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NMOCD ARTESIA

REMEDIATION SUMMARY

AND SITE CLOSURE REQUEST

PLAINS PIPELINE, L.P. (231735)
Beeson 8-Inch Discharge
Eddy County, New Mexico
Plains SRS # TNM Beeson Historical
UNIT LTR "B" (NW ¼ NE ¼), Section 3, Township 18 South, Range 30 East
Latitude 32° 46' 16.9" North, Longitude 103° 57' 20.7" West

Prepared For:

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

Prepared By:
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October 2009

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1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as Beeson 8-Inch Discharge (SRS # TNM Beeson Historical). The legal description of the release site is Unit Letter "B" (NW ¼ NE ¼), Section 3, Township 18 South, Range 30 East, in Eddy County, New Mexico. The property affected by the release is owned by The United States Department of the Interior Bureau of Land Management (BLM). In accordance with BLM protocol, Boone Archeological Services, LLC, in Carlsbad, New Mexico, conducted an archeological resource survey of the area for Plains. Results of the survey indicated no evidence of cultural resources present at the site. The Archeological Survey is provided as Appendix D. The release site latitude is 32° 46' 16.9" North and the longitude is 103° 57' 20.7" West. Please reference Figure 1 for a Site Location Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix F.

In September 2008, evidence of a historical release was brought to the attention of Plains by BLM representative Jim Amos. The release was reported to the New Mexico Oil Conservation Division (NMOCD) on September 22, 2008. There are three (3) areas of impact along the Plains Pipeline Right-of-Way (South Area, Middle Area and North Area), as identified by the BLM. During a meeting with NMOCD, BLM and Plains representatives it was determined soil samples would be collected from each of the three (3) areas of impact. The soil investigation was designed to delineate the vertical extent of the crude oil impacted soil.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database did not identify the average depth to groundwater information for Section 3, Township 18 South, Range 30 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately 275 feet below ground surface (bgs). The depth to groundwater at the Beeson 8-Inch Discharge release site results in a score of zero (0) being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the Beeson 8-Inch Discharge release site has an initial ranking score of zero (0). Based on this score, the soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 mg/Kg (ppm)

3.0 SUMMARY OF FIELD ACTIVITIES

On February 3, 2009, eight (8) soil samples (SA Sample 1-6 Inches, SA Sample 1–6 Feet, SA Sample 2–6 Inches, SA Sample 2–6 Feet, SA Sample 3–6 Inches, SA Sample 3–2 Feet, SA Sample 4–6 Inches and SA Sample 4–3 Feet) were collected from the South Area of impact, at depths ranging from six (6) inches to six (6) feet bgs. The soil samples were submitted to the laboratory and analyzed for concentrations of benzene, toluene, ethyl-benzene and xylene (BTEX) and total petroleum hydrocarbon (TPH) using EPA SW-846 8021b and SW-846 8015M, respectively. A summary of the analytical results is included in Table 1, Concentrations of BTEX, TPH and Chloride in Soil. Laboratory analytical reports are provided as Appendix B. Photographs are provided as Appendix C.

Laboratory analytical results indicated benzene concentrations were less than the laboratory method detection limit (MDL) in all the submitted soil samples. The analytical results indicated BTEX concentrations ranged from 0.0016 mg/Kg in soil sample SA Sample 2-6 Feet to 0.2408 mg/Kg in soil sample SA Sample 3-6 Inches. Laboratory analytical results indicated TPH concentrations ranged from 161 mg/Kg in soil sample SA Sample 1-6 Feet to 6,800 mg/Kg in soil sample SA Sample 2-6 Inches.

Soil sample SA Sample 1-6 Inches was analyzed for concentrations of chloride using method EPA 300. The analytical result indicated the chloride concentration was less than the laboratory MDL.

On February 3, 2009, two (2) soil samples (MA Sample 5-6 Inches and MA Sample 5-3 Feet) were collected from the Middle Area of impact, at depths ranging from six (6) inches to three (3) feet. Laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in both soil samples. The analytical results indicated BTEX concentrations were 0.0502 mg/Kg and 0.2117 mg/Kg in soil samples MA Sample 5-6 Inches and MA Sample 5-3 Feet, respectively. TPH concentrations were 1,057 mg/Kg and 4,301 mg/Kg in soil samples MA Sample 5-3 Feet and MA Sample 5-6 Inches, respectively.

Basin collected sixteen (16) soil samples (NA Sample 6-6 Inches, NA Sample 6-3 Feet, NA Sample 7-6 Inches, NA Sample 7-3 Feet, NA Sample 8-6 Inches, NA Sample 8-3 Feet, NA Sample 9-6 Feet, NA Sample 9-12 Feet, NA Sample 10-6 Inches, NA Sample 10-3 Feet, NA Sample 11-6 Feet, NA Sample 11- 12 Feet, NA Sample 12-6 Feet, NA Sample 12-15 Feet, NA Sample 13-6 Inches and NA Sample 13-3 Feet) from the North Area of impact, at depths ranging from six (6) inches to fifteen (15) feet bgs. The laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL in soil samples NA Sample 6-6 Inches, NA Sample 6-3 Feet, NA Sample 7-6 Inches, NA Sample 7-3 Feet, NA Sample 8-3 Feet, NA Sample 9-6 Feet, NA Sample 9-12 Feet, NA Sample 10-6 Inches, NA Sample 11-12 Feet, NA Sample 12-6 Feet, NA Sample 12-15 Feet, NA Sample 13-6 Inches and NA Sample 13-3 Feet to 0.0166 mg/Kg in soil sample NA Sample 10-3 Feet. BTEX concentrations ranged from 0.0012 mg/Kg in soil sample NA Sample 13-3 Feet to 109.652 mg/Kg in soil sample NA Sample 12-6 Feet. TPH concentrations ranged from less than the laboratory MDL in soil sample NA Sample 13-3 Feet to 18,100 mg/Kg in soil sample NA Sample 9-6 Feet.

Soil sample NA Sample 9-6 Feet was analyzed for concentrations of chloride. The laboratory analytical results indicated the chloride concentration was less than the laboratory MDL.

On February 25, 2009, the NMOCD Artesia Office granted verbal approval to mechanically till the South, Middle and North areas exhibiting asphaltine impact. Based on the laboratory analytical data, the area directly south of the Plains Beeson Station would require further investigation. In a letter dated March 2, 2009, the BLM approved the blending of the asphaltine impacted areas. The BLM correspondence is provided as Appendix E.

On March 18, 2009, Basin began mechanically treating the asphaltine impacted soil in the south, middle and north areas of the site. The area adjacent to and including soil samples SA Sample 1-6 inch, SA Sample 1-6 Feet, SA Sample 2-6 Inch, SA Sample 2-6 Feet, SA Sample 3-6 Inch, SA Sample 3-2 Feet, SA Sample 4-6 Inch, SA Sample 4-3 Feet, MA Sample 5-6 Inch, MA Sample 5-3 Feet, NA Sample 6-6 Inch, NA Sample 6-3 Feet, NA Sample 7-6 Inch, NA Sample 7-3 Feet, NA Sample 8-6 Inch and NA Sample 8-3 Feet was treated in place. The impacted soil was tilled and blended with non-impacted soil from the surrounding area. The south area of asphaltine impact measured approximately 47,785 square feet, the middle area measured approximately 8,600 square feet and the north area measured approximately 41,700 square feet. Upon completion of blending activities, the soil was mechanically tilled. On March 25, 2009, a BLM representative inspected the site and granted verbal approval to seed the treated areas. Please reference Figure 2 for a Site and Sample Location Map (South Area, Middle Area and North Area).

On April 13 and 14, 2009, six (6) soil borings (SB-1, SB-2, SB-3, SB-4, SB-5 and SB-6) were advanced in the area directly south of the Plains Beeson Station, to vertically investigate the extent of crude oil impacted soil. Soil boring logs are provided as Appendix A. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo-Ionization Detector (PID). Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX and TPH. Please reference Figure 3 Site and Sample Location Map (South of Beeson Station).

Soil boring SB-1 was located on the north side of the impacted area, south of the Plains Beeson Station and was advanced to a total depth of approximately sixty-five (65) feet bgs. Soil samples collected at ten (10), twenty (20), thirty (30), forty (40), fifty (50), sixty (60) and sixty-five (65) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL for all the submitted soil samples, with the exception of the soil sample collected at ten (10) feet bgs, which exhibited a benzene concentration of 0.2233 mg/Kg. The laboratory analytical results indicated BTEX concentrations ranged from 0.0052 mg/Kg in the soil sample collected at sixty-five (65) feet bgs to 28.33 mg/Kg in the soil sample collected at twenty (20) feet bgs. The laboratory analytical results indicated TPH concentrations ranged from 89.4 mg/Kg in the soil sample collected at sixty-five (65) feet bgs to 7,223 mg/Kg in the soil sample collected at ten (10) feet bgs.

Soil boring SB-2 was located in the middle of the impacted area, south of the Plains Beeson Station and was advanced to a total depth of approximately fifty-five (55) feet bgs. Soil samples collected at ten (10), twenty (20), thirty (30), forty (40), fifty (50) and fifty-five (55) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL in the soil samples collected at ten (10), thirty (30), fifty (50) and fifty-five (55) feet bgs to 3.28 mg/Kg in the soil sample collected at twenty (20) feet bgs. The laboratory analytical results indicated BTEX concentrations ranged

from less than the laboratory MDL in the soil sample collected at fifty-five (55) feet bgs to 197.594 mg/Kg in the soil sample collected at twenty (20) feet bgs. The laboratory analytical results indicated TPH concentrations ranged from 23.2 mg/Kg in the soil sample collected at fifty-five (55) feet bgs to 10,241 mg/Kg in the soil sample collected at ten (10) feet bgs.

Soil boring SB-3 was located on the west side of the impacted area, south of the Plains Beeson Station and was advanced to a total depth of approximately sixty (60) feet bgs. Soil samples collected at ten (10), twenty (20), thirty (30), forty (40), fifty-five (55) and sixty (60) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in all the submitted soil samples. The laboratory analytical results indicated BTEX concentrations ranged from less than the laboratory MDL in the soil sample collected at sixty (60) feet bgs to 92.608 mg/Kg in the soil sample collected at twenty (20) feet bgs. The laboratory analytical results indicated TPH concentrations ranged from 109.9 mg/Kg in the soil sample collected at ten (10) feet bgs to 8,307 mg/Kg in the soil sample collected at twenty (20) feet bgs.

Soil boring SB-4 was located west of soil boring SB-3 and was advanced to a total depth of approximately twenty-five (25) feet bgs. Soil samples collected at ten (10), twenty (20) and twenty-five (25) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL in all the submitted soil samples.

Soil boring SB-5 was located on the east side of the impacted area, south of the Plains Beeson Station and was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at ten (10), twenty (20), twenty-five (25) and thirty (30) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL in all the submitted soil samples.

Soil boring SB-6 was located on the south side of the impacted area, south of the Plains Beeson Station and was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at ten (10), twenty (20), twenty-five (25) and thirty (30) feet bgs were submitted to the laboratory. The laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL in all the submitted soil samples, with the exception of the soil sample collected at twenty (20) feet bgs, which exhibited a BTEX concentration of 0.0024 mg/Kg.

On July 9, 2009, the NMOCD Artesia Office granted verbal approval of the Remediation Summary and Site Closure Proposal.

On July 14, 2009, Basin commenced remedial activities at the site. The area defined by and including soil borings SB-1, SB-2, SB-3, SB-4 and SB-5 was excavated to a depth of approximately thirteen (13) feet bgs.

On July 16, 2009, three (3) stockpile soil samples (SP-1, SP-2 and SP-3) were collected and submitted to the laboratory. Each soil sample represented approximately 500 cy of excavated soil. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. The BTEX concentrations ranged from less than the appropriate laboratory MDL for soil sample SP-1 to 0.5051 mg/Kg for

soil sample SP-3. The TPH concentration ranged from 162.1 mg/Kg for soil sample SP-1 to 1,679 mg/Kg for soil sample SP-3. Based on the laboratory analytical results of the above referenced soil samples, the soil was deemed suitable for use as backfill material.

On July 20, 2009, three (3) stockpile soil samples (SP-4, SP-5 and SP-6) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples. The BTEX concentrations ranged from less than the appropriate laboratory MDL for soil sample SP-5 to 0.28 mg/Kg for soil sample SP-6. TPH concentrations ranged from 1,293 mg/Kg for soil sample SP-5 to 4,432 mg/Kg for soil sample SP-6. Based on the laboratory analytical results of the above referenced soil samples, the soil was deemed suitable for use as backfill material.

On July 28, 2009, nine (9) stockpile soil samples (SP-7, SP-8, SP-9, SP-10, SP-11, SP-12, SP-13, SP-14 and SP-15) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples, with the exception of soil sample SP-14, which exhibited a benzene concentration of 0.0424 mg/Kg. BTEX concentrations ranged from 0.0245 mg/Kg for soil sample SP-7 to 8.212 mg/Kg for soil sample SP-14. TPH concentrations exceeded NMOCD regulatory guidelines for all of the submitted soil samples with the exception of soil samples SP-7, SP-8, SP-9, SP-10, SP-11 and SP-15 which exhibited TPH concentrations of 1,144.4 mg/Kg, 1,454 mg/Kg, 1,896 mg/Kg, 3,910 mg/Kg, 2,775 mg/Kg and 1,449 mg/Kg, respectively. The NMOCD Artesia Office granted verbal approval to utilize the above referenced soil as backfill material.

On July 31, 2009, three (3) stockpile soil samples (SP-16, SP-17 and SP-18) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SP-17 and SP-18 to 0.0019 mg/Kg for soil sample SP-16. The BTEX concentrations ranged from 0.4591 mg/Kg for soil sample SP-16 to 2.528 mg/Kg for soil sample SP-17. The TPH concentrations ranged from 2,717 mg/Kg for soil sample SP-18 to 4,406 mg/Kg for soil sample SP-16. Based on the laboratory analytical results of the above referenced soil samples, the soil was deemed suitable for use as backfill material.

On August 4, 2009, five (5) stockpile soil samples (SP-19, SP-20, SP-21, SP-22 and SP-23) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from 0.0162 mg/Kg for soil sample SP-20 to 0.5094 mg/Kg for soil sample SP-23. The BTEX concentrations ranged from 2.919 mg/Kg for soil sample SP-20 to 65.78 mg/Kg for soil sample SP-23. The TPH concentrations ranged from 1,197 mg/Kg for soil sample SP-19 to 3,899 mg/Kg for soil sample SP-23. Based on laboratory analytical results, the soil contained in the stockpile, and represented by soil sample SP-23, required reblending and resampling. Based on analytical results, the soil represented by the remaining stockpiles (SP-19, SP-20, SP-21 and SP-22), was deemed suitable for use as backfill material.

On August 5, 2009, four (4) stockpile soil samples (SP-24, SP-25, SP-26 and SP-27) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SP-24, SP-25, and SP-27 to 0.1049 mg/Kg for soil sample SP-26. The BTEX concentrations ranged from 2.256 mg/Kg for soil sample SP-24 to 29.11 mg/Kg for soil sample SP-26. The TPH

concentrations ranged from 1,853 mg/Kg for soil sample SP-27 to 5,178 mg/Kg for soil sample SP-26. The NMOCD Artesia Office granted verbal approval to utilize the above referenced soil as backfill material.

On August 6, 2009, four (4) stockpile soil samples (SP-28, SP-29, SP-30 and SP-31) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SP-29, SP-30 and SP-31 to 0.0698 mg/Kg for soil sample SP-28. The BTEX concentrations ranged from 0.0046 mg/Kg for soil sample SP-29 to 17.83 mg/Kg for soil sample SP-30. The TPH concentrations ranged from 241.5 mg/Kg for soil sample SP-29 to 5,652 mg/Kg for soil sample SP-30. The NMOCD Artesia Office granted verbal approval to utilize the above referenced soil as backfill material.

On August 11, 2009, four (4) soil samples (NSW-1, NSW-2, NSW-3 and NSW-4) were collected from the excavation sidewall at approximately thirteen (13) feet bgs. The laboratory analytical results indicated benzene concentrations were less than the appropriate MDL for all of the submitted soil samples. The BTEX concentrations ranged from less than the appropriate MDL for soil samples NSW-2, NSW-3 and NSW-4 to 0.0144 mg/Kg for soil sample NSW-1. The TPH concentrations ranged from less than the laboratory MDL for soil sample NSW-4 to 4,997 mg/Kg for soil sample NSW-1.

On August 11, 2009, four (4) stockpile soil samples (SP-32, SP-33, SP-34 and SP-35) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate MDL for soil samples SP-32, SP-33 and SP-34 to 0.0068 mg/Kg for soil sample SP-35. The BTEX concentrations ranged from 0.0295 mg/Kg for soil sample SP-32 to 4.262 mg/Kg for soil sample SP-34. The TPH concentrations ranged from 1,032.8 mg/Kg for soil sample SP-32 to 3,059 mg/Kg for soil sample SP-34. Based on the laboratory analytical results of the above referenced soil samples, the soil was deemed suitable for use as backfill material.

On August 14, 2009, seven (7) soil samples (ESW-1, ESW-2, SSW-1, SSW-2, WSW-1, WSW-2, and WSW-3) were collected from the excavation sidewalls at approximately thirteen (13) feet bgs. The laboratory analytical results indicated the benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples ESW-1, SSW-1, SSW-2, WSW-1 and WSW-3 to 0.0022 mg/Kg for soil sample WSW-2. The laboratory analytical results indicated BTEX concentrations ranged from 0.0054 mg/Kg for soil sample SSW-1 to 10.156 mg/Kg for soil sample ESW-2. The laboratory analytical results indicated the TPH concentrations ranged from 133 mg/Kg for soil sample ESW-1 to 3,260 mg/Kg for soil sample WSW-2.

On August 14, 2009, eight (8) stockpile soil samples (SP-23A, SP-36, SP-37, SP-38, SP-39, SP-40, SP-41 and SP-42) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SP-39 and SP-40 to 0.855 mg/Kg for soil sample SP-42. The laboratory analytical results indicated BTEX concentrations ranged from 0.0111 mg/Kg for soil sample SP-38 to 82.03 mg/Kg for soil sample SP-42. The analytical results indicated TPH concentrations ranged from 137.3 mg/kg for soil sample SP-38 to 5,607 mg/Kg for soil sample SP-36. Based on laboratory analytical results, the soil contained in the stockpile, and represented by soil sample SP-42 required reblending and resampling. The NMOCD Artesia District Office granted verbal

approval to utilize the soil represented by stockpile soil sample SP-36 as use for backfill material. Based on analytical results, the soil represented by the remaining stockpiles was deemed suitable for use as backfill material.

On August 20, 2009, two (2) stockpile soil samples (SP-43 and SP-44) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from 0.3636 mg/Kg for soil sample SP-43 to 1.289 mg/Kg for soil sample SP-44. The laboratory analytical results indicated the BTEX concentrations ranged from 69.95 mg/Kg for soil sample SP-43 to 97.66 mg/Kg for soil sample SP-44. The laboratory analytical results indicated the TPH concentrations ranged from 6,052 mg/Kg for soil sample SP-43 to 8,494 mg/Kg for soil sample SP-44. Based on laboratory analytical results, the soil contained in the stockpiles, and represented by soil samples SP-43 and SP-44 required reblending and resampling.

The area defined by soil borings SB-2 and SB-3 was excavated to a depth of approximately twenty (20) feet bgs. On August 24, 2009, two (2) soil samples (Floor-1 and Floor -2) were collected from the floor of the excavation at approximately twenty (20) feet bgs. The laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL for soil sample Floor-2 to 1.405 mg/Kg for soil sample Floor-1. The laboratory analytical results indicated BTEX concentrations ranged from 0.0205 mg/Kg for soil sample Floor-2 to 131.87 mg/Kg for soil sample Floor-1. The laboratory analytical results indicated TPH concentrations ranged from 242 mg/Kg for soil sample Floor-2 to 8,075 mg/Kg for soil sample Floor-1. As per NMOCD request, the area excavated to twenty (20) feet bgs and represented by soil sample Floor-1 was allowed to volatize.

On August 31, 2009, one (1) soil sample (Floor-1A) was collected from the excavated area and submitted to the laboratory. The laboratory analytical results indicated benzene, BTEX and TPH concentrations for soil sample Floor-1A were 0.0428 mg/Kg, 22.29 mg/Kg and 1,908 mg/Kg, respectively.

On August 25, 2009, one (1) stockpile soil sample (SP-42A) was collected and submitted to the laboratory. The analytical results indicated the benzene, BTEX and TPH concentrations for soil sample SP-42A were 0.1165 mg/Kg, 32.67 mg/Kg and 4,577 mg/Kg, respectively. Based on the laboratory analytical results of the above referenced soil samples, the soil was deemed suitable for use as backfill material.

On August 28, 2009, two (2) stockpile soil samples (SP-43A and SP-44A) were collected and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations ranged from 0.0896 mg/Kg for soil sample SP-43A to 0.102 mg/Kg for soil sample SP-44A. The laboratory analytical results indicated BTEX concentrations ranged from 13.627 mg/Kg for soil sample SP-44A to 19.656 mg/Kg for soil sample SP-43A. The laboratory analytical results indicated the TPH concentrations ranged from 2,597 mg/Kg for soil sample SP-43A to 3,519 mg/Kg for soil sample SP-44A. Based on the analytical results of the stockpile soil samples referenced above, the soil was deemed suitable for use as backfill material.

Based on the analytical results and NMOCD approval, the excavation was backfilled in eighteen inch lifts, compacted and contoured to fit the surrounding topography.

On September 17 and 18, 2009 the site was seeded with a BLM approved seeding mixture.

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 the confirmation soil samples, Basin recommends Plains provide the NMOCD Artesia District Office and the BLM Carlsbad Office a copy of this Remediation Summary and Site Closure Request and request the NMOCD and BLM grant site closure of the Beeson 8" Discharge release site.

6.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site 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:

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Figures

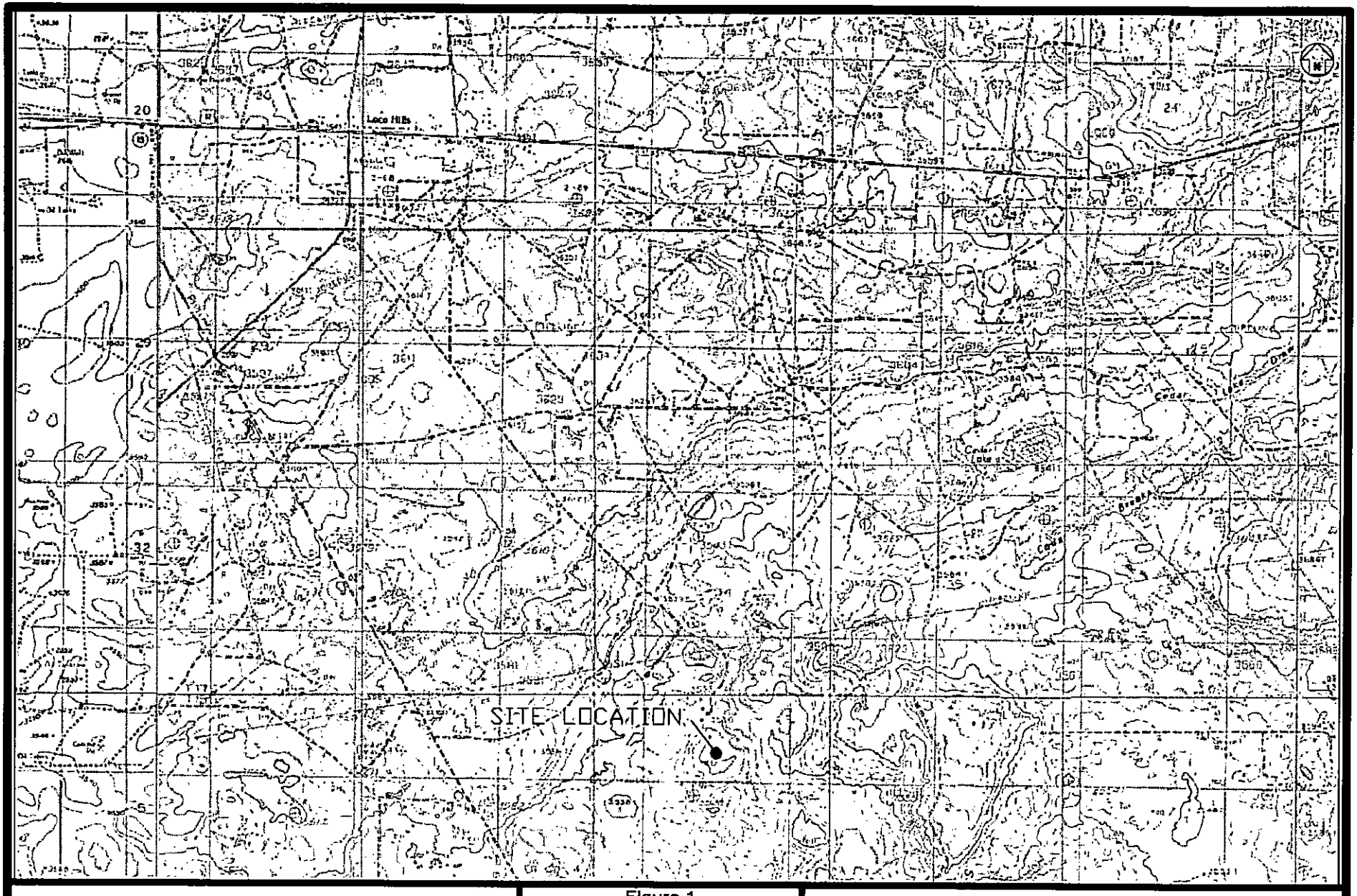
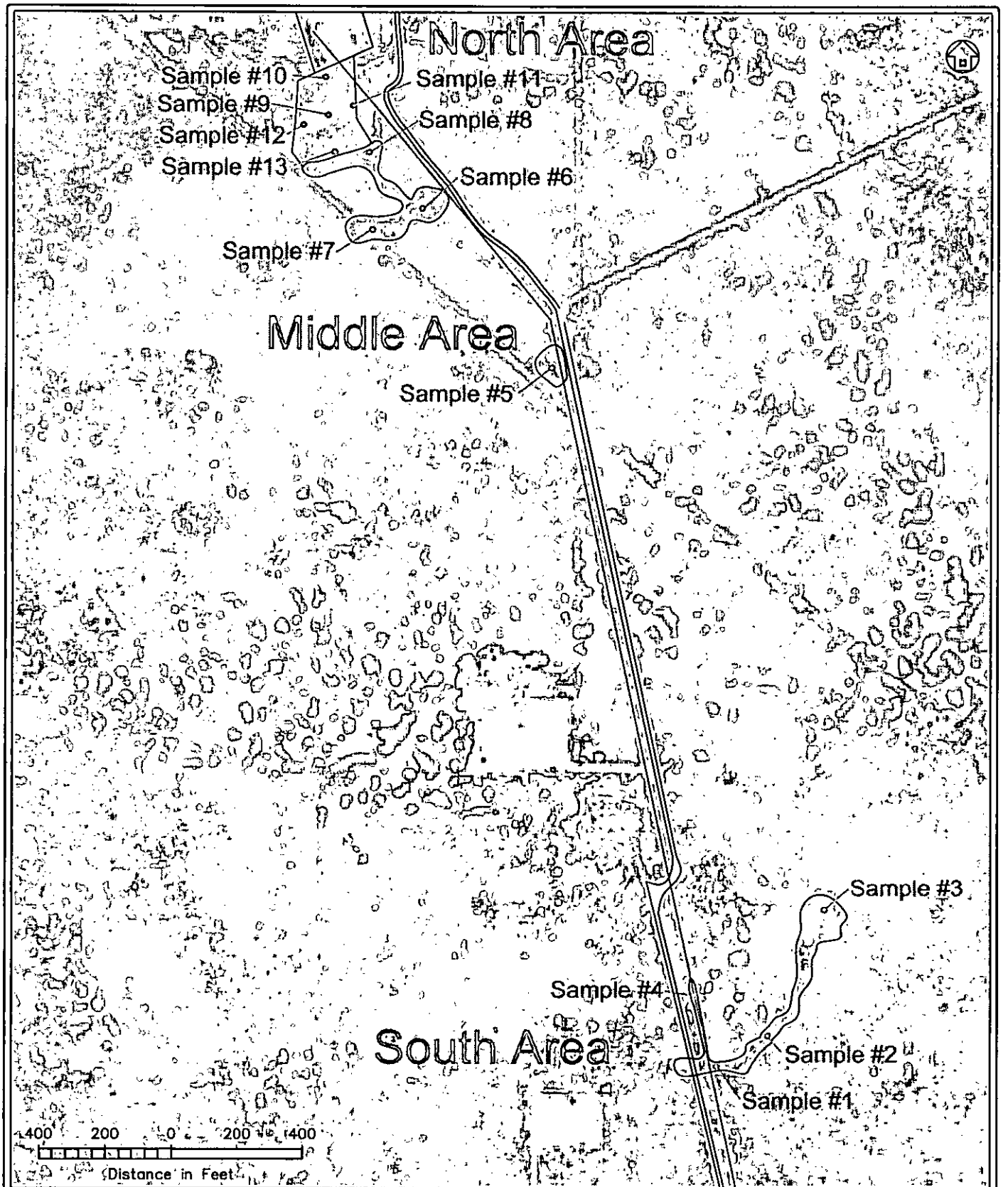


Figure 1
Site Location Map
Plains Pipeline, L.P.
Beeson 8-Inch Discharge
Eddy County, New Mexico
SRS# TNM Beeson Historical

Basin Environmental Services

Prep By: CDS	Checked By: CDS
June 12, 2009	Scale 1"=3000'



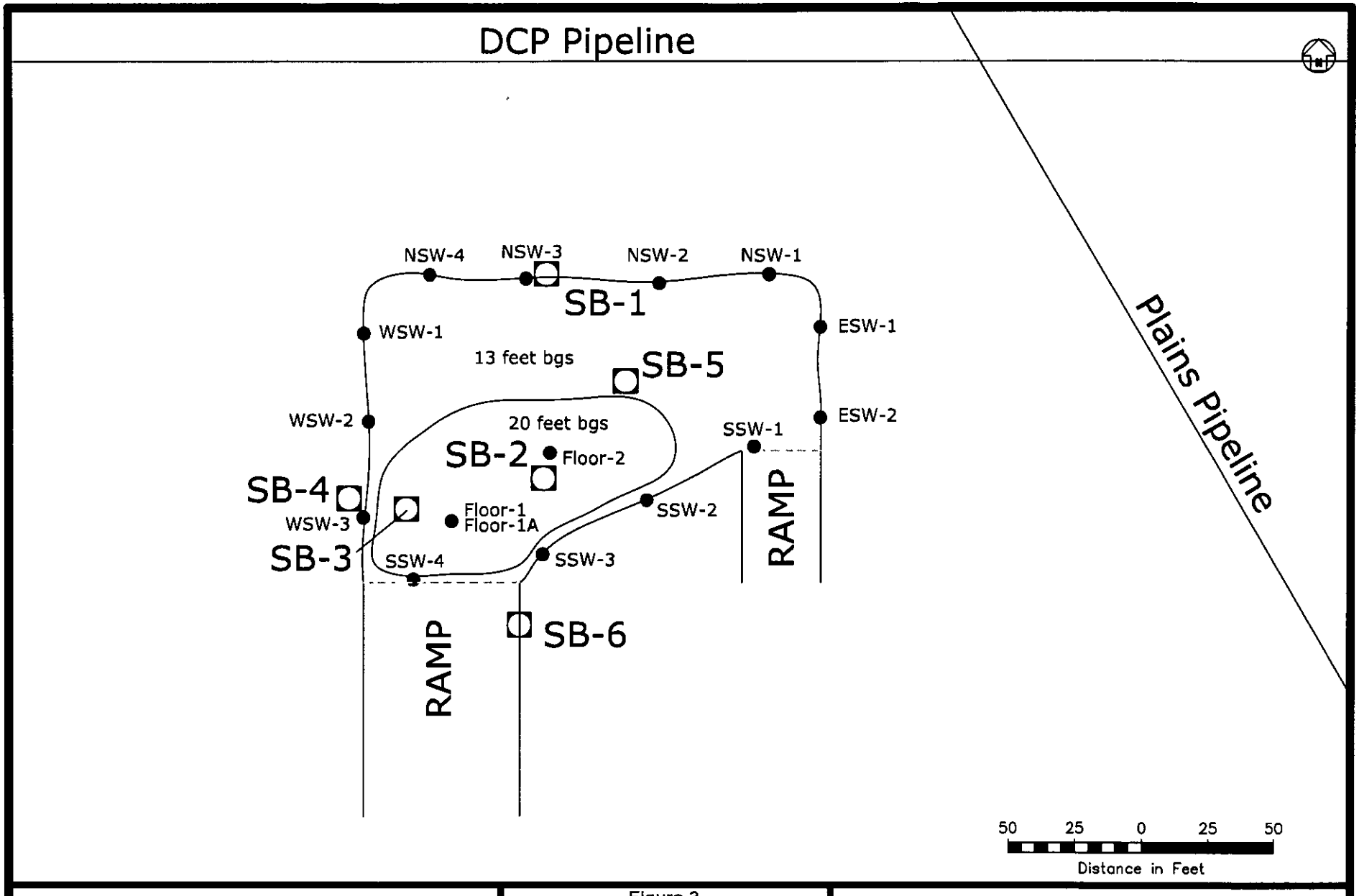
Legend:

- Visually Impacted Area
- Pipeline

Figure 2
Site and Sample Location Map
(South Area, Middle Area and North Area)
Plains Marketing, L.P.
Beeson 8 Inch Discharge
Eddy County, New Mexico
SRS # Beeson Historical

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
February 6, 2009	Scale 1inch = approximately 400 Feet


DCP Pipeline
Plains Pipeline
NSW-4
NSW-3
NSW-2
NSW-1
SB-1
WSW-1
ESW-1
13 feet bgs
SB-5
WSW-2
20 feet bgs
SSW-1
ESW-2
SB-2
Floor-2
SB-4
Floor-1
Floor-1A
SSW-2
WSW-3
SB-3
SSW-4
SSW-3
RAMP
RAMP
SB-6
50 25 0 25 50
Distance in Feet
Legend:
Excavation Extents
Pipeline
SB-1 Soil Boring
SSW-1 Sample Location
Figure 3
Site and Sample Location Map
(South of Beeson Station)
Plains Marketing, L.P.
Beeson 8-Inch Discharge
Eddy County, New Mexico
SRS # TNM Beeson Historical
Basin Environmental Consulting
Prep By: CDS
Checked By: CJB
October 14, 2009
Scale 1"=50 Feet

Tables

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
BEESON 8 INCH DISCHARGE
EDDY COUNTY, NEW MEXICO
SRS#TNM BEESON HISTORICAL

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 848-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SA Sample 1-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.003	0.0058	0.0068	0.0016	0.0172	<75.3	2,750	559	3,309	<5.02
SA Sample 1-6 Feet	6 Feet	02/03/09	In-Situ	<0.0011	<0.0021	0.0036	0.005	0.0017	0.0103	<15.9	108	53	161	
SA Sample 2-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0051	0.0033	0.004	0.0011	0.0135	<75.6	5,860	940	**6,800**	
SA Sample 2-6 Feet	6 Feet	02/03/09	In-Situ	<0.0011	<0.0022	0.0016	<0.0022	<0.0011	0.0016	<16.8	1,420	254	1,674	
SA Sample 3-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0049	0.1641	0.0693	0.0025	0.2408	<75.3	4,020	1,560	**5,580**	
SA Sample 3-2 Feet	2 Feet	02/03/09	In-Situ	<0.0010	<0.0020	0.045	0.0213	0.0048	0.0711	<75.7	437	137	574	
SA Sample 4-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0047	0.0138	0.0162	0.0029	0.0376	<150	5,190	1,080	**6,270**	
SA Sample 4-3 Feet	3 Feet	02/03/09	In-Situ	<0.0010	<0.0021	0.0089	0.0068	0.0018	0.0175	<78.6	805	183	988	
MA Sample 5-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0045	0.0208	0.0204	0.0045	0.0502	<151	3,490	811	4,301	
MA Sample 5-3 Feet	3 Feet	02/03/09	In-Situ	<0.0011	<0.0021	0.1361	0.0638	0.0118	0.2117	21.7	829	206	1,057	
NA Sample 6-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0037	0.0086	0.0062	<0.0010	0.0185	152	11,900	1,820	**13,872**	
NA Sample 6-3 Feet	3 Feet	02/03/09	In-Situ	<0.0010	<0.0020	0.0035	0.004	<0.0010	0.0075	<15.2	91.8	24.6	116	
NA Sample 7-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0059	0.0246	0.0283	<0.0010	0.0588	<151	4,060	1,070	**5,130**	
NA Sample 7-3 Feet	3 Feet	02/03/09	In-Situ	<0.0010	<0.0020	0.0056	0.003	<0.0010	0.0086	<15.1	99.4	22.8	122	
NA Sample 8-6 Inch	6 Inches	02/03/09	In-Situ	0.0116	0.019	0.0481	0.041	0.0015	0.1212	160	8,050	1,940	**10,150**	
NA Sample 8-3 Feet	3 Feet	02/03/09	In-Situ	<0.0010	0.0233	0.0485	0.0377	0.0088	0.1183	17.4	288	83	388	
NA Sample 9-6 Feet	6 Feet	02/03/09	In-Situ	<0.5233	3.082	24.28	21.89	7.604	**56.856**	4,910	12,100	1,090	**18,100**	<5.23
NA Sample 9-12 Feet	12 Feet	02/03/09	In-Situ	<0.5318	3.058	29.53	23.69	8.801	**65.079**	3,240	8,070	1,050	**12,360**	
NA Sample 10-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	<0.0020	0.0947	0.0142	0.0283	0.1372	217	777	206	1,200	
NA Sample 10-3 Feet	3 Feet	02/03/09	In-Situ	0.0166	0.0318	0.0977	0.0956	0.0396	0.2813	592	8,870	1,660	**11,122**	
NA Sample 11-6 Feet	6 Feet	02/03/09	In-Situ	0.0053	0.0232	0.0995	0.3236	0.2365	0.6881	509	3,850	563	4,922	
NA Sample 11-12 Feet	12 Feet	02/03/09	In-Situ	<0.0531	<0.1062	4.32	7.574	1.487	13.381	1,470	5,460	722	**7,652**	
NA Sample 12-6 Feet	6 Feet	02/03/09	In-Situ	<0.5242	4.482	41.63	51.06	12.48	**109.652**	2,860	8,310	980	**12,150**	
NA Sample 12-15 Feet	15 Feet	02/03/09	In-Situ	<0.5217	3.85	33.43	48.38	13.83	**99.49**	2,420	6,800	825	**10,045**	
NA Sample 13-6 Inch	6 Inches	02/03/09	In-Situ	<0.0010	0.0023	0.2413	0.1296	0.0162	0.3894	30.2	204	134	368	
NA Sample 13-3 Feet	3 Feet	02/03/09	In-Situ	<0.0010	<0.0020	0.0012	<0.0020	<0.0010	0.0012	<15.3	<15.3	<15.3	<15.3	
SB-1 @ 10'	10 Feet	04/13/09	In-Situ	0.2233	2.43	4.21	9.362	2.106	18.3313	961	5,570	692	**7,223**	
SB-1 @ 20'	20 Feet	04/13/09	In-Situ	<0.5503	2.141	9.295	15.54	1.354	28.33	1,820	4,230	342	**6,392**	
SB-1 @ 30'	30 Feet	04/13/09	In-Situ	<0.0011	<0.0022	0.0193	0.0592	0.0243	0.1028	79.4	316	21.6	417	

