

# REPORTS

# DATE:



### Basin Environmental Consulting, LLC

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

ŵ Effective Solutions

### **REMEDIATION SUMMARY**

### AND

### SOIL CLOSURE REQUEST

PLAINS PIPELINE, L.P. (231735) DCP Plant to Lea Station 6-Inch Sec. 31 Lea County, New Mexico Plains SRS # 2009-084 UNIT LTR "K" (NE ¼ /SW ¼ ), Section 31, Township 20 South, Range 37 East Latitude 32.52733° North, Longitude 103.2906° West NMOCD Reference # 1RP-2166

Prepared For:

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

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

May 2010

Curt D. Stanley Project Manager



May 4, 2010

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

NMOCD Reference # 1R-2166

Lea County, New Mexico

RECEIVED OCD 2010 HAY -5 A II: 18 Plains Pipeline, L.P. DCP Plant to Lea Station 6-inch Sec. 31 Site Unit Letter K of Section 31, Township 20 South, Range 37 East

RE:

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached Remediation Summary and Soil Closure Request, dated May 2010, for the DCP Plant to Lea Station 6-inch Sec. 31 site. This site is located in Section 31 of Township 20 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.

ason benry

Jáson Henry Remediation Coordinator Plains Pipeline, L.P.

CC: Brian Henington, NMSLO, Santa Fe Office Larry Johnson, NMOCD, Hobbs Office

Enclosure

### TABLE OF CONTENTS

| INTRODUCTION AND BACKGROUND INFORMATION | 1  |
|---|----|
| NMOCD SITE CLASSIFICATION               | .1 |
| SUMMARY OF SOIL REMEDIATION ACTIVITIES  | .2 |
| SOIL CLOSURE REQUEST                    | 7  |
| LIMITATIONS                             | .7 |
| DISTRIBUTION                            | .8 |
|   |    |

### FIGURES

0

•

Figure 1 – Site Location Map Figure 2 – Site and Sample Location Map

### **TABLES**

Table 1 – Concentrations of Benzene, BTEX and TPH in Soil

### 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)

## **INTRODUCTION AND BACKGROUND INFORMATION** Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Soil Closure Request for the release site known as DCP Plant to Lea Station 6-Inch Sec. 31 (SRS # 2009-084). The legal description of the release site is Unit Letter "K" (NE ¼ SW ¼) Section 31 Township 20 South Range 37 East in Lea County.

prepared this Remediation Summary and Soil Closure Request for the release site known as DCP Plant to Lea Station 6-Inch Sec. 31 (SRS # 2009-084). The legal description of the release site is Unit Letter "K" (NE ¼ SW ¼), Section 31, Township 20 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by The State of New Mexico (ROE permit #1794) and is administered by the New Mexico State Land Office (NMSLO). The release site GPS coordinates are 32.52733° North and 103.2906° 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 2, 2009, Plains discovered a crude oil release from a six (6)-inch steel pipeline. During initial response activities, Plains installed a temporary pipeline clamp on the pipeline to mitigate the release. The crude oil release resulted in a surface stain measuring approximately six (6) feet in width and eight (8) feet in length. The initial site assessment indicated approximately two (2) to three (3) barrels of crude oil was released from the pipeline and Plains initially classified the release as a "non-reportable" release. On April 7, 2009, following initial response activities, a soil investigation trench was excavated to a depth of approximately fourteen (14) feet below ground surface (bgs), parallel to the six (6) inch Plains pipeline. Based on visual and olfactory observations of the investigation trench, a soil boring was advanced on April 15, 2009 to further assess the vertical extent of impact at the site. On April 29, 2009, following the review of the existing data. Plains representatives reclassified the release as a "reportable" release. Plains notified the New Mexico Oil Conservation Division (NMOCD) - Hobbs District Office and Santa Fe Office of the release and a Release Notification and Corrective Action (Form C-141) was submitted. The Form C-141 indicated approximately twenty (20) barrels of crude oil was released from the pipeline, with no recovery. The cause of the release was attributed to external corrosion of the pipeline. General photographs of the site are provided as Appendix C.

The northern extent of the release site contains a pipeline corridor containing a twenty-four (24) and sixteen (16) inch diameter gas poly pipeline operated by DCP Midstream Partners, L.P. (DCP). In addition, an eight (8) inch fiberglass water pipeline operated by XTO Energy (XTO) is located to the north of the DCP poly pipelines and an abandoned ten (10) inch steel pipeline bisects the DCP Plant to Lea Station 6-Inch Sec. 31 excavation.

Plains maintained the large diameter and line spacing of the DCP poly pipelines constituted a health and safety hazard to Plains personnel and contractors working in close proximity to the pipelines. Plains requested NMOCD approval, to leave in-situ, impacted soil beneath and adjacent to the DCP poly pipelines.

### NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells have been registered in Section 31. Soil boring (SB-1) advanced by Plains, indicated groundwater was encountered at a depth of approximately seventy-seven (77) feet bgs. 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 approximately sixty (60) feet bgs. The depth of hydrocarbon impact versus the depth of

0

Gy.

0

8

•

0

C

) () ()

**()** ()

۲

6

**(** 

groundwater results in a score of twenty (20) being assigned to the site based on the NMOCD depth to groundwater criteria.

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

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

The NMOCD guidelines indicate the DCP Plant to Lea Station 6-Inch Sec 31 release site has an ranking score of twenty (20). Based on this score, the soil remediation levels for a site with a ranking score of twenty (20) points are as follows:

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

#### SUMMARY OF SOIL REMEDIATION ACTIVITIES

On April 7, 2009, following initial response activities, a soil investigation trench was excavated to a depth of approximately fourteen (14) feet bgs, parallel to the six (6) inch Plains pipeline. Based on visual and olfactory observations of the investigation trench, additional soil investigation was warranted.

On April 15, 2009, one (1) soil boring (SB-1) was advanced approximately ten (10) feet west of the release point to evaluate the vertical extent of soil impact. A soil boring log is 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 benzene, toluene, ethyl-benzene and xylene (BTEX) and total petroleum hydrocarbon (TPH) using EPA SW-846 8021b and SW-846 8015M, respectively.

Soil boring SB-1 was located approximately ten (10) feet west of the release point. The soil boring was advanced to a total depth of approximately eighty-five (85) feet bgs. Soil samples were collected at ten (10), twenty (20), thirty (30), forty (40), fifty (50), sixty (60), seventy (70) and seventy-five (75) feet bgs and submitted to the laboratory. The laboratory analytical results indicated benzene concentrations were less than the laboratory method detection limit (MDL) in all of the submitted soil samples, with the exception of the soil sample (SB-1 @ 10') collected at ten (10) feet bgs, which exhibited a benzene concentration of 0.0017 mg/Kg. All of the submitted soil samples exhibited benzene concentrations less than the NMOCD regulatory standard of 10 mg/Kg. The laboratory MDL in soil samples SB-1 @ 60', SB-1 @ 70' and SB-1 @ 75' to 1.931 mg/Kg in the soil sample SB-1 @ 50'. The laboratory analytical results indicated TPH concentrations ranged from 40.6 mg/Kg in the soil sample SB-1 @ 70' to 1,479.2 mg/Kg in the soil sample SB-1 @ 40'. Table 1 summarizes the Concentrations of Benzene, BTEX and TPH in

Soil. Soil boring and monitor well logs are provided as Appendix A and analytical reports are provided as Appendix B.

During the advancement of the soil boring, groundwater was encountered at approximately seventy-seven (77) feet bgs. A temporary casing was installed in the soil boring to allow a groundwater sample to be collected for analysis. On April 16, 2009, a groundwater sample (SB-1) 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. Based on the analytical results of the submitted groundwater sample, Plains notified NMOCD representatives at the Hobbs District Office and the Santa Fe Office of the laboratory confirmed impact to groundwater at the release site.

On June 2, 2009, following the advancement of the soil boring, excavation of the impacted soil commenced. Excavated soil was stockpiled on-site on plastic to mitigate the potential leaching of contaminants into the vadose zone.

On June 10, 2009, a soil sample (RP @ 15') was collected from the excavation floor at approximately fifteen (15) feet bgs. The analytical results indicated the benzene concentration was less than the laboratory MDL of 1.086 mg/Kg, the BTEX concentration was 15.568 mg/Kg and the TPH concentration was 1,418 mg/Kg.

On June 10, 2009, two (2) excavation sidewall soil samples (NSW @ 14.5' and SSW @ 14.5') were collected and submitted to the laboratory for analysis. The analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 mg/Kg and 0.0019 mg/Kg for soil samples SSW @ 14.5' and NSW @ 14.5', respectively. BTEX concentrations were less than the laboratory MDL of 0.0022 mg/Kg and 0.0165 mg/Kg for soil samples SSW @ 14.5' and NSW @ 14.5', respectively. BTEX concentrations were less than the laboratory MDL of 0.0022 mg/Kg and 0.0165 mg/Kg for soil samples SSW @ 14.5' and NSW @ 14.5', respectively. TPH concentrations were less than the laboratory MDL of 16.7 mg/Kg and 26.1 mg/Kg for soil samples SSW @ 14.5' and NSW @ 14.5', respectively. A baseline stockpile soil sample (Stockpile) was collected from the excavated soil to evaluate the soil and determine its potential use as backfill material. The analytical results indicated the benzene concentration was less than the laboratory MDL of 1.071 mg/Kg, the BTEX concentration was 13.027 mg/Kg and the TPH concentration was 1,344 mg/Kg.

On June 10, 2009, five (5) delineation trenches (West Trench, North Trench #1, North Trench #2, North Trench #2, East Trench #1 and East Trench #2) were excavated to delineate the northern extent of soil impact. A trench (West Trench) was excavated on the northwest corner of the existing excavation to further delineate the release. The West Trench was excavated to a total depth of approximately six (6) feet bgs. A soil sample was collected at six (6) feet bgs and submitted to the laboratory for determination of BTEX and TPH concentrations. The analytical results indicated benzene, BTEX and TPH concentrations were less than the laboratory MDL of 0.0011 mg/Kg, 0.0023 mg/Kg and 16.9 mg/Kg, respectively. The analytical results indicated the West Trench was not impacted by the release.

A delineation trench (North Trench #1) was excavated north of the sixteen (16) and twenty-four (24) inch DCP poly gas lines. North Trench #1 was excavated to a total depth of approximately fourteen (14) feet bgs. Soil samples were collected and submitted to the laboratory at four (4) feet, eight (8) feet, twelve (12) feet and fourteen (14) feet bgs. The analytical results indicated

benzene concentrations were less than the laboratory MDL in each of the soil samples, ranging from less than 0.0012 mg/Kg in soil sample North Trench #1 @ 4' to less than 1.120 mg/Kg in soil sample North Trench #1 @ 14'. BTEX concentrations ranged from less than the laboratory MDL of 0.0023 mg/Kg in soil sample North Trench #1 @ 4' to 29.417 mg/Kg in soil sample North Trench #1 @ 14' and TPH concentrations ranged from less than the laboratory MDL of 17.5 mg/Kg in soil sample North Trench #1 @ 4' to 7,163 mg/Kg in soil sample North Trench #1 @ 14'. Based on the analytical results of soil samples collected from the North Trench #1, delineation was unsuccessful and addition trenches (East Trench #1, East Trench #2 and North Trench #2) were excavated at the north and northeast sides of the release site.

