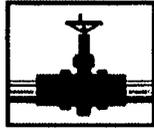


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REPORTS

DATE:

Nov. 2010



PLAINS
PIPELINE, L.P.

RECEIVED OCD

2011 APR 21 P 12:39

January 5, 2011

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

RE: Plains Pipeline, L.P. 14-inch Vac to Jal Legacy Site
NMOCD Reference # 1RP-2162
Unit Letter F of Section 25, Township 25 South, Range 37 East
Lea County, New Mexico

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached *Remediation Summary and Site Closure Request*, dated November 2010, for the 14-inch Vac to Jal Legacy site. This site is located in Section 25 of Township 25 South, and Range 37 East of Lea County, New Mexico. This document details the soil remediation activities performed at the site.

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains Pipeline, L.P.

CC: Larry Johnson, NMOCD, Hobbs Office

Enclosure

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
bjarguijo@basinenv.com
Office: (575) 396-2378 Fax: (575) 396-1429



REMEDATION SUMMARY RECEIVED AND SITE CLOSURE REQUEST

APR 21 2011

**PLAINS PIPELINE, LP (231735)
14-Inch Vac to Jal Legacy
Lea County, New Mexico
Plains SRS # 2009-092**

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

**UNIT LTR "F" (SE ¼ /NW ¼), Section 25, Township 25 South, Range 37 East
Latitude 32° 06' 10.7" North, Longitude 103° 07' 10.3" West
NMOCD Reference # 1RP-2162**

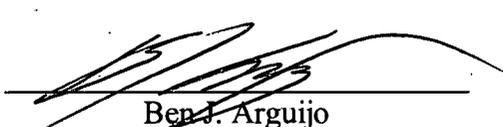
Prepared For:

Plains Pipeline, LP
333 Clay Street
Suite 1600
Houston, Texas 77002

Prepared By:

Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, New Mexico 88260

November 2010



Ben J. Arguijo

Project Manager

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Figure 2 – Site and Sample Location Map

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APPENDICES

Appendix A – Soil Boring and Monitor Well Logs

Appendix B – Analytical Reports

Appendix C – Photographs

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

Appendix E – Release Notification and Corrective Action (Form C-141, Final)

1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Pipeline, LP (Plains), has prepared this "Remediation Summary and Site Closure Request" for the release site known as 14-Inch Vac to Jal Legacy (SRS # 2009-092). The legal description of the release site is Unit Letter "F" (SE ¼ NW ¼), Section 25, Township 25 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Legacy Reserves, LP. The release site GPS coordinates are 32° 06' 10.7" North and 103° 07' 10.3" West. Please reference Figure 1 for a "Site Location Map" and Figure 2 for a "Site and Sample Location Map". The "Release Notification and Corrective Action" (Form C-141) is provided as Appendix D.

On April 9, 2009, Plains discovered a crude oil release from a fourteen (14)-inch steel pipeline. The cause of the release was attributed to external corrosion of the pipeline and was reported to the New Mexico Oil Conservation Division (NMOCD) on April 9, 2009. During initial response activities, Plains installed a temporary clamp on the pipeline to mitigate the release. Approximately two hundred fifty (250) barrels of crude oil was released from the pipeline, with no recovery. General photographs of the site are provided as Appendix C.

The release site is bisected by two (2) fourteen (14) inch Plains pipelines that run parallel through the site. Due to safety concerns associated with excavating and supporting the two (2) large diameter pipelines, Plains requested and received NMOCD approval to leave the soil beneath and adjacent to the Plains pipelines in-situ.

The 14-Inch Vac to Jal release site is located approximately 1,147 feet to the south-southeast of a documented groundwater remediation site (Arco South Justis Unit F-230). Information regarding this site can be found on the NMOCD imaging system.

2.0 NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells are registered in Section 25, Township 25S, Range 37E. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately fifty five (55) feet below ground surface (bgs). Soil boring (SB-1) was advanced by Plains and subsequently converted to a groundwater monitor well (MW-1). Groundwater was encountered at a depth of approximately sixty five (65) feet bgs in monitor well MW-1. The analytical results of the soil samples collected during the advancement of the soil boring, indicated hydrocarbon impact exceeding the NMOCD regulatory standard, was present at the groundwater interface. The depth of hydrocarbon impact results in a score of twenty (20) being assigned to the site based on the NMOCD depth to groundwater criteria.

A search of the water well database maintained by the NMOSE indicated there are no water wells within 1,000 feet of 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 this criteria.

The NMOCD guidelines indicate the 14-Inch Vac to Jal Legacy release site had an initial ranking score of twenty (20), which would set the remediation levels for the site at 10 mg/Kg for benzene, 50 mg/Kg for BTEX, and 100 mg/Kg for TPH. However, based on discussions with the NMOCD Hobbs District representative, site-specific risk-based remediation levels were established for the site. The remediation levels established for the site were 10 mg/Kg for benzene, 50 mg/Kg for BTEX, and 100 mg/Kg for TPH for the sidewalls, and 10 mg/Kg for benzene, 50 mg/Kg for BTEX, and 5,000 mg/Kg for TPH for the backfill material. Due to the close proximity of an active injection well and several pipelines, the NMOCD Hobbs District representative agreed to allow contaminant concentrations above these levels in several places on the floor of the excavation since the quality of the groundwater in this area was considered to be non-abatable.

3.0 DISTRIBUTION OF CONTAMINANTS IN THE UNSATURATED ZONE

3.1 Summary of Soil Remediation Activities

On April 9, 2009, following initial response activities, excavation of the hydrocarbon-impacted soil began at the site. Approximately 18,000 cubic yards (cy) of impacted soil was excavated and stockpiled on-site, pending final disposition. Final dimensions of the Main Excavation were approximately four hundred (400) feet in length, approximately two hundred (200) feet in width, and five (5) to fourteen (14) feet in depth. The West Excavation measured approximately one hundred fifty (150) feet in length, approximately one hundred five (105) feet in width, and approximately ten (10) feet in depth. The soil beneath and adjacent to the two (2) Plains pipelines was left in-situ due to safety concerns associated with excavating and supporting the two (2) large diameter pipelines.

On April 15, 2009, a soil sample (Chloride Baseline) was collected from the stockpiled material to determine chloride concentration of the soil. The soil sample was submitted to the laboratory for chloride analysis using EPA Method 300. The analytical results indicated a chloride concentration of 796 mg/kg. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chlorides in Soil". Analytical reports are provided as Appendix B.

On May 18, 2009, two (2) soil samples (Stockpile #1 and Stockpile #2) were collected from the stockpiled material and submitted to the laboratory for analysis. The soil samples were analyzed for concentrations of benzene, toluene, ethyl-benzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) using EPA Method SW 846-8021b and EPA Method SW 846-8015M, respectively. Laboratory analytical results indicated benzene concentrations of 3.549 mg/kg for soil sample Stockpile #1 and 23.2 mg/kg for soil sample Stockpile #2. BTEX concentrations were 275.569 mg/kg for soil sample Stockpile #1 and 545.4 mg/kg for soil sample Stockpile #2. TPH concentrations were 8,880 mg/kg for soil sample Stockpile #1 and 18,269 mg/kg for soil sample Stockpile #2.

On May 18, 2009, four (4) soil samples (Main Exc. NWSW, Main Exc. NESW, Main Exc. WSW and Main Exc. ESW) were collected from the Main Excavation sidewalls at depths ranging from 4.5 feet to 9 feet bgs. The soil samples were submitted to the laboratory for determination of BTEX and TPH constituent concentrations. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory method detection limit (MDL) for soil samples Main Exc. WSW and Main Exc. ESW to 0.0073 mg/kg

for soil sample Main Exc. NWSW. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples Main Exc. WSW and Main Exc. ESW to 0.0924 mg/kg for soil sample Main Exc. NWSW. TPH concentrations ranged from less than the laboratory MDL for soil sample Main Exc. WSW to 43.3 mg/kg for soil sample Main Exc. NESW. Please reference Figure 2 for the "Site and Sample Location Map".

Four (4) soil samples (Main Exc. Floor #1, Main Exc. Floor #2, Main Exc. Floor #3 and Main Exc. Floor #4) were also collected from the floor of the Main Excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL for soil sample Main Exc. Floor #2 to 9.459 mg/kg for soil sample Main Exc. Floor #4. BTEX concentrations ranged from 0.0046 mg/kg for soil sample Main Exc. Floor #1 to 371.119 mg/kg for soil sample Main Exc. Floor #4. TPH concentrations ranged from 19.8 mg/kg for soil sample Main Exc. Floor #1 to 13,233 mg/kg for soil sample Main Exc. Floor #4.

On May 26, 2009, nine (9) trenches were excavated to vertically and horizontally investigate the extent of hydrocarbon-impacted soil at the site. Selected soil samples were submitted to the laboratory for determination of BTEX and TPH concentrations.

Trench T-1 was located in the northeast corner of the Main Excavation. The trench was completed to a total depth of approximately ten (10) feet bgs. One (1) soil sample (T-1 @ 10' bgs) was collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL.

Trench T-2 was located in the eastern portion of the Main Excavation. The trench was completed to a total depth of approximately eighteen (18) feet bgs. Three (3) soil samples (T-2 @ 12' bgs, T-2 @ 14' bgs, and T-2 @ 18' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from 0.0023 mg/kg for soil sample T-2 @ 18' bgs to 34.76 mg/kg for soil sample T-2 @ 12' bgs. BTEX concentrations ranged from 0.0353 mg/kg for soil sample T-2 @ 18' bgs to 930.1 mg/kg for soil sample T-2 @ 12' bgs. TPH concentrations ranged from 131.3 mg/kg for soil sample T-2 @ 18' bgs to 28,240 mg/kg for soil sample T-2 @ 12' bgs.

Trench T-3 was located in the western portion of the Main Excavation. The trench was completed to a total depth of approximately thirty (30) feet bgs. Six (6) soil samples (T-3 @ 12' bgs, T-3 @ 14' bgs, T-3 @ 18' bgs, T-3 @ 22', T-3 @ 26' bgs, and T-3 @ 30' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples T-3 @ 26' bgs and T-3 @ 30' bgs to 11.28 mg/kg for soil sample T-3 @ 18' bgs. BTEX concentrations ranged from 0.0568 mg/kg for soil sample T-3 @ 22' bgs to 255.439 mg/kg for soil sample T-3 @ 14' bgs. TPH concentrations ranged from 59 mg/kg for soil sample T-3 @ 22' bgs to 18,110 mg/kg for soil sample T-3 @ 18' bgs.

Trench T-4 was located in the southern portion of the Main Excavation. The trench was completed to a total depth of approximately thirty (30) feet bgs. Six (6) soil samples (T-4 @ 12' bgs, T-4 @ 14' bgs, T-4 @ 18' bgs, T-4 @ 22' bgs, T-4 @ 26' bgs, and T-4 @ 30' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical

results indicated benzene concentrations ranged from 8.783 mg/kg for soil sample T-4 @ 14' to 48.18 mg/kg for soil sample T-4 @ 12' bgs. BTEX concentrations ranged from 303.923 mg/kg for soil sample T-4 @ 14' bgs to 1,097.58 mg/kg for soil sample T-4 @ 12' bgs. TPH concentrations ranged from 8,224 mg/kg for soil sample T-4 @ 14' bgs to 37,550 mg/kg for soil sample T-4 @ 12' bgs.

Trench T-5 was located in the southern portion of the West Excavation. The trench was completed to a total depth of approximately fourteen (14) feet bgs. One (1) soil sample (T-5 @ 14' bgs) was collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated a benzene concentration of 0.0078 mg/kg, a BTEX concentration of 0.0119 mg/kg, and a TPH concentration of 32 mg/kg.

Trench T-6 was located at the release point to a total depth of approximately eighteen (18) feet bgs. Three (3) soil samples (T-6 @ 10' bgs, T-6 @ 14' bgs, and T-6 @ 18' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL for soil sample T-6 @ 18' bgs to 1.999 mg/kg for soil sample T-6 @ 10' bgs. BTEX concentrations ranged from 0.006 mg/kg for soil sample T-6 @ 18' bgs to 89.099 mg/kg for soil sample T-6 @ 10' bgs. TPH concentrations ranged from 28.3 mg/kg for soil sample T-6 @ 14' bgs to 3,996 mg/kg for soil sample T-6 @ 10' bgs.

Trench T-7 was located to the north of the release point adjacent to the Plains pipelines. The trench was completed to a total depth of approximately eighteen (18) feet bgs. Three (3) soil samples (T-7 @ 10' bgs, T-7 @ 14' bgs, and T-7 @ 18' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory MDL for soil sample T-7 @ 18' bgs to 9.257 mg/kg for soil sample T-7 @ 10' bgs. BTEX concentrations ranged from 153.34 mg/kg for soil sample T-7 @ 18' bgs to 212.818 mg/kg for soil sample T-7 @ 14' bgs. TPH concentrations ranged from 9,061 mg/kg for soil sample T-7 @ 18' bgs to 9,840 mg/kg for soil sample T-7 @ 10' bgs.

Trench T-8 was located in the central portion of the Main Excavation. The trench was completed to a total depth of approximately fourteen (14) feet bgs. Two (2) soil samples (T-8 @ 10' bgs, and T-8 @ 14' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL, with the exception of soil sample T-8 @ 10' bgs, which exhibited a TPH concentration of 91.7 mg/kg.

Trench T-9 was located in the southeast corner of the Main Excavation. The trench was completed to a total depth of approximately fourteen (14) feet bgs. Two (2) soil samples (T-9 @ 10' bgs, and T-9 @ 14' bgs) were collected from the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from 0.0062 mg/kg for soil sample T-9 @ 14' bgs to 0.0072 mg/kg for soil sample T-9 @ 10' bgs. BTEX concentrations ranged from 0.0249 mg/kg for soil sample T-9 @ 14' bgs to 1.3389 mg/kg for soil sample T-9 @ 10' bgs. TPH concentrations ranged from 106 mg/kg for soil sample T-9 @ 14' bgs to 4,751 mg/kg for soil sample T-9 @ 10' bgs.

On May 28, 2009, four (4) soil samples (Main Exc. ESW-1 @ 8' bgs, Main Exc. ESW-2 @ 5' bgs, Main Exc. ESW-3 @ 3' bgs, and Main Exc. SSW @ 9.5' bgs) were collected from the Main Excavation sidewalls and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all the soil samples submitted, with the exception of soil samples Main Exc. ESW-1 @ 8' bgs and Main Exc. ESW-3 @ 3' bgs, which exhibited TPH concentrations of 38.8 mg/kg and 86.2 mg/kg, respectively. Based on these results, the horizontal extent of impacted soils appeared to have been delineated in all directions.

Based on the analytical results of the soil samples collected from the delineation trenches, further investigation of the vertical extent of hydrocarbon-impacted soil at the site was warranted.

On July 1 and 2, 2009, three (3) soil borings (SB-1, SB-2, and SB-3) were advanced at the site to further delineate the vertical extent of hydrocarbon-impacted soil at the site. 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, TPH, and chlorides.

Soil boring SB-1 was located in the southern portion of the Main Excavation at approximately ten (10) feet bgs and advanced to a total depth of approximately seventy (70) feet bgs. Soil samples collected at drilling depths of five (5) feet, fifteen (15) feet, twenty five (25) feet, thirty five (35) feet, forty five (45) feet, fifty (50) feet, and fifty five (55) feet were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SB-1/MW-1 @ 45', SB-1/MW-1 @ 50', and SB-1/MW-1 @ 55' to 1.447 mg/kg for soil sample SB-1/MW-1 @ 5'. BTEX concentrations ranged from 0.0025 mg/kg for soil sample SB-1/MW-1 @ 50' to 79.4979 mg/kg for soil sample SB-1/MW-1 @ 25'. TPH concentrations ranged from 445 mg/kg for soil sample SB-1/MW-1 @ 55' to 9,655 mg/kg for soil sample SB-1/MW-1 @ 25'. Chloride concentrations ranged from 10.3 mg/kg for soil sample SB-1/MW-1 @ 25' to 179 mg/kg for soil sample SB-1/MW-1 @ 55'.

Groundwater was encountered at approximately fifty four (54) feet drilling depth, or approximately sixty four (64) feet bgs, in SB-1. On July 1, 2009, soil boring SB-1 was converted to monitor well MW-1.

Soil boring SB-2 was located in the northwest portion of the Main Excavation at approximately ten (10) feet bgs. The soil boring was advanced to a total depth of approximately seventy (70) feet bgs. Soil samples collected at drilling depths of five (5) feet, fifteen (15) feet, twenty five (25) feet, thirty five (35) feet, forty five (45) feet, fifty (50) feet, and fifty five (55) feet were submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL in all the submitted soil samples, with the exception of soil sample SB-2 @ 15', which exhibited a benzene concentration of 0.2671 mg/kg. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples SB-2 @ 45', SB-2 @ 50', and SB-2 @ 55' to 26.391 mg/kg for soil sample SB-2 @ 5'. TPH concentrations ranged from 57.8 mg/kg for soil sample SB-2 @ 35' to 4,655 mg/kg for soil sample SB-2 @ 5'. Chloride concentrations ranged from less than the laboratory MDL for soil sample SB-2 @ 35' to 952 mg/kg for soil sample SB-2 @ 55'.

Groundwater was encountered at approximately fifty four (54) feet drilling depth, or approximately sixty four (64) feet bgs, in soil boring SB-2. A temporary casing was installed in the soil boring to allow a "preliminary" groundwater sample to be collected for analysis. On July 2, 2009, a groundwater sample (Prelim GW SB-2) was collected from the temporary casing and submitted to the laboratory for analysis. Following the collection of the groundwater sample, the temporary casing was removed from the soil boring, and the soil boring was plugged with cement and bentonite, as required by the NMOSE. A description of the analytical results of the collected groundwater sample (Prelim GW SB-2) is included in the "Summary of Groundwater Remediation Activities" below.

Soil boring SB-3 was located to the north of the release point adjacent to the Plains pipeline and advanced to a total depth of approximately seventy (70) feet bgs. Soil samples collected at five (5) feet, fifteen (15) feet, twenty five (25) feet, thirty five (35) feet, forty five (45) feet, fifty (50) feet, fifty five (55) feet, and sixty (60) feet were submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the laboratory MDL for all the submitted soil samples, with the exception of soil sample SB-3 @ 5', which exhibited a benzene concentration of 0.0644 mg/kg. BTEX concentrations ranged from less than the laboratory MDL for soil sample SB-3 @ 35' to 17.728 mg/kg for soil sample SB-3 @ 25'. TPH concentrations ranged from 72.2 mg/kg for soil sample SB-3 @ 50' to 6,226 mg/kg for soil sample SB-3 @ 5'. Chloride concentrations ranged from 8.94 mg/kg for soil sample SB-3 @ 50' to 152 mg/kg for soil sample SB-3 @ 5'.

Groundwater was encountered at approximately sixty four (64) feet bgs in soil boring SB-3. A temporary casing was installed in the soil boring to allow a "preliminary" groundwater sample to be collected for analysis. On July 2, 2009, a groundwater sample (Prelim GW SB-3) was collected from the temporary casing and submitted to the laboratory for analysis. Following the collection of the groundwater sample, the temporary casing was removed from the soil boring, and the soil boring was plugged with cement and bentonite, as required by the NMOSE. A description of the analytical results of the collected groundwater sample (Prelim GW SB-3) is included in the "Summary of Groundwater Remediation Activities" below.

On September 18, 2009, approximately five hundred (500) cubic yards of impacted soil was placed in a treatment cell and treated by blending and aeration methods.

On September 24, 2009, one (1) soil sample (Treatment Cell #1) was collected from the treatment cell and submitted to the laboratory for analysis. Laboratory analytical results indicated a benzene concentration of 1.539 mg/kg, a BTEX concentration of 136.31 mg/kg, and a TPH concentration of 11,310 mg/kg.

On September 30, 2009, three (3) soil samples (West Exc. NSW-1, West Exc. WSW-1, and West Exc. SSW-1) were collected from the West Excavation sidewalls and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all the submitted soil samples, with the exception of soil sample West Exc. SSW-1, which exhibited a TPH concentration of 20.7 mg/kg. Two (2) soil samples (West Exc. Floor-1 and West Exc. Floor-2) were also collected from the floor of the excavation and submitted to the laboratory for analysis. The laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all of the submitted soil samples.

On November 10, 2009, at the request of the NMOCD, the excavations were divided into seventy five (75) foot grids. Fourteen (14) soil samples (GP #1 @ 6', GP #2 @ Grade, GP #3 @ Grade, GP #4 @ 5', GP #5 @ 7', GP #6 @ 9', GP #7 @ 9', GP #8 @ 9', GP #9 @ 10', GP #10 @ 7', GP #11 @ 7', GP #12 @ 10', GP #13 @ 10', and GP #14 @ 12') were collected from the Main Excavation grid points and submitted to the laboratory for analysis. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL for soil sample GP #8 @ 9' to 4,696 mg/kg for soil sample GP #6 @ 9'. Chloride concentrations ranged from less than the appropriate laboratory MDL for soil samples GP #6 @ 9' and GP #12 @ 10' to 3,510 mg/kg for soil sample GP #3 @ Grade.

Two (2) soil samples (GP #15 @ 10' and GP #16 @ 10') were collected from the West Excavation grid points and submitted to the laboratory for analysis. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL for soil sample GP #16 @ 10' to 69.7 mg/kg for soil sample GP #15 @ 10'. Chloride concentrations ranged from 9.57 mg/kg for soil sample GP #16 @ 10' to 62.9 mg/kg for soil sample GP #15 @ 10'.

On December 10, 2009, two (2) soil borings (SB #4 and SB #5) were installed up-gradient of the excavation to evaluate the potential groundwater impact from an up-gradient, off-site source.

Soil boring SB #4 was located approximately two hundred fifty (250) feet to the north northwest of the site and advanced to a total depth of approximately seventy five (75) feet bgs. Soil samples collected at ten (10) feet, twenty (20) feet, thirty (30) feet, forty (40) feet, and fifty (50) feet were submitted to the laboratory for analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample SB #4 @ 50' to 85.3 mg/kg for soil sample SB #4 @ 10'.

Groundwater was encountered at approximately sixty four (64) feet bgs in soil boring SB #4. A temporary casing was installed in the soil boring to allow a "preliminary" groundwater sample to be collected for analysis. On December 22, 2009, a groundwater sample (SB-4 GW) was collected from the temporary casing and submitted to the laboratory for analysis. Following the collection of the groundwater sample, the temporary casing was removed from the soil boring, and the soil boring was plugged with cement and bentonite, as required by the NMOSE. A description of the analytical results of the collected groundwater sample (SB-4 GW) is included in the "Summary of Groundwater Remediation Activities" below.

Soil boring SB #5 was located approximately seven hundred fifteen (715) feet to the north northwest of the site and advanced to a total depth of approximately eighty (80) feet bgs. Soil samples collected at ten (10) feet, twenty (20) feet, thirty (30) feet, forty (40) feet, and forty five (45) feet were submitted to the laboratory for analysis. Laboratory analytical results indicated chloride concentrations ranged from 6.71 mg/kg for soil sample SB #5 @ 45' to 263 mg/kg for soil sample SB #5 @ 20'.

Groundwater was encountered at approximately sixty four (64) feet bgs in soil boring SB #5. A temporary casing was installed in the soil boring to allow a "preliminary" groundwater sample to be collected for analysis. On December 22, 2009, a groundwater sample (SB-5 GW) was collected from the temporary casing and submitted to the laboratory for analysis. Following the collection of the groundwater sample, the temporary casing was removed from the soil boring,

and the soil boring was plugged with cement and bentonite, as required by the NMOSE. A description of the analytical results of the collected groundwater sample (SB-5 GW) is included in the "Summary of Groundwater Remediation Activities" below.

On April 26, 2010, Plains submitted a "Remediation Summary and Proposed Soil Closure Strategy" (Proposal) to a representative of the NMOCD Hobbs District Office requesting remediation action of levels of 10 mg/kg (ppm) for Benzene, 50 mg/kg (ppm) for BTEX, and 5,000 mg/kg (ppm) for TPH, as detailed in Section 2.0, "NMOCD Site Classification", above. The Proposal was approved by the NMOCD representative, and the proposed closure activities commenced.

On April 28 and 29, 2010, Basin transported approximately 1,440 cy of more heavily impacted soil to Sundance Services, Inc. (NMOCD Permit # NM-01003) for disposal.

On June 3, 2010, Basin resumed soil activities at the site. The stockpiled soil was mechanically screened to separate the large rock from the soil. The separated rock was placed in the floor of the excavation and leveled, the soil was placed in 500 cubic yard stockpiles, and soil samples were collected from each stockpile and submitted to the laboratory for analysis.

On August 4, 2010, two (2) five-point composite soil samples (Screened SP #1 and Screened SP #2) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations ranged from 0.173 mg/kg for soil sample Screened SP #1 to 0.0297 mg/kg for soil sample Screened SP #2. BTEX concentrations ranged from 2.4404 mg/kg for soil sample Screened SP #1 to 3.722 mg/kg for soil sample Screened SP #2. TPH concentrations ranged from 4,868 mg/kg for soil sample Screened SP #2 to 5,011 mg/kg for soil sample Screened SP #1. Soil represented by soil samples Screened SP #1 and Screened SP #2 was deemed suitable for use as backfill material.

On August 17, 2010, five (5) five-point composite soil samples (Screened SP #3, Screened SP #4, Screened SP #5, Screened SP #6, and Screened SP #7) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 3.436 mg/kg for soil sample Screened SP #5 to 14.617 mg/kg for soil sample Screened SP #6. TPH concentrations ranged from 3,860 mg/kg for soil sample Screened SP #5 to 7,503 mg/kg for soil sample Screened SP #3. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil sample Screened SP #3 was re-blended on-site. Soil represented by soil samples Screened SP #4, Screened SP #5, Screened SP #6, and Screened SP #7 was deemed suitable for use as backfill material.

On August 30, 2010, three (3) five-point composite soil samples (Screened SP #8, Screened SP #9, and Screened SP #10) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 15.642 mg/kg for soil sample Screened SP #8 to 27.55 mg/kg for soil sample Screened SP #10. TPH concentrations ranged from 2,791 mg/kg for soil sample Screened SP #8 to 4,339 mg/kg for soil sample Screened SP #9. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil samples Screened SP #8, Screened SP #9, and Screened SP #10 was deemed suitable for use as backfill material.

On September 7, 2010, four (4) five-point composite soil samples (Screened SP #3A, Screened SP #11, Screened SP #12, and Screened SP #13) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 0.5841 mg/kg for soil sample Screened SP #3A to 5.451 mg/kg for soil sample Screened SP #13. TPH concentrations ranged from 2,786 mg/kg for soil sample Screened SP #11 to 4,153 mg/kg for soil sample Screened SP #13. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil samples Screened SP #3A, Screened SP #11, Screened SP #12, and Screened SP #13 was deemed suitable for use as backfill material.

On September 10, 2010, three (3) five-point composite soil samples (Screened SP #14, Screened SP #15, and Screened SP #16) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples Screened SP #15 and Screened SP #16 to 0.011 mg/kg for soil sample Screened SP #14. BTEX concentrations ranged from 1.0392 mg/kg for soil sample Screened SP #14 to 6.41 mg/kg for soil sample Screened SP #15. TPH concentrations ranged from 1,955 mg/kg for soil sample Screened SP #16 to 3,507 mg/kg for soil sample Screened SP #14. Soil represented by soil samples Screened SP #14, Screened SP #15, and Screened SP #16 was deemed suitable for use as backfill material.

On September 16, 2010, three (3) five-point composite soil samples (Screened SP #17, Screened SP #18, and Screened SP #19) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 1.6059 mg/kg for soil sample Screened SP #17 to 2.585 mg/kg for soil sample Screened SP #18. TPH concentrations ranged from 3,365 mg/kg for soil sample Screened SP #17 to 4,210 mg/kg for soil sample Screened SP #19. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil samples Screened SP #17, Screened SP #18, and Screened SP #19 was deemed suitable for use as backfill material.

On September 24, 2010, five (5) five-point composite soil samples (Screened SP #20, Screened SP #21, Screened SP #22, Screened SP #23, and Screened SP #24) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 1.077 mg/kg for soil sample Screened SP #21 to 1.6917 mg/kg for soil sample Screened SP #24. TPH concentrations ranged from 542 mg/kg for soil sample Screened SP #21 to 3,488 mg/kg for soil sample Screened SP #24. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil samples Screened SP #20, Screened SP #21, Screened SP #22, Screened SP #23, and Screened SP #24 was deemed suitable for use as backfill material.

On September 30, 2010, four (4) five-point composite soil samples (Screened SP #25, Screened SP #26, Screened SP #27, and Screened SP #28) were collected from the stockpiled material and submitted to the laboratory for analysis. The laboratory analytical results indicated BTEX concentrations ranged from 0.111 mg/kg for soil sample Screened SP #28 to 0.3357 mg/kg for soil sample Screened SP #25. TPH concentrations ranged from 1,204 mg/kg for soil sample Screened SP #28 to 2,007 mg/kg for soil sample Screened SP #27. Benzene concentrations were less than the appropriate laboratory MDL for all samples submitted. Soil represented by soil samples Screened SP #25, Screened SP #26, Screened SP #27, and Screened SP #28 was deemed suitable for use as backfill material.

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

3.2 Soil Closure Request

Plains has completed the soil closure activities detailed in the “Remediation Summary and Proposed Soil Closure Strategy”, dated May 2010. Soil samples collected from the floors and sidewalls of the Main and West excavations were analyzed by an NMOCD-approved laboratory, and concentrations of Benzene, BTEX, and TPH were below the remediation action levels set forth in that document. Representative stockpile soil samples were also collected, analyzed by an NMOCD-approved laboratory, and deemed suitable for backfill material, as documented in this report.

It is Basin’s opinion that soil remediation activities are complete and that Plains should request soil closure status for the 14-Inch Vac to Jal Legacy release site.

4.0 DISTRIBUTION OF CONTAMINANTS IN THE SATURATED ZONE

4.1 Summary of Groundwater Remediation Activities

On July 2, 2009, groundwater samples were collected from the temporary casing installed in soil borings SB-2 and SB-3 and submitted to the laboratory for analysis. The analytical results of groundwater collected from SB-2 indicated a benzene concentration of 0.0063 mg/L, a toluene concentration of 0.0158 mg/L, an ethyl-benzene concentration of 0.0054 mg/L, and a total xylene concentration of 0.0107 mg/L. The results further indicated a chloride concentration of 10,200 mg/L and a TDS concentration of 19,700 mg/L.

The analytical results of groundwater collected from SB-3 indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. The results further indicated a chloride concentration of 10,500 mg/L and a TDS concentration of 20,500 mg/L. Laboratory analytical results indicated benzene and BTEX concentrations were less than NMOCD regulatory standards for SB-2 and SB-3. Laboratory analytical results exceeded NMOCD regulatory standards for concentrations of chlorides and TDS in SB-1 and SB-2. Table 2 summarizes the “Concentrations of Benzene, BTEX, Chlorides & Total Dissolved Solids in Groundwater”.

On December 22, 2009, groundwater samples were collected from the temporary casing installed in soil boring SB-4 and SB-5. Analytical results of groundwater collected from SB-4 indicated a chloride concentration of 8,580 mg/L and a TDS concentration of 15,700 mg/L. The analytical results of groundwater collected from SB-5 indicated a chloride concentration of 9,920 mg/L and a TDS concentration of 18,200 mg/L. Laboratory analytical results indicated concentrations of chlorides and TDS exceeded NMOCD regulatory standards in the two (2) up-gradient soil borings.

The site monitor well (MW-1) was gauged, purged, and sampled on July 6, 2009, October 21, 2009, March 11, 2010, June 4, 2010, September 29, 2010, and November 5, 2010. The monitor well was gauged and purged of a minimum of three (3) well volumes of water or until the well was dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge,

and samples were obtained using disposable Teflon bailers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a trailer-mounted polystyrene tank and disposed of at an approved disposal in Monument, New Mexico.

The analytical results of the July 6, 2009, groundwater sampling event indicated all BTEX constituent concentrations were less than the appropriate laboratory MDL. The analytical results indicated a chloride concentration of 5,300 mg/L and a TDS concentration of 14,300 mg/L. Laboratory analytical results indicated benzene and BTEX concentrations were less than NMOCD regulatory standards. Analytical results indicated concentrations of chlorides and TDS exceeded NMOCD regulatory standards.

The analytical results of the October 21, 2009, groundwater sampling event indicated a benzene concentration of 0.0125 mg/L and a toluene concentration of 0.0049 mg/L. Ethyl-benzene and total xylene concentrations were less than the appropriate laboratory MDL. Laboratory analytical results indicated benzene concentrations exceeded NMOCD regulatory standards. Analytical results indicated concentrations of ethyl-benzene, total xylenes, and toluene was less than NMOCD regulatory standards.

The analytical results of the March 11, 2010, groundwater sampling event indicated a benzene concentration of 0.072 mg/L, a toluene concentration of 0.0243 mg/L, an ethyl-benzene concentration of 0.002 mg/L, and a total xylene concentration of 0.0017 mg/L. Laboratory analytical results indicated benzene concentrations exceeded NMOCD regulatory standards. Analytical results indicated concentrations of toluene, ethyl-benzene, and total xylenes were less than NMOCD regulatory standards.

The analytical results of the June 4, 2010, groundwater sampling event indicated a benzene concentration of 0.1407 mg/L, a toluene concentration of 0.0637 mg/L, an ethyl-benzene concentration of 0.0047 mg/L, and a total xylene concentration of 0.0067 mg/L. Laboratory analytical results indicated benzene concentrations exceeded NMOCD regulatory standards. Analytical results indicated concentrations of toluene, ethyl-benzene, and total xylenes were less than NMOCD regulatory standards.

The analytical results of the September 29, 2010, groundwater sampling event indicated a benzene concentration of 0.0514 mg/L, a toluene concentration of 0.0278 mg/L, an ethyl-benzene concentration of 0.0022 mg/L, and a total xylene concentration of 0.0047 mg/L. Laboratory analytical results indicated benzene concentrations exceeded NMOCD regulatory standards. Analytical results indicated concentrations of toluene, ethyl-benzene, and total xylenes were less than NMOCD regulatory standards.

The analytical results of the November 5, 2010, groundwater sampling event indicated a benzene concentration of 0.2795 mg/L, a toluene concentration of 0.1807 mg/L, an ethyl-benzene concentration of 0.0126 mg/L, and a total xylene concentration of 0.0049 mg/L. Laboratory analytical results indicated benzene concentrations exceeded NMOCD regulatory standards. Analytical results indicated concentrations of toluene, ethyl-benzene, and total xylenes were less than NMOCD regulatory standards.

4.2 Groundwater Closure Request

Plains installed one (1) monitor well (MW-1) and four (4) soil borings (SB-2 through SB-5) at the site to evaluate the status of the underlying groundwater. Monitor well MW-1 was located in the southern portion of the excavation. Laboratory analytical data indicated chloride and TDS concentrations exceeded NMOCD regulatory standards.

Soil boring SB-2 was located in the northwest portion of the excavation. Temporary casing was installed in the soil boring, and a groundwater sample was collected. Laboratory analytical results indicated chloride and TDS concentrations exceeded NMOCD regulatory standards.

Soil boring SB-3 was located to the north of the release point adjacent to the Plains pipeline. Temporary casing was installed in the soil boring, and a groundwater sample was collected. Laboratory analytical results indicated chloride and TDS concentrations exceeded NMOCD regulatory standards.

Soil boring SB-4 was located approximately two hundred fifty (250) feet north northwest of the site. Temporary casing was installed in the soil boring, and a groundwater sample was collected. Laboratory analytical results indicated chloride and TDS concentrations exceeded NMOCD regulatory standards.

Soil boring SB-5 was located approximately seven hundred fifteen (715) feet north northwest of the site. Temporary casing was installed in the soil boring, and a groundwater sample was collected. Laboratory analytical results indicated chloride and TDS concentrations exceeded NMOCD regulatory standards.

Given that 1.) elevated chloride and TDS concentrations exist in groundwater samples collected up-gradient from the release point, 2.) elevated chloride concentrations are absent in the soil column at the release point, and 3.) Plains lines transmit strictly crude oil, there is a strong probability that the groundwater contamination may be attributed to either an off-site source or naturally occurring concentrations of these contaminants. Upon further investigation, it was discovered that the 14-Inch Vac to Jal release site is located approximately 1,147 feet to the south-southeast of a documented groundwater remediation site (Arco South Justis Unit F-230). The ARCO Permian Monitor Well Report dated January 2, 2001, showed chloride concentrations exceeding NMOCD regulatory standards and a general groundwater gradient to the southeast.

Laboratory analytical results indicated TDS concentrations in groundwater samples collected from monitor well MW-1 and soil borings SB-2 through SB-5 exceeded 10,000 mg/L. Pursuant to New Mexico Administrative Code (NMAC) Section 20.6.2.4103, the groundwater is non-abatable based on pre-existing conditions, remediation of the groundwater at the 14" Vac to Jal release site is not warranted.

Basin further recommends that Plains request approval to cease groundwater monitoring at the 14" Vac to Jal release site and plug and abandon MW-1. The monitor well will be plugged and abandoned according to NMOSE guidelines by a state-certified water well drilling company. Plains will provide the NMOCD with plugging reports documenting the plugging procedures.

5.0 QA/QC PROCEDURES

5.1 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

5.2 Groundwater Sampling

The groundwater monitor wells were developed utilizing the Environmental Protection Agency (EPA) protocol of nine (9) well volumes of groundwater or until the monitoring wells are dry using an electrical Grundfos Pump. Within forty-eight hours of development and during subsequent quarterly groundwater sampling events, the monitor wells were measured and purged of approximately three (3) well volumes utilizing an electrical Grundfos Pump. Groundwater samples were collected using a disposable Teflon sampler, stored in clean, glass containers provided by the laboratory, and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at a NMOCD-approved disposal facility.

Groundwater samples were delivered to Xenco Laboratories, Inc., of Odessa, Texas, for analysis of BTEX, Chloride, and/or TDS concentrations using the methods described below. All samples were analyzed within approved holding times following the collection date.

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- Chloride concentrations in accordance with EPA Method 300
- TDS in accordance with Method SM2540C

5.3 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.

5.4 Laboratory Protocol

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

6.0 SITE CLOSURE REQUEST

Basin recommends that Plains request site closure status for the 14-Inch Vac to Jal Legacy release site. The activities conducted at the site met the objectives set forth in the “Remediation Summary and Proposed Soil Closure Strategy”. It is recommended that Plains not conduct any further remediation activities at the site.

7.0 LIMITATIONS

Basin Environmental Service Technologies, 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.

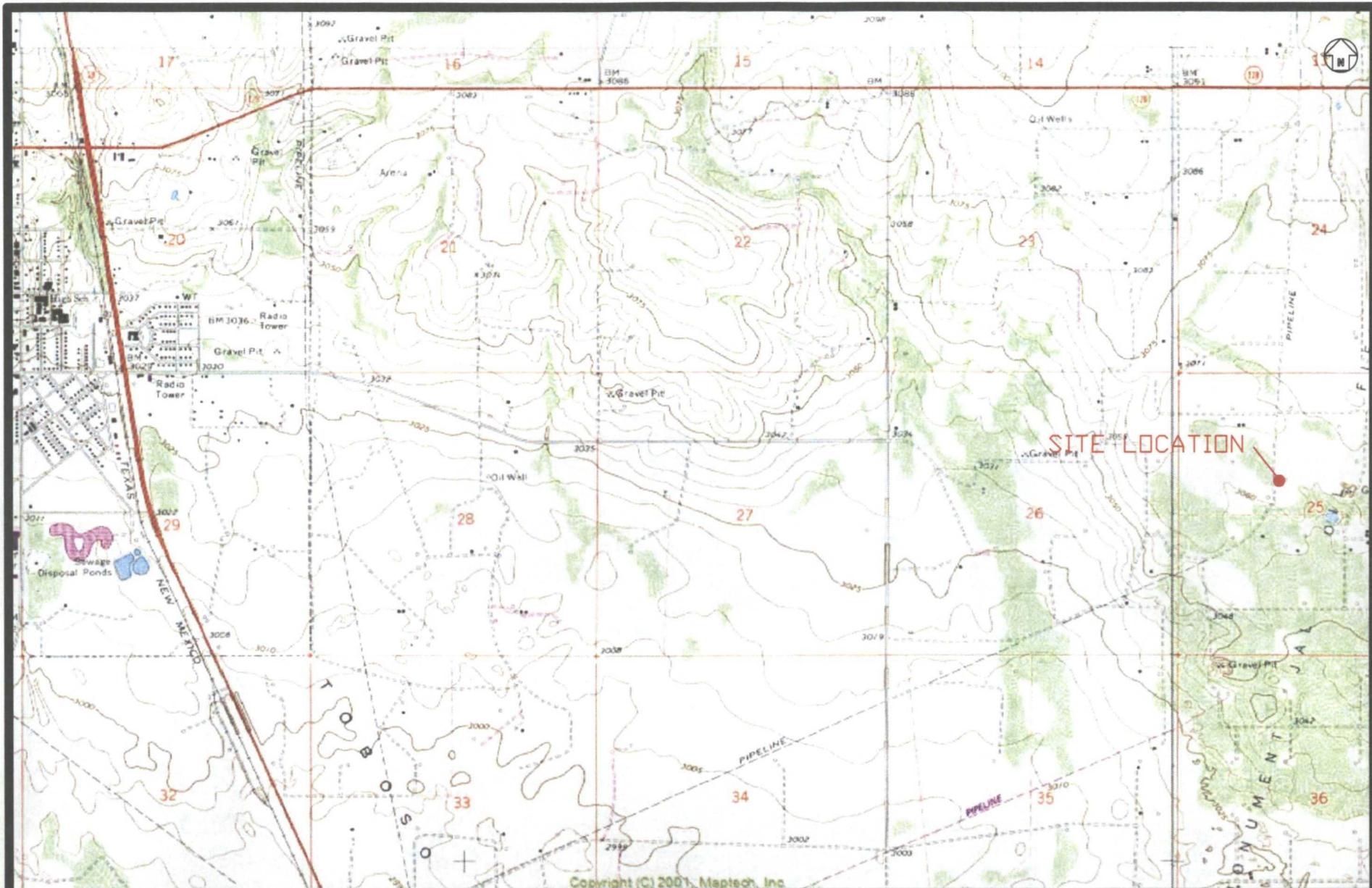
Basin Environmental Service Technologies, LLC, has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin Environmental Service Technologies, LLC, has not conducted an independent examination of the facts contained in referenced materials 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 Service Technologies, LLC, has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Service Technologies, 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, LP. 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 Service Technologies, LLC, and/or Plains Pipeline, LP.