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
BEESON 8 INCH DISCHARGE
EDDY COUNTY, NEW MEXICO
SRS#TNM BEESON HISTORICAL

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 846-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-1 @ 40'	40 Feet	04/13/09	In-Situ	<0.0263	<0.0526	0.0447	0.128	0.0628	0.2355	59	551	43.9	653.9	
SB-1 @ 50'	50 Feet	04/13/09	In-Situ	<0.0011	<0.0021	0.0044	0.0079	0.0027	0.015	53.5	370	56.3	479.3	
SB-1 @ 60	60 Feet	04/13/09	In-Situ	<00010	<0.0021	0.003	0.0029	<0.001	0.0059	19	144	<15.5	163	
SB-1 @ 65'	65 Feet	04/13/09	In-Situ	<0.0011	<0.0022	0.0024	0.0028	<0.0011	0.0052	<16.3	89.4	<16.3	89.4	
SB-2 @ 10'	10 Feet	04/13/09	In-Situ	<0.1037	0.4533	14.91	20	1.89	37.2533	2,040	7,470	731	**10,241**	
SB-2 @ 20'	20 Feet	04/13/09	In-Situ	3.28	15.68	105.6	63.07	9.964	**197.594**	3,750	5,140	548	**9,438**	
SB-2 @ 30'	30 Feet	04/13/09	In-Situ	<0.011	0.1288	1.323	1.316	0.145	2.9128	1,270	3,680	286	**5,236**	
SB-2 @ 40'	40 Feet	04/13/09	In-Situ	0.0034	0.0036	0.0229	0.016	0.0023	0.0482	1,270	3,680	286	**5,236**	
SB-2 @ 50'	50 Feet	04/13/09	In-Situ	<0.0011	<0.0021	0.0448	0.0546	0.0048	0.1042	58.1	337	36.9	432	
SB-2 @ 55'	55 Feet	04/13/09	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.5	23.2	<17.5	23.2	
SB-3 @ 10'	10 Feet	04/14/09	In-Situ	<0.001	<0.0021	0.0015	<0.0021	<0.0010	0.0015	20.1	89.8	<15.4	109.9	
SB-3 @ 20'	20 Feet	04/14/09	In-Situ	<0.53	3.848	38.06	47.34	3.36	**92.608**	2,790	5,130	387	**8,307**	
SB-3 @ 30'	30 Feet	04/14/09	In-Situ	<0.0534	0.1907	2.604	4.156	0.3167	7.2674	732	2,770	200	3,702	
SB-3 @ 40'	40 Feet	04/14/09	In-Situ	<0.0011	<0.0022	0.0316	0.0642	0.0312	0.127	103	511	38.4	652.4	
SB-3 @ 55'	55 Feet	04/14/09	In-Situ	<0.0011	<0.0022	0.0026	0.0034	0.0016	0.0076	19.1	131	<16.3	150.1	
SB-3 @ 60'	60 Feet	04/14/09	In-Situ	<0.0054	<0.0109	<0.0054	<0.0109	<0.0054	<0.0109	24	311	34.3	369.3	
SB-4 @ 10'	10 Feet	04/14/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	
SB-4 @ 20'	20 Feet	04/14/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	
SB-4 @ 25'	25 Feet	04/14/09	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.6	<19.6	<19.6	<19.6	
SB-5 @ 10'	10 Feet	04/14/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	
SB-5 @ 20'	20 Feet	04/14/09	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.7	<19.7	<19.7	<19.7	
SB-5 @ 25'	25 Feet	04/14/09	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.1	<18.1	<18.1	<18.1	
SB-5 @ 30'	30 Feet	04/14/09	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<20	<20	<20	<20	
SB-6 @ 10'	10 Feet	04/14/09	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.4	<19.4	<19.4	<19.4	
SB-6 @ 20'	20 Feet	04/14/09	In-Situ	<0.0014	<0.0028	0.0024	<0.0028	<0.0014	0.0024	<21.1	<21.1	<21.1	<21.1	
SB-6 @ 25'	25 Feet	04/14/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	
SB-6 @ 30'	30 Feet	04/14/09	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.7	<17.7	<17.7	<17.7	
SP-1	N/A	07/16/09	Backfill	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.5	118	44.1	162.1	
SP-2	N/A	07/16/09	Backfill	<0.0012	<0.0025	<0.0012	0.003	<0.0012	0.003	27.4	580	116	723.4	

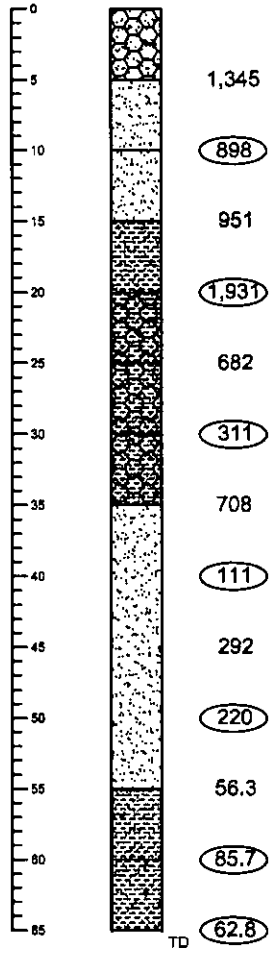
TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
BEESON 8 INCH DISCHARGE
EDDY COUNTY, NEW MEXICO
SRS#TNM BEESON HISTORICAL

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 848-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SP-3	N/A	07/16/09	Backfill	<0.0307	<0.0615	0.0587	0.3357	0.1107	0.5051	168	1,280	231	1,679	
SP-4	N/A	07/20/09	Backfill	<0.0015	<0.0029	0.0027	0.0065	<0.0015	0.0092	<109	2,040	428	2,468	
SP-5	N/A	07/20/09	Backfill	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<78.9	1,020	273	1,293	
SP-6	N/A	07/20/09	Backfill	<0.0010	<0.0021	0.0456	0.0869	0.1475	0.28	289	3,560	583	4,432	
SP-7	N/A	07/28/09	Backfill	<0.0010	<0.0021	0.0085	0.0117	0.0043	0.0245	59.4	983	102	1,144.4	
SP-8	N/A	07/28/09	Backfill	<0.0011	<0.0021	0.0163	0.0311	0.0158	0.0632	124	1,210	120	1,454	
SP-9	N/A	07/28/09	Backfill	<0.0213	<0.0426	0.0889	0.1049	0.1586	0.3524	212	1,510	174	1,896	
SP-10	N/A	07/28/09	Backfill	<0.0011	0.007	0.0837	0.2127	0.325	0.6284	428	3,160	322	3,910	
SP-11	N/A	07/28/09	Backfill	<0.0011	0.0056	0.0792	0.1289	0.2391	0.4528	248	2,230	297	2,775	
SP-12	N/A	07/28/09	Backfill	<0.0011	0.0327	0.2451	0.4812	0.3174	1.0764	601	4,360	511	**5,472**	
SP-13	N/A	07/28/09	Backfill	<0.0212	0.072	0.3416	0.8772	0.9925	2.2833	535	4,240	492	**5,267**	
SP-14	N/A	07/28/09	Backfill	0.0424	0.4288	0.986	3.406	3.349	8.212	966	4,970	533	**6,469**	
SP-15	N/A	07/28/09	Backfill	<0.0010	0.0042	0.0489	0.1024	0.1682	0.3237	186	1,140	123	1,449	
SP-16	N/A	07/31/09	Backfill	0.0019	0.024	0.0795	0.2405	0.1132	0.4591	423	3,580	403	4,406	
SP-17	N/A	07/31/09	Backfill	<0.0214	0.1285	0.4129	1.549	0.4373	2.528	693	2,950	340	3,983	
SP-18	N/A	07/31/09	Backfill	<0.0109	0.0759	0.2654	0.9429	0.9466	2.2308	365	2,110	242	2,717	
SP-19	N/A	08/04/09	Backfill	0.1419	0.4279	2.805	7.319	1.726	12.42	356	719	122	1,197	
SP-20	N/A	08/04/09	Backfill	0.0162	0.3662	0.3265	1.027	1.183	2.919	355	1,090	154	1,599	
SP-21	N/A	08/04/09	Backfill	0.0509	0.2294	0.3443	1.851	1.232	3.708	421	1,370	136	1,927	
SP-22	N/A	08/04/09	Backfill	0.0442	0.1773	0.3097	1.677	1.178	3.386	322	1,020	150	1,492	
SP-23	N/A	08/04/09	Reblend	0.5094	6.613	23.43	30.86	4.363	**65.78**	1,280	2,350	269	3,899	
SP-24	N/A	08/05/09	Backfill	<0.0050	0.0338	0.2475	1.121	0.8536	2.256	315	1,650	184	2,149	
SP-25	N/A	08/05/09	Backfill	<0.0207	0.0949	0.2422	1.251	0.8874	2.476	607	2,310	194	3,111	
SP-26	N/A	08/05/09	Backfill	0.1049	0.622	3.353	22.9	2.128	29.11	1580	3,260	338	**5,178**	
SP-27	N/A	08/05/09	Backfill	<0.020	1.211	0.5107	3.19	1.835	6.747	550	1,190	113	1,853	
SP-28	N/A	08/06/09	Backfill	0.0698	0.8179	1.383	8.153	6.059	16.483	731	2,830	309	3,870	
SP-29	N/A	08/06/09	Backfill	<0.0011	<0.0023	<0.0011	0.0031	0.0015	0.0046	<17.0	204	36.5	241.5	
SP-30	N/A	08/06/09	Backfill	<0.2621	<0.5241	10.94	4.83	2.062	17.83	1,020	4,230	402	**5,652**	
SP-31	N/A	08/06/09	Backfill	<0.001	0.0072	0.0145	0.034	0.0208	0.0765	143	1,300	152	1,595	

Soil Boring SB-1



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain
0 - 5	1,345	Heavy	Heavy
5 - 10	898	Moderate	Moderate
10 - 15	951	Moderate	Slight
15 - 20	1,931	Moderate	Slight
20 - 25	682	Slight	None
25 - 30	311	None	None
30 - 35	708	None	None
35 - 40	111	None	None
40 - 45	292	Slight	None
45 - 50	220	None	None
50 - 55	56.3	None	None
55 - 60	85.7	Slight	None
60 - 65	62.8	None	None

Soil Description

0 - 5' - Sand, brown, very fine grained with caliche nodules, wet.

5 - 10' - Sand, brown, very fine grained, moist.

10 - 15' - Sand, brown, very fine grained, moist.

15 - 20' - Clay, brown to tan, sandy, dry.

20 - 25' - Clay, tan, sandy with caliche nodules, dry.

25 - 30' - Clay, red to brown, sandy with caliche nodules, dry.

30 - 35' - Sand, red with some clay and caliche nodules, dry.

35 - 55' - Sand, tan, very fine grained, dry.

55 - 60' - Sand, dark reddish brown, very fine grained with some clay and caliche, dry

60 - 65' - Sand, dark reddish brown with some silty clay and gypsum stringers, dry

Soil Boring Details

Date Drilled: April 13, 2009
Thickness of Bentonite Seal: 65 Ft
Depth of Exploratory Boring: 65 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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.

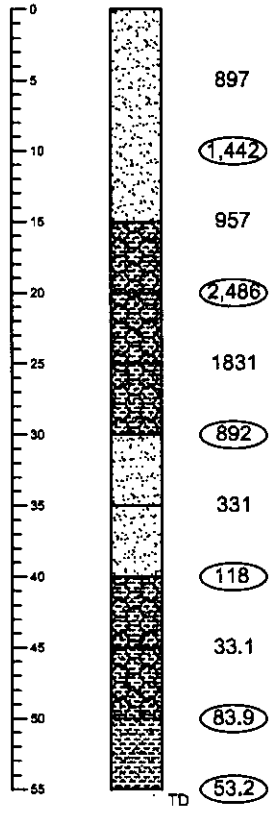
3.) The depths indicated are referenced from below ground surface (bgs).

Boring Log Details
Soil Boring SB-1
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Soil Boring SB-2



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0				
5	897	Heavy	Heavy	
10	1,442	Heavy	Heavy	0 - 15' - Sand, brown, very fine grained with caliche, wet.
15	957	Heavy	Moderate	
20	2,486	Heavy	Heavy	15 - 20' - Sand, brown to tan with clay and caliche, damp.
25	1831	Heavy	Heavy	20 - 25' - Clay, brown, sandy with caliche, damp
30	892	Heavy	Heavy	25 - 30' - Clay, red to brown, sandy with caliche nodules.
35	331	Moderate	Moderate	30 - 35' - Sand, tan, very fine grained, dry.
40	118	None	None	35 - 40' - Sand, tan to brown, dry.
45	33.1	None	None	40 - 45' - Clay, red to brown, sandy with caliche nodules, dry
50	83.9	None	None	45 - 50' - Sand, brown with some clay and caliche nodules, dry
55	53.2	None	None	55 - 60' - Sand, red to brown with silty clay and gypsum stringer @ 54 feet, dry.

Soil Boring Details

Date Drilled: April 13, 2009
Thickness of Bentonite Seal: 55 Ft
Depth of Exploratory Boring: 55 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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.

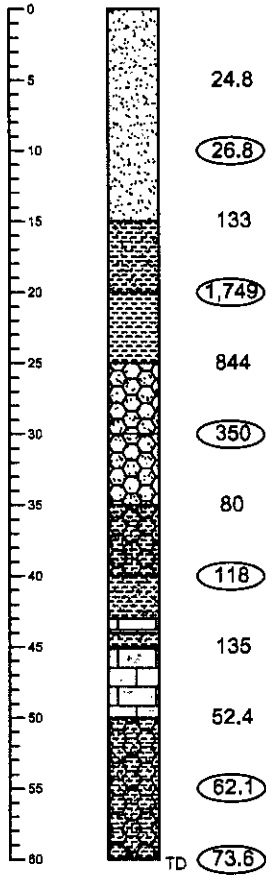
3.) The depths indicated are referenced from below ground surface (bgs).

Boring Log Details
Soil Boring SB-2
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Soil Boring SB-3



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0 - 5	24.8	None	None	0 - 15' - Sand, brown, very fine grained, damp.
5 - 10	(26.8)	None	None	
10 - 15	133	Slight	Slight	
15 - 20	(1,749)	Moderate	Moderate	15 - 20' - Clay, brown, sandy, damp.
20 - 25	844	Moderate	Moderate	20 - 25' - Clay, brown to tan, very fine grained dry.
25 - 30	(350)	Moderate	Slight	25 - 30' - Clay, tan, sandy with caliche nodules, dry.
30 - 35	80	None	None	30 - 35' - Sand, brown with caliche nodules, dry.
35 - 40	(118)	None	None	35 - 40' - Clay, brown to red, sandy with caliche nodules, dry.
40 - 45	135	None	None	40 - 43' - Clay, red to brown, sandy, dry 43 - 44' - Sandstone 44 - 45' - Clay, red to brown, sandy, dry
45 - 50	52.4	None	None	45 - 50' - Sandstone, brown, dry
50 - 55	(62.1)	None	None	50 - 60' - Clay, dark reddish brown, sandy with caliche nodules, dry
55 - 60	(73.6)	None	None	

Soil Boring Details

Date Drilled: April 14, 2009
Thickness of Bentonite Seal: 60 Ft
Depth of Exploratory Boring: 60 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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-3
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Soil Boring SB-4

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0			None	None
5		47.5	None	None
10		(45.8)	None	None
15		47.1	None	None
20		(44.9)	None	None
25	TD	45.4		

Soil Description

0 - 15' - Sand, red to brown, very fine grained, dry.

15 - 20' - Sand, red to brown, very fine grained, dry.

20 - 25' - Clay, red to brown, sandy, dry.

Soil Boring Details

Date Drilled: April 14, 2009
Thickness of Bentonite Seal: 25 Ft
Depth of Exploratory Boring: 25 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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.

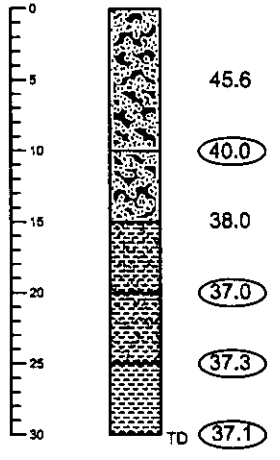
3.) The depths indicated are referenced from below ground surface (bgs).

Boring Log Details
Soil Boring SB-4
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Soil Boring SB-5



Depth (feet)	PID Reading	Petroleum Odor	Petroleum Stain
0			
5	45.6	None	None
10	(40.0)	None	None
15	38.0	None	None
20	(37.0)	None	None
25	(37.3)	None	None
30	(37.1) TD		

Soil Description

0 - 10' - Sand, red to brown, very fine grained, damp.

10 - 15" - Sand, red to brown, very fine grained, dry.

15 - 20' - Clay, tan, sandy, dry.

20 - 25' - Clay, tan to red, sandy with caliche, dry.

25 - 30' - Clay, brown to red, very fine grained, dry.

Soil Boring Details

Date Drilled: April 14, 2009
Thickness of Bentonite Seal: 30 Ft
Depth of Exploratory Boring: 30 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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-5
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Soil Boring SB-6

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0 - 5		32.3	None	None
5 - 10		35.1	None	None
10 - 15		29.8	None	None
15 - 20		32.4	None	None
20 - 25		19.6	None	None
25 - 30	TD	34.9	None	None

Soil Description

0 - 5' - Sand, red to brown, very fine grained, damp.

5 - 10' - Sand, red to brown, very fine grained with caliche nodules, damp.

10 - 15" - Sand, red to brown, very fine grained with some clay and calich nodules.

15 - 20' - Clay, brown to tan, sandy with caliche nodules, damp.

20 - 25' - Clay, tan to brown, sandy with caliche nodules, damp.

25 - 30' - Sand, brown, very fine grained, dry.

Soil Boring Details

Date Drilled: April 14, 2009
Thickness of Bentonite Seal: 30 Ft
Depth of Exploratory Boring: 30 Ft
Depth to Groundwater: N/A
Ground Water Elevation: N/A

▼ 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-6
Beeson 8-Inch Discharge Eddy County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
April 13, 2009	

Appendix B
Laboratory Analytical Reports

Analytical Report 324546

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Historical

16-FEB-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

16-FEB-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **324546**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 324546. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 324546 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SA Sample 1-6 Inch	S	Feb-03-09 09:00		324546-001
SA Sample 1-6 Feet	S	Feb-03-09 09:30		324546-002
SA Sample 2-6 Inch	S	Feb-03-09 09:45		324546-003
SA Sample 2-6 Feet	S	Feb-03-09 10:15		324546-004
SA Sample 3-6 Inch	S	Feb-03-09 10:30		324546-005
SA Sample 3-2 Feet	S	Feb-03-09 10:45		324546-006
SA Sample 4-6 Inch	S	Feb-03-09 11:00		324546-007
SA Sample 4-3 Feet	S	Feb-03-09 11:15		324546-008
MA Sample 5-6 Inch	S	Feb-03-09 11:30		324546-009
MA Sample 5-3 Feet	S	Feb-03-09 11:45		324546-010
NA Sample 6-6 Inch	S	Feb-03-09 12:00		324546-011
NA Sample 6-3 Feet	S	Feb-03-09 12:15		324546-012
NA Sample 7-6 Inch	S	Feb-03-09 12:30		324546-013
NA Sample 7-3 Feet	S	Feb-03-09 12:45		324546-014
NA Sample 8-6 Inch	S	Feb-03-09 13:00		324546-015
NA Sample 8-3 Feet	S	Feb-03-09 13:15		324546-016
NA Sample 9-6 Feet	S	Feb-03-09 14:00		324546-017
NA Sample 9-12 Feet	S	Feb-03-09 14:30		324546-018
NA Sample 10-6 Inch	S	Feb-03-09 15:00		324546-019
NA Sample 10-3 Feet	S	Feb-03-09 15:15		324546-020
NA Sample 11-6 Feet	S	Feb-03-09 16:15		324546-021
NA Sample 11-12 Feet	S	Feb-03-09 16:45		324546-022
NA Sample 12-6 Feet	S	Feb-03-09 17:45		324546-023
NA Sample 12-15 Feet	S	Feb-03-09 18:30		324546-024
NA Sample 13-6 Inch	S	Feb-03-09 18:45		324546-025
NA Sample 13-3 Feet	S	Feb-03-09 19:00		324546-026

Certificate of Analysis Summary 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 16-FEB-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	324546-001		324546-002		324546-003		324546-004		324546-005		324546-006	
	Field Id:	SA Sample 1-6 Inch		SA Sample 1-6 Feet		SA Sample 2-6 Inch		SA Sample 2-6 Feet		SA Sample 3-6 Inch		SA Sample 3-2 Feet	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-03-09 09:00		Feb-03-09 09:30		Feb-03-09 09:45		Feb-03-09 10:15		Feb-03-09 10:30		Feb-03-09 10:45	
BTEX by EPA 8021B	*Extracted:*	Feb-10-09 16:30		Feb-10-09 16:30		Feb-10-09 16:30		Feb-10-09 16:30		Feb-10-09 16:30		Feb-10-09 16:30	
	Analyzed:	Feb-11-09 02:25		Feb-11-09 02:45		Feb-11-09 03:05		Feb-11-09 03:25		Feb-11-09 03:46		Feb-11-09 04:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0010
Toluene		0.0030	0.0020	ND	0.0021	0.0051	0.0020	ND	0.0022	0.0049	0.0020	ND	0.0020
Ethylbenzene		0.0058	0.0010	0.0036	0.0011	0.0033	0.0010	0.0016	0.0011	0.1641	0.0010	0.0450	0.0010
m,p-Xylenes		0.0068	0.0020	0.0050	0.0021	0.0040	0.0020	ND	0.0022	0.0693	0.0020	0.0213	0.0020
o-Xylene		0.0016	0.0010	0.0017	0.0011	0.0011	0.0010	ND	0.0011	0.0025	0.0010	0.0048	0.0010
Total Xylenes		0.0084	0.0020	0.0067	0.0021	0.0051	0.0020	ND	0.0022	0.0718	0.0020	0.0261	0.0020
Total BTEX		0.0172	0.0010	0.0103	0.0011	0.0135	0.0010	0.0016	0.0011	0.2408	0.0010	0.0711	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	5.52	1.00	ND	1.00	10.72	1.00	ND	1.00	ND	1.00
TPH By SW8015 Mod	*Extracted:*	Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11	
	Analyzed:	Feb-11-09 22:41		Feb-11-09 23:06		Feb-11-09 23:30		Feb-11-09 23:55		Feb-12-09 00:20		Feb-12-09 00:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	75.3	ND	15.9	ND	75.6	ND	16.8	ND	75.3	ND	75.7
C12-C28 Diesel Range Hydrocarbons		2750	75.3	108	15.9	5860	75.6	1420	16.8	4020	75.3	437	75.7
C28-C35 Oil Range Hydrocarbons		559	75.3	53.0	15.9	940	75.6	254	16.8	1560	75.3	137	75.7
Total TPH		3309	75.3	161	15.9	6800	75.6	1674	16.8	5580	75.3	574	75.7

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 16-FEB-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	324546-007		324546-008		324546-009		324546-010		324546-011		324546-012	
	Field Id:	SA Sample 4-6 Inch		SA Sample 4-3 Feet		MA Sample 5-6 Inch		MA Sample 5-3 Feet		NA Sample 6-6 Inch		NA Sample 6-3 Feet	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-03-09 11:00		Feb-03-09 11:15		Feb-03-09 11:30		Feb-03-09 11:45		Feb-03-09 12:00		Feb-03-09 12:15	
BTEX by EPA 8021B	*Extracted:*	Feb-10-09 16:30		Feb-10-09 16:30		Feb-10-09 16:30		Feb-11-09 09:00		Feb-12-09 16:45		Feb-12-09 16:45	
	Analyzed:	Feb-11-09 04:27		Feb-11-09 04:48		Feb-11-09 05:08		Feb-11-09 12:52		Feb-12-09 16:47		Feb-12-09 17:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0010
Toluene		0.0047	0.0020	ND	0.0021	0.0045	0.0020	ND	0.0021	0.0037	0.0020	ND	0.0020
Ethylbenzene		0.0138	0.0010	0.0089	0.0010	0.0208	0.0010	0.1361	0.0011	0.0086	0.0010	0.0035	0.0010
m,p-Xylenes		0.0162	0.0020	0.0068	0.0021	0.0204	0.0020	0.0638	0.0021	0.0062	0.0020	0.0040	0.0020
o-Xylene		0.0029	0.0010	0.0018	0.0010	0.0045	0.0010	0.0118	0.0011	ND	0.0010	ND	0.0010
Total Xylenes		0.0191	0.0020	0.0086	0.0021	0.0249	0.0020	0.0756	0.0021	0.0062	0.0020	0.004	0.0020
Total BTEX		0.0376	0.0010	0.0175	0.0010	0.0502	0.0010	0.2117	0.0011	0.0185	0.0010	0.0075	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	4.57	1.00	ND	1.00	6.57	1.00	ND	1.00	1.11	1.00
TPH By SW8015 Mod	*Extracted:*	Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11	
	Analyzed:	Feb-12-09 01:09		Feb-12-09 01:34		Feb-12-09 01:59		Feb-12-09 02:23		Feb-12-09 03:13		Feb-12-09 03:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	150	ND	78.6	ND	151	21.7	16.1	152	151	ND	15.2
C12-C28 Diesel Range Hydrocarbons		5190	150	805	78.6	3490	151	829	16.1	11900	151	91.8	15.2
C28-C35 Oil Range Hydrocarbons		1080	150	183	78.6	811	151	206	16.1	1820	151	24.6	15.2
Total TPH		6270	150	988	78.6	4301	151	1056.7	16.1	13872	151	116.4	15.2

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 16-FEB-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	324546-013		324546-014		324546-015		324546-016		324546-017		324546-018	
	Field Id:	NA Sample 7-6 Inch		NA Sample 7-3 Feet		NA Sample 8-6 Inch		NA Sample 8-3 Feet		NA Sample 9-6 Feet		NA Sample 9-12 Feet	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-03-09 12:30		Feb-03-09 12:45		Feb-03-09 13:00		Feb-03-09 13:15		Feb-03-09 14:00		Feb-03-09 14:30	
BTEX by EPA 8021B	*Extracted:*	Feb-12-09 16:45		Feb-12-09 16:45		Feb-12-09 16:45		Feb-12-09 16:45		Feb-14-09 09:00		Feb-14-09 09:00	
	Analyzed:	Feb-12-09 17:31		Feb-12-09 17:51		Feb-12-09 18:11		Feb-12-09 18:32		Feb-14-09 17:47		Feb-14-09 18:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0010	0.0116	0.0010	ND	0.0010	ND	0.5233	ND	0.5318
Toluene		0.0059	0.0020	ND	0.0020	0.0190	0.0020	0.0233	0.0020	3.082	1.047	3.058	1.064
Ethylbenzene		0.0246	0.0010	0.0056	0.0010	0.0481	0.0010	0.0485	0.0010	24.28	0.5233	29.53	0.5318
m,p-Xylenes		0.0283	0.0020	0.0030	0.0020	0.0410	0.0020	0.0377	0.0020	21.89	1.047	23.69	1.064
o-Xylene		ND	0.0010	ND	0.0010	0.0015	0.0010	0.0088	0.0010	7.604	0.5233	8.801	0.5318
Total Xylenes		0.0283	0.0020	0.003	0.0020	0.0425	0.0020	0.0465	0.0020	29.494	1.047	32.491	1.064
Total BTEX		0.0588	0.0010	0.0086	0.0010	0.1212	0.0010	0.1183	0.0010	56.856	0.5233	65.079	0.5318
Percent Moisture	*Extracted:*												
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	ND	1.00	ND	1.00	1.29	1.00	4.46	1.00	5.98	1.00
TPH By SW8015 Mod	*Extracted:*	Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:11	
	Analyzed:	Feb-12-09 04:03		Feb-12-09 04:27		Feb-12-09 04:52		Feb-12-09 05:16		Feb-12-09 05:41		Feb-12-09 06:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	151	ND	15.1	160	151	17.4	15.2	4910	157	3240	160
C12-C28 Diesel Range Hydrocarbons		4060	151	99.4	15.1	8050	151	288	15.2	12100	157	8070	160
C28-C35 Oil Range Hydrocarbons		1070	151	22.8	15.1	1940	151	83.0	15.2	1090	157	1050	160
Total TPH		5130	151	122.2	15.1	10150	151	388.4	15.2	18100	157	12360	160

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 16-FEB-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	324546-019		324546-020		324546-021		324546-022		324546-023		324546-024	
	Field Id:	NA Sample 10-6 Inch		NA Sample 10-3 Feet		NA Sample 11-6 Feet		NA Sample 11-12 Feet		NA Sample 12-6 Feet		NA Sample 12-15 Feet	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-03-09 15:00		Feb-03-09 15:15		Feb-03-09 16:15		Feb-03-09 16:45		Feb-03-09 17:45		Feb-03-09 18:30	
BTEX by EPA 8021B	*Extracted:*	Feb-12-09 16:45		Feb-12-09 16:45		Feb-12-09 16:45		Feb-13-09 09:00		Feb-14-09 09:00		Feb-14-09 09:00	
	Analyzed:	Feb-12-09 19:34		Feb-12-09 19:55		Feb-12-09 20:57		Feb-13-09 16:28		Feb-14-09 18:28		Feb-14-09 18:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	0.0166	0.0010	0.0053	0.0011	ND	0.0531	ND	0.5242	ND	0.5217
Toluene		ND	0.0020	0.0318	0.0021	0.0232	0.0022	ND	0.1062	4.482	1.048	3.850	1.043
Ethylbenzene		0.0947	0.0010	0.0977	0.0010	0.0995	0.0011	4.320	0.0531	41.63	0.5242	33.43	0.5217
m,p-Xylenes		0.0142	0.0020	0.0956	0.0021	0.3236	0.0022	7.574	0.1062	51.06	1.048	48.38	1.043
o-Xylene		0.0283	0.0010	0.0396	0.0010	0.2365	0.0011	1.487	0.0531	12.48	0.5242	13.83	0.5217
Total Xylenes		0.0425	0.0020	0.1352	0.0021	0.5601	0.0022	9.061	0.1062	63.54	1.048	62.21	1.043
Total BTEX		0.1372	0.0010	0.2813	0.0010	0.6881	0.0011	13.381	0.0531	109.652	0.5242	99.49	0.5217
Percent Moisture	*Extracted:*												
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00		Feb-10-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.36	1.00	4.59	1.00	7.88	1.00	5.80	1.00	4.61	1.00	4.16	1.00
TPH By SW8015 Mod	*Extracted:*	Feb-11-09 20:11		Feb-11-09 20:11		Feb-11-09 20:46		Feb-11-09 20:46		Feb-11-09 20:46		Feb-11-09 20:46	
	Analyzed:	Feb-12-09 06:31		Feb-12-09 06:55		Feb-11-09 23:04		Feb-11-09 23:27		Feb-11-09 23:50		Feb-12-09 00:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		217	154	592	157	509	163	1470	159	2860	157	2420	157
C12-C28 Diesel Range Hydrocarbons		777	154	8870	157	3850	163	5460	159	8310	157	6800	157
C28-C35 Oil Range Hydrocarbons		206	154	1660	157	563	163	722	159	980	157	825	157
Total TPH		1200	154	11122	157	4922	163	7652	159	12150	157	10045	157

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 324546

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 16-FEB-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	324546-025		324546-026			
	Field Id:	NA Sample 13-6 Inch		NA Sample 13-3 Feet			
	Depth:						
	Matrix:	SOIL		SOIL			
	Sampled:	Feb-03-09 18:45		Feb-03-09 19:00			
BTEX by EPA 8021B	*Extracted:*	Feb-12-09 16:45		Feb-12-09 16:45			
	Analyzed:	Feb-12-09 22:19		Feb-12-09 23:00			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.0010	ND	0.0010		
Toluene		0.0023	0.0020	ND	0.0020		
Ethylbenzene		0.2413	0.0010	0.0012	0.0010		
m,p-Xylenes		0.1296	0.0020	ND	0.0020		
o-Xylene		0.0162	0.0010	ND	0.0010		
Total Xylenes		0.1458	0.0020	ND	0.0020		
Total BTEX		0.3894	0.0010	0.0012	0.0010		
Percent Moisture	*Extracted:*						
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00			
	Units/RL:	%	RL	%	RL		
Percent Moisture		1.82	1.00	1.75	1.00		
TPH By SW8015 Mod	*Extracted:*	Feb-11-09 20:46		Feb-11-09 20:46			
	Analyzed:	Feb-12-09 14:31		Feb-12-09 00:59			
	Units/RL:	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		30.2	15.3	ND	15.3		
C12-C28 Diesel Range Hydrocarbons		204	15.3	ND	15.3		
C28-C35 Oil Range Hydrocarbons		134	15.3	ND	15.3		
Total TPH		368.2	15.3	ND	15.3		

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Brent Barron
Odessa Laboratory Director

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749179 **Sample:** 324302-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 749179 **Sample:** 324302-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 749179 **Sample:** 324546-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0241	0.0300	80	80-120	

Lab Batch #: 749179 **Sample:** 324546-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 749179 **Sample:** 324546-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0184	0.0300	61	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749179 **Sample:** 324546-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 749179 **Sample:** 324546-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0234	0.0300	78	80-120	**

Lab Batch #: 749179 **Sample:** 324546-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 749179 **Sample:** 324546-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0198	0.0300	66	80-120	**

Lab Batch #: 749179 **Sample:** 324546-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749179 **Sample:** 324546-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0212	0.0300	71	80-120	**

Lab Batch #: 749179 **Sample:** 524500-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 749179 **Sample:** 524500-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 749179 **Sample:** 524500-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 749315 **Sample:** 324546-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0385	0.0300	128	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749315 **Sample:** 324679-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 749315 **Sample:** 324679-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 749315 **Sample:** 524599-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 749315 **Sample:** 524599-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 749315 **Sample:** 524599-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749440 **Sample:** 324546-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0204	0.0300	68	80-120	*

Lab Batch #: 749440 **Sample:** 324546-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 749440 **Sample:** 324546-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0222	0.0300	74	80-120	*

Lab Batch #: 749440 **Sample:** 324546-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 749440 **Sample:** 324546-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0209	0.0300	70	80-120	*

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749440 **Sample:** 324546-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0373	0.0300	124	80-120	*
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 749440 **Sample:** 324546-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 749440 **Sample:** 324546-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0759	0.0300	253	80-120	*

Lab Batch #: 749440 **Sample:** 324546-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.2781	0.0300	927	80-120	*

Lab Batch #: 749440 **Sample:** 324546-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0345	0.0300	115	80-120	
4-Bromofluorobenzene	0.0558	0.0300	186	80-120	*

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749440 **Sample:** 324546-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 749440 **Sample:** 324634-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 749440 **Sample:** 324634-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 749440 **Sample:** 524662-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 749440 **Sample:** 524662-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749440 **Sample:** 524662-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 749516 **Sample:** 324546-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0652	0.0300	217	80-120	**

Lab Batch #: 749516 **Sample:** 324881-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 749516 **Sample:** 324881-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 749516 **Sample:** 524714-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749516 **Sample:** 524714-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 749516 **Sample:** 524714-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 749636 **Sample:** 324546-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	80-120	
4-Bromofluorobenzene	0.0441	0.0300	147	80-120	**

Lab Batch #: 749636 **Sample:** 324546-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0477	0.0300	159	80-120	**

Lab Batch #: 749636 **Sample:** 324546-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0362	0.0300	121	80-120	**
4-Bromofluorobenzene	0.0448	0.0300	149	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749636 **Sample:** 324546-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0356	0.0300	119	80-120	
4-Bromofluorobenzene	0.0474	0.0300	158	80-120	**

Lab Batch #: 749636 **Sample:** 524791-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 749636 **Sample:** 524791-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 749636 **Sample:** 524791-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 749342 **Sample:** 324546-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	71.4	50.0	143	70-135	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749342 **Sample:** 324546-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	15.9	100	16	70-135	**
o-Terphenyl	64.5	50.0	129	70-135	