A delineation trench (North Trench #2) was excavated north of the eight (8) inch XTO fiberglass water line. North Trench #2 was excavated to a total depth of approximately eight (8) feet bgs. Soil samples were collected and submitted to the laboratory at four (4) feet and eight (8) feet bgs. The analytical results indicated benzene and BTEX concentrations were less than the laboratory MDL of 0.0011 and 0.0022 mg/Kg in each of the soil samples, respectively. TPH concentrations were less than the laboratory MDL of 15.9 mg/Kg and 16.5 mg/Kg in soil samples North Trench #2 @ 4' and North Trench #2 @ 8', respectively. Based on the analytical results of soil samples collected from the North Trench #2, delineation was successful on the north side of the release site.

A delineation trench (East Trench #1) was excavated east of the North Trench #1 and north of the sixteen (16) and twenty-four (24) inch DCP poly gas lines. East Trench #1 was excavated to a total depth of approximately fourteen (14) feet bgs. Soil samples were collected and submitted to the laboratory at four (4) feet and fourteen (14) feet bgs. The analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 mg/Kg and 0.0107 mg/Kg in soil samples East Trench #1 @ 4' and East Trench #1 @ 14', respectively. BTEX concentrations were 0.00 mg/Kg in soil sample East Trench #1 @ 4' and 3.7949 mg/Kg in soil sample East Trench #1 @ 14'. TPH concentrations were less than the laboratory MDL of 16.1 mg/Kg in soil sample East Trench #1 @ 4' and 3,224 mg/Kg in soil sample East Trench #1 @ 14', respectively. Based on the analytical results of soil samples collected from the North Trench #2, delineation was unsuccessful on the northeast side of the release site.

A delineation trench (East Trench #2) was excavated east of East Trench #1 and north of the sixteen (16) and twenty-four (24) inch DCP poly gas lines. East Trench #2 was excavated to a total depth of approximately fourteen (14) feet bgs. Soil samples were collected and submitted to the laboratory at four (4) feet and fourteen (14) feet bgs. The analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0010 mg/Kg and 0.0011 mg/Kg in soil samples East Trench #2 @ 4' and East Trench #2 @ 14', respectively. BTEX concentrations were less than the laboratory MDL of 0.0021 mg/Kg and 0.0022 mg/Kg in soil samples East Trench #1 @ 4' and East Trench #1 @ 14', respectively. TPH concentrations were less than the laboratory MDL of 15.6 mg/Kg and 17.0 mg/Kg in soil samples East Trench #1 @ 14', respectively. Based on the analytical results of soil samples collected from the East Trench #2, delineation was successful on the northeast side of the release site.

On June 10, 2009, a baseline stockpile soil sample (Stockpile) was collected and submitted to the laboratory. The analytical results indicated the benzene concentration was less than the laboratory MDL of 1.071 mg/Kg. The BTEX concentration was 13.047 mg/Kg and the TPH concentration was 1,344 mg/Kg.

On June 12, 2009, two (2) excavation sidewall soil samples (WSW @ 14.5' and ESW @ 14.5') were collected and submitted to the laboratory for analysis. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. TPH concentrations were less than the laboratory MDL of 16.7 mg/Kg and 16.9 mg/Kg for soil samples WSW @ 14.5' and ESW @ 14.5', respectively.

The excavation of impacted soil was completed on June 12, 2009. Approximately 1,400 cubic yards (cy) of soil was stockpiled on-site during excavation activities, pending final disposition. The final dimensions of the excavation were approximately seventy (77) feet in width, approximately eighty (80) feet in length and fifteen (15) feet in depth.

The analytical results indicated the excavation sidewalls had been remediated to concentrations less than the NMOCD regulatory standard of 10 mg/Kg benzene, 50 mg/Kg BTEX and 100 mg/Kg TPH.

In July 2009, Plains submitted a *Remediation Summary and Proposed Remediation Strategy* to the NMOCD Santa Fe Office.

On September 21 through September 23, 2010, four (4) monitor wells (MW-1 through MW-4) were installed to evaluate the status of the groundwater at the DCP Plant to Lea Station 6-Inch Sec. 31 release site. Soil samples were collected at five (5) foot drilling intervals and field screened using a PID. Selected soil samples were submitted to the laboratory for determination of concentrations of benzene, BTEX and TPH.

Monitor Well MW-1 is located approximately thirteen (13) feet northeast of the release point, in a side gradient position. The monitor well was installed to a total depth of approximately eightysix (86) feet bgs. Soil samples were collected at twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65), and seventy-five (75) feet bgs and submitted to the laboratory. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL. The analytical results further indicated BTEX concentrations ranged from 0.0359 mg/Kg in soil sample MW-1 @ 10' to 13.444 mg/Kg for soil sample MW-1 @ 40'. TPH concentrations ranged from 286 mg/Kg in soil sample MW-1 @ 10' to 1,538 mg/Kg in soil sample MW-1 @ 40'.

Monitor Well MW-2 is located approximately one hundred forty (140) feet north-northwest of the release point, in an up gradient position. The monitor well was installed to a total depth of approximately ninety (90) feet bgs. Soil samples were collected at fifteen (15), thirty (30), forty-five (45), sixty (60), and seventy-five (75) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Monitor Well MW-3 is located approximately eighty-eight (88) feet south southwest of the release point, in a down and side gradient position. The monitor well was installed to a total depth of approximately ninety (90) feet bgs. Soil samples were collected at fifteen (15), thirty (30), forty-five (45), and sixty (60) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate

laboratory MDL, with the exception of soil sample MW-3 @ 60', which exhibited a benzene concentration of 0.0025 mg/Kg, a BTEX concentration of 0.0052 mg/Kg.

Monitor Well MW-4 is located approximately one hundred thirty seven (137) feet southsoutheast of the release point, in a down gradient position. The monitor well was installed to a total depth of approximately ninety (90) feet bgs. Soil samples were collected at fifteen (15), thirty (30), forty-five (45), sixty (60), and seventy-five (75) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL.

On October 8, 2009, three (3) stockpile soil samples (SP-1, SP-2 and SP-3) were collected and submitted to the laboratory. The three (3) soil samples represented approximately 1,400 cubic yards (cy) of excavated soil. The laboratory analytical results indicated benzene concentrations were less than the laboratory MDL for each of the three (3) soil samples. BTEX concentrations ranged from less than the laboratory MDL for soil sample SP-3 to 0.0343 mg/Kg for soil sample SP-1. TPH concentrations ranged from less than the laboratory SP-1.

On January 25, 2010, Plains received partial approval of the *Remediation Summary and Proposed Remediation Strategy* from the NMOCD. The NMOCD approval was conditional and required the submission of an Additional Soil Remediation Strategy for the North Trench #1 and East Trench #1 areas, as well as details of the proposed excavation liner.

On February 24, 2010, Plains submitted the NMOCD requested *Additional Soil Remediation Strategy* to the NMOCD Santa Fe Office. On March 4, 2010, the NMOCD Santa Fe Office approved the *Additional Soil Remediation Strategy*.

On March 9, 2010, remediation activities approved by the NMOCD and set forth in the *Remediation Summary and Proposed Remediation Strategy* and *Additional Soil Remediation Strategy* commenced.

On March 10, 2010, a twenty (20) mil polyurethane liner was installed in the excavation. Prior to the liner installation, a six (6) inch layer of sand was placed in the excavation to protect the liner from sharp objects. Following the liner installation, a six (6) inch layer of sand was placed on top of the liner for further protection. This engineering control will inhibit vertical migration of the contaminants below the liner, by shedding moisture to the edge of the liner and beyond the horizontal extent of the underlying impacted soil.

On March 10 through March 16, 2010, the excavation was backfilled in twelve (12) inch lifts with stockpiled soil, as approved by the NMOCD. Moisture was added to the backfilled soil when required.

On March 16, 2010, approximately one thousand (1,000) gallons of fresh water, containing approximately one hundred (100) pounds of a water soluble fertilizer (Miller 20-20-20) was placed in the North Trench #1 and East Trench #1. Following the infusion of the water/fertilizer solution, a twenty (20) mil liner was placed in the excavation and backfilled.

On completion of the backfill activities the surface was contoured to fit the surrounding topography. Reseeding of the site with vegetation acceptable to the New Mexico State Land Office will take place when conditions are optimal.

#### SOIL CLOSURE REQUEST

Based on the analytical results of confirmation soil samples, Basin recommends Plains provide the NMOCD and the NMSLO Santa Fe offices, a copy of the Remediation Summary and Soil Closure Request and request the NMOCD grant soil closure status to the DCP Plant to Lea Station 6-inch Sec. 31 release site.

PSH recovery and groundwater monitoring and will continue at the DCP Plant to Lea Station 6-Inch Sec. 31 release site until the NMOCD Santa Fe Office approves cessation of these activities. A Groundwater Monitoring Report will be submitted before April 1<sup>st</sup> of each year.

#### LIMITATIONS

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

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

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

6

(† (†

Õ

() ()

•

Ø

9

0 0

0 0

Ø

0

0 6

Ô

### **DISTRIBUTION:**

| Copy 1: | Ed Hansen<br>New Mexico Energy, Minerals and Natural Resources Department<br>Oil Conservation Division<br>1220 South St. Francis Drive<br>Santa Fe, New Mexico 87505    |
|---------|---|
| Copy 2: | Larry Johnson<br>New Mexico Energy, Minerals and Natural Resources Department<br>Oil Conservation Division (District 1)<br>1625 French Drive<br>Hobbs, New Mexico 88240 |
| Copy 3: | Brian Henington<br>New Mexico State Land Office<br>310 Old Santa Fe Trail<br>P.O. Box 1148<br>Santa Fe, New Mexico 87504  |
| Copy 4: | Jeff Dann<br>Plains Pipeline, L.P.<br>333 Clay Street, Suite 1600<br>Houston, Texas 77002<br>jpdann@paalp.com   |
| Copy 5: | Jason Henry<br>Plains Pipeline, L.P.<br>2530 State Highway 214<br>Denver City, Texas 79323<br>jhenry@paalp.com  |
| Сору 6: | Curt D. Stanley<br>Basin Environmental Consulting, LLC<br>P.O. Box 381<br>Lovington, New Mexico 88260<br>cdstanley@basin-consulting.com                                 |
|         |   |

© Ø

6

### Figures





.