8.0 DISTRIBUTION:

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Figures



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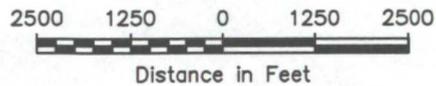
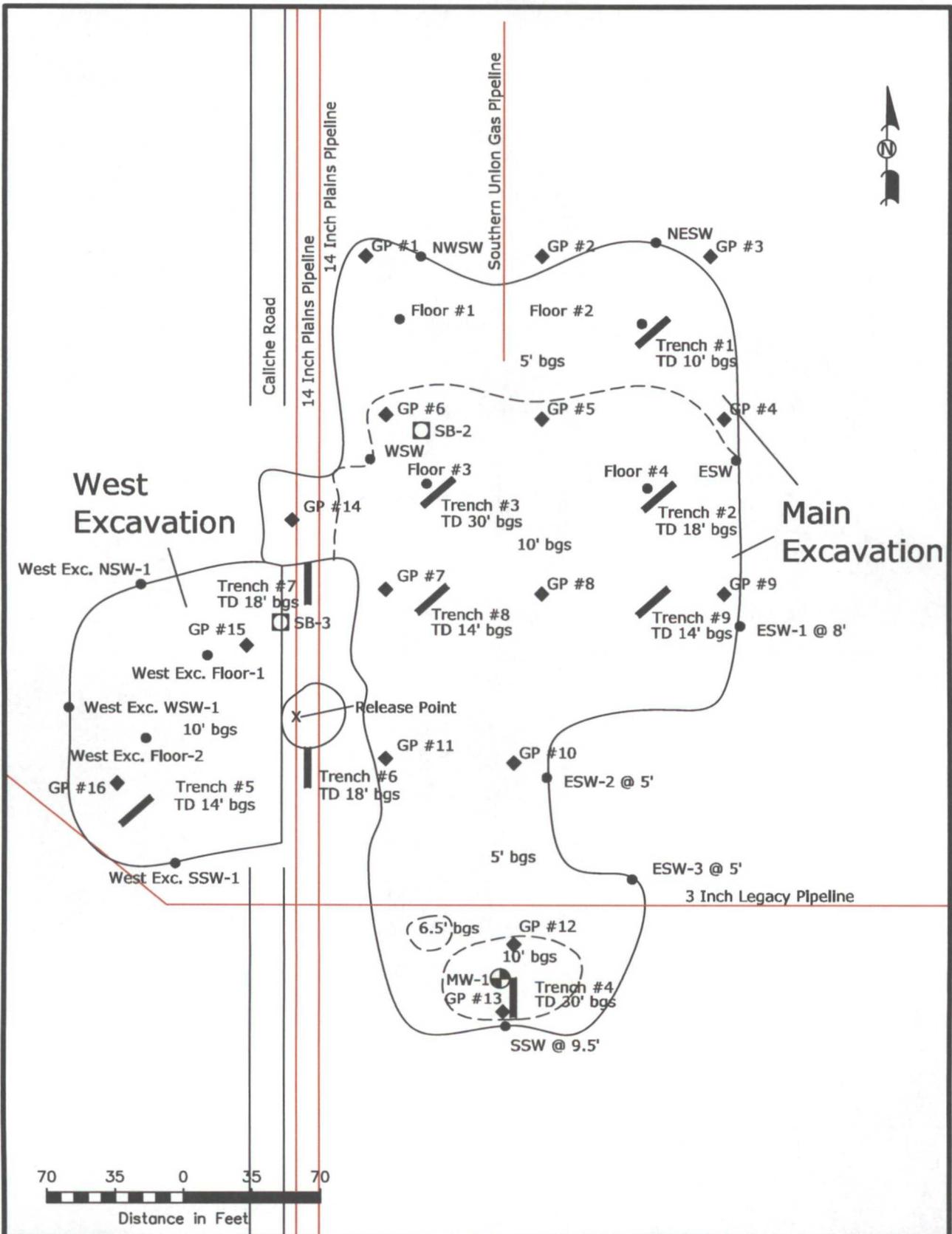


Figure 1
 Site Location Map
 Plains Pipeline, L.P.
 14-Inch Vac to Jal - Legacy
 Lea County, New Mexico
 SRS# 2009-092
 NMOCD Ref 1RP-2162

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
May 12, 2010	Scale 1"=2,500'



LEGEND:

- Soil Sample Location
- Pipeline
- - - Excavation Extent
- ⊕ Monitor Well Location
- Soil Boring Location

Figure 2

Site and Sample Location Map
 Plains Pipeline, L.P.
 14-Inch Vac to Jal - Legacy
 Lea County, NM
 SRS # 2009-092
 1RP-2162

Basin Environmental Consulting

Scale: 1" = 70'	Drawn By: CDS	Prepared By: CDS
November 11, 2009		

Tables

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
 14" VAC TO JAL - LEGACY
 LEA COUNTY, NEW MEXICO
 SRS: 2009-092
 NMOCD REFERENCE NO: 1RP-2162

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C ₉ -C ₃₅ (mg/Kg)	E 300 CHLORIDE (mg/Kg)
					BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₉ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)		
Chloride Baseline	N/A	4/15/2009	4/17/2009	N/A	-	-	-	-	-	-	-	-	-	-	796
Stockpile #1	N/A	5/18/2009	5/27/2009	N/A	3.549	88.56	63.06	88.09	32.31	275.569	3,990	4,890	<333	8,880	-
Stockpile #2	N/A	5/18/2009	5/27/2009	N/A	23.2	233	111	165.8	12.4	545.4	8,260	9,340	669	18,269	-
Main Exc. NWSW	4.5 Feet	5/18/2009	5/27/2009	In-Situ	0.0073	0.0354	0.0158	0.0249	0.009	0.0924	18	18.1	<15.4	36.1	-
Main Exc. NESW	4.5 Feet	5/18/2009	5/27/2009	In-Situ	0.0013	<0.0022	<0.0011	<0.0022	<0.0011	0.0013	<16.4	43.3	<16.4	43.3	-
Main Exc. WSW	9 Feet	5/18/2009	5/27/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	-
Main Exc. ESW	8 Feet	5/18/2009	5/27/2009	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	21.3	<15.4	21.3	-
Main Exc. Floor #1	5 Feet	5/18/2009	5/27/2009	In-Situ	0.0013	0.0033	<0.0010	<0.0021	<0.0010	0.0046	<15.4	19.8	<15.4	19.8	-
Main Exc. Floor #2	5 Feet	5/18/2009	5/27/2009	In-Situ	<2.397	26.82	41.51	71.76	27.42	167.51	4,460	7,640	<359	12,100	-
Main Exc. Floor #3	10 Feet	5/18/2009	5/27/2009	In-Situ	0.0022	0.0071	0.0013	<0.0020	<0.0010	0.0106	50.9	1,460	95.4	1,606.3	-
Main Exc. Floor #4	10 Feet	5/18/2009	5/27/2009	In-Situ	9.459	106.7	84.72	123	47.24	371.119	4,970	7,740	523	13,233	-
T-1 @ 10' bgs	10 Feet	5/26/2009	5/31/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	-
T-2 @ 12' bgs	12 Feet	5/26/2009	5/31/2009	In-Situ	34.76	323.9	189.7	285	96.74	930.1	10,300	16,500	1,440	28,240	-
T-2 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	18.84	223.7	136.1	206	70.99	655.63	7,000	10,500	1,050	18,550	-
T-2 @ 18' bgs	18 Feet	5/26/2009	5/31/2009	In-Situ	0.0023	0.0088	0.0069	0.0121	0.0052	0.0353	22.3	109	<17.3	131.3	-
T-3 @ 12' bgs	12 Feet	5/26/2009	5/31/2009	In-Situ	4.046	55.43	43.23	66.87	23.7	193.276	3,550	6,450	725	10,725	-
T-3 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	4.059	74.4	58.59	87.36	31.03	255.439	3,980	7,300	785	12,065	-
T-3 @ 18' bgs	18 Feet	5/26/2009	5/31/2009	In-Situ	11.28	83.91	48.65	73.01	24.87	241.72	5,930	11,100	1,080	18,110	-
T-3 @ 22' bgs	22 Feet	5/26/2009	5/31/2009	In-Situ	0.007	0.025	0.0085	0.011	0.0053	0.0568	<18.5	59	<18.5	59	-
T-3 @ 26' bgs	26 Feet	5/26/2009	5/31/2009	In-Situ	<0.1194	0.6279	1.565	4.657	2.401	9.2509	289	910	81.9	1,280.9	-
T-3 @ 30' bgs	30 Feet	5/26/2009	5/31/2009	In-Situ	<1.073	2.587	3.671	6.086	2.512	14.856	420	1,400	118	1,938	-
T-4 @ 12' bgs	12 Feet	5/26/2009	5/31/2009	In-Situ	48.18	400.1	211.1	327.2	111	1097.58	13,200	22,300	2,050	37,550	-
T-4 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	8.783	102	63.4	96	33.74	303.923	3,100	4,600	524	8,224	-
T-4 @ 18' bgs	18 Feet	5/26/2009	5/31/2009	In-Situ	29.02	277.2	142.5	215.4	73.52	737.64	9,680	14,200	1,340	25,220	-
T-4 @ 22' bgs	22 Feet	5/26/2009	5/31/2009	In-Situ	20.63	163.3	80.59	111.1	39.38	415	8,240	13,700	1,130	23,070	-
T-4 @ 26' bgs	26 Feet	5/26/2009	5/31/2009	In-Situ	31.62	213.1	111	158.5	55.5	569.72	5,040	7,900	853	13,793	-
T-4 @ 30' bgs	30 Feet	5/26/2009	5/31/2009	In-Situ	23.12	250.2	143	214.8	74.02	705.14	7,750	11,000	1,290	20,040	-
T-5 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	0.0078	0.0041	<0.0012	<0.0025	<0.0012	0.0119	<18.6	32	<18.6	32	-
T-6 @ 10' bgs	10 Feet	5/26/2009	5/31/2009	In-Situ	1.999	20.67	21.2	32.8	12.43	89.099	1,080	2,620	296	3,996	-
T-6 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	0.0013	0.0053	0.0015	<0.0025	<0.0013	0.0081	<18.9	28.3	<18.9	28.3	-
T-6 @ 18' bgs	18 Feet	5/26/2009	5/31/2009	In-Situ	<0.0012	0.0042	0.0018	<0.0024	<0.0012	0.006	<18.3	66.6	<18.3	66.6	-
T-7 @ 10' bgs	10 Feet	5/26/2009	5/31/2009	In-Situ	9.257	56.21	35.25	54.67	19.97	175.357	3,460	5,480	900	9,840	-
T-7 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	5.998	62.42	46.94	71.87	25.59	212.818	3,170	5,270	799	9,239	-
T-7 @ 18' bgs	18 Feet	5/26/2009	5/31/2009	In-Situ	<1.2	33.32	37.7	59.77	22.55	153.34	3,190	5,010	861	9,061	-
T-8 @ 10' bgs	10 Feet	5/26/2009	5/31/2009	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	47.4	44.3	91.7	-
T-8 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	-
T-9 @ 10' bgs	10 Feet	5/26/2009	5/31/2009	In-Situ	0.0072	0.3247	0.2975	0.4625	0.247	1.3389	383	3,720	648	4,751	-
T-9 @ 14' bgs	14 Feet	5/26/2009	5/31/2009	In-Situ	0.0062	<0.0023	0.0018	0.0097	0.0072	0.0249	<17.6	69.7	36.3	106	-
Main Exc. ESW-1 @ 8' bgs	8 Feet	5/28/2009	6/1/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	38.8	<16.8	38.8	-
Main Exc. ESW-2 @ 5' bgs	5 Feet	5/28/2009	6/1/2009	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0	-

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
14" VAC TO JAL - LEGACY
LEA COUNTY, NEW MEXICO
SRS: 2009-092
NMOCD REFERENCE NO: 1RP-2162

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C ₉ -C ₃₅ (mg/Kg)	E 300 CHLORIDE (mg/Kg)
					BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (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)		
Main Exc. ESW-3 @ 3' bgs	3 Feet	5/28/2009	6/1/2009	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	59.9	26.3	86.2	-
Main Exc. SSW @ 9.5' bgs	9.5 Feet	5/28/2009	6/1/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	-
SB-1 / MW-1 @ 5'	15 feet	7/1/2009	7/10/2009	In-Situ	1.447	13.56	10.15	14.23	6.562	45.949	731	2,310	<183	3,041	53.4
SB-1 / MW-1 @ 15'	25 Feet	7/1/2009	7/10/2009	In-Situ	1.197	12.27	8.475	12.21	5.658	39.81	551	1,980	126	2,657	23
SB-1 / MW-1 @ 25'	35 Feet	7/1/2009	7/10/2009	In-Situ	0.5279	18.58	18.72	29.75	11.92	79.4979	1,950	7,270	435	9,655	10.3
SB-1 / MW-1 @ 35'	45 Feet	7/1/2009	7/10/2009	In-Situ	0.556	10.74	17.45	30.49	11.55	70.7856	66.8	827	51.6	945.4	12.5
SB-1 / MW-1 @ 45'	55 Feet	7/1/2009	7/10/2009	In-Situ	<0.0010	0.0127	0.0642	0.1268	0.0578	0.2615	98	1,060	70.7	1,229.1	22.1
SB-1 / MW-1 @ 50'	60 Feet	7/1/2009	7/10/2009	In-Situ	<0.0010	<0.0021	<0.0010	0.0025	<0.0010	0.0025	336	2,910	195	3,441	19.6
SB-1 / MW-1 @ 55'	65 Feet	7/1/2009	7/10/2009	In-Situ	<0.0011	<0.0021	0.0068	0.0094	0.0083	0.0245	25.8	392	27.6	445	179
SB-2 @ 5'	15 Feet	7/1/2009	7/14/2009	In-Situ	<0.0279	2.41	7.296	11.59	5.095	26.391	904	3,610	141	4,655	47.7
SB-2 @ 15'	25 Feet	7/1/2009	7/13/2009	In-Situ	0.2671	4.984	2.384	9.315	3.829	20.7791	555	2,210	107	2,872	34
SB-2 @ 25'	35 Feet	7/1/2009	7/12/2009	In-Situ	<0.0011	<0.0023	0.0019	0.0058	0.0032	0.0109	21.1	196	<16.9	217.1	32.3
SB-2 @ 35'	45 Feet	7/1/2009	7/10/2009	In-Situ	<0.0010	<0.0021	0.0032	0.0078	0.0035	0.0145	<15.4	57.8	<15.4	57.8	<5.15
SB-2 @ 45'	55 Feet	7/1/2009	7/13/2009	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	27.2	261	20.2	308.4	51.2
SB-2 @ 50'	60 Feet	7/1/2009	7/12/2009	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	19.6	105	<16.0	124.6	47.1
SB-2 @ 55'	65 Feet	7/1/2009	7/12/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	16.8	86.8	<16.8	103.6	952
SB-3 @ 5'	5 Feet	7/2/2009	7/13/2009	In-Situ	0.0644	1.411	1.604	2.708	0.9809	6.7683	1,550	4,450	226	6,226	152
SB-3 @ 15'	15 Feet	7/2/2009	7/14/2009	In-Situ	<0.0272	0.6387	2.621	4.548	1.919	9.7267	477	2,660	155	3,292	73
SB-3 @ 25'	25 Feet	7/2/2009	7/14/2009	In-Situ	<0.5530	2.969	4.529	7.355	2.875	17.728	887	4,560	268	5,715	54.4
SB-3 @ 35'	35 Feet	7/2/2009	7/10/2009	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0010	<15.6	103	<15.6	103	24.8
SB-3 @ 45'	45 Feet	7/2/2009	7/10/2009	In-Situ	<0.0010	<0.0021	0.0023	0.0054	0.0028	0.0105	17.3	113	18	148.3	17.2
SB-3 @ 50'	50 Feet	7/2/2009	7/10/2009	In-Situ	<0.0010	<0.0020	0.0015	0.0035	0.0018	0.0068	<15.3	72.2	<15.3	72.2	8.94
SB-3 @ 55'	55 Feet	7/2/2009	7/10/2009	In-Situ	<0.0010	0.0035	0.0142	0.0305	0.0137	0.0619	23.3	159	18.2	200.5	24.1
SB-3 @ 60'	60 Feet	7/2/2009	7/10/2009	In-Situ	<0.0010	<0.0021	0.0038	0.0087	0.0041	0.0166	23.7	126	18.5	168.2	46.1
Treatment Cell #1	Backfill	9/24/2009	9/30/2009	In-Situ	1.539	31.4	30.15	51.23	21.99	136.31	2,560.0	8,530	220.0	11,310.0	-
West Exc NSW-1	8 Feet	9/30/2009	10/3/2009	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	-
West Exc WSW-1	8 Feet	9/30/2009	10/3/2009	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0022	<18.3	<18.3	<18.3	<18.3	-
West Exc SSW-1	8 Feet	9/30/2009	10/3/2009	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.2	20.7	<17.2	20.7	-
West Exc Floor-1	10 Feet	9/30/2009	10/3/2009	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.6	<17.6	<17.6	<17.6	-
West Exc Floor-2	10 Feet	9/30/2009	10/3/2009	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	-
GP #1 @ 6'	6 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<16.1	31.4	<16.1	31.4	119
GP #2 @ Grade	Surface	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	31.1	522	134	687.1	11.6
GP #3 @ Grade	Surface	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<15.5	263	74.8	337.8	3,510
GP #4 @ 5'	5 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<16.3	19.7	<16.3	19.7	772
GP #5 @ 7'	7 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<15.7	62.1	<15.7	62.1	142
GP #6 @ 9'	9 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	216	4,190	290	4,696	<5.22
GP #7 @ 9'	9 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<16.2	40.6	<16.2	40.6	71.5

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
14" VAC TO JAL - LEGACY
LEA COUNTY, NEW MEXICO
SRS: 2009-092
NMOCD REFERENCE NO: 1RP-2162

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C ₆ -C ₃₅ (mg/Kg)	E 300 CHLORIDE (mg/Kg)
					BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (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)		
GP #8 @ 9'	9 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<16.5	<16.5	<16.5	<16.5	378
GP #9 @ 10'	10 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	36.4	286	16.2	338.6	6.72
GP #10 @ 7'	7 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<15.9	23.2	<15.9	23.2	16.6
GP #11 @ 7'	7 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<15.4	170	18.6	188.6	21.3
GP #12 @ 10'	10 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	688	3,670	227	4,585	<5.17
GP #13 @ 10'	10 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<17.1	51.9	<17.1	51.9	219
GP #14 @ 12'	12 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	212	2,920	199	3,331	9.32
GP #15 @ 10'	10 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<16.2	69.7	<16.2	69.7	62.9
GP #16 @ 10'	10 Feet	11/10/2009	11/10/2009	In-Situ	-	-	-	-	-	-	<18.8	<18.8	<18.8	<18.8	9.57
SB #4 @ 10'	10 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	85.3
SB #4 @ 20'	20 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	26.8
SB #4 @ 30'	30 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	61.8
SB #4 @ 40'	40 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	26.5
SB #4 @ 50'	50 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	<5.02
SB #5 @ 10'	10 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	117
SB #5 @ 20'	20 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	263
SB #5 @ 30'	30 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	55.5
SB #5 @ 40'	40 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	6.71
SB #5 @ 45'	45 Feet	12/10/2009	12/15/2009	In-Situ	-	-	-	-	-	-	-	-	-	-	183
Screened SP # 1	N/A	8/4/2010	8/16/2010	In-Situ	0.0173	0.1184	0.3405	1.206	0.7582	2.4404	1260	3550	201	5,011	
Screened SP # 2	N/A	8/4/2010	8/16/2010	In-Situ	0.0297	0.158	0.3963	1.354	1.784	3.722	1320	3400	148	4,868	
Screened SP #3	N/A	8/17/2010	8/27/2010	In-Situ	-	-	-	-	-	-	643	5810	1050	7,503	
Screened SP #4	N/A	8/17/2010	8/27/2010	In-Situ	<0.1077	<0.2155	0.46	1.673	1.405	3.538	1120	2840	160	4,120	
Screened SP #5	N/A	8/17/2010	8/27/2010	In-Situ	<0.0217	0.0814	0.3981	1.443	1.513	3.436	1190	2480	190	3,860	
Screened SP #6	N/A	8/17/2010	8/27/2010	In-Situ	<0.108	0.2311	0.9537	6.488	6.944	14.617	1490	2510	195	4,195	
Screened SP #7	N/A	8/17/2010	8/27/2010	In-Situ	<0.1094	<0.2187	0.6792	4.426	4.88	9.985	1290	2510	145	3,945	
Screened SP #8	N/A	8/30/2010	9/9/2010	In-Situ	<0.1105	0.2828	1.507	6.676	7.176	15.642	981	1730	80.4	2,791	
Screened SP #9	N/A	8/30/2010	9/9/2010	In-Situ	<0.1130	0.4158	1.037	11.78	8.956	22.19	1690	2520	129	4,339	
Screened SP #10	N/A	8/30/2010	9/9/2010	In-Situ	<0.1104	0.5621	1.339	15.25	10.4	27.55	1420	2210	73.7	3,704	
Screened SP #3A	N/A	9/7/2010	9/15/2010	In-Situ	<0.0213	0.0552	0.1002	0.2966	0.1321	0.5841	680	2470	199	3,349	
Screened SP #11	N/A	9/7/2010	9/15/2010	In-Situ	<0.0535	0.2656	0.3266	0.4519	0.2816	1.3257	592	2060	134	2,786	
Screened SP # 12	N/A	9/7/2010	9/15/2010	In-Situ	<0.0528	<0.1056	0.3476	1.258	1.855	3.461	764	2750	140	3,654	
Screened SP #13	N/A	9/7/2010	9/15/2010	In-Situ	<0.0541	0.2092	0.127	3.177	1.938	5.451	1270	2710	173	4,153	
Screened SP # 14	N/A	9/10/2010	9/16/2010	In-Situ	0.0011	0.0314	0.0149	0.5307	0.4611	1.0392	901	2540	66.4	3,507	
Screened SP # 15	N/A	9/10/2010	9/16/2010	In-Situ	<0.0265	0.14	0.7463	2.849	2.675	6.41	645	1930	81.6	2,657	
Screened SP #16	N/A	9/10/2010	9/16/2010	In-Situ	<0.0265	0.0672	0.4311	1.377	1.203	3.078	408	1510	36.8	1,955	

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

PLAINS PIPELINE, L.P.
 14" VAC TO JAL - LEGACY
 LEA COUNTY, NEW MEXICO
 SRS: 2009-092
 NMOCD REFERENCE NO: 1RP-2162

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C ₉ -C ₃₅ (mg/Kg)	E 300 CHLORIDE (mg/Kg)
					BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (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)		
Screened SP # 17	N/A	9/16/2010	9/25/2010	In-Situ	<0.0214	<0.0427	0.1657	0.7331	0.7071	1.6059	488	2780	97.3	3,365	
Screened SP # 18	N/A	9/16/2010	9/25/2010	In-Situ	<0.0213	0.0451	0.2326	1.208	1.099	2.585	538	3070	99.2	3,707	
Screened SP # 19	N/A	9/16/2010	9/25/2010	In-Situ	<0.0211	0.0433	0.1387	1.033	0.8556	2.071	501	3570	139	4,210	
Screened SP # 20	N/A	9/24/2010	10/1/2010	In-Situ	<0.0217	0.0572	0.1376	0.5285	0.274	0.9973	350	1130	56.1	1,536	
Screened SP # 21	N/A	9/24/2010	10/1/2010	In-Situ	<0.0221	<0.0441	<0.0221	0.0755	0.0322	0.1077	132	390	19.7	542	
Screened SP # 22	N/A	9/24/2010	10/1/2010	In-Situ	<0.0213	<0.0425	0.0423	0.2	0.1756	0.4179	436	1930	85.1	2,451	
Screened SP # 23	N/A	9/24/2010	10/1/2010	In-Situ	<0.0217	<0.0433	<0.0217	0.0925	0.0518	0.1443	161	640	39.2	840	
Screened SP # 24	N/A	9/24/2010	10/1/2010	In-Situ	<0.0213	<0.0427	0.1157	0.8306	0.7454	1.6917	850	2480	158	3,488	
Screened SP # 25	N/A	9/30/2010	10/9/2010	In-Situ	<0.0539	<0.1078	0.0652	0.1956	0.0749	0.3357	132	1280	35	1,447	
Screened SP # 26	N/A	9/30/2010	10/9/2010	In-Situ	<0.0542	<0.1083	<0.0542	0.1365	<0.0542	0.1365	104	1200	26.3	1,330	
Screened SP # 27	N/A	10/1/2010	10/9/2010	In-Situ	<0.0533	<0.1066	<0.0533	0.1493	0.0576	0.2069	156	1820	31.4	2,007	
Screened SP # 28	N/A	10/1/2010	10/9/2010	In-Situ	<0.0534	<0.1068	<0.0534	0.1111	<0.0534	0.1111	96.4	1080	27.4	1,204	

TABLE 3

GROUNDWATER ELEVATION DATA

**PLAINS PIPELINE, L.P.
14" VAC TO JAL LEGACY
LEA COUNTY, NEW MEXICO
PLAINS SRS NO: 2009-092
NMOCD REFERENCE NO: 1RP-2162**

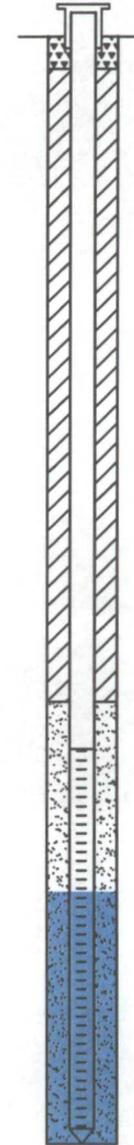
WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 1	7/6/2009	3,497.90	-	55.38	0.00	3,442.52
MW - 1	10/21/2009	3,497.90	-	55.42	0.00	3,442.48
MW - 1	3/11/2010	3,497.90	-	50.57	0.00	3,447.33
MW - 1	6/4/2010	3,497.90	-	55.54	0.00	3,442.36
MW - 1	9/23/2010	3,497.90	-	50.66	0.00	3,447.24
MW - 1	11/5/2010	3,502.90	-	60.54	0.00	3,442.36

Appendices

Appendix A
Soil Boring & Monitor Well Logs

Soil Boring SB-1 / Monitor Well MW-1

Depth Below Ground Surface	Drilling Depth	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	0			Moderate	Slight	0 - 5' - Caliche, tan, damp
15	5		676	Heavy	Slight	
20	10		1305	Heavy	Slight	5 - 15' - Caliche, tan, soft, dry with sand
25	15		1634			
30	20		1355	Moderate	None	15 - 20' - Sand, brown, very fine grained with sandstone fragments
35	25		1904	Moderate	None	20 - 30' - Sand, brown to red, clayey
40	30		196	Moderate	None	
45	35		224	Moderate	None	30 - 40' - Gravel (Chert), tan to brown, dry
50	40		441	Slight	None	
55	45		169	Slight	None	30 - 40' - Sand, brown, very fine grained with gravel (chert)
60	50		836	Slight	None	
65	55		123	None	None	
70	60		92	None	None	50 - 70' - Sand, red to brown, very fine grained, damp
75	65					
80	70					



Date Drilled July 1, 2009
 Thickness of Bentonite Seal 42 Ft
 Depth of Exploratory Boring 70 Ft
 Depth to Groundwater Approximately 64 Ft bgs
 Ground Water Elevation _____

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

Grout Surface Seal
 Bentonite Pellet Seal
 Sand Pack
 Screen

Completion Notes

- 1.) The monitor well was advanced on date using air rotary drilling techniques.
- 2.) The well was constructed with 4" ID, 0.010 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- 3.) The well is protected with a locked stick up steel cover and compression cap.
- 4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring Details
 SB-1
 Monitor Well Details
 MW-1

14-Inch Vac to Jal - Legacy
 Lea County, New Mexico
 Plains Pipeline, L.P.

Basin Environmental Consulting

Prep By: CDS
 August 4, 2009
 Checked By: CDS

Soil Boring SB-2

Depth Below Ground Surface	Drilling Depth	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	0			Heavy	Moderate	0 - 10' - Caliche, tan, soft, dry
5	5		(1308)	Heavy	Moderate	
10	10		1482	Heavy	None	10 - 15' - Sand, brown, very fine grained with sandstone fragments, dry
15	15		(1463)	Moderate	None	15 - 20' - Sand, reddish brown, very fine grained with sandstone fragments, dry
20	20		529	Slight	None	20 - 25' - Clay, reddish brown, sandy with sandstone fragments, dry
25	25		(116)	Slight	None	25 - 30' - Sand, brown, some clay, damp
30	30		27.1	Slight	None	
35	35		(94)	Slight	None	30 - 45' - Sand, brown, with gravel (chert), dry
40	40		178	Slight	None	
45	45		(157)	None	None	
50	50		(90.2)	None	None	30 - 45' - Sand, brown, very fine grained with gravel (chert), damp
55	55		(42.3)	None	None	
60	60	TD	46.1	None	None	

Date Drilled July 1, 2009
 Thickness of Bentonite Seal 60 Ft
 Depth of Exploratory Boring 60 Ft
 Depth to Groundwater Approximately 64 Ft bgs
 Ground Water Elevation _____

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

Notes

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring Details
SB-2

14-Inch Vac to Jal - Legacy
Lea County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
August 4, 2009	

Soil Boring SB-3

Date Drilled July 2, 2009
 Thickness of Bentonite Seal 70 Ft
 Depth of Exploratory Boring 70 Ft
 Depth to Groundwater Approximately 64 Ft bgs
 Ground Water Elevation _____

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

Depth Below Ground Surface	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0			Heavy	Heavy	0 - 5' - Caliche, tan, hard, dry
5		(1550)	Heavy	Heavy	5 - 10' - Sand, tan, dry with caliche nodules
10		1465	Heavy	Slight	10 - 20' - Sand, tan to white, dry with caliche nodules
15		(1128)	Heavy	Slight	
20		1367	Moderate	None	20 - 30' - Clay, brown, sandy with sandstone fragments, dry
25		(1487)	Moderate	None	
30		381	Slight	None	30 - 35' - Clay, reddish brown, sandy, dry
35		(125)	None	None	
40		87	None	None	35 - 50' - Sand, reddish brown, dry with gravel
45		(75)	None	None	
50		(85.6)	None	None	
55		(136)	None	None	
60		96.1	None	None	
65		157	None	None	50 - 70' - Sand, reddish brown, damp with gravel
70		84.4	None	None	

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.

Soil Boring Details
SB-3

14-Inch Vac to Jal - Legacy
Lea County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
August 4, 2009	

Soil Boring SB-4

Date Drilled December 10, 2009
 Thickness of Bentonite Seal 75 Ft
 Depth of Exploratory Boring 75 Ft
 Depth to Groundwater _____
 Ground Water Elevation _____

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

Depth Below Ground Surface	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0			None	None	0 - 1' - Clay, brown, sandy with some white caliche
5		-	None	None	1 - 6' - Caliche, white to grey, sandy, soft, dry
10			None	None	6 - 20' - Sand, light brown and caliche, white to grey, soft, dry
15		-	None	None	20 - 25' - Sand, brown to dark brown, coarse grained, clayey with some sandstone fragments
20			None	None	25 - 27' - Clay, dark brown with some sandstone fragments, dry
25		-	None	None	27 - 30' - Sand, dark brown, very fine grained with some sandstone fragments. dry
30			None	None	30 - 33' - Sand, dark brown, very fine grained with some sandstone fragments and clayey, dry
35		-	None	None	33 - 35' - Sand, reddish brown, very fine grained with some sandstone fragments
40			None	None	35 - 55' - Sand, dark brown to reddish brown with some sandstone fragments, dry, Lost circulation at 55' bgs, No sample collected at 55' bgs
45		-	None	None	55 - 60' - Sand, dark brown to reddish brown with some sandstone fragments and some well rounded gravel, dry
50			None	None	60 - 75' - Sand, brown with some sandstone, No samples collected due to lost circulation, wet
55					
60					
65					
70					
75					

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.

Soil Boring Details
SB-4

14-Inch Vac to Jal - Legacy
 Lea County, New Mexico
 Plains Pipeline, L.P.

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
May 5, 2010	

Soil Boring SB-5

Date Drilled December 10, 2009
 Thickness of Bentonite Seal 80 Ft
 Depth of Exploratory Boring 80 Ft
 Depth to Groundwater _____
 Ground Water Elevation _____

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

Depth Below Ground Surface	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0		-	None	None	
5		-	None	None	
10		○	None	None	0 - 23' - Caliche, white, and brown sand, dry
15		-	None	None	
20		○	None	None	
25		-	None	None	23 - 30' - Sand, brown, very fine grained with some sandstone fragments, dry
30		○	None	None	30 - 34' - Sand, brown, very fine grained with some sandstone fragments and some red to dark red clay
35		-	None	None	
40	○	None	None		
45	○	None	None		
50	-	None	None		
55					34 - 80' - Sand, brown, very fine grained with some sandstone fragments. Lost circulation at 45' bgs, No samples below 45' bgs
60					
65					
70					
75					
80	TD				

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.

Soil Boring Details
SB-5

14-Inch Vac to Jal - Legacy
Lea County, New Mexico
Plains Pipeline, L.P.

Basin Environmental Consulting

Prep By: CDS

Checked By: CDS

May 5, 2010

Appendix B
Analytical Reports

Analytical Report 330360

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vacuum to Jal Lagacy

2009-092

20-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



20-APR-09

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

Reference: XENCO Report No: **330360**
14" Vacuum to Jal Lagacy
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 330360. 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. 330360 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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Sample Cross Reference 330360



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vacuum to Jal Lagacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Chloride Baseline	S	Apr-15-09 15:00		330360-001



Certificate of Analysis Summary 330360

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vacuum to Jal Lagacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Apr-17-09 08:07 am

Report Date: 20-APR-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	330360-001				
	Field Id:	Chloride Baseline				
	Depth:					
	Matrix:	SOIL				
	Sampled:	Apr-15-09 15:00				
Anions by EPA 300	Extracted:					
	Analyzed:	Apr-17-09 14:47				
	Units/RL:	mg/kg RL				
Chloride		796 10.3				
Percent Moisture	Extracted:					
	Analyzed:	Apr-17-09 17:00				
	Units/RL:	% RL				
Percent Moisture		3.28 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.

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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.

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9701 Harry Hines Blvd , Dallas, TX 75220
5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Blank Spike Recovery



Project Name: 14" Vacuum to Jal Lagacy

Work Order #: 330360

Project ID:

2009-092

Lab Batch #: 756272

Sample: 756272-1-BKS

Matrix: Solid

Date Analyzed: 04/17/2009

Date Prepared: 04/17/2009

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	10.5	105	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

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



Form 3 - MS Recoveries



Project Name: 14" Vacuum to Jal Lagacy

Work Order #: 330360

Lab Batch #: 756272

Date Analyzed: 04/17/2009

QC- Sample ID: 330360-001 S

Reporting Units: mg/kg

Date Prepared: 04/17/2009

Project ID: 2009-092

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	Chloride	796	207	939	69	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: 14" Vacuum to Jal Lagacy

Work Order #: 330360

Lab Batch #: 756272

Project ID: 2009-092

Date Analyzed: 04/17/2009

Date Prepared: 04/17/2009

Analyst: LATCOR

QC- Sample ID: 330360-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	796	793	0	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: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
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
Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 04-17-09 @ 0807
 Lab ID #: 330360
 Initials: JMF

Sample Receipt Checklist

				Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	2.5	°C	
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	(Not Present)		
#4	Custody Seals intact on sample bottles/ container? (label)	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Present		
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	ID written on Cont./ Lid		
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable		
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below		
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below		
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No			
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below		
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below		
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable		
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> 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 333087

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-92

29-MAY-09



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-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



29-MAY-09

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

Reference: XENCO Report No: **333087**
14" Vac to Jal Legacy
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 333087. 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. 333087 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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Sample Cross Reference 333087



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile # 1	S	May-18-09 14:30		333087-001
Stockpile # 2	S	May-18-09 14:40		333087-002
Main Exc. - NWSW	S	May-18-09 14:45		333087-003
Main Exc. - NESW	S	May-18-09 14:50		333087-004
Main Exc. - WSW	S	May-18-09 15:00		333087-005
Main Exc. - ESW	S	May-18-09 15:10		333087-006
Main Exc. Floor # 1	S	May-18-09 15:20		333087-007
Main Exc. Floor # 2	S	May-18-09 15:30		333087-008
Main Exc. Floor # 3	S	May-18-09 15:40		333087-009
Main Exc. Floor # 4	S	May-18-09 15:50		333087-010



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy

Project ID: 2009-92

Work Order Number: 333087

Report Date: 29-MAY-09

Date Received: 05/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-759451 Percent Moisture

None

Batch: LBA-759476 TPH by SW8015 Mod
SW8015MOD_NM

Batch 759476, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected;
data not confirmed by re-analysis

Samples affected are: 333087-010.

Batch: LBA-759977 BTEX-MTBE EPA 8021B
SW8021BM

Batch 759977, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is
suspected; data not confirmed by re-analysis

Samples affected are: 333087-003,333087-008.

4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis.

Samples affected are: 530571-1-BLK.

SW8021BM

Batch 759977, Benzene, Toluene recovered above QC limits in the Matrix Spike and Matrix
Spike Duplicate.

Samples affected are: 333087-003, -010, -008, -005, -007, -009, -004, -006.

The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy

Project ID: 2009-92

Work Order Number: 333087

Report Date: 29-MAY-09

Date Received: 05/19/2009

*Batch: LBA-760298 BTEX-MTBE EPA 8021B
SW8021BM*

Batch 760298, 4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis. Samples affected are: 530774-1-BLK.

SW8021BM

Batch 760298, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 333087-001.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

*Batch: LBA-760452 BTEX-MTBE EPA 8021B
BTEX by 8021B*

760452, The Beginning and ending CCV for this batch was within QC limits, However, due to carry-over from an extremely contaminated sample immediately prior to it, the Middle CCV was above the QC limits. All Batch QC and sample surrogates were within QC limits, therefore this QC failure has negligible effect on this sample.