Lab Batch #: 749342 **Sample:** 324546-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	152	100	152	70-135	**
o-Terphenyl	62.6	50.0	125	70-135	

Lab Batch #: 749342 **Sample:** 324546-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	141	100	141	70-135	**
o-Terphenyl	61.2	50.0	122	70-135	

Lab Batch #: 749342 **Sample:** 324546-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 749342 **Sample:** 324546-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749342 **Sample:** 324679-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	56.1	50.0	112	70-135	

Lab Batch #: 749342 **Sample:** 324679-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	61.0	50.0	122	70-135	

Lab Batch #: 749342 **Sample:** 524616-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	59.4	50.0	119	70-135	

Lab Batch #: 749342 **Sample:** 524616-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 749342 **Sample:** 524616-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749351 **Sample:** 324546-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	100	90	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 749351 **Sample:** 324546-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	100	99	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 749351 **Sample:** 324546-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.8	100	80	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 749351 **Sample:** 324546-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.8	100	95	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 749351 **Sample:** 324546-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	100	86	70-135	
o-Terphenyl	43.6	50.0	87	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749351 **Sample:** 324546-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	100	94	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 749351 **Sample:** 324546-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.2	100	78	70-135	
o-Terphenyl	41.4	50.0	83	70-135	

Lab Batch #: 749351 **Sample:** 324546-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	100	93	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 749351 **Sample:** 324546-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	100	81	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

Lab Batch #: 749351 **Sample:** 324546-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	
o-Terphenyl	53.1	50.0	106	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749351 **Sample:** 324546-010 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 749351 **Sample:** 324546-010 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

Lab Batch #: 749351 **Sample:** 324546-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.5	100	83	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 749351 **Sample:** 324546-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	52.9	50.0	106	70-135	

Lab Batch #: 749351 **Sample:** 324546-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.0	100	84	70-135	
o-Terphenyl	44.1	50.0	88	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749351 **Sample:** 324546-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 749351 **Sample:** 324546-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 749351 **Sample:** 324546-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 749351 **Sample:** 324546-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	26.1	100	26	70-135	**
o-Terphenyl	57.8	50.0	116	70-135	

Lab Batch #: 749351 **Sample:** 324546-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	152	100	152	70-135	**
o-Terphenyl	56.1	50.0	112	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 324546,

Project ID: TNM-Beeson Historical

Lab Batch #: 749351 **Sample:** 324546-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	100	97	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 749351 **Sample:** 324546-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 749351 **Sample:** 524621-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 749351 **Sample:** 524621-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	56.2	50.0	112	70-135	

Lab Batch #: 749351 **Sample:** 524621-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 324546 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 02/10/2009 **Date Analyzed:** 02/10/2009

Lab Batch ID: 749179 **Sample:** 524500-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0989	99	0.1	0.1014	101	2	70-130	35	
Toluene	ND	0.1000	0.1035	104	0.1	0.1060	106	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1024	102	0.1	0.1051	105	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.2116	106	0.2	0.2174	109	3	70-135	35	
o-Xylene	ND	0.1000	0.1047	105	0.1	0.1078	108	3	71-133	35	

Analyst: ASA **Date Prepared:** 02/11/2009 **Date Analyzed:** 02/11/2009

Lab Batch ID: 749315 **Sample:** 524599-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1010	101	0.1	0.1015	102	0	70-130	35	
Toluene	ND	0.1000	0.1011	101	0.1	0.1016	102	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1001	100	0.1	0.1002	100	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.2074	104	0.2	0.2073	104	0	70-135	35	
o-Xylene	ND	0.1000	0.1035	104	0.1	0.1032	103	0	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 324546 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 02/12/2009 **Date Analyzed:** 02/12/2009

Lab Batch ID: 749440 **Sample:** 524662-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1010	101	0.1	0.1035	104	2	70-130	35	
Toluene	ND	0.1000	0.1026	103	0.1	0.1047	105	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1017	102	0.1	0.1036	104	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2102	105	0.2	0.2152	108	2	70-135	35	
o-Xylene	ND	0.1000	0.1037	104	0.1	0.1059	106	2	71-133	35	

Analyst: ASA **Date Prepared:** 02/13/2009 **Date Analyzed:** 02/13/2009

Lab Batch ID: 749516 **Sample:** 524714-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1030	103	0.1	0.1032	103	0	70-130	35	
Toluene	ND	0.1000	0.1047	105	0.1	0.1048	105	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1061	106	0.1	0.1063	106	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.2211	111	0.2	0.2223	111	1	70-135	35	
o-Xylene	ND	0.1000	0.1074	107	0.1	0.1091	109	2	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 324546 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 02/14/2009 **Date Analyzed:** 02/14/2009

Lab Batch ID: 749636 **Sample:** 524791-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0932	93	0.1	0.0990	99	6	70-130	35	
Toluene	ND	0.1000	0.0928	93	0.1	0.0997	100	7	70-130	35	
Ethylbenzene	ND	0.1000	0.0927	93	0.1	0.0997	100	7	71-129	35	
m,p-Xylenes	ND	0.2000	0.1918	96	0.2	0.2073	104	8	70-135	35	
o-Xylene	ND	0.1000	0.0951	95	0.1	0.1024	102	7	71-133	35	

Analyst: BHW **Date Prepared:** 02/11/2009 **Date Analyzed:** 02/11/2009

Lab Batch ID: 749342 **Sample:** 524616-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	948	95	1000	960	96	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	974	97	1000	980	98	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 324546 **Project ID:** TNM-Beeson Historical

Analyst: BHW **Date Prepared:** 02/11/2009 **Date Analyzed:** 02/11/2009

Lab Batch ID: 749351 **Sample:** 524621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1120	112	1000	1120	112	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1060	106	1000	1050	105	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 324546 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 749179 **QC- Sample ID:** 324302-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/11/2009 **Date Prepared:** 02/10/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1118	0.0794	71	0.1118	0.0781	70	2	70-130	35	
Toluene	ND	0.1118	0.0816	73	0.1118	0.0802	72	2	70-130	35	
Ethylbenzene	ND	0.1118	0.0821	73	0.1118	0.0807	72	2	71-129	35	
m,p-Xylenes	ND	0.2236	0.1723	77	0.2236	0.1696	76	2	70-135	35	
o-Xylene	ND	0.1118	0.0805	72	0.1118	0.0792	71	2	71-133	35	

Lab Batch ID: 749315 **QC- Sample ID:** 324679-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/11/2009 **Date Prepared:** 02/11/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0843	84	0.1000	0.0884	88	5	70-130	35	
Toluene	ND	0.1000	0.0845	85	0.1000	0.0895	90	6	70-130	35	
Ethylbenzene	ND	0.1000	0.0808	81	0.1000	0.0871	87	8	71-129	35	
m,p-Xylenes	ND	0.2000	0.1685	84	0.2000	0.1790	90	6	70-135	35	
o-Xylene	ND	0.1000	0.0827	83	0.1000	0.0881	88	6	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 324546 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 749440 **QC- Sample ID:** 324634-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/13/2009 **Date Prepared:** 02/12/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1032	0.0780	76	0.1032	0.0748	72	4	70-130	35	
Toluene	ND	0.1032	0.0494	48	0.1032	0.0450	44	9	70-130	35	X
Ethylbenzene	ND	0.1032	0.0361	35	0.1032	0.0316	31	13	71-129	35	X
m,p-Xylenes	ND	0.2065	0.0670	32	0.2065	0.0580	28	14	70-135	35	X
o-Xylene	ND	0.1032	0.0367	36	0.1032	0.0329	32	11	71-133	35	X

Lab Batch ID: 749516 **QC- Sample ID:** 324881-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/13/2009 **Date Prepared:** 02/13/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1061	0.0779	73	0.1061	0.0801	75	3	70-130	35	
Toluene	ND	0.1061	0.0726	68	0.1061	0.0759	72	4	70-130	35	X
Ethylbenzene	ND	0.1061	0.0698	66	0.1061	0.0742	70	6	71-129	35	X
m,p-Xylenes	ND	0.2122	0.1418	67	0.2122	0.1519	72	7	70-135	35	X
o-Xylene	ND	0.1061	0.0699	66	0.1061	0.0746	70	7	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 324546 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 749342 **QC- Sample ID:** 324679-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/12/2009 **Date Prepared:** 02/11/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1040	976	94	1040	959	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1040	1000	96	1040	1000	96	0	70-135	35	

Lab Batch ID: 749351 **QC- Sample ID:** 324546-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/12/2009 **Date Prepared:** 02/11/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	21.7	1070	1210	111	1070	1180	108	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	829	1070	1890	99	1070	1910	101	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 324546

Lab Batch #: 749157 **Project ID:** TNM-Beeson Historical
Date Analyzed: 02/10/2009 **Date Prepared:** 02/10/2009 **Analyst:** BEV
QC- Sample ID: 324546-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	ND	ND	NC	20	

Lab Batch #: 749161
Date Analyzed: 02/10/2009 **Date Prepared:** 02/10/2009 **Analyst:** BEV
QC- Sample ID: 324546-021 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.88	8.14	3	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant — PAGE 01 OF 03 — Project Name: Beeson 8" Discharge

Company Name: Basin Environmental Service Technologies, LLC — Project #: TNM - Beeson Historical

Company Address: 2800 Plains Hwy — Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 — PO #: PAA - J. Henry

Telephone No: (575) 605-7210 — Fax No: (505) 396-1429 — Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: C.J Bryant — e-mail: cjbryant@basin-consulting.com

(lab use only) ORDER #: 324546

Analyze For: TCLP / TOTAL

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl (VOA X 2)	H_2SO_4	NaOH	$Na_2S_2O_3$	None (PAH)	Other (Specify)	Matrix: GW - Groundwater / S - Soil/Sed / SW-Surface Water / DW - Drinking Water / Sludge / Other (Specify)	8015M: TPH 418.1	TPH TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N O R M	PAH	EPA Plant Filter Test	Chlorides E 300	RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT
01	SA Sample 1 - 6 inch			2/3/2009	900		1	X								Soil	X									X							X
02	SA Sample 1 - 6 feet			2/3/2009	930		1	X								Soil	X									X							X
03	SA Sample 2 - 6 inch			2/3/2009	945		1	X								Soil	X									X							X
04	SA Sample 2 - 6 feet			2/3/2009	1015		1	X								Soil	X									X							X
05	SA Sample 3 - 6 inch			2/3/2009	1030		1	X								Soil	X									X							X
06	SA Sample 3 - 2 feet			2/3/2009	1045		1	X								Soil	X									X							X
07	SA Sample 4 - 6 inch			2/3/2009	1100		1	X								Soil	X									X							X
08	SA Sample 4 - 3 feet			2/3/2009	1115		1	X								Soil	X									X							X
09	MA Sample 5 - 6 inch			2/3/2009	1130		1	X								Soil	X									X							X
10	MA Sample 5 - 3 feet			2/3/2009	1145		1	X								Soil	X									X							X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
	2/4/09	0830			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by (LEO): Karen Fitch	Date: 02-04-09	Time: 0830

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79766
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant PAGE 02 OF 03 Project Name: Beeson 8" Discharge

Company Name: Basin Environmental Service Technologies, LLC Project #: TNM - Beeson Historical

Company Address: 2800 Plains Hwy Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 PO #: PAA - J. Henry

Telephone No: (575) 396-7210 Fax No: (505) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: C. S. Bryant e-mail: cjbryant@basin-consulting.com

(lab use only)
ORDER #: 324546

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA X 2)	H2SO4	NaOH	Na2S2O3	None (Plain)	Other (Specify)	Matrix: Soil/Water Sludge	Groundwater	Wastewater	Drinking Water	Other (Specify)	Analyze For: TCLP: 8015M	TOTAL: TPH 418.1	TPH TX 1005	Cations (Ca Mg Na K)	Anions (Cl SO4 Alkalinity)	BAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B or 8260 (BTEX, EDB)	RCI	N O R M	PAH	EPA Paint Filter Test	Chlorides E 300	RUSH TAT (mon-weekend) 24, 48, 72 hrs	Standard TAT
11	NA Sample 6 - 6 inch			2/3/2009	1200		1	X								Soil					X															X
12	NA Sample 6 - 3 feet			2/3/2009	1215		1	X								Soil					X																X
13	NA Sample 7 - 6 inch			2/3/2009	1230		1	X								Soil					X																X
14	NA Sample 7 - 3 feet			2/3/2009	1245		1	X								Soil					X																X
15	NA Sample 8 - 6 inch			2/3/2009	1300		1	X								Soil					X																X
116	NA Sample 8 - 3 feet			2/3/2009	1315		1	X								Soil					X																X
17	NA Sample 9 - 6 feet			2/3/2009	1400		1	X								Soil					X																X
18	NA Sample 9 - 12 feet			2/3/2009	1430		1	X								Soil					X																X
19	NA Sample 10 - 6 inch			2/3/2009	1500		1	X								Soil					X																X
20	NA Sample 10 - 3 feet			2/3/2009	1515		1	X								Soil					X																X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
	2/4/09	0855			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by	Date	Time	Received by ELOT:	Date	Time
				2/4/09	0855

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt 3.5 °C

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant PAGE 03 OF 03 Project Name: Beeson 8" Discharge

Company Name: Basin Environmental Service Technologies, LLC Project #: TNM - Beeson Historical

Company Address: 2500 Plains Hwy Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 PO #: PAA - J. Henry

Telephone No: (575) 605-7210 Fax No: (505) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: C. Bryant e-mail: cjbryant@basin-consulting.com

(lab use only) ORDER #: 324546

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl (VOA 4 2)	H_2SO_4	NaOH	$Na_2S_2O_3$	None (PAH)	Other (Specify)	Matrix: Soil	Analyze For: TPH 418.1 / 8015M	TPH TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	NORM	PAH	EPA Plant Plan Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
21	NA Sample 11 - 6 feet			2/3/2009	1615		1	X								Soil	X								X							X
22	NA Sample 11 - 12 feet			2/3/2009	1645		1	X								Soil	X															X
23	NA Sample 12 - 6 feet			2/3/2009	1745		1	X								Soil	X															X
24	NA Sample 12 - 15 feet			2/3/2009	1830		1	X								Soil	X															X
25	NA Sample 13 - 6 inch			2/3/2009	1845		1	X								Soil	X															X
26	NA Sample 13 - 3 feet			2/3/2009	1900		1	X								Soil	X															X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
	2/4/09	0830			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by ELOT:	Date	Time
			Jessica Fitch	2/10/09	0856

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sample/Client Rep.?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin

Date/ Time: 04-10-09 @ 0856

Lab ID #: 324946

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	2.5 °C	
#2	Shipping container in good condition?	Yes	No	(N/A)	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present (N/A)	
#4	Custody Seals intact on sample bottles/ container? (N/A)	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 325012

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Historical

17-FEB-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

17-FEB-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **325012**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 325012. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 325012 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 325012

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SA Sample 1-6 Inch	S	Feb-03-09 09:00		325012-001
NA Sample 9-6 Feet	S	Feb-03-09 14:00		325012-002

Certificate of Analysis Summary 325012

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Feb-10-09 08:56 am
Report Date: 17-FEB-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	325012-001		325012-002							
	Field Id:	SA Sample 1-6 Inch		NA Sample 9-6 Feet							
	Depth:										
	Matrix:	SOIL		SOIL							
	Sampled:	Feb-03-09 09:00		Feb-03-09 14:00							
Anions by EPA 300	*Extracted:*										
	Analyzed:	Feb-16-09 11:03		Feb-16-09 11:03							
	Units/RL:	mg/kg	RL	mg/kg	RL						
Chloride		ND	5.02	ND	5.23						
Percent Moisture	*Extracted:*										
	Analyzed:	Feb-10-09 17:00		Feb-10-09 17:00							
	Units/RL:	%	RL	%	RL						
Percent Moisture		ND	1.00	4.46	1.00						

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Blank Spike Recovery

Project Name: Beeson 8" Discharge

Work Order #: 325012 **Project ID:** TNM-Beeson Historical

Lab Batch #: 749735 **Sample:** 749735-1-BKS **Matrix:** Solid

Date Analyzed: 02/16/2009 **Date Prepared:** 02/16/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by EPA 300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	11.4	114	90-110	H

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 325012
Lab Batch #: 749735
Date Analyzed: 02/16/2009
QC- Sample ID: 325035-001 S
Reporting Units: mg/kg

Date Prepared: 02/16/2009
Batch #: 1

Project ID: TNM-Beeson Historical
Analyst: LATCOR
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5150	2350	7710	109	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 325012

Lab Batch #: 749735 **Project ID:** TNM-Beeson Historical
Date Analyzed: 02/16/2009 **Date Prepared:** 02/16/2009 **Analyst:** LATCOR
QC- Sample ID: 325035-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5150	5050	2	20	

Lab Batch #: 749157
Date Analyzed: 02/10/2009 **Date Prepared:** 02/10/2009 **Analyst:** BEV
QC- Sample ID: 324546-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	ND	ND	NC	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575) 605-7210 Fax No: (505) 396-1429
Sampler Signature: Cynthia Henley for C. S. Bryant e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: TNM - Beeson Historical
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 325017

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: Drw - Drinking Water, Sw - Surface Water, Ww - Wastewater, Gw - Groundwater, S - Soil/Solid, Sd - Solid, Sl - Sludge, O - Oil, A - Air, Other - Specify	TCLP: TPH 418.1 8015M	TPH TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	TOTAL: N O R M	Chloride L 300		RUSH TAT (Pre Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	SA Sample 1 - 6 inch			2/3/2009	900		1	X																					X			X
02	NA Sample 9 - 6 feet			2/3/2009	1400		1	X																					X			X

Special Instructions:

Relinquished by	Date	Time	Received by:	Date	Time
Cynthia Henley	2/10/09	0830			
Relinquished by	Date	Time	Received by:	Date	Time
Relinquished by	Date	Time	Received by ELOT: Jessica Fitch	02-11-09	0830

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) / Intact Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler / Client Rep ? Y N
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin

Date/ Time: [illegible]

Lab ID # : [illegible]

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	2.5 °C	
#2	Shipping container in good condition?	Yes	No	[illegible]	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present [illegible]	
#4	Custody Seals intact on sample bottles/ container? [illegible]	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 330355

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

22-APR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

22-APR-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **330355**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 330355. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 330355 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 10'	S	Apr-13-09 09:00		330355-001
SB-1 @ 20'	S	Apr-13-09 09:20		330355-002
SB-1 @ 30'	S	Apr-13-09 09:40		330355-003
SB-1 @ 40'	S	Apr-13-09 10:10		330355-004
SB-1 @ 50'	S	Apr-13-09 10:45		330355-005
SB-1 @ 60'	S	Apr-13-09 11:15		330355-006
SB-1 @ 65'	S	Apr-13-09 11:45		330355-007
SB-2 @ 10'	S	Apr-13-09 13:00		330355-008
SB-2 @ 20'	S	Apr-13-09 13:20		330355-009
SB-2 @ 30'	S	Apr-13-09 13:40		330355-010
SB-2 @ 40'	S	Apr-13-09 14:10		330355-011
SB-2 @ 50'	S	Apr-13-09 14:40		330355-012
SB-2 @ 55'	S	Apr-13-09 15:10		330355-013
SB-3 @ 10'	S	Apr-14-09 08:40		330355-014
SB-3 @ 20'	S	Apr-14-09 09:00		330355-015
SB-3 @ 30'	S	Apr-14-09 09:25		330355-016
SB-3 @ 40'	S	Apr-14-09 09:50		330355-017
SB-3 @ 55'	S	Apr-14-09 10:15		330355-018
SB-3 @ 60'	S	Apr-14-09 10:50		330355-019
SB-4 @ 10'	S	Apr-14-09 11:20		330355-020
SB-4 @ 20'	S	Apr-14-09 11:40		330355-021
SB-4 @ 25'	S	Apr-14-09 12:10		330355-022
SB-5 @ 10'	S	Apr-14-09 13:30		330355-023
SB-5 @ 20'	S	Apr-14-09 13:50		330355-024
SB-5 @ 25'	S	Apr-14-09 14:15		330355-025
SB-5 @ 30'	S	Apr-14-09 14:45		330355-026
SB-6 @ 10'	S	Apr-14-09 15:30		330355-027
SB-6 @ 20'	S	Apr-14-09 15:50		330355-028
SB-6 @ 25'	S	Apr-14-09 16:15		330355-029
SB-6 @ 30'	S	Apr-14-09 16:40		330355-030

Certificate of Analysis Summary 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am
Report Date: 22-APR-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	330355-001		330355-002		330355-003		330355-004		330355-005		330355-006	
	Field Id:	SB-1 @ 10'		SB-1 @ 20'		SB-1 @ 30'		SB-1 @ 40'		SB-1 @ 50'		SB-1 @ 60'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-13-09 09:00		Apr-13-09 09:20		Apr-13-09 09:40		Apr-13-09 10:10		Apr-13-09 10:45		Apr-13-09 11:15	
BTEX by EPA 8021B	*Extracted:*	Apr-17-09 11:00		Apr-20-09 14:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00	
	Analyzed:	Apr-18-09 22:15		Apr-21-09 00:51		Apr-18-09 17:50		Apr-18-09 20:13		Apr-18-09 18:10		Apr-18-09 18:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.2233	0.1079	ND	0.5503	ND	0.0011	ND	0.0263	ND	0.0011	ND	0.0010
Toluene		2.430	0.2158	2.141	1.101	ND	0.0022	ND	0.0526	ND	0.0021	ND	0.0021
Ethylbenzene		4.210	0.1079	9.295	0.5503	0.0193	0.0011	0.0447	0.0263	0.0044	0.0011	0.0030	0.0010
m,p-Xylenes		9.362	0.2158	15.54	1.101	0.0592	0.0022	0.1280	0.0526	0.0079	0.0021	0.0029	0.0021
o-Xylene		2.106	0.1079	1.354	0.5503	0.0243	0.0011	0.0628	0.0263	0.0027	0.0011	ND	0.0010
Total Xylenes		11.468	0.1079	16.894	0.5503	0.0835	0.0011	0.1908	0.0263	0.0106	0.0011	0.0029	0.0010
Total BTEX		18.3313	0.1079	28.33	0.5503	0.1028	0.0011	0.2355	0.0263	0.015	0.0011	0.0059	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7.31	1.00	9.33	1.00	8.61	1.00	4.88	1.00	6.00	1.00	3.26	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Analyzed:	Apr-18-09 15:12		Apr-18-09 15:37		Apr-18-09 16:02		Apr-18-09 16:26		Apr-18-09 16:52		Apr-18-09 17:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		961	162	1820	165	79.4	16.4	59.0	15.8	53.5	16.0	19.0	15.5
C12-C28 Diesel Range Hydrocarbons		5570	162	4230	165	316	16.4	551	15.8	370	16.0	144	15.5
C28-C35 Oil Range Hydrocarbons		692	162	342	165	21.6	16.4	43.9	15.8	56.3	16.0	ND	15.5
Total TPH		7223	162	6392	165	417	16.4	653.9	15.8	479.8	16.0	163	15.5

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am
Report Date: 22-APR-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	330355-007		330355-008		330355-009		330355-010		330355-011		330355-012	
	Field Id:	SB-1 @ 65'		SB-2 @ 10'		SB-2 @ 20'		SB-2 @ 30'		SB-2 @ 40'		SB-2 @ 50'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-13-09 11:45		Apr-13-09 13:00		Apr-13-09 13:20		Apr-13-09 13:40		Apr-13-09 14:10		Apr-13-09 14:40	
BTEX by EPA 8021B	*Extracted:*	Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00	
	Analyzed:	Apr-18-09 16:07		Apr-18-09 20:33		Apr-18-09 20:54		Apr-18-09 21:14		Apr-18-09 16:28		Apr-18-09 16:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.1037	3.280	0.5655	ND	0.0110	0.0034	0.0014	ND	0.0011
Toluene		ND	0.0022	0.4533	0.2074	15.68	1.131	0.1288	0.0220	0.0036	0.0027	ND	0.0021
Ethylbenzene		0.0024	0.0011	14.91	0.1037	105.6	0.5655	1.323	0.0110	0.0229	0.0014	0.0448	0.0011
m,p-Xylenes		0.0028	0.0022	20.00	0.2074	63.07	1.131	1.316	0.0220	0.0160	0.0027	0.0546	0.0021
o-Xylene		ND	0.0011	1.890	0.1037	9.964	0.5655	0.1450	0.0110	0.0023	0.0014	0.0048	0.0011
Total Xylenes		0.0028	0.0011	21.89	0.1037	73.034	0.5655	1.461	0.0110	0.0183	0.0014	0.0594	0.0011
Total BTEX		0.0052	0.0011	37.2533	0.1037	197.594	0.5655	2.9128	0.0110	0.0482	0.0014	0.1042	0.0011
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		8.11	1.00	3.59	1.00	11.58	1.00	9.10	1.00	25.96	1.00	6.26	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Analyzed:	Apr-18-09 17:42		Apr-18-09 18:07		Apr-18-09 18:32		Apr-18-09 18:57		Apr-18-09 19:46		Apr-18-09 20:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.3	2040	156	3750	170	1270	165	27.4	20.3	58.1	16.0
C12-C28 Diesel Range Hydrocarbons		89.4	16.3	7470	156	5140	170	3680	165	89.8	20.3	337	16.0
C28-C35 Oil Range Hydrocarbons		ND	16.3	731	156	548	170	286	165	ND	20.3	36.9	16.0
Total TPH		89.4	16.3	10241	156	9438	170	5236	165	117.2	20.3	432	16.0

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am
Report Date: 22-APR-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	330355-013		330355-014		330355-015		330355-016		330355-017		330355-018	
	Field Id:	SB-2 @ 55'		SB-3 @ 10'		SB-3 @ 20'		SB-3 @ 30'		SB-3 @ 40'		SB-3 @ 55'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-13-09 15:10		Apr-14-09 08:40		Apr-14-09 09:00		Apr-14-09 09:25		Apr-14-09 09:50		Apr-14-09 10:15	
BTEX by EPA 8021B	*Extracted:*	Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00		Apr-17-09 11:00	
	Analyzed:	Apr-18-09 17:09		Apr-18-09 17:29		Apr-18-09 21:35		Apr-18-09 21:55		Apr-18-09 19:32		Apr-18-09 19:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0010	ND	0.5300	ND	0.0534	ND	0.0011	ND	0.0011
Toluene		ND	0.0023	ND	0.0021	3.848	1.060	0.1907	0.1068	ND	0.0022	ND	0.0022
Ethylbenzene		ND	0.0012	0.0015	0.0010	38.06	0.5300	2.604	0.0534	0.0316	0.0011	0.0026	0.0011
m,p-Xylenes		ND	0.0023	ND	0.0021	47.34	1.060	4.156	0.1068	0.0642	0.0022	0.0034	0.0022
o-Xylene		ND	0.0012	ND	0.0010	3.360	0.5300	0.3167	0.0534	0.0312	0.0011	0.0016	0.0011
Total Xylenes		ND	0.0012	ND	0.0010	50.7	0.5300	4.4727	0.0534	0.0954	0.0011	0.005	0.0011
Total BTEX		ND	0.0012	0.0015	0.0010	92.608	0.5300	7.2674	0.0534	0.127	0.0011	0.0076	0.0011
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.49	1.00	2.90	1.00	5.66	1.00	6.39	1.00	7.66	1.00	8.12	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Analyzed:	Apr-18-09 20:35		Apr-18-09 21:00		Apr-18-09 21:26		Apr-18-09 21:51		Apr-18-09 22:16		Apr-18-09 22:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.5	20.1	15.4	2790	159	732	16.0	103	16.2	19.1	16.3
C12-C28 Diesel Range Hydrocarbons		23.2	17.5	89.8	15.4	5130	159	2770	16.0	511	16.2	131	16.3
C28-C35 Oil Range Hydrocarbons		ND	17.5	ND	15.4	387	159	200	16.0	38.4	16.2	ND	16.3
Total TPH		23.2	17.5	109.9	15.4	8307	159	3702	16.0	652.4	16.2	150.1	16.3

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am
Report Date: 22-APR-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	330355-019		330355-020		330355-021		330355-022		330355-023		330355-024	
	Field Id:	SB-3 @ 60'		SB-4 @ 10'		SB-4 @ 20'		SB-4 @ 25'		SB-5 @ 10'		SB-5 @ 20'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-14-09 10:50		Apr-14-09 11:20		Apr-14-09 11:40		Apr-14-09 12:10		Apr-14-09 13:30		Apr-14-09 13:50	
BTEX by EPA 8021B	*Extracted:*	Apr-21-09 10:00		Apr-20-09 14:00		Apr-20-09 14:00		Apr-20-09 14:00		Apr-20-09 14:00		Apr-20-09 14:00	
	Analyzed:	Apr-22-09 09:15		Apr-20-09 22:07		Apr-20-09 22:27		Apr-20-09 22:48		Apr-20-09 23:09		Apr-20-09 23:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0054	ND	0.0011	ND	0.0011	ND	0.0013	ND	0.0011	ND	0.0013
Toluene		ND	0.0109	ND	0.0022	ND	0.0022	ND	0.0026	ND	0.0022	ND	0.0026
Ethylbenzene		ND	0.0054	ND	0.0011	ND	0.0011	ND	0.0013	ND	0.0011	ND	0.0013
m,p-Xylenes		ND	0.0109	ND	0.0022	ND	0.0022	ND	0.0026	ND	0.0022	ND	0.0026
o-Xylene		ND	0.0054	ND	0.0011	ND	0.0011	ND	0.0013	ND	0.0011	ND	0.0013
Total Xylenes		ND	0.0054	ND	0.0011	ND	0.0011	ND	0.0013	ND	0.0011	ND	0.0013
Total BTEX		ND	0.0054	ND	0.0011	ND	0.0011	ND	0.0013	ND	0.0011	ND	0.0013
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7.89	1.00	8.14	1.00	7.90	1.00	23.58	1.00	8.25	1.00	23.82	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-17-09 17:00		Apr-17-09 17:00		Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00	
	Analyzed:	Apr-18-09 23:07		Apr-18-09 23:32		Apr-19-09 16:56		Apr-19-09 17:21		Apr-19-09 17:47		Apr-19-09 18:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		24.0	16.3	ND	16.3	ND	16.3	ND	19.6	ND	16.3	ND	19.7
C12-C28 Diesel Range Hydrocarbons		311	16.3	ND	16.3	ND	16.3	ND	19.6	ND	16.3	ND	19.7
C28-C35 Oil Range Hydrocarbons		34.3	16.3	ND	16.3	ND	16.3	ND	19.6	ND	16.3	ND	19.7
Total TPH		369.3	16.3	ND	16.3	ND	16.3	ND	19.6	ND	16.3	ND	19.7

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 330355

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am
Report Date: 22-APR-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	330355-025		330355-026		330355-027		330355-028		330355-029		330355-030	
	Field Id:	SB-5 @ 25'		SB-5 @ 30'		SB-6 @ 10'		SB-6 @ 20'		SB-6 @ 25'		SB-6 @ 30'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-14-09 14:15		Apr-14-09 14:45		Apr-14-09 15:30		Apr-14-09 15:50		Apr-14-09 16:15		Apr-14-09 16:40	
BTEX by EPA 8021B	*Extracted:*	Apr-20-09 14:00		Apr-20-09 14:00		Apr-20-09 00:00		Apr-20-09 00:00		Apr-20-09 00:00		Apr-20-09 00:00	
	Analyzed:	Apr-20-09 23:50		Apr-21-09 00:10		Apr-21-09 03:35		Apr-21-09 03:55		Apr-21-09 04:16		Apr-21-09 04:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0014	ND	0.0011	ND	0.0012
Toluene		ND	0.0024	ND	0.0026	ND	0.0026	ND	0.0028	ND	0.0022	ND	0.0023
Ethylbenzene		ND	0.0012	ND	0.0013	ND	0.0013	0.0024	0.0014	ND	0.0011	ND	0.0012
m,p-Xylenes		ND	0.0024	ND	0.0026	ND	0.0026	ND	0.0028	ND	0.0022	ND	0.0023
o-Xylene		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0014	ND	0.0011	ND	0.0012
Total Xylenes		ND	0.0012	ND	0.0013	ND	0.0013	ND	0.0014	ND	0.0011	ND	0.0012
Total BTEX		ND	0.0012	ND	0.0013	ND	0.0013	0.0024	0.0014	ND	0.0011	ND	0.0012
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00		Apr-17-09 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		17.22	1.00	25.07	1.00	22.68	1.00	28.79	1.00	10.10	1.00	15.19	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00		Apr-19-09 14:00	
	Analyzed:	Apr-19-09 18:37		Apr-19-09 19:03		Apr-19-09 19:28		Apr-19-09 19:53		Apr-19-09 20:18		Apr-19-09 20:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.1	ND	20.0	ND	19.4	ND	21.1	ND	16.7	ND	17.7
C12-C28 Diesel Range Hydrocarbons		ND	18.1	ND	20.0	ND	19.4	ND	21.1	ND	16.7	ND	17.7
C28-C35 Oil Range Hydrocarbons		ND	18.1	ND	20.0	ND	19.4	ND	21.1	ND	16.7	ND	17.7
Total TPH		ND	18.1	ND	20.0	ND	19.4	ND	21.1	ND	16.7	ND	17.7

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Brent Barron
Odessa Laboratory Director

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756284 **Sample:** 8406394-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 13:43

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 756284 **Sample:** 8406394-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 14:04

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 756284 **Sample:** 8406394-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 14:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 756284 **Sample:** 330355-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 756284 **Sample:** 330355-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:28

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0209	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756284 **Sample:** 330355-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0215	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0414	0.0300	138	80-120	**

Lab Batch #: 756284 **Sample:** 330355-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 17:09

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 756284 **Sample:** 330355-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 17:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 756284 **Sample:** 330355-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 17:50

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0492	0.0300	164	80-120	**

Lab Batch #: 756284 **Sample:** 330355-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 18:10

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756284 **Sample:** 330355-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 18:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 756284 **Sample:** 330355-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 19:32

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0415	0.0300	138	80-120	**

Lab Batch #: 756284 **Sample:** 330355-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 19:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 756284 **Sample:** 330355-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 20:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0231	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 756284 **Sample:** 330355-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 20:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0210	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0396	0.0300	132	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756284 **Sample:** 330355-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 20:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0200	0.0300	67	80-120	**
4-Bromofluorobenzene	0.0373	0.0300	124	80-120	**

Lab Batch #: 756284 **Sample:** 330355-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0385	0.0300	128	80-120	**

Lab Batch #: 756284 **Sample:** 330355-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0212	0.0300	71	80-120	**
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 756284 **Sample:** 330355-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:55

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0221	0.0300	74	80-120	**
4-Bromofluorobenzene	0.0350	0.0300	117	80-120	

Lab Batch #: 756284 **Sample:** 330355-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 22:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0397	0.0300	132	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756284 **Sample:** 330355-007 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 22:56

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 756284 **Sample:** 330355-007 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 23:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 756422 **Sample:** 528566-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/20/09 15:57

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 756422 **Sample:** 528566-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/20/09 16:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 756422 **Sample:** 528566-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/20/09 16:59

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756422 **Sample:** 330555-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 20:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 756422 **Sample:** 330555-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 21:05

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 756422 **Sample:** 330355-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 22:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 756422 **Sample:** 330355-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 22:27

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0225	0.0300	75	80-120	*

Lab Batch #: 756422 **Sample:** 330355-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 22:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756422 **Sample:** 330355-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 23:09

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0232	0.0300	77	80-120	*

Lab Batch #: 756422 **Sample:** 330355-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 23:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 756422 **Sample:** 330355-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 23:50

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 756422 **Sample:** 330355-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 00:10

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0249	0.0300	83	80-120	

Lab Batch #: 756422 **Sample:** 330355-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 00:51

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0212	0.0300	71	80-120	**
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756442 **Sample:** 528575-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 02:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 756442 **Sample:** 528575-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 02:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 756442 **Sample:** 528575-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 03:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 756442 **Sample:** 330355-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 03:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 756442 **Sample:** 330355-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 03:55

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756442 **Sample:** 330355-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 04:16

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 756442 **Sample:** 330355-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 04:36

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 756442 **Sample:** 330355-027 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 10:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 756442 **Sample:** 330355-027 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/21/09 10:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 756632 **Sample:** 528674-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 11:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756632 **Sample:** 528674-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 12:10

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 756632 **Sample:** 528674-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/21/09 12:51

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	**
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 756632 **Sample:** 330355-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/22/09 09:15

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0207	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0394	0.0300	131	80-120	**

Lab Batch #: 756632 **Sample:** 330466-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/22/09 11:18

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0503	0.0300	168	80-120	*

Lab Batch #: 756632 **Sample:** 330466-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/22/09 11:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0499	0.0300	166	80-120	**

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756245 **Sample:** 8406370-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 13:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

Lab Batch #: 756245 **Sample:** 8406370-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 14:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 756245 **Sample:** 8406370-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/18/09 14:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	100	94	70-135	
o-Terphenyl	54.6	50.0	109	70-135	

Lab Batch #: 756245 **Sample:** 330355-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 15:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

Lab Batch #: 756245 **Sample:** 330355-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 15:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756245 **Sample:** 330355-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100	97	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

Lab Batch #: 756245 **Sample:** 330355-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 756245 **Sample:** 330355-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 16:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 756245 **Sample:** 330355-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	100	95	70-135	
o-Terphenyl	54.5	50.0	109	70-135	

Lab Batch #: 756245 **Sample:** 330355-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 17:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	100	98	70-135	
o-Terphenyl	56.9	50.0	114	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756245 **Sample:** 330355-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 18:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Lab Batch #: 756245 **Sample:** 330355-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 18:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.8	50.0	116	70-135	

Lab Batch #: 756245 **Sample:** 330355-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 18:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 756245 **Sample:** 330355-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 19:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 756245 **Sample:** 330355-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 20:11

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100	97	70-135	
o-Terphenyl	55.7	50.0	111	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756245 **Sample:** 330355-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 20:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 756245 **Sample:** 330355-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 756245 **Sample:** 330355-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	57.1	50.0	114	70-135	