....



Ô

**TABLE 1** 

CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

PLAINS PIPELINE, L.P. DCP PLANT TO LEA STATION 6-INCH SECTION 31 LEA COUNTY, NEW MENICO SRS: 2009-084 NMOCD REFERENCE NO: 1RP-2166

|                | _      | -                               | _          | _          | _          | _          | _          | _          | _          | _          |            | _  |          | -           |             | _                | _                    | _                    | _                     | _                     | _                    | _                    | _                    | _                    | _                    | _                     |           |  | _           | _          | _                       | _          | _          |            | -          |            | _          | —        |
|----------------|--------|---------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|----------|-------------|-------------|------------------|----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------|--|-------------|------------|-------------------------|------------|------------|------------|------------|------------|------------|----------|
| TOTAL          | TPH    | C <sub>6</sub> -C <sub>35</sub> | (mg/Kg)    | 494        | 906        | 481        | 1,479.2    | 1,005.1    | 122.5      | 40.6       | 43.3       |  | 1,418    | 26.1        | <16.7       | <16.9            | <17.5                | 5,004                | 8,430                 | 7,163                 | <16.1                | 3,224                | <15.9                | <16.5                | <15.6                | <17.0                 | 1,344     |  | 16.9        | <16.7      | · · · · · · · · · · · · | 286        | 784        | 1,290      | 1,538      | 1,229      | 924        | <16.1    |
| 4              | ORO    | $C_{28}-C_{35}$                 | (mg/Kg)    | 33         | 58         | 27         | 93.2       | 59.1       | <15        | <15.1      | <15.1      |  | 187      | <16.4       | <16.7       | <16.9            | <17.5                | 915                  | 1,610                 | 1,430                 | <16.1                | 600                  | <15.9                | <16.5                | <15.6                | <17.0                 | 206       |  | <15.5       | <16.7      |                         | <87.1      | <77.6      | <75.8      | <75.7      | <75.4      | <75.3      | <16.1    |
| THOD: 80157    | DRO    | $C_{12}-C_{28}$                 | (mg/Kg)    | 311        | 473        | 249        | 687        | 481        | 102        | 40.6       | 43.3       |  | 422      | 26.1        | <16.7       | <16.9            | <17.5                | 3,780                | 5,920                 | 4,910                 | <16.1                | 2,430                | <15.9                | <16.5                | <15.6                | <17.0                 | 653       | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | 16.9        | <16.7      |                         | 149        | 440        | 616        | 550        | 529        | 448        | <16.1    |
| ME             | GRO    | C <sub>6</sub> -C <sub>12</sub> | (mg/Kg)    | 150        | 375        | 205        | 669        | 465        | 20.5       | <15.1      | <15.1      | 1999 (J. 1997) - 1999 (J. 1999) - 1999 ( | 809      | <16.4       | <16.7       | <16.9            | <17.5                | 309                  | 006                   | 823                   | <16.1                | 194                  | <15.9                | <16.5                | <15.6                | <17.0                 | 485       |  | <15.5       | <16.7      | 5                       | 137        | 344        | 674        | 886        | 200        | 476        | <16.1    |
|                | TOTAL  | BTEN                            | (mg/Kg)    | 0.2556     | 0.2353     | 0.0143     | 1.7683     | 1.931      | <0.098     | <0.0020    | <0.0020    |  | 15.568   | 0.0165      | <0.0022     | <0.0023          | <0.0023              | 8.281                | 26.067                | 29.417                | 0.0024               | 3.7949               | <0.0022              | <0.0022              | <0.0021              | <0.0022               | 13.027    |  | <0.0020     | <0.0022    |                         | 0.0359     | 2.876      | 10.291     | 13.444     | 7.143      | 3.563      | <0.0021  |
|                | Ģ      | XYLENE                          | (mg/Kg)    | 0.0554     | 0.0623     | 0.0041     | 0.4634     | 0.4744     | <0.0049    | <0.0010    | <0.0010    |  | 2.508    | <0.0011     | <0.0011     | <0.0011          | <0.0012              | 3.179                | 5.021                 | 5.157                 | <0.0011              | 1.419                | <0.0011              | <0.0011              | <0.0010              | <0.0011               | 2.527     |  | <0.0010     | <0.0011    |                         | 0.0111     | 0.6959     | 2.244      | 2.981      | 1.652      | 0.8998     | <0.0011  |
| 46-8021B, 5030 | M.P    | XYLENES                         | (mg/Kg)    | 0.1399     | 0.1368     | 0.0084     | 1.079      | 1.183      | <0.0098    | <0.0020    | <0.0020    |  | 13.06    | 0.0083      | <0.0022     | <0.0023          | <0.0023              | 3.9                  | 12.62                 | 14.36                 | 0.0024               | 2.033                | <0.0021              | <0.0022              | <0.0021              | <0.0022               | 10.5      |  | <0.0020     | <0.0022    |                         | 0.0248     | 1.794      | 6.373      | 8.349      | 4.364      | 2.155      | <0.0021  |
| OD: EPA SW 8.  | ETHYL- | BENZENE                         | (mg/Kg)    | 0.0368     | 0.0301     | 0.0018     | 0.226      | 0.2736     | <0.0049    | <0.0010    | <0.0010    |  | <1.086   | 0.0012      | <0.0011     | <0.0011          | <0.0012              | 1.0090               | 3.918                 | 4.516                 | <0.0011              | 0.2889               | <0.0011              | <0.0011              | <0.0010              | <0.0011               | <1.071    |  | <0.0010     | <0.0011    |                         | <0.0058    | 0.3744     | 1.5160     | 1.9840     | 1.1270     | 0.5080     | <0.0011  |
| METH           |        | TOLUENE                         | ung/ Ng    | 0.022      | 0.0061     | <0.0021    | <0.1013    | <0.0997    | <0.0098    | <0.0020    | <0.0020    |  | <2.172   | 0.0051      | <0.0022     | <0.0023          | <0.0023              | 0.1930               | 4.508                 | 5.384                 | <0.0021              | 0.054                | <0.0021              | <0.0022              | <0.0021              | <0.0022               | <2.141    |  | <0.0020     | <0.0022    |                         | <0.0116    | 0.0113     | 0.1577     | 0.1298     | <0.1006    | <0.1002    | <0.0021  |
|                |        | BENZENE                         | (IIIg/ Ng) | 0.0017     | <0.0011    | <0.0011    | <0.0507    | <0.0498    | <0.0049    | <0.0010    | <0.0010    |  | <1.086   | 0.0019      | <0.0011     | <0.0011          | <0.0012              | <0.0555              | <1.065                | <1.120                | <0.0011              | <0.0107              | <0.0011              | <0.0011              | <0.0010              | <0.0011               | <1.071    |  | <0.0010     | <0.0011    |                         | <0.0058    | <0.0052    | <0.0505    | <0.0499    | <0.0503    | <0.0501    | <0.0011  |
|                | SOIL   | STATUS                          |            | In-Situ    |  | In-Situ  | In-Situ     | In-Situ     | In-Situ          | In-Situ              | In-Situ              | In-Situ               | In-Situ               | In-Situ              | In-Situ              | In-Situ              | In-Situ              | In-Situ              | In-Situ               | N/A       | 2  | In-Situ     | In-Situ    |                         | In-Situ    | In-Situ    | In-Situ    | In-Situ    | In-Situ    | In-Situ    | In-Situ  |
|                | DATE   | ANALYZED                        |            | 04/21/09   | 04/21/09   | 04/21/09   | 04/21/09   | 04/21/09   | 04/21/09   | 04/21/09   | 04/21/09   |  | 06/16/09 | 06/16/09    | 06/16/09    | 06/16/09         | 06/16/09             | 06/16/09             | 06/16/09              | 06/16/09              | 06/16/09             | 06/16/09             | 06/16/09             | 06/16/09             | 06/16/09             | 06/16/09              | 06/16/09  |  | 06/16/09    | 06/16/09   |                         | 09/29/09   | 00/57/60   | 09/29/09   | 60/57/60   | 09/29/09   | 00/57/60   | 09/26/09 |
|                | SAMPLE | DATE                            |            | 04/15/09   | 04/15/09   | 04/15/09   | 04/15/09   | 04/15/09   | 04/15/09   | 04/15/09   | 04/15/09   | · ·  | 06/10/00 | 60/01/90    | 06/10/00    | 06/10/09         | 06/10/09             | 06/10/09             | 06/10/09              | 06/10/09              | 06/10/09             | 06/10/09             | 06/10/09             | 06/10/09             | 06/10/09             | 06/10/09              | 06/10/09  | * "SS"                                   | 06/12/09    | 06/12/09   |                         | 09/23/09   | 09/23/09   | 09/23/09   | 09/23/09   | 09/23/09   | 09/23/09   | 60/12/60 |
|                | SAMPLE | DEPTH                           | (cont)     | 10 Feet    | 20 Feet    | 30 Feet    | 40 Feet    | 50 Feet    | 60 Feet    | 70 Feet    | 75 Feet    |  | 15 Feet  | 14.5 Feet   | 14.5 Feet   | 6 Feet           | 4 Feet               | 8 Feet               | 12 Feet               | 14 Feet               | 4 Feet               | 14 Feet              | 4 Feet               | 8 Feet               | 4 Feet               | 14 Feet               | N/A       |  | 14.5 Feet   | 14.5 Feet  |                         | 25 Feet    | 35 Feet    | 45 Feet    | 55 Feet    | 65 Feet    | 75 Feet    | 15 Feet  |
|                |        | SAMPLE LOCATION                 |            | SB-1 @ 10' | SB-1 @ 20' | SB-1 @ 30' | SB-1 @ 40' | SB-1 @ 50' | SB-1 @ 60' | SB-1 @ 70' | SB-1 @ 75' |  | RP @ 15' | NSW @ 14.5' | SSW @ 14.5' | West Trench @ 6' | North Trench #1 @ 4' | North Trench #1 @ 8' | North Trench #1 @ 12' | North Trench #1 @ 14' | East Trench # 1 @ 4' | East Trench #1 @ 14' | North Trench #2 @ 4' | North Trench #2 @ 8' | East Trench # 2 @ 4' | East Trench # 2 @ 14' | Stockpile |  | ESW @ 14.5' | WSW @ 14.5 |                         | MW-1 @ 10' | MW-1 @ 20' | MW-1 @ 30' | MW-1 @ 40' | MW-1 @ 50' | MW-1 @ 60' | MW-2@15' |