Certificate of Analysis Summary 333087

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy



Project Id: 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Tue May-19-09 08:12 am

Report Date: 29-MAY-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333087-001	333087-002	333087-003	333087-004	333087-005	333087-006
	Field Id:	Stockpile # 1	Stockpile # 2	Main Exc - NWSW	Main Exc - NESW	Main Exc. - WSW	Main Exc. - ESW
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-18-09 14 30	May-18-09 14:40	May-18-09 14:45	May-18-09 14 50	May-18-09 15.00	May-18-09 15:10
BTEX by EPA 8021B	Extracted:	May-27-09 10:00	May-28-09 16:00	May-22-09 12:09	May-22-09 12:09	May-22-09 12 09	May-22-09 12:09
	Analyzed:	May-27-09 13:18	May-28-09 16:28	May-22-09 19:03	May-22-09 19:24	May-22-09 19:46	May-22-09 20:07
	Units/RL:	mg/kg RL					
Benzene		3.549 0.5545	23.20 2.187	0.0073 0.0010	0 0013 0.0011	ND 0 0011	ND 0.0010
Toluene		88.56 1.109	233 0 4 373	0.0354 0.0020	ND 0.0022	ND 0 0022	ND 0.0020
Ethylbenzene		63.06 0.5545	111 0 2 187	0.0158 0.0010	ND 0 0011	ND 0.0011	ND 0.0010
m,p-Xylenes		88.09 1.109	165.8 4 373	0.0249 0.0020	ND 0.0022	ND 0.0022	ND 0.0020
o-Xylene		32 31 0.5545	12 40 2.187	0.0090 0 0010	ND 0 0011	ND 0.0011	ND 0.0010
Total Xylenes		120.4 0.5545	178.2 2 187	0.0339 0.0010	ND 0.0011	ND 0.0011	ND 0.0010
Total BTEX		275.569 0.5545	545 4 2 187	0.0924 0 0010	0 0013 0.0011	ND 0.0011	ND 0.0010
Percent Moisture	Extracted:	May-20-09 08:59	May-20-09 08.59	May-20-09 08:59	May-20-09 08:59	May-20-09 08.59	May-20-09 08:59
	Analyzed:	May-20-09 08:59	May-20-09 08.59	May-20-09 08:59	May-20-09 08:59	May-20-09 08.59	May-20-09 08:59
	Units/RL:	% RL					
Percent Moisture		9 83 1.00	8 54 1.00	2.34 1.00	8.37 1.00	7 38 1.00	2.31 1 00
TPH By SW8015 Mod	Extracted:	May-19-09 12:58	May-19-09 12 58	May-19-09 12:58	May-19-09 12:58	May-19-09 12:58	May-19-09 12:58
	Analyzed:	May-19-09 15:59	May-19-09 16:24	May-19-09 16:49	May-19-09 17:14	May-19-09 17:39	May-19-09 18 04
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		3990 333	8260 164	18.0 15.4	ND 16.4	ND 16.2	ND 15 4
C12-C28 Diesel Range Hydrocarbons		4890 333	9340 164	18.1 15.4	43.3 16.4	ND 16.2	21.3 15.4
C28-C35 Oil Range Hydrocarbons		ND 333	669 164	ND 15.4	ND 16.4	ND 16.2	ND 15.4
Total TPH		8880 333	18269 164	36.1 15.4	43 3 16.4	ND 16.2	21.3 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.

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Brent Barron
Odessa Laboratory Director



Certificate of Analysis Summary 333087
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Tue May-19-09 08:12 am

Report Date: 29-MAY-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	333087-007	333087-008	333087-009	333087-010		
	<i>Field Id:</i>	Main Exc Floor # 1	Main Exc. Floor # 2	Main Exc Floor # 3	Main Exc Floor # 4		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	May-18-09 15:20	May-18-09 15:30	May-18-09 15:40	May-18-09 15:50		
	<i>Extracted:</i>	May-22-09 12:09	May-22-09 12:09	May-22-09 12:09	May-22-09 12:09		
	<i>Analyzed:</i>	May-22-09 21:11	May-22-09 17:58	May-22-09 21:33	May-22-09 18:19		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		0.0013 0.0010	ND 2.397	0.0022 0.0010	9.459 0.5842		
Toluene		0.0033 0.0021	26.82 4.793	0.0071 0.0020	106.7 1.168		
Ethylbenzene		ND 0.0010	41.51 2.397	0.0013 0.0010	84.72 0.5842		
m,p-Xylenes		ND 0.0021	71.76 4.793	ND 0.0020	123.0 1.168		
o-Xylene		ND 0.0010	27.42 2.397	ND 0.0010	47.24 0.5842		
Total Xylenes		ND 0.0010	99.18 2.397	ND 0.0010	170.24 0.5842		
Total BTEX		0.0046 0.0010	167.51 2.397	0.0106 0.0010	371.119 0.5842		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-20-09 08:59	May-20-09 08:59	May-20-09 08:59	May-20-09 08:59		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		2.77 1.00	16.55 1.00	ND 1.00	14.42 1.00		
TPH By SW8015 Mod	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-19-09 12:58	May-19-09 12:58	May-19-09 12:58	May-19-09 12:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	4460 359	50.9 15.1	4970 175		
C12-C28 Diesel Range Hydrocarbons		19.8 15.4	7640 359	1460 15.1	7740 175		
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 359	95.4 15.1	523 175		
Total TPH		19.8 15.4	12100 359	1606.3 15.1	13233 175		

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 user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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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.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759977

Sample: 530571-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/22/09 14:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0333	0.0300	111	80-120	

Lab Batch #: 759977

Sample: 530571-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/22/09 15:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0339	0.0300	113	80-120	

Lab Batch #: 759977

Sample: 530571-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/22/09 15:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0230	0.0300	77	80-120	*

Lab Batch #: 759977

Sample: 333087-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 17:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0377	0.0300	126	80-120	*

Lab Batch #: 759977

Sample: 333087-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 18:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0416	0.0300	139	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759977

Sample: 333087-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 19:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0337	0.0300	112	80-120	

Lab Batch #: 759977

Sample: 333087-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 19:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0343	0.0300	114	80-120	

Lab Batch #: 759977

Sample: 333087-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 19:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0332	0.0300	111	80-120	

Lab Batch #: 759977

Sample: 333087-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 20:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0303	0.0300	101	80-120	

Lab Batch #: 759977

Sample: 333087-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 21:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0255	0.0300	85	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759977

Sample: 333087-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/22/09 21:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0353	0.0300	118	80-120	

Lab Batch #: 759977

Sample: 333087-003 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/23/09 00:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0345	0.0300	115	80-120	

Lab Batch #: 759977

Sample: 333087-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/23/09 01:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0333	0.0300	111	80-120	

Lab Batch #: 760298

Sample: 530774-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/27/09 10:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0242	0.0300	81	80-120	

Lab Batch #: 760298

Sample: 530774-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/27/09 10:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 760298

Sample: 530774-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 05/27/09 11:27	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	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	0.0164	0.0300	55	80-120	*

Lab Batch #: 760298

Sample: 333087-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 05/27/09 13:18	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 760298

Sample: 333233-020 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 05/27/09 19:45	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B 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	0.0291	0.0300	97	80-120	

Lab Batch #: 760298

Sample: 333233-020 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 05/27/09 20:07	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 760452

Sample: 530869-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 05/28/09 13:01	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B 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	0.0318	0.0300	106	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 760452

Sample: 530869-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/28/09 13:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0308	0.0300	103	80-120	

Lab Batch #: 760452

Sample: 530869-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/28/09 14:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0248	0.0300	83	80-120	

Lab Batch #: 760452

Sample: 333087-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/28/09 16:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0313	0.0300	104	80-120	

Lab Batch #: 759476

Sample: 530300-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/19/09 13:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.8	50.0	92	70-135	

Lab Batch #: 759476

Sample: 530300-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/19/09 14:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	46.0	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759476

Sample: 530300-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/19/09 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 759476

Sample: 333087-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 15:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 759476

Sample: 333087-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 16:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 759476

Sample: 333087-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 16:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 759476

Sample: 333087-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 17:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	100	86	70-135	
o-Terphenyl	49.1	50.0	98	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759476

Sample: 333087-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 17:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	100	90	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

Lab Batch #: 759476

Sample: 333087-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 18:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 759476

Sample: 333087-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 18:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.6	100	91	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 759476

Sample: 333087-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 18:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 759476

Sample: 333087-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 19:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	100	89	70-135	
o-Terphenyl	49.7	50.0	99	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: 14" Vac to Jal Legacy

Work Orders : 333087,

Project ID: 2009-92

Lab Batch #: 759476

Sample: 333087-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 20:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	140	100	140	70-135	*
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 759476

Sample: 333087-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/19/09 23:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	49.2	50.0	98	70-135	

Lab Batch #: 759476

Sample: 333087-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/20/09 00:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	49.2	50.0	98	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: 14" Vac to Jal Legacy

Work Order #: 333087

Analyst: BRB

Date Prepared: 05/22/2009

Project ID: 2009-92

Date Analyzed: 05/22/2009

Lab Batch ID: 759977

Sample: 530571-1-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	0.1183	118	0.1	0.1172	117	1	70-130	35	
Toluene	ND	0.1000	0.1143	114	0.1	0.1132	113	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1190	119	0.1	0.1181	118	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2396	120	0.2	0.2368	118	1	70-135	35	
o-Xylene	ND	0.1000	0.1148	115	0.1	0.1140	114	1	71-133	35	

Analyst: ASA

Date Prepared: 05/27/2009

Date Analyzed: 05/27/2009

Lab Batch ID: 760298

Sample: 530774-1-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	0.1000	100	0.1	0.1002	100	0	70-130	35	
Toluene	ND	0.1000	0.0963	96	0.1	0.0968	97	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1030	103	0.1	0.1046	105	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2083	104	0.2	0.2113	106	1	70-135	35	
o-Xylene	ND	0.1000	0.0985	99	0.1	0.1001	100	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: 14" Vac to Jal Legacy

Work Order #: 333087

Analyst: BRB

Lab Batch ID: 760452

Sample: 530869-1-BKS

Date Prepared: 05/28/2009

Batch #: 1

Project ID: 2009-92

Date Analyzed: 05/28/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0958	96	0.1	0.0944	94	1	70-130	35	
Toluene	ND	0.1000	0.0931	93	0.1	0.0922	92	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0987	99	0.1	0.0973	97	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2007	100	0.2	0.1975	99	2	70-135	35	
o-Xylene	ND	0.1000	0.0952	95	0.1	0.0940	94	1	71-133	35	

Analyst: BHW

Date Prepared: 05/19/2009

Date Analyzed: 05/19/2009

Lab Batch ID: 759476

Sample: 530300-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1010	101	1000	990	99	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	964	96	1000	954	95	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 - MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 333087

Project ID: 2009-92

Lab Batch ID: 759977

QC- Sample ID: 333087-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/23/2009

Date Prepared: 05/22/2009

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0073	0.1024	0.2245	212	0.1024	0.2088	197	7	70-130	35
Toluene	0.0354	0.1024	0.3688	326	0.1024	0.3445	302	7	70-130	35	X
Ethylbenzene	0.0158	0.1024	0.1478	129	0.1024	0.1382	120	7	71-129	35	
m,p-Xylenes	0.0249	0.2048	0.2332	102	0.2048	0.2213	96	5	70-135	35	
o-Xylene	0.0090	0.1024	0.1041	93	0.1024	0.0991	88	5	71-133	35	

Lab Batch ID: 760298

QC- Sample ID: 333233-020 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/27/2009

Date Prepared: 05/27/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1092	0.0619	57	0.1092	0.0656	60	6	70-130	35
Toluene	ND	0.1092	0.0606	55	0.1092	0.0644	59	6	70-130	35	X
Ethylbenzene	ND	0.1092	0.0677	62	0.1092	0.0720	66	6	71-129	35	X
m,p-Xylenes	ND	0.2183	0.1392	64	0.2183	0.1474	68	6	70-135	35	X
o-Xylene	ND	0.1092	0.0628	58	0.1092	0.0671	61	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Form 3 - MS / MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 333087

Project ID: 2009-92

Lab Batch ID: 759476

QC- Sample ID: 333087-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/19/2009

Date Prepared: 05/19/2009

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	1080	1150	106	1080	1160	107	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1080	1100	102	1080	1120	104	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 333087

Lab Batch #: 759451

Project ID: 2009-92

Date Analyzed: 05/20/2009

Date Prepared: 05/20/2009

Analyst: BEV

QC- Sample ID: 333088-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
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
 Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains
 Date/ Time: 05/19/09 8:12
 Lab ID #: 333097
 Initials: AWK

Sample Receipt Checklist

			Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	15	C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#3	Custody Seals intact on shipping container/ cooler?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#11	Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#19	Subcontract of sample(s)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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 333729

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal - Legacy

2009-092

03-JUN-09



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-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



03-JUN-09

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

Reference: XENCO Report No: **333729**
14-Inch Vac to Jal - Legacy
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 333729. 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. 333729 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 333729



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 @ 10' bgs	S	May-26-09 10:00		333729-001
T-2 @ 12' bgs	S	May-26-09 10:05		333729-002
T-2 @ 14' bgs	S	May-26-09 10:10		333729-003
T-2 @ 18' bgs	S	May-26-09 10:20		333729-004
T-3 @ 12' bgs	S	May-26-09 10:30		333729-005
T-3 @ 14' bgs	S	May-26-09 10:40		333729-006
T-3 @ 18' bgs	S	May-26-09 10:50		333729-007
T-3 @ 22' bgs	S	May-26-09 11:00		333729-008
T-3 @ 26' bgs	S	May-26-09 11:10		333729-009
T-3 @ 30' bgs	S	May-26-09 11:20		333729-010
T-4 @ 12' bgs	S	May-26-09 11:30		333729-011
T-4 @ 14' bgs	S	May-26-09 11:40		333729-012
T-4 @ 18' bgs	S	May-26-09 11:50		333729-013
T-4 @ 22' bgs	S	May-26-09 12:00		333729-014
T-4 @ 26' bgs	S	May-26-09 12:10		333729-015
T-4 @ 30' bgs	S	May-26-09 12:20		333729-016
T-5 @ 14' bgs	S	May-26-09 12:30		333729-017
T-6 @ 10' bgs	S	May-26-09 12:40		333729-018
T-6 @ 14' bgs	S	May-26-09 12:50		333729-019
T-6 @ 18' bgs	S	May-26-09 13:00		333729-020
T-7 @ 10' bgs	S	May-26-09 13:10		333729-021
T-7 @ 14' bgs	S	May-26-09 13:20		333729-022
T-7 @ 18' bgs	S	May-26-09 13:30		333729-023
T-8 @ 10' bgs	S	May-26-09 13:40		333729-024
T-8 @ 14' bgs	S	May-26-09 13:50		333729-025
T-9 @ 10' bgs	S	May-26-09 14:00		333729-026
T-9 @ 14' bgs	S	May-26-09 14:10		333729-027



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal - Legacy

Project ID: 2009-092

Report Date: 03-JUN-09

Work Order Number: 333729

Date Received: 05/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-760246 Percent Moisture

None

Batch: LBA-760247 Percent Moisture

None

Batch: LBA-760705 BTEX-MTBE EPA 8021B

SW8021BM

Batch 760705, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 333729-005,333729-007.

4-Bromofluorobenzene recovered below QC limits. Matrix Interference is suspected. Sample Data confirmed by re-analysis. Samples affected are: 530985-1-BLK,333729-017,333729-010,333729-001. QC data not confirmed by reanalysis.

Batch: LBA-760797 BTEX-MTBE EPA 8021B

SW8021BM

Batch 760797, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 333729-023,333729-021,333729-022.

4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 531040-1-BLK,333729-024,333729-019,333729-025. QC data is not confirmed by reanalysis.

SW8021BM

Batch 760797, Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 333729-025, -026, -021, -022, -019, -023, -020, -024, -027.

The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 333729

Report Date: 03-JUN-09

Date Received: 05/27/2009

*Batch: LBA-760837 TPH by SW8015 Mod
None*

*Batch: LBA-760842 TPH by SW8015 Mod
None*

*Batch: LBA-760926 BTEX-MTBE EPA 8021B
SW8021BM*

Batch 760926, 4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis. Samples affected are: 531104-1-BLK.

SW8021BM

Batch 760926, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. This failure is most likely due to matrix interference with the sample chosen for MS/MSD analysis.

Samples affected are: 333729-016, -011, -013, -003, -002.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



Certificate of Analysis Summary 333729

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal - Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333729-001	333729-002	333729-003	333729-004	333729-005	333729-006
	Field Id:	T-1 @ 10' bgs	T-2 @ 12' bgs	T-2 @ 14' bgs	T-2 @ 18' bgs	T-3 @ 12' bgs	T-3 @ 14' bgs
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-26-09 10:00	May-26-09 10:05	May-26-09 10:10	May-26-09 10:20	May-26-09 10:30	May-26-09 10:40
BTEX by EPA 8021B	Extracted:	May-30-09 11:00	Jun-01-09 16:30	Jun-01-09 16:30	May-30-09 11:00	May-30-09 11:00	May-30-09 11:00
	Analyzed:	May-31-09 16:41	Jun-02-09 11:41	Jun-02-09 12:24	May-31-09 17:03	May-31-09 19:33	May-31-09 20:37
	Units/RL:	mg/kg RL					
	Benzene	ND 0.0011	34.76 5.852	18.84 5.886	0.0023 0.0011	4.046 1.153	4.059 1.147
Toluene	ND 0.0022	323.9 11.70	223.7 11.77	0.0088 0.0023	55.43 2.305	74.40 2.293	
Ethylbenzene	ND 0.0011	189.7 5.852	136.1 5.886	0.0069 0.0011	43.23 1.153	58.59 1.147	
m,p-Xylenes	ND 0.0022	285.0 11.70	206.0 11.77	0.0121 0.0023	66.87 2.305	87.36 2.293	
o-Xylene	ND 0.0011	96.74 5.852	70.99 5.886	0.0052 0.0011	23.70 1.153	31.03 1.147	
Total Xylenes	ND 0.0011	381.74 5.852	276.99 5.886	0.0173 0.0011	90.57 1.153	118.39 1.147	
Total BTEX	ND 0.0011	930.1 5.852	655.63 5.886	0.0353 0.0011	193.276 1.153	255.439 1.147	
TPH By SW8015 Mod	Extracted:	Jun-01-09 11:07					
	Analyzed:	Jun-01-09 14:25	Jun-01-09 14:50	Jun-01-09 15:15	Jun-01-09 15:40	Jun-01-09 16:05	Jun-01-09 16:30
	Units/RL:	mg/kg RL					
	C6-C12 Gasoline Range Hydrocarbons	ND 16.4	10300 177	7000 178	22.3 17.3	3550 173	3980 174
C12-C28 Diesel Range Hydrocarbons	ND 16.4	16500 177	10500 178	109 17.3	6450 173	7300 174	
C28-C35 Oil Range Hydrocarbons	ND 16.4	1440 177	1050 178	ND 17.3	725 173	785 174	
Total TPH	ND 16.4	28240 177	18550 178	131.3 17.3	10725 173	12065 174	

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 Odessa Laboratory Director



Certificate of Analysis Summary 333729
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Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal - Legacy

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333729-001	333729-002	333729-003	333729-004	333729-005	333729-006
	Field Id:	T-1 @ 10' bgs	T-2 @ 12' bgs	T-2 @ 14' bgs	T-2 @ 18' bgs	T-3 @ 12' bgs	T-3 @ 14' bgs
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-26-09 10:00	May-26-09 10:05	May-26-09 10:10	May-26-09 10:20	May-26-09 10:30	May-26-09 10:40
Percent Moisture	Extracted:						
	Analyzed:	May-28-09 08:46					
	Units/RL:	% RL					
Percent Moisture		8.71 1.00	15.24 1.00	15.73 1.00	13.23 1.00	13.24 1.00	13.66 1.00

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Contact: Jason Henry

Project Location: Lea County, NM

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Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333729-007	333729-008	333729-009	333729-010	333729-011	333729-012
	Field Id:	T-3 @ 18' bgs	T-3 @ 22' bgs	T-3 @ 26' bgs	T-3 @ 30' bgs	T-4 @ 12' bgs	T-4 @ 14' bgs
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-26-09 10:50	May-26-09 11:00	May-26-09 11:10	May-26-09 11:20	May-26-09 11:30	May-26-09 11:40
BTEX by EPA 8021B	Extracted:	May-30-09 11:00	May-30-09 11:00	May-30-09 11:00	May-30-09 11:00	Jun-01-09 16:30	May-30-09 11:00
	Analyzed:	May-31-09 20:59	May-31-09 17:24	May-31-09 18:28	May-31-09 21:20	Jun-02-09 12:46	May-31-09 22:03
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	11.28 1.141	0.0070 0.0012	ND 0.1194	ND 1.073	48.18 6.038	8.783 1.280
Toluene	83.91 2.283	0.0250 0.0025	0.6279 0.2388	2.587 2.147	400.1 12.08	102.0 2.561	
Ethylbenzene	48.65 1.141	0.0085 0.0012	1.565 0.1194	3.671 1.073	211.1 6.038	63.40 1.280	
m,p-Xylenes	73.01 2.283	0.0110 0.0025	4.657 0.2388	6.086 2.147	327.2 12.08	96.00 2.561	
o-Xylene	24.87 1.141	0.0053 0.0012	2.401 0.1194	2.512 1.073	111.0 6.038	33.74 1.280	
Total Xylenes	97.88 1.141	0.0163 0.0012	7.058 0.1194	8.598 1.073	438.2 6.038	129.74 1.280	
Total BTEX	241.72 1.141	0.0568 0.0012	9.2509 0.1194	14.856 1.073	1097.58 6.038	303.923 1.280	
TPH By SW8015 Mod	Extracted:	Jun-01-09 11:07	Jun-01-09 11:07	Jun-01-09 11:07	Jun-01-09 11:07	Jun-01-09 11:07	Jun-01-09 11:07
	Analyzed:	Jun-01-09 16:55	Jun-01-09 17:20	Jun-01-09 17:45	Jun-01-09 18:10	Jun-01-09 19:00	Jun-01-09 19:24
	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	5930 171	ND 18.5	289 18.2	420 16.2	13200 364	3100 193
C12-C28 Diesel Range Hydrocarbons	11100 171	59.0 18.5	910 18.2	1400 16.2	22300 364	4600 193	
C28-C35 Oil Range Hydrocarbons	1080 171	ND 18.5	81.9 18.2	118 16.2	2050 364	524 193	
Total TPH	18110 171	59 18.5	1280.9 18.2	1938 16.2	37550 364	8224 193	

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Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal - Legacy

Date Received in Lab: Wed May-27-09 08:34 am

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Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	333729-007	333729-008	333729-009	333729-010	333729-011	333729-012
	<i>Field Id:</i>	T-3 @ 18' bgs	T-3 @ 22' bgs	T-3 @ 26' bgs	T-3 @ 30' bgs	T-4 @ 12' bgs	T-4 @ 14' bgs
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-26-09 10:50	May-26-09 11:00	May-26-09 11:10	May-26-09 11:20	May-26-09 11:30	May-26-09 11:40
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-28-09 08:46					
	<i>Units/RL:</i>	% RL					
Percent Moisture		12.39 1.00	19.12 1.00	17.55 1.00	7.39 1.00	17.52 1.00	22.36 1.00

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Project Name: 14-Inch Vac to Jal - Legacy



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Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333729-013	333729-014	333729-015	333729-016	333729-017	333729-018
Field Id:	T-4 @ 18' bgs	T-4 @ 22' bgs	T-4 @ 26' bgs	T-4 @ 30' bgs	T-5 @ 14' bgs	T-6 @ 10' bgs	
Depth:							
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampled:	May-26-09 11:50	May-26-09 12:00	May-26-09 12:10	May-26-09 12:20	May-26-09 12:30	May-26-09 12:40	
BTEX by EPA 8021B	Extracted:	Jun-01-09 16:30	May-30-09 11:00	May-30-09 11:00	Jun-01-09 16:30	May-30-09 11:00	May-30-09 11:00
Analyzed:	Jun-02-09 13:08	May-31-09 22:46	May-31-09 23:07	Jun-02-09 13:50	May-31-09 17:46	May-31-09 23:50	
Units/RL:	mg/kg RL	mg/kg RL					
Benzene		29.02 6.241	20.63 1.178	31.62 1.129	23.12 5.694	0.0078 0.0012	1.999 1.234
Toluene		277.2 12.48	163.3 2.356	213.1 2.258	250.2 11.39	0.0041 0.0025	20.67 2.468
Ethylbenzene		142.5 6.241	80.59 1.178	111.0 1.129	143.0 5.694	ND 0.0012	21.20 1.234
m,p-Xylenes		215.4 12.48	111.1 2.356	158.5 2.258	214.8 11.39	ND 0.0025	32.80 2.468
o-Xylene		73.52 6.241	39.38 1.178	55.50 1.129	74.02 5.694	ND 0.0012	12.43 1.234
Total Xylenes		288.92 6.241	150.48 1.178	214 1.129	288.82 5.694	ND 0.0012	45.23 1.234
Total BTEX		737.64 6.241	415 1.178	569.72 1.129	705.14 5.694	0.0119 0.0012	89.099 1.234
TPH By SW8015 Mod	Extracted:	Jun-01-09 11:07	Jun-01-09 11:07				
Analyzed:	Jun-01-09 19:49	Jun-01-09 20:14	Jun-01-09 20:39	Jun-01-09 21:04	Jun-01-09 21:28	Jun-01-09 21:53	
Units/RL:	mg/kg RL	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		9680 188	8240 177	5040 170	7750 343	ND 18.6	1080 92.6
C12-C28 Diesel Range Hydrocarbons		14200 188	13700 177	7900 170	11000 343	32.0 18.6	2620 92.6
C28-C35 Oil Range Hydrocarbons		1340 188	1130 177	853 170	1290 343	ND 18.6	296 92.6
Total TPH		25220 188	23070 177	13793 170	20040 343	32 18.6	3996 92.6

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Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal - Legacy

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	333729-013	333729-014	333729-015	333729-016	333729-017	333729-018
		<i>Field Id:</i>	T-4 @ 18' bgs	T-4 @ 22' bgs	T-4 @ 26' bgs	T-4 @ 30' bgs	T-5 @ 14' bgs
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-26-09 11:50	May-26-09 12:00	May-26-09 12 10	May-26-09 12:20	May-26-09 12 30	May-26-09 12:40
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-28-09 08:46	May-28-09 08:46	May-28-09 08:46	May-28-09 08:46	May-28-09 08:46	May-28-09 08:46
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		20.20 1.00	15.11 1.00	11.76 1.00	12.54 1.00	19.36 1.00	18.97 1.00

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Contact: Jason Henry

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Analysis Requested	Lab Id:	333729-019	333729-020	333729-021	333729-022	333729-023	333729-024
	Field Id:	T-6 @ 14' bgs	T-6 @ 18' bgs	T-7 @ 10' bgs	T-7 @ 14' bgs	T-7 @ 18' bgs	T-8 @ 10' bgs
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-26-09 12:50	May-26-09 13:00	May-26-09 13:10	May-26-09 13:20	May-26-09 13:30	May-26-09 13:40
BTEX by EPA 8021B	Extracted:	Jun-01-09 08:00					
	Analyzed:	Jun-01-09 10:55	Jun-01-09 11:17	Jun-01-09 13:04	Jun-01-09 13:25	Jun-01-09 13:47	Jun-01-09 11:38
	Units/RL:	mg/kg RL					
Benzene		0.0013 0.0013	ND 0.0012	9.257 1.137	5.998 1.190	ND 1.200	ND 0.0011
Toluene		0.0053 0.0025	0.0042 0.0024	56.21 2.274	62.42 2.380	33.32 2.400	ND 0.0023
Ethylbenzene		0.0015 0.0013	0.0018 0.0012	35.25 1.137	46.94 1.190	37.70 1.200	ND 0.0011
m,p-Xylenes		ND 0.0025	ND 0.0024	54.67 2.274	71.87 2.380	59.77 2.400	ND 0.0023
o-Xylene		ND 0.0013	ND 0.0012	19.97 1.137	25.59 1.190	22.55 1.200	ND 0.0011
Total Xylenes		ND 0.0013	ND 0.0012	74.64 1.137	97.46 1.190	82.32 1.200	ND 0.0011
Total BTEX		0.0081 0.0013	0.0006 0.0012	175.357 1.137	212.818 1.190	153.34 1.200	ND 0.0011
TPH By SW8015 Mod	Extracted:	Jun-01-09 11:07	Jun-01-09 11:07	Jun-01-09 12:14	Jun-01-09 12:14	Jun-01-09 12:14	Jun-01-09 12:14
	Analyzed:	Jun-01-09 22:18	Jun-01-09 22:43	Jun-01-09 13:33	Jun-01-09 13:56	Jun-01-09 14:20	Jun-01-09 14:43
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 18.9	ND 18.3	3460 344	3170 360	3190 360	ND 17.0
C12-C28 Diesel Range Hydrocarbons		28.3 18.9	66.6 18.3	5480 344	5270 360	5010 360	47.4 17.0
C28-C35 Oil Range Hydrocarbons		ND 18.9	ND 18.3	900 344	799 360	861 360	44.3 17.0
Total TPH		28.3 18.9	66.6 18.3	9840 344	9239 360	9061 360	91.7 17.0

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Analysis Requested	Lab Id:	333729-019	333729-020	333729-021	333729-022	333729-023	333729-024
	Field Id:	T-6 @ 14' bgs	T-6 @ 18' bgs	T-7 @ 10' bgs	T-7 @ 14' bgs	T-7 @ 18' bgs	T-8 @ 10' bgs
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-26-09 12:50	May-26-09 13:00	May-26-09 13:10	May-26-09 13:20	May-26-09 13:30	May-26-09 13:40
Percent Moisture	Extracted:						
	Analyzed:	May-28-09 08:46	May-28-09 08:46	May-28-09 08:54	May-28-09 08:54	May-28-09 08:54	May-28-09 08:54
	Units/RL:	% RL					
Percent Moisture		20.72 1.00	18.18 1.00	12.76 1.00	16.64 1.00	16.68 1.00	11.94 1.00

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Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	333729-025	333729-026	333729-027			
	Field Id:	T-8 @ 14' bgs	T-9 @ 10' bgs	T-9 @ 14' bgs			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	May-26-09 13 50	May-26-09 14:00	May-26-09 14 10			
BTEX by EPA 8021B	Extracted:	Jun-01-09 08:00	Jun-01-09 08:00	Jun-01-09 08:00			
	Analyzed:	Jun-01-09 11:59	Jun-01-09 12:43	Jun-01-09 12:21			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.0012	0.0072 0.0011	0.0062 0.0012			
Toluene		ND 0.0023	0.3247 0.0021	ND 0.0023			
Ethylbenzene		ND 0.0012	0.2975 0.0011	0.0018 0.0012			
m,p-Xylenes		ND 0.0023	0.4625 0.0021	0.0097 0.0023			
o-Xylene		ND 0.0012	0.2470 0.0011	0.0072 0.0012			
Total Xylenes		ND 0.0012	0.7095 0.0011	0.0169 0.0012			
Total BTEX		ND 0.0012	1.3389 0.0011	0.0249 0.0012			
TPH By SW8015 Mod	Extracted:	Jun-01-09 12:14	Jun-01-09 12:14	Jun-01-09 12:14			
	Analyzed:	Jun-01-09 15 06	Jun-01-09 15:29	Jun-01-09 15:52			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		ND 17.4	383 160	ND 17.6			
C12-C28 Diesel Range Hydrocarbons		ND 17.4	3720 160	69.7 17.6			
C28-C35 Oil Range Hydrocarbons		ND 17.4	648 160	36.3 17.6			
Total TPH		ND 17.4	4751 160	106 17.6			

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Project Id: 2009-092
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal - Legacy

Date Received in Lab: Wed May-27-09 08:34 am

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	333729-025	333729-026	333729-027			
	<i>Field Id:</i>	T-8 @ 14' bgs	T-9 @ 10' bgs	T-9 @ 14' bgs			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	May-26-09 13:50	May-26-09 14:00	May-26-09 14:10			
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	May-28-09 08:54	May-28-09 08:54	May-28-09 08:54			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		13.92 1.00	6.37 1.00	14.57 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.

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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.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,
Lab Batch #: 760705

Sample: 530985-1-BKS / BKS

Project ID: 2009-092

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 05/31/09 14:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0264	0.0300	88	80-120	

Lab Batch #: 760705

Sample: 530985-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 05/31/09 15:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 760705

Sample: 530985-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 05/31/09 15:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0195	0.0300	65	80-120	*

Lab Batch #: 760705

Sample: 333729-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 05/31/09 16:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0189	0.0300	63	80-120	**

Lab Batch #: 760705

Sample: 333729-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 05/31/09 17:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760705

Sample: 333729-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 17:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0251	0.0300	84	80-120	

Lab Batch #: 760705

Sample: 333729-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 17:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0224	0.0300	75	80-120	**

Lab Batch #: 760705

Sample: 333729-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 18:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0455	0.0300	152	80-120	**

Lab Batch #: 760705

Sample: 333729-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 19:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0276	0.0300	92	80-120	

Lab Batch #: 760705

Sample: 333729-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0280	0.0300	93	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,
Lab Batch #: 760705

Sample: 333729-007 / SMP

Project ID: 2009-092

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 20:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	**
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 760705

Sample: 333729-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 21:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0231	0.0300	77	80-120	**

Lab Batch #: 760705

Sample: 333729-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 22:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0274	0.0300	91	80-120	

Lab Batch #: 760705

Sample: 333729-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 22:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0264	0.0300	88	80-120	

Lab Batch #: 760705

Sample: 333729-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 23:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0297	0.0300	99	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760705

Sample: 333729-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/31/09 23:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0252	0.0300	84	80-120	
4-Bromofluorobenzene		0.0273	0.0300	91	80-120	

Lab Batch #: 760705

Sample: 333729-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 00:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0297	0.0300	99	80-120	
4-Bromofluorobenzene		0.0274	0.0300	91	80-120	

Lab Batch #: 760705

Sample: 333729-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 00:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0307	0.0300	102	80-120	
4-Bromofluorobenzene		0.0272	0.0300	91	80-120	

Lab Batch #: 760797

Sample: 531040-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 09:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0323	0.0300	108	80-120	
4-Bromofluorobenzene		0.0267	0.0300	89	80-120	

Lab Batch #: 760797

Sample: 531040-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 09:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0324	0.0300	108	80-120	
4-Bromofluorobenzene		0.0267	0.0300	89	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,
Lab Batch #: 760797

Sample: 531040-1-BLK / BLK

Project ID: 2009-092
Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 06/01/09 10:34	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0220	0.0300	73	80-120	*

Lab Batch #: 760797 Sample: 333729-019 / SMP
Units: mg/kg Date Analyzed: 06/01/09 10:55

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 10:55	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0208	0.0300	69	80-120	**

Lab Batch #: 760797 Sample: 333729-020 / SMP
Units: mg/kg Date Analyzed: 06/01/09 11:17

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 11:17	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0255	0.0300	85	80-120	

Lab Batch #: 760797 Sample: 333729-024 / SMP
Units: mg/kg Date Analyzed: 06/01/09 11:38

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 11:38	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0205	0.0300	68	80-120	**

Lab Batch #: 760797 Sample: 333729-025 / SMP
Units: mg/kg Date Analyzed: 06/01/09 11:59

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 11:59	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0204	0.0300	68	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760797

Sample: 333729-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 12:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0296	0.0300	99	80-120	

Lab Batch #: 760797

Sample: 333729-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 12:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1156	0.0300	385	80-120	**

Lab Batch #: 760797

Sample: 333729-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 13:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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 #: 760797

Sample: 333729-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 13:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0288	0.0300	96	80-120	

Lab Batch #: 760797

Sample: 333729-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 13:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0294	0.0300	98	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760797

Sample: 333729-025 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0281	0.0300	94	80-120	

Lab Batch #: 760797

Sample: 333729-025 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0271	0.0300	90	80-120	

Lab Batch #: 760926

Sample: 531104-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 09:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0267	0.0300	89	80-120	

Lab Batch #: 760926

Sample: 531104-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 09:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 760926

Sample: 531104-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 10:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0192	0.0300	64	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760926

Sample: 333729-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 11:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0261	0.0300	87	80-120	

Lab Batch #: 760926

Sample: 333729-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 12:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0271	0.0300	90	80-120	

Lab Batch #: 760926

Sample: 333729-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 12:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0279	0.0300	93	80-120	

Lab Batch #: 760926

Sample: 333729-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 13:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0264	0.0300	88	80-120	

Lab Batch #: 760926

Sample: 333729-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 13:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0286	0.0300	95	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760926

Sample: 334047-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 14:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0425	0.0300	142	80-120	*

Lab Batch #: 760926

Sample: 334047-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 14:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0448	0.0300	149	80-120	*

Lab Batch #: 760837

Sample: 531068-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 12:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 760837

Sample: 531068-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 12:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 760837

Sample: 531068-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 13:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	47.0	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760837

Sample: 333729-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 13:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 760837

Sample: 333729-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 13:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

Lab Batch #: 760837

Sample: 333729-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 14:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 760837

Sample: 333729-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 14:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

Lab Batch #: 760837

Sample: 333729-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 15:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	48.7	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760837

Sample: 333729-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 15:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 760837

Sample: 333729-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 15:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	100	95	70-135	
o-Terphenyl	49.6	50.0	99	70-135	

Lab Batch #: 760837

Sample: 333729-027 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 21:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 760837

Sample: 333729-027 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 21:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

Lab Batch #: 760842

Sample: 531073-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 13:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	44.7	50.0	89	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760842

Sample: 531073-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 13:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 760842

Sample: 531073-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 14:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	100	90	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 760842

Sample: 333729-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 14:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	100	92	70-135	
o-Terphenyl	49.3	50.0	99	70-135	

Lab Batch #: 760842

Sample: 333729-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 14:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	55.2	50.0	110	70-135	

Lab Batch #: 760842

Sample: 333729-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 15:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	53.4	50.0	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,
Lab Batch #: 760842

Sample: 333729-004 / SMP

Project ID: 2009-092

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/01/09 15:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	100	94	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 760842

Sample: 333729-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/01/09 16:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

Lab Batch #: 760842

Sample: 333729-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/01/09 16:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 760842

Sample: 333729-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/01/09 16:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 760842

Sample: 333729-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/01/09 17:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	52.1	50.0	104	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760842

Sample: 333729-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 17:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 760842

Sample: 333729-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 18:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	100	96	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 760842

Sample: 333729-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 760842

Sample: 333729-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 760842

Sample: 333729-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	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	

* 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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760842

Sample: 333729-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 20:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 760842

Sample: 333729-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 20:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 760842

Sample: 333729-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 21:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

Lab Batch #: 760842

Sample: 333729-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 21:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 760842

Sample: 333729-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 21:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	50.6	50.0	101	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: 14-Inch Vac to Jal - Legacy

Work Orders : 333729,

Project ID: 2009-092

Lab Batch #: 760842

Sample: 333729-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 22:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 760842

Sample: 333729-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 22:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	100	93	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

Lab Batch #: 760842

Sample: 333729-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 23:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 760842

Sample: 333729-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 23:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	50.4	50.0	101	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: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Analyst: ASA

Date Prepared: 05/30/2009

Project ID: 2009-092

Date Analyzed: 05/31/2009

Lab Batch ID: 760705

Sample: 530985-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.1043	104	0.1	0.1094	109	5	70-130	35	
Toluene	ND	0.1000	0.1019	102	0.1	0.1068	107	5	70-130	35	
Ethylbenzene	ND	0.1000	0.1079	108	0.1	0.1133	113	5	71-129	35	
m,p-Xylenes	ND	0.2000	0.2179	109	0.2	0.2281	114	5	70-135	35	
o-Xylene	ND	0.1000	0.1031	103	0.1	0.1085	109	5	71-133	35	

Analyst: ASA

Date Prepared: 06/01/2009

Date Analyzed: 06/01/2009

Lab Batch ID: 760797

Sample: 531040-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.1105	111	0.1	0.1094	109	1	70-130	35	
Toluene	ND	0.1000	0.1066	107	0.1	0.1053	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1109	111	0.1	0.1096	110	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2246	112	0.2	0.2219	111	1	70-135	35	
o-Xylene	ND	0.1000	0.1060	106	0.1	0.1053	105	1	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: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Analyst: ASA

Date Prepared: 06/01/2009

Project ID: 2009-092

Date Analyzed: 06/02/2009

Lab Batch ID: 760926

Sample: 531104-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.1107	111	0.1	0.1118	112	1	70-130	35	
Toluene	ND	0.1000	0.1069	107	0.1	0.1082	108	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1118	112	0.1	0.1133	113	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2249	112	0.2	0.2274	114	1	70-135	35	
o-Xylene	ND	0.1000	0.1067	107	0.1	0.1081	108	1	71-133	35	

Analyst: BHW

Date Prepared: 06/01/2009

Date Analyzed: 06/01/2009

Lab Batch ID: 760837

Sample: 531068-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	842	84	1000	841	84	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1040	104	1000	1040	104	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



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Analyst: BHW

Lab Batch ID: 760842

Sample: 531073-1-BKS

Batch #: 1

Project ID: 2009-092

Date Analyzed: 06/01/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	908	91	1000	904	90	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1080	108	1000	1070	107	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 / MSD Recoveries



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Project ID: 2009-092

Lab Batch ID: 760705

QC- Sample ID: 333729-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 05/30/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0023	0.1141	0.0980	84	0.1141	0.0977	84	0	70-130	35	
Toluene	0.0088	0.1141	0.1059	85	0.1141	0.0984	79	7	70-130	35	
Ethylbenzene	0.0069	0.1141	0.0971	79	0.1141	0.0978	80	1	71-129	35	
m,p-Xylenes	0.0121	0.2282	0.1902	78	0.2282	0.1946	80	2	70-135	35	
o-Xylene	0.0052	0.1141	0.0926	77	0.1141	-0.0935	77	1	71-133	35	

Lab Batch ID: 760797

QC- Sample ID: 333729-025 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 06/01/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1162	0.1004	86	0.1162	0.1043	90	4	70-130	35	
Toluene	ND	0.1162	0.0976	84	0.1162	0.0997	86	2	70-130	35	
Ethylbenzene	ND	0.1162	0.0802	69	0.1162	0.0777	67	3	71-129	35	X
m,p-Xylenes	ND	0.2323	0.2091	90	0.2323	0.2156	93	3	70-135	35	
o-Xylene	ND	0.1162	0.1001	86	0.1162	0.1025	88	2	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Form 3 - MSD Recoveries



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Project ID: 2009-092

Lab Batch ID: 760926

QC- Sample ID: 334047-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/02/2009

Date Prepared: 06/01/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0039	0.1162	0.0695	56	0.1162	0.0599	48	15	70-130	35
Toluene	0.0316	0.1162	0.0582	23	0.1162	0.0535	19	8	70-130	35	X
Ethylbenzene	0.0370	0.1162	0.0447	7	0.1162	0.0421	4	6	71-129	35	X
m,p-Xylenes	0.0469	0.2323	0.1022	24	0.2323	0.0944	20	8	70-135	35	X
o-Xylene	0.0475	0.1162	0.0447	0	0.1162	0.0418	0	7	71-133	35	X

Lab Batch ID: 760837

QC- Sample ID: 333729-027 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 06/01/2009

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	1170	1030	88	1170	1060	91	3	70-135	35
C12-C28 Diesel Range Hydrocarbons	69.7	1170	1320	107	1170	1380	112	4	70-135	35	

Lab Batch ID: 760842

QC- Sample ID: 333729-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 06/01/2009

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	1100	987	90	1100	1090	99	10	70-135	35
C12-C28 Diesel Range Hydrocarbons	16.4	1100	1170	105	1100	1300	117	11	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 333729

Lab Batch #: 760246

Project ID: 2009-092

Date Analyzed: 05/28/2009

Date Prepared: 05/28/2009

Analyst: BEV

QC- Sample ID: 333729-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	8.71	10.5	18	20	

Lab Batch #: 760247

Date Analyzed: 05/28/2009

Date Prepared: 05/28/2009

Analyst: BEV

QC- Sample ID: 333729-021 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	12.8	12.9	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

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Basin/Plains
 Date/ Time: 05/27/09 8:34
 Lab ID #: 333729
 Initials: gmu

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-1.5 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 334002

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal - Legacy

2009-092

03-JUN-09



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-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



03-JUN-09

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

Reference: XENCO Report No: **334002**
14" Vac to Jal - Legacy
Project Address: Jal, 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 334002. 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. 334002 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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Sample Cross Reference 334002



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Main Exc. ESW-1 @ 8'bgs	S	May-28-09 15:30		334002-001
Main Exc. ESW-2 @ 5'bgs	S	May-28-09 15:40		334002-002
Main Exc. ESW-3 @ 3'bgs	S	May-28-09 15:50		334002-003
Main Exc. SSW @ 9.5'bgs	S	May-28-09 16:00		334002-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 334002

Report Date: 03-JUN-09

Date Received: 05/28/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-760577 Percent Moisture

AD2216A

Batch 760577, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 334002-001, -003, -002, -004.