Lab Batch #: 756245 **Sample:** 330355-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 21:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	57.9	50.0	116	70-135	

Lab Batch #: 756245 **Sample:** 330355-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 22:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	60.8	50.0	122	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756245 **Sample:** 330355-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 22:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	56.9	50.0	114	70-135	

Lab Batch #: 756245 **Sample:** 330355-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 23:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	100	96	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 756245 **Sample:** 330355-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 23:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	64.7	50.0	129	70-135	

Lab Batch #: 756245 **Sample:** 330355-007 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/18/09 23:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 756245 **Sample:** 330355-007 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 00:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	54.3	50.0	109	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756285 **Sample:** 8406396-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/19/09 15:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 756285 **Sample:** 8406396-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/19/09 16:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 756285 **Sample:** 8406396-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/19/09 16:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.7	100	97	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 756285 **Sample:** 330355-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 16:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

Lab Batch #: 756285 **Sample:** 330355-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 17:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	63.8	50.0	128	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756285 **Sample:** 330355-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 17:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-135	
o-Terphenyl	56.1	50.0	112	70-135	

Lab Batch #: 756285 **Sample:** 330355-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 18:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	100	97	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 756285 **Sample:** 330355-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 18:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Lab Batch #: 756285 **Sample:** 330355-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 19:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 756285 **Sample:** 330355-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 19:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 330355,

Project ID: Beeson Historical

Lab Batch #: 756285 **Sample:** 330355-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 19:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	100	97	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 756285 **Sample:** 330355-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 20:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	100	98	70-135	
o-Terphenyl	56.9	50.0	114	70-135	

Lab Batch #: 756285 **Sample:** 330355-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/19/09 20:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	100	99	70-135	
o-Terphenyl	57.5	50.0	115	70-135	

Lab Batch #: 756285 **Sample:** 330355-030 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 01:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 756285 **Sample:** 330355-030 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/20/09 02:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	54.6	50.0	109	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 330355 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 04/20/2009 **Date Analyzed:** 04/20/2009

Lab Batch ID: 756422 **Sample:** 528566-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0910	91	0.1	0.0909	91	0	70-130	35	
Toluene	ND	0.1000	0.0877	88	0.1	0.0875	88	0	70-130	35	
Ethylbenzene	ND	0.1000	0.0944	94	0.1	0.0944	94	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.1951	98	0.2	0.1947	97	0	70-135	35	
o-Xylene	ND	0.1000	0.0942	94	0.1	0.0933	93	1	71-133	35	

Analyst: ASA **Date Prepared:** 04/20/2009 **Date Analyzed:** 04/21/2009

Lab Batch ID: 756442 **Sample:** 528575-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0811	81	0.1	0.0811	81	0	70-130	35	
Toluene	ND	0.1000	0.0769	77	0.1	0.0767	77	0	70-130	35	
Ethylbenzene	ND	0.1000	0.0804	80	0.1	0.0805	81	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.1661	83	0.2	0.1661	83	0	70-135	35	
o-Xylene	ND	0.1000	0.0795	80	0.1	0.0796	80	0	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 330355 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 04/21/2009 **Date Analyzed:** 04/21/2009

Lab Batch ID: 756632 **Sample:** 528674-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0846	85	0.1	0.0873	87	3	70-130	35	
Toluene	ND	0.1000	0.0801	80	0.1	0.0833	83	4	70-130	35	
Ethylbenzene	ND	0.1000	0.0845	85	0.1	0.0878	88	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.1755	88	0.2	0.1818	91	4	70-135	35	
o-Xylene	ND	0.1000	0.0835	84	0.1	0.0858	86	3	71-133	35	

Analyst: ASA **Date Prepared:** 04/17/2009 **Date Analyzed:** 04/18/2009

Lab Batch ID: 756284 **Sample:** 8406394-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0971	97	0.1	0.0991	99	2	70-130	35	
Toluene	ND	0.1000	0.0921	92	0.1	0.0939	94	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0974	97	0.1	0.0995	100	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2022	101	0.2	0.2063	103	2	70-135	35	
o-Xylene	ND	0.1000	0.0962	96	0.1	0.0988	99	3	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 330355 **Project ID:** Beeson Historical

Analyst: BHW **Date Prepared:** 04/17/2009 **Date Analyzed:** 04/18/2009

Lab Batch ID: 756245 **Sample:** 8406370-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1050	105	1000	1060	106	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	1030	103	0	70-135	35	

Analyst: BHW **Date Prepared:** 04/19/2009 **Date Analyzed:** 04/19/2009

Lab Batch ID: 756285 **Sample:** 8406396-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1040	104	1000	1070	107	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1020	102	1000	1050	105	3	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 330355 **Project ID:** Beeson Historical

Lab Batch ID: 756284 **QC- Sample ID:** 330355-007 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/18/2009 **Date Prepared:** 04/17/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1088	0.0815	75	0.1088	0.0775	71	5	70-130	35	
Toluene	ND	0.1088	0.0760	70	0.1088	0.0714	66	6	70-130	35	X
Ethylbenzene	0.0024	0.1088	0.0784	70	0.1088	0.0720	64	9	71-129	35	X
m,p-Xylenes	0.0028	0.2177	0.1596	72	0.2177	0.1468	66	8	70-135	35	X
o-Xylene	ND	0.1088	0.0754	69	0.1088	0.0698	64	8	71-133	35	X

Lab Batch ID: 756422 **QC- Sample ID:** 330555-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/20/2009 **Date Prepared:** 04/20/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1007	0.0693	69	0.0999	0.0670	67	3	70-130	35	X
Toluene	ND	0.1007	0.0612	61	0.0999	0.0584	58	5	70-130	35	X
Ethylbenzene	ND	0.1007	0.0570	57	0.0999	0.0548	55	4	71-129	35	X
m,p-Xylenes	ND	0.2014	0.1158	57	0.1998	0.1108	55	4	70-135	35	X
o-Xylene	ND	0.1007	0.0554	55	0.0999	0.0538	54	3	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 330355 **Project ID:** Beeson Historical

Lab Batch ID: 756442 **QC- Sample ID:** 330355-027 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/21/2009 **Date Prepared:** 04/20/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1293	0.0819	63	0.1293	0.0867	67	6	70-130	35	X
Toluene	ND	0.1293	0.0752	58	0.1293	0.0790	61	5	70-130	35	X
Ethylbenzene	ND	0.1293	0.0778	60	0.1293	0.0835	65	7	71-129	35	X
m,p-Xylenes	ND	0.2587	0.1172	45	0.2587	0.1201	46	2	70-135	35	X
o-Xylene	ND	0.1293	0.0767	59	0.1293	0.0814	63	6	71-133	35	X

Lab Batch ID: 756632 **QC- Sample ID:** 330466-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/22/2009 **Date Prepared:** 04/21/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1126	0.0617	55	0.1126	0.0627	56	2	70-130	35	X
Toluene	ND	0.1126	0.0598	53	0.1126	0.0612	54	2	70-130	35	X
Ethylbenzene	ND	0.1126	0.0652	58	0.1126	0.0662	59	2	71-129	35	X
m,p-Xylenes	ND	0.2252	0.1341	60	0.2252	0.1364	61	2	70-135	35	X
o-Xylene	ND	0.1126	0.0587	52	0.1126	0.0604	54	3	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 330355 **Project ID:** Beeson Historical

Lab Batch ID: 756245 **QC- Sample ID:** 330355-007 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/18/2009 **Date Prepared:** 04/17/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1090	1120	103	1090	1180	108	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	89.4	1090	1120	95	1090	1200	102	7	70-135	35	

Lab Batch ID: 756285 **QC- Sample ID:** 330355-030 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/20/2009 **Date Prepared:** 04/19/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1180	1360	115	1180	1410	119	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1180	1330	113	1180	1380	117	4	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 330355

Lab Batch #: 756185 **Project ID:** Beeson Historical
Date Analyzed: 04/17/2009 **Date Prepared:** 04/17/2009 **Analyst:** BEV
QC- Sample ID: 330355-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.31	7.60	4	20	

Lab Batch #: 756187
Date Analyzed: 04/17/2009 **Date Prepared:** 04/17/2009 **Analyst:** BEV
QC- Sample ID: 330355-021 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.90	7.38	7	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

1 of 3

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature: Camille Bryant

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES
e-mail: cbryant@basin-consulting.com

(lab use only)
ORDER #: 330355

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: 4 oz.	Matrix	Analyze For: TPH: 418.1 / 8015M	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N O R M				RUSH TAT (Pre-Scheduled 24, 48, 72 hrs)	Standard TAT 4 DAY
								Ice / HNO3 / HCl / H2SO4 / NaOH / Na2S2O3 / None / Other (Specify)	DW = Drinking Water GW = Groundwater S = Solid/Soil WW = Non-Potable Specify Other	TCLP: / TOTAL:															
1	SB-1 @ 10'			13-Apr-09	0900		1	X	Soil	X								X							X
2	SB-1 @ 20'			13-Apr-09	0920		1	X	Soil	X								X							X
3	SB-1 @ 30'			13-Apr-09	0940		1	X	Soil	X								X							X
4	SB-1 @ 40'			13-Apr-09	1010		1	X	Soil	X								X							X
5	SB-1 @ 50'			13-Apr-09	1045		1	X	Soil	X								X							X
6	SB-1 @ 60'			13-Apr-09	1115		1	X	Soil	X								X							X
7	SB-1 @ 65'			13-Apr-09	1145		1	X	Soil	X								X							X
8	SB-2 @ 10'			13-Apr-09	1300		1	X	Soil	X								X							X
9	SB-2 @ 20'			13-Apr-09	1320		1	X	Soil	X								X							X
10	SB-2 @ 30'			13-Apr-09	1340		1	X	Soil	X								X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	4/16/09	1600		4/16/09	1600
Relinquished by:	Date	Time	Received by:	Date	Time
	4/17/09	0207			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				04-17-09	0907

Laboratory Comments:
Sample Containers Intact? N
VOCs Free of Headspace? N
Labels on container(s) N
Custody seals on container(s) N/A N
Custody seals on cooler(s) N
Sample Hand Delivered by Sampler/Client Rep.? Y
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 2 of 3

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature: Camille Bryant e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 330355

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	H2O	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: SW – Surface Water S – Soil/Sed GW – Groundwater S – Solid/Sed NP – Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021 / 5030 or BTEX 8260	TCLP: TOTAL: X	HCl	H2O RUN				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
11	SB-2 @ 40'			13-Apr-09	1410		1	X								Soil	X									X							X
12	SB-2 @ 50'			13-Apr-09	1440		1	X								Soil	X									X							X
13	SB-2 @ 55'			13-Apr-09	1510		1	X								Soil	X									X							X
14	SB-3 @ 10'			14-Apr-09	0840		1	X								Soil	X									X							X
15	SB-3 @ 20'			14-Apr-09	0900		1	X								Soil	X									X							X
16	SB-3 @ 30'			14-Apr-09	0925		1	X								Soil	X									X							X
17	SB-3 @ 40'			14-Apr-09	0950		1	X								Soil	X									X							X
18	SB-3 @ 55'			14-Apr-09	1015		1	X								Soil	X									X							X
19	SB-3 @ 60'			14-Apr-09	1050		1	X								Soil	X									X							X
20	SB-4 @ 10'			14-Apr-09	1120		1	X								Soil	X									X							X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
Camille Bryant	4/16/09	1600		4/16/09	1600
	4/17/09	0807			
Relinquished by	Date	Time	Received by ELOT:	Date	Time
				04-17-09	0917

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s)? Y N
Custody seals on container(s)/bottle(s)? Y N
Custody seals on cooler(s)? Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
Sampled by ELOT? Y N
Received by Cooler? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 3 of 3

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature: Camille Bryant e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 330355

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW - Drinking Water SL = Sludge GW = Groundwater S = Soil/Solid NP = Non-Potable Specify Other	Analyze For: TPH: 418.1 (8015M)	TPH: TX 1005	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/8260 or BTEX 8260	TCLP: TOTAL: X	HCl	HNO3	RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT 4 DAY
21	SB-4 @ 20'			14-Apr-09	1140		1	X								Soil	X									X					X
22	SB-4 @ 25'			14-Apr-09	1210		1	X								Soil	X									X					X
23	SB-5 @ 10'			14-Apr-09	1330		1	X								Soil	X									X					X
24	SB-5 @ 20'			14-Apr-09	1350		1	X								Soil	X									X					X
25	SB-5 @ 25'			14-Apr-09	1415		1	X								Soil	X									X					X
26	SB-5 @ 30'			14-Apr-09	1445		1	X								Soil	X									X					X
27	SB-6 @ 10'			14-Apr-09	1530		1	X								Soil	X									X					X
28	SB-6 @ 20'			14-Apr-09	1550		1	X								Soil	X									X					X
29	SB-6 @ 25'			14-Apr-09	1615		1	X								Soil	X									X					X
30	SB-6 @ 30'			14-Apr-09	1640		1	X								Soil	X									X					X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	4/16/09	1600		4/16/09	1600
Relinquished by:	Date	Time	Received by:	Date	Time
	4/17/09	0807			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				04-17-09	0807

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 2.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin

Date/ Time: 04-17-09 @ 0807

Lab ID #: 330355

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	2.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container? Label	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample Instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 338241

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Hist.

22-JUL-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

22-JUL-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **338241**
Beeson 8" Discharge
Project Address: Eddy Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 338241. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 338241 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 338241

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	Jul-16-09 08:30		338241-001
SP-2	S	Jul-16-09 10:30		338241-002
SP-3	S	Jul-16-09 13:00		338241-003

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Hist.*	*Report Date:*	*22-JUL-09*
Work Order Number:	*338241*	*Date Received:*	*07/17/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-765833 Percent Moisture
None

Batch: LBA-765898 BTEX-MTBE EPA 8021B
SW8021BM

Batch 765898, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533884-1-BLK,338241-001.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 53384-1-BKS.

Batch: LBA-766045 BTEX-MTBE EPA 8021B
SW8021BM

Batch 766045, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 338241-003.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 766045, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 338241-003.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533980-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 338241-003.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 533980-1-BKS, 533980-1-BSD

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Hist.*	*Report Date:*	*22-JUL-09*
Work Order Number:	*338241*	*Date Received:*	*07/17/2009*

Batch: LBA-766215 TPH by SW8015 Mod
None

Certificate of Analysis Summary 338241

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Hist.
Contact: Jason Henry
Project Location: Eddy Co., NM

Date Received in Lab: Fri Jul-17-09 09:00 am
Report Date: 22-JUL-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	338241-001		338241-002		338241-003					
	Field Id:	SP-1		SP-2		SP-3					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jul-16-09 08:30		Jul-16-09 10:30		Jul-16-09 13:00					
BTEX by EPA 8021B	*Extracted:*	Jul-19-09 13:00		Jul-19-09 13:00		Jul-19-09 13:00					
	Analyzed:	Jul-20-09 00:02		Jul-20-09 00:20		Jul-20-09 02:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0012	ND	0.0012	ND	0.0307				
Toluene		ND	0.0025	ND	0.0025	ND	0.0615				
Ethylbenzene		ND	0.0012	ND	0.0012	0.0587	0.0307				
m,p-Xylenes		ND	0.0025	0.0030	0.0025	0.3357	0.0615				
o-Xylene		ND	0.0012	ND	0.0012	0.1107	0.0307				
Total Xylenes		ND	0.0012	0.003	0.0012	0.4464	0.0307				
Total BTEX		ND	0.0012	0.003	0.0012	0.5051	0.0307				
Percent Moisture	*Extracted:*										
	Analyzed:	Jul-20-09 09:38		Jul-20-09 09:38		Jul-20-09 09:38					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		19.03	1.00	19.55	1.00	18.68	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-21-09 09:48		Jul-21-09 09:48		Jul-21-09 09:48					
	Analyzed:	Jul-21-09 13:59		Jul-21-09 14:24		Jul-21-09 14:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	18.5	27.4	18.6	168	92.1				
C12-C28 Diesel Range Hydrocarbons		118	18.5	580	18.6	1280	92.1				
C28-C35 Oil Range Hydrocarbons		44.1	18.5	116	18.6	231	92.1				
Total TPH		162.1	18.5	723.4	18.6	1679	92.1				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338241,

Project ID: TNM-Beeson Hist.

Lab Batch #: 765898 **Sample:** 533884-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/19/09 22:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0371	0.0300	124	80-120	*

Lab Batch #: 765898 **Sample:** 533884-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/19/09 22:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 765898 **Sample:** 533884-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/19/09 23:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0133	0.0300	44	80-120	*

Lab Batch #: 765898 **Sample:** 338241-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 00:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0156	0.0300	52	80-120	*

Lab Batch #: 765898 **Sample:** 338241-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 00:20

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338241,

Project ID: TNM-Beeson Hist.

Lab Batch #: 765898 **Sample:** 338241-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 02:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 766045 **Sample:** 533980-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 18:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0382	0.0300	127	80-120	*

Lab Batch #: 766045 **Sample:** 533980-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 18:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0376	0.0300	125	80-120	*

Lab Batch #: 766045 **Sample:** 533980-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 19:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0161	0.0300	54	80-120	*

Lab Batch #: 766045 **Sample:** 338241-003 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 21:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0223	0.0300	74	80-120	**
4-Bromofluorobenzene	0.0483	0.0300	161	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338241,

Project ID: TNM-Beeson Hist.

Lab Batch #: 766045 **Sample:** 338034-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 21:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 766045 **Sample:** 338034-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 22:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 766215 **Sample:** 534063-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 766215 **Sample:** 534063-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 766215 **Sample:** 534063-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	100	90	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338241,

Project ID: TNM-Beeson Hist.

Lab Batch #: 766215 **Sample:** 338241-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 13:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.7	91	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 766215 **Sample:** 338241-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 14:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	99.8	94	70-135	
o-Terphenyl	49.9	49.9	100	70-135	

Lab Batch #: 766215 **Sample:** 338241-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 14:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.9	88	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 766215 **Sample:** 338237-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 17:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	43.3	50.0	87	70-135	

Lab Batch #: 766215 **Sample:** 338237-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 18:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 338241 **Project ID:** TNM-Beeson Hist.

Analyst: ASA **Date Prepared:** 07/19/2009 **Date Analyzed:** 07/19/2009

Lab Batch ID: 765898 **Sample:** 533884-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0940	94	0.1	0.0869	87	8	70-130	35	
Toluene	ND	0.1000	0.0905	91	0.1	0.0833	83	8	70-130	35	
Ethylbenzene	ND	0.1000	0.1031	103	0.1	0.0942	94	9	71-129	35	
m,p-Xylenes	ND	0.2000	0.2066	103	0.2	0.1891	95	9	70-135	35	
o-Xylene	ND	0.1000	0.0978	98	0.1	0.0897	90	9	71-133	35	

Analyst: ASA **Date Prepared:** 07/20/2009 **Date Analyzed:** 07/20/2009

Lab Batch ID: 766045 **Sample:** 533980-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0759	76	0.1	0.0772	77	2	70-130	35	
Toluene	ND	0.1000	0.0756	76	0.1	0.0767	77	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0889	89	0.1	0.0894	89	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.1804	90	0.2	0.1808	90	0	70-135	35	
o-Xylene	ND	0.1000	0.0850	85	0.1	0.0850	85	0	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 338241 **Project ID:** TNM-Beeson Hist.

Analyst: BHW **Date Prepared:** 07/21/2009 **Date Analyzed:** 07/21/2009

Lab Batch ID: 766215 **Sample:** 534063-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	826	83	1000	845	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	987	99	1000	1010	101	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 338241 **Project ID:** TNM-Beeson Hist.

Lab Batch ID: 766045 **QC- Sample ID:** 338034-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/20/2009 **Date Prepared:** 07/20/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0020	0.1010	0.0434	41	0.1010	0.0468	44	8	70-130	35	X
Toluene	ND	0.1010	0.0252	25	0.1010	0.0275	27	9	70-130	35	X
Ethylbenzene	ND	0.1010	0.0157	16	0.1010	0.0168	17	7	71-129	35	X
m,p-Xylenes	ND	0.2019	0.0299	15	0.2019	0.0320	16	7	70-135	35	X
o-Xylene	ND	0.1010	0.0137	14	0.1010	0.0148	15	8	71-133	35	X

Lab Batch ID: 766215 **QC- Sample ID:** 338237-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/21/2009 **Date Prepared:** 07/21/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	116	1290	1260	89	1290	1310	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	428	1290	2030	124	1290	1970	120	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 338241

Lab Batch #: 765833 **Project ID:** TNM-Beeson Hist.

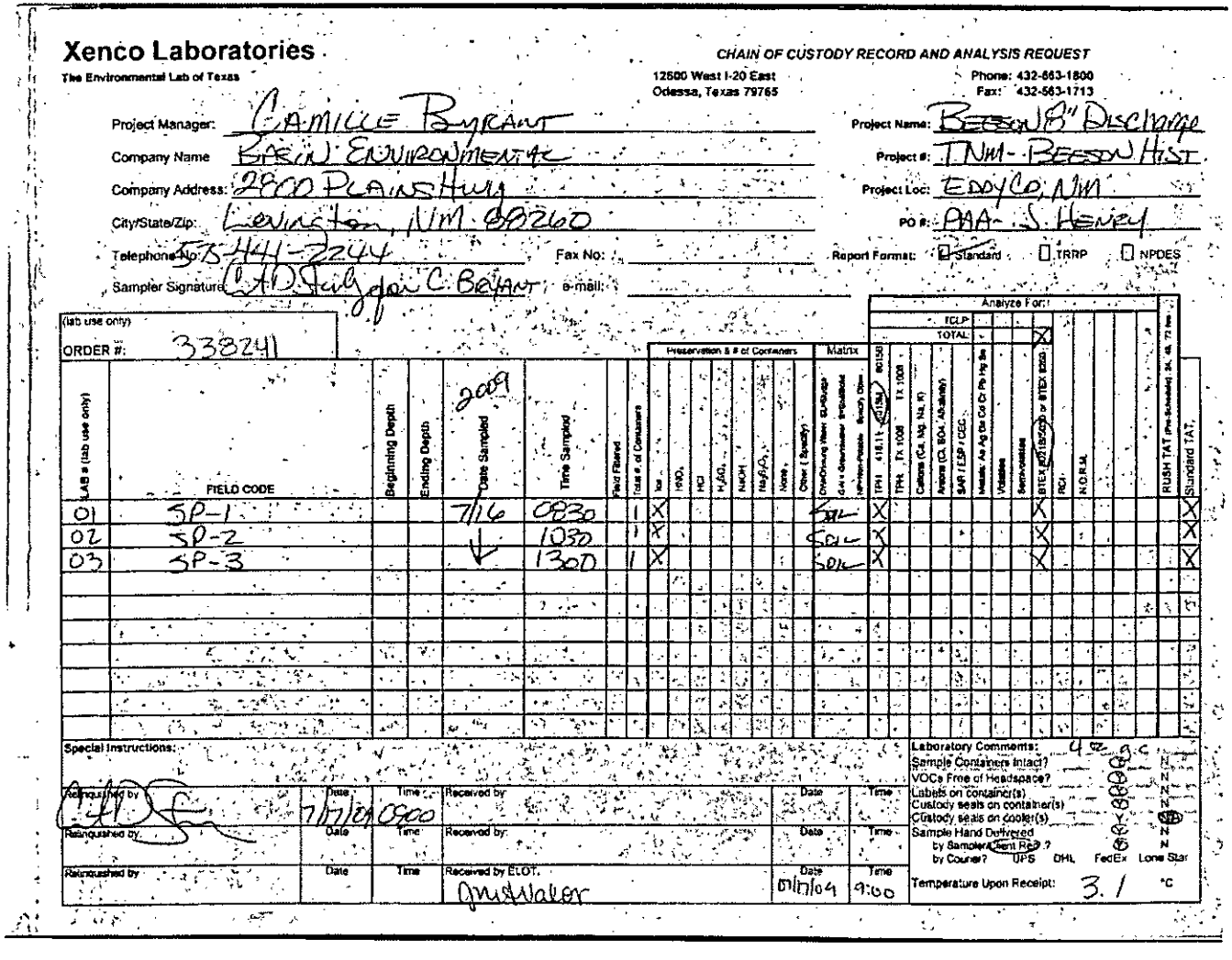
Date Analyzed: 07/20/2009 **Date Prepared:** 07/20/2009 **Analyst:** BEV

QC- Sample ID: 338241-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	19.0	19.8	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: CAMILLE BRYANT
Company Name: BASIN ENVIRONMENTAL
Company Address: 2800 PLAINS HWY
City/State/Zip: LOVINGTON, NM 88260
Telephone No: 575-441-2244 Fax No:
Sampler Signature: A.D. Sub for C. BRYANT e-mail:

Project Name: BEESON "B" DISCHARGE
Project #: TNM - BEESON HIST.
Project Loc: EDDY CO. NM
PO #: AAA - S. HENRY
Report Format: Standard TRRP NPDES

(lab use only)
ORDER #: 33824

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	# of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	NaHSO4	None	Other (Specify)	Matrix: Drinking Water / Groundwater / Wastewater / Surface Water / Sludge / Other	Analyze For: TPH 418.1 / 8015	TPH TX 1005	TPH TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT
01	SP-1			7/16	0830		1	X								SOIL	X									X						X
02	SP-2			↓	1030		1	X								SOIL	X									X						X
03	SP-3				1300		1	X								SOIL	X									X						X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
	7/17/04	0900			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by ELOT	Date	Time
			Gus Walker	07/17/04	9:00

Laboratory Comments: 4 oz. g.c.
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains

Date/ Time: 01/7/09 9:00

Lab ID # : 338241

Initials: gmd

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	3.1 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample Instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- [x] See attached e-mail/ fax
- [ ] Client understands and would like to proceed with analysis
- [ ] Cooling process had begun shortly after sampling event

Analytical Report 338461

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Hist

24-JUL-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

XENCO Laboratories

24-JUL-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **338461**
Beeson 8" Discharge
Project Address: Eddy Co, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 338461. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 338461 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 338461

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP # 4	S	Jul-20-09 11:00		338461-001
SP # 5	S	Jul-20-09 11:10		338461-002
SP # 6	S	Jul-20-09 11:20		338461-003

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Hist*	*Report Date:*	*24-JUL-09*
Work Order Number:	*338461*	*Date Received:*	*07/21/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-766139 Percent Moisture
AD2216A
Batch 766139, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 338461-002, -003, -001.

Batch: LBA-766215 TPH by SW8015 Mod
None

Batch: LBA-766465 BTEX-MTBE EPA 8021B
SW8021BM

Batch 766465, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534181-1-BLK
Batch 766465, 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 338461-002.
Batch 766465, 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 338461-003.

Certificate of Analysis Summary 338461

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Hist
Contact: Jason Henry
Project Location: Eddy Co, NM

Date Received in Lab: Tue Jul-21-09 08:50 am
Report Date: 24-JUL-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	338461-001		338461-002		338461-003					
	Field Id:	SP # 4		SP # 5		SP # 6					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jul-20-09 11:00		Jul-20-09 11:10		Jul-20-09 11:20					
BTEX by EPA 8021B	*Extracted:*	*Jul-23-09 16:00*		*Jul-23-09 16:00*		*Jul-23-09 16:00*					
	Analyzed:	Jul-23-09 18:15		Jul-23-09 18:34		Jul-23-09 18:52					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0015	ND	0.0011	ND	0.0010				
Toluene		ND	0.0029	ND	0.0021	ND	0.0021				
Ethylbenzene		0.0027	0.0015	ND	0.0011	0.0456	0.0010				
m,p-Xylenes		0.0065	0.0029	ND	0.0021	0.0869	0.0021				
o-Xylene		ND	0.0015	ND	0.0011	0.1475	0.0010				
Total Xylenes		0.0065	0.0015	ND	0.0011	0.2344	0.0010				
Total BTEX		0.0092	0.0015	ND	0.0011	0.28	0.0010				
Percent Moisture	*Extracted:*										
	Analyzed:	Jul-22-09 09:48		Jul-22-09 09:48		Jul-22-09 09:48					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		31.30	1.00	4.94	1.00	3.70	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-21-09 12:37		Jul-21-09 12:37		Jul-21-09 12:37					
	Analyzed:	Jul-21-09 16:05		Jul-21-09 16:56		Jul-21-09 17:21					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	109	ND	78.9	289	77.8				
C12-C28 Diesel Range Hydrocarbons		2040	109	1020	78.9	3560	77.8				
C28-C35 Oil Range Hydrocarbons		428	109	273	78.9	583	77.8				
Total TPH		2468	109	1293	78.9	4432	77.8				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338461,

Project ID: TNM-Beeson Hist

Lab Batch #: 766465 **Sample:** 534181-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/23/09 16:24

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 766465 **Sample:** 534181-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/23/09 16:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0349	0.0300	116	80-120	

Lab Batch #: 766465 **Sample:** 534181-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/23/09 17:20

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0122	0.0300	41	80-120	*

Lab Batch #: 766465 **Sample:** 338461-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/23/09 18:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 766465 **Sample:** 338461-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/23/09 18:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0202	0.0300	67	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338461,

Project ID: TNM-Beeson Hist

Lab Batch #: 766465 **Sample:** 338461-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/23/09 18:52

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.2008	0.0300	669	80-120	**

Lab Batch #: 766465 **Sample:** 338541-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/23/09 23:10

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 766465 **Sample:** 338541-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/23/09 23:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0357	0.0300	119	80-120	

Lab Batch #: 766215 **Sample:** 534063-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 766215 **Sample:** 534063-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338461,

Project ID: TNM-Beeson Hist

Lab Batch #: 766215 **Sample:** 534063-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	100	90	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 766215 **Sample:** 338461-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 16:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.8	99.6	82	70-135	
o-Terphenyl	43.5	49.8	87	70-135	

Lab Batch #: 766215 **Sample:** 338461-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 16:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	40.6	50.0	81	70-135	

Lab Batch #: 766215 **Sample:** 338461-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 17:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	99.9	97	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 766215 **Sample:** 338237-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 17:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	43.3	50.0	87	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 338461,

Project ID: TNM-Beeson Hist

Lab Batch #: 766215 **Sample:** 338237-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 18:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 338461 **Project ID:** TNM-Beeson Hist

Analyst: ASA **Date Prepared:** 07/23/2009 **Date Analyzed:** 07/23/2009

Lab Batch ID: 766465 **Sample:** 534181-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.5000	0.5250	105	0.1	0.1061	106	133	70-130	35	
Toluene	ND	0.5000	0.4933	99	0.1	0.1003	100	132	70-130	35	
Ethylbenzene	ND	0.5000	0.5374	107	0.1	0.1110	111	132	71-129	35	
m,p-Xylenes	ND	1.000	1.104	110	0.2	0.2278	114	132	70-135	35	
o-Xylene	ND	0.5000	0.5171	103	0.1	0.1079	108	131	71-133	35	

Analyst: BHW **Date Prepared:** 07/21/2009 **Date Analyzed:** 07/21/2009

Lab Batch ID: 766215 **Sample:** 534063-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	826	83	1000	845	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	987	99	1000	1010	101	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 338461 **Project ID:** TNM-Beeson Hist

Lab Batch ID: 766465 **QC- Sample ID:** 338541-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/23/2009 **Date Prepared:** 07/23/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1059	0.0791	75	0.1059	0.0830	78	5	70-130	35	
Toluene	ND	0.1059	0.0754	71	0.1059	0.0797	75	6	70-130	35	
Ethylbenzene	ND	0.1059	0.0825	78	0.1059	0.0882	83	7	71-129	35	
m,p-Xylenes	ND	0.2118	0.1698	80	0.2118	0.1786	84	5	70-135	35	
o-Xylene	ND	0.1059	0.0784	74	0.1059	0.0839	79	7	71-133	35	

Lab Batch ID: 766215 **QC- Sample ID:** 338237-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/21/2009 **Date Prepared:** 07/21/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	116	1290	1260	89	1290	1310	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	428	1290	2030	124	1290	1970	120	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 338461

Lab Batch #: 766139 **Project ID:** TNM-Beeson Hist

Date Analyzed: 07/22/2009 **Date Prepared:** 07/22/2009 **Analyst:** BEV

QC- Sample ID: 338461-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	31.3	3.08	164	20	F

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental
Company Address: 2800 Plains Hwy
City/State/Zip: Lovington, NM 88260
Telephone No: 575-396-2378 Fax No:
Sampler Signature: T.A. Smith for C. Bryant e-mail:

Project Name: Beeson "B" Discharge
Project #: TNM-Beeson Hist
Project Loc: Eddy Co. NM
PO #: PAA - T. Henry
Report Format: Standard TRRP NPDES

(lab use only)
ORDER #: 338461

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: Soil/Solid	Water	Analyze For: TPH: 418.1 (8015M)	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX (8021B/60 or TTEX 8260)	RCI	NORM	RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT
01	SP#4			7/20	1100		1	X								X		X									X				X
02	SP#5			↓	1110		1	↓								↓		↓									↓				↓
03	SP#6			↓	1120		1	↓								↓		↓									↓				↓

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
T.A. Smith	7/21/09	0850			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by FLOT: Jeanne Fitch	Date 07-21-09	Time 0850

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 2-6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env.

Date/ Time: 07-21-09 @ 0850

Lab ID # : 338461

Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	2 C	
#2	Shipping container in good condition?	(Yes)	No	(N/A)	
#3	Custody Seals intact on shipping container/ cooler?	(Yes)	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample Instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 339128

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Historical

04-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

XENCO Laboratories

04-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **339128**
Beeson 8" Discharge
Project Address: Eddy County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 339128. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 339128 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 339128

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-7	S	Jul-28-09 10:00		339128-001
SP-8	S	Jul-28-09 10:10		339128-002
SP-9	S	Jul-28-09 10:20		339128-003
SP-10	S	Jul-28-09 10:30		339128-004
SP-11	S	Jul-28-09 10:40		339128-005
SP-12	S	Jul-28-09 10:50		339128-006
SP-13	S	Jul-28-09 11:00		339128-007
SP-14	S	Jul-28-09 11:10		339128-008
SP-15	S	Jul-28-09 11:20		339128-009

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Historical*	*Report Date:*	*04-AUG-09*
Work Order Number:	*339128*	*Date Received:*	*07/29/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-767032 Percent Moisture
AD2216A
Batch 767032, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 339128-003, -009, -001, -002, -005, -008, -004, -007, -006.

Batch: LBA-767083 TX1005
None

Batch: LBA-767321 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767321, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 339128-003, -007.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 767321, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 339128-007.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534694-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 339128-007, 339128-003
4-Bromofluorobenzene recovered above QC limits. Data not confirmed by re-analysis. Samples affected are: 339317-001 S, 339317-001 SD

SW8021BM

Batch 767321, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene RPD was outside QC limits.
Samples affected are: 339128-003, -007
The Laboratory Control Sample for Ethylbenzene, Toluene, m,p-Xylene, and o-Xylene is within Laboratory Control Limits.