Page 1 of 2

**TABLE 1** 

CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

PLAINS PIPELINE, L.P. DCP PLANT TO LEA STATION 6-INCH SECTION 31 LEA COUNTY, NEW MEXICO SRS: 2009-084 NMOCD REFERENCE NO: 1RP-2166

|                  |                             |          |          |                    |              | MET                | HOD: EPA SW 8 | 46-8021B, 5030 |                       |          | ME  | THOD: 8015A     | 4               | TOTAL                           |
|------------------|-----------------------------|----------|----------|--------------------|--------------|--------------------|---------------|----------------|-----------------------|----------|---|-----------------|-----------------|---------------------------------|
| St MBLE LOCATION | SAMPLE                      | SAMPLE   | DATE     | SOIL               | anaznau<br>B | TOL UTANE          | ETHYL-        | M.P            | ò                     | TOTAL    | GRO   | DRO             | ORO             | HdT                             |
| SAMELE LOCATION  | BESD                        | DATE     | ANALYZED | STATUS             | BENZENE      | I OLUENE<br>ma/E'a | BENZENE       | XYLENES        | NYLENE                | BTEN     | $C_{6}-C_{12}$  | $C_{12}-C_{28}$ | $C_{28}-C_{35}$ | C <sub>6</sub> -C <sub>35</sub> |
|                  | (cont)                      |          |          |                    | (ung/ng)     | av /am             | (mg/Kg)       | (mg/Kg)        | (mg/Kg)               | (mg/Kg)  | (mg/Kg)   | (mg/Kg)         | (mg/Kg)         | (mg/Kg)                         |
| MW-2 @ 30'       | 30 Feet                     | 60/17/60 | 09/26/09 | In-Situ            | <0.0011      | <0.0021            | <0.0011       | <0.0021        | <0.0011               | <0.0021  | <16.1   | <16.1           | <16.1           | <16.1                           |
| MW-2 @ 45'       | 45 Feet                     | 09/21/09 | 09/26/09 | In-Situ            | <0.0010      | <0.0020            | <0.0010       | <0.0020        | <0.0010               | <0.0020  | <15.1   | <15.1           | <15.1           | <15.1                           |
| MW-2 @ 60'       | 60 Feet                     | 09/21/09 | 09/26/09 | In-Situ            | <0.0011      | <0.0021            | <0.0011       | <0.0021        | <0.0011               | <0.0021  | <16.1   | <16.1           | <16.1           | <16.1                           |
| MW-2 @ 75'       | 75 Feet                     | 09/21/09 | 06/26/09 | In-Situ            | <0.0013      | <0.0026            | <0.0013       | <0.0026        | <0.0013               | <0.0026  | <19.2   | <19.2           | <19.2           | <19.2                           |
| MW-3 @ 15'       | 15 Feet                     | 09/22/09 | 00/26/09 | In-Situ            | <0.0011      | <0.0022            | <0.0011       | <0.0022        | <0.0011               | <0.0022  | <16.3   | <16.3           | <16.3           | <16.3                           |
| MW-3 @ 30'       | 30 Feet                     | 09/22/09 | 09/26/09 | In-Situ            | < 0.0011     | <0.0021            | <0.0011       | <0.0021        | <0.0011               | <0.0021  | <16.0   | <16.0           | <16.0           | <16.0                           |
| MW-3 @ 45'       | 45 Feet                     | 09/22/09 | 06/26/09 | In-Situ            | <0.0010      | <0.0020            | < 0.0010      | <0.0020        | <0.0010               | <0.0020  | <15.0   | <15.0           | <15.0           | <15.0                           |
| MW-3 @ 60'       | 60 Feet                     | 09/22/09 | 09/26/09 | In-Situ            | 0.0025       | 0.0027             | <0.0011       | <0.0021        | <0.0011               | 0.0052   | <16.0   | <16.0           | <16.0           | <16.0                           |
| MW-4 @ 15'       | 15 Feet                     | 09/22/09 | 09/26/09 | In-Situ            | <0.0010      | <0.0020            | <0.0010       | <0.0020        | <0.0010               | <0.0020  | 5.4</td <td>&lt;15.4</td> <td>&lt;15.4</td> <td>&lt;15.4</td> | <15.4           | <15.4           | <15.4                           |
| MW-4 @ 30'       | 30 Feet                     | 09/22/09 | 09/26/09 | In-Situ            | <0.0010      | <0.0021            | <0.0010       | <0.0021        | <0.0010               | <0.0021  | <15.7   | <15.7           | <15.7           | <15.7                           |
| MW-4 @ 45'       | 45 Feet                     | 09/22/09 | 06/26/09 | In-Situ            | <0.0010      | <0.0021            | <0.0010       | <0.0021        | <0.0010               | <0.0021  | <15.6   | <15.6           | <15.6           | <15.6                           |
| MW-4 @ 60'       | 60 Feet                     | 09/22/09 | 09/26/09 | In-Situ            | <0.0012      | <0.0025            | <0.0012       | <0.0025        | <0.0012               | <0.0025  | <18.6   | <18.6           | <18.6           | <18.6                           |
|                  | $\{ f_{i}, f_{i}, f_{i} \}$ |          |          | Contraction of the |              |                    |               | \$             |                       |          |   |                 | 1. 1. A.        |                                 |
| SP-1             | N/A                         | 10/08/09 | 60/60/01 | N/A                | <0.0010      | 0.0022             | 0.0055        | 0.0343         | 0.0217                | 0.0637   | 55.1  | 489.0           | 28.5            | 572.6                           |
| SP-2             | N/A                         | 10/08/09 | 60/60/01 | N/A                | <0.0010      | <0.0021            | 0.0019        | 0.0042         | 0.0038                | 0.0099   | 22.4  | 189.0           | <15.8           | 211.4                           |
| SP-3             | N/A                         | 10/08/09 | 60/60/01 | N/A                | <0.0010      | <0.0021            | < 0.0010      | <0.0021        | <0.0010               | <0.0021  | <15.8   | <15.8           | <15.8           | <15.8                           |
|                  |                             |          |          |                    |              |                    |               | A              | and the second second | 1. Cales |   |                 |                 | с <sup>у</sup> ,                |
|                  |                             |          |          |                    |              |                    |               |                |                       |          |   |                 |                 |                                 |

Page 2 of 2

## Appendices

() () ()

0

**OO** 

0

0

• 0 Ò 0 0 • æ ₿

### Appendix A Soil Boring and Monitor Well Logs

Œ Ð • Ì 0 

• 0 0 Ð Ø 0 8 

| Depth      |             |           |                 | Μ                 | onitor Well MW-1  |         |  |                              |
|------------|-------------|-----------|-----------------|-------------------|---|---------|--|------------------------------|
| ground     | Drilling So | il PID    | Petroleum P     | etroleun<br>Stain | Soil Description  |         | Monitor Well MV  | <u>V-1</u>                   |
| E          | E° E        |           |                 | Jain              |   |         | Date Drilled September 24<br>Thickness of Bentonite Seat 57 F  | 4, 2009<br>-1                |
| 20         | -5          | 1836      | Heavy           | Slight            | U - 5 - Sand, brown with caliche hodules  |         | Depth to Groundwater<br>Ground Water Elevation   | (bys                         |
| 25         | L 10        | (747)     | Very Heavy      | Slight            | 5 - 18' - Caliche, grev, hard, drv, sandy   |         | Indicates the DSH lavel more   | -                            |
| 30         | -15 80      | 779       | Heavy           | None              |   |         | Indicates the groundwater lev measured on  | rel                          |
| - 35       | - 20        | 848       | Heavy           | None              | 18 - 25' - Sand brown very fine grained dry with  |         | <ul> <li>Indicates samples selected for<br/>Laboratory Analysis.</li> <li>PID Head-space reading in ppm o<br/>with a pater instruction detect</li> </ul> | r<br>Ibtained                |
| 40         | -25         | 1449      | Heavy           | None              | caliche nodules   |         | with a photo-tonization detect   | ж.                           |
| - 45       |             | (1463)    | Heavy           | None              |   |         |  |                              |
| Ē          |             | 1078      | Heavy           | None              |   |         |  |                              |
|            |             |           | Heavy           | None              |   |         |  |                              |
| - 56       | - 40        | 936       | Heavy           | None              |   |         |  |                              |
| - 60       | - 45        | 1522      | Heavy           | None              | 25 - 71' - Sand, brown, very fine grained, moist to<br>wet at approximately 70 feet. Monitor well was | 1000    |  |                              |
| 65         | - 50        | (1438)    | Heavy           | None              | completed using water   |         | Grout Surface Seal   |                              |
| - 70       | - 55        | 1851      | Heavy           | None              |   | 225455  | Bentonite Pellet Seal  |                              |
| 175        | - 60        | (1550)    | Very Heavy      | None              |   | 2649031 |  |                              |
| - 80       | 65          | 863       | Verv Heavy      | None              |   |         | Sand Pack  |                              |
| - 85<br>86 |             | то        | ( or y ( loarly | Hono              |   |         | Screen   |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         | Completion Notes   | on date                      |
|            |             |           |                 |                   |   |         | using air / water rotary drilling te<br>2.) The well was constructed with 4<br>inch factory slotted, threaded joi  | " ID, 0.020<br>int, schedu   |
|            |             |           |                 |                   |   |         | 40 PVC pipe.<br>3.) The well is protected with a lock<br>steel cover and compression ca  | ed stick up<br>p.            |
|            |             |           |                 |                   |   |         | <ol> <li>The lines between material types<br/>on the profile log represent appr<br/>boundaries. Actual transitions m<br/>pradual</li> </ol>              | s shown<br>oximate<br>nay be |
|            |             |           |                 |                   |   |         | <ol> <li>The depths indicated are referen<br/>ground surface.</li> </ol>   | nced from                    |
|            |             |           |                 |                   |   |         |  |                              |
|            |             |           |                 |                   |   |         |  |                              |
|            |             | Monito    | or Well N       | /IW-1             | Rasin En  | vironn  | nental Consu   | Itin                         |
| [          | DCP Pla     | nt to Lea | a Station       | n 6-Ir<br>Mex     | tico  | CDS     | Cherked By: CDS  |                              |
|            | -           | Plains    | Pipeline        | , L.P             | - October   | 7, 2009 | Gibbled by, 665  |                              |