Batch: LBA-760797 BTEX-MTBE EPA 8021B

SW8021BM

Batch 760797, 4-Bromofluorobenzene recovered below QC limits. Data not confirmed by re-analysis. Samples affected are: 531040-1-BLK, 334002-002, 334002-001. Matrix Interferences are suspected in sample surrogate failures.

SW8021BM

Batch 760797, Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 334002-001, -003, -002, -004.

The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits

Batch: LBA-760837 TPH by SW8015 Mod

None

Batch: LBA-761030 TPH by SW8015 Mod

None



Certificate of Analysis Summary 334002
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Jal, NM

Project Name: 14" Vac to Jal - Legacy

Date Received in Lab: Thu May-28-09 05:45 pm

Report Date: 03-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	334002-001	334002-002	334002-003	334002-004		
	Field Id:	Main Exc ESW-1 @ 8'bg	Main Exc ESW-2 @ 5'bg	Main Exc ESW-3 @ 3'bg	Main Exc SSW @ 9.5'bg		
Depth:							
Matrix:		SOIL	SOIL	SOIL	SOIL		
Sampled:		May-28-09 15:30	May-28-09 15:40	May-28-09 15:50	May-28-09 16:00		
BTEX by EPA 8021B	Extracted:	Jun-01-09 08:00	Jun-01-09 08:00	Jun-01-09 08:00	Jun-01-09 08:00		
	Analyzed:	Jun-01-09 16:32	Jun-01-09 16:54	Jun-01-09 17:16	Jun-01-09 17:38		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011		
Toluene		ND 0.0022	ND 0.0021	ND 0.0021	ND 0.0022		
Ethylbenzene		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011		
m,p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0021	ND 0.0022		
o-Xylene		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011		
Total Xylenes		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011		
Total BTEX		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011		
Percent Moisture	Extracted:						
	Analyzed:	May-29-09 14:05	May-29-09 14:05	May-29-09 14:05	May-29-09 14:05		
	Units/RL:	% RL	% RL	% RL	% RL		
Percent Moisture		10.85 1.00	6.16 1.00	3.18 1.00	9.90 1.00		
TPH By SW8015 Mod	Extracted:	Jun-01-09 12:14	Jun-01-09 14:45	Jun-01-09 14:45	Jun-01-09 14:45		
	Analyzed:	Jun-01-09 21:12	Jun-02-09 16:58	Jun-02-09 17:21	Jun-02-09 17:44		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 16.8	ND 16.0	ND 15.5	ND 16.6		
C12-C28 Diesel Range Hydrocarbons		38.8 16.8	ND 16.0	59.9 15.5	ND 16.6		
C28-C35 Oil Range Hydrocarbons		ND 16.8	ND 16.0	26.3 15.5	ND 16.6		
Total TPH		38.8 16.8	ND 16.0	86.2 15.5	ND 16.6		

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.

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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.
- 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: 14" Vac to Jal - Legacy

Work Orders : 334002,

Project ID: 2009-092

Lab Batch #: 760797

Sample: 531040-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 09:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0267	0.0300	89	80-120	

Lab Batch #: 760797

Sample: 531040-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 09:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 760797

Sample: 531040-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 10:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0220	0.0300	73	80-120	*

Lab Batch #: 760797

Sample: 334002-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 16:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0223	0.0300	74	80-120	*

Lab Batch #: 760797

Sample: 334002-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 16:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0232	0.0300	77	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: 14" Vac to Jal - Legacy

Work Orders : 334002,

Project ID: 2009-092

Lab Batch #: 760797

Sample: 334002-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 17:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	80-120	

Lab Batch #: 760797

Sample: 334002-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 17:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0245	0.0300	82	80-120	

Lab Batch #: 760797

Sample: 333729-025 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0281	0.0300	94	80-120	

Lab Batch #: 760797

Sample: 333729-025 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/01/09 19:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0271	0.0300	90	80-120	

Lab Batch #: 760837

Sample: 531068-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/01/09 12:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	42.0	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - Legacy

Work Orders : 334002,

Project ID: 2009-092

Lab Batch #: 760837

Sample: 531068-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 06/01/09 12:46	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 760837

Sample: 531068-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 06/01/09 13:10	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 760837

Sample: 334002-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 21:12	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 760837

Sample: 333729-027 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 21:35	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 760837

Sample: 333729-027 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/01/09 21:58	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	49.1	50.0	98	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: 14" Vac to Jal - Legacy

Work Orders : 334002,

Project ID: 2009-092

Lab Batch #: 761030

Sample: 531173-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 15:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 761030

Sample: 531173-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 16:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	46.0	50.0	92	70-135	

Lab Batch #: 761030

Sample: 531173-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/02/09 16:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	100	94	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

Lab Batch #: 761030

Sample: 334002-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 16:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 761030

Sample: 334002-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 17:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	54.0	50.0	108	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: 14" Vac to Jal - Legacy

Work Orders : 334002,

Project ID: 2009-092

Lab Batch #: 761030

Sample: 334002-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 17:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 761030

Sample: 334002-004 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 21:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	55.0	50.0	110	70-135	

Lab Batch #: 761030

Sample: 334002-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/02/09 22:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	52.3	50.0	105	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: 14" Vac to Jal - Legacy

Work Order #: 334002

Analyst: ASA

Date Prepared: 06/01/2009

Project ID: 2009-092

Date Analyzed: 06/01/2009

Lab Batch ID: 760797

Sample: 531040-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.1105	111	0.1	0.1094	109	1	70-130	35	
Toluene	ND	0.1000	0.1066	107	0.1	0.1053	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1109	111	0.1	0.1096	110	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2246	112	0.2	0.2219	111	1	70-135	35	
o-Xylene	ND	0.1000	0.1060	106	0.1	0.1053	105	1	71-133	35	

Analyst: BHW

Date Prepared: 06/01/2009

Date Analyzed: 06/01/2009

Lab Batch ID: 760837

Sample: 531068-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	842	84	1000	841	84	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1040	104	1000	1040	104	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



BS / BSD Recoveries



Project Name: 14" Vac to Jal - Legacy

Work Order #: 334002

Analyst: BHW

Date Prepared: 06/01/2009

Project ID: 2009-092

Date Analyzed: 06/02/2009

Lab Batch ID: 761030

Sample: 531173-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	877	88	1000	873	87	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1120	112	1000	1100	110	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: 14" Vac to Jal - Legacy

Work Order #: 334002

Project ID: 2009-092

Lab Batch ID: 760797

QC- Sample ID: 333729-025 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 06/01/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1162	0.1004	86	0.1162	0.1043	90	4	70-130	35	
Toluene	ND	0.1162	0.0976	84	0.1162	0.0997	86	2	70-130	35	
Ethylbenzene	ND	0.1162	0.0802	69	0.1162	0.0777	67	3	71-129	35	X
m,p-Xylenes	ND	0.2323	0.2091	90	0.2323	0.2156	93	3	70-135	35	
o-Xylene	ND	0.1162	0.1001	86	0.1162	0.1025	88	2	71-133	35	

Lab Batch ID: 760837

QC- Sample ID: 333729-027 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/01/2009

Date Prepared: 06/01/2009

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	1170	1030	88	1170	1060	91	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	69.7	1170	1320	107	1170	1380	112	4	70-135	35	

Lab Batch ID: 761030

QC- Sample ID: 334002-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/02/2009

Date Prepared: 06/01/2009

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	1110	1000	90	1110	1040	94	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1110	1240	112	1110	1290	116	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal - Legacy

Work Order #: 334002

Lab Batch #: 760577

Project ID: 2009-092

Date Analyzed: 05/29/2009

Date Prepared: 05/29/2009

Analyst: JLG

QC- Sample ID: 333999-001 S D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.91	5.39	60	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

Variance/ Corrective Action Report- Sample Log-In

Client: Platts/Basin
 Date/ Time: 05-28-09 @ 1745
 Lab ID #: 3374002
 Initials: JMF

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.5 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/ container? / (air)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont/ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 337175

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal- Legacy

2009-092

03-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 (AAL11), 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



03-AUG-09

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

Reference: XENCO Report No: **337175**
14-Inch Vac to Jal- Legacy
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 337175. 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. 337175 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 337175



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal- Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1 @ 5'	S	Jul-01-09 09:30		337175-001
MW-1 @ 15'	S	Jul-01-09 09:50		337175-002
MW-1 @ 25'	S	Jul-01-09 10:00		337175-003
MW-1 @ 35'	S	Jul-01-09 10:20		337175-004
MW-1 @ 45'	S	Jul-01-09 10:45		337175-005
MW-1 @ 50'	S	Jul-01-09 11:15		337175-006
MW-1 @ 55'	S	Jul-01-09 12:05		337175-007
SB-2 @ 5'	S	Jul-01-09 13:10		337175-008
SB-2 @ 15'	S	Jul-01-09 13:40		337175-009
SB-2 @ 25'	S	Jul-01-09 14:10		337175-010
SB-2 @ 35'	S	Jul-01-09 14:35		337175-011
SB-2 @ 45'	S	Jul-01-09 15:10		337175-012
SB-2 @ 50'	S	Jul-01-09 15:40		337175-013
SB-2 @ 55'	S	Jul-01-09 16:10		337175-014
SB-3 @ 5'	S	Jul-02-09 09:50		337175-015
SB-3 @ 15'	S	Jul-02-09 10:15		337175-016
SB-3 @ 25'	S	Jul-02-09 10:35		337175-017
SB-3 @ 35'	S	Jul-02-09 11:05		337175-018
SB-3 @ 45'	S	Jul-02-09 11:30		337175-019
SB-3 @ 50'	S	Jul-02-09 11:55		337175-020
SB-3 @ 55'	S	Jul-02-09 12:25		337175-021



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal- Legacy

Project ID: 2009-092

Work Order Number: 337175

Report Date: 03-AUG-09

Date Received: 07/06/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764625 Percent Moisture

None

Batch: LBA-764626 Percent Moisture

None

Batch: LBA-764775 TX1005

None

Batch: LBA-764777 TPH by SW8015 Mod

None

Batch: LBA-765019 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765019, 4-Bromofluorobenzene recovered below QC limits Sample Data not confirmed by re-analysis. Samples affected are: 533394-1-BLK,337175-002,337175-001.

4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 337175-003, 337175-002, 337175-001, 337025-001 S, 337025-001 SD, and 533394-1-BKS

SW8021BM

Batch 765019, Toluene recovered below QC limits in the Matrix Spike.

Samples affected are: 337175-001, -002, -003.

The Laboratory Control Sample for Toluene is within laboratory Control Limits



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal- Legacy

Project ID: 2009-092

Work Order Number: 337175

Report Date: 03-AUG-09

Date Received: 07/06/2009

Batch: LBA-765081 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765081: 4-Bromofluorobenzene recovered above QC limits. QC Data not confirmed by re-analysis. Samples affected are: 337175-021, 337175-007.

1,4-Difluorobenzene recovered below QC limits. QC Data not confirmed by re-analysis. Samples affected are: 337175-019, 337175-020, 337175-021, 337175-011.

Matrix interferences is suspected.

Batch: LBA-765200 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765200, Benzene, Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 337175-013, -005, -006, -010, -014.

The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits

SW8021BM

Batch 765200, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533475-1-BLK.

4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 337713-006 S and 337713-006 SD, 337175-006, 337175-005, 337175-010



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal- Legacy

Project ID: 2009-092

Work Order Number: 337175

Report Date: 03-AUG-09

Date Received: 07/06/2009

*Batch: LBA-765231 BTEX-MTBE EPA 8021B
SW8021BM*

Batch 765231, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 337175-015.

4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533520-1-BLK.

1,4-Difluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 337175-009.

4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; Sample data confirmed by re-analysis

Samples affected are: 337719-001 S,337175-004,337175-015. QC data not confirmed by reanalysis.

SW8021BM

Batch 765231, 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: 337175-004, -009, -015.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 765231, Ethylbenzene, m,p-Xylenes , o-Xylene RPD was outside QC limits; is reportable as LCS is passing.

Samples affected are: 337175-004, -009, -015



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal- Legacy

Project ID: 2009-092

Work Order Number: 337175

Report Date: 03-AUG-09

Date Received: 07/06/2009

*Batch: LBA-765323 BTEX-MTBE EPA 8021B
SW8021BM*

Batch 765323, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 337175-012, -016, -017, -008.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 765323, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533559-1-BLK.

4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 533559-1-BKS, 533559-1-BSD, 337175-012S, 337175-012SD

4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 337175-016 and -008

*Batch: LBA-767305 Inorganic Anions by EPA 300
None*

*Batch: LBA-767307 Inorganic Anions by EPA 300
None*



Certificate of Analysis Summary 337175

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal- Legacy

Date Received in Lab: Mon Jul-06-09 12:35 pm

Report Date: 03-AUG-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	337175-001	337175-002	337175-003	337175-004	337175-005	337175-006
	Field Id:	MW-1 @ 5'	MW-1 @ 15'	MW-1 @ 25'	MW-1 @ 35'	MW-1 @ 45'	MW-1 @ 50'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-01-09 09:30	Jul-01-09 09:50	Jul-01-09 10:00	Jul-01-09 10:20	Jul-01-09 10:45	Jul-01-09 11:15
Anions by EPA 300	Extracted:						
	Analyzed:	Jul-31-09 07:55					
	Units/RL:	mg/kg RL					
Chloride		53.4 6.11	23.0 6.77	10.3 5.41	12.5 5.39	22.1 5.14	19.6 5.22
BTEX by EPA 8021B	Extracted:	Jul-09-09 17:00	Jul-09-09 17:00	Jul-09-09 17:00	Jul-11-09 11:15	Jul-11-09 10:00	Jul-11-09 10:00
	Analyzed:	Jul-10-09 01:26	Jul-10-09 02:09	Jul-10-09 07:30	Jul-13-09 10:08	Jul-12-09 15:37	Jul-12-09 15:18
	Units/RL:	mg/kg RL					
Benzene		1.447 0.0611	1.197 0.0338	0.5279 0.1082	0.5556 0.2697	ND 0.0010	ND 0.0010
Toluene		13.56 0.1222	12.27 0.0677	18.58 0.2163	10.74 0.5394	0.0127 0.0021	ND 0.0021
Ethylbenzene		10.15 0.0611	8.475 0.0338	18.72 0.1082	17.45 0.2697	0.0642 0.0010	ND 0.0010
m,p-Xylenes		14.23 0.1222	12.21 0.0677	29.75 0.2163	30.49 0.5394	0.1268 0.0021	0.0025 0.0021
o-Xylene		6.562 0.0611	5.658 0.0338	11.92 0.1082	11.55 0.2697	0.0578 0.0010	ND 0.0010
Total Xylenes		20.792 0.0611	17.868 0.0338	41.67 0.1082	42.04 0.2697	0.1846 0.0010	0.0025 0.0010
Total BTEX		45.949 0.0611	39.81 0.0338	79.4979 0.1082	70.7856 0.2697	0.2615 0.0010	0.0025 0.0010
TPH By SW8015 Mod	Extracted:	Jul-07-09 12:24					
	Analyzed:	Jul-07-09 18:57	Jul-07-09 19:22	Jul-07-09 19:47	Jul-07-09 20:12	Jul-07-09 20:37	Jul-07-09 21:02
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		731 183	551 101	1950 81.1	66.8 16.2	98.4 15.3	336 78.3
C12-C28 Diesel Range Hydrocarbons		2310 183	1980 101	7270 81.1	827 16.2	1060 15.3	2910 78.3
C28-C35 Oil Range Hydrocarbons		ND 183	126 101	435 81.1	51.6 16.2	70.7 15.3	195 78.3
Total TPH		3041 183	2657 101	9655 81.1	945.4 16.2	1229.1 15.3	3441 78.3

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Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 337175

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal- Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Jul-06-09 12:35 pm

Report Date: 03-AUG-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	337175-001	337175-002	337175-003	337175-004	337175-005	337175-006
	Field Id:	MW-1 @ 5'	MW-1 @ 15'	MW-1 @ 25'	MW-1 @ 35'	MW-1 @ 45'	MW-1 @ 50'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-01-09 09:30	Jul-01-09 09:50	Jul-01-09 10:00	Jul-01-09 10:20	Jul-01-09 10:45	Jul-01-09 11:15
Percent Moisture	Extracted:						
	Analyzed:	Jul-06-09 12:45					
	Units/RL:	% RL					
Percent Moisture		18.20 1.00	26.12 1.00	7.55 1.00	7.30 1.00	2.63 1.00	4.21 1.00

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 Brent Barron, II
 Odessa Laboratory Manager



Certificate of Analysis Summary 337175

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal- Legacy

Date Received in Lab: Mon Jul-06-09 12:35 pm

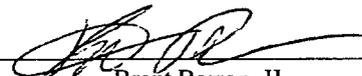
Report Date: 03-AUG-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	337175-007	337175-008	337175-009	337175-010	337175-011	337175-012
	Field Id:	MW-1 @ 55'	SB-2 @ 5'	SB-2 @ 15'	SB-2 @ 25'	SB-2 @ 35'	SB-2 @ 45'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jul-01-09 12:05	Jul-01-09 13:10	Jul-01-09 13:40	Jul-01-09 14:10	Jul-01-09 14:35	Jul-01-09 15:10
Anions by EPA 300	Extracted:						
	Analyzed:	Jul-31-09 07:55					
	Units/RL:	mg/kg RL					
Chloride		179 10.5	47.7 5.58	34.0 5.65	32.3 5.66	ND 5.15	51.2 5.29
BTEX by EPA 8021B	Extracted:	Jul-09-09 17:00	Jul-11-09 12:05	Jul-11-09 11:15	Jul-11-09 10:00	Jul-09-09 17:00	Jul-11-09 12:05
	Analyzed:	Jul-10-09 13:18	Jul-14-09 00:55	Jul-13-09 08:35	Jul-12-09 16:14	Jul-10-09 13:39	Jul-13-09 22:46
	Units/RL:	mg/kg RL					
Benzene		ND 0.0011	ND 0.0279	0.2671 0.0565	ND 0.0011	ND 0.0010	ND 0.0011
Toluene		ND 0.0021	2.410 0.0558	4.984 0.1130	ND 0.0023	ND 0.0021	ND 0.0021
Ethylbenzene		0.0068 0.0011	7.296 0.0279	2.384 0.0565	0.0019 0.0011	0.0032 0.0010	ND 0.0011
m,p-Xylenes		0.0094 0.0021	11.59 0.0558	9.315 0.1130	0.0058 0.0023	0.0078 0.0021	ND 0.0021
o-Xylene		0.0083 0.0011	5.095 0.0279	3.829 0.0565	0.0032 0.0011	0.0035 0.0010	ND 0.0011
Total Xylenes		0.0177 0.0011	16.685 0.0279	13.144 0.0565	0.009 0.0011	0.0113 0.0010	ND 0.0011
Total BTEX		0.0245 0.0011	26.391 0.0279	20.7791 0.0565	0.0109 0.0011	0.0145 0.0010	ND 0.0011
Percent Moisture	Extracted:						
	Analyzed:	Jul-06-09 12:45					
	Units/RL:	% RL					
Percent Moisture		4.84 1.00	10.46 1.00	11.47 1.00	11.60 1.00	2.83 1.00	5.47 1.00
TPH By SW8015 Mod	Extracted:	Jul-07-09 13:22					
	Analyzed:	Jul-08-09 01:35	Jul-08-09 02:01	Jul-08-09 02:26	Jul-08-09 02:52	Jul-08-09 03:16	Jul-08-09 03:41
	Units/RL:	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		25.8 15.8	904 83.8	555 16.9	21.1 16.9	ND 15.4	27.2 15.9
C12-C28 Diesel Range Hydrocarbons		392 15.8	3610 83.8	2210 16.9	196 16.9	57.8 15.4	261 15.9
C28-C35 Oil Range Hydrocarbons		27.6 15.8	141 83.8	107 16.9	ND 16.9	ND 15.4	20.2 15.9
Total TPH		445.4 15.8	4655 83.8	2872 16.9	217.1 16.9	57.8 15.4	308.4 15.9

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 Brent Barron, II
 Odessa Laboratory Manager



Certificate of Analysis Summary 337175

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal- Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Jul-06-09 12:35 pm

Report Date: 03-AUG-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	337175-013	337175-014	337175-015	337175-016	337175-017	337175-018
	<i>Field Id:</i>	SB-2 @ 50'	SB-2 @ 55'	SB-3 @ 5'	SB-3 @ 15'	SB-3 @ 25'	SB-3 @ 35'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-01-09 15:40	Jul-01-09 16:10	Jul-02-09 09:50	Jul-02-09 10:15	Jul-02-09 10:35	Jul-02-09 11:05
Anions by EPA 300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-31-09 07:55	Jul-31-09 07:55	Jul-31-09 07:55	Jul-31-09 07:55	Jul-31-09 13:25	Jul-31-09 13:25
	<i>Units/RL:</i>	mg/kg RL					
Chloride		471 10.7	952 22.4	152 10.6	73.0 5.43	54.4 5.53	24.8 5.19
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-11-09 10:00	Jul-11-09 10:00	Jul-11-09 11:15	Jul-11-09 12:05	Jul-11-09 12:05	Jul-09-09 17:00
	<i>Analyzed:</i>	Jul-12-09 12:50	Jul-12-09 15:55	Jul-13-09 09:31	Jul-14-09 01:13	Jul-14-09 02:26	Jul-10-09 11:30
	<i>Units/RL:</i>	mg/kg RL					
Benzene		ND 0.0011	ND 0.0011	0.0644 0.0528	ND 0.0272	ND 0.5530	ND 0.0010
Toluene		ND 0.0021	ND 0.0022	1.411 0.1055	0.6387 0.0543	2.969 1.106	ND 0.0021
Ethylbenzene		ND 0.0011	ND 0.0011	1.604 0.0528	2.621 0.0272	4.529 0.5530	ND 0.0010
m,p-Xylenes		ND 0.0021	ND 0.0022	2.708 0.1055	4.548 0.0543	7.355 1.106	ND 0.0021
o-Xylene		ND 0.0011	ND 0.0011	0.9809 0.0528	1.919 0.0272	2.875 0.5530	ND 0.0010
Total Xylenes		ND 0.0011	ND 0.0011	3.6889 0.0528	6.467 0.0272	10.23 0.5530	ND 0.0010
Total BTEX		ND 0.0011	ND 0.0011	6.7683 0.0528	9.7267 0.0272	17.728 0.5530	ND 0.0010
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-06-09 12:45					
	<i>Units/RL:</i>	% RL					
Percent Moisture		6.52 1.00	10.91 1.00	5.24 1.00	7.94 1.00	9.58 1.00	3.61 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Jul-07-09 13:22					
	<i>Analyzed:</i>	Jul-08-09 04:06	Jul-08-09 04:30	Jul-08-09 04:55	Jul-08-09 05:20	Jul-08-09 06:10	Jul-08-09 06:35
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		19.6 16.0	16.8 16.8	1550 79.0	477 81.3	887 82.9	ND 15.6
C12-C28 Diesel Range Hydrocarbons		105 16.0	86.8 16.8	4450 79.0	2660 81.3	4560 82.9	103 15.6
C28-C35 Oil Range Hydrocarbons		ND 16.0	ND 16.8	226 79.0	155 81.3	268 82.9	ND 15.6
Total TPH		124.6 16.0	103.6 16.8	6226 79.0	3292 81.3	5715 82.9	103 15.6

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Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 337175

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal- Legacy

Date Received in Lab: Mon Jul-06-09 12:35 pm

Report Date: 03-AUG-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	337175-019	337175-020	337175-021			
	<i>Field Id:</i>	SB-3 @ 45'	SB-3 @ 50'	SB-3 @ 55'			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jul-02-09 11:30	Jul-02-09 11:55	Jul-02-09 12:25			
Anions by EPA 300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-31-09 13:25	Jul-31-09 13:25	Jul-31-09 13:25			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		17.2 5.13	8.94 5.12	24.1 5.14			
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-09-09 17:00	Jul-09-09 17:00	Jul-09-09 17:00			
	<i>Analyzed:</i>	Jul-10-09 11:52	Jul-10-09 12:13	Jul-10-09 12:35			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.0010	ND 0.0010	ND 0.0010			
Toluene		ND 0.0021	ND 0.0020	0.0035 0.0021			
Ethylbenzene		0.0023 0.0010	0.0015 0.0010	0.0142 0.0010			
m,p-Xylenes		0.0054 0.0021	0.0035 0.0020	0.0305 0.0021			
o-Xylene		0.0028 0.0010	0.0018 0.0010	0.0137 0.0010			
Total Xylenes		0.0082 0.0010	0.0053 0.0010	0.0442 0.0010			
Total BTEX		0.0105 0.0010	0.0068 0.0010	0.0619 0.0010			
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-06-09 12:45	Jul-06-09 12:45	Jul-06-09 12:45			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		2.58 1.00	2.27 1.00	2.65 1.00			
TPH By SW8015 Mod	<i>Extracted:</i>	Jul-07-09 13:22	Jul-07-09 13:22	Jul-07-09 13:22			
	<i>Analyzed:</i>	Jul-08-09 06:59	Jul-08-09 07:24	Jul-08-09 07:48			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		17.3 15.3	ND 15.3	23.3 15.4			
C12-C28 Diesel Range Hydrocarbons		113 15.3	72.2 15.3	159 15.4			
C28-C35 Oil Range Hydrocarbons		18.0 15.3	ND 15.3	18.2 15.4			
Total TPH		148.3 15.3	72.2 15.3	200.5 15.4			

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 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.

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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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765019

Sample: 533394-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/09/09 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0370	0.0300	123	80-120	**

Lab Batch #: 765019

Sample: 533394-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/09/09 22:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0348	0.0300	116	80-120	

Lab Batch #: 765019

Sample: 533394-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/09/09 23:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0127	0.0300	42	80-120	**

Lab Batch #: 765019

Sample: 337175-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 01:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0517	0.0300	172	80-120	*

Lab Batch #: 765019

Sample: 337175-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 02:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0556	0.0300	185	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765019

Sample: 337175-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 07:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0530	0.0300	177	80-120	*

Lab Batch #: 765019

Sample: 337025-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 08:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0397	0.0300	132	80-120	**

Lab Batch #: 765019

Sample: 337025-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 08:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0368	0.0300	123	80-120	**

Lab Batch #: 765081

Sample: 533433-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 09:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0366	0.0300	122	80-120	*

Lab Batch #: 765081

Sample: 533433-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 09:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0361	0.0300	120	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765081

Sample: 533433-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 10:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 765081

Sample: 337175-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 11:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0307	0.0300	102	80-120	

Lab Batch #: 765081

Sample: 337175-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 11:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0342	0.0300	114	80-120	

Lab Batch #: 765081

Sample: 337175-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 12:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0304	0.0300	101	80-120	

Lab Batch #: 765081

Sample: 337175-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 12:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0389	0.0300	130	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765081

Sample: 337175-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 13:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	*

Lab Batch #: 765081

Sample: 337175-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 13:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0346	0.0300	115	80-120	

Lab Batch #: 765200

Sample: 533475-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/12/09 08:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0356	0.0300	119	80-120	

Lab Batch #: 765200

Sample: 533475-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/12/09 09:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0155	0.0300	52	80-120	**

Lab Batch #: 765200

Sample: 337175-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 12:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0353	0.0300	118	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765200

Sample: 337175-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 15:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0443	0.0300	148	80-120	*

Lab Batch #: 765200

Sample: 337175-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 15:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0603	0.0300	201	80-120	*

Lab Batch #: 765200

Sample: 337175-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 15:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0334	0.0300	111	80-120	

Lab Batch #: 765200

Sample: 337175-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 16:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0419	0.0300	140	80-120	*

Lab Batch #: 765200

Sample: 337713-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 16:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0403	0.0300	134	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765200

Sample: 337713-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/12/09 17:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0384	0.0300	128	80-120	*

Lab Batch #: 765231

Sample: 533520-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 02:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0350	0.0300	117	80-120	

Lab Batch #: 765231

Sample: 533520-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 03:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0347	0.0300	116	80-120	

Lab Batch #: 765231

Sample: 533520-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 03:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0159	0.0300	53	80-120	*

Lab Batch #: 765231

Sample: 337175-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 08:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0380	0.0300	127	80-120	**
4-Bromofluorobenzene	0.0361	0.0300	120	80-120	

* Surrogate outside of Laboratory QC limits

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

*** 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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765231

Sample: 337175-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 09:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	**
4-Bromofluorobenzene	0.0424	0.0300	141	80-120	**

Lab Batch #: 765231

Sample: 337175-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 10:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0507	0.0300	169	80-120	**

Lab Batch #: 765231

Sample: 337719-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 10:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0362	0.0300	121	80-120	*

Lab Batch #: 765231

Sample: 337719-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 11:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0312	0.0300	104	80-120	

Lab Batch #: 765323

Sample: 533559-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 21:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0368	0.0300	123	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765323

Sample: 533559-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 21:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0362	0.0300	121	80-120	*

Lab Batch #: 765323

Sample: 533559-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/13/09 22:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0164	0.0300	55	80-120	*

Lab Batch #: 765323

Sample: 337175-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/13/09 22:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0330	0.0300	110	80-120	

Lab Batch #: 765323

Sample: 337175-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/14/09 00:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0675	0.0300	225	80-120	**

Lab Batch #: 765323

Sample: 337175-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/14/09 01:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0532	0.0300	177	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 765323

Sample: 337175-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/14/09 02:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 765323

Sample: 337175-012 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/14/09 05:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0393	0.0300	131	80-120	*

Lab Batch #: 765323

Sample: 337175-012 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/14/09 07:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0383	0.0300	128	80-120	*

Lab Batch #: 764775

Sample: 533254-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/07/09 11:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	43.9	50.0	88	70-135	

Lab Batch #: 764775

Sample: 533254-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/07/09 11:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	41.4	50.0	83	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 764775

Sample: 533254-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/07/09 12:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 764775

Sample: 337175-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 18:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	42.5	50.0	85	70-135	

Lab Batch #: 764775

Sample: 337175-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 19:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	48.2	49.9	97	70-135	

Lab Batch #: 764775

Sample: 337175-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 19:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 764775

Sample: 337175-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 20:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	51.8	50.0	104	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 764775

Sample: 337175-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 20:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.5	104	70-135	
o-Terphenyl	49.3	49.8	99	70-135	

Lab Batch #: 764775

Sample: 337175-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 21:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 764775

Sample: 337224-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 21:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 764775

Sample: 337224-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/07/09 21:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 764777

Sample: 533256-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/08/09 00:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	45.0	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: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 764777

Sample: 533256-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/08/09 00:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 764777

Sample: 533256-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/08/09 01:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 764777

Sample: 337175-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 01:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 764777

Sample: 337175-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 02:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 764777

Sample: 337175-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 02:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	51.1	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 764777

Sample: 337175-010 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 02:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.7	94	70-135	
o-Terphenyl	44.5	49.9	89	70-135	

Lab Batch #: 764777

Sample: 337175-011 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 03:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 764777

Sample: 337175-012 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 03:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	100	98	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 764777

Sample: 337175-013 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 04:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 764777

Sample: 337175-014 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 04:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	47.7	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,
Lab Batch #: 764777

Sample: 337175-015 / SMP

Project ID: 2009-092

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/08/09 04:55	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	46.4	49.9	93	70-135	

Lab Batch #: 764777 Sample: 337175-016 / SMP
Units: mg/kg Date Analyzed: 07/08/09 05:20

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/08/09 05:20	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	47.7	49.9	96	70-135	

Lab Batch #: 764777 Sample: 337175-017 / SMP
Units: mg/kg Date Analyzed: 07/08/09 06:10

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/08/09 06:10	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 764777 Sample: 337175-018 / SMP
Units: mg/kg Date Analyzed: 07/08/09 06:35

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/08/09 06:35	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

Lab Batch #: 764777 Sample: 337175-019 / SMP
Units: mg/kg Date Analyzed: 07/08/09 06:59

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/08/09 06:59	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	99.5	100	70-135	
o-Terphenyl	48.0	49.8	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal- Legacy

Work Orders : 337175,

Project ID: 2009-092

Lab Batch #: 764777

Sample: 337175-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 07:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	100	98	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 764777

Sample: 337175-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 07:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 764777

Sample: 337175-007 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 10:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 764777

Sample: 337175-007 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/08/09 10:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	47.7	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.