Batch: LBA-767326 TPH by SW8015 Mod
None

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Historical*	*Report Date:*	*04-AUG-09*
Work Order Number:	*339128*	*Date Received:*	*07/29/2009*

Batch: LBA-767466 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767466, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 339128-008.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534776-1-BLK.
4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 339128-002, 339128-004, 339128-005, 339128-006, 339128-008, 339128-009.
4-Bromofluorobenzene recovered above QC limits. Data not confirmed by re-analysis. Samples affected are: 339438-003 S, 339438-003 SD

Certificate of Analysis Summary 339128

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Wed Jul-29-09 08:23 am
Report Date: 04-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	339128-001		339128-002		339128-003		339128-004		339128-005		339128-006	
	Field Id:	SP-7		SP-8		SP-9		SP-10		SP-11		SP-12	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-28-09 10:00		Jul-28-09 10:10		Jul-28-09 10:20		Jul-28-09 10:30		Jul-28-09 10:40		Jul-28-09 10:50	
BTEX by EPA 8021B	*Extracted:*	Aug-03-09 10:00		Aug-03-09 10:00		Jul-31-09 00:00		Aug-03-09 10:00		Aug-03-09 10:00		Aug-03-09 10:00	
	Analyzed:	Aug-03-09 12:34		Aug-03-09 12:52		Jul-31-09 20:17		Aug-03-09 13:29		Aug-03-09 13:48		Aug-03-09 14:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0011	ND	0.0213	ND	0.0011	ND	0.0011	ND	0.0011
Toluene		ND	0.0021	ND	0.0021	ND	0.0426	0.0070	0.0021	0.0056	0.0022	0.0327	0.0021
Ethylbenzene		0.0085	0.0010	0.0163	0.0011	0.0889	0.0213	0.0837	0.0011	0.0792	0.0011	0.2451	0.0011
m,p-Xylenes		0.0117	0.0021	0.0311	0.0021	0.1049	0.0426	0.2127	0.0021	0.1289	0.0022	0.4812	0.0021
o-Xylene		0.0043	0.0010	0.0158	0.0011	0.1586	0.0213	0.3250	0.0011	0.2391	0.0011	0.3174	0.0011
Total Xylenes		0.0160	0.0010	0.0469	0.0011	0.2635	0.0213	0.5377	0.0011	0.3680	0.0011	0.7986	0.0011
Total BTEX		0.0245	0.0010	0.0632	0.0011	0.3524	0.0213	0.6284	0.0011	0.4528	0.0011	1.0764	0.0011
Percent Moisture	*Extracted:*												
	Analyzed:	Jul-30-09 08:44		Jul-30-09 08:44		Jul-30-09 08:44		Jul-30-09 08:44		Jul-30-09 08:44		Jul-30-09 08:44	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.48	1.00	5.56	1.00	6.20	1.00	5.49	1.00	7.61	1.00	5.67	1.00
TPH By SW8015 Mod	*Extracted:*	Jul-29-09 13:24		Jul-29-09 13:24		Jul-29-09 13:24		Jul-29-09 13:24		Jul-29-09 13:24		Jul-29-09 13:24	
	Analyzed:	Jul-30-09 04:38		Jul-30-09 05:02		Jul-30-09 05:28		Jul-30-09 09:05		Jul-30-09 09:29		Jul-30-09 09:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		59.4	15.3	124	15.8	212	80.0	428	79.3	248	81.1	601	79.3
C12-C28 Diesel Range Hydrocarbons		983	15.3	1210	15.8	1510	80.0	3160	79.3	2230	81.1	4360	79.3
C28-C35 Oil Range Hydrocarbons		102	15.3	120	15.8	174	80.0	322	79.3	297	81.1	511	79.3
Total TPH		1144.4	15.3	1454	15.8	1896	80.0	3910	79.3	2775	81.1	5472	79.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 339128

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Wed Jul-29-09 08:23 am
Report Date: 04-AUG-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	339128-007		339128-008		339128-009			
	Field Id:	SP-13		SP-14		SP-15			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-28-09 11:00		Jul-28-09 11:10		Jul-28-09 11:20			
BTEX by EPA 8021B	*Extracted:*	Jul-31-09 00:00		Aug-03-09 10:00		Aug-03-09 10:00			
	Analyzed:	Jul-31-09 21:31		Aug-03-09 18:59		Aug-03-09 14:44			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.0212	0.0424	0.0265	ND	0.0010		
Toluene		0.0720	0.0423	0.4288	0.0530	0.0042	0.0021		
Ethylbenzene		0.3416	0.0212	0.9860	0.0265	0.0489	0.0010		
m,p-Xylenes		0.8772	0.0423	3.406	0.0530	0.1024	0.0021		
o-Xylene		0.9925	0.0212	3.349	0.0265	0.1682	0.0010		
Total Xylenes		1.8697	0.0212	6.755	0.0265	0.2706	0.0010		
Total BTEX		2.2833	0.0212	8.212	0.0265	0.3237	0.0010		
Percent Moisture	*Extracted:*								
	Analyzed:	Jul-30-09 08:44		Jul-30-09 08:44		Jul-30-09 08:44			
	Units/RL:	%	RL	%	RL	%	RL		
Percent Moisture		5.49	1.00	5.60	1.00	4.42	1.00		
TPH By SW8015 Mod	*Extracted:*	Jul-29-09 13:24		Jul-29-09 13:24		Jul-31-09 12:09			
	Analyzed:	Jul-30-09 10:18		Jul-30-09 10:43		Jul-31-09 20:16			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		535	79.0	966	79.4	186	15.6		
C12-C28 Diesel Range Hydrocarbons		4240	79.0	4970	79.4	1140	15.6		
C28-C35 Oil Range Hydrocarbons		492	79.0	533	79.4	123	15.6		
Total TPH		5267	79.0	6469	79.4	1449	15.6		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767321 **Sample:** 534694-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 10:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 767321 **Sample:** 534694-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 10:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 767321 **Sample:** 534694-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 11:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0153	0.0300	51	80-120	*

Lab Batch #: 767321 **Sample:** 339128-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/09 20:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0398	0.0300	133	80-120	**

Lab Batch #: 767321 **Sample:** 339128-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/09 21:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0582	0.0300	194	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767321 **Sample:** 339317-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/09 22:26

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0415	0.0300	138	80-120	*

Lab Batch #: 767321 **Sample:** 339317-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/09 22:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0404	0.0300	135	80-120	*

Lab Batch #: 767466 **Sample:** 534776-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 09:27

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0361	0.0300	120	80-120	

Lab Batch #: 767466 **Sample:** 534776-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 09:46

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 767466 **Sample:** 534776-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 10:23

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0102	0.0300	34	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767466 **Sample:** 339128-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 12:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0437	0.0300	146	80-120	**

Lab Batch #: 767466 **Sample:** 339128-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 12:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0582	0.0300	194	80-120	**

Lab Batch #: 767466 **Sample:** 339128-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 13:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.1744	0.0300	581	80-120	**

Lab Batch #: 767466 **Sample:** 339128-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 13:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.1311	0.0300	437	80-120	**

Lab Batch #: 767466 **Sample:** 339128-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 14:06

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.2778	0.0300	926	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767466 **Sample:** 339128-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 14:44

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.1921	0.0300	640	80-120	**

Lab Batch #: 767466 **Sample:** 339128-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 18:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0222	0.0300	74	80-120	**
4-Bromofluorobenzene	0.1204	0.0300	401	80-120	**

Lab Batch #: 767466 **Sample:** 339438-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0384	0.0300	128	80-120	*

Lab Batch #: 767466 **Sample:** 339438-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0388	0.0300	129	80-120	*

Lab Batch #: 767083 **Sample:** 534530-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/29/09 22:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767083 **Sample:** 534530-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/29/09 22:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 767083 **Sample:** 534530-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/29/09 22:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.8	100	95	70-135	
o-Terphenyl	50.5	50.0	101	70-135	

Lab Batch #: 767083 **Sample:** 339128-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 04:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.7	99	70-135	
o-Terphenyl	52.9	49.9	106	70-135	

Lab Batch #: 767083 **Sample:** 339128-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 05:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

Lab Batch #: 767083 **Sample:** 339128-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 05:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	54.4	50.0	109	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767083 **Sample:** 339128-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 09:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

Lab Batch #: 767083 **Sample:** 339128-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 09:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

Lab Batch #: 767083 **Sample:** 339128-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 09:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-135	
o-Terphenyl	54.7	49.9	110	70-135	

Lab Batch #: 767083 **Sample:** 339128-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 10:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.6	104	70-135	
o-Terphenyl	52.2	49.8	105	70-135	

Lab Batch #: 767083 **Sample:** 339128-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 10:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767083 **Sample:** 339130-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 11:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.6	116	70-135	
o-Terphenyl	52.8	49.8	106	70-135	

Lab Batch #: 767083 **Sample:** 339130-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/30/09 11:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	53.3	49.8	107	70-135	

Lab Batch #: 767326 **Sample:** 534701-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 19:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 767326 **Sample:** 534701-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 19:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 767326 **Sample:** 534701-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/09 19:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.5	100	88	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339128,

Project ID: TNM-Beeson Historical

Lab Batch #: 767326 **Sample:** 339128-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/09 20:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	99.6	96	70-135	
o-Terphenyl	47.4	49.8	95	70-135	

Lab Batch #: 767326 **Sample:** 339339-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/09 01:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	46.9	49.8	94	70-135	

Lab Batch #: 767326 **Sample:** 339339-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/09 02:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.7	109	70-135	
o-Terphenyl	47.3	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 339128 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 07/31/2009 **Date Analyzed:** 07/31/2009

Lab Batch ID: 767321 **Sample:** 534694-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1048	105	0.1	0.1096	110	4	70-130	35	
Toluene	ND	0.1000	0.0991	99	0.1	0.1041	104	5	70-130	35	
Ethylbenzene	ND	0.1000	0.1087	109	0.1	0.1152	115	6	71-129	35	
m,p-Xylenes	ND	0.2000	0.2209	110	0.2	0.2362	118	7	70-135	35	
o-Xylene	ND	0.1000	0.1062	106	0.1	0.1114	111	5	71-133	35	

Analyst: ASA **Date Prepared:** 08/03/2009 **Date Analyzed:** 08/03/2009

Lab Batch ID: 767466 **Sample:** 534776-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0990	99	0.1	0.1019	102	3	70-130	35	
Toluene	ND	0.1000	0.0942	94	0.1	0.0966	97	3	70-130	35	
Ethylbenzene	ND	0.1000	0.1055	106	0.1	0.1071	107	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2134	107	0.2	0.2192	110	3	70-135	35	
o-Xylene	ND	0.1000	0.1032	103	0.1	0.1053	105	2	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 339128 **Project ID:** TNM-Beeson Historical

Analyst: BHW **Date Prepared:** 07/29/2009 **Date Analyzed:** 07/29/2009

Lab Batch ID: 767083 **Sample:** 534530-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	796	80	1000	845	85	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	912	91	1000	982	98	7	70-135	35	

Analyst: BHW **Date Prepared:** 07/31/2009 **Date Analyzed:** 07/31/2009

Lab Batch ID: 767326 **Sample:** 534701-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	829	83	1000	817	82	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	873	87	1000	862	86	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 339128 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 767321 **QC- Sample ID:** 339317-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/31/2009 **Date Prepared:** 07/31/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0851	85	0.1000	0.0660	66	25	70-130	35	X
Toluene	ND	0.1000	0.0675	68	0.1000	0.0469	47	36	70-130	35	XF
Ethylbenzene	ND	0.1000	0.0567	57	0.1000	0.0372	37	42	71-129	35	XF
m,p-Xylenes	ND	0.2000	0.1092	55	0.2000	0.0668	33	48	70-135	35	XF
o-Xylene	ND	0.1000	0.0543	54	0.1000	0.0352	35	43	71-133	35	XF

Lab Batch ID: 767466 **QC- Sample ID:** 339438-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1087	0.0796	73	0.1087	0.0777	71	2	70-130	35	
Toluene	ND	0.1087	0.0791	73	0.1087	0.0781	72	1	70-130	35	
Ethylbenzene	ND	0.1087	0.0929	85	0.1087	0.0942	87	1	71-129	35	
m,p-Xylenes	ND	0.2174	0.1916	88	0.2174	0.1944	89	1	70-135	35	
o-Xylene	ND	0.1087	0.0910	84	0.1087	0.0915	84	1	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 339128 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 767083 **QC- Sample ID:** 339130-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/30/2009 **Date Prepared:** 07/29/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1180	1040	88	1180	1040	88	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1180	1260	107	1180	1280	108	2	70-135	35	

Lab Batch ID: 767326 **QC- Sample ID:** 339339-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2009 **Date Prepared:** 07/31/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1140	990	87	1140	995	87	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	21.5	1140	1040	89	1140	1060	91	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 339128

Lab Batch #: 767032 **Project ID:** TNM-Beeson Historical

Date Analyzed: 07/30/2009 **Date Prepared:** 07/30/2009 **Analyst:** BEV

QC- Sample ID: 339128-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.48	3.68	39	20	F

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant — PAGE 01 OF 01 — Project Name: Beeson 8" Discharge
Company Name: Basin Environmental Service Technologies, LLC — Project #: TNM - Beeson Historical
Company Address: 2800 Plains Hwy — Project Loc: Eddy County, NM
City/State/Zip: Lovington, NM 88260 — PO #: PAA - J. Henry
Telephone No: (575) 605-7210 — Fax No: (505) 396-1429 — Report Format: [X] Standard [ ] TRRP [ ] NPDES
Sampler Signature: Camille Bryant — e-mail: cjbryant@basin-consulting.com

(lab use only) ORDER #: 339128

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA x 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: GW - Groundwater S - Soil/Sol SW - Surface Water SL - Sludge WW - Wastewater Specify Other	Analyze For: TPH: 418.1 / 8015M / 8015D	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX: Benzene & BTEX 8260	RCI	N O R M	PAH	EPA Plant Filter Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SP-7			7/28/2009	1000		1	X								Soil	X								X						X
02	SP-8			7/28/2009	1010		1	X								Soil	X								X						X
03	SP-9			7/28/2009	1020		1	X								Soil	X								X						X
04	SP-10			7/28/2009	1030		1	X								Soil	X								X						X
05	SP-11			7/28/2009	1040		1	X								Soil	X								X						X
06	SP-12			7/28/2009	1050		1	X								Soil	X								X						X
07	SP-13			7/28/2009	1100		1	X								Soil	X								X						X
08	SP-14			7/28/2009	1110		1	X								Soil	X								X						X
09	SP-15			7/28/2009	1120		1	X								Soil	X								X						X

Special Instructions:

Relinquished by: Camille Bryant	Date 7/28/09	Time 1400	Received by:		Date 7/28/09	Time 1400
Relinquished by:	Date 7/29/09	Time 0823	Received by:		Date	Time
Relinquished by:	Date	Time	Received by ELOT:		Date 7/29/09	Time 0823

Laboratory Comments:
Sample Containers Intact? Y
VOCs Free of Headspace? Y
Labels on container(s) Y
Custody seals on container(s) N
Custody seals on cooler(s) N
Sample Hand Delivered by Sample/Client Rep.? Y
by Courier? UPS DHL FedEx Lone Star
4029455
Temperature Upon Receipt: 2.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains

Date/ Time: 7.29.09 8:23

Lab ID #: 339128

Initials: AL

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	7.1 °C	
#2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler?	(Yes)	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples property preserved?	(Yes)	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 339427

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

06-AUG-09





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

06-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **339427**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 339427. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 339427 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

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XENCO Laboratories

Sample Cross Reference 339427

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-16	S	Jul-31-09 09:30		339427-001
SP-17	S	Jul-31-09 09:45		339427-002
SP-18	S	Jul-31-09 09:55		339427-003

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*06-AUG-09*
Work Order Number:	*339427*	*Date Received:*	*07/31/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-767303 Percent Moisture
None

Batch: LBA-767471 TPH by SW8015 Mod
None

Batch: LBA-767681 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767681, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 339703-001 D, 339427-002, 339427-003
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 534902-1-BLK.
4-Bromofluorobenzene recovered above QC limits. Sample Data confirmed by re-analysis.
Samples affected are: 339427-001, 339427-002, 339427-003, 339703-001 D.

Certificate of Analysis Summary 339427

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jul-31-09 01:45 pm
Report Date: 06-AUG-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	339427-001		339427-002		339427-003					
	Field Id:	SP-16		SP-17		SP-18					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jul-31-09 09:30		Jul-31-09 09:45		Jul-31-09 09:55					
BTEX by EPA 8021B	*Extracted:*	Aug-05-09 10:00		Aug-05-09 10:00		Aug-05-09 10:00					
	Analyzed:	Aug-05-09 11:17		Aug-05-09 15:48		Aug-05-09 16:07					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		0.0019	0.0011	ND	0.0214	ND	0.0109				
Toluene		0.0240	0.0022	0.1285	0.0429	0.0759	0.0217				
Ethylbenzene		0.0795	0.0011	0.4129	0.0214	0.2654	0.0109				
m,p-Xylenes		0.2405	0.0022	1.549	0.0429	0.9429	0.0217				
o-Xylene		0.1132	0.0011	0.4373	0.0214	0.9466	0.0109				
Total Xylenes		0.3537	0.0011	1.986	0.0214	1.8895	0.0109				
Total BTEX		0.4591	0.0011	2.528	0.0214	2.2308	0.0109				
Percent Moisture	*Extracted:*										
	Analyzed:	Aug-03-09 08:45		Aug-03-09 08:45		Aug-03-09 08:45					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		8.40	1.00	6.65	1.00	7.84	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-03-09 14:19		Aug-03-09 14:19		Aug-03-09 14:19					
	Analyzed:	Aug-03-09 16:12		Aug-03-09 16:37		Aug-03-09 17:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		423	81.5	693	80.1	365	81.1				
C12-C28 Diesel Range Hydrocarbons		3580	81.5	2950	80.1	2110	81.1				
C28-C35 Oil Range Hydrocarbons		403	81.5	340	80.1	242	81.1				
Total TPH		4406	81.5	3983	80.1	2717	81.1				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339427,

Project ID: Beeson Historical

Lab Batch #: 767681 **Sample:** 534902-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 767681 **Sample:** 534902-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 767681 **Sample:** 534902-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 10:08

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0167	0.0300	56	80-120	*

Lab Batch #: 767681 **Sample:** 339427-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 11:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.2635	0.0300	878	80-120	**

Lab Batch #: 767681 **Sample:** 339427-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 15:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0230	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0699	0.0300	233	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339427,

Project ID: Beeson Historical

Lab Batch #: 767681 **Sample:** 339427-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 16:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0769	0.0300	256	80-120	**

Lab Batch #: 767681 **Sample:** 339703-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 17:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0467	0.0300	156	80-120	**

Lab Batch #: 767471 **Sample:** 534782-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 14:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.2	100	95	70-135	
o-Terphenyl	39.4	50.0	79	70-135	

Lab Batch #: 767471 **Sample:** 534782-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 14:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	38.9	50.0	78	70-135	

Lab Batch #: 767471 **Sample:** 534782-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/03/09 15:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.5	100	84	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339427,

Project ID: Beeson Historical

Lab Batch #: 767471 **Sample:** 339427-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 16:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.5	89	70-135	
o-Terphenyl	43.1	49.8	87	70-135	

Lab Batch #: 767471 **Sample:** 339427-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 16:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	99.7	91	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 767471 **Sample:** 339427-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 17:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.1	99.7	87	70-135	
o-Terphenyl	43.2	49.9	87	70-135	

Lab Batch #: 767471 **Sample:** 339513-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/03/09 21:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.0	100	89	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 339427 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/05/2009 **Date Analyzed:** 08/05/2009

Lab Batch ID: 767681 **Sample:** 534902-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0923	92	0.1	0.1062	106	14	70-130	35	
Toluene	ND	0.1000	0.0879	88	0.1	0.1005	101	13	70-130	35	
Ethylbenzene	ND	0.1000	0.0969	97	0.1	0.1101	110	13	71-129	35	
m,p-Xylenes	ND	0.2000	0.1976	99	0.2	0.2232	112	12	70-135	35	
o-Xylene	ND	0.1000	0.0949	95	0.1	0.1066	107	12	71-133	35	

Analyst: ANL **Date Prepared:** 08/03/2009 **Date Analyzed:** 08/03/2009

Lab Batch ID: 767471 **Sample:** 534782-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	830	83	1000	855	86	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1000	100	1000	1010	101	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 339427

Lab Batch #: 767681 **Project ID:** Beeson Historical
Date Analyzed: 08/05/2009 **Date Prepared:** 08/05/2009 **Analyst:** ASA
QC- Sample ID: 339703-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	0.1419	0.1201	17	35	
Toluene	0.4279	0.3764	13	35	
Ethylbenzene	2.805	2.796	0	35	
m,p-Xylenes	7.319	7.375	1	35	
o-Xylene	1.726	1.743	1	35	
a,a,a-Trifluorotoluene	1.72	1.72	0	35	

Lab Batch #: 767303
Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **Analyst:** BEV
QC- Sample ID: 339340-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	6.16	5.94	4	20	

Lab Batch #: 767471
Date Analyzed: 08/03/2009 **Date Prepared:** 08/03/2009 **Analyst:** ANL
QC- Sample ID: 339513-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	24.1	25.5	6	35	
C12-C28 Diesel Range Hydrocarbons	1130	1230	8	35	
C28-C35 Oil Range Hydrocarbons	98.9	114	14	35	

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Project Name: Beeson 8" Discharge
Company Name: Basin Environmental Consulting, LLC
Project #: Beeson Historical
Company Address: P.O. Box 301
Project Loc: Lea County, NM
City/State/Zip: Lovington, NM 88260
PO #: PAA-J. Henry
Telephone No: (575)605-7210
Fax No: (505) 396-1429
Report Format: [X] Standard [ ] TRRP [ ] NPDES
Sampler Signature: Camille Bryant
e-mail: cbryant@basin-consulting.com

(lab use only)
ORDER #: 339427

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW – Drinking Water SL – Sludge; GW – Groundwater S – Soil/Solid; WW – Non-Aqueous Specify Other	Analyze For: TPH: 418.1 / 8015M	TPH: TX1005 TX1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX: 8021B/5030 or BTEX: 8260	RCI	NORM					TOTAL	TCLP	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAYS
01	SP-16			31-Jul-09	0930		1	X								Soil	X								X										X
02	SP-17			31-Jul-09	0945		1	X								Soil	X								X										X
03	SP-18			31-Jul-09	0955		1	X								Soil	X								X										X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	7/31/09	10:17		7/31/09	10:47
Relinquished by:	Date	Time	Received by:	Date	Time
	7/31/09	1:45			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cindy Ann	7-31-09	13:45

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
4029655
Temperature Upon Receipt: 1.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains

Date/ Time: 7-31-09 13:45

Lab ID #: 339427

Initials: AL

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	1.5 °C	
#2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4 Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	(Yes)	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	(Yes)	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 339703

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

10-AUG-09

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

XENCO Laboratories

10-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **339703**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 339703. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 339703 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 339703

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-19	S	Aug-04-09 09:28		339703-001
SP-20	S	Aug-04-09 09:40		339703-002
SP-21	S	Aug-04-09 09:56		339703-003
SP-22	S	Aug-04-09 10:12		339703-004
SP-23	S	Aug-04-09 10:28		339703-005

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*10-AUG-09*
Work Order Number:	*339703*	*Date Received:*	*08/05/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-767681 BTEX-MTBE EPA 8021B
SW8021BM

Batch 767681, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 339703-001 D,339703-004,339703-003,339703-001.
4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 534902-1-BLK.
4-Bromofluorobenzene recovered above QC limits Matrix interferences is suspected; Data confirmed by re-analysis. Samples affected are: 339703-003, 339703-001, 339703-004, 339703-001 D

Batch: LBA-767723 TPH by SW8015 Mod
None

Batch: LBA-767761 Percent Moisture
None

Batch: LBA-768053 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768053, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 339703-005,339703-002.
4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 535108-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 339703-002, 339703-005.

Certificate of Analysis Summary 339703

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Wed Aug-05-09 08:35 am
Report Date: 10-AUG-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	339703-001		339703-002		339703-003		339703-004		339703-005	
	Field Id:	SP-19		SP-20		SP-21		SP-22		SP-23	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-04-09 09:28		Aug-04-09 09:40		Aug-04-09 09:56		Aug-04-09 10:12		Aug-04-09 10:28	
BTEX by EPA 8021B	*Extracted:*	Aug-05-09 10:00		Aug-07-09 16:00		Aug-05-09 10:00		Aug-05-09 10:00		Aug-07-09 16:00	
	Analyzed:	Aug-05-09 13:57		Aug-07-09 22:58		Aug-05-09 17:22		Aug-05-09 17:40		Aug-07-09 23:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.1419	0.0572	0.0162	0.0118	0.0509	0.0248	0.0442	0.0208	0.5094	0.1152
Toluene		0.4279	0.1144	0.3662	0.0236	0.2294	0.0497	0.1773	0.0417	6.613	0.2305
Ethylbenzene		2.805	0.0572	0.3265	0.0118	0.3443	0.0248	0.3097	0.0208	23.43	0.1152
m,p-Xylenes		7.319	0.1144	1.027	0.0236	1.851	0.0497	1.677	0.0417	30.86	0.2305
o-Xylene		1.726	0.0572	1.183	0.0118	1.232	0.0248	1.178	0.0208	4.363	0.1152
Total Xylenes		9.045	0.0572	2.210	0.0118	3.083	0.0248	2.855	0.0208	35.22	0.1152
Total BTEX		12.420	0.0572	2.919	0.0118	3.708	0.0248	3.386	0.0208	65.78	0.1152
Percent Moisture	*Extracted:*										
	Analyzed:	Aug-06-09 10:43		Aug-06-09 10:43		Aug-06-09 10:43		Aug-06-09 10:43		Aug-06-09 10:43	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		12.60	1.00	15.35	1.00	19.44	1.00	3.98	1.00	13.23	1.00
TPH By SW8015 Mod	*Extracted:*	Aug-05-09 12:58		Aug-05-09 12:58		Aug-05-09 12:58		Aug-05-09 12:58		Aug-05-09 12:58	
	Analyzed:	Aug-05-09 13:54		Aug-05-09 14:20		Aug-05-09 14:47		Aug-05-09 15:13		Aug-05-09 15:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		356	85.7	355	88.2	421	18.6	322	78.1	1280	86.4
C12-C28 Diesel Range Hydrocarbons		719	85.7	1090	88.2	1370	18.6	1020	78.1	2350	86.4
C28-C35 Oil Range Hydrocarbons		122	85.7	154	88.2	136	18.6	150	78.1	269	86.4
Total TPH		1197	85.7	1599	88.2	1927	18.6	1492	78.1	3899	86.4

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339703,

Project ID: Beeson Historical

Lab Batch #: 767681 **Sample:** 534902-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 767681 **Sample:** 534902-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 09:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 767681 **Sample:** 534902-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 10:08

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0167	0.0300	56	80-120	*

Lab Batch #: 767681 **Sample:** 339703-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 13:57

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0206	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0471	0.0300	157	80-120	**

Lab Batch #: 767681 **Sample:** 339703-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 17:22

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0206	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0548	0.0300	183	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339703,

Project ID: Beeson Historical

Lab Batch #: 767681 **Sample:** 339703-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 17:40

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0209	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0627	0.0300	209	80-120	**

Lab Batch #: 767681 **Sample:** 339703-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 17:59

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0467	0.0300	156	80-120	**

Lab Batch #: 768053 **Sample:** 535108-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/09 19:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	

Lab Batch #: 768053 **Sample:** 535108-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/09 20:12

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 768053 **Sample:** 535108-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/09 20:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0134	0.0300	45	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339703,

Project ID: Beeson Historical

Lab Batch #: 768053 **Sample:** 339703-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/09 22:58

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0210	0.0300	70	80-120	**
4-Bromofluorobenzene	0.1193	0.0300	398	80-120	**

Lab Batch #: 768053 **Sample:** 339703-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/09 23:16

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0559	0.0300	186	80-120	**

Lab Batch #: 768053 **Sample:** 339957-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/09 04:11

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0360	0.0300	120	80-120	

Lab Batch #: 768053 **Sample:** 339957-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/09 04:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 767723 **Sample:** 534932-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 12:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339703,

Project ID: Beeson Historical

Lab Batch #: 767723 **Sample:** 534932-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 13:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	100	98	70-135	
o-Terphenyl	42.3	50.1	84	70-135	

Lab Batch #: 767723 **Sample:** 534932-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/05/09 13:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.3	100	82	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 767723 **Sample:** 339703-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 13:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.9	88	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 767723 **Sample:** 339703-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 14:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	99.6	86	70-135	
o-Terphenyl	45.4	49.8	91	70-135	

Lab Batch #: 767723 **Sample:** 339703-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 14:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 339703,

Project ID: Beeson Historical

Lab Batch #: 767723 **Sample:** 339703-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 15:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	100	89	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

Lab Batch #: 767723 **Sample:** 339703-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 15:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 767723 **Sample:** 339703-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/05/09 16:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 339703 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/05/2009 **Date Analyzed:** 08/05/2009

Lab Batch ID: 767681 **Sample:** 534902-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0923	92	0.1	0.1062	106	14	70-130	35	
Toluene	ND	0.1000	0.0879	88	0.1	0.1005	101	13	70-130	35	
Ethylbenzene	ND	0.1000	0.0969	97	0.1	0.1101	110	13	71-129	35	
m,p-Xylenes	ND	0.2000	0.1976	99	0.2	0.2232	112	12	70-135	35	
o-Xylene	ND	0.1000	0.0949	95	0.1	0.1066	107	12	71-133	35	

Analyst: ASA **Date Prepared:** 08/07/2009 **Date Analyzed:** 08/07/2009

Lab Batch ID: 768053 **Sample:** 535108-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0935	94	0.1	0.0943	94	1	70-130	35	
Toluene	ND	0.1000	0.0907	91	0.1	0.0919	92	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1038	104	0.1	0.1057	106	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2107	105	0.2	0.2140	107	2	70-135	35	
o-Xylene	ND	0.1000	0.1012	101	0.1	0.1032	103	2	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 339703 **Project ID:** Beeson Historical

Analyst: BHW **Date Prepared:** 08/05/2009 **Date Analyzed:** 08/05/2009

Lab Batch ID: 767723 **Sample:** 534932-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	812	81	1000	819	82	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	837	84	1000	838	84	0	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 339703 **Project ID:** Beeson Historical

Lab Batch ID: 768053 **QC- Sample ID:** 339957-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/08/2009 **Date Prepared:** 08/07/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1092	0.0851	78	0.1092	0.0858	79	1	70-130	35	
Toluene	ND	0.1092	0.0825	76	0.1092	0.0829	76	0	70-130	35	
Ethylbenzene	ND	0.1092	0.0934	86	0.1092	0.0934	86	0	71-129	35	
m,p-Xylenes	ND	0.2185	0.1876	86	0.2185	0.1880	86	0	70-135	35	
o-Xylene	ND	0.1092	0.0906	83	0.1092	0.0909	83	0	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 339703

Lab Batch #: 767681 **Project ID:** Beeson Historical
Date Analyzed: 08/05/2009 **Date Prepared:** 08/05/2009 **Analyst:** ASA
QC- Sample ID: 339703-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	0.1419	0.1201	17	35	
Toluene	0.4279	0.3764	13	35	
Ethylbenzene	2.805	2.796	0	35	
m,p-Xylenes	7.319	7.375	1	35	
o-Xylene	1.726	1.743	1	35	

Lab Batch #: 767761
Date Analyzed: 08/06/2009 **Date Prepared:** 08/06/2009 **Analyst:** BEV
QC- Sample ID: 339656-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.17	9.59	16	20	

Lab Batch #: 767723
Date Analyzed: 08/05/2009 **Date Prepared:** 08/05/2009 **Analyst:** BHW
QC- Sample ID: 339703-005 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	1280	1300	2	35	
C12-C28 Diesel Range Hydrocarbons	2350	2400	2	35	
C28-C35 Oil Range Hydrocarbons	269	277	3	35	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature: Camille Bryant e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 339703

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW – Drinking Water SL = Sludge; GW – Groundwater S – Soil/Solid; WW/SW – Wastewater O – Oil; NP – Non-Potable Specify Other	Analyze For: BTEX 8021B/5030 or BTEX 8260	RUSH TAT (Pre-Scheduled 24, 48, 72 hrs)	Standard TAT 4 DAY
01	SP-19			4-Aug-09	928		1	X								Soil	X		X
02	SP-20			4-Aug-09	940		1	X								Soil	X		X
03	SP-21			4-Aug-09	956		1	X								Soil	X		X
04	SP-22			4-Aug-09	1012		1	X								Soil	X		X
05	SP-23			4-Aug-09	1028		1	X								Soil	X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	8/4/09	1300		8/4/09	1300
	8/5/09	0835			
			Received by ELOT:	08/05/09	8:35

Laboratory Comments: 402.9 C
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N (NP)
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 5.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin/Plains

Date/ Time: 08/05/09 8:35

Lab ID #: 339703

Initials: QMW

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 340059

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

12-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

XENCO Laboratories

12-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **340059**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 340059. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 340059 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

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XENCO Laboratories

Sample Cross Reference 340059

ACCREDITED IN ACCORDANCE WITH nelac

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-24	S	Aug-05-09 09:20		340059-001
SP-25	S	Aug-05-09 09:38		340059-002
SP-26	S	Aug-05-09 09:59		340059-003
SP-27	S	Aug-05-09 10:11		340059-004

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*12-AUG-09*
Work Order Number:	*340059*	*Date Received:*	*08/06/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768017 Specific Conductance by EPA 120.1
None

Batch: LBA-768021 TX1005
None

Batch: LBA-768335 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768335, m,p-Xylenes recovered below QC limits in the Matrix Spike. Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340059-003, -004, -002, -001.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768335, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 340059-002,340059-004,340059-003,340059-001.
4-Bromofluorobenzene recovered below QC limits QC Data not confirmed by re-analysis.
Samples affected are: 535264-1-BLK.
4-Bromofluorobenzene recovered above QC limits QC Sample Data confirmed by re-analysis.
Samples affected are: 340373-003 S, 340059-001, 340059-002, 340059-004, 340059-003

Certificate of Analysis Summary 340059

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Thu Aug-06-09 05:40 pm
Report Date: 12-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	340059-001		340059-002		340059-003		340059-004					
	Field Id:	SP-24		SP-25		SP-26		SP-27					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-05-09 09:20		Aug-05-09 09:38		Aug-05-09 09:59		Aug-05-09 10:11					
BTEX by EPA 8021B	*Extracted:*	Aug-11-09 10:00		Aug-11-09 10:00		Aug-11-09 10:00		Aug-11-09 10:00					
	Analyzed:	Aug-11-09 11:06		Aug-11-09 11:25		Aug-11-09 12:53		Aug-11-09 12:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0050	ND	0.0207	0.1049	0.0510	ND	0.0210				
Toluene		0.0338	0.0099	0.0949	0.0414	0.6220	0.1021	1.211	0.0421				
Ethylbenzene		0.2475	0.0050	0.2422	0.0207	3.353	0.0510	0.5107	0.0210				
m,p-Xylenes		1.121	0.0099	1.251	0.0414	22.90	0.1021	3.190	0.0421				
o-Xylene		0.8536	0.0050	0.8874	0.0207	2.128	0.0510	1.835	0.0210				
Total Xylenes		1.975	0.0050	2.138	0.0207	25.03	0.0510	5.025	0.0210				
Total BTEX		2.256	0.0050	2.476	0.0207	29.11	0.0510	6.747	0.0210				
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-10-09 09:02		Aug-10-09 09:02		Aug-10-09 09:02		Aug-10-09 09:02					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		ND	1.00	3.31	1.00	2.01	1.00	4.96	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-09-09 19:03		Aug-09-09 19:03		Aug-09-09 19:03		Aug-09-09 19:03					
	Analyzed:	Aug-09-09 22:06		Aug-09-09 22:32		Aug-09-09 22:57		Aug-09-09 23:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		315	74.4	607	15.5	1580	76.2	550	15.7				
C12-C28 Diesel Range Hydrocarbons		1650	74.4	2310	15.5	3260	76.2	1190	15.7				
C28-C35 Oil Range Hydrocarbons		184	74.4	194	15.5	338	76.2	113	15.7				
Total TPH		2149	74.4	3111	15.5	5178	76.2	1853	15.7				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340059,

Project ID: Beeson Historical

Lab Batch #: 768335 **Sample:** 535264-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 09:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 768335 **Sample:** 535264-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 09:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 768335 **Sample:** 535264-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 10:11

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0129	0.0300	43	80-120	*

Lab Batch #: 768335 **Sample:** 340059-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 11:06

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0205	0.0300	68	80-120	**
4-Bromofluorobenzene	0.2085	0.0300	695	80-120	**

Lab Batch #: 768335 **Sample:** 340059-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 11:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0576	0.0300	192	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340059,

Project ID: Beeson Historical

Lab Batch #: 768335 **Sample:** 340059-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 12:02

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0207	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0787	0.0300	262	80-120	**

Lab Batch #: 768335 **Sample:** 340059-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 12:53

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0202	0.0300	67	80-120	**
4-Bromofluorobenzene	0.0571	0.0300	190	80-120	**

Lab Batch #: 768335 **Sample:** 340373-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 16:05

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768335 **Sample:** 340373-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 16:24

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 768021 **Sample:** 535079-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/09/09 19:59

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340059,

Project ID: Beeson Historical

Lab Batch #: 768021 **Sample:** 535079-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/09/09 20:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

Lab Batch #: 768021 **Sample:** 535079-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/09/09 20:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.1	100	87	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 768021 **Sample:** 340059-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/09 22:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	99.8	96	70-135	
o-Terphenyl	47.0	49.9	94	70-135	

Lab Batch #: 768021 **Sample:** 340059-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/09 22:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.9	98	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 768021 **Sample:** 340059-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/09 22:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	47.0	49.8	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340059,

Project ID: Beeson Historical

Lab Batch #: 768021 **Sample:** 340059-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/09 23:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.7	107	70-135	
o-Terphenyl	47.0	49.9	94	70-135	

Lab Batch #: 768021 **Sample:** 340239-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/09 06:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.7	107	70-135	
o-Terphenyl	44.4	49.9	89	70-135	

Lab Batch #: 768021 **Sample:** 340239-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/09 06:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	43.8	49.9	88	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 340059 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/11/2009 **Date Analyzed:** 08/11/2009

Lab Batch ID: 768335 **Sample:** 535264-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1104	110	0.1	0.1100	110	0	70-130	35	
Toluene	ND	0.1000	0.1053	105	0.1	0.1054	105	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1149	115	0.1	0.1164	116	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2360	118	0.2	0.2395	120	1	70-135	35	
o-Xylene	ND	0.1000	0.1105	111	0.1	0.1128	113	2	71-133	35	

Analyst: BHW **Date Prepared:** 08/09/2009 **Date Analyzed:** 08/09/2009

Lab Batch ID: 768021 **Sample:** 535079-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	866	87	1000	878	88	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	901	90	1000	921	92	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 340059 **Project ID:** Beeson Historical

Lab Batch ID: 768335 **QC- Sample ID:** 340373-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/11/2009 **Date Prepared:** 08/11/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1149	0.0676	59	0.1149	0.0713	62	5	70-130	35	X
Toluene	ND	0.1149	0.0642	56	0.1149	0.0682	59	6	70-130	35	X
Ethylbenzene	ND	0.1149	0.0720	63	0.1149	0.0764	66	6	71-129	35	X
m,p-Xylenes	ND	0.2298	0.1509	66	0.2298	0.1601	70	6	70-135	35	X
o-Xylene	ND	0.1149	0.0680	59	0.1149	0.0705	61	4	71-133	35	X

Lab Batch ID: 768021 **QC- Sample ID:** 340239-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/10/2009 **Date Prepared:** 08/09/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1050	968	92	1050	959	91	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	40.3	1050	1070	98	1050	1050	96	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 340059

Lab Batch #: 768017 **Project ID:** Beeson Historical

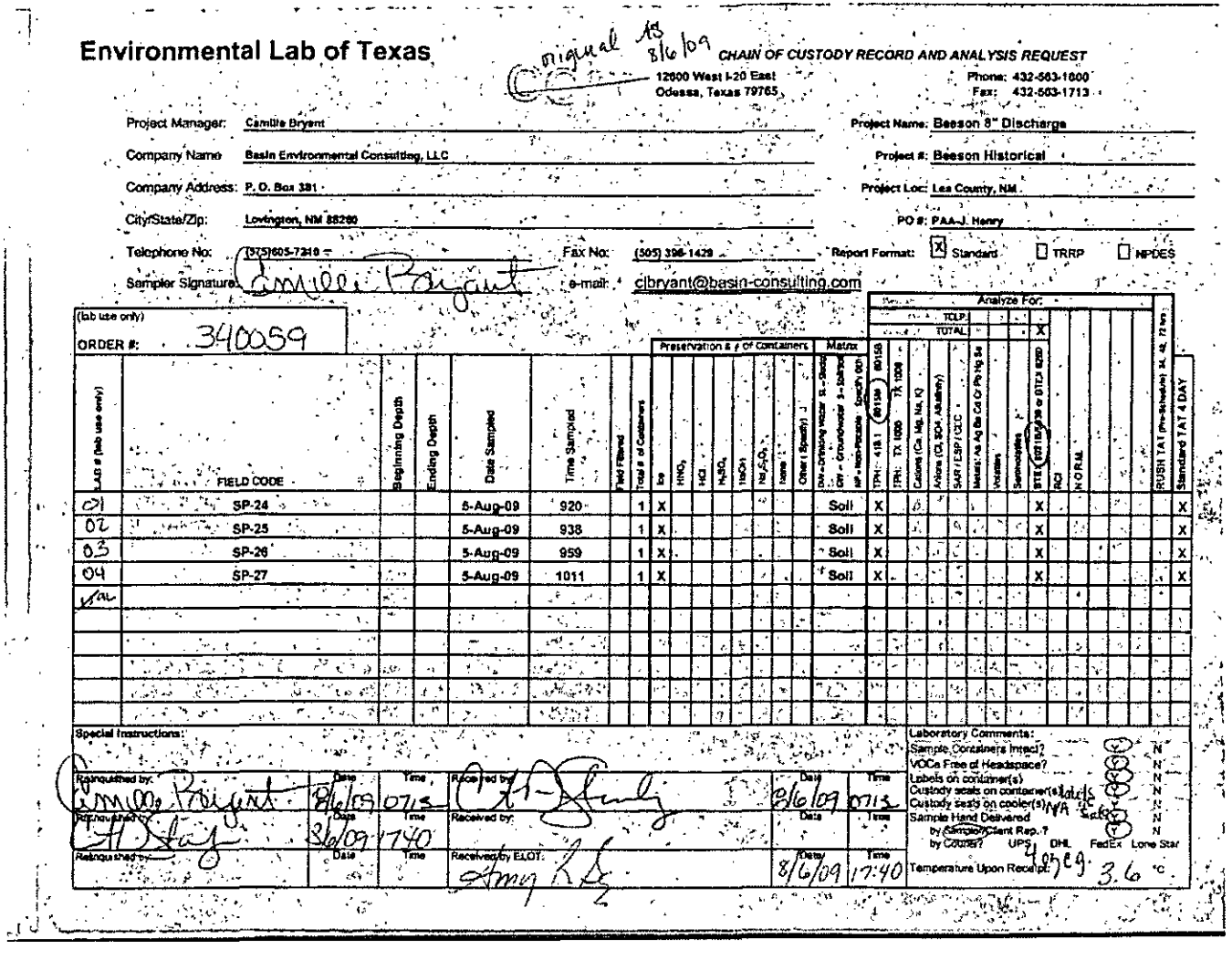
Date Analyzed: 08/10/2009 **Date Prepared:** 08/10/2009 **Analyst:** BEV

QC- Sample ID: 340058-001 D **Batch #:** 1 **Matrix:** Solid

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	ND	ND	NC	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Environmental Lab of Texas

Original 8/6/09

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7310 Fax No: (505) 398-1429
Sampler Signature: Camille Bryant e-mail: clbryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 340059

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW = Drinking Water SL = Sludge GW = Groundwater S = Soil/Solid WP = Wastewater Specify Oth	Analyze For: TPH: 418.1 (8015)	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX (8021B/5030 or 8TCA 8260)	RCI	NORM			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	SP-24			5-Aug-09	920		1	X								Soil	X								X							X
02	SP-25			5-Aug-09	938		1	X								Soil	X								X							X
03	SP-26			5-Aug-09	959		1	X								Soil	X								X							X
04	SP-27			5-Aug-09	1011		1	X								Soil	X								X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	8/6/09	0715		8/6/09	0715
Relinquished by:	Date	Time	Received by:	Date	Time
	8/6/09	1740			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				8/6/09	17:40

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) N/A Y N
Custody seals on cooler(s) N/A Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental / Plains

Date/ Time: 8/6/09 17:40

Lab ID # : 340059

Initials: AB

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	3.6 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	(Yes)	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 340491

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Historical

14-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

XENCO Laboratories

14-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **340491**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 340491. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 340491 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 340491

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-28	S	Aug-06-09 15:00		340491-001
SP-29	S	Aug-06-09 15:10		340491-002
SP-30	S	Aug-06-09 15:20		340491-003
SP-31	S	Aug-06-09 15:30		340491-004

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Historical*	*Report Date:*	*14-AUG-09*
Work Order Number:	*340491*	*Date Received:*	*08/10/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768265 TX1005
None

Batch: LBA-768270 Percent Moisture
None

Batch: LBA-768368 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768368, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340491-001, -004.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768368, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 340491-001,340491-004.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not cofirmed by re-analysis. Samples affected are: 535290-1-BKS, 535290-1-BSD, 340491-004, 340491-001.