| Drilling | Soil         | PID          | Patroleum | Petroleum | Monitor Well MW-2   |           |                                       | Monitor Well MW-2   |
|----------|--------------|--------------|-----------|-----------|---|-----------|---------------------------------------|---|
| Depth C  | columns      | Reading      | Odor      | Stain     | Soil Description  | 5000      | Da                                    | e Drilled September 21, 2009  |
| Ē        |              | 0.2          | None      | None      | 0 - 3' bgs - Sand, light brown, clayey with caliche nodules |           | Th<br>De<br>De                        | ckness of Bentonite Seat <u>61 Ft</u><br>oth of Exploratory Boring <u>90 Ft bgs</u><br>oth to Groundwater   |
| Ē        |              | 0.3          | None      | None      | 2 - 14' bas - Caliche white soft dry sandy                  |           | Gr                                    | und Water Elevation   |
| 10       |              | 0.2          |           |           | 2 - 14 bys - Galicine, white, solit, dry, salidy            |           | T                                     | Indicates the PSH level measured  |
| 15       |              | 20.5         | None      | None      |   |           |                                       | on<br>Indicates the groundwater level<br>measured on  |
| 20       |              | 16.8         | None      | None      |   |           | PI                                    | <ul> <li>Indicates samples selected for<br/>Laboratory Analysis.</li> <li>Head-space reading in ppm obtained<br/>with a charter instrume detector.</li> </ul> |
| - 25     |              | 39.7         | None      | None      |   |           |                                       | with a proto-tonization detector.   |
|          |              | 27.1         | None      | None      |   |           |                                       |   |
| E        |              | 31.1         | None      | None      |   |           |                                       |   |
| - 36     | 124          | 46.6         | None      | None      |   |           |                                       |   |
| 40       |              | 46.9         | None      | None      |   |           |                                       |   |
| - 45     |              | (48.1)       |           |           |   |           |                                       |   |
| -50      |              | 35.4         | None      | None      | 14 - 90° bgs - Sand, brown, very fine grained, dry,         |           |                                       |   |
| - 55     |              | 47.9         | None      | None      | and completed drilling with water                           |           | 4                                     | Grout Surface Seal  |
| Ē        |              | (10.0)       | None      | None      |   |           | E                                     | Bentonite Pellet Seal   |
| - 60     |              | (48.9)       | None      | None      |   |           |                                       | Sand Pack   |
| 65       |              | 46.2         | None      | None      |   | CON BASE  |                                       |   |
| 70       |              | 45.4         | Nana      | Nono      |   |           | E                                     | Screen  |
| 75       |              | (43.4)       | None      | None      |   |           |                                       |   |
| 80       |              | 44.3         | None      | None      |   |           |                                       |   |
| - 85     |              |              |           |           |   |           |                                       |   |
| Ē        |              |              |           |           |   |           |                                       |   |
| 90       | TD           |              |           |           |   |           |                                       |   |
|          |              |              |           |           |   |           |                                       |   |
|          |              |              |           |           |   |           |                                       |   |
|          |              |              |           |           |   |           |                                       |   |
|          |              |              |           |           |   |           |                                       | Completion Notes  |
|          |              |              |           |           |   |           | 1                                     | The monitor well was advanced on date<br>using air / water rotary drilling technique  |
|          |              |              |           |           |   |           | 2.                                    | The well was constructed with 2" ID, 0.<br>inch factory slotted, threaded joint, sch<br>40 PVC pipe.  |
|          |              |              |           |           |   |           | 3.                                    | The well is protected with a locked stick<br>steel cover and compression cap.   |
|          |              |              |           |           |   |           |                                       | on the profile log represent approximate<br>boundaries. Actual transitions may be<br>gradual.   |
|          |              |              |           |           |   |           | 3.                                    | The depths indicated are referenced fro<br>ground surface.  |
|          |              |              |           |           |   |           |                                       |   |
|          |              |              |           |           |   |           |                                       |   |
|          | Conce Sector | M            | nitor W   |           | N/_2  |           | Bard Sector                           |   |
| DC       |              | ant to       | Lea S     | tation    | 6-Inch Sec 31 Basin E                                       | nviror    | me                                    | ntal Consulti   |
|          |              | Lea C<br>Pla | ounty,    | New I     | Vlexico   | p By: CDS | 1                                     | Checked By: CDS   |
|          |              |              |           | ,         | Od  | 1, 2009   | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |   |

| Drilling<br>Depth C | Soil   | PID              | Petroleum P          | etroleum<br>Stain | Monitor Well MW-3  | 3                                      | Monitor Well MW-3  |
|---------------------|--------|------------------|----------------------|-------------------|--|--|--|
|                     | olumns | Reading          | Ouor                 | Stall             |  |  | Date Drilled September 22, 2009<br>Thickness of Bentonite Seat 61 Ft   |
| 5                   | <br>   | 2.5              | None                 | None              | 0 - 5' bgs - Clay, light brown, sandy with caliche<br>nodules, some organics                       |  | Depth of Exploratory Boring <u>90 Ft bgs</u><br>Depth to Groundwater<br>Ground Water Elevatiog   |
| - 10                |        | 9.4              | None                 | None              | 5 - 12' bgs - Caliche, white, soft, dry, sandy   |  | Indicates the PSH level measured   |
| 15                  |        | 10.5             | None                 | None              | 12 - 18' bgs - Sand, light brown, very fine grained with some caliche nodules                      |  | Indicates the groundwater level<br>measured on   |
| -20                 |        | 11.1             | None                 | None              | 18 - 24' bas - Caliche white soft dry sandy  |  | Laboratory Analysis.<br>PID Head-space reading in ppm obtained<br>with a photo-ionization detector.  |
| -25                 |        | 15.1             | None                 | None              |  |  |  |
| - 30                |        | 8.0              | None                 | None              | 24 - 33' bgs - Sand, light brown and Caliche, white, soft, dry                                     |  |  |
| - 35                | 23.8   | 8.2              | None                 | None              |  |  |  |
| - 40                |        | 4.9              | None                 | None              |  |  |  |
| Ē                   |        | (91)             | None                 | None              |  |  |  |
|                     |        | 13.0             | None                 | None              |  |  |  |
|                     |        | 8.6              | None                 | None              | 33 - 90' bgs - Sand, reddish brown, very fine<br>grained, dry. Lost circulation at 60 feet bgs and |  | Grout Surface Seal   |
| - 50                |        | 0.0              | None                 | None              | completed drilling with water  |  | Bentonite Pellet Seal  |
| - 60<br>-           |        | 0.4              |                      |                   |  |  | Sand Pack  |
| - 65<br>-<br>-<br>- |        |                  |                      |                   |  | 10000000000000000000000000000000000000 | Screen   |
| - 70                |        |                  |                      |                   |  |  |  |
| 75                  |        |                  |                      |                   |  |  |  |
| - 30                |        |                  |                      |                   |  |  |  |
| - 85                |        |                  |                      |                   |  |  | 그는 것 사람들이  |
| E 90                | TD     |                  |                      |                   |  | CYXC.                                  |  |
| 1.1                 |        |                  |                      |                   |  |  |  |
| 1.12                |        |                  |                      |                   |  |  |  |
|                     |        |                  |                      |                   |  |  | 10.0029  |
|                     |        |                  |                      |                   |  |  | Completion Notes   |
|                     |        |                  |                      |                   |  |  | <ol> <li>The monitor well was advanced on date<br/>using air / water rotary drilling techniques.</li> <li>The well was constructed with 2" ID, 0.020<br/>inch factory slotted, threaded joint, schedule</li> </ol> |
|                     |        |                  |                      |                   |  |  | <ul><li>40 PVC pipe.</li><li>3.) The well is protected with a locked stick up steel cover and compression cap.</li></ul>   |
|                     |        |                  |                      |                   |  |  | 4.) The lines between material types shown<br>on the profile log represent approximate<br>boundaries. Actual transitions may be  |
|                     |        |                  |                      |                   |  |  | <ul> <li>3.) The depths indicated are referenced from<br/>ground surface.</li> </ul>   |
| 335                 |        |                  |                      |                   |  |  |  |
|                     |        |                  |                      |                   |  |  | and a star has   |
|                     |        | Mo               | onitor W             | ell M\            | N-3 Basin  | Environ                                | mental Consulting  |
| DC                  | P P    | lant to<br>Lea C | Lea Sta<br>County, I | Ation New N       | 6-Inch Sec 31  | Prep By: CDS                           | Checked By: CDS  |
| 1.0                 |        | Pla              | ins Pipe             | eline,            | L.P.   | October 7, 2009                        |  |

| and the second second |                 | Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec. |                   |                    |  |                 |  |
|-----------------------|-----------------|---|-------------------|--------------------|--|-----------------|--|
|                       |                 |   | 6.1               |                    | Monitor Well MW-   | 4               | Monitor Well MW-4  |
| Drilling<br>Depth (   | Soil<br>Columns | PID<br>Reading                          | Petroleum<br>Odor | Petroleum<br>Stain | Soil Description   | 5007            | Date Drilled September 22, 2009  |
| Ē,                    |                 | 10.5                                    | None              | None               | 0 - 5' bgs - Sand, light brown, clayey with caliche<br>nodules, some organics                                  |                 | Thickness of Bentonite Seat60 Ft<br>Depth of Exploratory Boring89 Ft bgs<br>Depth to Groundwater   |
| Ē                     |                 | 10.5                                    | None              | None               | 5 - 10' bgs - Caliche, white, soft, dry, sandy   |                 | Ground Water Elevation   |
| - 10                  |                 | 27.2                                    | None              | None               | 10 -15' bgs - Sand, light brown, very fine grained,  |                 | Indicates the PSH level measured on  |
| - 15<br>-             |                 | 29.8                                    | None              | None               | dry<br>15 - 20' bgs - Sand, light brown, very fine grained,  |                 | <ul> <li>Indicates the groundwater level<br/>measured on</li> <li>Indicates samples selected for</li> </ul>  |
| 20                    |                 | 5.7                                     | None              | None               | dry with some caliche nodules  |                 | Laboratory Analysis.<br>PID Head-space reading in ppm obtained<br>with a photo-ionization detector.  |
| 25                    |                 | 25.0                                    | None              | None               | 20 - 28' bgs - Caliche, white, hard, dry, sandy  |                 |  |
| - 30                  |                 | 26.2                                    | None              | None               | 28 - 33' bgs - Sand, light brown, very fine grained,   |                 |  |
| - 35                  |                 | 41 1                                    | None              | None               | ary with caliche hodules<br>33 - 35' bgs - Sand, reddish brown, very fine<br>grained, dry with caliche nodules |                 |  |
| Ē                     |                 |   | None              | None               | 3  |                 |  |
| - 40                  |                 | 31.4                                    | None              | None               |  |                 |  |
| 45                    |                 | 27.9                                    | None              | None               |  |                 |  |
| 50                    |                 | 30.4                                    | Nano              | Nana               |  |                 |  |
| 55                    |                 | 25.4                                    | None              | None               |  |                 | Grout Surface Seal   |
| 60                    |                 | 33.9                                    | None              | None               | 33 - 89' bgs - Sand, reddish brown, very fine<br>grained, dry. Lost circulation at 60 feet bgs and             |                 | Bentonite Pellet Seal  |
| 65                    |                 |   |                   |                    | completed drilling with water  |                 | Sand Pack  |
|                       |                 |   |                   |                    |  | 1000 ACC 4000   | Screen   |
| Ē                     |                 |   |                   |                    |  |                 |  |
| - 76                  |                 |   |                   |                    |  |                 |  |
| 80                    |                 |   |                   |                    |  |                 |  |
| 85                    |                 |   |                   |                    |  |                 |  |
| E.89                  | TD STATE        |   |                   |                    |  | 14740           |  |
|                       |                 |   |                   |                    |  |                 |  |
|                       |                 |   |                   |                    |  |                 |  |
|                       |                 |   |                   |                    |  |                 |  |
|                       |                 |   |                   |                    |  |                 | Over the Nation  |
|                       |                 |   |                   |                    |  |                 | Completion Notes     The monitor well was advanced on date     using air / water rotary diffing techniques.     The well was constructed with 2° 10, 0:00     Inch factory stotled, threaded joint, schedul     40 PVC piec                  |
|                       |                 |   |                   |                    |  |                 | <ol> <li>The well is protected with a locked stick up<br/>steel cover and compression cap.</li> <li>The lines between material types shown<br/>on the profile tog represent approximate<br/>boundaries. Actual transitions may be</li> </ol> |
|                       |                 |   |                   |                    |  |                 | gradual.<br>3.) The depths indicated are referenced from<br>around surface   |
|                       |                 |   |                   |                    |  |                 | ······································   |
|                       |                 |   |                   |                    |  |                 |  |
| D                     | CP P            | Mo<br>lant to                           | onitor V<br>Lea S | Vell M<br>tation   | W-4 Basin<br>6-Inch Sec 31   | Environ         | mental Consultin   |
|                       |                 | Lea C                                   | County,           | New                | Mexico   | Prep By: CDS    | Checked By: CDS  |
|                       |                 | Pla                                     | ins Pip           | enne,              | L.P.   | October 7, 2009 |  |