Blank Spike Recovery



Project Name: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Project ID:

2009-092

Lab Batch #: 765200

Sample: 533475-1-BKS

Matrix: Solid

Date Analyzed: 07/12/2009

Date Prepared: 07/11/2009

Analyst: BRB

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.1000	0.0928	93	70-130	
Toluene	ND	0.1000	0.0886	89	70-130	
Ethylbenzene	ND	0.1000	0.0979	98	71-129	
m,p-Xylenes	ND	0.2000	0.1979	99	70-135	
o-Xylene	ND	0.1000	0.0942	94	71-133	

Lab Batch #: 767305

Sample: 767305-1-BKS

Matrix: Solid

Date Analyzed: 07/31/2009

Date Prepared: 07/31/2009

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	9.70	97	80-120	

Lab Batch #: 767307

Sample: 767307-1-BKS

Matrix: Solid

Date Analyzed: 07/31/2009

Date Prepared: 07/31/2009

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	9.14	91	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes

- Below Reporting Limit



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Analyst: BRB

Date Prepared: 07/09/2009

Project ID: 2009-092

Date Analyzed: 07/09/2009

Lab Batch ID: 765019

Sample: 533394-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0776	78	0.1	0.0799	80	3	70-130	35	
Toluene	ND	0.1000	0.0738	74	0.1	0.0759	76	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0813	81	0.1	0.0840	84	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene	ND	0.1000	0.0793	79	0.1	0.0809	81	2	71-133	35	

Analyst: BRB

Date Prepared: 07/09/2009

Date Analyzed: 07/10/2009

Lab Batch ID: 765081

Sample: 533433-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0787	79	0.1	0.0802	80	2	70-130	35	
Toluene	ND	0.1000	0.0751	75	0.1	0.0766	77	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0845	85	0.1	0.0859	86	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1724	86	0.2	0.1751	88	2	70-135	35	
o-Xylene	ND	0.1000	0.0813	81	0.1	0.0827	83	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: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Analyst: BRB

Date Prepared: 07/11/2009

Project ID: 2009-092

Date Analyzed: 07/13/2009

Lab Batch ID: 765231

Sample: 533520-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0896	90	0.1	0.0916	92	2	70-130	35	
Toluene	ND	0.1000	0.0848	85	0.1	0.0868	87	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0941	94	0.1	0.0959	96	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1876	94	0.2	0.1918	96	2	70-135	35	
o-Xylene	ND	0.1000	0.0896	90	0.1	0.0912	91	2	71-133	35	

Analyst: ASA

Date Prepared: 07/11/2009

Date Analyzed: 07/13/2009

Lab Batch ID: 765323

Sample: 533559-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0947	95	0.1	0.0932	93	2	70-130	35	
Toluene	ND	0.1000	0.0912	91	0.1	0.0897	90	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1030	103	0.1	0.1019	102	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2103	105	0.2	0.2056	103	2	70-135	35	
o-Xylene	ND	0.1000	0.0982	98	0.1	0.0967	97	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: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Analyst: BHW

Lab Batch ID: 764775

Units: mg/kg

Date Prepared: 07/07/2009

Sample: 533254-1-BKS

Batch #: 1

Project ID: 2009-092

Date Analyzed: 07/07/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	865	87	1000	842	84	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1020	102	1000	970	97	5	70-135	35	

Analyst: BHW

Date Prepared: 07/07/2009

Date Analyzed: 07/08/2009

Lab Batch ID: 764777

Sample: 533256-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	870	87	1000	916	92	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	1070	107	4	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: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Lab Batch #: 767305

Date Analyzed: 07/31/2009

QC- Sample ID: 339247-001 S

Reporting Units: mg/kg

Project ID: 2009-092

Analyst: LATCOR

Date Prepared: 07/31/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	157	212	386	108	80-120	

Lab Batch #: 767307

Date Analyzed: 07/31/2009

QC- Sample ID: 337175-017 S

Reporting Units: mg/kg

Date Prepared: 07/31/2009

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	54.4	111	158	93	80-120	

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

- Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Project ID: 2009-092

Lab Batch ID: 765019

QC- Sample ID: 337025-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/10/2009

Date Prepared: 07/09/2009

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B 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	0.1006	0.0715	71	0.1006	0.0767	76	7	70-130	35	
Toluene	ND	0.1006	0.0692	69	0.1006	0.0731	73	5	70-130	35	X
Ethylbenzene	ND	0.1006	0.0781	78	0.1006	0.0807	80	3	71-129	35	
m,p-Xylenes	ND	0.2012	0.1601	80	0.2012	0.1638	81	2	70-135	35	
o-Xylene	ND	0.1006	0.0751	75	0.1006	0.0770	77	2	71-133	35	

Lab Batch ID: 765200

QC- Sample ID: 337713-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/12/2009

Date Prepared: 07/11/2009

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B 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	0.1123	0.0720	64	0.1123	0.0742	66	3	70-130	35	X
Toluene	ND	0.1123	0.0765	68	0.1123	0.0779	69	2	70-130	35	X
Ethylbenzene	ND	0.1123	0.0867	77	0.1123	0.0866	77	0	71-129	35	
m,p-Xylenes	ND	0.2247	0.1789	80	0.2247	0.1776	79	1	70-135	35	
o-Xylene	ND	0.1123	0.0850	76	0.1123	0.0840	75	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Form 3 - M MSD Recoveries



Project Name: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Project ID: 2009-092

Lab Batch ID: 765231

QC- Sample ID: 337719-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/13/2009

Date Prepared: 07/11/2009

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1025	0.0713	70	0.1025	0.0682	67	4	70-130	35
Toluene	ND	0.1025	0.0592	58	0.1025	0.0499	49	17	70-130	35	X
Ethylbenzene	ND	0.1025	0.0615	60	0.1025	0.0417	41	38	71-129	35	XF
m,p-Xylenes	ND	0.2050	0.1225	60	0.2050	0.0824	40	39	70-135	35	XF
o-Xylene	ND	0.1025	0.0583	57	0.1025	0.0372	36	44	71-133	35	XF

Lab Batch ID: 765323

QC- Sample ID: 337175-012 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/14/2009

Date Prepared: 07/11/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1058	0.0838	79	0.1058	0.0820	78	2	70-130	35
Toluene	ND	0.1058	0.0765	72	0.1058	0.0731	69	5	70-130	35	X
Ethylbenzene	ND	0.1058	0.0796	75	0.1058	0.0731	69	9	71-129	35	X
m,p-Xylenes	ND	0.2116	0.1580	75	0.2116	0.1470	69	7	70-135	35	X
o-Xylene	ND	0.1058	0.0780	74	0.1058	0.0709	67	10	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 Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Form 3 - MS / MSD Recoveries



Project Name: 14-Inch Vac to Jal- Legacy

Work Order # : 337175

Project ID: 2009-092

Lab Batch ID: 764775

QC- Sample ID: 337224-001 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 07/07/2009

Date Prepared: 07/07/2009

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	729	1130	1840	98	1130	1870	101	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	3940	1130	5230	114	1130	5440	133	4	70-135	35	

Lab Batch ID: 764777

QC- Sample ID: 337175-007 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 07/08/2009

Date Prepared: 07/07/2009

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	25.8	1050	916	85	1050	915	85	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	392	1050	1430	99	1050	1390	95	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, I = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14-Inch Vac to Jal- Legacy

Work Order #: 337175

Lab Batch #: 767305
Date Analyzed: 07/31/2009
QC- Sample ID: 339247-001 D
Reporting Units: mg/kg

Date Prepared: 07/31/2009
Batch #: 1

Project ID: 2009-092
Analyst: LATCOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	157	166	6	20	

Lab Batch #: 767307
Date Analyzed: 07/31/2009
QC- Sample ID: 337175-017 D
Reporting Units: mg/kg

Date Prepared: 07/31/2009
Batch #: 1

Analyst: LATCOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	54.4	50.6	3	20	

Lab Batch #: 764625
Date Analyzed: 07/06/2009
QC- Sample ID: 337166-001 D
Reporting Units: %

Date Prepared: 07/06/2009
Batch #: 1

Analyst: LATCOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	3.72	4.09	9	20	

Lab Batch #: 764626
Date Analyzed: 07/06/2009
QC- Sample ID: 337175-008 D
Reporting Units: %

Date Prepared: 07/06/2009
Batch #: 1

Analyst: LATCOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	10.5	11.0	5	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

Page 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
Sampler Signature: Camille Bryant

Project Name: 14-Inch Vac to Jal - Legacy
Project #: 2009-092
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: Standard TRRP NPDES

Fax No: (505) 396-1429

e-mail: cibryant@basin-consulting.com

(lab use only)

ORDER #: 337115

FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Filtration	Total # of Containers	Preservation & I of Containers								Matrix	Analyze For:		RUSH FAT (Pre-Remedy) 24 hr. 72 hr.	Standard TAT 4 DAY	
							NO ₃	NO ₂	HCl	H ₂ SO ₄	HNO ₃	H ₂ O ₂	NaOH	Na ₂ SO ₄		None	Other (Specify)			ICLP
01	MW-1 @ 5'		7/1/09	0930		1	X								SOIL	X		X		
02	MW-1 @ 15'		7/1/09	0950		1	X								SOIL	X		X		
03	MW-1 @ 25'		7/1/09	1000		1	X								SOIL	X		X		
04	MW-1 @ 35'		7/1/09	1020		1	X								SOIL	X		X		
05	MW-1 @ 45'		7/1/09	1045		1	X								SOIL	X		X		
06	MW-1 @ 50'		7/1/09	1115		1	X								SOIL	X		X		
07	MW-1 @ 55'		7/1/09	1205		1	X								SOIL	X		X		
08	SB-2 @ 5'		7/1/09	1310		1	X								SOIL	X		X		
09	SB-2 @ 15'		7/1/09	1340		1	X								SOIL	X		X		
10	SB-2 @ 25'		7/1/09	1410		1	X								SOIL	X		X		

Special Instructions:

Requisitioned by: <u>Camille Bryant</u>	Date: <u>7/6/09</u>	Time: <u>1235</u>	Received by:	Date:	Time:
Requisitioned by:	Date:	Time:	Received by:	Date:	Time:
Requisitioned by:	Date:	Time:	Received by: ELDI: <u>Andrea Lem</u>	Date: <u>7.6.09</u>	Time: <u>12:35</u>

Laboratory Comments:
Sample Containers Intact? N
VOCs Free of Headspace? N
Labels on container(s) N
Custody seals on container(s) N
Custody seals on cooler(s) N
Sample Hand Delivered N
by Sampler/Client Rep? N
by Courier? N UPS N DHL N FedEx N Lone Star N
Temperature Upon Receipt: 41 °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

Project Name: 14-Inch Vac to Jal - Legacy

Company Name: Basin Environmental Service Technologies, LLC

Project #: 2009-092

Company Address: P. O. Box 301

Project Loc: Les County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J. Henry

Telephone No: (575) 605-7210

Fax No: (505) 305-1429

Report Format: Standard IRRP NPDES

Sampler Signature: Camille Bryant

e-mail: cbryant@basin-consulting.com

(lab use only)		Analyze For:																																	
ORDER #:		TOTAL																																	
LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Total # of Containers	Field Filtrate	HNO3	HCl	H2SO4	NaOH	Na2SO4	None	Other (Specify)	Matrix	SPH	TPH	VOCs	SVOCs	Metal/Trace	IC	PC	OC	P	M	D	A	T	Q	R	Other (Specify)				
	33715																																		
11	SB-2 @ 35'			7/1/09	1435	1	X								SOIL	X																		X	
12	SB-2 @ 45'			7/1/09	1510	1	X								SOIL	X																		X	
13	SB-2 @ 50'			7/1/09	1540	1	X								SOIL	X																		X	
14	SB-2 @ 55'			7/1/09	1610	1	X								SOIL	X																		X	
15	SB-3 @ 5'			7/2/09	0950	1	X								SOIL	X																		X	
16	SB-3 @ 15'			7/2/09	1015	1	X								SOIL	X																		X	
17	SB-3 @ 25'			7/2/09	1035	1	X								SOIL	X																		X	
18	SB-3 @ 35'			7/2/09	1105	1	X								SOIL	X																		X	
19	SB-3 @ 45'			7/2/09	1130	1	X								SOIL	X																		X	
20	SB-3 @ 50'			7/2/09	1155	1	X								SOIL	X																		X	

Special Instructions:										Laboratory Comments:									
Reinforced by: <u>Camille Bryant</u> Date: <u>7/16/09</u> Time: <u>12:35</u>										Sample Containers Intact? <input checked="" type="checkbox"/>									
Reinforced by:										VOCs Free of Headspace? <input checked="" type="checkbox"/>									
Reinforced by:										Labels on containers? <input checked="" type="checkbox"/>									
Reinforced by:										Custody seals on containers? <input checked="" type="checkbox"/>									
Reinforced by:										Custody seals on cooler(s)? <input checked="" type="checkbox"/>									
Reinforced by:										Sample Hand Delivered? <input checked="" type="checkbox"/>									
Reinforced by:										By courier? <input checked="" type="checkbox"/> UPS <input type="checkbox"/> DHL <input type="checkbox"/> FedEx <input type="checkbox"/> Long Star									
Reinforced by:										Temperature Upon Receipt: <u>4.1</u> °C									

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Camille Bryant

Project Name: 14-Inch Vec to Jal - Legacy

Company Name: Basin Environmental Service Technologies, LLC

Project #: 2009-092

Company Address: P. O. Box 301

Project Loc: Lee County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J. Henry

Telephone No: (875) 605-7210

Fax No: (505) 398-1429

Report Format: Standard TRRP NPDES

Sampler Signature: Camille Bryant

e-mail: cibryant@basin-consulting.com

ORDER #: 337175

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field # of Containers	Preservation & # of Containers		Matrix		Analyze For:		RUSH TAT (pre-shipment) 24, 48, 72 Hrs	
							IN	OUT	Soil	Water	TCLP TOTAL	Other		Other
Z1	SB-3 @ 55'			7/2/09	1225	1	X				X			

Special Instructions:						Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) Sample Hand Delivered by Sampler/Client Rep.? by Courier? URS DHS FedEx Lone Star Temperature Upon Receipt: 4.1 °C									
Requisitioned by:	<u>Camille Bryant</u>	Date:	<u>7/6/09</u>	Time:	<u>1235</u>	Received by:		Date:		Time:					
Requisitioned by:		Date:		Time:		Received by:		Date:		Time:					
Requisitioned by:		Date:		Time:		Received by (ELOT):	<u>Andrea Lewis</u>	Date:	<u>7-6-09</u>	Time:	<u>12:35</u>				

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 7-6-09 12:35
 Lab ID #: 337175
 Initials: al

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.1 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 analysts.
 - Cooling process had begun shortly after sampling event

Analytical Report 337279

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal - Legacy

2009-092

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



04-AUG-09

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

Reference: XENCO Report No: **337279**
14-Inch Vac to Jal - Legacy
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 337279. 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. 337279 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 337279



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-3 @ 60'	S	Jul-02-09 12:35		337279-001

CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 337279

Report Date: 04-AUG-09

Date Received: 07/07/2009

Sample receipt non conformances and Comments:

Per client's request, Chloride by E300 is to be analyzed although sample 337279-001 (soil) expired 07/30/09. Lab will proceed with 07/31/09 request.

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764742 Percent Moisture

None

Batch: LBA-764867 TPH by SW8015 Mod

None

Batch: LBA-765081 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765081, 4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 533433-1-BKS,337279-001. Matrix interference is suspected.

Batch: LBA-767458 Inorganic Anions by EPA 300

E300



Certificate of Analysis Summary 337279
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal - Legacy

Date Received in Lab: Tue Jul-07-09 10:15 am

Report Date: 04-AUG-09

Project Manager: Brent Barron, II

Analysis Requested	<i>Lab Id:</i>	337279-001				
	<i>Field Id:</i>	SB-3 @ 60'				
	<i>Depth:</i>					
	<i>Matrix:</i>	SOIL				
	<i>Sampled:</i>	Jul-02-09 12:35				
Anions by EPA 300	<i>Extracted:</i>					
	<i>Analyzed:</i>	Aug-03-09 19:34				
	<i>Units/RL:</i>	mg/kg RL				
Chloride		46.1 5.13				
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-09-09 17:00				
	<i>Analyzed:</i>	Jul-10-09 12:56				
	<i>Units/RL:</i>	mg/kg RL				
Benzene		ND 0.0010				
Toluene		ND 0.0021				
Ethylbenzene		0.0038 0.0010				
m,p-Xylenes		0.0087 0.0021				
o-Xylene		0.0041 0.0010				
Total Xylenes		0.0128 0.0010				
Total BTEX		0.0166 0.0010				
Percent Moisture	<i>Extracted:</i>					
	<i>Analyzed:</i>	Jul-07-09 16:00				
	<i>Units/RL:</i>	% RL				
Percent Moisture		2.46 1.00				
TPH By SW8015 Mod	<i>Extracted:</i>	Jul-08-09 13:39				
	<i>Analyzed:</i>	Jul-08-09 16:22				
	<i>Units/RL:</i>	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		23.7 15.4				
C12-C28 Diesel Range Hydrocarbons		126 15.4				
C28-C35 Oil Range Hydrocarbons		18.5 15.4				
Total TPH		168.2 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.

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 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.

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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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: 14-Inch Vac to Jal - Legacy

Work Orders : 337279,

Project ID: 2009-092

Lab Batch #: 765081

Sample: 533433-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 09:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0366	0.0300	122	80-120	*

Lab Batch #: 765081

Sample: 533433-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 09:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0361	0.0300	120	80-120	

Lab Batch #: 765081

Sample: 533433-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/10/09 10:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 765081

Sample: 337279-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/10/09 12:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0385	0.0300	128	80-120	*

Lab Batch #: 764867

Sample: 533304-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/08/09 15:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	53.0	50.0	106	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: 14-Inch Vac to Jal - Legacy

Work Orders : 337279,

Project ID: 2009-092

Lab Batch #: 764867

Sample: 533304-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 07/08/09 15:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 764867

Sample: 533304-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 07/08/09 15:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

Lab Batch #: 764867

Sample: 337279-001 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 16:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.9	108	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 764867

Sample: 337279-001 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 19:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 764867

Sample: 337279-001 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 07/08/09 19:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	70-135	
o-Terphenyl	54.2	50.0	108	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.



Blank Spike Recovery



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 337279

Project ID:

2009-092

Lab Batch #: 767458

Sample: 767458-1-BKS

Matrix: Solid

Date Analyzed: 08/03/2009

Date Prepared: 08/03/2009

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	9.93	99	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 337279

Analyst: BRB

Date Prepared: 07/09/2009

Project ID: 2009-092

Date Analyzed: 07/10/2009

Lab Batch ID: 765081

Sample: 533433-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0787	79	0.1	0.0802	80	2	70-130	35	
Toluene	ND	0.1000	0.0751	75	0.1	0.0766	77	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0845	85	0.1	0.0859	86	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1724	86	0.2	0.1751	88	2	70-135	35	
o-Xylene	ND	0.1000	0.0813	81	0.1	0.0827	83	2	71-133	35	

Analyst: BHW

Date Prepared: 07/08/2009

Date Analyzed: 07/08/2009

Lab Batch ID: 764867

Sample: 533304-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	816	82	1000	818	82	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	848	85	1000	843	84	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: 14-Inch Vac to Jal - Legacy

Work Order #: 337279

Lab Batch #: 767458

Date Analyzed: 08/03/2009

QC- Sample ID: 337279-001 S

Reporting Units: mg/kg

Project ID: 2009-092

Analyst: LATCOR

Date Prepared: 08/03/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes							
Chloride		46.1	103	150	101	80-120	

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

☐ - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: 14-Inch Vac to Jal - Legacy



Work Order #: 337279

Project ID: 2009-092

Lab Batch ID: 764867

QC- Sample ID: 337279-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/08/2009

Date Prepared: 07/08/2009

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	23.7	1030	872	82	1020	891	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	126	1030	1040	89	1020	1060	92	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 337279

Lab Batch #: 767458

Project ID: 2009-092

Date Analyzed: 08/03/2009

Date Prepared: 08/03/2009

Analyst: LATCOR

QC- Sample ID: 337279-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	46.1	45.4	2	20	

Lab Batch #: 764742

Date Analyzed: 07/07/2009

Date Prepared: 07/07/2009

Analyst: BEV

QC- Sample ID: 337200-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	4.27	3.58	18	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
 Variance/ Corrective Action Report- Sample Log-In

Client: Basin Plains
 Date/ Time: 07/07/09 10:15
 Lab ID #: 337279
 Initials: MMH

Sample Receipt Checklist

Client Initials

	Yes	No		
#1 Temperature of container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D.L.	C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#3 Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present	
#4 Custody Seals intact on sample bottles/container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 346217

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal-Legacy

2009-092

30-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)



30-SEP-09

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

Reference: XENCO Report No: **346217**
14-Inch Vac to Jal-Legacy
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 346217. 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. 346217 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.

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Sample Cross Reference 346217



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal-Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Treatment Cell # 1	S	Sep-24-09 16:00		346217-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal-Legacy

Project ID: 2009-092

Work Order Number: 346217

Report Date: 30-SEP-09

Date Received: 09/28/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-774613 Percent Moisture

None

Batch: LBA-774863 TX1005

None

Batch: LBA-774935 BTEX-MTBE EPA 8021B

SW8021BM

Batch 774935, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 346217-001.



Certificate of Analysis Summary 346217

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal-Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Sep-28-09 09:35 am

Report Date: 30-SEP-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	346217-001				
	Field Id:	Treatment Cell # 1				
	Depth:					
	Matrix:	SOIL				
	Sampled:	Sep-24-09 16:00				
BTEX by EPA 8021B	Extracted:	Sep-30-09 10:00				
	Analyzed:	Sep-30-09 15:50				
	Units/RL:	mg/kg RL				
Benzene		1.539 0.2060				
Toluene		31.40 0.4120				
Ethylbenzene		30.15 0.2060				
m,p-Xylenes		51.23 0.4120				
o-Xylene		21.99 0.2060				
Total Xylenes		73.22 0.2060				
Total BTEX		136.31 0.2060				
Percent Moisture	Extracted:					
	Analyzed:	Sep-29-09 09:07				
	Units/RL:	% RL				
Percent Moisture		2.92 1.00				
TPH By SW8015 Mod	Extracted:	Sep-29-09 22:44				
	Analyzed:	Sep-30-09 05:23				
	Units/RL:	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		2560 155				
C12-C28 Diesel Range Hydrocarbons		8530 155				
C28-C35 Oil Range Hydrocarbons		220 155				
Total TPH		11310 155				

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 user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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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.

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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: 14-Inch Vac to Jal-Legacy

Work Orders : 346217,

Project ID: 2009-092

Lab Batch #: 774935

Sample: 539231-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/09 13:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0303	0.0300	101	80-120	

Lab Batch #: 774935

Sample: 539231-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/09 13:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0302	0.0300	101	80-120	

Lab Batch #: 774935

Sample: 346217-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/09 15:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0194	0.0300	65	80-120	**
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 774863

Sample: 539177-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/29/09 23:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 774863

Sample: 539177-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/09 00:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	100	88	70-135	
o-Terphenyl	36.7	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

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



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal-Legacy

Work Orders : 346217,

Project ID: 2009-092

Lab Batch #: 774863

Sample: 539177-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg

Date Analyzed: 09/30/09 00:25

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.5	100	81	70-135	
o-Terphenyl	39.7	50.0	79	70-135	

Lab Batch #: 774863

Sample: 346217-001 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 09/30/09 05:23

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	41.4	50.0	83	70-135	

Lab Batch #: 774863

Sample: 345957-002 D / MD

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 09/30/09 05:49

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.2	100	96	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.



Blank Spike Recovery



Project Name: 14-Inch Vac to Jal-Legacy

Work Order #: 346217

Project ID:

2009-092

Lab Batch #: 774935

Sample: 539231-1-BKS

Matrix: Solid

Date Analyzed: 09/30/2009

Date Prepared: 09/30/2009

Analyst: ASA

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.1000	0.0926	93	70-130	
Toluene	ND	0.1000	0.0917	92	70-130	
Ethylbenzene	ND	0.1000	0.0941	94	71-129	
m,p-Xylenes	ND	0.2000	0.2057	103	70-135	
o-Xylene	ND	0.1000	0.0990	99	71-133	

Blank Spike Recovery [D] = 100*[C]/[B]

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal-Legacy

Work Order #: 346217

Analyst: BHW

Lab Batch ID: 774863

Sample: 539177-1-BKS

Date Prepared: 09/29/2009

Batch #: 1

Project ID: 2009-092

Date Analyzed: 09/29/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	848	85	1000	877	88	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	813	81	1000	846	85	4	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: 14-Inch Vac to Jal-Legacy

Work Order #: 346217

Lab Batch #: 774613

Project ID: 2009-092

Date Analyzed: 09/29/2009

Date Prepared: 09/29/2009

Analyst: BEV

QC- Sample ID: 346186-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	12.2	13.0	7	20	

Lab Batch #: 774863

Date Analyzed: 09/30/2009

Date Prepared: 09/29/2009

Analyst: BHW

QC- Sample ID: 345957-002 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

TPH By SW8015 Mod	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
C6-C12 Gasoline Range Hydrocarbons	ND	ND	NC	35	
C12-C28 Diesel Range Hydrocarbons	36.0	39.3	9	35	
C28-C35 Oil Range Hydrocarbons	ND	ND	NC	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 F-20 East
 Odessa, Texas 79765
 Phone: 432-563-1600
 Fax: 432-563-1713

Project Manager: Curt Stanley PAGE 01 OF 02
 Company Name: Basin Environmental Service Technologies, LLC
 Company Address: 2800 Plains Hwy
 City/State/Zip: Lovington, NM 88280
 Telephone No: 5751441-2244 Fax No: (505) 395-1429
 Sampler Signature: [Signature] e-mail: cstanley@basinenv.com

Project Name: 14-Inch Vac to Jai - Legacy
 Project #: 2009-092
 Project Loc: Lea County, NM
 PO #: PAA - J. Henry
 Report Format: Standard TRRP NPOES

(lab use only)							Analyze For																						
ORDER #:	LAB #	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Photo	Total # of Containers	# of Containers	Preservation & # of Containers	Matrix	TCU-P	TOTAL	As	Cd	Cu	Cr	Fe	Mn	Ni	NO3-N	NO2-N	PAH	EPA Particulate Test	Chloride E 300	RUSH TAT (pre-scheduled 24, 48, 72 hrs)	Standard TAT		
		Treatment Cell #1			5/24/2009	1600		1	X	None	Soil	X																	X
Special Instructions:							Laboratory Comments:																						
Requested by	Date	Time	Received by	Date	Time	Received by	Sample contained residue? N VOCs free of headspace? N Labels on container(s)? N Custody seals on container(s)? N Custody seals on container(s)? N Sample Hand Delivered? N by Sample/Client Rep? N by Carrier? UPS CHL FedEx Lone Star Date: 5/28/09 Temperature Upon Receipt: 3.6 °C																						
Requested by	Date	Time	Received by	Date	Time	Received by																							
Requested by	Date	Time	Received by	Date	Time	Received by																							

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 9.28.09 9:35
 Lab ID #: 340217
 Initials: ca

Sample Receipt Checklist

			Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	No	3.6 °C	
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/> Yes	No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#11	Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> 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 346641

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal - Legacy

2009-092

06-OCT-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 (AAL11), 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)



06-OCT-09

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

Reference: XENCO Report No: **346641**
14" Vac to Jal - Legacy
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 346641. 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. 346641 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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Sample Cross Reference 346641



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West Exc. NSW-1	S	Sep-30-09 16:00		346641-001
West Exc. WSW-1	S	Sep-30-09 16:05		346641-002
West Exc. SSW-1	S	Sep-30-09 16:10		346641-003
West Exc. Floor-1	S	Sep-30-09 16:15		346641-004
West Exc. Floor-2	S	Sep-30-09 16:20		346641-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 346641

Report Date: 06-OCT-09

Date Received: 10/01/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-775229 Percent Moisture

None

Batch: LBA-775555 BTEX-MTBE EPA 8021B
SW8021BM

Batch 775555, Benzene, Ethylbenzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 346641-001, -003, -002, -004, -005.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-775682 TPH by SW8015 Mod

None



Certificate of Analysis Summary 346641

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: 14" Vac to Jal - Legacy

Date Received in Lab: Thu Oct-01-09 07:35 am

Report Date: 06-OCT-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	346641-001	346641-002	346641-003	346641-004	346641-005	
	Field Id:	West Exc. NSW-1	West Exc. WSW-1	West Exc. SSW-1	West Exc Floor-1	West Exc. Floor-2	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Sep-30-09 16:00	Sep-30-09 16:05	Sep-30-09 16:10	Sep-30-09 16:15	Sep-30-09 16:20	
BTEX by EPA 8021B	Extracted:	Oct-02-09 16:15	Oct-02-09 16:15	Oct-02-09 16:15	Oct-02-09 16:15	Oct-02-09 16:15	
	Analyzed:	Oct-03-09 14:50	Oct-03-09 15:12	Oct-03-09 15:32	Oct-03-09 15:54	Oct-03-09 16:15	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0012	
Toluene		ND 0.0022	ND 0.0024	ND 0.0023	ND 0.0023	ND 0.0024	
Ethylbenzene		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0012	
m,p-Xylenes		ND 0.0022	ND 0.0024	ND 0.0023	ND 0.0023	ND 0.0024	
o-Xylene		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0012	
Total Xylenes		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0012	
Total BTEX		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0012	
Percent Moisture	Extracted:						
	Analyzed:	Oct-02-09 09:28	Oct-02-09 09:28	Oct-02-09 09:28	Oct-02-09 09:28	Oct-02-09 09:28	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		9.99 1.00	18.1 1.00	12.6 1.00	14.6 1.00	16.6 1.00	
TPH By SW8015 Mod	Extracted:	Oct-04-09 14:52	Oct-04-09 14:52	Oct-04-09 14:52	Oct-04-09 14:52	Oct-04-09 14:52	
	Analyzed:	Oct-05-09 14:02	Oct-05-09 14:28	Oct-05-09 14:53	Oct-05-09 15:18	Oct-05-09 15:43	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.7	ND 18.3	ND 17.2	ND 17.6	ND 18.0	
C12-C28 Diesel Range Hydrocarbons		ND 16.7	ND 18.3	20.7 17.2	ND 17.6	ND 18.0	
C28-C35 Oil Range Hydrocarbons		ND 16.7	ND 18.3	ND 17.2	ND 17.6	ND 18.0	
Total TPH		ND 16.7	ND 18.3	20.7 17.2	ND 17.6	ND 18.0	

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.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

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.
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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: 14" Vac to Jal - Legacy

Work Orders : 346641,

Project ID: 2009-092

Lab Batch #: 775555

Sample: 539581-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/03/09 08:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0293	0.0300	98	80-120	

Lab Batch #: 775555

Sample: 539581-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/03/09 08:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0297	0.0300	99	80-120	

Lab Batch #: 775555

Sample: 539581-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/03/09 09:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0295	0.0300	98	80-120	

Lab Batch #: 775555

Sample: 346641-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 14:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0312	0.0300	104	80-120	

Lab Batch #: 775555

Sample: 346641-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 15:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0325	0.0300	108	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: 14" Vac to Jal - Legacy

Work Orders : 346641,

Project ID: 2009-092

Lab Batch #: 775555

Sample: 346641-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 15:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0308	0.0300	103	80-120	

Lab Batch #: 775555

Sample: 346641-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 15:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0316	0.0300	105	80-120	

Lab Batch #: 775555

Sample: 346641-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 16:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0316	0.0300	105	80-120	

Lab Batch #: 775555

Sample: 346856-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 18:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0314	0.0300	105	80-120	

Lab Batch #: 775555

Sample: 346856-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/03/09 18:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0322	0.0300	107	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: 14" Vac to Jal - Legacy

Work Orders : 346641,
Lab Batch #: 775682

Project ID: 2009-092

Sample: 539683-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 10/05/09 11:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.3	100	91	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 775682

Sample: 539683-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 10/05/09 12:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.5	100	88	70-135	
o-Terphenyl	36.2	50.0	72	70-135	

Lab Batch #: 775682

Sample: 539683-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 10/05/09 12:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.5	100	76	70-135	
o-Terphenyl	36.7	50.0	73	70-135	

Lab Batch #: 775682

Sample: 346641-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/05/09 14:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.6	100	73	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 775682

Sample: 346641-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/05/09 14:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.3	100	73	70-135	
o-Terphenyl	35.6	50.0	71	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: 14" Vac to Jal - Legacy

Work Orders : 346641,

Project ID: 2009-092

Lab Batch #: 775682

Sample: 346641-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/09 14:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.1	100	76	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 775682

Sample: 346641-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/09 15:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.1	100	74	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 775682

Sample: 346641-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/09 15:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.5	100	76	70-135	
o-Terphenyl	36.0	50.0	72	70-135	

Lab Batch #: 775682

Sample: 346327-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/09 21:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	100	94	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 775682

Sample: 346327-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/09 22:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	100	91	70-135	
o-Terphenyl	36.0	50.0	72	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: 14" Vac to Jal - Legacy

Work Order #: 346641

Analyst: ASA

Date Prepared: 10/02/2009

Project ID: 2009-092

Date Analyzed: 10/03/2009

Lab Batch ID: 775555

Sample: 539581-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0966	97	0.1	0.0976	98	1	70-130	35	
Toluene	ND	0.1000	0.0932	93	0.1	0.0947	95	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0937	94	0.1	0.0956	96	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2039	102	0.2	0.2082	104	2	70-135	35	
o-Xylene	ND	0.1000	0.0993	99	0.1	0.1009	101	2	71-133	35	

Analyst: BHW

Date Prepared: 10/04/2009

Date Analyzed: 10/05/2009

Lab Batch ID: 775682

Sample: 539683-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	852	85	1000	867	87	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	823	82	1000	828	83	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 / MSD Recoveries



Project Name: 14" Vac to Jal - Legacy

Work Order #: 346641

Project ID: 2009-092

Lab Batch ID: 775555

QC- Sample ID: 346856-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/03/2009

Date Prepared: 10/02/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.1095	0.0675	62	0.1088	0.0643	59	5	70-130	35	X
Toluene	ND	0.1095	0.0702	64	0.1088	0.0651	60	8	70-130	35	X
Ethylbenzene	ND	0.1095	0.0685	63	0.1088	0.0646	59	6	71-129	35	X
m,p-Xylenes	ND	0.2189	0.1647	75	0.2176	0.1504	69	9	70-135	35	X
o-Xylene	ND	0.1095	0.0751	69	0.1088	0.0696	64	8	71-133	35	X

Lab Batch ID: 775682

QC- Sample ID: 346327-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/05/2009

Date Prepared: 10/04/2009

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	1020	914	90	1020	894	88	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1020	877	86	1020	855	84	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal - Legacy

Work Order #: 346641

Lab Batch #: 775229

Project ID: 2009-092

Date Analyzed: 10/02/2009

Date Prepared: 10/02/2009

Analyst: BEV

QC- Sample ID: 346641-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.99	9.96	0	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

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin Env
 Date/ Time: 10-01-09 00735
 Lab ID #: 344041
 Initials: JMF

Sample Receipt Checklist

			Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	No	L. C
#2 Shipping container in good condition?	<input checked="" type="radio"/> Yes	No	
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	<input checked="" type="radio"/> Not Present
#4 Custody Seals intact on sample bottles/ container/ label	<input checked="" type="radio"/> Yes	No	Not Present
#5 Chain of Custody present?	<input checked="" type="radio"/> Yes	No	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	No	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No	ID written on Cont / Lid
#9 Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#11 Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	No	
#12 Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	No	See Below
#13 Samples properly preserved?	<input checked="" type="radio"/> Yes	No	See Below
#14 Sample bottles intact?	<input checked="" type="radio"/> Yes	No	
#15 Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#16 Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No	See Below
#19 Subcontract of sample(s)?	Yes	No	<input checked="" type="radio"/> Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="radio"/> 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 351779

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal Legacy

2009-092

16-NOV-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 (AAL11), 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)



16-NOV-09

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

Reference: XENCO Report No: **351779**
14-Inch Vac to Jal Legacy
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 351779. 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. 351779 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 351779



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GP # 1 @ 6 Ft	S	Nov-10-09 13:00		351779-001
GP # 2 @ Grade	S	Nov-10-09 13:05		351779-002
GP # 3 @ Grade	S	Nov-10-09 13:10		351779-003
GP # 4 @ 5 Ft	S	Nov-10-09 13:15		351779-004
GP # 5 @ 7 Ft	S	Nov-10-09 13:20		351779-005
GP # 6 @ 9 Ft	S	Nov-10-09 13:25		351779-006
GP # 7 @ 9 Ft	S	Nov-10-09 13:30		351779-007
GP # 8 @ 9 Ft	S	Nov-10-09 13:35		351779-008
GP # 9 @ 10 Ft	S	Nov-10-09 13:40		351779-009
GP # 10 @ 7 Ft	S	Nov-10-09 13:45		351779-010
GP # 11 @ 7 Ft	S	Nov-10-09 13:50		351779-011
GP # 12 @ 10 Ft	S	Nov-10-09 13:55		351779-012
GP # 13 @ 10 Ft	S	Nov-10-09 14:00		351779-013
GP # 14 @ 12 Ft	S	Nov-10-09 14:05		351779-014
GP # 15 @ 10 Ft	S	Nov-10-09 14:10		351779-015
GP # 16 @ 10 Ft	S	Nov-10-09 14:15		351779-016

CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal Legacy

Project ID: 2009-092

Work Order Number: 351779

Report Date: 16-NOV-09

Date Received: 11/11/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-781290 Inorganic Anions by EPA 300

None

Batch: LBA-781303 TPH by SW8015 Mod

None

Batch: LBA-781403 Percent Moisture

None

Batch: LBA-781406 Percent Moisture

None

Batch: LBA-781411 Inorganic Anions In Soil by E300

None



Certificate of Analysis Summary 351779

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Wed Nov-11-09 08:12 am

Report Date: 16-NOV-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	351779-001	351779-002	351779-003	351779-004	351779-005	351779-006
	<i>Field Id:</i>	GP # 1 @ 6 Ft	GP # 2 @ Grade	GP # 3 @ Grade	GP # 4 @ 5 Ft	GP # 5 @ 7 Ft	GP # 6 @ 9 Ft
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-10-09 13:00	Nov-10-09 13:05	Nov-10-09 13:10	Nov-10-09 13:15	Nov-10-09 13:20	Nov-10-09 13:25
Inorganic Anions In Soil by E300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-11-09 13:33	Nov-12-09 08:42				
	<i>Units/RL:</i>	mg/kg RL					
Chloride		119 10.7	11.6 10.2	3510 51.7	772 27.2	142 10.4	ND 5.22
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-12-09 14:41					
	<i>Units/RL:</i>	% RL					
Percent Moisture		6.85 1.00	1.48 1.00	3.37 1.00	8.09 1.00	4.20 1.00	4.18 1.00
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-11-09 12:45					
	<i>Analyzed:</i>	Nov-11-09 18:43	Nov-11-09 19:10	Nov-11-09 19:37	Nov-11-09 20:03	Nov-11-09 20:30	Nov-11-09 20:57
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16.1	31.1 15.2	ND 15.5	ND 16.3	ND 15.7	216 15.6
C12-C28 Diesel Range Hydrocarbons		31.4 16.1	522 15.2	263 15.5	19.7 16.3	62.1 15.7	4190 15.6
C28-C35 Oil Range Hydrocarbons		ND 16.1	134 15.2	74.8 15.5	ND 16.3	ND 15.7	290 15.6
Total TPH		31.4 16.1	687 15.2	338 15.5	19.7 16.3	62.1 15.7	4696 15.6

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Version 1 014


Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 351779

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal Legacy

Date Received in Lab: Wed Nov-11-09 08:12 am

Report Date: 16-NOV-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	351779-007	351779-008	351779-009	351779-010	351779-011	351779-012
	<i>Field Id:</i>	GP # 7 @ 9 Ft	GP # 8 @ 9 Ft	GP # 9 @ 10 Ft	GP # 10 @ 7 Ft	GP # 11 @ 7 Ft	GP # 12 @ 10 Ft
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Nov-10-09 13:30	Nov-10-09 13:35	Nov-10-09 13:40	Nov-10-09 13:45	Nov-10-09 13:50	Nov-10-09 13:55
Inorganic Anions In Soil by E300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-12-09 08:42					
	<i>Units/RL:</i>	mg/kg RL					
Chloride		71.5 5.40	378 27.5	6.72 5.38	16.6 10.6	21.3 5.14	ND 5.17
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-12-09 14:41	Nov-12-09 14:41	Nov-12-09 14:41	Nov-12-09 14:52	Nov-12-09 14:52	Nov-12-09 14:52
	<i>Units/RL:</i>	% RL					
Percent Moisture		7.38 1.00	9.23 1.00	7.03 1.00	5.46 1.00	2.80 1.00	3.25 1.00
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-11-09 12:45					
	<i>Analyzed:</i>	Nov-11-09 21:25	Nov-11-09 21:52	Nov-11-09 22:19	Nov-11-09 22:47	Nov-11-09 23:41	Nov-12-09 00:08
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 16.2	ND 16.5	36.4 16.1	ND 15.9	ND 15.4	688 15.5
C12-C28 Diesel Range Hydrocarbons		40.6 16.2	ND 16.5	286 16.1	23.2 15.9	170 15.4	3670 15.5
C28-C35 Oil Range Hydrocarbons		ND 16.2	ND 16.5	16.2 16.1	ND 15.9	18.6 15.4	227 15.5
Total TPH		40.6 16.2	ND 16.5	339 16.1	23.2 15.9	189 15.4	4585 15.5

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Version: 1.014


Brent Barron, II
 Odessa Laboratory Manager



Certificate of Analysis Summary 351779
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal Legacy

Date Received in Lab: Wed Nov-11-09 08:12 am

Report Date: 16-NOV-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	351779-013	351779-014	351779-015	351779-016		
	<i>Field Id:</i>	GP # 13 @ 10 Ft	GP # 14 @ 12 Ft	GP # 15 @ 10 Ft	GP # 16 @ 10 Ft		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Nov-10-09 14:00	Nov-10-09 14:05	Nov-10-09 14:10	Nov-10-09 14:15		
Inorganic Anions In Soil by E300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-12-09 08:42	Nov-12-09 08:42	Nov-12-09 08:42	Nov-12-09 08:42		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		219 22.8	9.32 5.21	62.9 5.43	9.57 6.29		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Nov-12-09 14:52	Nov-12-09 14:52	Nov-12-09 14:52	Nov-12-09 14:52		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		12.1 1.00	3.95 1.00	7.86 1.00	20.5 1.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Nov-11-09 12:45	Nov-11-09 12:45	Nov-11-09 12:45	Nov-11-09 12:45		
	<i>Analyzed:</i>	Nov-12-09 00:36	Nov-12-09 01:03	Nov-12-09 01:29	Nov-12-09 01:55		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 17.1	212 15.6	ND 16.2	ND 18.8		
C12-C28 Diesel Range Hydrocarbons		51.9 17.1	2920 15.6	69.7 16.2	ND 18.8		
C28-C35 Oil Range Hydrocarbons		ND 17.1	199 15.6	ND 16.2	ND 18.8		
Total TPH		51.9 17.1	3331 15.6	69.7 16.2	ND 18.8		

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Version 1.014

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.

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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



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal Legacy

Work Orders : 351779,

Project ID: 2009-092

Lab Batch #: 781303

Sample: 542950-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/11/09 17:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.9	124	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 781303

Sample: 542950-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/11/09 17:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.8	127	70-135	
o-Terphenyl	54.1	49.9	108	70-135	

Lab Batch #: 781303

Sample: 542950-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/11/09 18:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.8	93	70-135	
o-Terphenyl	58.3	49.9	117	70-135	

Lab Batch #: 781303

Sample: 351779-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 18:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	99.9	88	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 781303

Sample: 351779-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 19:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.1	99.9	76	70-135	
o-Terphenyl	45.3	50.0	91	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: 14-Inch Vac to Jal Legacy

Work Orders : 351779,

Project ID: 2009-092

Lab Batch #: 781303

Sample: 351779-003 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 11/11/09 19:37

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	99.7	87	70-135	
o-Terphenyl	53.8	49.9	108	70-135	

Lab Batch #: 781303

Sample: 351779-004 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 11/11/09 20:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.1	100	87	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 781303

Sample: 351779-005 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 11/11/09 20:30

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	100	85	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 781303

Sample: 351779-006 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 11/11/09 20:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.7	99.8	87	70-135	
o-Terphenyl	54.7	49.9	110	70-135	

Lab Batch #: 781303

Sample: 351779-007 / SMP

Batch: 1 **Matrix:** Soil

Units: mg/kg

Date Analyzed: 11/11/09 21:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	100	87	70-135	
o-Terphenyl	54.8	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal Legacy

Work Orders : 351779,

Project ID: 2009-092

Lab Batch #: 781303

Sample: 351779-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 21:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.7	99.8	82	70-135	
o-Terphenyl	51.1	49.9	102	70-135	

Lab Batch #: 781303

Sample: 351779-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 22:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	100	94	70-135	
o-Terphenyl	60.3	50.0	121	70-135	

Lab Batch #: 781303

Sample: 351779-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 22:47

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.0	100	76	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 781303

Sample: 351779-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/11/09 23:41

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.8	99.6	71	70-135	
o-Terphenyl	43.9	49.8	88	70-135	

Lab Batch #: 781303

Sample: 351779-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 00:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	50.3	50.0	101	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

† If results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal Legacy

Work Orders : 351779,

Project ID: 2009-092

Lab Batch #: 781303

Sample: 351779-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 00:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	53.3	50.0	107	70-135	

Lab Batch #: 781303

Sample: 351779-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 01:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.4	100	95	70-135	
o-Terphenyl	59.0	50.0	118	70-135	

Lab Batch #: 781303

Sample: 351779-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 01:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.4	99.7	89	70-135	
o-Terphenyl	55.4	49.9	111	70-135	

Lab Batch #: 781303

Sample: 351779-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 01:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	99.5	90	70-135	
o-Terphenyl	57.0	49.8	114	70-135	

Lab Batch #: 781303

Sample: 351779-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 04:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	54.7	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.



Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal Legacy

Work Orders : 351779,

Lab Batch #: 781303

Sample: 351779-001 SD / MSD

Project ID: 2009-092

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/12/09 04:33

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	53.5	50.0	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.



Blank Spike Recovery



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 351779

Project ID:

2009-092

Lab Batch #: 781290

Sample: 781290-1-BKS

Matrix: Solid

Date Analyzed: 11/11/2009

Date Prepared: 11/11/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Soil by E300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	10.6	106	75-125	

Lab Batch #: 781411

Sample: 781411-1-BKS

Matrix: Solid

Date Analyzed: 11/12/2009

Date Prepared: 11/12/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Soil by E300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	10.4	104	75-125	

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



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 351779

Analyst: BEV

Date Prepared: 11/11/2009

Project ID: 2009-092

Date Analyzed: 11/11/2009

Lab Batch ID: 781303

Sample: 542950-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	999	892	89	998	895	90	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	999	808	81	998	835	84	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 Recoveries



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 351779

Lab Batch #: 781290

Date Analyzed: 11/11/2009

QC- Sample ID: 351720-001 S

Reporting Units: mg/kg

Project ID: 2009-092

Analyst: LATCOR

Date Prepared: 11/11/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	2120	1300	3700	122	75-125	

Lab Batch #: 781411

Date Analyzed: 11/12/2009

QC- Sample ID: 351779-006 S

Reporting Units: mg/kg

Date Prepared: 11/12/2009

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	115	120	104	75-125	

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

BRL - Below Reporting Limit



Form 3 - M MSD Recoveries



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 351779

Project ID: 2009-092

Lab Batch ID: 781303

QC- Sample ID: 351779-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/12/2009

Date Prepared: 11/11/2009

Analyst: BEV

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	934	87	1070	951	89	2	70-135	35
C12-C28 Diesel Range Hydrocarbons	31.4	1070	837	75	1070	864	78	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 351779

Lab Batch #: 781290

Project ID: 2009-092

Date Analyzed: 11/11/2009

Date Prepared: 11/11/2009

Analyst: LATICOR

QC- Sample ID: 351720-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	2120	2110	0	20	

Lab Batch #: 781411

Date Analyzed: 11/12/2009

Date Prepared: 11/12/2009

Analyst: LATICOR

QC- Sample ID: 351779-006 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	ND	ND	NC	20	

Lab Batch #: 781403

Date Analyzed: 11/12/2009

Date Prepared: 11/12/2009

Analyst: BEV

QC- Sample ID: 351716-016 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.47	8.39	12	20	

Lab Batch #: 781406

Date Analyzed: 11/12/2009

Date Prepared: 11/12/2009

Analyst: BEV

QC- Sample ID: 351779-010 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	5.46	5.87	7	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 79766

Phone: 432-663-1800
Fax: 432-663-1713

Project Manager: Curt Stanley PAGE 01 OF 02

Project Name: 14-Inch Vac to Jal Legacy

Company Name: Basin Environmental Service Technologies, LLC

Project #: 2009-092

Company Address: 2800 Plains Hwy

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J. Henry

Telephone No: (575) 441-2244

Fax No: (575) 398-1429

Report Format: Standard TRRP NPDES

Sampler Signature:

e-mail: cdstanley@basin-consulting.com

(lab use only)
ORDER #: 351779

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers										Matrix	TPH: 418.1 (8016M) 8015B	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	Semi-volatiles	BTEX 8021B/8030 or BTEX 8280	RCI	N.O.R.M.	PAH	EPA Paint Filter Test	Chloride (300)	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Ice	HNO ₃	HCl (VOA X 2)	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None (PAH)	Other (Specify)	DW-Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid																	
01	GP #1 @ 6 ft			11/10/2009	1300	1	1	X																								X	X	
02	GP #2 @ Grade			11/10/2009	1305	1	1	X																								X	X	
03	GP #3 @ Grade			11/10/2009	1310	1	1	X																								X	X	
04	GP #4 @ 5 ft			11/10/2009	1315	1	1	X																								X	X	
05	GP #5 @ 7 ft			11/10/2009	1320	1	1	X																								X	X	
06	GP #6 @ 9 ft			11/10/2009	1325	1	1	X																								X	X	
07	GP #7 @ 9 ft			11/10/2009	1330	1	1	X																								X	X	
08	GP #8 @ 9 ft			11/10/2009	1335	1	1	X																								X	X	
09	GP #9 @ 10 ft			11/10/2009	1340	1	1	X																								X	X	
10	GP #10 @ 7 ft			11/10/2009	1345	1	1	X																								X	X	

Special Instructions:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11/10/09	08:12			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by ELOT:	Date:	Time:
				11/11/09	8:12

Laboratory Comments: 40g.c
 Sample Containers Intact?
 VOCs Free of Headspace?
 Labels on container(s)
 Custody seals on container(s)
 Custody seals on cooler(s)
 Sample Hand Delivered by Sampler/Cust Rep?
 by Courier? UPS DHL FedEx Lone Star
 Temperature Upon Receipt: -4 °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: Curt Stanley PAGE 02 OF 02
Company Name: Basin Environmental Service Technologies, LLC
Company Address: 2800 Plains Hwy
City/State/Zip: Lovington, NM 88260
Telephone No: (575) 441-2244 Fax No: (575) 398-1429
Sampler Signature: [Signature] e-mail: cdstanley@basin-consulting.com

Project Name: 14-inch Vac to Jal Legacy
Project #: 2009-092
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: Standard TRRP NPDES

(lab use only)
ORDER #: 351779

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers										Matrix
								100	HNO ₃	HCl (VOA X 2)	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₈	None (PAH)	Other (Specify)	DW-Drinking Water SL-Sludge	GW - Groundwater S-Soil/Solid	
11	GP #11 @ 7 ft			11/10/2009	1350		1	X									Soil	X
12	GP #12 @ 10 ft			11/10/2009	1355		1	X									Soil	X
13	GP #13 @ 10 ft			11/10/2009	1400		1	X									Soil	X
14	GP #14 @ 12 ft			11/10/2009	1405		1	X									Soil	X
15	GP #15 @ 10 ft			11/10/2009	1410		1	X									Soil	X
16	GP #16 @ 10 ft			11/10/2009	1015		1	X									Soil	X

TCLP:		8015B	TX 1005	TX 1006	Carbon (C, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatile	Semivolatiles	BTEX 8021B/6030 or BTEX 8080	RCI	N.O.R.I.M.	PAH	EPA Paint Filter Test	Chloride E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs
TOTAL:																	

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
<u>[Signature]</u>	<u>11/11/09</u>	<u>08:12</u>			
			Received by ELOT:		
			<u>[Signature]</u>	<u>11/11/09</u>	<u>8:12</u>

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? Y UPS Y DHL Y FedEx Y Lone Star

Temperature Upon Receipt: °C

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains
 Date/ Time: 11/11/09 8:12
 Lab ID #: 351779
 Initials: gnd

Sample Receipt Checklist

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

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 355590

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal Legacy

2009-092

17-DEC-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 (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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)



17-DEC-09

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

Reference: XENCO Report No: **355590**
14-Inch Vac to Jal Legacy
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 355590. 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. 355590 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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Sample Cross Reference 355590



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB # 4 @ 10'	S	Dec-10-09 09:15		355590-001
SB # 4 @ 20'	S	Dec-10-09 09:40		355590-002
SB # 4 @ 30'	S	Dec-10-09 10:25		355590-003
SB # 4 @ 40'	S	Dec-10-09 11:00		355590-004
SB # 4 @ 50'	S	Dec-10-09 11:55		355590-005
SB # 5 @ 10'	S	Dec-10-09 13:10		355590-006
SB # 5 @ 20'	S	Dec-10-09 13:40		355590-007
SB # 5 @ 30'	S	Dec-10-09 14:15		355590-008
SB # 5 @ 40'	S	Dec-10-09 15:00		355590-009
SB # 5 @ 45'	S	Dec-10-09 15:50		355590-010



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal Legacy

Project ID: 2009-092

Work Order Number: 355590

Report Date: 17-DEC-09

Date Received: 12/14/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-785868 Inorganic Anions by EPA 300

None

Batch: LBA-785882 Percent Moisture

None

Batch: LBA-785886 Percent Moisture

None

Batch: LBA-785951 Inorganic Anions In Soil by E300

None



Certificate of Analysis Summary 355590

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal Legacy

Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Dec-14-09 05:20 pm

Report Date: 17-DEC-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	355590-001	355590-002	355590-003	355590-004	355590-005	355590-006
	<i>Field Id:</i>	SB # 4 @ 10'	SB # 4 @ 20'	SB # 4 @ 30'	SB # 4 @ 40'	SB # 4 @ 50'	SB # 5 @ 10'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-10-09 09:15	Dec-10-09 09:40	Dec-10-09 10:25	Dec-10-09 11:00	Dec-10-09 11:55	Dec-10-09 13:10
Inorganic Anions In Soil by E300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-15-09 14:06					
	<i>Units/RL:</i>	mg/kg RL					
Chloride		85.3 5.77	26.8 5.55	61.8 5.38	26.5 5.17	ND 5.02	117 5.64
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-15-09 17:00					
	<i>Units/RL:</i>	% RL					
Percent Moisture		13.4 1.00	9.89 1.00	7.01 1.00	3.27 1.00	12.1 1.00	11.3 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 user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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 Brent Barron, II
 Odessa Laboratory Manager



Certificate of Analysis Summary 355590

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14-Inch Vac to Jal Legacy

Date Received in Lab: Mon Dec-14-09 05:20 pm

Report Date: 17-DEC-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	355590-007	355590-008	355590-009	355590-010		
	<i>Field Id:</i>	SB # 5 @ 20'	SB # 5 @ 30'	SB # 5 @ 40'	SB # 5 @ 45'		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-10-09 13:40	Dec-10-09 14:15	Dec-10-09 15:00	Dec-10-09 15:50		
Inorganic Anions In Soil by E300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-16-09 08:38	Dec-16-09 08:38	Dec-16-09 08:38	Dec-16-09 08:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		263 11.2	55.5 5.23	6.71 5.04	183 10.4		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-15-09 17:00	Dec-15-09 17:00	Dec-15-09 17:00	Dec-15-09 17:00		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		10.5 1.00	4.41 1.00	ND 1.00	3.44 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.

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 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.

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4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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



Blank Spike Recovery



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 355590

Project ID:

2009-092

Lab Batch #: 785868

Sample: 785868-1-BKS

Matrix: Solid

Date Analyzed: 12/15/2009

Date Prepared: 12/15/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.8	108	75-125	

Lab Batch #: 785951

Sample: 785951-1-BKS

Matrix: Solid

Date Analyzed: 12/16/2009

Date Prepared: 12/16/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.6	106	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

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

BRL - Below Reporting Limit



Form 3 - MS Recoveries



Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 355590

Lab Batch #: 785868

Date Analyzed: 12/15/2009

QC- Sample ID: 355585-001 S

Reporting Units: mg/kg

Project ID: 2009-092

Analyst: LATCOR

Date Prepared: 12/15/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	255	1260	1640	110	75-125	

Lab Batch #: 785951

Date Analyzed: 12/16/2009

QC- Sample ID: 355590-008 S

Reporting Units: mg/kg

Date Prepared: 12/16/2009

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	55.5	112	172	104	75-125	

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

Below Reporting Limit



Sample Duplicate Recovery

Project Name: 14-Inch Vac to Jal Legacy

Work Order #: 355590

Lab Batch #: 785868
Date Analyzed: 12/15/2009
QC- Sample ID: 355585-001 D
Reporting Units: mg/kg

Date Prepared: 12/15/2009
Batch #: 1

Project ID: 2009-092
Analyst: LATICOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	255	241	6	20	

Lab Batch #: 785951
Date Analyzed: 12/16/2009
QC- Sample ID: 355590-008 D
Reporting Units: mg/kg

Date Prepared: 12/16/2009
Batch #: 1

Analyst: LATICOR
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	55.5	56.7	2	20	

Lab Batch #: 785882
Date Analyzed: 12/15/2009
QC- Sample ID: 355585-001 D
Reporting Units: %

Date Prepared: 12/15/2009
Batch #: 1

Analyst: WRU
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	20.9	22.4	7	20	

Lab Batch #: 785886
Date Analyzed: 12/15/2009
QC- Sample ID: 355590-007 D
Reporting Units: %

Date Prepared: 12/15/2009
Batch #: 1

Analyst: WRU
Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	10.5	11.4	9	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
Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 12-14-09 @ 1720
 Lab ID #: 355590
 Initials: JMF

Sample Receipt Checklist

			Client Initials		
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	No	2.6 °C	
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	No	<input checked="" type="radio"/> Not Present	
#4	Custody Seals intact on sample bottles/ container? /labels	<input checked="" type="radio"/> Yes	No	Not Present	
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	No		
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	No	See Below	
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	No	See Below	
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No	See Below	
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> 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 384537

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" VAC to Jal Legacy

SRS# 2009-92

16-AUG-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

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Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)



16-AUG-10

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

Reference: XENCO Report No: **384537**
14" VAC to Jal Legacy
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 384537. 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. 384537 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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Sample Cross Reference 384537



PLAINS ALL AMERICAN EH&S, Midland, TX

14" VAC to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP-1	S	Aug-04-10 11:00		384537-001
Screened SP-2	S	Aug-04-10 11:10		384537-002



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" VAC to Jal Legacy



Project ID: SRS# 2009-92

Work Order Number: 384537

Report Date: 16-AUG-10

Date Received: 08/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-817871 Percent Moisture

None

Batch: LBA-817882 TPH by SW8015 Mod

None

Batch: LBA-818918 BTEX by EPA 8021

SW8021BM

Batch 818918, Benzene, Toluene, m,p-Xylenes RPD was outside QC limits.

Samples affected are: 384537-001, -002

SW8021BM

Batch 818918, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 384537-001,384537-002.

4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 384537-002,384537-001.

SW8021BM

Batch 818918, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 384537-001, -002.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits



Certificate of Analysis Summary 384537

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" VAC to Jal Legacy



Project Id: SRS# 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Aug-05-10 02:10 pm

Report Date: 16-AUG-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	384537-001	384537-002				
	Field Id:	Screened SP-1	Screened SP-2				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	Aug-04-10 11:00	Aug-04-10 11:10				
BTEX by EPA 8021	Extracted:	Aug-13-10 14:30	Aug-13-10 14:30				
	Analyzed:	Aug-16-10 05:32	Aug-16-10 07:06				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		0.0173 0.0103	0.0297 0.0107				
Toluene		0.1184 0.0205	0.1580 0.0215				
Ethylbenzene		0.3405 0.0103	0.3963 0.0107				
m,p-Xylenes		1.206 0.0205	1.354 0.0215				
o-Xylene		0.7582 0.0103	1.784 0.0107				
Xylenes, Total		1.964 0.0103	3.138 0.0107				
Total BTEX		2.440 0.0103	3.722 0.0107				
Percent Moisture	Extracted:						
	Analyzed:	Aug-07-10 09:24	Aug-07-10 09:24				
	Units/RL:	% RL	% RL				
Percent Moisture		6.29 1.00	6.91 1.00				
TPH by SW8015 Mod	Extracted:	Aug-06-10 13:15	Aug-06-10 13:15				
	Analyzed:	Aug-06-10 22:58	Aug-06-10 23:19				
	Units/RL:	mg/kg RL	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		1260 80.0	1320 80.4				
C12-C28 Diesel Range Hydrocarbons		3550 80.0	3400 80.4				
C28-C35 Oil Range Hydrocarbons		201 80.0	148 80.4				
Total TPH		5011 80.0	4868 80.4				

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.

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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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: 14" VAC to Jal Legacy

Work Orders : 384537,

Project ID: SRS# 2009-92

Lab Batch #: 818918

Sample: 570654-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/15/10 22:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 818918

Sample: 570654-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/15/10 22:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 818918

Sample: 570654-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/16/10 00:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0286	0.0300	95	80-120	

Lab Batch #: 818918

Sample: 385503-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/16/10 01:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0327	0.0300	109	80-120	

Lab Batch #: 818918

Sample: 385503-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/16/10 01:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0292	0.0300	97	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: 14" VAC to Jal Legacy

Work Orders : 384537,

Project ID: SRS# 2009-92

Lab Batch #: 818918

Sample: 384537-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/16/10 05:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0190	0.0300	63	80-120	**
4-Bromofluorobenzene	0.0981	0.0300	327	80-120	**

Lab Batch #: 818918

Sample: 384537-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/16/10 07:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0171	0.0300	57	80-120	**
4-Bromofluorobenzene	0.0941	0.0300	314	80-120	**

Lab Batch #: 817882

Sample: 570025-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 21:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	63.9	50.0	128	70-135	

Lab Batch #: 817882

Sample: 570025-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 22:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	57.0	50.2	114	70-135	

Lab Batch #: 817882

Sample: 570025-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/06/10 22:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	57.2	50.1	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.



Form 2 - Surrogate Recoveries

Project Name: 14" VAC to Jal Legacy

Work Orders : 384537,

Project ID: SRS# 2009-92

Lab Batch #: 817882

Sample: 384537-001 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 08/06/10 22:58	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		116	100	116	70-135	
o-Terphenyl		53.0	50.0	106	70-135	

Lab Batch #: 817882

Sample: 384537-002 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 08/06/10 23:19	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		116	99.8	116	70-135	
o-Terphenyl		50.0	49.9	100	70-135	

Lab Batch #: 817882

Sample: 384564-004 S / MS

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 08/07/10 05:53	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		125	100	125	70-135	
o-Terphenyl		47.7	50.2	95	70-135	

Lab Batch #: 817882

Sample: 384564-004 SD / MSD

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 08/07/10 06:12	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		124	101	123	70-135	
o-Terphenyl		56.0	50.3	111	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: 14" VAC to Jal Legacy

Work Order #: 384537

Analyst: ASA

Date Prepared: 08/13/2010

Project ID: SRS# 2009-92

Date Analyzed: 08/15/2010

Lab Batch ID: 818918

Sample: 570654-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1000	0.1119	112	0.1	0.1104	110	1	70-130	35	
Toluene	ND	0.1000	0.1042	104	0.1	0.1016	102	3	70-130	35	
Ethylbenzene	ND	0.1000	0.1094	109	0.1	0.1059	106	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.2195	110	0.2	0.2111	106	4	70-135	35	
o-Xylene	ND	0.1000	0.1102	110	0.1	0.1075	108	2	71-133	35	

Analyst: BEV

Date Prepared: 08/06/2010

Date Analyzed: 08/06/2010

Lab Batch ID: 817882

Sample: 570025-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1070	107	1000	1120	112	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	877	88	1000	1000	100	13	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 - MSD Recoveries



Project Name: 14" VAC to Jal Legacy

Work Order #: 384537

Project ID: SRS# 2009-92

Lab Batch ID: 818918

QC- Sample ID: 385503-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/16/2010

Date Prepared: 08/13/2010

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.1088	0.0010	1	0.1088	0.0688	63	194	70-130	35
Toluene	ND	0.1088	0.0032	3	0.1088	0.0566	52	179	70-130	35	XF
Ethylbenzene	ND	0.1088	0.0511	47	0.1088	0.0469	43	9	71-129	35	X
m,p-Xylenes	ND	0.2176	0.0024	1	0.2176	0.0551	25	183	70-135	35	XF
o-Xylene	ND	0.1088	0.0454	42	0.1088	0.0484	44	6	71-133	35	X

Lab Batch ID: 817882

QC- Sample ID: 384564-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/07/2010

Date Prepared: 08/06/2010

Analyst: BEV

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	1050	1130	108	1060	1120	106	1	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1050	956	91	1060	1030	97	7	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: 14" VAC to Jal Legacy

Work Order #: 384537

Lab Batch #: 817871

Project ID: SRS# 2009-92

Date Analyzed: 08/07/2010

Date Prepared: 08/07/2010

Analyst: JLG

QC- Sample ID: 384538-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.30	9.69	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 79785

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

Project Manager: Camille Bryant

Project Name: 14" Vac to Jal Legacy

Company Name: Basin Environmental Consulting, LLC

Project #: SRS# 2009-92

Company Address: P.O. Box 381

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA-J. Henry

Telephone No: (575)605-7210

Fax No: (505) 398-1429

Report Format: Standard TRRP NPDES

Sampler Signature: Camille Bryant

e-mail: cibryant@basin-consulting.com

(lab use only) **ORDER #:** 384537

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers							Matrix		Analyze For:								RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY										
								Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₈	None	Other (Specify)	DW - Drinking Water St. - Study	GW - Groundwater S - Soil/Sol	NP - Non-Portable - Specify DRB	TPH: 418.1	8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)			SAR / ESP / CEC	Metals: As Ag Bg Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.C.R.M			
-001	Screened SP-1			4-Aug-10	1100		1	X										X																		
-002	Screened SP-2			4-Aug-10	1110		1	X										X																		

Special Instructions: Hold for BTEX analysis

Special Instructions:						Laboratory Comments:					
Requisitioned by: <u>Camille Bryant</u>						VOCs Free of Headpace? <input checked="" type="checkbox"/> N					
Date:	Time:	Received by: <u>[Signature]</u>				Date:	Time:	Custody seals on container(s) <u>intact</u> <input checked="" type="checkbox"/> N			
<u>8/5/10</u>	<u>09:00</u>					<u>8/5/10</u>	<u>09:00</u>				
Requisitioned by: <u>[Signature]</u>						Samples Hand Delivered by Sampler/Client Rep? <input checked="" type="checkbox"/> N					
Date:	Time:	Received by: <u>[Signature]</u>				Date:	Time:	by Courier? <input checked="" type="checkbox"/> N			
<u>8/5/10</u>	<u>14:10</u>					<u>8/5/10</u>	<u>14:10</u>	Temperature Upon Receipt: <u>40.2 C</u> <input checked="" type="checkbox"/> N			
Requisitioned by: <u>[Signature]</u>						Temperature Upon Receipt: <u>40.2 C</u>					
						Temperature Upon Receipt: <u>1.1</u> °C					



XENCO Laboratories
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin / Plains
 Date/Time: 8/5/10 14:10
 Lab ID #: 324537
 Initials: AS

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and <u>bottles</u> ?	Yes	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>11</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

Contact: _____ Contacted by: _____ Date/Time: _____
 Regarding: _____
 Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 386163
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS# 2009-92

30-AUG-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), 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)

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Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

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Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



30-AUG-10

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

Reference: XENCO Report No: **386163**
14" Vac to Jal Legacy
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 386163. 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. 386163 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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Sample Cross Reference 386163



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP #3	S	Aug-17-10 10:30		386163-001
Screened SP #4	S	Aug-17-10 10:35		386163-002
Screened SP #5	S	Aug-17-10 10:40		386163-003
Screened SP #6	S	Aug-17-10 10:45		386163-004
Screened SP #7	S	Aug-17-10 10:50		386163-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal Legacy



Project ID: SRS# 2009-92
Work Order Number: 386163

Report Date: 30-AUG-10
Date Received: 08/18/2010

Sample receipt non conformances and Comments:

Client/Consultant authorized the analysis of BTEX on samples 386163-002 through -005 on August 23, 2010

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-819442 TPH by SW8015 Mod
SW8015MOD_NM

Batch 819442, o-Terphenyl recovered above QC limits . Matrix interferences is suspected for this surrogate failure, 1-Chlorooctane was within QC limits; data not confirmed by re-analysis
Samples affected are: 386163-001.

Batch: LBA-819487 Percent Moisture
AD2216A

Batch 819487, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 386163-004, -002, -001, -003, -005.

Batch: LBA-820715 BTEX by EPA 8021B
SW8021BM

Batch 820715, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 386163-003.

4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 386163-003,386163-004,386163-002,386163-005.



Certificate of Analysis Summary 386163

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Wed Aug-18-10 11:55 am

Report Date: 30-AUG-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	386163-001	386163-002	386163-003	386163-004	386163-005	
	<i>Field Id:</i>	Screened SP #3	Screened SP #4	Screened SP #5	Screened SP #6	Screened SP #7	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Aug-17-10 10:30	Aug-17-10 10:35	Aug-17-10 10:40	Aug-17-10 10:45	Aug-17-10 10:50	
BTEX by EPA 8021	<i>Extracted:</i>		Aug-26-10 15:57	Aug-26-10 15:57	Aug-26-10 15:57	Aug-26-10 15:57	
	<i>Analyzed:</i>		Aug-27-10 21:41	Aug-27-10 20:55	Aug-27-10 22:27	Aug-27-10 21:18	
	<i>Units/RL:</i>		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene			ND 0.1077	ND 0.0217	ND 0.1080	ND 0.1094	
Toluene			ND 0.2155	0.0814 0.0434	0.2311 0.2160	ND 0.2187	
Ethylbenzene			0.4600 0.1077	0.3981 0.0217	0.9537 0.1080	0.6792 0.1094	
m,p-Xylenes			1.673 0.2155	1.443 0.0434	6.488 0.2160	4.426 0.2187	
o-Xylene			1.405 0.1077	1.513 0.0217	6.944 0.1080	4.880 0.1094	
Xylenes, Total			3.078 0.1077	2.956 0.0217	13.432 0.1080	9.306 0.1094	
Total BTEX			3.538 0.1077	3.436 0.0217	14.617 0.1080	9.985 0.1094	
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Aug-19-10 08:29					
	<i>Units/RL:</i>	% RL					
Percent Moisture		5.64 1.00	7.36 1.00	8.04 1.00	7.78 1.00	9.29 1.00	
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-18-10 11:55					
	<i>Analyzed:</i>	Aug-18-10 15:10	Aug-18-10 15:30	Aug-18-10 15:50	Aug-18-10 16:09	Aug-18-10 16:49	
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		643 79.1	1120 80.6	1190 81.2	1490 81.1	1290 82.5	
C12-C28 Diesel Range Hydrocarbons		5810 79.1	2840 80.6	2480 81.2	2510 81.1	2510 82.5	
C28-C35 Oil Range Hydrocarbons		1050 79.1	160 80.6	190 81.2	195 81.1	145 82.5	
Total TPH		7503 79.1	4120 80.6	3860 81.2	4195 81.1	3945 82.5	

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.

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 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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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: 14" Vac to Jal Legacy

Work Orders : 386163,

Project ID: SRS# 2009-92

Lab Batch #: 820715

Sample: 571869-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 08/27/10 05:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0356	0.0300	119	80-120	

Lab Batch #: 820715

Sample: 571869-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 08/27/10 06:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0346	0.0300	115	80-120	
4-Bromofluorobenzene	0.0360	0.0300	120	80-120	

Lab Batch #: 820715

Sample: 571869-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 08/27/10 07:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

Lab Batch #: 820715

Sample: 386163-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/10 20:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0961	0.0300	320	80-120	**

Lab Batch #: 820715

Sample: 386163-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/10 21:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0594	0.0300	198	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: 14" Vac to Jal Legacy

Work Orders : 386163,

Project ID: SRS# 2009-92

Lab Batch #: 820715

Sample: 386163-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/10 21:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0536	0.0300	179	80-120	**

Lab Batch #: 820715

Sample: 386163-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/27/10 22:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0651	0.0300	217	80-120	**

Lab Batch #: 819442

Sample: 570931-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/18/10 12:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	100	86	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 819442

Sample: 570931-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/18/10 12:31

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	100	88	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 819442

Sample: 570931-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/18/10 12:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.7	100	75	70-135	
o-Terphenyl	37.8	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 386163,

Project ID: SRS# 2009-92

Lab Batch #: 819442

Sample: 386163-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/18/10 15:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	99.5	88	70-135	
o-Terphenyl	76.9	49.8	154	70-135	*

Lab Batch #: 819442

Sample: 386163-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/18/10 15:30

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.5	85	70-135	
o-Terphenyl	47.0	49.8	94	70-135	

Lab Batch #: 819442

Sample: 386163-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/18/10 15:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	99.5	85	70-135	
o-Terphenyl	49.7	49.8	100	70-135	

Lab Batch #: 819442

Sample: 386163-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/18/10 16:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.8	99.7	86	70-135	
o-Terphenyl	45.6	49.9	91	70-135	

Lab Batch #: 819442

Sample: 386163-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/18/10 16:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	99.8	83	70-135	
o-Terphenyl	39.2	49.9	79	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: 14" Vac to Jal Legacy

Work Order #: 386163

Analyst: ASA

Lab Batch ID: 820715

Sample: 571869-1-BKS

Date Prepared: 08/26/2010

Batch #: 1

Project ID: SRS# 2009-92

Date Analyzed: 08/27/2010

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0855	86	0.1	0.0890	89	4	70-125	25	
Toluene	ND	0.1000	0.0866	87	0.1	0.0886	89	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0904	90	0.1	0.0928	93	3	71-129	25	
m,p-Xylenes	ND	0.2000	0.1761	88	0.2	0.1806	90	3	70-131	25	
o-Xylene	ND	0.1000	0.0900	90	0.1	0.0921	92	2	71-133	25	

Analyst: JLG

Date Prepared: 08/18/2010

Date Analyzed: 08/18/2010

Lab Batch ID: 819442

Sample: 570931-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1140	114	1000	995	100	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	936	94	1000	979	98	4	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: 14" Vac to Jal Legacy

Work Order #: 386163

Lab Batch #: 819487

Project ID: SRS# 2009-92

Date Analyzed: 08/19/2010

Date Prepared: 08/19/2010

Analyst: JLG

QC- Sample ID: 386098-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.56	3.42	29	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
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: PLAA
 Date/Time: 8/18/10
 Lab ID #: 386163
 Initials: HS

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	<u>Yes</u>	No	N/A	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 387696
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS# 2009-92

09-SEP-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



09-SEP-10

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

Reference: XENCO Report No: **387696**
14" Vac to Jal Legacy
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 387696. 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. 387696 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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Sample Cross Reference 387696



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP # 8	S	Aug-30-10 10:30		387696-001
Screened SP # 9	S	Aug-30-10 10:35		387696-002
Screened SP # 10	S	Aug-30-10 10:40		387696-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: SRS# 2009-92

Work Order Number: 387696

Report Date: 09-SEP-10

Date Received: 08/30/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-820965 Percent Moisture

None

Batch: LBA-820995 TPH by SW8015 Mod

None

Batch: LBA-822248 BTEX by EPA 8021

SW8021BM

Batch 822248, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 387696-001,387696-003,387696-002.

4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 387696-001,387696-003,387696-002.

SW8021BM

Batch 822248, Benzene, Toluene, o-Xylene recovered below QC limits in the Matrix Spike. Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered above QC limits in the Matrix Spike Duplicate.

Samples affected are: 387696-001, -003, -002.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, o-Xylene, Ethylbenzene is within laboratory Control Limits

SW8021BM

Batch 822248, Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene RPD was outside QC limits.

Samples affected are: 387696-001, -003, -002



Certificate of Analysis Summary 387696

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy



Project Id: SRS# 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Aug-30-10 01:20 pm

Report Date: 09-SEP-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	387696-001	387696-002	387696-003			
	<i>Field Id:</i>	Screened SP # 8	Screened SP # 9	Screened SP # 10			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Aug-30-10 10:30	Aug-30-10 10:35	Aug-30-10 10:40			
BTEX by EPA 8021	<i>Extracted:</i>	Sep-09-10 08:00	Sep-09-10 08:00	Sep-09-10 08:00			
	<i>Analyzed:</i>	Sep-09-10 12:32	Sep-09-10 12:55	Sep-09-10 13:18			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.1105	ND 0.1130	ND 0.1104			
Toluene		0.2828 0.2210	0.4158 0.2260	0.5621 0.2208			
Ethylbenzene		1.507 0.1105	1.037 0.1130	1.339 0.1104			
m,p-Xylenes		6.676 0.2210	11.78 0.2260	15.25 0.2208			
o-Xylene		7.176 0.1105	8.956 0.1130	10.40 0.1104			
Xylenes, Total		13.852 0.1105	20.74 0.1130	25.65 0.1104			
Total BTEX		15.642 0.1105	22.19 0.1130	27.55 0.1104			
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Aug-31-10 08:22	Aug-31-10 08:22	Aug-31-10 08:22			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		9.31 1.00	10.6 1.00	9.44 1.00			
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-30-10 15:40	Aug-30-10 15:40	Aug-30-10 15:40			
	<i>Analyzed:</i>	Aug-31-10 02:49	Aug-31-10 03:28	Aug-31-10 03:47			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		981 16.5	1690 16.8	1420 16.6			
C12-C28 Diesel Range Hydrocarbons		1730 16.5	2520 16.8	2210 16.6			
C28-C35 Oil Range Hydrocarbons		80.4 16.5	129 16.8	73.7 16.6			
Total TPH		2791 16.5	4339 16.8	3704 16.6			

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.

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 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 387696,

Project ID: SRS# 2009-92

Lab Batch #: 822248

Sample: 572851-1-BKS / BKS

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 10:35	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0338	0.0300	113	80-120	
4-Bromofluorobenzene		0.0344	0.0300	115	80-120	

Lab Batch #: 822248

Sample: 572851-1-BLK / BLK

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 11:45	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0289	0.0300	96	80-120	
4-Bromofluorobenzene		0.0341	0.0300	114	80-120	

Lab Batch #: 822248

Sample: 387696-001 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 12:32	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0237	0.0300	79	80-120	**
4-Bromofluorobenzene		0.0540	0.0300	180	80-120	**

Lab Batch #: 822248

Sample: 387696-002 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 12:55	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0203	0.0300	68	80-120	**
4-Bromofluorobenzene		0.0480	0.0300	160	80-120	**

Lab Batch #: 822248

Sample: 387696-003 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 13:18	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0231	0.0300	77	80-120	**
4-Bromofluorobenzene		0.0558	0.0300	186	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: 14" Vac to Jal Legacy

Work Orders : 387696,

Project ID: SRS# 2009-92

Lab Batch #: 822248

Sample: 387639-009 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 14:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0352	0.0300	117	80-120	

Lab Batch #: 822248

Sample: 387639-009 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 15:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 820995

Sample: 572063-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/30/10 22:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.9	85	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 820995

Sample: 572063-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/30/10 23:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	100	85	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 820995

Sample: 572063-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 08/30/10 23:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	99.9	86	70-135	
o-Terphenyl	44.5	50.0	89	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: 14" Vac to Jal Legacy

Work Orders : 387696,

Project ID: SRS# 2009-92

Lab Batch #: 820995

Sample: 387696-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/31/10 02:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.2	99.5	96	70-135	
o-Terphenyl	43.4	49.8	87	70-135	

Lab Batch #: 820995

Sample: 387696-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/31/10 03:28

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	42.6	50.1	85	70-135	

Lab Batch #: 820995

Sample: 387696-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/31/10 03:47

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	100	97	70-135	
o-Terphenyl	43.7	50.1	87	70-135	

Lab Batch #: 820995

Sample: 387639-001 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/31/10 04:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	100	88	70-135	
o-Terphenyl	42.3	50.1	84	70-135	

Lab Batch #: 820995

Sample: 387639-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 08/31/10 04:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	41.6	50.2	83	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

^ If results are based on MDL and validated for QC purposes.



Blank Spike Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 387696

Project ID:

SRS# 2009-92

Lab Batch #: 822248

Sample: 572851-1-BKS

Matrix: Solid

Date Analyzed: 09/09/2010

Date Prepared: 09/09/2010

Analyst: ASA

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.1000	0.0821	82	70-130	
Toluene	ND	0.1000	0.0819	82	70-130	
Ethylbenzene	ND	0.1000	0.0864	86	71-129	
m,p-Xylenes	ND	0.2000	0.1691	85	70-135	
o-Xylene	ND	0.1000	0.0856	86	71-133	

Blank Spike Recovery [D] = 100*[C]/[B]

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

BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 387696

Analyst: BEV

Date Prepared: 08/30/2010

Project ID: SRS# 2009-92

Date Analyzed: 08/30/2010

Lab Batch ID: 820995

Sample: 572063-1-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	999	1040	104	1000	1060	106	2	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	999	1010	101	1000	1010	101	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



Form 3 - MS / MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 387696

Project ID: SRS# 2009-92

Lab Batch ID: 822248

QC- Sample ID: 387639-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/09/2010

Date Prepared: 09/09/2010

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0028	0.1206	0.0826	66	0.1218	0.1654	133	67	70-130	35
Toluene	ND	0.1206	0.0812	67	0.1218	0.1842	151	78	70-130	35	XF
Ethylbenzene	ND	0.1206	0.0863	72	0.1218	0.2314	190	91	71-129	35	XF
m,p-Xylenes	ND	0.2412	0.1705	71	0.2436	0.4920	202	97	70-135	35	XF
o-Xylene	ND	0.1206	0.0839	70	0.1218	0.2243	184	91	71-133	35	XF

Lab Batch ID: 820995

QC- Sample ID: 387639-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/31/2010

Date Prepared: 08/30/2010

Analyst: BEV

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	1130	1200	106	1130	1170	104	3	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1130	1090	96	1130	1020	90	7	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 387696

Lab Batch #: 820965

Project ID: SRS# 2009-92

Date Analyzed: 08/31/2010

Date Prepared: 08/31/2010

Analyst: JLG

QC- Sample ID: 387639-009 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	17.9	16.1	10	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

12800 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 381
 City/State/Zip: Lovington, NM 88260
 Telephone No: (575)605-7210
 Sampler Signature: _____

Project Name: 14" Vac to Jal Legacy
 Project #: SRS# 2009-92
 Project Loc: Lea County, NM
 PO #: PAA-J. Henry
 Report Format: Standard TRRP NPDES

Fax No: (505) 396-1429
 e-mail: cjbryant@basin-consulting.com

(lab use only)
 ORDER #: 3876914

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers								Matrix	TPH 418.1 8015M 8015B	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	Semi-volatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY			
								Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)															DW - Drinking Water SL - Sludge	GW - Groundwater S - Soil/Sol	NP - Non-Potable Specify OCH
01	Screened SP #8			30-Aug-10	1030		1	X																								X
02	Screened SP #9			30-Aug-10	1035		1	X																								X
03	Screened SP #10			30-Aug-10	1040		1	X																								X

Special Instructions: Conduct TPH analysis, Hold for BTEX

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Sally Conway</u>	<u>8/30</u>	<u>13:20</u>			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
			<u>[Signature]</u>	<u>8/30/10</u>	<u>13:20</u>

Laboratory Comments:

VOCs Free of Headspace? D N

Custody seals on container(s) D N

Sample Hand Delivered D N

by Sampler/Client Rep. ? D N

by Carrier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.0 °C



XENCO Laboratories
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Placa
 Date/Time: 8/30/10 13:20
 Lab ID #: 387696
 Initials: HS

Sample Receipt Checklist

1. Samples on Ice?	Blue	<u>Water</u>	No	
2. Shipping container In good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	<u>No</u>	N/A	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>5.0</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 388944
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS# 2009-92

16-SEP-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

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Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):

Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



16-SEP-10

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

Reference: XENCO Report No: **388944**
14" Vac to Jal Legacy
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 388944. 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. 388944 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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Sample Cross Reference 388944



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP-3A	S	Sep-07-10 12:00		388944-001
Screened SP-11	S	Sep-07-10 12:15		388944-002
Screened SP-12	S	Sep-07-10 12:30		388944-003
Screened SP-13	S	Sep-07-10 12:45		388944-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: SRS# 2009-92

Work Order Number: 388944

Report Date: 16-SEP-10

Date Received: 09/08/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-822164 Percent Moisture

None

Batch: LBA-822362 TPH by SW8015 Mod

None

Batch: LBA-823241 BTEX by EPA 8021

SW8021BM

Batch 823241, Ethylbenzene, o-Xylene RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 388944-004, -002, -001, -003.

SW8021BM

Batch 823241, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 388944-001 D, 388944-003, 388944-002, 388944-001. 1,4-Difluorobenzene was within QC limits.