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Historical*	*Report Date:*	*14-AUG-09*
Work Order Number:	*340491*	*Date Received:*	*08/10/2009*

Batch: LBA-768535 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768535, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340491-003, -002.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768535, 4-Bromofluorobenzene recovered below QC limits Sample Data confirmed by re-analysis. Samples affected are: 535392-1-BLK,340491-002, 340491-003.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 535392-1-BKS and 535392-1-BSD

Certificate of Analysis Summary 340491

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Mon Aug-10-09 05:13 pm
Report Date: 14-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	340491-001		340491-002		340491-003		340491-004					
	Field Id:	SP-28		SP-29		SP-30		SP-31					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-06-09 15:00		Aug-06-09 15:10		Aug-06-09 15:20		Aug-06-09 15:30					
BTEX by EPA 8021B	*Extracted:*	Aug-12-09 17:00		Aug-13-09 17:00		Aug-13-09 17:00		Aug-12-09 17:00					
	Analyzed:	Aug-13-09 01:41		Aug-13-09 18:23		Aug-13-09 18:42		Aug-12-09 21:04					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		0.0698	0.0529	ND	0.0011	ND	0.2621	ND	0.0010				
Toluene		0.8179	0.1058	ND	0.0023	ND	0.5241	0.0072	0.0020				
Ethylbenzene		1.383	0.0529	ND	0.0011	10.94	0.2621	0.0145	0.0010				
m,p-Xylenes		8.153	0.1058	0.0031	0.0023	4.830	0.5241	0.0340	0.0020				
o-Xylene		6.059	0.0529	0.0015	0.0011	2.062	0.2621	0.0208	0.0010				
Total Xylenes		14.212	0.0529	0.0046	0.0011	6.892	0.2621	0.0548	0.0010				
Total BTEX		16.483	0.0529	0.0046	0.0011	17.83	0.2621	0.0765	0.0010				
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-12-09 10:03		Aug-12-09 10:03		Aug-12-09 10:03		Aug-12-09 10:03					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		5.49	1.00	11.95	1.00	4.60	1.00	1.80	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-11-09 13:33		Aug-11-09 13:33		Aug-11-09 13:33		Aug-11-09 13:33					
	Analyzed:	Aug-11-09 20:40		Aug-11-09 21:06		Aug-11-09 21:31		Aug-11-09 21:57					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		731	158	ND	17.0	1020	157	143	76.1				
C12-C28 Diesel Range Hydrocarbons		2830	158	204	17.0	4230	157	1300	76.1				
C28-C35 Oil Range Hydrocarbons		309	158	36.5	17.0	402	157	152	76.1				
Total TPH		3870	158	241	17.0	5652	157	1595	76.1				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340491,

Project ID: TNM-Beeson Historical

Lab Batch #: 768368 **Sample:** 535290-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 19:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0135	0.0300	45	80-120	*

Lab Batch #: 768368 **Sample:** 340491-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 21:04

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0224	0.0300	75	80-120	*
4-Bromofluorobenzene	0.0756	0.0300	252	80-120	*

Lab Batch #: 768368 **Sample:** 340491-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 01:41

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0205	0.0300	68	80-120	*
4-Bromofluorobenzene	0.1519	0.0300	506	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340491,

Project ID: TNM-Beeson Historical

Lab Batch #: 768368 **Sample:** 340660-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 02:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 768368 **Sample:** 340660-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 03:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 768535 **Sample:** 535392-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 17:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768535 **Sample:** 535392-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 17:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0366	0.0300	122	80-120	*

Lab Batch #: 768535 **Sample:** 535392-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 18:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340491,

Project ID: TNM-Beeson Historical

Lab Batch #: 768535 **Sample:** 340491-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 18:23

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0236	0.0300	79	80-120	**

Lab Batch #: 768535 **Sample:** 340491-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 18:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	80-120	
4-Bromofluorobenzene	0.0430	0.0300	143	80-120	**

Lab Batch #: 768535 **Sample:** 340491-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/14/09 00:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 768535 **Sample:** 340491-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/14/09 00:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 768265 **Sample:** 535219-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 14:39

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	40.7	50.0	81	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340491,

Project ID: TNM-Beeson Historical

Lab Batch #: 768265 **Sample:** 535219-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 15:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.1	50.0	82	70-135	

Lab Batch #: 768265 **Sample:** 535219-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/11/09 15:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	100	84	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 768265 **Sample:** 340491-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 20:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	99.7	89	70-135	
o-Terphenyl	41.4	49.9	83	70-135	

Lab Batch #: 768265 **Sample:** 340491-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 21:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.3	99.7	82	70-135	
o-Terphenyl	41.8	49.9	84	70-135	

Lab Batch #: 768265 **Sample:** 340491-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 21:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	43.9	49.8	88	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340491,

Project ID: TNM-Beeson Historical

Lab Batch #: 768265 **Sample:** 340491-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 21:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.4	99.6	75	70-135	
o-Terphenyl	37.9	49.8	76	70-135	

Lab Batch #: 768265 **Sample:** 340373-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 22:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	99.9	99	70-135	
o-Terphenyl	39.6	50.0	79	70-135	

Lab Batch #: 768265 **Sample:** 340373-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/11/09 23:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 340491 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 08/12/2009 **Date Analyzed:** 08/12/2009

Lab Batch ID: 768368 **Sample:** 535290-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1102	110	0.1	0.1092	109	1	70-130	35	
Toluene	ND	0.1000	0.1058	106	0.1	0.1046	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1193	119	0.1	0.1179	118	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2451	123	0.2	0.2420	121	1	70-135	35	
o-Xylene	ND	0.1000	0.1151	115	0.1	0.1139	114	1	71-133	35	

Analyst: ASA **Date Prepared:** 08/13/2009 **Date Analyzed:** 08/13/2009

Lab Batch ID: 768535 **Sample:** 535392-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0968	97	0.1	0.0999	100	3	70-130	35	
Toluene	ND	0.1000	0.0931	93	0.1	0.0966	97	4	70-130	35	
Ethylbenzene	ND	0.1000	0.1046	105	0.1	0.1087	109	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.2160	108	0.2	0.2243	112	4	70-135	35	
o-Xylene	ND	0.1000	0.1015	102	0.1	0.1060	106	4	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 340491 **Project ID:** TNM-Beeson Historical

Analyst: BHW **Date Prepared:** 08/11/2009 **Date Analyzed:** 08/11/2009

Lab Batch ID: 768265 **Sample:** 535219-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	905	91	1000	923	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1120	112	1000	1130	113	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 340491 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 768368 **QC- Sample ID:** 340660-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/13/2009 **Date Prepared:** 08/12/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1111	0.0806	73	0.1111	0.0821	74	2	70-130	35	
Toluene	ND	0.1111	0.0662	60	0.1111	0.0663	60	0	70-130	35	X
Ethylbenzene	ND	0.1111	0.0729	66	0.1111	0.0716	64	2	71-129	35	X
m,p-Xylenes	ND	0.2222	0.1467	66	0.2222	0.1433	64	2	70-135	35	X
o-Xylene	ND	0.1111	0.0696	63	0.1111	0.0685	62	2	71-133	35	X

Lab Batch ID: 768535 **QC- Sample ID:** 340491-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/14/2009 **Date Prepared:** 08/13/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1136	0.0937	82	0.1136	0.0925	81	1	70-130	35	
Toluene	ND	0.1136	0.0699	62	0.1136	0.0671	59	4	70-130	35	X
Ethylbenzene	ND	0.1136	0.0482	42	0.1136	0.0434	38	10	71-129	35	X
m,p-Xylenes	0.0031	0.2271	0.0942	40	0.2271	0.0851	36	10	70-135	35	X
o-Xylene	0.0015	0.1136	0.0487	42	0.1136	0.0452	38	7	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 340491 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 768265 **QC- Sample ID:** 340373-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/11/2009 **Date Prepared:** 08/11/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1170	1090	93	1170	1100	94	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1170	1310	112	1170	1350	115	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 340491

Lab Batch #: 768270 **Project ID:** TNM-Beeson Historical

Date Analyzed: 08/12/2009 **Date Prepared:** 08/12/2009 **Analyst:** BEV

QC- Sample ID: 340491-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture **Analyte**	**Parent Sample Result [A]**	**Sample Duplicate Result [B]**	**RPD**	**Control Limits %RPD**	**Flag**
Percent Moisture	5.49	6.71	20	20	

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant | PAGE 01 OF 01 | Project Name: Beeson 8" Discharge

Company Name: Basin Environmental Service Technologies, LLC | Project #: TNM - Beeson Historical

Company Address: 2800 Plains Hwy | Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 | PO #: PAA - J. Henry

Telephone No: (575) 605-7210 | Fax No: (505) 396-1429 | Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: [signature] | cbryant@basin-consulting.com

(lab use only) ORDER #: 340491

Lab # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: DW – Drinking Water S – Soil/Sed GW – Groundwater SW – Surface Water NP – Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015 (8015)	TOTAL: TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	PAH	EPA Paint Filter Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SP-28			8/6/2009	1500		1	X								Soil	X									X							X
02	SP-29			8/6/2009	1510		1	X								Soil	X									X							X
03	SP-30			8/6/2009	1520		1	X								Soil	X									X							X
04	SP-31			8/6/2009	1530		1	X								Soil	X									X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	8/10/09	1713			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			[signature]	08/10/09	17:13

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y (N)
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 5.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env

Date/ Time: 05/10/09 17:13

Lab ID #: 340491

Initials: QM

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.1 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 340658

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

18-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Houston - Dallas - San Antonio - Tampa - Miami - Midland - Corpus Christi - Atlanta - Latin America

18-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **340658**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 340658. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 340658 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 340658

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NSW-1	S	Aug-11-09 10:50		340658-001
NSW-2	S	Aug-11-09 11:05		340658-002
NSW-3	S	Aug-11-09 11:14		340658-003
NSW-4	S	Aug-11-09 11:23		340658-004
SP-32	S	Aug-11-09 11:35		340658-005
SP-33	S	Aug-11-09 11:47		340658-006
SP-34	S	Aug-11-09 11:59		340658-007
SP-35	S	Aug-11-09 12:08		340658-008

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*18-AUG-09*
Work Order Number:	*340658*	*Date Received:*	*08/12/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768358 Percent Moisture
AD2216A %Moisture

Batch 768358, Percent Moisture RPD recovered outside QC limits. This is most likely due to sample non-homogeneity.
Samples affected are: 340658-001 D.

Batch: LBA-768368 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768368, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340658-001, -002, -004, -003, -005.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768368, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 535290-1-BKS, 535290-1-BSD, 340658-001, 340658-005

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*18-AUG-09*
Work Order Number:	*340658*	*Date Received:*	*08/12/2009*

Batch: LBA-768535 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768535, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 340658-008,340658-007.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535392-1-BLK.
4-Bromofluorobenzene recovered above QC limits QC Data not confirmed by re-analysis.
Samples affected are: 535392-1-BKS, 535392-1-BSD, 340658-006, 340658-007, 340658-008.

SW8021BM

Batch 768535, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 340658-006, -008, -007.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-768669 TPH by SW8015 Mod
None

Certificate of Analysis Summary 340658

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Wed Aug-12-09 08:45 am
Report Date: 18-AUG-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	340658-001		340658-002		340658-003		340658-004		340658-005		340658-006	
	Field Id:	NSW-1		NSW-2		NSW-3		NSW-4		SP-32		SP-33	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-11-09 10:50		Aug-11-09 11:05		Aug-11-09 11:14		Aug-11-09 11:23		Aug-11-09 11:35		Aug-11-09 11:47	
BTEX by EPA 8021B	*Extracted:*	Aug-12-09 17:00		Aug-12-09 17:00		Aug-12-09 17:00		Aug-12-09 17:00		Aug-12-09 17:00		Aug-13-09 17:00	
	Analyzed:	Aug-12-09 21:22		Aug-12-09 21:41		Aug-12-09 21:59		Aug-12-09 22:18		Aug-12-09 23:13		Aug-13-09 19:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0014	ND	0.0010	ND	0.0515
Toluene		ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0027	ND	0.0020	ND	0.1029
Ethylbenzene		0.0076	0.0010	ND	0.0010	ND	0.0010	ND	0.0014	0.0030	0.0010	0.5353	0.0515
m,p-Xylenes		0.0039	0.0020	ND	0.0020	ND	0.0020	ND	0.0027	0.0146	0.0020	1.189	0.1029
o-Xylene		0.0029	0.0010	ND	0.0010	ND	0.0010	ND	0.0014	0.0119	0.0010	0.7469	0.0515
Total Xylenes		0.0068	0.0010	ND	0.0010	ND	0.0010	ND	0.0014	0.0265	0.0010	1.936	0.0515
Total BTEX		0.0144	0.0010	ND	0.0010	ND	0.0010	ND	0.0014	0.0295	0.0010	2.471	0.0515
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-12-09 16:00		Aug-12-09 16:00		Aug-12-09 16:00		Aug-12-09 16:00		Aug-12-09 16:00		Aug-12-09 16:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		1.13	1.00	2.13	1.00	1.47	1.00	26.09	1.00	ND	1.00	2.86	1.00
TPH By SW8015 Mod	*Extracted:*	Aug-13-09 11:06		Aug-13-09 11:06		Aug-13-09 11:06		Aug-13-09 11:06		Aug-13-09 11:06		Aug-13-09 11:06	
	Analyzed:	Aug-13-09 19:42		Aug-13-09 20:07		Aug-13-09 20:32		Aug-13-09 20:57		Aug-13-09 21:22		Aug-13-09 21:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		166	75.6	ND	15.3	ND	76.1	ND	20.2	90.4	15.1	454	15.4
C12-C28 Diesel Range Hydrocarbons		4460	75.6	21.0	15.3	691	76.1	ND	20.2	857	15.1	2230	15.4
C28-C35 Oil Range Hydrocarbons		371	75.6	ND	15.3	155	76.1	ND	20.2	84.4	15.1	156	15.4
Total TPH		4997	75.6	21.0	15.3	846	76.1	ND	20.2	1032	15.1	2840	15.4

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Certificate of Analysis Summary 340658

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Wed Aug-12-09 08:45 am
Report Date: 18-AUG-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	340658-007		340658-008					
	Field Id:	SP-34		SP-35					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-11-09 11:59		Aug-11-09 12:08					
BTEX by EPA 8021B	*Extracted:*	Aug-13-09 17:00		Aug-13-09 17:00					
	Analyzed:	Aug-13-09 19:37		Aug-13-09 19:56					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0051	0.0068	0.0052				
Toluene		0.0878	0.0102	0.0967	0.0104				
Ethylbenzene		0.4292	0.0051	0.3133	0.0052				
m,p-Xylenes		2.060	0.0102	1.323	0.0104				
o-Xylene		1.685	0.0051	1.161	0.0052				
Total Xylenes		3.745	0.0051	2.484	0.0052				
Total BTEX		4.262	0.0051	2.901	0.0052				
Percent Moisture	*Extracted:*								
	Analyzed:	Aug-12-09 16:00		Aug-12-09 16:00					
	Units/RL:	%	RL	%	RL				
Percent Moisture		1.96	1.00	3.54	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-13-09 11:06		Aug-13-09 11:06					
	Analyzed:	Aug-13-09 22:12		Aug-13-09 22:37					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		459	76.5	478	77.8				
C12-C28 Diesel Range Hydrocarbons		2360	76.5	2130	77.8				
C28-C35 Oil Range Hydrocarbons		240	76.5	231	77.8				
Total TPH		3059	76.5	2839	77.8				

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Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768368 **Sample:** 535290-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 18:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

Lab Batch #: 768368 **Sample:** 535290-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/12/09 19:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0135	0.0300	45	80-120	*

Lab Batch #: 768368 **Sample:** 340658-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 21:22

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0397	0.0300	132	80-120	*

Lab Batch #: 768368 **Sample:** 340658-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 21:41

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768368 **Sample:** 340658-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 21:59

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 768368 **Sample:** 340658-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 22:18

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0242	0.0300	81	80-120	

Lab Batch #: 768368 **Sample:** 340658-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/12/09 23:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	80-120	
4-Bromofluorobenzene	0.0516	0.0300	172	80-120	*

Lab Batch #: 768368 **Sample:** 340660-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 02:55

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 768368 **Sample:** 340660-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 03:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768535 **Sample:** 535392-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 17:09

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 768535 **Sample:** 535392-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 17:27

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0366	0.0300	122	80-120	*

Lab Batch #: 768535 **Sample:** 535392-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 18:04

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

Lab Batch #: 768535 **Sample:** 340658-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 19:19

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0459	0.0300	153	80-120	**

Lab Batch #: 768535 **Sample:** 340658-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 19:37

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0210	0.0300	70	80-120	**
4-Bromofluorobenzene	0.3011	0.0300	1004	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768535 **Sample:** 340658-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 19:56

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0214	0.0300	71	80-120	**
4-Bromofluorobenzene	0.1932	0.0300	644	80-120	**

Lab Batch #: 768535 **Sample:** 340491-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/14/09 00:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 768535 **Sample:** 340491-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/14/09 00:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 768669 **Sample:** 535318-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 18:26

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 768669 **Sample:** 535318-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 18:51

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768669 **Sample:** 535318-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/13/09 19:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	100	87	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 768669 **Sample:** 340658-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 19:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.8	99.7	76	70-135	
o-Terphenyl	40.3	49.9	81	70-135	

Lab Batch #: 768669 **Sample:** 340658-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 20:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.9	94	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 768669 **Sample:** 340658-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 20:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	100	90	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 768669 **Sample:** 340658-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 20:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	99.7	93	70-135	
o-Terphenyl	47.8	49.9	96	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768669 **Sample:** 340658-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 21:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	100	88	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 768669 **Sample:** 340658-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 21:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	99.8	97	70-135	
o-Terphenyl	46.9	49.9	94	70-135	

Lab Batch #: 768669 **Sample:** 340658-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 22:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 768669 **Sample:** 340658-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 22:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	100	94	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 768669 **Sample:** 340658-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/13/09 23:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	42.9	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 340658,

Project ID: Beeson Historical

Lab Batch #: 768669 **Sample:** 340658-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/14/09 00:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-135	
o-Terphenyl	43.0	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 340658 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/12/2009 **Date Analyzed:** 08/12/2009

Lab Batch ID: 768368 **Sample:** 535290-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1102	110	0.1	0.1092	109	1	70-130	35	
Toluene	ND	0.1000	0.1058	106	0.1	0.1046	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1193	119	0.1	0.1179	118	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2451	123	0.2	0.2420	121	1	70-135	35	
o-Xylene	ND	0.1000	0.1151	115	0.1	0.1139	114	1	71-133	35	

Analyst: ASA **Date Prepared:** 08/13/2009 **Date Analyzed:** 08/13/2009

Lab Batch ID: 768535 **Sample:** 535392-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0968	97	0.1	0.0999	100	3	70-130	35	
Toluene	ND	0.1000	0.0931	93	0.1	0.0966	97	4	70-130	35	
Ethylbenzene	ND	0.1000	0.1046	105	0.1	0.1087	109	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.2160	108	0.2	0.2243	112	4	70-135	35	
o-Xylene	ND	0.1000	0.1015	102	0.1	0.1060	106	4	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 340658 **Project ID:** Beeson Historical

Analyst: BHW **Date Prepared:** 08/13/2009 **Date Analyzed:** 08/13/2009

Lab Batch ID: 768669 **Sample:** 535318-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	900	90	1000	909	91	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1090	109	1000	1110	111	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 340658 **Project ID:** Beeson Historical

Lab Batch ID: 768368 **QC- Sample ID:** 340660-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/13/2009 **Date Prepared:** 08/12/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1111	0.0806	73	0.1111	0.0821	74	2	70-130	35	
Toluene	ND	0.1111	0.0662	60	0.1111	0.0663	60	0	70-130	35	X
Ethylbenzene	ND	0.1111	0.0729	66	0.1111	0.0716	64	2	71-129	35	X
m,p-Xylenes	ND	0.2222	0.1467	66	0.2222	0.1433	64	2	70-135	35	X
o-Xylene	ND	0.1111	0.0696	63	0.1111	0.0685	62	2	71-133	35	X

Lab Batch ID: 768535 **QC- Sample ID:** 340491-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/14/2009 **Date Prepared:** 08/13/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1136	0.0937	82	0.1136	0.0925	81	1	70-130	35	
Toluene	ND	0.1136	0.0699	62	0.1136	0.0671	59	4	70-130	35	X
Ethylbenzene	ND	0.1136	0.0482	42	0.1136	0.0434	38	10	71-129	35	X
m,p-Xylenes	0.0031	0.2271	0.0942	40	0.2271	0.0851	36	10	70-135	35	X
o-Xylene	0.0015	0.1136	0.0487	42	0.1136	0.0452	38	7	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 340658 **Project ID:** Beeson Historical

Lab Batch ID: 768669 **QC- Sample ID:** 340658-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/13/2009 **Date Prepared:** 08/13/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1020	955	94	1020	972	95	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	21.0	1020	1170	113	1020	1200	116	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 340658

Lab Batch #: 768358 **Project ID:** Beeson Historical

Date Analyzed: 08/12/2009 **Date Prepared:** 08/12/2009 **Analyst:** WRU

QC- Sample ID: 340658-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.13	1.64	37	20	F

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210 Fax No: (505) 396-1429
Sampler Signature: Camille Bryant e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 340658

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW = Drinking Water SL = Sludge; GW = Groundwater S = Soil/Solid; WW = Non-Potable Stream; OW	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 418.1 / 8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CCE	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	HOLD				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	NSW-1			11-Aug-09	1050		1	X								Soil	X										X							X
02	NSW-2			11-Aug-09	1105		1	X								Soil	X										X							X
03	NSW-3			11-Aug-09	1114		1	X								Soil	X										X							X
04	NSW-4			11-Aug-09	1123		1	X								Soil	X										X							X
05	SP-32			11-Aug-09	1135		1	X								Soil	X										X							X
06	SP-33			11-Aug-09	1147		1	X								Soil	X										X							X
07	SP-34			11-Aug-09	1159		1	X								Soil	X										X							X
08	SP-35			11-Aug-09	1208		1	X								Soil	X										X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	8/11/09	1400		8/11/09	1400
Relinquished by:	Date	Time	Received by:	Date	Time
	8/12/09	0845			
Relinquished by	Date	Time	Received by ELOT:	Date	Time
				08/12/09	8:45

Laboratory Comments: 4 02 g - C
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains

Date/ Time: 05/12/09 8:45

Lab ID #: 340058

Initials: qma

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 341297

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

21-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

21-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **341297**
Beeson 8" Discharge
Project Address: Eddy County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 341297. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 341297 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 341297

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
ESW-1	S	Aug-14-09 09:00		341297-001
ESW-2	S	Aug-14-09 09:15		341297-002
SSW-1	S	Aug-14-09 09:30		341297-003
SSW-2	S	Aug-14-09 09:45		341297-004
WSW-1	S	Aug-14-09 10:00		341297-005
WSW-2	S	Aug-14-09 10:15		341297-006
WSW-3	S	Aug-14-09 10:30		341297-007
SP-23 A	S	Aug-14-09 10:50		341297-008
SP-36	S	Aug-14-09 11:00		341297-009
SP-37	S	Aug-14-09 11:10		341297-010
SP-38	S	Aug-14-09 11:20		341297-011
SP-39	S	Aug-17-09 14:00		341297-012
SP-40	S	Aug-17-09 14:10		341297-013
SP-41	S	Aug-17-09 14:20		341297-014
SP-42	S	Aug-17-09 14:30		341297-015

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*21-AUG-09*
Work Order Number:	*341297*	*Date Received:*	*08/18/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-768928 Percent Moisture
AD2216A
Batch 768928, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 341297-004, -005, -012, -002, -011, -003, -008, -009, -013, -001, -014, -007, -010, -006.

Batch: LBA-768931 Percent Moisture
None

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID: *Beeson Historical* | *Report Date:* *21-AUG-09*
Work Order Number: *341297* | *Date Received:* *08/18/2009*

Batch: LBA-768993 BTEX-MTBE EPA 8021B
SW8021BM

Batch 768993, m,p-Xylenes RPD was outside QC limits.
Samples affected are: 341297-004, -005, -011, -003, -001, -006

SW8021BM

Batch 768993, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 341297-004, -005, -011, -003, -001, -006.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 768993, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 341297-005. Data for 341297-002 was confirmed by re-analysis.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535698-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 341297-001 S and 341297-004. Data for 341297-002 was confirmed by re-analysis.

Batch: LBA-769017 TPH by SW8015 Mod
None

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*21-AUG-09*
Work Order Number:	*341297*	*Date Received:*	*08/18/2009*

Batch: LBA-769116 BTEX-MTBE EPA 8021B
SW8021BM

Batch 769116, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 341297-002 DL,341297-014 D ,341297-007,341297-009,341297-010,341297-013,341297-014,341297-015,341297-008.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 535778-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 341297-002 DL,341297-014 D ,341297-007,341297-009,341297-010,341297-013,341297-014,341297-015,341297-008, 341297-012
1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 341297-014 D.

Batch: LBA-769146 TPH by SW8015 Mod
None

Certificate of Analysis Summary 341297

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Tue Aug-18-09 08:30 am
Report Date: 21-AUG-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	341297-001		341297-002		341297-003		341297-004		341297-005		341297-006	
	Field Id:	ESW-1		ESW-2		SSW-1		SSW-2		WSW-1		WSW-2	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-09 09:00		Aug-14-09 09:15		Aug-14-09 09:30		Aug-14-09 09:45		Aug-14-09 10:00		Aug-14-09 10:15	
BTEX by EPA 8021B	*Extracted:*	Aug-18-09 16:45		Aug-18-09 16:45		Aug-18-09 16:45		Aug-18-09 16:45		Aug-18-09 16:45		Aug-18-09 16:45	
	Analyzed:	Aug-18-09 22:06		Aug-18-09 22:24		Aug-18-09 22:43		Aug-18-09 23:01		Aug-18-09 23:20		Aug-18-09 23:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	0.0012	0.0011	ND	0.0011	ND	0.0012	ND	0.0010	0.0022	0.0010
Toluene		ND	0.0024	0.0610	0.0022	ND	0.0022	ND	0.0024	0.0022	0.0020	0.0021	0.0021
Ethylbenzene		0.0031	0.0012	3.525 D	0.0112	0.0025	0.0011	0.0044	0.0012	0.0065	0.0010	0.0017	0.0010
m,p-Xylenes		0.0035	0.0024	6.474 D	0.0224	0.0029	0.0022	0.0139	0.0024	0.0050	0.0020	0.0041	0.0021
o-Xylene		ND	0.0012	0.0950	0.0011	ND	0.0011	0.0093	0.0012	0.0018	0.0010	ND	0.0010
Total Xylenes		0.0035	0.0012	6.569	0.0011	0.0029	0.0011	0.0232	0.0012	0.0068	0.0010	0.0041	0.0010
Total BTEX		0.0066	0.0012	10.156	0.0011	0.0054	0.0011	0.0276	0.0012	0.0155	0.0010	0.0101	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		15.62	1.00	10.83	1.00	11.08	1.00	16.29	1.00	1.65	1.00	3.23	1.00
TPH By SW8015 Mod	*Extracted:*	Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17	
	Analyzed:	Aug-19-09 14:57		Aug-19-09 15:23		Aug-19-09 15:48		Aug-19-09 16:14		Aug-19-09 17:04		Aug-19-09 17:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.8	468	83.7	ND	16.9	169	89.6	ND	15.3	ND	77.5
C12-C28 Diesel Range Hydrocarbons		106	17.8	1790	83.7	350	16.9	2150	89.6	681	15.3	2930	77.5
C28-C35 Oil Range Hydrocarbons		27.0	17.8	172	83.7	31.4	16.9	168	89.6	60.6	15.3	330	77.5
Total TPH		133	17.8	2430	83.7	381	16.9	2487	89.6	742	15.3	3260	77.5

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 341297

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Tue Aug-18-09 08:30 am
Report Date: 21-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	341297-007		341297-008		341297-009		341297-010		341297-011		341297-012	
	Field Id:	WSW-3		SP-23 A		SP-36		SP-37		SP-38		SP-39	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-09 10:30		Aug-14-09 10:50		Aug-14-09 11:00		Aug-14-09 11:10		Aug-14-09 11:20		Aug-17-09 14:00	
BTEX by EPA 8021B	*Extracted:*	Aug-19-09 15:05		Aug-19-09 15:05		Aug-19-09 15:05		Aug-19-09 15:05		Aug-18-09 16:45		Aug-19-09 15:05	
	Analyzed:	Aug-19-09 17:58		Aug-19-09 18:35		Aug-19-09 19:12		Aug-19-09 20:45		Aug-19-09 00:15		Aug-19-09 21:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0054	0.0068	0.0051	0.2043	0.1075	0.4489	0.2656	0.0011	0.0010	ND	0.0502
Toluene		0.0525	0.0109	0.5732	0.0102	2.785	0.2151	3.395	0.5312	0.0025	0.0020	0.9690	0.1004
Ethylbenzene		1.548	0.0054	0.4312	0.0051	9.800	0.1075	22.23	0.2656	0.0025	0.0010	0.5023	0.0502
m,p-Xylenes		2.041	0.0109	1.969	0.0102	15.01	0.2151	20.69	0.5312	0.0038	0.0020	3.429	0.1004
o-Xylene		0.5163	0.0054	1.641	0.0051	5.697	0.1075	2.784	0.2656	0.0012	0.0010	0.9961	0.0502
Total Xylenes		2.557	0.0054	3.610	0.0051	20.71	0.1075	23.47	0.2656	0.0050	0.0010	4.425	0.0502
Total BTEX		4.158	0.0054	4.621	0.0051	33.50	0.1075	49.55	0.2656	0.0111	0.0010	5.896	0.0502
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7.88	1.00	1.95	1.00	7.00	1.00	5.88	1.00	2.18	1.00	ND	1.00
TPH By SW8015 Mod	*Extracted:*	Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17		Aug-18-09 13:17	
	Analyzed:	Aug-19-09 17:55		Aug-19-09 18:20		Aug-19-09 18:46		Aug-19-09 19:11		Aug-19-09 19:36		Aug-19-09 20:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		101	16.3	330	76.5	1420	80.6	986	79.4	ND	15.3	364	75.3
C12-C28 Diesel Range Hydrocarbons		354	16.3	1290	76.5	3880	80.6	2060	79.4	120	15.3	1250	75.3
C28-C35 Oil Range Hydrocarbons		35.2	16.3	130	76.5	307	80.6	165	79.4	17.3	15.3	120	75.3
Total TPH		490	16.3	1750	76.5	5607	80.6	3211	79.4	137	15.3	1734	75.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 341297

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Eddy County, NM

Date Received in Lab: Tue Aug-18-09 08:30 am
Report Date: 21-AUG-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	341297-013		341297-014		341297-015				
	Field Id:	SP-40		SP-41		SP-42				
	Depth:									
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Aug-17-09 14:10		Aug-17-09 14:20		Aug-17-09 14:30				
BTEX by EPA 8021B	*Extracted:*	Aug-19-09 15:05		Aug-19-09 15:05		Aug-19-09 15:05				
	Analyzed:	Aug-19-09 21:59		Aug-19-09 22:36		Aug-19-09 23:13				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		ND	0.0513	0.4092	0.0531	0.8550	0.2740			
Toluene		0.8879	0.1026	3.440	0.1062	7.873	0.5481			
Ethylbenzene		2.057	0.0513	20.67	0.0531	41.94	0.2740			
m,p-Xylenes		2.383	0.1026	10.12	0.1062	26.67	0.5481			
o-Xylene		1.110	0.0513	2.142	0.0531	4.689	0.2740			
Total Xylenes		3.493	0.0513	12.26	0.0531	31.36	0.2740			
Total BTEX		6.438	0.0513	36.78	0.0531	82.03	0.2740			
Percent Moisture	*Extracted:*									
	Analyzed:	Aug-18-09 16:00		Aug-18-09 16:00		Aug-18-09 16:00				
	Units/RL:	%	RL	%	RL	%	RL			
Percent Moisture		2.52	1.00	5.80	1.00	8.77	1.00			
TPH By SW8015 Mod	*Extracted:*	Aug-18-09 13:17		Aug-18-09 13:17		Aug-19-09 12:21				
	Analyzed:	Aug-19-09 20:26		Aug-19-09 20:52		Aug-19-09 15:33				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		573	76.9	700	79.3	1710	81.8			
C12-C28 Diesel Range Hydrocarbons		2230	76.9	1630	79.3	2950	81.8			
C28-C35 Oil Range Hydrocarbons		198	76.9	146	79.3	348	81.8			
Total TPH		3001	76.9	2476	79.3	5008	81.8			

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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 768993 **Sample:** 535698-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/18/09 20:52

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0340	0.0300	113	80-120	

Lab Batch #: 768993 **Sample:** 535698-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/18/09 21:10

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 768993 **Sample:** 535698-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/18/09 21:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0112	0.0300	37	80-120	*