0

.

Ğ

### Appendix B Analytical Reports

C Ð 

### Analytical Report 330358

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

DCP Plant to Lea Station 6" - Sec 31 2009-0234

22-APR-09





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



22-APR-09

Î

9

6

6

Ø



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

Reference: XENCO Report No: **330358 DCP Plant to Lea Station 6'' - Sec 31** 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 330358. 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. 330358 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

£



and the second states of the second second

**nēla**ð

### Sample Cross Reference 330358

### PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6" - Sec 31

| Sample Id  | Matrix | Date Collected  | Sample Depth | Lab Sample Id |
|------------|--------|-----------------|--------------|---------------|
| SB-1 @ 10' | S      | Apr-15-09 13:50 |              | 330358-001    |
| SB-1 @ 20' | S      | Apr-15-09 14:00 |              | 330358-002    |
| SB-1 @ 30' | S      | Apr-15-09 14:20 |              | 330358-003    |
| SB-1 @ 40' | S      | Apr-15-09 14:30 |              | 330358-004    |
| SB-1 @ 50' | S      | Apr-15-09 14:50 |              | 330358-005    |
| SB-1 @ 60' | S      | Apr-15-09 15:20 |              | 330358-006    |
| SB-1 @ 70' | S      | Apr-15-09 15:50 |              | 330358-007    |
| SB-1 @ 75' | S      | Apr-15-09 16:20 |              | 330358-008    |

Ð • 5 ant a Bris

6

6

9

() () ()

**.** 

Page 3 of 21

S C C Certificate of Analysis Summary 330358 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6" - Sec 31

Contact: Jason Henry Project Id: 2009-0234

E

Linnin Linnin



Date Received in Lab: Fri Apr-17-09 08:07 am Report Date: 22-APR-09

1.00 0.0049 15.0 0.00490.00490.0098 0.00490.0049 15.0 15.0 15.0 ND 0.0098 R R Ł Apr-15-09 15:20 Apr-21-09 10:00 Apr-22-09 10:37 Apr-17-09 17:00 Apr-19-09 15:00 Apr-20-09 06:22 330358-006 SB-1 @ 60' mg/kg ND QN DN DN QN SOIL g 122.5 Q Q 20.5 102 mg/kg % mg/kg RL ND 0.0498 1.00 ND 0.0997 0.2736 0.0498 0.4744 0.0498 1.6574 0.0498 R R 15.1 15.1 15.1 15.1 1.183 0.0997 1.931 0.0498 Apr-20-09 00:00 Apr-17-09 17:00 Apr-19-09 15:00 Apr-15-09 14:50 Apr-21-09 09:43 Apr-20-09 05:57 330358-005 SB-1 @ 50' Brent Barron, II SOIL g 465 59.1 481 1005.1 mg/kg % Project Manager: mg/kg RL ND 0.0507 1.00 15.2 15.2 15.2 15.2 RL 1.079 0.1013 ND 0.1013 R R 0.2259 0.0507 0.4634 0.0507 1.5424 0.0507 1.7683 0.0507 Apr-21-09 09:22 Apr-17-09 17:00 Apr-15-09 14:30 Apr-20-09 00:00 Apr-19-09 14:00 Apr-20-09 01:18 330358-004 SB-1 @ 40' mg/kg SOIL 1.28 687 93.2 1479.2 % mg/kg RL ND 0.0011 1.00 15.8 15.8 15.8 15.8 R 0.0084 0.0021 0.0041 0.0011 0.0018 0.0011 0.0125 0.0011 R ND 0.0021 0.0143 0.0011 Apr-21-09 05:58 Apr-15-09 14:20 Apr-20-09 00:00 Apr-17-09 17:00 Apr-19-09 14:00 Apr-20-09 00:53 330358-003 SB-1 @ 30' <u>mg/kg</u>\_\_\_\_\_ SOIL 4.83 249 27.0 481 % mg/kg RL ND 0.0011 1.00 16.2 16.2 16.2 16.2 RL RL 0.0061 0.0022 0.0301 0.0011 0.1368 0.0022 0.0623 0.0011 0.1991 0.0011 RL 0.0011 Apr-20-09 00:28 Apr-20-09 00:00 Apr-21-09 05:37 Apr-17-09 17:00 Apr-19-09 14:00 Apr-15-09 14:00 330358-002 SB-1 @ 20' <u>mg/kg</u> 375 SOIL 0.2353 58.0 7.30 473 906 % mg/kg RL 0.0017 0.0010 0.0368 0.0010 0.0554 0.0010 1.00 15.7 15.7 15.7 0.1953 0.0010 0.1399 0.0021 0.2556 0.0010 RL 15.7 R 0.0218 0.0021 Apr-17-09 17:00 Apr-19-09 14:00 Apr-20-09 00:00 Apr-21-09 05:17 Apr-15-09 13:50 Apr-20-09 00:03 SB-1 @ 10' 330358-001 SOIL 4.59 150 311 32.7 493.7 mg/kg % Field Id: Matrix: Lab Id: Depth: Sampled: Extracted: Analyzed: Extracted: Extracted: Analyzed: Units/RL: Units/RL: Analyzed: Units/RL: TPH By SW8015 Mod **BTEX by EPA 8021B Percent Moisture** C6-C12 Gasoline Range Hydrocarbons C12-C28 Dicsel Range Hydrocarbons Project Location: Lea County, NM Analysis Requested C28-C35 Oil Range Hydrocarbons Percent Moisture Total Xylenes Ethylbenzene m,p-Xylenes **Fotal BTEX** Total TPH o-Xylene Benzene Tolucne

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 the anterpretation represent the best judgment of XENCO Laborations. XEXCO Laboratorics assumes no responsibility and malks 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Director Brent Barron

I

 Certificate of Analysis Summary 330358
 Certificate of Analysis Summary 330358 Sector
Secto





Project Location: Lea County, NM Contact: Jason Henry Project Id: 2009-0234

Date Received in Lab: Fri Apr-17-09 08:07 am Report Date: 22-APR-09

|                                    |            |                 | 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Project Manager: | Brent Barron, II |  |
|------------------------------------|------------|-----------------|---|------------------|------------------|--|
|                                    | Lab Id:    | 330358-007      | 330358-008                              |                  |                  |  |
| Analyseis Poanostod                | Field Id:  | SB-1 @ 70'      | SB-1 @ 75'                              |                  |                  |  |
| rate and a sector                  | Depth:     |                 |   |                  |                  |  |
|                                    | Matrix:    | SOIL            | SOIL                                    |                  |                  |  |
|                                    | Sampled:   | Apr-15-09 15:50 | Apr-15-09 16:20                         |                  |                  |  |
| BTEX hv EPA 8021B                  | Extracted: | Apr-20-09 00:00 | Apr-20-09 00:00                         |                  |                  |  |
|                                    | Analyzed:  | Apr-21-09 06:18 | Apr-21-09 06:39                         |                  |                  |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL                                |                  |                  |  |
| Benzene                            |            | 0100.0 UN       | ND 0.0010                               |                  |                  |  |
| Toluene                            |            | ND 0.0020       | ND 0.0020                               |                  |                  |  |
| Ethylbenzene                       |            | ND 0.0010       | ND 0.0010                               |                  |                  |  |
| m,p-Xylcnes                        |            | ND 0.0020       | ND 0.0020                               | 77               |                  |  |
| o-Xylene                           | -          | ND 0.0010       | ND 0.0010                               |                  |                  |  |
| Total Xylencs                      |            | ND 0.0010       | 0100.0 UN                               |                  |                  |  |
| Total BTEX                         |            | ND 0.0010       | ND 0.0010                               |                  |                  |  |
| Percent Moisture                   | Extracted: |                 |   |                  |                  |  |
|                                    | Analyzed:  | Apr-17-09 17:00 | Apr-17-09 17:00                         |                  |                  |  |
|                                    | Units/RL:  | % RL            | % RL                                    |                  |                  |  |
| Percent Moisture                   |            | ND 1.00         | ND 1.00                                 |                  |                  |  |
| TPH By SW8015 Mod                  | Extracted: | Apr-19-09 15:00 | Apr-19-09 15:00                         |                  |                  |  |
|                                    | Analyzed:  | Apr-20-09 06:47 | Apr-20-09 07:12                         |                  |                  |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL                                |                  |                  |  |
| C6-C12 Gasoline Range Hydrocarbons | _          | ND 15.1         | ND 15.1                                 |                  |                  |  |
| C12-C28 Diesel Range Hydrocarbons  |            | 40.6 15.1       | 43.3 15.1                               |                  |                  |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND 15.1         | ND 15.1                                 |                  |                  |  |
| Total TPH                          |            | 40.6 15.1       | 43.3 15.1                               |                  |                  |  |

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

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

Odessa Laboratory Director A W

Page 5 of 21





- 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.