Certificate of Analysis Summary 388944

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Wed Sep-08-10 01:30 pm

Report Date: 16-SEP-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	388944-001	388944-002	388944-003	388944-004		
	<i>Field Id:</i>	Screened SP-3A	Screened SP-11	Screened SP-12	Screened SP-13		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Sep-07-10 12:00	Sep-07-10 12:15	Sep-07-10 12:30	Sep-07-10 12:45		
BTEX by EPA 8021	<i>Extracted:</i>	Sep-14-10 11:00	Sep-14-10 11:00	Sep-14-10 11:00	Sep-14-10 11:00		
	<i>Analyzed:</i>	Sep-15-10 13:47	Sep-15-10 14:29	Sep-15-10 16:07	Sep-15-10 16:29		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		ND 0.0213	ND 0.0535	ND 0.0528	ND 0.0541		
Toluene		0.0552 0.0426	0.2656 0.1071	ND 0.1056	0.2092 0.1081		
Ethylbenzene		0.1002 0.0213	0.3266 0.0535	0.3476 0.0528	0.1270 0.0541		
m,p-Xylenes		0.2966 0.0426	0.4519 0.1071	1.258 0.1056	3.177 0.1081		
o-Xylene		0.1321 0.0213	0.2816 0.0535	1.855 0.0528	1.938 0.0541		
a,a,a-Trifluorotoluene		0.639	1.61	1.58	1.62		
Xylenes, Total		0.4287 0.0213	0.7335 0.0535	3.113 0.0528	5.115 0.0541		
Total BTEX		0.5841 0.0213	1.3257 0.0535	3.461 0.0528	5.451 0.0541		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Sep-09-10 09:17	Sep-09-10 09:17	Sep-09-10 09:17	Sep-09-10 09:17		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		6.15 1.00	6.61 1.00	5.34 1.00	7.51 1.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Sep-09-10 09:15	Sep-09-10 09:15	Sep-09-10 09:15	Sep-09-10 09:15		
	<i>Analyzed:</i>	Sep-09-10 15:16	Sep-09-10 15:57	Sep-09-10 16:17	Sep-09-10 16:37		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		680 79.5	592 16.0	764 79.4	1270 81.3		
C12-C28 Diesel Range Hydrocarbons		2470 79.5	2060 16.0	2750 79.4	2710 81.3		
C28-C35 Oil Range Hydrocarbons		199 79.5	134 16.0	140 79.4	173 81.3		
Total TPH		3349 79.5	2786 16.0	3654 79.4	4153 81.3		

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.

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 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation 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: 14" Vac to Jal Legacy

Work Orders : 388944,

Project ID: SRS# 2009-92

Lab Batch #: 823241

Sample: 573410-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/15/10 12:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 823241

Sample: 573410-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/15/10 12:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0297	0.0300	99	80-120	

Lab Batch #: 823241

Sample: 573410-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/15/10 13:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0272	0.0300	91	80-120	

Lab Batch #: 823241

Sample: 388944-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/15/10 13:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0407	0.0300	136	80-120	**

Lab Batch #: 823241

Sample: 388944-001 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/15/10 14:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0402	0.0300	134	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: 14" Vac to Jal Legacy

Work Orders : 388944,

Project ID: SRS# 2009-92

Lab Batch #: 823241

Sample: 388944-002 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/15/10 14:29	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	
4-Bromofluorobenzene		0.0365	0.0300	122	80-120	**

Lab Batch #: 823241

Sample: 388944-003 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/15/10 16:07	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0323	0.0300	108	80-120	
4-Bromofluorobenzene		0.0426	0.0300	142	80-120	**

Lab Batch #: 823241

Sample: 388944-004 / SMP

Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/15/10 16:29	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
BTEX by EPA 8021						
Analytes						
1,4-Difluorobenzene		0.0269	0.0300	90	80-120	
4-Bromofluorobenzene		0.0352	0.0300	117	80-120	

Lab Batch #: 822362

Sample: 572914-1-BKS / BKS

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 11:09	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		120	101	119	70-135	
o-Terphenyl		61.3	50.3	122	70-135	

Lab Batch #: 822362

Sample: 572914-1-BSD / BSD

Batch: 1 Matrix: Solid

SURROGATE RECOVERY STUDY						
Units: mg/kg	Date Analyzed: 09/09/10 11:28	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
TPH by SW8015 Mod						
Analytes						
1-Chlorooctane		115	99.7	115	70-135	
o-Terphenyl		53.5	49.9	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: 14" Vac to Jal Legacy

Work Orders : 388944,

Project ID: SRS# 2009-92

Lab Batch #: 822362

Sample: 572914-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/09/10 11:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	53.5	50.2	107	70-135	

Lab Batch #: 822362

Sample: 388944-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 15:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.5	103	70-135	
o-Terphenyl	44.2	49.8	89	70-135	

Lab Batch #: 822362

Sample: 388944-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 15:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.7	120	70-135	
o-Terphenyl	35.5	49.9	71	70-135	

Lab Batch #: 822362

Sample: 388944-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 16:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	51.4	50.1	103	70-135	

Lab Batch #: 822362

Sample: 388944-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 16:37

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	38.0	50.1	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 388944,

Project ID: SRS# 2009-92

Lab Batch #: 822362

Sample: 388842-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 19:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.8	118	70-135	
o-Terphenyl	63.6	49.9	127	70-135	

Lab Batch #: 822362

Sample: 388842-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/09/10 19:37

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	101	114	70-135	
o-Terphenyl	54.0	50.3	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 388944

Analyst: SEE

Date Prepared: 09/14/2010

Project ID: SRS# 2009-92

Date Analyzed: 09/15/2010

Lab Batch ID: 823241

Sample: 573410-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Analytes	BTEX by EPA 8021										
	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	0.0994	0.0955	96	0.0998	0.1003	101	5	70-130	35	
Toluene	ND	0.0994	0.0929	93	0.0998	0.0970	97	4	70-130	35	
Ethylbenzene	ND	0.0994	0.1011	102	0.0998	0.1051	105	4	71-129	35	
m,p-Xylenes	ND	0.1988	0.2018	102	0.1996	0.2110	106	4	70-135	35	
o-Xylene	ND	0.0994	0.0911	92	0.0998	0.0963	96	6	71-133	35	

Analyst: BEV

Date Prepared: 09/09/2010

Date Analyzed: 09/09/2010

Lab Batch ID: 822362

Sample: 572914-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Analytes	TPH by SW8015 Mod										
	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	1010	994	98	997	983	99	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1010	834	83	997	834	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



Form 3 - MS / MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 388944

Project ID: SRS# 2009-92

Lab Batch ID: 822362

QC- Sample ID: 388842-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/09/2010

Date Prepared: 09/09/2010

Analyst: BEV

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	1270	1230	97	1280	1220	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1270	1100	87	1280	1050	82	5	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 388944

Lab Batch #: 823241

Project ID: SRS# 2009-92

Date Analyzed: 09/15/2010

Date Prepared: 09/14/2010

Analyst: SEE

QC- Sample ID: 388944-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	ND	ND	NC	35	
Toluene	0.0552	0.0654	17	35	
Ethylbenzene	0.1002	0.2067	69	35	F
m,p-Xylenes	0.2966	0.3303	11	35	
o-Xylene	0.1321	0.2255	52	35	F
a,a,a-Trifluorotoluene	0.639	0.639	0	35	

Lab Batch #: 822164

Date Analyzed: 09/09/2010

Date Prepared: 09/09/2010

Analyst: JLG

QC- Sample ID: 388842-001 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	21.2	20.7	2	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
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Frw.
 Date/Time: 9/8/10 1:30
 Lab ID #: 388944
 Initials: TJ

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<u>Yes</u>	No	N/A	<i>Labels as seals</i>
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>NO</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	<u>No</u>	N/A	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>51</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 389406
for
PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant

14 " Vac to Jal Legacy

SRS# 2009-92

17-SEP-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

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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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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17-SEP-10

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

Reference: XENCO Report No: **389406**
14 " Vac to Jal Legacy
Project Address: Lea County, NM

Camille Bryant:

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 389406. 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. 389406 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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Sample Cross Reference 389406



PLAINS ALL AMERICAN EH&S, Midland, TX

14 " Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP # 14	S	Sep-10-10 13:30		389406-001
Screened SP # 15	S	Sep-10-10 13:40		389406-002
Screened SP # 16	S	Sep-10-10 13:50		389406-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14 " Vac to Jal Legacy



Project ID: SRS# 2009-92
Work Order Number: 389406

Report Date: 17-SEP-10
Date Received: 09/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-822471 Percent Moisture
None

Batch: LBA-822482 TPH by SW8015 Mod
None

Batch: LBA-823318 BTEX by EPA 8021
SW8021BM

Batch 823318, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 389406-002.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 389406-003.

SW8021BM

Batch 823318, Benzene, Toluene recovered below QC limits in the Matrix Spike.
Samples affected are: 389406-003, -002.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits

Batch: LBA-823461 BTEX by EPA 8021
SW8021BM

Batch 823461, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 389406-001.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 389406-001.



Certificate of Analysis Summary 389406
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS# 2009-92

Contact: Camille Bryant

Project Location: Lea County, NM

Project Name: 14 " Vac to Jal Legacy

Date Received in Lab: Fri Sep-10-10 02:05 pm

Report Date: 17-SEP-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	389406-001	389406-002	389406-003			
	Field Id:	Screened SP # 14	Screened SP # 15	Screened SP # 16			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Sep-10-10 13:30	Sep-10-10 13:40	Sep-10-10 13:50			
BTEX by EPA 8021	Extracted:	Sep-15-10 09:00	Sep-14-10 10:30	Sep-14-10 10:30			
	Analyzed:	Sep-16-10 04:09	Sep-15-10 13:44	Sep-15-10 13:20			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		0.0011 0.0011	ND 0.0265	ND 0.0265			
Toluene		0.0314 0.0021	0.1400 0.0530	0.0672 0.0529			
Ethylbenzene		0.0149 0.0011	0.7463 0.0265	0.4311 0.0265			
m,p-Xylenes		0.5307 0.0021	2.849 0.0530	1.377 0.0529			
o-Xylene		0.4611 0.0011	2.675 0.0265	1.203 0.0265			
Xylenes, Total		0.9918 0.0011	5.524 0.0265	2.580 0.0265			
Total BTEX		1.0392 0.0011	6.410 0.0265	3.078 0.0265			
Percent Moisture	Extracted:						
	Analyzed:	Sep-11-10 09:22	Sep-11-10 09:22	Sep-11-10 09:22			
	Units/RL:	% RL	% RL	% RL			
Percent Moisture		5.25 1.00	5.74 1.00	5.47 1.00			
TPH by SW8015 Mod	Extracted:	Sep-10-10 15:30	Sep-10-10 15:30	Sep-10-10 15:30			
	Analyzed:	Sep-11-10 03:50	Sep-11-10 04:10	Sep-11-10 04:49			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		901 15.9	645 15.8	408 15.8			
C12-C28 Diesel Range Hydrocarbons		2540 15.9	1930 15.8	1510 15.8			
C28-C35 Oil Range Hydrocarbons		66.4 15.9	81.6 15.8	36.8 15.8			
Total TPH		3507 15.9	2657 15.8	1955 15.8			

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: 14 " Vac to Jal Legacy

Work Orders : 389406,

Project ID:SRS# 2009-92

Lab Batch #:823318

Sample: 573462-1-BKS / BKS

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 03:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0349	0.0300	116	80-120	

Lab Batch #:823318

Sample: 573462-1-BSD / BSD

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 04:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0344	0.0300	115	80-120	

Lab Batch #:823318

Sample: 573462-1-BLK / BLK

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 05:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0322	0.0300	107	80-120	

Lab Batch #:823318

Sample: 389624-001 S / MS

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 06:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0355	0.0300	118	80-120	

Lab Batch #:823318

Sample: 389624-001 SD / MSD

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 06:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0349	0.0300	116	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	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: 14 " Vac to Jal Legacy

Work Orders 389406,

Project ID:SRS# 2009-92

Lab Batch #:823318

Sample: 389406-003 / SMP

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 13:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0409	0.0300	136	80-120	**

Lab Batch #:823318

Sample: 389406-002 / SMP

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 13:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0281	0.0300	94	80-120	

Lab Batch #:823461

Sample: 573500-1-BKS / BKS

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 18:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0307	0.0300	102	80-120	

Lab Batch #:823461

Sample: 573500-1-BSD / BSD

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 18:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0309	0.0300	103	80-120	

Lab Batch #:823461

Sample: 573500-1-BLK / BLK

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/15/10 19:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0279	0.0300	93	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: 14 " Vac to Jal Legacy

Work Orders 389406,

Project ID:SRS# 2009-92

Lab Batch #:823461

Sample: 389624-002 S / MS

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 20:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #:823461

Sample: 389624-002 SD / MSD

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/15/10 20:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0312	0.0300	104	80-120	

Lab Batch #:823461

Sample: 389406-001 / SMP

Batch: 1 Matrix:Soil

Units: mg/kg

Date Analyzed: 09/16/10 04:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0607	0.0300	202	80-120	**

Lab Batch #:822482

Sample: 572990-1-BKS / BKS

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/11/10 00:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.1	50.2	122	70-135	

Lab Batch #:822482

Sample: 572990-1-BSD / BSD

Batch: 1 Matrix:Solid

Units: mg/kg

Date Analyzed: 09/11/10 00:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	59.3	50.0	119	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: 14 " Vac to Jal Legacy

Work Orders 389406,

Project ID: SRS# 2009-92

Lab Batch #: 822482

Sample: 572990-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/11/10 00:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	60.3	50.2	120	70-135	

Lab Batch #: 822482

Sample: 389406-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/11/10 03:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	45.5	50.2	91	70-135	

Lab Batch #: 822482

Sample: 389406-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/11/10 04:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.5	124	70-135	
o-Terphenyl	56.9	49.8	114	70-135	

Lab Batch #: 822482

Sample: 389406-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/11/10 04:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.5	124	70-135	
o-Terphenyl	60.4	49.8	121	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: 14 " Vac to Jal Legacy

Work Order #: 389406

Analyst: SEE

Lab Batch ID: 823318

Sample: 573462-1-BKS

Date Prepared: 09/14/2010

Batch #: 1

Project ID: SRS# 2009-92

Date Analyzed: 09/15/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1004	0.0893	89	0.1006	0.0867	86	3	70-130	35	
Toluene	ND	0.1004	0.0886	88	0.1006	0.0860	85	3	70-130	35	
Ethylbenzene	ND	0.1004	0.0928	92	0.1006	0.0901	90	3	71-129	35	
m,p-Xylenes	ND	0.2008	0.1797	89	0.2012	0.1746	87	3	70-135	35	
o-Xylene	ND	0.1004	0.0927	92	0.1006	0.0899	89	3	71-133	35	

Analyst: BRB

Date Prepared: 09/15/2010

Date Analyzed: 09/15/2010

Lab Batch ID: 823461

Sample: 573500-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1004	0.0787	78	0.0992	0.0760	77	3	70-130	35	
Toluene	ND	0.1004	0.0765	76	0.0992	0.0746	75	3	70-130	35	
Ethylbenzene	ND	0.1004	0.0818	81	0.0992	0.0792	80	3	71-129	35	
m,p-Xylenes	ND	0.2008	0.1627	81	0.1984	0.1577	79	3	70-135	35	
o-Xylene	ND	0.1004	0.0760	76	0.0992	0.0724	73	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



BS / BSD Recoveries



Project Name: 14 " Vac to Jal Legacy

Work Order #: 389406

Analyst: BEV

Date Prepared: 09/10/2010

Project ID: SRS# 2009-92

Date Analyzed: 09/11/2010

Lab Batch ID: 822482

Sample: 572990-1-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	1070	107	1000	1020	102	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	937	94	1000	1020	102	8	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 - M MSD Recoveries



Project Name: 14 " Vac to Jal Legacy

Work Order #: 389406

Project ID: SRS# 2009-92

Lab Batch ID: 823318

QC- Sample ID: 389624-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/15/2010

Date Prepared: 09/14/2010

Analyst: SEE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0998	0.0615	62	0.0998	0.0836	84	30	70-130	35	X
Toluene	ND	0.0998	0.0651	65	0.0998	0.0823	82	23	70-130	35	X
Ethylbenzene	ND	0.0998	0.0717	72	0.0998	0.0858	86	18	71-129	35	
m,p-Xylenes	ND	0.1996	0.1410	71	0.1996	0.1663	83	16	70-135	35	
o-Xylene	ND	0.0998	0.0711	71	0.0998	0.0839	84	17	71-133	35	

Lab Batch ID: 823461

QC- Sample ID: 389624-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/15/2010

Date Prepared: 09/15/2010

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0996	0.0901	90	0.0996	0.0885	89	2	70-130	35	
Toluene	ND	0.0996	0.0875	88	0.0996	0.0855	86	2	70-130	35	
Ethylbenzene	ND	0.0996	0.0917	92	0.0996	0.0870	87	5	71-129	35	
m,p-Xylenes	ND	0.1992	0.1808	91	0.1992	0.1736	87	4	70-135	35	
o-Xylene	ND	0.0996	0.0802	81	0.0996	0.0765	77	5	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14 " Vac to Jal Legacy

Work Order #: 389406

Lab Batch #: 822471

Project ID: SRS# 2009-92

Date Analyzed: 09/11/2010

Date Prepared: 09/11/2010

Analyst: JLG

QC- Sample ID: 389332-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.08	1.86	11	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
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
 Date/Time: 9/10/10 14:05
 Lab ID #: 389406
 Initials: AS

Sample Receipt Checklist

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 5.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 Initial and Backup Temperature confirm out of temperature conditions
 Client understands and would like to proceed with analysis

Analytical Report 390387
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-92

27-SEP-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

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Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):

Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



27-SEP-10

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

Reference: XENCO Report No: **390387**
14" Vac to Jal Legacy
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 390387. 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. 390387 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.

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Sample Cross Reference 390387



PLAINS ALL AMERICAN EH&S, Midland, TX
14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP #17	S	Sep-16-10 14:30		390387-001
Screened SP #18	S	Sep-16-10 14:40		390387-002
Screened SP #19	S	Sep-16-10 14:55		390387-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: 2009-92

Work Order Number: 390387

Report Date: 27-SEP-10

Date Received: 09/17/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-823839 Percent Moisture

None

Batch: LBA-823856 TPH by SW8015 Mod

None

Batch: LBA-824704 BTEX by EPA 8021

SW8021BM

Batch 824704, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 390387-001,390387-003,390387-002.



Certificate of Analysis Summary 390387

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Fri Sep-17-10 02:50 pm

Report Date: 27-SEP-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	390387-001	390387-002	390387-003			
	<i>Field Id:</i>	Screened SP #17	Screened SP #18	Screened SP #19			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Sep-16-10 14:30	Sep-16-10 14:40	Sep-16-10 14:55			
BTEX by EPA 8021	<i>Extracted:</i>	Sep-25-10 15:00	Sep-25-10 15:00	Sep-25-10 15:00			
	<i>Analyzed:</i>	Sep-25-10 23:56	Sep-26-10 00:19	Sep-26-10 00:43			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.0214	ND 0.0213	ND 0.0211			
Toluene		ND 0.0427	0.0451 0.0425	0.0433 0.0422			
Ethylbenzene		0.1657 0.0214	0.2326 0.0213	0.1387 0.0211			
m,p-Xylenes		0.7331 0.0427	1.208 0.0425	1.033 0.0422			
o-Xylene		0.7071 0.0214	1.099 0.0213	0.8556 0.0211			
Xylenes, Total		1.4402 0.0214	2.307 0.0213	1.889 0.0211			
Total BTEX		1.6059 0.0214	2.585 0.0213	2.071 0.0211			
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Sep-21-10 08:21	Sep-21-10 08:21	Sep-21-10 08:21			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		6.32 1.00	5.95 1.00	5.24 1.00			
TPH by SW8015 Mod	<i>Extracted:</i>	Sep-20-10 10:00	Sep-20-10 10:00	Sep-20-10 10:00			
	<i>Analyzed:</i>	Sep-20-10 16:32	Sep-20-10 16:51	Sep-20-10 17:10			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		488 16.0	538 15.9	501 15.8			
C12-C28 Diesel Range Hydrocarbons		2780 16.0	3070 15.9	3570 15.8			
C28-C35 Oil Range Hydrocarbons		97.3 16.0	99.2 15.9	139 15.8			
Total TPH		3365 16.0	3707 15.9	4210 15.8			

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi


 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation 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: 14" Vac to Jal Legacy

Work Orders : 390387,

Project ID: 2009-92

Lab Batch #: 824704

Sample: 574328-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/25/10 15:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0340	0.0300	113	80-120	

Lab Batch #: 824704

Sample: 574328-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/25/10 16:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0341	0.0300	114	80-120	

Lab Batch #: 824704

Sample: 574328-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/25/10 17:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0321	0.0300	107	80-120	

Lab Batch #: 824704

Sample: 390697-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/25/10 21:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

Lab Batch #: 824704

Sample: 390697-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/25/10 22:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0351	0.0300	117	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: 14" Vac to Jal Legacy

Work Orders : 390387,

Project ID: 2009-92

Lab Batch #: 824704

Sample: 390387-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/25/10 23:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0410	0.0300	137	80-120	**

Lab Batch #: 824704

Sample: 390387-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/26/10 00:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0395	0.0300	132	80-120	**

Lab Batch #: 824704

Sample: 390387-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/26/10 00:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0378	0.0300	126	80-120	**

Lab Batch #: 823856

Sample: 573814-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/10 15:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	99.8	85	70-135	
o-Terphenyl	57.4	49.9	115	70-135	

Lab Batch #: 823856

Sample: 573814-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/10 15:53

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	100	82	70-135	
o-Terphenyl	47.3	50.2	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 390387,

Project ID: 2009-92

Lab Batch #: 823856

Sample: 573814-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/10 16:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.7	99.8	82	70-135	
o-Terphenyl	44.8	49.9	90	70-135	

Lab Batch #: 823856

Sample: 390387-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/20/10 16:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	100	85	70-135	
o-Terphenyl	58.0	50.1	116	70-135	

Lab Batch #: 823856

Sample: 390387-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/20/10 16:51

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	99.5	88	70-135	
o-Terphenyl	46.7	49.8	94	70-135	

Lab Batch #: 823856

Sample: 390387-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/20/10 17:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	99.5	88	70-135	
o-Terphenyl	47.6	49.8	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 390387

Analyst: BRB

Lab Batch ID: 824704

Sample: 574328-1-BKS

Date Prepared: 09/25/2010

Batch #: 1

Project ID: 2009-92

Date Analyzed: 09/25/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1000	0.0896	90	0.1	0.0892	89	0	70-130	35	
Toluene	ND	0.1000	0.0884	88	0.1	0.0879	88	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0908	91	0.1	0.0911	91	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.1793	90	0.2	0.1798	90	0	70-135	35	
o-Xylene	ND	0.1000	0.0905	91	0.1	0.0902	90	0	71-133	35	

Analyst: BEV

Date Prepared: 09/20/2010

Date Analyzed: 09/20/2010

Lab Batch ID: 823856

Sample: 573814-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	998	1080	108	1000	1060	106	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	998	1020	102	1000	988	99	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 - MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 390387

Project ID: 2009-92

Lab Batch ID: 824704

QC- Sample ID: 390697-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/25/2010

Date Prepared: 09/25/2010

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.1079	0.0976	90	0.1079	0.0950	88	3	70-130	35
Toluene	ND	0.1079	0.0960	89	0.1079	0.0934	87	3	70-130	35	
Ethylbenzene	ND	0.1079	0.0993	92	0.1079	0.0964	89	3	71-129	35	
m,p-Xylenes	ND	0.2158	0.1964	91	0.2158	0.1899	88	3	70-135	35	
o-Xylene	ND	0.1079	0.0988	92	0.1079	0.0954	88	4	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 390387

Lab Batch #: 823839

Project ID: 2009-92

Date Analyzed: 09/21/2010

Date Prepared: 09/21/2010

Analyst: JLG

QC- Sample ID: 390387-001 D

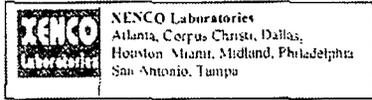
Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.32	5.73	10	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



Document Title: Sample Receipt Checklist
 Document No.: NYS-SRC
 Revision: Date No 01, 05/18/10
 Effective Date: 05/20/10
 Page No.: 1 of 1

Prelogin / Nonconformance Report - Sample Log-in

Client: Plains/Basin Env
 Date/Time: 09-17-10 @ 1450
 Lab ID #: 390387
 Initials: JMF

Sample Receipt Checklist

1. Sample on ice?	Blue	<input checked="" type="radio"/> Water	Nc	
2. Shipping container in good condition?	<input checked="" type="radio"/> Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles ^{as labels} ?	Yes	No	N/A	
4. Chain of Custody present?	<input checked="" type="radio"/> Yes	No		
5. Sample instructions complete on chain of custody?	<input checked="" type="radio"/> Yes	No		
6. Any missing / extra samples?	Yes	<input checked="" type="radio"/> No		
7. Chain of custody signed when relinquished / received?	<input checked="" type="radio"/> Yes	No		
8. Chain of custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No		
9. Container labels legible and intact?	<input checked="" type="radio"/> Yes	No		
10. Sample matrix / properties agree with chain of custody?	<input checked="" type="radio"/> Yes	No		
11. Samples in proper container / bottle?	<input checked="" type="radio"/> Yes	No		
12. Samples properly preserved?	<input checked="" type="radio"/> Yes	No	N/A	
13. Sample container intact?	<input checked="" type="radio"/> Yes	No		
14. Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No		
15. All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No		
16. Subcontract of sample(s)?	Yes	<input checked="" type="radio"/> No	N/A	
17. Voc sample have zero head space?	<input checked="" type="radio"/> Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 5.6 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

Contact: _____ Contacted by _____ Date/Time _____

Regarding _____

Corrective Action Taken _____

- Check all that apply
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5 B 3 1 a 1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 391429
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS # 2009-92

01-OCT-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



01-OCT-10

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

Reference: XENCO Report No: **391429**
14" Vac to Jal Legacy
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 391429. 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. 391429 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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Sample Cross Reference 391429



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP # 20	S	Sep-24-10 13:30		391429-001
Screened SP # 21	S	Sep-24-10 13:45		391429-002
Screened SP # 22	S	Sep-24-10 14:00		391429-003
Screened SP # 23	S	Sep-24-10 14:15		391429-004
Screened SP # 24	S	Sep-24-10 14:30		391429-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: SRS # 2009-92

Work Order Number: 391429

Report Date: 01-OCT-10

Date Received: 09/27/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-824908 Percent Moisture

Batch: LBA-824911 TPH by SW8015 Mod

Batch: LBA-825540 BTEX by EPA 8021

SW8021BM

Batch 825540, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 391429-005,391429-001.

SW8021BM

Batch 825540, Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene RPD was outside QC limits.

Samples affected are: 391429-001, -005, -003, -002, -004

SW8021BM

Batch 825540, Benzene, Toluene recovered below QC limits in the Matrix Spike. Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 391429-001, -005, -003, -002, -004.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

The Matrix Spike for this batch was improperly spiked causing very low recoveries. The BKS and BSD were within limits therefore validating the batch.



Certificate of Analysis Summary 391429

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS # 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Mon Sep-27-10 03:22 pm

Report Date: 01-OCT-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	391429-001	391429-002	391429-003	391429-004	391429-005	
	<i>Field Id:</i>	Screened SP # 20	Screened SP # 21	Screened SP # 22	Screened SP # 23	Screened SP # 24	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Sep-24-10 13:30	Sep-24-10 13:45	Sep-24-10 14:00	Sep-24-10 14:15	Sep-24-10 14:30	
BTEX by EPA 8021	<i>Extracted:</i>	Sep-30-10 15:30					
	<i>Analyzed:</i>	Oct-01-10 01:32	Oct-01-10 01:55	Oct-01-10 02:18	Oct-01-10 02:41	Oct-01-10 03:05	
	<i>Units/RL:</i>	mg/kg RL					
Benzene		ND 0.0217	ND 0.0221	ND 0.0213	ND 0.0217	ND 0.0213	
Toluene		0.0572 0.0433	ND 0.0441	ND 0.0425	ND 0.0433	ND 0.0427	
Ethylbenzene		0.1376 0.0217	ND 0.0221	0.0423 0.0213	ND 0.0217	0.1157 0.0213	
m,p-Xylenes		0.5285 0.0433	0.0755 0.0441	0.2000 0.0425	0.0925 0.0433	0.8306 0.0427	
o-Xylene		0.2740 0.0217	0.0322 0.0221	0.1756 0.0213	0.0518 0.0217	0.7454 0.0213	
Xylenes, Total		0.8025 0.0217	0.1077 0.0221	0.3756 0.0213	0.1443 0.0217	1.5760 0.0213	
Total BTEX		0.9973 0.0217	0.1077 0.0221	0.4179 0.0213	0.1443 0.0217	1.6917 0.0213	
Percent Moisture	<i>Extracted:</i>	Sep-28-10 08:30					
	<i>Analyzed:</i>						
	<i>Units/RL:</i>	% RL					
Percent Moisture		7.67 1.00	9.37 1.00	5.91 1.00	7.67 1.00	6.28 1.00	
TPH by SW8015 Mod	<i>Extracted:</i>	Sep-27-10 16:30					
	<i>Analyzed:</i>	Sep-27-10 20:49	Sep-27-10 21:08	Sep-27-10 21:28	Sep-27-10 21:48	Sep-27-10 22:07	
	<i>Units/RL:</i>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		350 16.3	132 16.5	436 15.9	161 16.2	850 15.9	
C12-C28 Diesel Range Hydrocarbons		1130 16.3	390 16.5	1930 15.9	640 16.2	2480 15.9	
C28-C35 Oil Range Hydrocarbons		56.1 16.3	19.7 16.5	85.1 15.9	39.2 16.2	158 15.9	
Total TPH		1536 16.3	542 16.5	2451 15.9	840 16.2	3488 15.9	

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

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

- MDL** Method Detection Limit

- PQL** Practical Quantitation 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: 14" Vac to Jal Legacy

Work Orders : 391429,

Project ID: SRS # 2009-92

Lab Batch #: 825540

Sample: 574821-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/10 17:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0343	0.0300	114	80-120	

Lab Batch #: 825540

Sample: 574821-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/10 18:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0345	0.0300	115	80-120	

Lab Batch #: 825540

Sample: 574821-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/30/10 19:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0325	0.0300	108	80-120	

Lab Batch #: 825540

Sample: 391751-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/10 23:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0343	0.0300	114	80-120	

Lab Batch #: 825540

Sample: 391751-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/30/10 23:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	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

^ If results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 391429,

Project ID: SRS # 2009-92

Lab Batch #: 825540

Sample: 391429-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/10 01:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0363	0.0300	121	80-120	**

Lab Batch #: 825540

Sample: 391429-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/10 01:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0350	0.0300	117	80-120	

Lab Batch #: 825540

Sample: 391429-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/10 02:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0359	0.0300	120	80-120	

Lab Batch #: 825540

Sample: 391429-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/10 02:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0341	0.0300	114	80-120	

Lab Batch #: 825540

Sample: 391429-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/10 03:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0382	0.0300	127	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: 14" Vac to Jal Legacy

Work Orders : 391429,

Project ID: SRS # 2009-92

Lab Batch #: 824911

Sample: 574443-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/27/10 16:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.0	100	79	70-135	
o-Terphenyl	45.5	50.1	91	70-135	

Lab Batch #: 824911

Sample: 574443-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/27/10 16:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	100	85	70-135	
o-Terphenyl	46.8	50.2	93	70-135	

Lab Batch #: 824911

Sample: 574443-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/27/10 16:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.3	100	80	70-135	
o-Terphenyl	42.5	50.1	85	70-135	

Lab Batch #: 824911

Sample: 391429-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 20:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	44.4	50.1	89	70-135	

Lab Batch #: 824911

Sample: 391429-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 21:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.5	85	70-135	
o-Terphenyl	48.1	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

^ If results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 391429,

Project ID: SRS # 2009-92

Lab Batch #: 824911

Sample: 391429-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 21:28

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	99.5	86	70-135	
o-Terphenyl	42.4	49.8	85	70-135	

Lab Batch #: 824911

Sample: 391429-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 21:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.8	85	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 824911

Sample: 391429-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 22:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.5	92	70-135	
o-Terphenyl	37.5	49.8	75	70-135	

Lab Batch #: 824911

Sample: 391387-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 22:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.8	85	70-135	
o-Terphenyl	42.8	49.9	86	70-135	

Lab Batch #: 824911

Sample: 391387-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/27/10 22:47

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	99.8	83	70-135	
o-Terphenyl	41.7	49.9	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 391429

Analyst: BRB

Date Prepared: 09/30/2010

Project ID: SRS # 2009-92

Date Analyzed: 09/30/2010

Lab Batch ID: 825540

Sample: 574821-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.1053	105	0.1	0.1060	106	1	70-130	35
Toluene	ND	0.1000	0.1034	103	0.1	0.1043	104	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1070	107	0.1	0.1078	108	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2084	104	0.2	0.2098	105	1	70-135	35	
o-Xylene	ND	0.1000	0.1053	105	0.1	0.1054	105	0	71-133	35	

Analyst: BEV

Date Prepared: 09/27/2010

Date Analyzed: 09/27/2010

Lab Batch ID: 824911

Sample: 574443-1-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	1030	103	1000	1070	107	4	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1000	942	94	1000	1030	103	9	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: 14" Vac to Jal Legacy

Work Order #: 391429

Project ID: SRS # 2009-92

Lab Batch ID: 825540

QC- Sample ID: 391751-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/30/2010

Date Prepared: 09/30/2010

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021 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	0.1148	0.0014	1	0.1148	0.0967	84	194	70-130	35	XF
Toluene	ND	0.1148	0.0014	1	0.1148	0.0833	73	193	70-130	35	XF
Ethylbenzene	ND	0.1148	0.0011	1	0.1148	0.0681	59	194	71-129	35	XF
m,p-Xylenes	ND	0.2296	0.0020	1	0.2296	0.1308	57	194	70-135	35	XF
o-Xylene	ND	0.1148	0.0011	1	0.1148	0.0683	59	194	71-133	35	XF

Lab Batch ID: 824911

QC- Sample ID: 391387-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/27/2010

Date Prepared: 09/27/2010

Analyst: BEV

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	1090	1160	106	1090	1160	106	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1090	905	83	1090	925	85	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 391429

Lab Batch #: 824908

Project ID: SRS # 2009-92

Date Analyzed: 09/28/2010

Date Prepared: 09/28/2010

Analyst: JLG

QC- Sample ID: 391388-002 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	21.4	22.2	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

Project Name: 14" Vac to Jal Legacy

Company Name: Basin Environmental Consulting, LLC

Project #: SRS# 2009-92

Company Address: P.O. Box 381

Project Loc: Lee County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAJ-J. Henry

Telephone No: (575)605-7210

Fax No: (505) 396-1429

Report Format: Standard TRRP NPDES

Sampler Signature: Camille Bryant

e-mail: cjbryant@basin-consulting.com

(lab use only)		Analyze For									
ORDER #: <u>391429</u>		TCL:									
LAB # (lab use only)		TOTAL:									
FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers	Matrix	TPH	THP	TC
							Isop HNO ₃ HCl H ₂ SO ₄ NaOH H ₂ O ₂ None	Other (Specify) DW - Drinking Water 1L - 500ppm GW - Groundwater 1-500ppm UR - Non-Regulate Specify Cont	TPH: 418 (8195) 80195 THP: 7X 1005 7X 1006	TC: (Ca, Mg, Na, K)	TC: (Al, SO ₄ , Ammonia)
01 Screened SP #20			9/24	1330		1	X	SW	X		
02 Screened SP #21				1345							
03 Screened SP #22				1400							
04 Screened SP #23				1415							
05 Screened SP #24				1430							

Special Instructions: Hold for BTEX analysis				Laboratory Comments: Sample Chain of Custody VOCs Free of Headspace? Sample Chain of Custody Custody seals on container(s) Custody seals on container(s) Sample Hand Delivered by Sampler/Client Rep? by Courier? Temperature Upon Receipt					
Relinquished by: <u>Camille Bryant</u>	Date: <u>9/21/10</u>	Time: <u>15:22</u>	Received by:	Date:	Time:	Received by: <u>Andreea Elom</u>	Date: <u>9-27-10</u>	Time: <u>15:22</u>	Temperature: <u>4.1</u> °C



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 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-in

Client: Basin Env. / Plains
 Date/Time: 9.27.10 15:22
 Lab ID #: 391429
 Initiate: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 Initial and Backup Temperature confirm out of temperature conditions
 Client understands and would like to proceed with analysis

Analytical Report 392369
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS # 2009-92

13-OCT-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85)
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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



13-OCT-10

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

Reference: XENCO Report No: **392369**
14" Vac to Jal Legacy
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 392369. 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. 392369 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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Sample Cross Reference 392369



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Screened SP # 25	S	Sep-30-10 13:00		392369-001
Screened SP # 26	S	Sep-30-10 13:20		392369-002
Screened SP # 27	S	Oct-01-10 13:30		392369-003
Screened SP # 28	S	Oct-01-10 13:50		392369-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: SRS # 2009-92
Work Order Number: 392369

Report Date: 13-OCT-10
Date Received: 10/04/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-826738 BTEX by EPA 8021
SW8021BM

Batch 826738, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 575584-1-BLK.



Certificate of Analysis Summary 392369

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy



Project Id: SRS # 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Oct-04-10 03:09 pm

Report Date: 13-OCT-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	392369-001	392369-002	392369-003	392369-004		
	<i>Field Id:</i>	Screened SP # 25	Screened SP # 26	Screened SP # 27	Screened SP # 28		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Sep-30-10 13:00	Sep-30-10 13:20	Oct-01-10 13:30	Oct-01-10 13:50		
BTEX by EPA 8021	<i>Extracted:</i>	Oct-08-10 18:00	Oct-08-10 18:00	Oct-08-10 18:00	Oct-08-10 18:00		
	<i>Analyzed:</i>	Oct-09-10 01:44	Oct-09-10 02:07	Oct-09-10 02:30	Oct-09-10 02:54		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		ND 0.0539	ND 0.0542	ND 0.0533	ND 0.0534		
Toluene		ND 0.1078	ND 0.1083	ND 0.1066	ND 0.1068		
Ethylbenzene		0.0652 0.0539	ND 0.0542	ND 0.0533	ND 0.0534		
m,p-Xylenes		0.1956 0.1078	0.1365 0.1083	0.1493 0.1066	0.1111 0.1068		
o-Xylene		0.0749 0.0539	ND 0.0542	0.0576 0.0533	ND 0.0534		
Xylenes, Total		0.2705 0.0539	0.1365 0.0542	0.2069 0.0533	0.1111 0.0534		
Total BTEX		0.3357 0.0539	0.1365 0.0542	0.2069 0.0533	0.1111 0.0534		
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Oct-07-10 08:30	Oct-07-10 08:30	Oct-07-10 08:30	Oct-07-10 08:30		
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL		
Percent Moisture		7.22 1.00	7.68 1.00	6.20 1.00	6.38 1.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-05-10 09:30	Oct-05-10 09:30	Oct-05-10 09:30	Oct-05-10 09:30		
	<i>Analyzed:</i>	Oct-05-10 12:07	Oct-05-10 12:26	Oct-05-10 12:45	Oct-05-10 13:05		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		132 16.1	104 16.3	156 15.9	96.4 16.0		
C12-C28 Diesel Range Hydrocarbons		1280 16.1	1200 16.3	1820 15.9	1080 16.0		
C28-C35 Oil Range Hydrocarbons		35.0 16.1	26.3 16.3	31.4 15.9	27.4 16.0		
Total TPH		1447 16.1	1330 16.3	2007 15.9	1204 16.0		

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.