Lab Batch #: 768993 **Sample:** 341297-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 22:06

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 768993 **Sample:** 341297-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 22:24

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0214	0.0300	71	80-120	**
4-Bromofluorobenzene	0.2111	0.0300	704	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 768993 **Sample:** 341297-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 22:43

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 768993 **Sample:** 341297-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 23:01

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0468	0.0300	156	80-120	*

Lab Batch #: 768993 **Sample:** 341297-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 23:20

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 768993 **Sample:** 341297-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/18/09 23:38

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0249	0.0300	83	80-120	

Lab Batch #: 768993 **Sample:** 341297-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 00:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 768993 **Sample:** 341297-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 05:10

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0380	0.0300	127	80-120	*

Lab Batch #: 768993 **Sample:** 341297-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 05:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 769116 **Sample:** 535778-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 15:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0349	0.0300	116	80-120	

Lab Batch #: 769116 **Sample:** 535778-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 15:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 769116 **Sample:** 535778-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 16:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0182	0.0300	61	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769116 **Sample:** 341297-002 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 17:21

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	**
4-Bromofluorobenzene	0.1024	0.0300	341	80-120	**

Lab Batch #: 769116 **Sample:** 341297-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 17:58

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0988	0.0300	329	80-120	**

Lab Batch #: 769116 **Sample:** 341297-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 18:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0219	0.0300	73	80-120	**
4-Bromofluorobenzene	0.3073	0.0300	1024	80-120	**

Lab Batch #: 769116 **Sample:** 341297-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 19:12

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0216	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0454	0.0300	151	80-120	**

Lab Batch #: 769116 **Sample:** 341297-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 20:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0224	0.0300	75	80-120	**
4-Bromofluorobenzene	0.0405	0.0300	135	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769116 **Sample:** 341297-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 21:22

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0563	0.0300	188	80-120	**

Lab Batch #: 769116 **Sample:** 341297-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 21:59

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0562	0.0300	187	80-120	**

Lab Batch #: 769116 **Sample:** 341297-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 22:36

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0219	0.0300	73	80-120	**
4-Bromofluorobenzene	0.1686	0.0300	562	80-120	**

Lab Batch #: 769116 **Sample:** 341297-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 23:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0213	0.0300	71	80-120	**
4-Bromofluorobenzene	0.0603	0.0300	201	80-120	**

Lab Batch #: 769116 **Sample:** 341297-014 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 23:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0207	0.0300	69	80-120	*
4-Bromofluorobenzene	0.1508	0.0300	503	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769017 **Sample:** 535701-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/18/09 14:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	43.7	50.0	87	70-135	

Lab Batch #: 769017 **Sample:** 535701-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/18/09 14:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	43.6	50.0	87	70-135	

Lab Batch #: 769017 **Sample:** 535701-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 12:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	100	94	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

Lab Batch #: 769017 **Sample:** 341297-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 14:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	100	94	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 769017 **Sample:** 341297-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 15:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.5	104	70-135	
o-Terphenyl	48.2	49.8	97	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769017 **Sample:** 341297-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 15:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	60.2	50.0	120	70-135	

Lab Batch #: 769017 **Sample:** 341297-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 16:14

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	51.4	50.0	103	70-135	

Lab Batch #: 769017 **Sample:** 341297-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 17:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	43.6	50.0	87	70-135	

Lab Batch #: 769017 **Sample:** 341297-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 17:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.8	100	91	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 769017 **Sample:** 341297-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 17:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.5	99.8	89	70-135	
o-Terphenyl	44.7	49.9	90	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769017 **Sample:** 341297-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 18:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 769017 **Sample:** 341297-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 18:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 769017 **Sample:** 341297-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 19:11

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.6	113	70-135	
o-Terphenyl	49.7	49.8	100	70-135	

Lab Batch #: 769017 **Sample:** 341297-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 19:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.9	95	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

Lab Batch #: 769017 **Sample:** 341297-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 20:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769017 **Sample:** 341297-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 20:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 769017 **Sample:** 341297-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 20:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-135	
o-Terphenyl	47.7	49.8	96	70-135	

Lab Batch #: 769017 **Sample:** 341297-011 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 21:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 769146 **Sample:** 535811-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 14:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 769146 **Sample:** 535811-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 14:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	56.8	50.0	114	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341297,

Project ID: Beeson Historical

Lab Batch #: 769146 **Sample:** 535811-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/19/09 15:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 769146 **Sample:** 341297-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/19/09 15:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.5	120	70-135	
o-Terphenyl	62.5	49.8	126	70-135	

Lab Batch #: 769146 **Sample:** 341300-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/20/09 00:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	54.1	50.0	108	70-135	

Lab Batch #: 769146 **Sample:** 341300-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/20/09 01:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.9	128	70-135	
o-Terphenyl	55.2	50.0	110	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 341297 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/18/2009 **Date Analyzed:** 08/18/2009

Lab Batch ID: 768993 **Sample:** 535698-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1050	105	0.1	0.1034	103	2	70-130	35	
Toluene	ND	0.1000	0.0997	100	0.1	0.0984	98	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1116	112	0.1	0.1108	111	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2291	115	0.2	0.2254	113	2	70-135	35	
o-Xylene	ND	0.1000	0.1090	109	0.1	0.1080	108	1	71-133	35	

Analyst: ASA **Date Prepared:** 08/19/2009 **Date Analyzed:** 08/19/2009

Lab Batch ID: 769116 **Sample:** 535778-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0949	95	0.1	0.0915	92	4	70-130	35	
Toluene	ND	0.1000	0.0920	92	0.1	0.0881	88	4	70-130	35	
Ethylbenzene	ND	0.1000	0.1045	105	0.1	0.1000	100	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.2160	108	0.2	0.2062	103	5	70-135	35	
o-Xylene	ND	0.1000	0.1024	102	0.1	0.0975	98	5	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 341297 **Project ID:** Beeson Historical

Analyst: BHW **Date Prepared:** 08/18/2009 **Date Analyzed:** 08/18/2009

Lab Batch ID: 769017 **Sample:** 535701-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	961	96	1000	950	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1170	117	1000	1160	116	1	70-135	35	

Analyst: BHW **Date Prepared:** 08/19/2009 **Date Analyzed:** 08/19/2009

Lab Batch ID: 769146 **Sample:** 535811-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	976	98	1000	990	99	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1040	104	1000	1070	107	3	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 341297 **Project ID:** Beeson Historical

Lab Batch ID: 768993 **QC- Sample ID:** 341297-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/19/2009 **Date Prepared:** 08/18/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1185	0.0936	79	0.1185	0.0875	74	7	70-130	35	
Toluene	ND	0.1185	0.0679	57	0.1185	0.0564	48	19	70-130	35	X
Ethylbenzene	0.0031	0.1185	0.0548	44	0.1185	0.0415	32	28	71-129	35	X
m,p-Xylenes	0.0035	0.2370	0.0695	28	0.2370	0.0394	15	55	70-135	35	XF
o-Xylene	ND	0.1185	0.0542	46	0.1185	0.0502	42	8	71-133	35	X

Lab Batch ID: 769146 **QC- Sample ID:** 341300-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/20/2009 **Date Prepared:** 08/19/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1020	1090	107	1020	1100	108	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	336	1020	1500	114	1020	1530	117	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I= Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Beeson 8" Discharge

Work Order #: 341297

Lab Batch #: 769116 **Project ID:** Beeson Historical

Date Analyzed: 08/19/2009 **Date Prepared:** 08/19/2009 **Analyst:** ASA

QC- Sample ID: 341297-014 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	0.4092	0.3572	14	35	
Toluene	3.440	3.021	13	35	
Ethylbenzene	20.67	20.06	3	35	
m,p-Xylenes	10.12	9.927	2	35	
o-Xylene	2.142	1.845	15	35	

Lab Batch #: 768928

Date Analyzed: 08/18/2009 **Date Prepared:** 08/18/2009 **Analyst:** WRU

QC- Sample ID: 341294-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.87	2.48	28	20	F

Lab Batch #: 769017

Date Analyzed: 08/19/2009 **Date Prepared:** 08/18/2009 **Analyst:** BHW

QC- Sample ID: 341297-011 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	ND	NC	35	
C12-C28 Diesel Range Hydrocarbons	120	123	2	35	
C28-C35 Oil Range Hydrocarbons	17.3	15.8	9	35	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210
Sampler Signature: Camille Bryant

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Fax No: (505) 396-1429
e-mail: cbryant@basin-consulting.com
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 341297

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Yes/No	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	H3PO4	None	Other (Specify)	Matrix: SW – Surface Water S – Soil/Sed/Solid GW – Groundwater WW – Wastewater DW – Drinking Water NP – Non-Potable Specify Other	TPH 418.1 / 8015	TPH TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/8260 or BTEX 8260	RCI	HCO3	TDS	TSS	pH	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	ESW -1			14-Aug-09	0900		1	X								Soil	X								X							X
02	ESW -2			14-Aug-09	0915		1	X								Soil	X								X							X
03	SSW -1			14-Aug-09	0930		1	X								Soil	X								X							X
04	SSW-2			14-Aug-09	0945		1	X								Soil	X								X							X
05	WSW -1			14-Aug-09	100		1	X								Soil	X								X							X
06	WSW -2			14-Aug-09	1015		1	X								Soil	X								X							X
07	WSW-3			14-Aug-09	1030		1	X								Soil	X								X							X
08	SP-23 A			14-Aug-09	1050		1	X								Soil	X								X							X
09	SP-36			14-Aug-09	1100		1	X								Soil	X								X							X
10	SP-37			14-Aug-09	1110		1	X								Soil	X								X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	8/17/09	1000		8/17/09	1000
	8/18/09	0830			
			Received by ELOT: Jessica Fitch	8.19.09	0830

Analyze For: TCLP: / TOTAL: X

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) / N/A Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.1 °C

Environmental Lab of Texas

Page 2 of 2

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210
Fax No: (505) 396-1429
Sampler Signature: Camille Bryant
e-mail: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 341297

Lab # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: SW – Drinking Water SL – Sludge; GW – Groundwater S – Soil/Solid; WW – Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 (8015M)	TOTAL: TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX (8015B/8260 or BTEX 8260)	RCI	N O R M				RUSH TAT (Pre-schedule) 24, 48, 72 hrs.	Standard TAT 4 DAY
11	SP-38			14-Aug-09	1120		1	X								Soil	X									X							X
12	SP-39			8/17/09	1400																												
13	SP-40			8/17/09	1410																												
14	SP-41			8/17/09	1420																												
15	SP-42			8/17/09	1430																												

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	8/17/09	1000		8/17/09	1040
	8/18/09	0230			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne Fitch	8-18-09	0830

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 3.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains/Basin

Date/ Time: 08-18-09 @ 0830

Lab ID #: 341297

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.1 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container? /label	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Varianco Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 341767

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

26-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

XENCO Laboratories

26-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **341767**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 341767. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 341767 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 341767

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-43	S	Aug-20-09 12:00		341767-001
SP-44	S	Aug-20-09 12:10		341767-002
SSW-3	S	Aug-20-09 12:20		341767-003
SSW-4	S	Aug-20-09 12:30		341767-004

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*26-AUG-09*
Work Order Number:	*341767*	*Date Received:*	*08/21/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-769451 Percent Moisture
None

Batch: LBA-769468 BTEX-MTBE EPA 8021B
SW8021BM

Batch 769468, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536026-1-BLK.

Batch: LBA-769704 BTEX-MTBE EPA 8021B
SW8021BM

Batch 769704, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 341767-001,341767-002.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536183-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 342146-002S, 342146-002SD

Batch: LBA-769861 TPH by SW8015 Mod
None

Certificate of Analysis Summary 341767

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Aug-21-09 08:13 am
Report Date: 26-AUG-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	341767-001		341767-002		341767-003		341767-004					
	Field Id:	SP-43		SP-44		SSW-3		SSW-4					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Aug-20-09 12:00		Aug-20-09 12:10		Aug-20-09 12:20		Aug-20-09 12:30					
BTEX by EPA 8021B	*Extracted:*	Aug-25-09 11:00		Aug-25-09 11:00		Aug-21-09 15:00		Aug-21-09 15:00					
	Analyzed:	Aug-25-09 13:09		Aug-25-09 13:28		Aug-22-09 03:57		Aug-22-09 04:15					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		0.3636	0.2203	1.289	0.2145	0.0013	0.0011	0.0016	0.0012				
Toluene		2.719	0.4407	6.218	0.4290	0.0037	0.0022	ND	0.0023				
Ethylbenzene		35.46	0.2203	50.44	0.2145	0.0122	0.0011	0.0037	0.0012				
m,p-Xylenes		25.87	0.4407	33.76	0.4290	0.0094	0.0022	0.0026	0.0023				
o-Xylene		5.539	0.2203	5.956	0.2145	0.0021	0.0011	ND	0.0012				
Total Xylenes		31.41	0.2203	39.72	0.2145	0.0115	0.0011	0.0026	0.0012				
Total BTEX		69.95	0.2203	97.66	0.2145	0.0287	0.0011	0.0079	0.0012				
Percent Moisture	*Extracted:*												
	Analyzed:	Aug-24-09 09:50		Aug-24-09 09:50		Aug-24-09 09:50		Aug-24-09 09:50					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		9.23	1.00	6.75	1.00	9.46	1.00	14.24	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-25-09 16:14		Aug-25-09 16:14		Aug-25-09 16:14		Aug-25-09 16:14					
	Analyzed:	Aug-25-09 18:50		Aug-25-09 19:15		Aug-25-09 19:40		Aug-25-09 20:05					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		1820	165	2370	161	ND	16.6	ND	17.5				
C12-C28 Diesel Range Hydrocarbons		3910	165	5640	161	ND	16.6	ND	17.5				
C28-C35 Oil Range Hydrocarbons		322	165	484	161	ND	16.6	ND	17.5				
Total TPH		6052	165	8494	161	ND	16.6	ND	17.5				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341767,

Project ID: Beeson Historical

Lab Batch #: 769468 **Sample:** 536026-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/09 00:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	

Lab Batch #: 769468 **Sample:** 536026-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/09 00:34

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 769468 **Sample:** 536026-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/22/09 01:10

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0144	0.0300	48	80-120	*

Lab Batch #: 769468 **Sample:** 341767-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/09 03:57

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0249	0.0300	83	80-120	
4-Bromofluorobenzene	0.0420	0.0300	140	80-120	*

Lab Batch #: 769468 **Sample:** 341767-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/09 04:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341767,

Project ID: Beeson Historical

Lab Batch #: 769468 **Sample:** 341867-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/09 09:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0370	0.0300	123	80-120	*

Lab Batch #: 769468 **Sample:** 341867-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/22/09 10:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 769704 **Sample:** 536183-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 09:11

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 769704 **Sample:** 536183-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 09:30

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 769704 **Sample:** 536183-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 10:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0185	0.0300	62	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341767,

Project ID: Beeson Historical

Lab Batch #: 769704 **Sample:** 341767-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 13:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0432	0.0300	144	80-120	**

Lab Batch #: 769704 **Sample:** 341767-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 13:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0208	0.0300	69	80-120	**
4-Bromofluorobenzene	0.0433	0.0300	144	80-120	**

Lab Batch #: 769704 **Sample:** 342146-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 14:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0376	0.0300	125	80-120	*

Lab Batch #: 769704 **Sample:** 342146-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 14:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0390	0.0300	130	80-120	*

Lab Batch #: 769861 **Sample:** 536258-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	36.4	50.0	73	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341767,

Project ID: Beeson Historical

Lab Batch #: 769861 **Sample:** 536258-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 18:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	37.2	50.0	74	70-135	

Lab Batch #: 769861 **Sample:** 536258-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 18:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.9	99.9	79	70-135	
o-Terphenyl	40.1	50.0	80	70-135	

Lab Batch #: 769861 **Sample:** 341767-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 18:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

Lab Batch #: 769861 **Sample:** 341767-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 19:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	42.9	50.0	86	70-135	

Lab Batch #: 769861 **Sample:** 341767-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 19:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.1	100	79	70-135	
o-Terphenyl	40.0	50.0	80	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 341767,

Project ID: Beeson Historical

Lab Batch #: 769861 **Sample:** 341767-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 20:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.5	100	76	70-135	
o-Terphenyl	37.8	50.0	76	70-135	

Lab Batch #: 769861 **Sample:** 341767-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/26/09 03:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	41.5	50.0	83	70-135	

Lab Batch #: 769861 **Sample:** 341767-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/26/09 03:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.2	100	97	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 341767 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 08/21/2009 **Date Analyzed:** 08/22/2009

Lab Batch ID: 769468 **Sample:** 536026-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1058	106	0.1	0.1045	105	1	70-130	35	
Toluene	ND	0.1000	0.1040	104	0.1	0.1021	102	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1135	114	0.1	0.1113	111	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2306	115	0.2	0.2272	114	1	70-135	35	
o-Xylene	ND	0.1000	0.1093	109	0.1	0.1083	108	1	71-133	35	

Analyst: ASA **Date Prepared:** 08/25/2009 **Date Analyzed:** 08/25/2009

Lab Batch ID: 769704 **Sample:** 536183-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0838	84	0.1	0.0852	85	2	70-130	35	
Toluene	ND	0.1000	0.0810	81	0.1	0.0821	82	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0901	90	0.1	0.0907	91	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.1852	93	0.2	0.1876	94	1	70-135	35	
o-Xylene	ND	0.1000	0.0885	89	0.1	0.0901	90	2	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 341767 **Project ID:** Beeson Historical

Analyst: BHW **Date Prepared:** 08/25/2009 **Date Analyzed:** 08/25/2009

Lab Batch ID: 769861 **Sample:** 536258-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	ND	1000	857	86	1000	874	87	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1000	100	1000	1020	102	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 341767 **Project ID:** Beeson Historical

Lab Batch ID: 769468 **QC- Sample ID:** 341867-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/22/2009 **Date Prepared:** 08/21/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1028	0.0843	82	0.1028	0.0848	82	1	70-130	35	
Toluene	0.0026	0.1028	0.0810	76	0.1028	0.0811	76	0	70-130	35	
Ethylbenzene	ND	0.1028	0.0817	79	0.1028	0.0816	79	0	71-129	35	
m,p-Xylenes	ND	0.2056	0.1672	81	0.2056	0.1654	80	1	70-135	35	
o-Xylene	ND	0.1028	0.0775	75	0.1028	0.0777	76	0	71-133	35	

Lab Batch ID: 769704 **QC- Sample ID:** 342146-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/25/2009 **Date Prepared:** 08/25/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1079	0.0872	81	0.1079	0.0869	81	0	70-130	35	
Toluene	ND	0.1079	0.0829	77	0.1079	0.0823	76	1	70-130	35	
Ethylbenzene	0.0070	0.1079	0.0936	80	0.1079	0.0920	79	2	71-129	35	
m,p-Xylenes	0.0119	0.2158	0.1911	83	0.2158	0.1896	82	1	70-135	35	
o-Xylene	0.0016	0.1079	0.0923	84	0.1079	0.0924	84	0	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 341767 **Project ID:** Beeson Historical

Lab Batch ID: 769861 **QC- Sample ID:** 341767-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/26/2009 **Date Prepared:** 08/25/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1100	1140	104	1100	1050	95	8	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1100	1290	117	1100	1240	113	4	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Beeson 8" Discharge

Work Order #: 341767

Lab Batch #: 769451 **Project ID:** Beeson Historical

Date Analyzed: 08/24/2009 **Date Prepared:** 08/24/2009 **Analyst:** BEV

QC- Sample ID: 341769-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	19.4	18.7	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No.: (575)605-7210 Fax No: (505) 398-1429
Sampler Signature:

Project Name: Beeson 8" Discharge
Project #: Beeson Historical
Project Loc: Lea County, NM
PO #: PAA-J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

e-mail: cibryant@basin-consulting.com

(lab use only)
ORDER #: 341767

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP TOTAL: TPH: 418.1 / 8015M	TPH: TX 1005 / TX 1006	Chlorides (Cl, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	NORM				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	SP-43			8/20/2009	1200		1	X								Soil	X								X							X
02	SP-44			8/20/2009	1210		1	X								Soil	X								X							X
03	SSW-3			8/20/2009	1220		1	X								Soil	X								X							X
04	SSW-4			8/20/2009	1230		1	X								Soil	X								X							X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	8/21/09	0813			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jaime Fitch	08-21-09	0813

Laboratory Comments:
Sample Containers Intact? Y Y Y Y Y Y Y N N N
VOCs Free of Headspace? Y Y Y Y Y Y Y N N N
Labels on container(s) Y Y Y Y Y Y Y N N N
Custody seals on container(s)/bottle(s) Y Y Y Y Y Y Y N N N
Custody seals on cooler(s) Y Y Y Y Y Y Y N N N
Sample Hand Delivered by Sample/Client Rep.? Y Y Y Y Y Y Y N N N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 4.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env.

Date/ Time: 08-21-09 @ 0813

Lab ID #: 341767

Initials: JMF

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	4.1 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	Yes	No		
#6 Sample instructions complete of Chain of Custody?	Yes	No		
#7 Chain of Custody signed when relinquished/ received?	Yes	No		
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11 Containers supplied by ELOT?	Yes	No		
#12 Samples in proper container/ bottle?	Yes	No	See Below	
#13 Samples properly preserved?	Yes	No	See Below	
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Yes	No		
#16 Containers documented on Chain of Custody?	Yes	No		
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 342146

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM-Beeson Historical

26-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

XENCO Laboratories

26-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **342146**
Beeson 8" Discharge
Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 342146. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 342146 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 342146

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor -1	S	Aug-24-09 15:00		342146-001
Floor -2	S	Aug-24-09 15:10		342146-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM-Beeson Historical*	*Report Date:*	*26-AUG-09*
Work Order Number:	*342146*	*Date Received:*	*08/25/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-769696 Percent Moisture
None

Batch: LBA-769704 BTEX-MTBE EPA 8021B
SW8021BM

Batch 769704, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 342146-001.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536183-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 342146-002, 342146-002S, 342146-002SD

Batch: LBA-769861 TPH by SW8015 Mod
None

Certificate of Analysis Summary 342146

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM-Beeson Historical
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Aug-25-09 08:30 am
Report Date: 26-AUG-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	342146-001		342146-002					
	Field Id:	Floor -1		Floor -2					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-24-09 15:00		Aug-24-09 15:10					
BTEX by EPA 8021B	*Extracted:*	Aug-25-09 11:00		Aug-25-09 11:00					
	Analyzed:	Aug-25-09 13:46		Aug-25-09 12:32					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		1.405	0.2374	ND	0.0011				
Toluene		11.95	0.4747	ND	0.0021				
Ethylbenzene		62.81	0.2374	0.0070	0.0011				
m,p-Xylenes		46.43	0.4747	0.0119	0.0021				
o-Xylene		9.274	0.2374	0.0016	0.0011				
Total Xylenes		55.70	0.2374	0.0135	0.0011				
Total BTEX		131.87	0.2374	0.0205	0.0011				
Percent Moisture	*Extracted:*								
	Analyzed:	Aug-25-09 14:39		Aug-25-09 14:39					
	Units/RL:	%	RL	%	RL				
Percent Moisture		15.74	1.00	7.33	1.00				
TPH By SW8015 Mod	*Extracted:*	Aug-25-09 16:14		Aug-25-09 16:14					
	Analyzed:	Aug-25-09 23:21		Aug-25-09 23:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		2240	88.7	22.6	16.2				
C12-C28 Diesel Range Hydrocarbons		5460	88.7	200	16.2				
C28-C35 Oil Range Hydrocarbons		375	88.7	19.4	16.2				
Total TPH		8075	88.7	242	16.2				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342146,

Project ID: TNM-Beeson Historical

Lab Batch #: 769704 **Sample:** 536183-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 09:11

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 769704 **Sample:** 536183-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 09:30

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 769704 **Sample:** 536183-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 10:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0185	0.0300	62	80-120	*

Lab Batch #: 769704 **Sample:** 342146-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 12:32

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0375	0.0300	125	80-120	*

Lab Batch #: 769704 **Sample:** 342146-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 13:46

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0217	0.0300	72	80-120	**
4-Bromofluorobenzene	0.0467	0.0300	156	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342146,

Project ID: TNM-Beeson Historical

Lab Batch #: 769704 **Sample:** 342146-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 14:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0376	0.0300	125	80-120	*

Lab Batch #: 769704 **Sample:** 342146-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 14:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0390	0.0300	130	80-120	*

Lab Batch #: 769861 **Sample:** 536258-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	36.4	50.0	73	70-135	

Lab Batch #: 769861 **Sample:** 536258-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 18:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	37.2	50.0	74	70-135	

Lab Batch #: 769861 **Sample:** 536258-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/25/09 18:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.9	99.9	79	70-135	
o-Terphenyl	40.1	50.0	80	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342146,

Project ID: TNM-Beeson Historical

Lab Batch #: 769861 **Sample:** 342146-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 23:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.6	107	70-135	
o-Terphenyl	40.7	49.8	82	70-135	

Lab Batch #: 769861 **Sample:** 342146-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/25/09 23:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.6	99.8	84	70-135	
o-Terphenyl	42.0	49.9	84	70-135	

Lab Batch #: 769861 **Sample:** 341767-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/26/09 03:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	41.5	50.0	83	70-135	

Lab Batch #: 769861 **Sample:** 341767-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/26/09 03:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.2	100	97	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342146 **Project ID:** TNM-Beeson Historical

Analyst: ASA **Date Prepared:** 08/25/2009 **Date Analyzed:** 08/25/2009

Lab Batch ID: 769704 **Sample:** 536183-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0838	84	0.1	0.0852	85	2	70-130	35	
Toluene	ND	0.1000	0.0810	81	0.1	0.0821	82	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0901	90	0.1	0.0907	91	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.1852	93	0.2	0.1876	94	1	70-135	35	
o-Xylene	ND	0.1000	0.0885	89	0.1	0.0901	90	2	71-133	35	

Analyst: BHW **Date Prepared:** 08/25/2009 **Date Analyzed:** 08/25/2009

Lab Batch ID: 769861 **Sample:** 536258-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	857	86	1000	874	87	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1000	100	1000	1020	102	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 342146 **Project ID:** TNM-Beeson Historical

Lab Batch ID: 769704 **QC- Sample ID:** 342146-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/25/2009 **Date Prepared:** 08/25/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1079	0.0872	81	0.1079	0.0869	81	0	70-130	35	
Toluene	ND	0.1079	0.0829	77	0.1079	0.0823	76	1	70-130	35	
Ethylbenzene	0.0070	0.1079	0.0936	80	0.1079	0.0920	79	2	71-129	35	
m,p-Xylenes	0.0119	0.2158	0.1911	83	0.2158	0.1896	82	1	70-135	35	
o-Xylene	0.0016	0.1079	0.0923	84	0.1079	0.0924	84	0	71-133	35	

Lab Batch ID: 769861 **QC- Sample ID:** 341767-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/26/2009 **Date Prepared:** 08/25/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1100	1140	104	1100	1050	95	8	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1100	1290	117	1100	1240	113	4	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 342146

Lab Batch #: 769696 **Project ID:** TNM-Beeson Historical

Date Analyzed: 08/25/2009 **Date Prepared:** 08/25/2009 **Analyst:** BEV

QC- Sample ID: 342146-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	15.7	15.2	3	20	

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant PAGE 01 OF 01

Company Name: Basin Environmental Service Technologies, LLC

Company Address: 2800 Plains Hwy

City/State/Zip: Lovington, NM 88260

Telephone No: (575) 605-7210 Fax No: (505) 396-1429

Sampler Signature: CB for Billy Blackwell Email: cibryant@basin-consulting.com

Project Name: Beeson 8" Discharge

Project #: TNM - Beeson Historical

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 342146

Analyze For: TCLP / TOTAL

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA X 7)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: Dw - Drinking Water SL - Sludge; GW - Groundwater S - Soil/Solid; WP - Non-Potable Specify Other	TPH: 418.1 (8015M) 8015	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B or 5030 or BTEX 8260	HCS	N.O.R.M.	PAH	EPA Priority Pollutant Metals	Chlorides E 300	RUSH TAT (Pre-Schedule) (24, 72 hrs)	Standard TAT
001	FLOOR-1			8/24	1500		1	X								Soil	X								X						X	
002	FLOOR-2			8/24	1510		1	X								Soil	X								X						X	

Special Instructions: BILL BASIN FOR RUSH CHARGES

Relinquished by:	Date	Time	Received by:	Date	Time
	8/25/19	0830			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Ana Valer	08/25/19	8:30

Laboratory Comments: 24 hr

Sample Containers Intact? Y N N N N N

VOCs Free of Headspace? Y N N N N N

Labels on container(s) Y N N N N N

Custody seals on container(s) Y N N N N N

Custody seals on cooler(s) Y N N N N N

Sample Hand Delivered by Sampler/Client Rep.? Y N N N N N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains /Basin

Date/ Time: 04/25/09 8:30

Lab ID # : 342146

Initials: QMA

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	3.6 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 342302

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

TNM Beeson Historical

31-AUG-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

XENCO Laboratories

31-AUG-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **342302**
Beeson 8" Discharge
Project Address: Eddy Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 342302. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 342302 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 342302

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-42A	S	Aug-25-09 15:10		342302-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*TNM Beeson Historical*	*Report Date:*	*31-AUG-09*
Work Order Number:	*342302*	*Date Received:*	*08/26/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-769962 TPH by SW8015 Mod
None

Batch: LBA-769966 Percent Moisture
None

Batch: LBA-770141 BTEX-MTBE EPA 8021B
SW8021BM

Batch 770141, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 342302-001 D,342302-001.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 342302-001, 342302-001 D.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536427-1-BLK.
4-Bromofluorobenzene recovered above QC limits Sample Data not confirmed by re-analysis. Samples affected are: 536427-1-BKS, 536427-1-BSD, 342302-001, 342302-001 D.

Certificate of Analysis Summary 342302

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: TNM Beeson Historical
Contact: Jason Henry
Project Location: Eddy Co., NM

Date Received in Lab: Wed Aug-26-09 08:32 am
Report Date: 31-AUG-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	342302-001					
	Field Id:	SP-42A					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Aug-25-09 15:10					
BTEX by EPA 8021B	*Extracted:*	Aug-27-09 10:00					
	Analyzed:	Aug-27-09 15:54					
	Units/RL:	mg/kg RL					
Benzene		0.1165 0.1073					
Toluene		0.9024 0.2146					
Ethylbenzene		12.85 0.1073					
m,p-Xylenes		14.74 0.2146					
o-Xylene		4.062 0.1073					
Total Xylenes		18.80 0.1073					
Total BTEX		32.67 0.1073					
Percent Moisture	*Extracted:*						
	Analyzed:	Aug-26-09 14:00					
	Units/RL:	% RL					
Percent Moisture		6.80 1.00					
TPH By SW8015 Mod	*Extracted:*	Aug-26-09 13:34					
	Analyzed:	Aug-26-09 19:24					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		1220 161					
C12-C28 Diesel Range Hydrocarbons		3060 161					
C28-C35 Oil Range Hydrocarbons		297 161					
Total TPH		4577 161					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342302, **Project ID:** TNM Beeson Historical

Lab Batch #: 770141 **Sample:** 536427-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/27/09 11:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0362	0.0300	121	80-120	*

Lab Batch #: 770141 **Sample:** 536427-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/27/09 12:01

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0363	0.0300	121	80-120	*

Lab Batch #: 770141 **Sample:** 536427-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/27/09 12:38

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0160	0.0300	53	80-120	*

Lab Batch #: 770141 **Sample:** 342302-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/27/09 15:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0225	0.0300	75	80-120	**
4-Bromofluorobenzene	0.0470	0.0300	157	80-120	**

Lab Batch #: 770141 **Sample:** 342302-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/27/09 17:26

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0496	0.0300	165	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342302,

Project ID: TNM Beeson Historical

Lab Batch #: 769962 **Sample:** 536317-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/26/09 16:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 769962 **Sample:** 536317-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/26/09 16:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	38.2	50.0	76	70-135	

Lab Batch #: 769962 **Sample:** 536317-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/26/09 16:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.2	100	77	70-135	
o-Terphenyl	39.6	50.0	79	70-135	

Lab Batch #: 769962 **Sample:** 342302-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/26/09 19:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	41.9	50.0	84	70-135	

Lab Batch #: 769962 **Sample:** 342293-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/27/09 00:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	37.4	50.0	75	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342302,

Project ID: TNM Beeson Historical

Lab Batch #: 769962 **Sample:** 342293-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/27/09 00:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342302 **Project ID:** TNM Beeson Historical

Analyst: ASA **Date Prepared:** 08/27/2009 **Date Analyzed:** 08/27/2009

Lab Batch ID: 770141 **Sample:** 536427-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0924	92	0.1	0.0931	93	1	70-130	35	
Toluene	ND	0.1000	0.0898	90	0.1	0.0904	90	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1007	101	0.1	0.1018	102	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2064	103	0.2	0.2083	104	1	70-135	35	
o-Xylene	ND	0.1000	0.0980	98	0.1	0.0992	99	1	71-133	35	

Analyst: BHW **Date Prepared:** 08/26/2009 **Date Analyzed:** 08/26/2009

Lab Batch ID: 769962 **Sample:** 536317-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	927	93	1000	867	87	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1080	108	1000	1020	102	6	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 342302 **Project ID:** TNM Beeson Historical

Lab Batch ID: 769962 **QC- Sample ID:** 342293-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/27/2009 **Date Prepared:** 08/26/2009 **Analyst:** BHW

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	ND	1070	952	89	1070	1090	102	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	113	1070	1180	100	1070	1360	117	14	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 342302

Lab Batch #: 770141 **Project ID:** TNM Beeson Historical

Date Analyzed: 08/27/2009 **Date Prepared:** 08/27/2009 **Analyst:** ASA

QC- Sample ID: 342302-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	0.1165	0.1341	14	35	
Toluene	0.9024	1.106	20	35	
Ethylbenzene	12.85	14.14	10	35	
m,p-Xylenes	14.74	16.36	10	35	
o-Xylene	4.062	4.638	13	35	

Lab Batch #: 769966

Date Analyzed: 08/26/2009 **Date Prepared:** 08/26/2009 **Analyst:** BEV

QC- Sample ID: 341905-001 D **Batch #:** 1 **Matrix:** Solid

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	23.6	23.3	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental
Company Address: 2800 S. Cain's Hwy
City/State/Zip: Lovington, NM
Telephone No: 575-441-2264 Fax No:
Sampler Signature: C. Bryant for Billy Blackwood

Project Name: Beeson "B" Discharge
Project #: TNM Beeson Historical
Project Loc: Eddy Co., NM
PO #: POA-J. Henry
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 342302

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: GW = Groundwater, S=Soil/Sed/Solid, W=Wastewater, O=Other	Analyze For: TCLP: TPH 418.1 (8015M)	TOTAL: TPH TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	BAR / ESP / SEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/8260 or BTEX 8260	RCI	N O R M			RUSH TAT (Pre-scheduling 24, 48, 72 hrs)	Standard TAT
01	SP-42A			8/25	1510		1	X								Soil	X									X						X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	8/26/09	0825			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: [signature]	8/26/09	08:25

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Label on Bottle Y N
Custody seals on cooler(s) N/A Y N
Sample Hand Delivered Y N
by Sampler/Client Rep ? Y N
by Courier? UPS DHL Fedex Lone Star
Temperature Upon Receipt: 2.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental

Date/ Time: 8/26/09 08:23

Lab ID # : 342302

Initials: AS

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	2.6 °C	
#2	Shipping container in good condition?	(Yes)	No	N/A	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	Yes	No	(Not Applicable)	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 342786

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

02-SEP-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

02-SEP-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **342786**
Beeson 8" Discharge
Project Address: Eddy Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 342786. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 342786 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 342786

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-43A	S	Aug-28-09 13:30		342786-001
SP-44A	S	Aug-28-09 13:35		342786-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*02-SEP-09*
Work Order Number:	*342786*	*Date Received:*	*08/28/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-770489 Percent Moisture
AD2216A
Batch 770489, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 342786-001, -002.

Batch: LBA-770617 BTEX-MTBE EPA 8021B
SW8021BM

Batch 770617, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 342786-002,342786-001.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536696-1-BLK.
4-Bromofluorobenzene recovered above QC limits Sample Data confirmed by re-analysis.
Samples affected are: 536696-1-BKS 342848-001 S, 342786-001, 342786-002.