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 - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

|   | 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: DCP Plant to Lea Station 6" - Sec 31

| ork Orders : 330358  | ,                                     |   | Project I             | <b>D:</b> 2009-0234   | 1                       |       |
|----------------------|---------------------------------------|---|-----------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 756442  | Sample: 528575-1-BKS / B              | KS Ba                                   | tch: 1 Matr           | ix: Solid             |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 02:13         | SU                                      | RROGATE R             | ECOVERY               | STUDY                   | 1     |
| BTEX                 | K by EPA 8021B                        | Amount<br>Found<br>[A]                  | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1 4-Difluorobenzene  | · · · · · · · · · · · · · · · · · · · | 0.0275                                  | 0.0300                | 92                    | 80-120                  |       |
| 4-Bromofluorobenzene |                                       | 0.0285                                  | 0.0300                | 95                    | 80-120                  |       |
| Lab Batch #: 756442  | Sample: 528575-1-BSD / B              | SD Ba                                   | tch: I Matr           | ix: Solid             |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 02:34         | SU                                      | RROGATE R             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B                        | Amount<br>Found<br>[A]                  | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                                       | 0.0274                                  | 0.0300                | 91                    | 80-120                  |       |
| 4-Bromofluorobenzene |                                       | 0.0285                                  | 0.0300                | 95                    | 80-120                  |       |
| Lab Batch #: 756442  | Sample: 528575-1-BLK / B              | LK Ba                                   | tch: 1 Matr           | ix: Solid             |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 03:14         | SU                                      | RROGATE R             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B<br>Analytes            | Amount<br>Found<br>[A]                  | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                                       | 0.0245                                  | 0.0300                | 82                    | 80-120                  | ····· |
| 4-Bromofluorobenzene |                                       | 0.0277                                  | 0.0300                | 92                    | 80-120                  | -:    |
| Lab Batch #: 756442  | Sample: 330358-001 / SMP              | Ba                                      | tch:   Matr           | ix: Soil              |                         | 1     |
| Units: mg/kg         | Date Analyzed: 04/21/09 05:17         | SU                                      | RROGATE R             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B                        | Amount<br>Found<br>[A]                  | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  | · · · · · · · · · · · · · · · · · · · | 0.0214                                  | 0.0300                | 71                    | 80-120                  | *     |
| 4-Bromofluorobenzene |                                       | 0.0563                                  | 0.0300                | 188                   | 80-120                  | *     |
| Lab Batch #: 756442  | Sample: 330358-002 / SMP              | Ba                                      | tch: 1 Matr           | ix: Soil              | • <u>•</u> •••          |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 05:37         | SU                                      | RROGATE R             | ECOVERY               | STUDY                   |       |
| BTEX                 | A nalytes                             | Amount<br>Found<br>[A]                  | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| I.4-Difluorobenzene  | 4 x1141 y US                          | 0.0206                                  | 0.0300                | 69                    | 80-120                  | *     |
|                      |                                       | ~ |                       |                       |                         |       |

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



### Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" - Sec 31

| Work Orders : 330358 | ,                                     |                          | Project II              | <b>):</b> 2009-0234                           | ł                       |       |
|----------------------|---------------------------------------|--------------------------|-------------------------|---|-------------------------|-------|
| Lab Batch #: 756442  | Sample: 330358-003 / SMP              | Batch: 1 Matrix: Soil    |                         |   |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 05:58         | SURROGATE RECOVERY STUDY |                         |   |                         |       |
| BTEX by EPA 8021B    |                                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R                                | Control<br>Limits<br>%R | Flags |
|                      | Analytes                              | į                        |                         | [D]   |                         |       |
| I,4-Difluorobenzene  |                                       | 0.0196                   | 0.0300                  | 65  | 80-120                  | *     |
| 4-Bromofluorobenzene |                                       | 0.0322                   | 0.0300                  | 107   | 80-120                  |       |
| Lab Batch #: 756442  | Sample: 330358-007 / SMP              | Bat                      | tch:   Matri            | x: Soil                                       |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 06:18         | SU                       | RROGATE RE              | COVERY  | STUDY                   | 1     |
| BTE                  | X by EPA 8021B<br>Analytes            | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Control<br>Recovery Limits F1<br>%R %R<br>[D] |                         |       |
| 1,4-Difluorobenzene  |                                       | 0.0238                   | 0.0300                  | 79  | 80-120                  | *     |
| 4-Bromofluorobenzene | · · · · · · · · · · · · · · · · · · · | 0.0316                   | 0.0300                  | 105   | 80-120                  |       |
| Lab Batch #: 756442  | Sample: 330358-008 / SMP              | Batch: 1 Matrix: Soil    |                         |   |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 06:39         | SURROGATE RECOVERY STUDY |                         |   |                         |       |
| BTEX by EPA 8021B    |                                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R                                | Control<br>Limits<br>%R | Flags |
|                      | Analytes                              |                          |                         | [D]   |                         |       |
| 1,4-Difluorobenzene  |                                       | 0.0230                   | 0.0300                  | 77  | 80-120                  | *     |
| 4-Bromofluorobenzene |                                       | 0.0299                   | 0.0300                  | 100   | 80-120                  |       |
| Lab Batch #: 756442  | Sample: 330358-004 / SMP              | Bat                      | tch: <sup>1</sup> Matri | x: Soil                                       |                         |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 09:22         | SURROGATE RECOVERY STUDY |                         |   |                         |       |
| BTEX                 | X by EPA 8021B<br>Analytes            | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D]                         | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                                       | 0.0227                   | 0.0300                  | 76  | 80-120                  | *     |
| 4-Bromofluorobenzene |                                       | 0.0404                   | 0.0300                  | 135   | 80-120                  | *     |
| Lab Batch #: 756442  | Sample: 330358-005 / SMP              | Bat                      | tch: 1 Matri            | x: Soil                                       | 1                       |       |
| Units: mg/kg         | Date Analyzed: 04/21/09 09:43         | SURROGATE RECOVERY STUDY |                         |   |                         |       |
| ВТЕХ                 | K by EPA 8021B                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R                                | Control<br>Limits<br>%R | Flags |
| 1.4-Difluorobenzene  |                                       | 0.0211                   | 0.0300                  | 70  | 80.120                  | *     |
| 4-Bromofluorobenzene |                                       | 0.0211                   | 0.0300                  | 127   | 80-120                  | *     |
|                      |                                       | 0,0500                   | 0,0500                  | 121   | 00-120                  |       |

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



6

### Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" - Sec 31

| Vork Orders : 330358 | ',  |  | Project II   | <b>D:</b> 2009-0234         | ŧ  |          |
|----------------------|---|--|--|-----------------------------|--|----------|
| Lab Batch #: 756442  | Sample: 330355-027 S / MS   | IS Batch: 1 Matrix: Soil                         |  |                             |  |          |
| Units: mg/kg         | Date Analyzed: 04/21/09 10:25   | SURROGATE RECOVERY STUDY                         |  |                             |  |          |
| BTEX                 | K by EPA 8021B  | Amount<br>Found<br>[A]                           | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R                    | Flags    |
| 1.4 Differenchanzana |   | 0.0241   |  |                             |  | ł        |
| 1,4-Difluorobenzene  | ······································  | 0.0241   | 0.0300   | δυ<br>07                    | 80-120                                     | l        |
| 4-Dromonicorocenzene |   | 0.0271   | 0.0500   |                             |  | <u> </u> |
| Lab Batch #: 756442  | Sample: 330355-027 SD / N   | ASD Bat  | tch: 1 Matri   | ix: Soil                    |  |          |
| Units: mg/kg         | Date Analyzed: 04/21/09 10:45   | SU   | RROGATE RE   | SCOVERY S                   | STUDY                                      |          |
| BTEX                 | BTEX by EPA 8021B Amount True Found Amount Recovery Limi [A] [B] %R %I [D]              |  |  |                             | Control<br>Limits<br>%R                    | Flags    |
| 1.4-Difluorøbenzene  |   | 0.0252   | 0.0300   | 84                          | 80-120                                     | <u> </u> |
| 4-Bromofluorobenzene |   | 0.0311   | 0.0300   | 104                         | 80-120                                     | [        |
| Lah Batch #: 756632  | Sample: 528674-1-BKS / F  | JKS Ba   | tch: 1 Matr  | ix: Solid                   | <u> </u>                                   |          |
| Units: mg/kg         | Date Analyzed: 04/21/09 11:49   | SURROGATE RECOVERY STUDY                         |  |                             |  |          |
| BTEX by EPA 8021B    |   | Amount<br>Found<br>[A]                           | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R                    | Flags    |
| 1.4 Diffuorabenzone  | Analytes  | 0.0267   | 0.0200   | 0                           | PO 120                                     | <b> </b> |
| 4-Bromofluerobenzene |   | 0.0207   | 0.0300   | 107                         | 80-120                                     | <u> </u> |
|                      |   | 0.0322   | 0.0300   |                             | 00-120                                     | <u> </u> |
| Lab Batch #: 756632  | Sample: 528674-1-BSD / B  | SD Ba  | tch: 1 Matri   | ix: Solid                   |  |          |
| Units: mg/kg         | Date Analyzed: 04/21/09 12:10   | SU   | RROGATE RE   | ECOVERY S                   | STUDY                                      | ·        |
| BTEX                 | ( by EPA 8021B<br>Analytes  | Amount<br>Found<br>[A]                           | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R                    | Flags    |
| 1,4-Difluorobenzene  |   | 0.0269   | 0.0300   | 90                          | 80-120                                     | [        |
| 4-Bromofluorobenzene |   | 0.0329   | 0.0300   | 110                         | 80-120                                     | l        |
| Lab Batch #: 756632  | ······································  | 3LK Batch: I Matrix: Solid                       |  |                             |  |          |
| 4                    | Sample: 528674-1-BLK / B  | LK Ba  | tch: I Matri   | IA. Oonu                    |  |          |
| Units: mg/kg         | Sample: 528674-1-BLK / E<br>Date Analyzed: 04/21/09 12:51                               | 3LK Ba   | tch: 1 Matr<br>RROGATE RI                                    | COVERY S                    | STUDY                                      |          |
| Units: mg/kg BTE3    | Sample: 528674-1-BLK / E<br>Date Analyzed: 04/21/09 12:51<br>( by EPA 8021B             | SLK Ba<br>SU<br>Amount<br>Found<br>[A]           | tch: I Matr<br>RROGATE RI<br>True<br>Amount<br>[B]           | Recovery<br>%R              | STUDY<br>Control<br>Limits<br>%R           | Flags    |
| Units: mg/kg<br>BTEX | Sample: 528674-1-BLK / E<br>Date Analyzed: 04/21/09 12:51<br>& by EPA 8021B<br>Analytes | BLK Ba<br>SU<br>Amount<br>Found<br>[A]<br>0.0235 | tch: I Matr<br>RROGATE RI<br>True<br>Amount<br>[B]<br>0.0300 | Recovery<br>%R<br>[D]<br>78 | STUDY<br>Control<br>Limits<br>%R<br>80-120 | Flags    |