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 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 392369,

Project ID: SRS # 2009-92

Lab Batch #: 826738

Sample: 575584-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/08/10 18:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0301	0.0300	100	80-120	

Lab Batch #: 826738

Sample: 575584-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/08/10 19:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0303	0.0300	101	80-120	

Lab Batch #: 826738

Sample: 575584-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/08/10 19:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0165	0.0300	55	80-120	*

Lab Batch #: 826738

Sample: 392818-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/08/10 23:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0325	0.0300	108	80-120	

Lab Batch #: 826738

Sample: 392818-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/09/10 00:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0316	0.0300	105	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: 14" Vac to Jal Legacy

Work Orders : 392369,

Project ID: SRS # 2009-92

Lab Batch #: 826738

Sample: 392369-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/09/10 01:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0282	0.0300	94	80-120	

Lab Batch #: 826738

Sample: 392369-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/09/10 02:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0281	0.0300	94	80-120	

Lab Batch #: 826738

Sample: 392369-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/09/10 02:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 826738

Sample: 392369-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/09/10 02:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0281	0.0300	94	80-120	

Lab Batch #: 826063

Sample: 575177-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/10 11:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	101	93	70-135	
o-Terphenyl	53.5	50.3	106	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: 14" Vac to Jal Legacy

Work Orders : 392369,

Project ID: SRS # 2009-92

Lab Batch #: 826063

Sample: 575177-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/10 11:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.9	94	70-135	
o-Terphenyl	58.5	50.0	117	70-135	

Lab Batch #: 826063

Sample: 575177-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/05/10 11:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.2	99.5	95	70-135	
o-Terphenyl	51.5	49.8	103	70-135	

Lab Batch #: 826063

Sample: 392369-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/10 12:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	60.4	49.9	121	70-135	

Lab Batch #: 826063

Sample: 392369-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/10 12:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	57.1	50.2	114	70-135	

Lab Batch #: 826063

Sample: 392369-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/10 12:45

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	99.5	97	70-135	
o-Terphenyl	59.3	49.8	119	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: 14" Vac to Jal Legacy

Work Orders : 392369,

Project ID: SRS # 2009-92

Lab Batch #: 826063

Sample: 392369-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/05/10 13:05

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	57.9	50.0	116	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: 14" Vac to Jal Legacy

Work Order #: 392369

Analyst: BRB

Date Prepared: 10/08/2010

Project ID: SRS # 2009-92

Date Analyzed: 10/08/2010

Lab Batch ID: 826738

Sample: 575584-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.1159	116	0.1	0.1122	112	3	70-130	35
Toluene	ND	0.1000	0.1178	118	0.1	0.1139	114	3	70-130	35	
Ethylbenzene	ND	0.1000	0.1176	118	0.1	0.1137	114	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.2406	120	0.2	0.2328	116	3	70-135	35	
o-Xylene	ND	0.1000	0.1151	115	0.1	0.1127	113	2	71-133	35	

Analyst: BEV

Date Prepared: 10/05/2010

Date Analyzed: 10/05/2010

Lab Batch ID: 826063

Sample: 575177-1-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	1010	1010	100	999	1010	101	0	70-135	35
C12-C28 Diesel Range Hydrocarbons	ND	1010	936	93	999	980	98	5	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: 14" Vac to Jal Legacy

Work Order #: 392369

Project ID: SRS # 2009-92

Lab Batch ID: 826738

QC- Sample ID: 392818-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/08/2010

Date Prepared: 10/08/2010

Analyst: BRB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.1063	0.1027	97	0.1063	0.1013	95	1	70-130	35	
Toluene	ND	0.1063	0.1027	97	0.1063	0.1008	95	2	70-130	35	
Ethylbenzene	ND	0.1063	0.1011	95	0.1063	0.0996	94	1	71-129	35	
m,p-Xylenes	ND	0.2125	0.2088	98	0.2125	0.2048	96	2	70-135	35	
o-Xylene	ND	0.1063	0.1037	98	0.1063	0.1018	96	2	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 392369

Lab Batch #: 826348

Project ID: SRS # 2009-92

Date Analyzed: 10/07/2010

Date Prepared: 10/07/2010

Analyst: JLG

QC- Sample ID: 392371-001 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	6.99	6.48	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
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No 01, 5/27/2010
 Effective Date: 5/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
 Date/Time: 10/4/10 15:09
 Lab ID #: 392369
 Initials: AS

Sample Receipt Checklist

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.6.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 337179

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-092

14-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



14-JUL-09

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

Reference: XENCO Report No: **337179**
14" Vac to Jal Legacy
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 337179. 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. 337179 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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Sample Cross Reference 337179



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-2 Prelim GW	W	Jul-02-09 07:30		337179-001
SB-3 Prelim GW	W	Jul-02-09 13:00		337179-002

CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy

Project ID: 2009-092

Work Order Number: 337179

Report Date: 14-JUL-09

Date Received: 07/06/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764628 Inorganic Anions by EPA 300

None

Batch: LBA-764871 TDS by SM2540C

None

Batch: LBA-765343 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765343, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533575-1-BLK, 337179-002.

1,4-Difluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 336977-006 S, 336977-006 SD.

SW8021BM

Batch 765343, Toluene, o-Xylene recovered below QC limits in the Matrix Spike.

Samples affected are: 337179-002, -001.

The Laboratory Control Sample for Toluene, o-Xylene is within laboratory Control Limits



Certificate of Analysis Summary 337179
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Mon Jul-06-09 12:35 pm

Report Date: 14-JUL-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	337179-001	337179-002				
	<i>Field Id:</i>	SB-2 Prelim GW	SB-3 Prelim GW				
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER				
	<i>Sampled:</i>	Jul-02-09 07:30	Jul-02-09 13:00				
Anions by EPA 300	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-06-09 14:02	Jul-06-09 14:02				
	<i>Units/RL:</i>	mg/L RL	mg/L RL				
Chloride		10200 500	10500 500				
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-11-09 11:00	Jul-11-09 11:00				
	<i>Analyzed:</i>	Jul-13-09 14:25	Jul-13-09 14:43				
	<i>Units/RL:</i>	mg/L RL	mg/L RL				
Benzene		0.0063 0.0010	ND 0.0010				
Toluene		0.0158 0.0020	ND 0.0020				
Ethylbenzene		0.0054 0.0010	ND 0.0010				
m,p-Xylenes		0.0070 0.0020	ND 0.0020				
o-Xylene		0.0037 0.0010	ND 0.0010				
Total Xylenes		0.0107 0.0010	ND 0.0010				
Total BTEX		0.0382 0.0010	ND 0.0010				
TDS by SM2540C	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-07-09 15:22	Jul-07-09 15:22				
	<i>Units/RL:</i>	mg/L RL	mg/L RL				
Total dissolved solids		19700 5.00	20500 5.00				

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.

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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.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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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
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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 337179,

Project ID: 2009-092

Lab Batch #: 765343

Sample: 533575-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 12:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0351	0.0300	117	80-120	

Lab Batch #: 765343

Sample: 533575-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 12:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0356	0.0300	119	80-120	

Lab Batch #: 765343

Sample: 533575-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 13:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0192	0.0300	64	80-120	*

Lab Batch #: 765343

Sample: 337179-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 14:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0273	0.0300	91	80-120	

Lab Batch #: 765343

Sample: 337179-002 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 14:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0229	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.



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 337179,

Project ID: 2009-092

Lab Batch #: 765343

Sample: 336977-006 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 20:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0472	0.0300	157	80-120	*
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 765343

Sample: 336977-006 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/13/09 20:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0485	0.0300	162	80-120	*
4-Bromofluorobenzene	0.0331	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.



Blank Spike Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 337179

Project ID:

2009-092

Lab Batch #: 764628

Sample: 764628-1-BKS

Matrix: Water

Date Analyzed: 07/06/2009

Date Prepared: 07/06/2009

Analyst: LATCOR

Reporting Units: mg/L

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	9.22	92	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 337179

Analyst: ASA

Date Prepared: 07/11/2009

Project ID: 2009-092

Date Analyzed: 07/13/2009

Lab Batch ID: 765343

Sample: 533575-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0845	85	0.1	0.0908	91	7	70-125	25	
Toluene	ND	0.1000	0.0799	80	0.1	0.0861	86	7	70-125	25	
Ethylbenzene	ND	0.1000	0.0890	89	0.1	0.0961	96	8	71-129	25	
m,p-Xylenes	ND	0.2000	0.1780	89	0.2	0.1937	97	8	70-131	25	
o-Xylene	ND	0.1000	0.0847	85	0.1	0.0914	91	8	71-133	25	

Analyst: WRU

Date Prepared: 07/07/2009

Date Analyzed: 07/07/2009

Lab Batch ID: 764871

Sample: 764871-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	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
Analytes											
Total dissolved solids	ND	1000	904	90	1000	942	94	4	80-120	30	

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: 14" Vac to Jal Legacy

Work Order #: 337179

Lab Batch #: 764628

Date Analyzed: 07/06/2009

Date Prepared: 07/06/2009

Project ID: 2009-092

Analyst: LATCOR

QC- Sample ID: 337000-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	495	250	739	98	80-120	

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

Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 337179

Project ID: 2009-092

Lab Batch ID: 765343

QC- Sample ID: 336977-006 S

Batch #: 1 Matrix: Water

Date Analyzed: 07/13/2009

Date Prepared: 07/11/2009

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0286	0.1000	0.1043	76	0.1000	0.1067	78	2	70-125	25
Toluene	ND	0.1000	0.0679	68	0.1000	0.0698	70	3	70-125	25	X
Ethylbenzene	0.0030	0.1000	0.0759	73	0.1000	0.0791	76	4	71-129	25	
m,p-Xylenes	ND	0.2000	0.1494	75	0.2000	0.1540	77	3	70-131	25	
o-Xylene	ND	0.1000	0.0704	70	0.1000	0.0728	73	3	71-133	25	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 337179

Lab Batch #: 764628

Project ID: 2009-092

Date Analyzed: 07/06/2009

Date Prepared: 07/06/2009

Analyst: LATCOR

QC- Sample ID: 337000-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	495	487	2	20	

Lab Batch #: 764871

Date Prepared: 07/07/2009

Analyst: WRU

Date Analyzed: 07/07/2009

QC- Sample ID: 337179-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	19700	19800	1	30	

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
 Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 7-10-09 12:35
 Lab ID #: 337179
 Initials: AL

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.1 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample Instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 337272

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal - Legacy

2009-092

14-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 (AAL11), 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)

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14-JUL-09

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

Reference: XENCO Report No: **337272**
14" Vac to Jal - Legacy
Project Address: Lea 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 337272. 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. 337272 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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Sample Cross Reference 337272



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Jul-06-09 10:45		337272-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 337272

Report Date: 14-JUL-09

Date Received: 07/07/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764860 Inorganic Anions by EPA 300

None

Batch: LBA-764871 TDS by SM2540C

None

Batch: LBA-765196 BTEX-MTBE EPA 8021B

SW8021BM

Batch 765196, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 337272-001.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 765196, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 337033-002 S,337033-002 SD.

4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533485-1-BLK,337033-002 S,337033-002 SD,337272-001.

4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 533485-1-BKS,533485-1-BSD.



Certificate of Analysis Summary 337272

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea Co., NM

Project Name: 14" Vac to Jal - Legacy

Date Received in Lab: Tue Jul-07-09 10:15 am

Report Date: 14-JUL-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	337272-001					
	Field Id:	MW-1					
	Depth:						
	Matrix:	WATER					
	Sampled:	Jul-06-09 10:45					
Anions by EPA 300	Extracted:						
	Analyzed:	Jul-08-09 17:29					
	Units/RL:	mg/L RL					
Chloride		5300 250					
BTEX by EPA 8021B	Extracted:	Jul-08-09 18:00					
	Analyzed:	Jul-11-09 17:06					
	Units/RL:	mg/L RL					
Benzene		ND 0.0010					
Toluene		ND 0.0020					
Ethylbenzene		ND 0.0010					
m,p-Xylenes		ND 0.0020					
o-Xylene		ND 0.0010					
Total Xylenes		ND 0.0010					
Total BTEX		ND 0.0010					
TDS by SM2540C	Extracted:						
	Analyzed:	Jul-07-09 15:22					
	Units/RL:	mg/L RL					
Total dissolved solids		14300 5.00					

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.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi


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.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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: 14" Vac to Jal - Legacy

Work Orders : 337272,

Project ID: 2009-092

Lab Batch #: 765196

Sample: 533485-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/11/09 10:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0366	0.0300	122	80-120	*

Lab Batch #: 765196

Sample: 533485-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/11/09 11:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0372	0.0300	124	80-120	*

Lab Batch #: 765196

Sample: 533485-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/11/09 11:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0167	0.0300	56	80-120	*

Lab Batch #: 765196

Sample: 337272-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/11/09 17:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0189	0.0300	63	80-120	*

Lab Batch #: 765196

Sample: 337033-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/12/09 07:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	<0.0000	0.0300	0	80-120	*
4-Bromofluorobenzene	<0.0000	0.0300	0	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: 14" Vac to Jal - Legacy

Work Orders : 337272,

Project ID: 2009-092

Lab Batch #: 765196

Sample: 337033-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 07/12/09 08:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	<0.0000	0.0300	0	80-120	*
4-Bromofluorobenzene	<0.0000	0.0300	0	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.



Blank Spike Recovery



Project Name: 14" Vac to Jal - Legacy

Work Order #: 337272



Project ID:

2009-092

Lab Batch #: 764860

Sample: 764860-1-BKS

Matrix: Water

Date Analyzed: 07/08/2009

Date Prepared: 07/08/2009

Analyst: LATCOR

Reporting Units: mg/L

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	9.03	90	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]

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

⓪ - Below Reporting Limit



BS / BSD Recoveries



Project Name: 14" Vac to Jal - Legacy

Work Order #: 337272

Analyst: BRB

Date Prepared: 07/08/2009

Project ID: 2009-092

Date Analyzed: 07/11/2009

Lab Batch ID: 765196

Sample: 533485-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.0924	92	0.1	0.0933	93	1	70-125	25	
Toluene	ND	0.1000	0.0872	87	0.1	0.0883	88	1	70-125	25	
Ethylbenzene	ND	0.1000	0.0961	96	0.1	0.0984	98	2	71-129	25	
m,p-Xylenes	ND	0.2000	0.1950	98	0.2	0.1992	100	2	70-131	25	
o-Xylene	ND	0.1000	0.0929	93	0.1	0.0947	95	2	71-133	25	

Analyst: WRU

Date Prepared: 07/07/2009

Date Analyzed: 07/07/2009

Lab Batch ID: 764871

Sample: 764871-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	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
Analytes											
Total dissolved solids	ND	1000	904	90	1000	942	94	4	80-120	30	

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: 14" Vac to Jal - Legacy

Work Order #: 337272

Lab Batch #: 764860

Project ID: 2009-092

Date Analyzed: 07/08/2009

Date Prepared: 07/08/2009

Analyst: LATCOR

QC- Sample ID: 337428-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	127	100	241	114	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

- Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 14" Vac to Jal - Legacy

Work Order #: 337272

Project ID: 2009-092

Lab Batch ID: 765196

QC- Sample ID: 337033-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 07/12/2009

Date Prepared: 07/08/2009

Analyst: BRB

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0316	0.1000	ND	0	0.1000	ND	0	NC	70-125	25	X
Toluene	0.0071	0.1000	ND	0	0.1000	ND	0	NC	70-125	25	X
Ethylbenzene	0.0021	0.1000	ND	0	0.1000	ND	0	NC	71-129	25	X
m,p-Xylenes	0.0080	0.2000	ND	0	0.2000	ND	0	NC	70-131	25	X
o-Xylene	0.0041	0.1000	ND	0	0.1000	ND	0	NC	71-133	25	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: 14" Vac to Jal - Legacy

Work Order #: 337272

Lab Batch #: 764860

Project ID: 2009-092

Date Analyzed: 07/08/2009

Date Prepared: 07/08/2009

Analyst: LATCOR

QC- Sample ID: 337428-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	127	141	10	20	

Lab Batch #: 764871

Date Prepared: 07/07/2009

Analyst: WRU

Date Analyzed: 07/07/2009

QC- Sample ID: 337179-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	19700	19800	1	30	

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
 Variance/ Corrective Action Report- Sample Log-In

Client: Basin Plains
 Date/ Time: 07/07/09 10:15
 Lab ID #: 337272
 Initials: AVAA

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	04 C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/cooler?	<input type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 349366

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal - Legacy

2009-092

23-OCT-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 (AAL11), 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)



23-OCT-09

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

Reference: XENCO Report No: **349366**
14-Inch Vac to Jal - Legacy
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 349366. 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. 349366 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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Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Sample Cross Reference 349366



PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal - Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Oct-21-09 10:30		349366-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14-Inch Vac to Jal - Legacy

Project ID: 2009-092

Work Order Number: 349366

Report Date: 23-OCT-09

Date Received: 10/22/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-778519 BTEX-MTBE EPA 8021B

None



Certificate of Analysis Summary 349366

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal - Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Thu Oct-22-09 08:30 am

Report Date: 23-OCT-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	349366-001					
	Field Id:	MW-1					
	Depth:						
	Matrix:	WATER					
	Sampled:	Oct-21-09 10:30					
BTEX by EPA 8021	Extracted:	Oct-22-09 14:00					
	Analyzed:	Oct-22-09 14:46					
	Units/RL:	mg/L RL					
	Benzene	0.0125 0.0010					
Toluene	0.0049 0.0020						
Ethylbenzene	ND 0.0010						
m,p-Xylenes	ND 0.0020						
o-Xylene	ND 0.0010						
Xylenes, Total	ND 0.0010						
Total BTEX	0.0174 0.0010						

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.

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 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.

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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: 14-Inch Vac to Jal - Legacy

Work Orders : 349366,

Project ID: 2009-092

Lab Batch #: 778519

Sample: 541341-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/22/09 13:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0302	0.0300	101	80-120	

Lab Batch #: 778519

Sample: 541341-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/22/09 13:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0302	0.0300	101	80-120	

Lab Batch #: 778519

Sample: 541341-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/22/09 14:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0292	0.0300	97	80-120	

Lab Batch #: 778519

Sample: 349366-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/22/09 14:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0302	0.0300	101	80-120	

Lab Batch #: 778519

Sample: 349366-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 10/22/09 23:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0316	0.0300	105	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: 14-Inch Vac to Jal - Legacy

Work Orders : 349366,

Project ID: 2009-092

Lab Batch #: 778519

Sample: 349366-001 SD / MSD

Batch: 1 **Matrix:** Water

Units: mg/L

Date Analyzed: 10/22/09 23:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	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.



BS / BSD Recoveries



Project Name: 14-Inch Vac to Jal - Legacy

Work Order #: 349366

Analyst: ASA

Date Prepared: 10/22/2009

Project ID: 2009-092

Date Analyzed: 10/22/2009

Lab Batch ID: 778519

Sample: 541341-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1000	0.0952	95	0.1	0.0941	94	1	70-125	25	
Toluene	ND	0.1000	0.0937	94	0.1	0.0925	93	1	70-125	25	
Ethylbenzene	ND	0.1000	0.0950	95	0.1	0.0936	94	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.2091	105	0.2	0.2064	103	1	70-131	25	
o-Xylene	ND	0.1000	0.1013	101	0.1	0.1002	100	1	71-133	25	

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: 14-Inch Vac to Jal - Legacy

Work Order #: 349366

Project ID: 2009-092

Lab Batch ID: 778519

QC- Sample ID: 349366-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/22/2009

Date Prepared: 10/22/2009

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0125	0.1000	0.1029	90	0.1000	0.1029	90	0	70-125	25	
Toluene	0.0049	0.1000	0.0960	91	0.1000	0.0940	89	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0875	88	0.1000	0.0865	87	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.1941	97	0.2000	0.1893	95	3	70-131	25	
o-Xylene	ND	0.1000	0.0934	93	0.1000	0.0915	92	2	71-133	25	

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-22-09 2:0830
 Lab ID #: 349366
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	4.6 ° C	
#2 Shipping container in good condition?	<u>Yes</u>	No	<u>N/A</u>	
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present <u>N/A</u>	
#4 Custody Seal's intact on sample bottles/ container? /label	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont / Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	Not Applicable	
#20 VOC samples have zero headspace?	<u>Yes</u>	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 356646

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-092

30-DEC-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 (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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)



30-DEC-09

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

Reference: XENCO Report No: **356646**
14" Vac to Jal Legacy
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 356646. 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. 356646 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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Sample Cross Reference 356646



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-4 GW	W	Dec-22-09 11:15		356646-001
SB-5 GW	W	Dec-22-09 12:30		356646-002



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy

Project ID: 2009-092

Work Order Number: 356646

Report Date: 30-DEC-09

Date Received: 12/23/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-786923 Inorganic Anions by EPA 300

E300MI

Batch 786923, Chloride recovered above QC limits in the Matrix Spike.

Samples affected are: 356646-001, -002.

The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-787536 TDS by SM2540C

None



Certificate of Analysis Summary 356646

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy

Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Wed Dec-23-09 08:17 am

Report Date: 30-DEC-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	356646-001	356646-002				
	Field Id:	SB-4 GW	SB-5 GW				
	Depth:						
	Matrix:	WATER	WATER				
	Sampled:	Dec-22-09 11:15	Dec-22-09 12:30				
Inorganic Anions In Water by E300	Extracted:						
	Analyzed:	Dec-23-09 10:08	Dec-23-09 10:08				
	Units/RL:	mg/L RL	mg/L RL				
Chloride		8580 250	9920 250				
TDS by SM2540C	Extracted:						
	Analyzed:	Dec-28-09 14:40	Dec-28-09 14:40				
	Units/RL:	mg/L RL	mg/L RL				
Total dissolved solids		15700 5.00	18200 5.00				

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria

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- 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
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2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Blank Spike Recovery



Project Name: 14" Vac to Jal Legacy

Work Order #: 356646

Project ID:

2009-092

Lab Batch #: 786923

Sample: 786923-1-BKS

Matrix: Water

Date Analyzed: 12/23/2009

Date Prepared: 12/23/2009

Analyst: LATCOR

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Water by E300	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	ND	10.0	10.8	108	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]

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

-- Below Reporting Limit



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 356646

Analyst: WRU

Date Prepared: 12/28/2009

Project ID: 2009-092

Date Analyzed: 12/28/2009

Lab Batch ID: 787536

Sample: 787536-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	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
Analytes											
Total dissolved solids	ND	1000	1040	104	1000	980	98	6	80-120	30	

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: 14" Vac to Jal Legacy

Work Order #: 356646

Lab Batch #: 786923

Date Analyzed: 12/23/2009

Date Prepared: 12/23/2009

Project ID: 2009-092

Analyst: LATCOR

QC- Sample ID: 356608-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	133	100	244	111	90-110	X

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

Below Reporting Limit



Sample Duplicate Recovery

Project Name: 14" Vac to Jal Legacy

Work Order #: 356646

Lab Batch #: 786923

Project ID: 2009-092

Date Analyzed: 12/23/2009

Date Prepared: 12/23/2009

Analyst: LATCOR

QC- Sample ID: 356608-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Inorganic Anions In Water by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	133	134	1	20	

Lab Batch #: 787536

Date Analyzed: 12/28/2009

Date Prepared: 12/28/2009

Analyst: WRU

QC- Sample ID: 356646-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	15700	16300	4	30	

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

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental/Plains

Date/ Time: 12/23/09 8:17

Lab ID #: 356646

Initials: JS

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	2.6 °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 366350

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14 Inch Vac to Jal Legacy

2009-092

24-MAR-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



24-MAR-10

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

Reference: XENCO Report No: **366350**
14 Inch Vac to Jal Legacy
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 366350. 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. 366350 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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Sample Cross Reference 366350



PLAINS ALL AMERICAN EH&S, Midland, TX

14 Inch Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Mar-11-10 09:45		366350-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14 Inch Vac to Jal Legacy



Project ID: 2009-092

Report Date: 24-MAR-10

Work Order Number: 366350

Date Received: 03/19/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-799583 BTEX by EPA 8021

None



Certificate of Analysis Summary 366350

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14 Inch Vac to Jal Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Mar-19-10 04:47 pm

Report Date: 24-MAR-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	366350-001					
	Field Id:	MW-1					
	Depth:						
	Matrix:	WATER					
	Sampled:	Mar-11-10 09:45					
BTEX by EPA 8021	Extracted:	Mar-23-10 08:00					
	Analyzed:	Mar-23-10 11:56					
	Units/RL:	mg/L RL					
Benzene		0.0720 0.0010					
Toluene		0.0243 0.0020					
Ethylbenzene		0.0020 0.0010					
m,p-Xylenes		ND 0.0020					
o-Xylene		0.0017 0.0010					
Xylenes, Total		0.0017 0.0010					
Total BTEX		0.1000 0.0010					

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.

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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.

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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: 14 Inch Vac to Jal Legacy

Work Orders : 366350,

Project ID: 2009-092

Lab Batch #: 799583

Sample: 558913-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 10:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0296	0.0300	99	80-120	

Lab Batch #: 799583

Sample: 558913-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 10:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0309	0.0300	103	80-120	

Lab Batch #: 799583

Sample: 558913-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 11:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0308	0.0300	103	80-120	

Lab Batch #: 799583

Sample: 366350-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 11:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0265	0.0300	88	80-120	

Lab Batch #: 799583

Sample: 366350-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 20:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0277	0.0300	92	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: 14 Inch Vac to Jal Legacy

Work Orders : 366350,

Project ID: 2009-092

Lab Batch #: 799583

Sample: 366350-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 03/23/10 20:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	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	0.0282	0.0300	94	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.



BS / BSD Recoveries



Project Name: 14 Inch Vac to Jal Legacy

Work Order #: 366350

Analyst: ASA

Date Prepared: 03/23/2010

Project ID: 2009-092

Date Analyzed: 03/23/2010

Lab Batch ID: 799583

Sample: 558913-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1000	0.0967	97	0.1	0.0999	100	3	70-125	25	
Toluene	ND	0.1000	0.0966	97	0.1	0.0987	99	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0968	97	0.1	0.1008	101	4	71-129	25	
m,p-Xylenes	ND	0.2000	0.1894	95	0.2	0.1966	98	4	70-131	25	
o-Xylene	ND	0.1000	0.0910	91	0.1	0.0946	95	4	71-133	25	

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: 14 Inch Vac to Jal Legacy

Work Order #: 366350

Project ID: 2009-092

Lab Batch ID: 799583

QC- Sample ID: 366350-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 03/23/2010

Date Prepared: 03/23/2010

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0720	0.1000	0.1522	80	0.1000	0.1568	85	3	70-125	25
Toluene	0.0243	0.1000	0.1053	81	0.1000	0.1072	83	2	70-125	25	
Ethylbenzene	0.0020	0.1000	0.0831	81	0.1000	0.0839	82	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.1560	78	0.2000	0.1564	78	0	70-131	25	
o-Xylene	0.0017	0.1000	0.0771	75	0.1000	0.0771	75	0	71-133	25	

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 3.19.10 16:47
 Lab ID #: 366350
 Initials: AL

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	3.6 °C	
#2 Shipping container in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Present	
#5 Chain of Custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#11 Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#12 Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#13 Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#14 Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#15 Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#16 Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	
#20 VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> 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 375611

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

SRS # 2009-92

09-JUN-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



09-JUN-10

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

Reference: XENCO Report No: **375611**
14" Vac to Jal Legacy
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 375611. 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. 375611 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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Sample Cross Reference 375611



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Jun-04-10 09:45		375611-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy

Project ID: SRS # 2009-92

Report Date: 09-JUN-10

Work Order Number: 375611

Date Received: 06/04/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809848 BTEX by EPA 8021

SW8021BM

Batch 809848, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 375611-001.



Certificate of Analysis Summary 375611
PLAINS ALL AMERICAN EH&S, Midland, TX

Project Id: SRS # 2009-92

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: 14" Vac to Jal Legacy

Date Received in Lab: Fri Jun-04-10 02:20 pm

Report Date: 09-JUN-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	375611-001				
	Field Id:	MW-1				
	Depth:					
	Matrix:	WATER				
	Sampled:	Jun-04-10 09:45				
BTEX by EPA 8021	Extracted:	Jun-08-10 16:00				
	Analyzed:	Jun-08-10 22:23				
	Units/RL:	mg/L RL				
Benzene		0.1407 0.0010				
Toluene		0.0637 0.0020				
Ethylbenzene		0.0047 0.0010				
m,p-Xylenes		0.0041 0.0020				
o-Xylene		0.0026 0.0010				
Xylenes, Total		0.0067 0.0010				
Total BTEX		0.2158 0.0010				

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.

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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.

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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: 14" Vac to Jal Legacy

Work Orders : 375611,

Project ID: SRS # 2009-92

Lab Batch #: 809848

Sample: 565236-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/08/10 18:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0294	0.0300	98	80-120	

Lab Batch #: 809848

Sample: 565236-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/08/10 18:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0300	0.0300	100	80-120	

Lab Batch #: 809848

Sample: 565236-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/08/10 19:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0295	0.0300	98	80-120	

Lab Batch #: 809848

Sample: 375611-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/08/10 22:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0238	0.0300	79	80-120	*

Lab Batch #: 809848

Sample: 375188-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/09/10 04:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0286	0.0300	95	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: 14" Vac to Jal Legacy

Work Orders : 375611,

Project ID: SRS # 2009-92

Lab Batch #: 809848

Sample: 375188-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/09/10 04:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0281	0.0300	94	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 375611

Analyst: ASA

Date Prepared: 06/08/2010

Project ID: SRS # 2009-92

Date Analyzed: 06/08/2010

Lab Batch ID: 809848

Sample: 565236-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Analytes	BTEX by EPA 8021										
	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	0.0959	96	0.1	0.1012	101	5	70-125	25	
Toluene	ND	0.1000	0.0961	96	0.1	0.1019	102	6	70-125	25	
Ethylbenzene	ND	0.1000	0.1011	101	0.1	0.1066	107	5	71-129	25	
m,p-Xylenes	ND	0.2000	0.2021	101	0.2	0.2135	107	5	70-131	25	
o-Xylene	ND	0.1000	0.0998	100	0.1	0.1061	106	6	71-133	25	

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: 14" Vac to Jal Legacy

Work Order #: 375611

Project ID: SRS # 2009-92

Lab Batch ID: 809848

QC- Sample ID: 375188-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 06/09/2010

Date Prepared: 06/08/2010

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0013	0.1000	0.0848	84	0.1000	0.0873	86	3	70-125	25	
Toluene	ND	0.1000	0.0845	85	0.1000	0.0882	88	4	70-125	25	
Ethylbenzene	ND	0.1000	0.0869	87	0.1000	0.0908	91	4	71-129	25	
m,p-Xylenes	ND	0.2000	0.1727	86	0.2000	0.1773	89	3	70-131	25	
o-Xylene	ND	0.1000	0.0845	85	0.1000	0.0886	89	5	71-133	25	

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



XENCO Laboratories
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No : SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains
 Date/Time: 6.4.10 14:20
 Lab ID #: 375611
 Initials: AL

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and <u>bottles</u> ?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 5.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 Initial and Backup Temperature confirm out of temperature conditions
 Client understands and would like to proceed with analysis

Analytical Report 391428
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-092

01-OCT-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

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01-OCT-10

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

Reference: XENCO Report No: **391428**
14" Vac to Jal Legacy
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 391428. 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. 391428 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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Sample Cross Reference 391428



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Sep-23-10 09:30		391428-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: 2009-092

Report Date: 01-OCT-10

Work Order Number: 391428

Date Received: 09/27/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



Certificate of Analysis Summary 391428

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Mon Sep-27-10 03:22 pm

Report Date: 01-OCT-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	391428-001				
	Field Id:	MW-1				
	Depth:					
	Matrix:	WATER				
	Sampled:	Sep-23-10 09:30				
BTEX by EPA 8021	Extracted:	Sep-29-10 15:40				
	Analyzed:	Sep-30-10 05:01				
	Units/RL:	mg/L RL				
Benzene		0.0514 0.0010				
Toluene		0.0278 0.0020				
Ethylbenzene		0.0022 0.0010				
m,p-Xylenes		0.0028 0.0020				
o-Xylene		0.0019 0.0010				
Xylenes, Total		0.0047 0.0010				
Total BTEX		0.0861 0.0010				

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi


 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

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal Legacy

Work Orders : 391428,

Project ID: 2009-092

Lab Batch #: 825380

Sample: 574732-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 03:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0345	0.0300	115	80-120	

Lab Batch #: 825380

Sample: 574732-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 03:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 825380

Sample: 574732-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 04:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0322	0.0300	107	80-120	

Lab Batch #: 825380

Sample: 391428-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 05:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0309	0.0300	103	80-120	

Lab Batch #: 825380

Sample: 391428-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 05:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0317	0.0300	106	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: 14" Vac to Jal Legacy

Work Orders : 391428,

Project ID: 2009-092

Lab Batch #: 825380

Sample: 391428-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 09/30/10 05:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0321	0.0300	107	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 391428

Analyst: ASA

Date Prepared: 09/29/2010

Project ID: 2009-092

Date Analyzed: 09/30/2010

Lab Batch ID: 825380

Sample: 574732-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021	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
Analytes											
Benzene	ND	0.1000	0.0924	92	0.1	0.0907	91	2	70-125	25	
Toluene	ND	0.1000	0.0915	92	0.1	0.0895	90	2	70-125	25	
Ethylbenzene	ND	0.1000	0.0927	93	0.1	0.0914	91	1	71-129	25	
m,p-Xylenes	ND	0.2000	0.1817	91	0.2	0.1796	90	1	70-131	25	
o-Xylene	ND	0.1000	0.0938	94	0.1	0.0927	93	1	71-133	25	

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: 14" Vac to Jal Legacy

Work Order #: 391428

Project ID: 2009-092

Lab Batch ID: 825380

QC- Sample ID: 391428-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 09/30/2010

Date Prepared: 09/29/2010

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 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	0.0514	0.1000	0.1409	90	0.1000	0.1407	89	0	70-125	25
Toluene	0.0278	0.1000	0.1173	90	0.1000	0.1167	89	1	70-125	25	
Ethylbenzene	0.0022	0.1000	0.0906	88	0.1000	0.0896	87	1	71-129	25	
m,p-Xylenes	0.0028	0.2000	0.1724	85	0.2000	0.1697	83	2	70-131	25	
o-Xylene	0.0019	0.1000	0.0905	89	0.1000	0.0882	86	3	71-133	25	

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 Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



XENCO Laboratories
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No: SYS-SRC
 Revision/Date: No 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains
 Date/Time: 9-27-10 15:22
 Lab ID #: 391428
 Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and <u>bottles</u> ?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 4.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3 1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Analytical Report 397215
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal Legacy

2009-092

17-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-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 (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), 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)

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Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):

Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



17-NOV-10

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

Reference: XENCO Report No: **397215**
14" Vac to Jal Legacy
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 397215. 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. 397215 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.

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



Sample Cross Reference 397215



PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal Legacy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Nov-05-10 15:00		397215-001



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: 14" Vac to Jal Legacy



Project ID: 2009-092

Report Date: 17-NOV-10

Work Order Number: 397215

Date Received: 11/12/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



Certificate of Analysis Summary 397215

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal Legacy



Project Id: 2009-092

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Nov-12-10 04:20 pm

Report Date: 17-NOV-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	397215-001				
	Field Id:	MW-1				
	Depth:					
	Matrix:	WATER				
	Sampled:	Nov-05-10 15:00				
BTEX by EPA 8021B	Extracted:	Nov-15-10 16:45				
	Analyzed:	Nov-16-10 11:10				
	Units/RL:	mg/L RL				
Benzene		0.2795 0.0010				
Toluene		0.1807 0.0020				
Ethylbenzene		0.0126 0.0010				
m_p-Xylenes		0.0114 0.0020				
o-Xylene		0.0049 0.0010				
Total Xylenes		0.0163 0.0010				
Total BTEX		0.4891 0.0010				

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.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi


 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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
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: 14" Vac to Jal Legacy

Work Orders : 397215,

Project ID: 2009-092

Lab Batch #: 832334

Sample: 578959-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 09:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0344	0.0300	115	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 832334

Sample: 578959-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 10:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0353	0.0300	118	80-120	

Lab Batch #: 832334

Sample: 578959-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 10:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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 #: 832334

Sample: 397215-001 / SMP

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 11:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0250	0.0300	83	80-120	

Lab Batch #: 832334

Sample: 397215-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 14:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.0269	0.0300	90	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: 14" Vac to Jal Legacy

Work Orders : 397215,

Project ID: 2009-092

Lab Batch #: 832334

Sample: 397215-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/16/10 15:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	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.



BS / BSD Recoveries



Project Name: 14" Vac to Jal Legacy

Work Order #: 397215

Analyst: ASA

Date Prepared: 11/15/2010

Project ID: 2009-092

Date Analyzed: 11/16/2010

Lab Batch ID: 832334

Sample: 578959-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

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	0.0961	96	0.1	0.1026	103	7	70-125	25
Toluene	ND	0.1000	0.0930	93	0.1	0.0996	100	7	70-125	25	
Ethylbenzene	ND	0.1000	0.0935	94	0.1	0.1008	101	8	71-129	25	
m_p-Xylenes	ND	0.2000	0.1896	95	0.2	0.2038	102	7	70-131	25	
o-Xylene	ND	0.1000	0.0924	92	0.1	0.0972	97	5	71-133	25	

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: 14" Vac to Jal Legacy

Work Order #: 397215

Project ID: 2009-092

Lab Batch ID: 832334

QC- Sample ID: 397215-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/16/2010

Date Prepared: 11/15/2010

Analyst: ASA

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.2795	0.1000	0.3749	95	0.1000	0.3882	109	3	70-125	25	
Toluene	0.1807	0.1000	0.2835	103	0.1000	0.2916	111	3	70-125	25	
Ethylbenzene	0.0126	0.1000	0.1002	88	0.1000	0.1015	89	1	71-129	25	
m_p-Xylenes	0.0114	0.2000	0.1834	86	0.2000	0.1834	86	0	70-131	25	
o-Xylene	0.0049	0.1000	0.0928	88	0.1000	0.0934	89	1	71-133	25	

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



XENCO Laboratories
 Atlanta, Boca Raton, Corpus Christi, Dallas
 Houston, Miami, Odessa, Philadelphia
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
 Document No.: SYS-SRC
 Revision/Date: No. 01, 5/27/2010
 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Plains
 Client: Basin Environmental
 Date/Time: 11-18-10 16:20
 Lab ID #: 397215
 Initials: AM

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<u>Yes</u>	No	<u>N/A</u>	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	<u>No</u>	N/A	
17. VOC sample have zero head space?	Yes	<u>No</u>	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 3.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
 - Initial and Backup Temperature confirm out of temperature conditions
 - Client understands and would like to proceed with analysis

Appendix C
Photographs



14 Inch Vac to Jal Legacy Initial Release



Excavation Activities at the 14 Inch Vac to Jal Legacy Release Site



Excavation Activities at the 14 Inch Vac to Jal Legacy Release Site



Excavation Activities at the 14 Inch Vac to Jal Legacy Release Site



14 Inch Vac to Jal Legacy Release Site Looking South



14 Inch Vac to Jal Legacy Release Site Looking East



Completion of Remediation Activities at the 14 Inch Vac to Jal Legacy Release Site



Completion of Remediation Activities at the 14 Inch Vac to Jal Legacy Release Site

Appendix D
Release Notification &
Corrective Action
(Form C-141, Initial)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
100 Rio Brazos Road, Aztec, NM 87410
District IV
220 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

RECEIVED

APR 20 2009
HOBBSOCD

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 - Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	14 - inch Vac to Jal Legacy	Facility Type	Pipeline

Surface Owner	Legacy Petroleum	Mineral Owner		Lease No.	
---------------	------------------	---------------	--	-----------	--

LOCATION OF RELEASE

NEAREST WELL API # 30-025-11759-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	25	25S	37E					Lea

Latitude N 32° 6' 10.7" Longitude W 103° 7' 10.3"

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	250 bbls	Volume Recovered	0 bbls
Source of Release	14" Steel Pipeline	Date and Hour of Occurrence	04/09/2009	Date and Hour of Discovery	04/09/2009 10:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Jason Henry	Date and Hour	04/09/2009 @ 14:20		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

WATER @ 55'

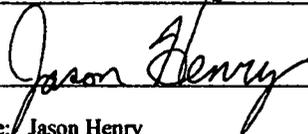
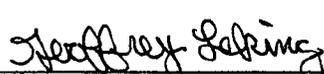
Describe Cause of Problem and Remedial Action Taken.*

During the purging of the 14-inch Sweet Vac to Jal Line, a release of crude oil occurred due to external corrosion. Throughput for the subject line is 0 bbls/day because the line is inactive and was being purged at the time of the release. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 38.

Describe Area Affected and Cleanup Action Taken.*

The released crude resulted in a surface stain that measured approximately 300' x 300'. The impacted area will be remediated per applicable guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Jason Henry	Approved by ENV ENGR District Supervisor: 	
Title: Remediation Coordinator	Approval Date: 04/21/09	Expiration Date: 06/22/09
E-mail Address: jhenry@paalp.com	Conditions of Approval: DELINEATE TO CLEANUP. SUBMIT FINAL C-141 BY 06/22/09.	Attached <input type="checkbox"/>
Date: 04/20/2009 Phone: (575) 441-1099		

* Attach Additional Sheets If Necessary

IRP - 2162 (09.4)

FGRL0912457808

Appendix E
Release Notification &
Corrective Action
(Form C-141, Final)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
90 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

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

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

Reference # 1R-2162

OPERATOR

Initial Report Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 - Denver City, TX 79323	Telephone No.	(575) 441-1099
Facility Name	14 - inch Vac to Jal Legacy	Facility Type	Pipeline

Surface Owner	COG Operating LLC	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
F	25	25S	37E					Lea

Latitude N 32° 6' 10.7" Longitude W 103° 7' 10.3"

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	250 bbls	Volume Recovered	0 bbls
Source of Release	14" Steel Pipeline	Date and Hour of Occurrence	04/09/2009	Date and Hour of Discovery	04/09/2009 10:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required				
	If YES, To Whom? Larry Johnson				
By Whom?	Jason Henry				
	Date and Hour 04/09/2009 @ 14:20				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
	If YES, Volume Impacting the Watercourse.				

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

During the purging of the 14-inch Sweet Vac to Jal Line, a release of crude oil occurred due to external corrosion. Throughput for the subject line is 0 bbls/day because the line is inactive and was being purged at the time of the release. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 38.

Describe Area Affected and Cleanup Action Taken.*

Please see the attached Basin Environmental Service Technologies Remediation Summary and Site Closure Request for details of remedial activities conducted at the site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Jason Henry	Approved by District Supervisor:		
Title: Remediation Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jhenry@paalp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 01/05/2011	Phone: (575) 441-1099		