SW8021BM

Batch 770617, Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike.
Samples affected are: 342786-001, -002.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-770670 TX1005
None

Certificate of Analysis Summary 342786

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Eddy Co., NM

Date Received in Lab: Fri Aug-28-09 05:25 pm
Report Date: 02-SEP-09
Project Manager: Brent Barron, II

Analysis Requested								
	Lab Id:	342786-001		342786-002				
	Field Id:	SP-43A		SP-44A				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	Aug-28-09 13:30		Aug-28-09 13:35				
BTEX by EPA 8021B	*Extracted:*	Sep-01-09 12:00		Sep-01-09 12:00				
	Analyzed:	Sep-01-09 15:01		Sep-01-09 15:19				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Benzene		0.0896	0.0533	0.1020	0.0531			
Toluene		2.153	0.1067	2.244	0.1062			
Ethylbenzene		7.300	0.0533	4.859	0.0531			
m,p-Xylenes		7.759	0.1067	4.945	0.1062			
o-Xylene		2.354	0.0533	1.477	0.0531			
Total Xylenes		10.113	0.0533	6.422	0.0531			
Total BTEX		19.656	0.0533	13.627	0.0531			
Percent Moisture	*Extracted:*							
	Analyzed:	Sep-01-09 09:14		Sep-01-09 09:14				
	Units/RL:	%	RL	%	RL			
Percent Moisture		6.25	1.00	6.05	1.00			
TPH By SW8015 Mod	*Extracted:*	Sep-01-09 16:07		Sep-01-09 16:07				
	Analyzed:	Sep-01-09 18:34		Sep-01-09 19:00				
	Units/RL:	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		797	159	949	159			
C12-C28 Diesel Range Hydrocarbons		1640	159	2390	159			
C28-C35 Oil Range Hydrocarbons		160	159	180	159			
Total TPH		2597	159	3519	159			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342786,

Project ID: Beeson Historical

Lab Batch #: 770617 **Sample:** 536696-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 09:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0375	0.0300	125	80-120	*

Lab Batch #: 770617 **Sample:** 536696-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 10:00

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 770617 **Sample:** 536696-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 10:38

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0118	0.0300	39	80-120	*

Lab Batch #: 770617 **Sample:** 342786-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 15:01

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0207	0.0300	69	80-120	**
4-Bromofluorobenzene	0.1043	0.0300	348	80-120	**

Lab Batch #: 770617 **Sample:** 342786-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 15:19

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0221	0.0300	74	80-120	**
4-Bromofluorobenzene	0.0711	0.0300	237	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342786,

Project ID: Beeson Historical

Lab Batch #: 770617 **Sample:** 342848-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 16:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0398	0.0300	133	80-120	*

Lab Batch #: 770670 **Sample:** 536776-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 770670 **Sample:** 536776-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 17:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 770670 **Sample:** 536776-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 18:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 770670 **Sample:** 342786-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 18:34

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.5	126	70-135	
o-Terphenyl	53.1	49.8	107	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342786,

Project ID: Beeson Historical

Lab Batch #: 770670 **Sample:** 342786-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 19:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.5	124	70-135	
o-Terphenyl	52.6	49.8	106	70-135	

Lab Batch #: 770670 **Sample:** 342848-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 22:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 770670 **Sample:** 342848-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 23:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342786 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 09/01/2009 **Date Analyzed:** 09/01/2009

Lab Batch ID: 770617 **Sample:** 536696-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0998	100	0.1	0.0996	100	0	70-130	35	
Toluene	ND	0.1000	0.0963	96	0.1	0.0961	96	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1098	110	0.1	0.1087	109	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2322	116	0.2	0.2296	115	1	70-135	35	
o-Xylene	ND	0.1000	0.1078	108	0.1	0.1068	107	1	71-133	35	

Analyst: BHW **Date Prepared:** 09/01/2009 **Date Analyzed:** 09/01/2009

Lab Batch ID: 770670 **Sample:** 536776-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	878	88	999	897	90	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	927	93	999	934	93	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342786
Lab Batch #: 770617
Project ID: Beeson Historical
Date Analyzed: 09/01/2009
Date Prepared: 09/01/2009
Analyst: ASA
QC- Sample ID: 342848-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	ND	0.1102	0.0733	67	70-130	X
Toluene	ND	0.1102	0.0673	61	70-130	X
Ethylbenzene	ND	0.1102	0.0745	68	71-129	X
m,p-Xylenes	ND	0.2204	0.1566	71	70-135	
o-Xylene	0.0017	0.1102	0.0716	63	71-133	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 342786 **Project ID:** Beeson Historical

Lab Batch ID: 770670 **QC- Sample ID:** 342848-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/01/2009 **Date Prepared:** 09/01/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1100	995	90	1100	990	90	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1100	1040	95	1100	1030	94	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Beeson 8" Discharge

Work Order #: 342786

Lab Batch #: 770489 **Project ID:** Beeson Historical

Date Analyzed: 09/01/2009 **Date Prepared:** 09/01/2009 **Analyst:** BEV

QC- Sample ID: 342786-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	6.25	8.90	35	20	F

Spike Relative Difference RPD 200 * |(B-A)/(B+A)|
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: Camille Bryant
Company Name: Basin Environmental
Company Address: 2800 Plains Hwy
City/State/Zip: Lovington NM 88260
Telephone No.: 575-441-2241 Fax No.:
Sampler Signature:
e-mail:

Project Name: Beeson E "Deadman"
Project #: Beeson Historical
Project Loc: Eddy Co, NM
PO #: AFE - J. Henley
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 342786

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	H3PO4	None	Other (Specify)	Matrix: Soil	Water	TPH 418.1 / 8015M	TPH TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	HOLD				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SP-43A			8/28	1330		1	X								Soil		X								X							X
02	SP-44A			8/28	1335		1	X								Soil		X								X							X

Analyze For:
TCLP:
TOTAL:

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
	8/28/09	1725			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by ELOT	Date	Time
			Jeanne Fitch	082809	1725

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered Y N
by Sampler/Client Rep. ?
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env.

Date/ Time: 08-28-09 @ 1725

Lab ID #: 342786

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	4.6 °C	
#2	Shipping container in good condition?	Yes	No	NA	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present NA	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: Contacted by: Date/ Time:

Regarding:

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 342888

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Beeson 8" Discharge

Beeson Historical

02-SEP-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

XENCO Laboratories

02-SEP-09

Project Manager: **Jason Henry**
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No: **342888**
Beeson 8" Discharge
Project Address: Eddy Co., NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 342888. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 342888 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

XENCO Laboratories

Sample Cross Reference 342888

PLAINS ALL AMERICAN EH&S, Midland, TX

Beeson 8" Discharge

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Floor - 1A	S	Aug-31-09 14:46		342888-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Beeson 8" Discharge

Project ID:	*Beeson Historical*	*Report Date:*	*02-SEP-09*
Work Order Number:	*342888*	*Date Received:*	*09/01/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-770520 Percent Moisture
None

Batch: LBA-770617 BTEX-MTBE EPA 8021B
SW8021BM

Batch 770617, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 342888-001.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 536696-1-BLK.
4-Bromofluorobenzene recovered above QC limits Sample Data confirmed by re-analysis.
Samples affected are: 536696-1-BKS, 342848-001 S, 342888-001.

SW8021BM

Batch 770617, Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike.
Samples affected are: 342888-001.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-770670 TX1005
None

Certificate of Analysis Summary 342888

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Beeson 8" Discharge

Project Id: Beeson Historical
Contact: Jason Henry
Project Location: Eddy Co., NM

Date Received in Lab: Tue Sep-01-09 08:38 am
Report Date: 02-SEP-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	342888-001					
	Field Id:	Floor - 1A					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Aug-31-09 14:46					
BTEX by EPA 8021B	*Extracted:*	Sep-01-09 12:00					
	Analyzed:	Sep-01-09 14:31					
	Units/RL:	mg/kg RL					
Benzene		0.0428 0.0256					
Toluene		0.7113 0.0511					
Ethylbenzene		7.874 0.0256					
m,p-Xylenes		10.19 0.0511					
o-Xylene		3.469 0.0256					
Total Xylenes		13.66 0.0256					
Total BTEX		22.29 0.0256					
Percent Moisture	*Extracted:*						
	Analyzed:	Sep-01-09 11:15					
	Units/RL:	% RL					
Percent Moisture		21.89 1.00					
TPH By SW8015 Mod	*Extracted:*	Sep-01-09 16:07					
	Analyzed:	Sep-01-09 21:07					
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		568 191					
C12-C28 Diesel Range Hydrocarbons		1340 191					
C28-C35 Oil Range Hydrocarbons		ND 191					
Total TPH		1908 191					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342888,

Project ID: Beeson Historical

Lab Batch #: 770617 **Sample:** 536696-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 09:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0375	0.0300	125	80-120	*

Lab Batch #: 770617 **Sample:** 536696-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 10:00

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 770617 **Sample:** 536696-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 10:38

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0118	0.0300	39	80-120	*

Lab Batch #: 770617 **Sample:** 342888-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 14:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0211	0.0300	70	80-120	**
4-Bromofluorobenzene	0.1674	0.0300	558	80-120	**

Lab Batch #: 770617 **Sample:** 342848-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 16:03

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0398	0.0300	133	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342888,

Project ID: Beeson Historical

Lab Batch #: 770670 **Sample:** 536776-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 770670 **Sample:** 536776-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 17:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 770670 **Sample:** 536776-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/01/09 18:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 770670 **Sample:** 342888-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 21:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.5	114	70-135	
o-Terphenyl	52.9	49.8	106	70-135	

Lab Batch #: 770670 **Sample:** 342848-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 22:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Beeson 8" Discharge

Work Orders : 342888,

Project ID: Beeson Historical

Lab Batch #: 770670 **Sample:** 342848-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/01/09 23:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342888 **Project ID:** Beeson Historical

Analyst: ASA **Date Prepared:** 09/01/2009 **Date Analyzed:** 09/01/2009

Lab Batch ID: 770617 **Sample:** 536696-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0998	100	0.1	0.0996	100	0	70-130	35	
Toluene	ND	0.1000	0.0963	96	0.1	0.0961	96	0	70-130	35	
Ethylbenzene	ND	0.1000	0.1098	110	0.1	0.1087	109	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2322	116	0.2	0.2296	115	1	70-135	35	
o-Xylene	ND	0.1000	0.1078	108	0.1	0.1068	107	1	71-133	35	

Analyst: BHW **Date Prepared:** 09/01/2009 **Date Analyzed:** 09/01/2009

Lab Batch ID: 770670 **Sample:** 536776-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	878	88	999	897	90	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	927	93	999	934	93	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Beeson 8" Discharge

Work Order #: 342888

Lab Batch #: 770617

Project ID: Beeson Historical

Date Analyzed: 09/01/2009

Date Prepared: 09/01/2009

Analyst: ASA

QC- Sample ID: 342848-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	ND	0.1102	0.0733	67	70-130	X
Toluene	ND	0.1102	0.0673	61	70-130	X
Ethylbenzene	ND	0.1102	0.0745	68	71-129	X
m,p-Xylenes	ND	0.2204	0.1566	71	70-135	
o-Xylene	0.0017	0.1102	0.0716	63	71-133	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Beeson 8" Discharge

Work Order # : 342888 **Project ID:** Beeson Historical

Lab Batch ID: 770670 **QC- Sample ID:** 342848-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/01/2009 **Date Prepared:** 09/01/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1100	995	90	1100	990	90	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1100	1040	95	1100	1030	94	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Beeson 8" Discharge

Work Order #: 342888

Lab Batch #: 770520 **Project ID:** Beeson Historical

Date Analyzed: 09/01/2009 **Date Prepared:** 09/01/2009 **Analyst:** BEV

QC- Sample ID: 342859-008 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.16	3.44	8	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Manager: CAMILLE BRYANT
Company Name: BASIN ENVIRONMENTAL SERVICE TECH
Company Address: 2800 PLAINS HWY
City/State/Zip: LOVINGTON, NM
Telephone No: 575-396-2244 Fax No:
Sampler Signature: e-mail:

Project Name: BEESON 8" DISCHARGE
Project #: BEESON HISTORICAL
Project Loc: EDDY CO. NM
PO #: BMA - J. HENRY
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 342888

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: 4oz g. C.	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water, GW=Groundwater, SW=Surface Water, S=Soil/Solid, NP=Non-Potable, SL=Sludge, Other	Analyze For: TCLP: TOTAL: 8015B TPH: 418.1 (8015A) TPH: TX 1005 TPH: TX 1002 Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Alkalinity) SAR / ESP / CEC Metals: As, Ag, Ba, Cd, Cr, Pb, Hg, Se Volatiles Semivolatiles BTEX 8021B/5030 or BTEX 8260 RCI GRO DRO ORO PAH PCB's	RUSH TAT (Pre-Scheduled 24, 48, 72 hrs)	Standard TAT
01	FLOOR - 1A			8/31	14:40		1	X							SOIL	X		X		

Special Instructions:
BILL RUSH CHARGE TO BASIN ENVIRONMENTAL SERVICE TECH

Relinquished by:	Date	Time	Received by:	Date	Time
	9/1/09	0830			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Phillip Walker	09/01/09	0:38

Laboratory Comments: 4oz g. C.
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains/Basin

Date/ Time: 09/01/09 8:38

Lab ID #: 342888

Initials: GMA

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

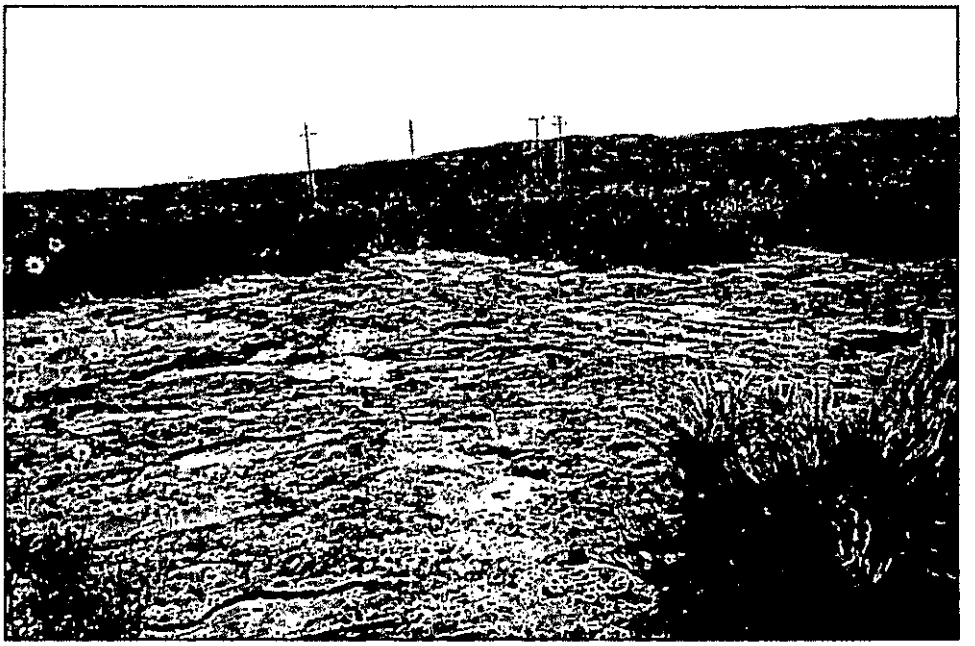
Regarding: _____

Corrective Action Taken: _____

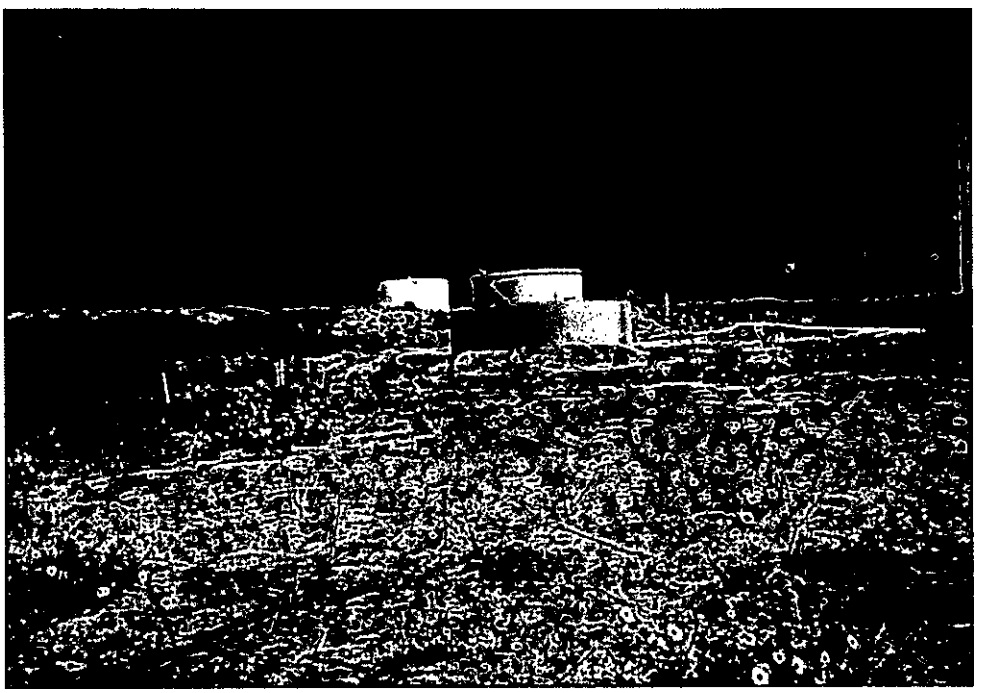
Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

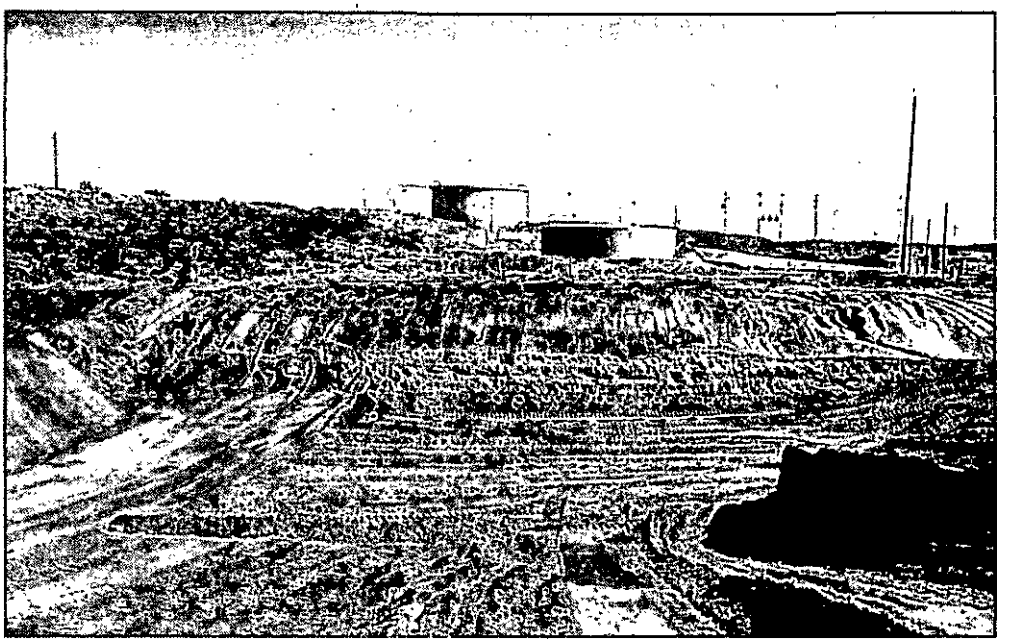
Appendix C
Photographs



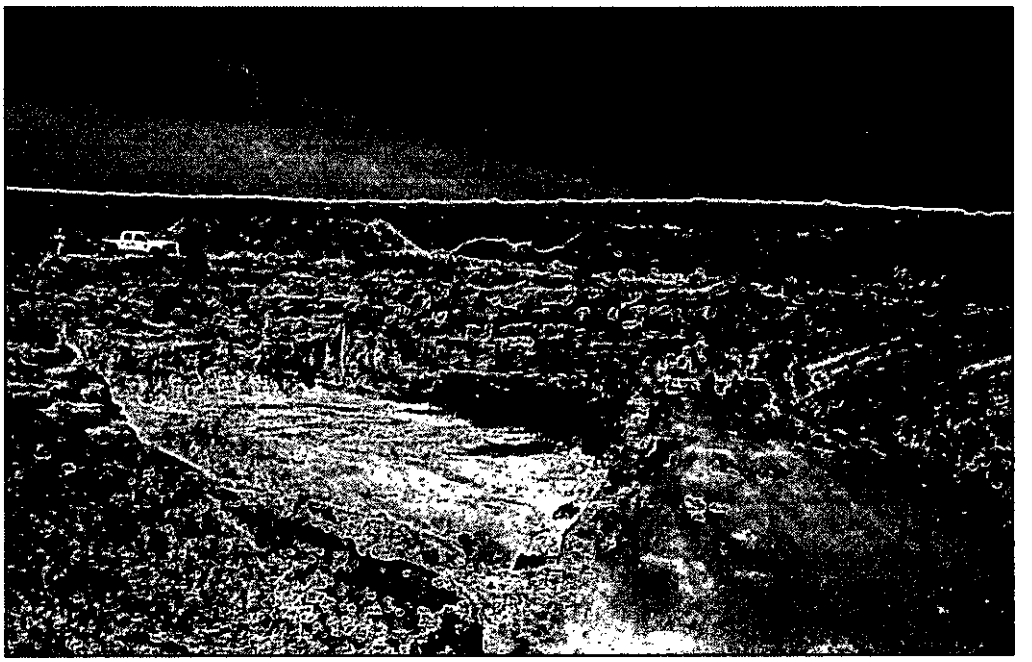
Beeson 8-Inch Discharge Release Site prior to remediation activities



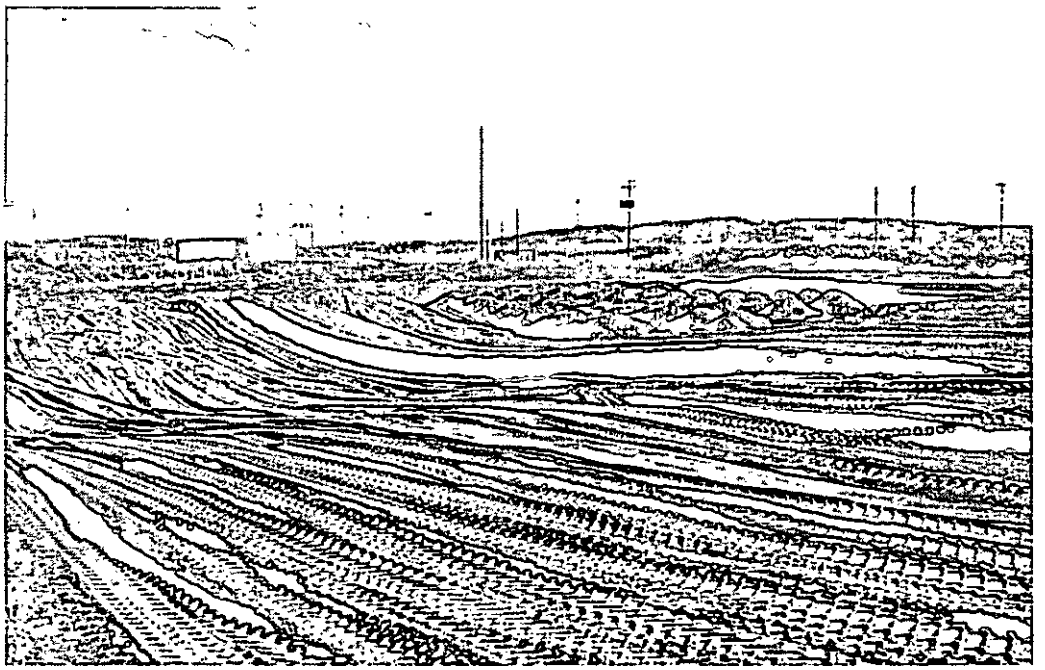
Beeson 8-Inch Discharge Release Site prior to remediation activities



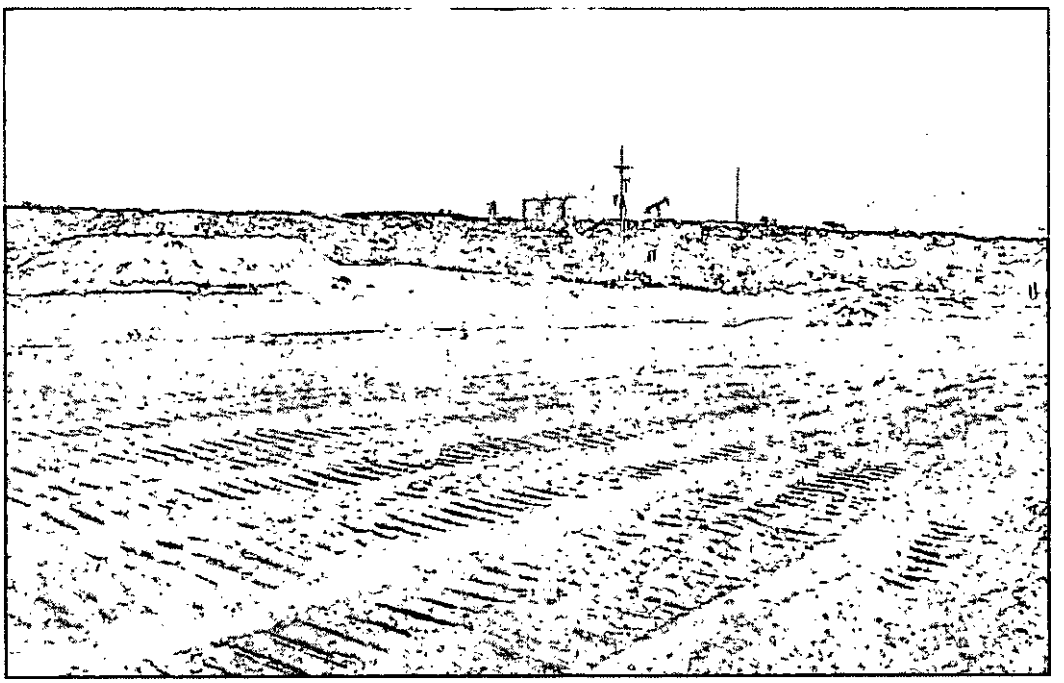
Beeson 8-Inch Discharge Release Site during excavation activities



Beeson 8-Inch Discharge Release Site during excavation activities



Beeson 8-Inch Discharge Release Site during backfilling activities



Beeson 8-Inch Discharge Release Site during backfilling activities



Beeson 8-Inch Discharge Release Site during seeding activities



Beeson 8-Inch Discharge release site during seeding activities

Appendix D
Archaeological Resource Survey

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.:	2a. Lead (Sponsoring) Agency:	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:
111988	BLM, CFO		

4. Title of Report: Beeson 8" Historical petroleum leak.

Author(s) Ann and Danny Boone

5. Type of Report ☒ Negative ☐ Positive

6. Investigation Type
☐ Research Design ☒ Survey/Inventory ☐ Test Excavation ☐ Excavation ☐ Collections/Non-Field Study
☐ Overview/Lit Review ☐ Monitoring ☐ Ethnographic study ☐ Site specific visit ☐ Other

7. Description of Undertaking (what does the project entail?): The project is three areas where petroleum fluid leaked from a buried pipeline. Area No. 1 is a large area where liquid ran and pooled, it is located just south of the Plains Beeson Station. Area No. 2 is a small pedestal near a caliche capped road and area No. 3 is a large area where liquid ran and pooled (See attached LocationMap). Area No. 1 and area No. 3 are very irregular shaped, area 2 is approximately 6 feet in diameter. All appear to be several years in age. The impacted area plus a 100 feet buffer around them was surveyed and the perimeter flagged with orange tape tied to vegetation. Cleanup methods are unknown but it is assumed that contaminated soil will be excavated by large machines and removed from the site.

8. Dates of Investigation: (from: 27 Oct. 08 to:)	9. Report Date: 30 Oct. 08
10. Performing Agency/Consultant: Boone Archaeological Services, LLC 2030 North Canal, Carlsbad, NM 88220 575-885-1352 Principal Investigator: Danny Boone Field Supervisor: Danny Boone Field Personnel Names: Danny Boone	11. Performing Agency/Consultant Report No.: BAS 10-08-09 12. Applicable Cultural Resource Permit No(s): BLM: 190-2920-06-J
13. Client/Customer (project proponent): Plains Marketing, L.P. Contact: Curt D. Stanley (Agent with Basin Enviromental) Address: 1301 S Country Road 1150 Midland, Texas 79706-4476 Phone: (432) 682-5392	14. Client/Customer Project No.: Plains SRS, Beeson Historical

15. Land Ownership Status *(Must be indicated on project map)*:

Land Owner	Acres Surveyed	Acres In APE
BLM	21 (+/-)	14.5 (-/+)
TOTALS	21 (-/+)	14.5 (+/-)

16. Records Search(es):

Date(s) of ARMS File Review: 27 Oct. 08	Name of Reviewer(s): Ann Boone	
Date(s) of NR/SR File Review:	Name of Reviewer(s):	
Date(s) of Other Agency File Review: 27 Oct. 08	Name of Reviewer(s): Danny Boone	Agency: BLM, CFO

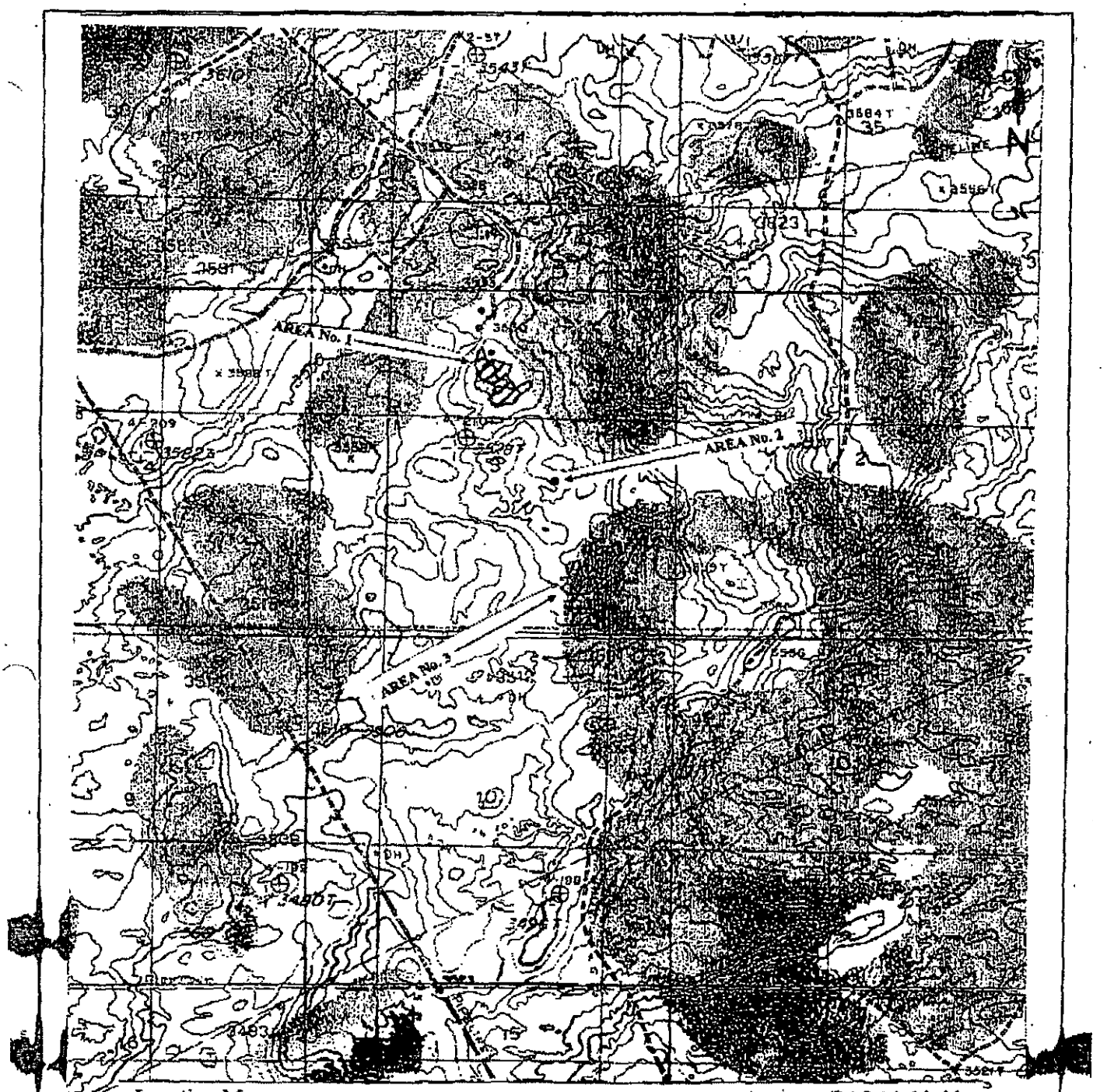
Findings: No previously recorded sites were located within 500 feet, LA 102543 is within 0.25 mile.

17. Survey Data: a. Source Graphics ☒ NAD 27 ☐ NAD 83
☒ USGS 7.5' (1:24,000) topo map ☐ Other topo map, Scale:
☒ GPS Unit Accuracy ☐ <1.0m ☒ 1-10m ☐ 10-100m ☐ >100m

b. USGS 7.5' Topographic Map Name / USGS Quad Code

Loco Hills, N. M. (Prov. Ed. 1985)	32103-G8

c. County(ies): Eddy



Location Map BAS 10-08-09

Archaeological survey areas for the Beeson 8" Historical sites for Plains Marketing, L.P. in Section 3, T 18S, R 30E, NMPM, Eddy County, New Mexico.

Map Reference: USGS 7.5' Series; Loco Hills, N. M. (Prov. Ed. 1985) 32103-G8

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

BAS

17. Survey Data (continued):
d. Nearest City or Town: Loco Hills, NM
e. Legal Description:

Township (N/S)	Range (E/W)	Section	¼ ¼ ¼
18S	30E	3 (Area 1)	ne nw, nw ne, sw ne.
		3 (Area 2)	nw se,
		3 (Area 3)	sw se, se se,

Projected legal description? Yes [ ] No [X] Unplatted [ ]
f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

18. Survey Field Methods:
Intensity: ☒ 100% coverage ☐ <100% coverage
Configuration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):
Scope: ☒ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)
Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)
Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: 27 Oct. 08
Survey Person Hours: 5.5 Recording Person Hours: 0 Total Hours: 5.5
Additional Narrative: Location and acres are estimates based on a hand held GPS Unit. Area No. 1 and area No. 3 are very irregular shaped, area 2 is approximately 6 feet in diameter. The impacted area plus a 100 feet buffer around them was surveyed.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):
Topography: Moderately rolling and undulating dunal plain.
Vegetative community: Consists primarily of shinoak, sage brush, sand burrs, more sand burrs, yucca cactus, various grasses and other flora.
NRCS: Kermit-Berino association: Sandy, deep soils from wind-worked mixed sand deposits.
Elevation: 3,530 (+/-) 25 feet

20. a. Percent Ground Visibility: 70 overall b. Condition of Survey Area (grazed, bladed, undisturbed, etc.): Project is where petroleum fluid leaked from a buried pipeline

21. CULTURAL RESOURCE FINDINGS ☐ Yes, See Page 3 ☒ No, Discuss Why: Unknown

22. Required Attachments (check all appropriate boxes):
☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn
☐ Copy of NMCRIS Mapserver Map Check
☐ LA Site Forms - new sites (*with sketch map & topographic map*)
☐ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*)
☐ Historic Cultural Property Inventory Forms
☐ List and Description of Isolates, if applicable
☐ List and Description of Collections, if applicable

23. Other Attachments:
☐ Photographs and Log
☐ Other Attachments
(Describe):

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Danny Boone
Signature Danny Boone Date: 30 Oct. 08 Title (if not PI):

25. Reviewing Agency:
Reviewer's Name/Date

Accepted ( ) Rejected ( )

Tribal Consultation (if applicable): ☐ Yes ☐ No

26. SHPO
Reviewer's Name/Date:

HPD Log #:
SHPO File Location:
Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.: 111988	2. Lead (Sponsoring) Agency: BLM, CFO	3. Lead Agency Report No.:

SURVEY RESULTS:
Sites discovered and registered: 0
Sites discovered and NOT registered: 0
Previously recorded sites revisited *(site update form required)*: 0
Previously recorded sites not relocated *(site update form required)*: 0
TOTAL SITES VISITED: 0
Total isolates recorded: 0 Non-selective isolate recording? ☒
Total structures recorded *(new and previously recorded, including acequias)*: 0

MANAGEMENT SUMMARY: No cultural resources were encountered therefore archaeological clearance of three areas flagged with orange tape tied to vegetation for the Beeson 8" Historical sites for Plains Marketing, L.P. is recommended. If cultural resources are encountered at any time all activity should cease and the BLM Archaeologist notified immediately.

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

SURVEY LA NUMBER LOG
Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

MONITORING LA NUMBER LOG *(site form required)*
Sites Discovered *(site form required)* : Previously recorded sites *(Site update form required)*:

LA No.	Field/Agency No.	LA No.	Field/Agency No.

Areas outside known nearby site boundaries monitored? Yes ☐, No ☐ If no explain why:

TESTING & EXCAVATION LA NUMBER LOG *(site form required)*

Tested LA number(s)	Excavated LA number(s)

Appendix E
BLM Correspondence

Camille J. Bryant

From: <Paul_Evans@nm.blm.gov>
To: "Camille J. Bryant" <cjbryant@basin-consulting.com>
Sent: Monday, March 02, 2009 10:23 AM
Subject: Re: Plains Beeson 8-Inch Release Site

Ms. Camille,

Your plan to blend the asphaltines location sounds fine, along as you have a good blend of soil to asphaltines. I will need to inspect the north and the middle areas before the reseeding is done. Thank you for the heads up on this.

Paul R Evans
Bureau of Land Management
Realty
Environmental Protection Specialist
Office 575-234-5972
Direct Line 575-234-5977
Mobile 575-361-7548
Fax 575-234-5927

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-14
Revised October 10, 200

Submit 2 Copies to appropriat
District Office in accordanc
with Rule 116 on bac
side of for

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Rep

Name of Company Plains Pipeline	Contact Camille Reynolds
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 575-441-0965
Facility Name Beeson 8" Discharge	Facility Type 8"Steel Pipeline

Surface Owner BLM	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	3	18S	30E					Eddy

Latitude 32° 46' 16.9" Longitude 103° 57' 20.7"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release Unknown	Volume Recovered
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 09/12/2008 @ 14:30
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Camille Bryant	Date and Hour 09/22/2008 @ 09:00	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken Historical release identified by the BLM (Jim Amos) will remediate to BLM/NMOCD guidelines

Describe Area Affected and Cleanup Action Taken.* Impacted areas along pipeline ROW for approximately 0.7 mile.

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: Camille Bryant	OIL CONSERVATION DIVISION
Printed Name: Camille Bryant	Approved by District Supervisor:
Title: Remediation Coordinator	Approval Date: / Expiration Date:
E-mail Address: cjbryant@paalp.com	Conditions of Approval: / Attached ☐
Date: 09/22/2008 Phone:575-441-0965	

* Attach Additional Sheets If Necessary