\*\* 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: DCP Plant to Lea Station 6" - Sec 31

| Vork Orders : 330358 | ,   |                           | Project II              | <b>D:</b> 2009-0234      | ł,                      |       |
|----------------------|---|---------------------------|-------------------------|--------------------------|-------------------------|-------|
| Lab Batch #: 756632  | Sample: 330358-006 / SMP                                  | P Batch: 1 Matrix: Soil   |                         |                          |                         |       |
| Units: mg/kg         | Date Analyzed: 04/22/09 10:37                             | SURROGATE RECOVERY STUDY  |                         |                          |                         |       |
| BTEX by EPA 8021B    |   | Amount<br>Found<br>[A]    | True<br>Amount<br>[B]   | Recovery<br>%R           | Control<br>Limits<br>%R | Flags |
|                      | Analytes  |                           |                         | [D]                      |                         |       |
| 1,4-Difluorobenzene  |   | 0.0206                    | 0.0300                  | 69                       | 80-120                  | , **  |
| 4-Bromofluorobenzene |   | 0.0445                    | 0.0300                  | 148                      | 80-120                  | **    |
| Lab Batch #: 756632  | Sample: 330466-001 S / MS                                 | Ba                        | tch: 1 Matri            | ix: Soil                 |                         |       |
| Units: mg/kg         | Date Analyzed: 04/22/09 11:18                             | SU                        | <b>RROGATE RI</b>       | ECOVERY S                | STUDY                   |       |
| BTE                  | X by EPA 8021B  | Amount<br>Found<br>[A]    | True<br>Amount<br>[B]   | Recovery Limits<br>%R %R |                         |       |
| 1,4-Difluorobenzene  |   | 0.0237                    | 0.0300                  | 79                       | 80-120                  | *     |
| 4-Bromofluorobenzene |   | 0.0503                    | 0.0300                  | 168                      | 80-120                  | *     |
| Lab Batch #: 756632  | Sample: 330466-001 SD / M                                 | ISD Ba                    | tch: <sup>1</sup> Matri | ix: Soil                 |                         |       |
| Units: mg/kg         | Date Analyzed: 04/22/09 11:39                             | SURROGATE RECOVERY STUDY  |                         |                          |                         |       |
| BTEX by EPA 8021B    |   | Amount<br>Found<br>[A]    | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D]    | Control<br>Limits<br>%R | Flags |
| 1 4-Difluorobenzene  |   | 0.0236                    | 0.0300                  | 79                       | 80-120                  | *     |
| 4-Bromofluorobenzene |   | 0.0499                    | 0.0300                  | 166                      | 80-120                  | *     |
| Lab Batch #: 756285  | Sample: 8406396-1-BKS / E                                 | BKS Ba                    | tch: 1 Matri            | ix: Solid                |                         |       |
| Units: mg/kg         | Date Analyzed: 04/19/09 15:42                             | SURROGATE RECOVERY STUDY  |                         |                          |                         |       |
| трн і                | By SW8015 Mod   | Amount<br>Found<br>[A]    | True<br>Amount<br>[B]   | Recovery<br>%R           | Control<br>Limits<br>%R | Flags |
| L Chlangastana       | Anarytes  | 108                       | 100                     | 100                      | 70.125                  |       |
| o-Terphenyl          |   | 50.3                      | 50.0                    | 108                      | 70-135                  |       |
| Lab Batab #: 756295  | Sample: 8406206 1 PSD / E                                 |                           |                         |                          |                         |       |
| Lau Baten #: / 30263 | Sample: 0400390-1-05D/ 0<br>Date Analyzed: 04/10/00 16:07 | BSD Batch: I Matrix: Sold |                         |                          |                         |       |
|                      | Carc / mary 2001 / 19/07 10:07                            |                           |                         |                          | Control                 |       |
| ТРНІ                 | 3y SW8015 Mod<br>Analytes                                 | Found<br>[A]              | Amount<br>[B]           | Recovery<br>%R<br>[D]    | Limits<br>%R            | Flags |
| 1-Chlorooctane       |   |                           | 100                     | 111                      | 70-135                  |       |
| a Tambanul           |   | 52.0                      | 50.0                    | 104                      | 70 135                  |       |

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



### Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" - Sec 31

| ork Orders : 330358 | ,                             |                           | Project II            | <b>D:</b> 2009-0234   | 1                       |            |  |
|---------------------|-------------------------------|---------------------------|-----------------------|-----------------------|-------------------------|------------|--|
| Lab Batch #: 756285 | Sample: 8406396-1-BLK / 1     | BLK Ba                    | tch: 1 Matr           | ix: Solid             |                         |            |  |
| Units: mg/kg        | Date Analyzed: 04/19/09 16:32 | SURROGATE RECOVERY STUDY  |                       |                       |                         |            |  |
| TPH By SW8015 Mod   |                               | Amount<br>Found '<br>[A]  | True<br>Amount<br>{B} | Recovery<br>%R        | Control<br>Limits<br>%R | Flags      |  |
|                     | Analytes                      |                           |                       | [D]                   |                         |            |  |
| 1-Chlorooctane      |                               | 96.7                      | 100                   | 97                    | 70-135                  |            |  |
| o-Terphenyl         |                               | 56.5                      | 50.0                  | 113                   | 70-135                  |            |  |
| Lab Batch #: 756285 | Sample: 330358-001 / SMP      | Ba                        | tch: I Matr           | ix: Soil              |                         |            |  |
| Units: mg/kg        | Date Analyzed: 04/20/09 00:03 | SU                        | RROGATE R             | ECOVERY               | STUDY                   |            |  |
| TPH                 | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A]    | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Flags                   |            |  |
| 1-Chlorooctane      |                               | 102                       | 100                   | 102                   | 70-135                  |            |  |
| o-Terphenyl         |                               | 57.8                      | 50.0                  | 116                   | 70-135                  | 1          |  |
| Lab Batch #: 756285 | Sample: 330358-002 / SMP      | SMP Batch: I Matrix: Soil |                       |                       |                         |            |  |
| Units: mg/kg        | Date Analyzed: 04/20/09 00:28 | SURROGATE RECOVERY STUDY  |                       |                       |                         |            |  |
| TPH By SW8015 Mod   |                               | Amount<br>Found<br>[A]    | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags      |  |
| 1-Chlorooctane      | Anarytes                      | 101                       | 100                   | 101                   | 70.125                  | ÷          |  |
| o-Terphenyl         |                               | 55.2                      | 50.0                  | 110                   | 70-135                  | . <u> </u> |  |
| Lah Batch #: 756285 | Sample: 330358-003 / SMP      | Ra                        | tch·   Matr           | ix: Soil              |                         | ļ          |  |
| Units: mg/kg        | Date Analyzed: 04/20/09 00:53 | SL                        | RROGATE R             | ECOVERY               | STUDY                   |            |  |
| TPH                 | By SW8015 Mod                 | Amount<br>Found<br>[A]    | True<br>Amount<br>{B} | Recovery<br>%R        | Control<br>Limits<br>%R | Flags      |  |
|                     | Analytes                      |                           |                       | [D]                   |                         |            |  |
| 1-Chlorooctane      |                               | 98.6                      | 100                   | 99                    | 70-135                  |            |  |
| o-Terphenyl         |                               | 55.9                      | 50.0                  | 112                   | 70-135                  |            |  |
| Lab Batch #: 756285 | Sample: 330358-004 / SMP      | Batch: 1 Matrix: Soil     |                       |                       |                         |            |  |
| Units: mg/kg        | Date Analyzed: 04/20/09 01:18 | SL                        | RROGATE R             | OGATE RECOVERY STUDY  |                         |            |  |
| TPH                 | By SW8015 Mod                 | Amount<br>Found<br>[A]    | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags      |  |
|                     | Analytaa                      |                           | •                     |                       |                         |            |  |
| L-Chlorooctane      | Analytes                      | 105                       | 100                   | 105                   | 70.136                  |            |  |

\*\* 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: DCP Plant to Lea Station 6" - Sec 31

| Vork Orders : 330358 | \$,                           |                        | Project II            | <b>):</b> 2009-0234   | ŧ                       |                |
|----------------------|-------------------------------|------------------------|-----------------------|-----------------------|-------------------------|----------------|
| Lab Batch #: 756285  | Sample: 330355-030 S / MS     | 3 Ba                   | tch: l Matri          | ix: Soil              |                         |                |
| Units: mg/kg         | Date Analyzed: 04/20/09 01:43 | SU                     | RROGATE RF            | <b>ECOVERY</b> f      | STUDY                   |                |
| ТРН Ј                | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags          |
|                      | Analytes                      | l                      | '                     | [D]                   | 1!                      | L              |
| 1-Chlorooctanc       |                               | 114                    | 100                   | 114                   | 70-135                  |                |
| o-Terphenyl          |                               | 52.3                   | 50.0                  | 105                   | 70-135                  | 1              |
| Lab Batch #: 756285  | Sample: 330355-030 SD / N     | ASD Ba                 | tch: 1 Matri          | ix: Soil              |                         |                |
| Units: mg/kg         | Date Analyzed: 04/20/09 02:09 | SU                     | RROGATE RF            | ECOVERY               | STUDY                   | 1              |
| ТРН І                | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | • Flags        |
| 1-Chlorooctanc       |                               | 118                    | 100                   | 118                   | 70-135                  | t.             |
| o-Terphenyl          |                               | 54.6                   | 50.0                  | 109                   | 70-135                  |                |
| Lab Batch #: 756385  | Sample: 8406400-1-BKS / J     | BKS Ba                 | itch: 1 Matr          | ix: Solid             | ·                       |                |
| Units: mg/kg         | Date Analyzed: 04/20/09 04:41 | SU                     | RROGATE RI            | ECOVERY               | STUDY                   |                |
| ТРН Ј                | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags          |
|                      | Analytes                      |                        | 100                   |                       | 70.125                  | <del> </del> ; |
| I-Chlorooctane       |                               |                        | 100                   |                       | 70-135                  | <u> </u>       |
| 0-1 crpneny          |                               | 50.2                   | 50.0                  | 100                   | /0-155                  | <u>  </u>      |
| Lab Batch #: 756385  | Sample: 8406400-1-BSD / F     | 3SD Ba                 | tch: 1 Matri          | ix: Solid             |                         | :              |
| Units: mg/kg         | Date Analyzed: 04/20/09 05:06 | SU                     | RROGATE RE            | <b>COVERY</b>         | STUDY                   | -              |
| ТРН Г                | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags          |
| 1-Chlorooctane       |                               | 111                    | 100                   | +                     | 70-135                  | <u> :</u>      |
| o-Terphenyl          |                               | 51.2                   | 50.0                  | 102                   | 70-135                  | † <u>.</u>     |
| Lab Batch #: 756385  | Sample: 8406400-1-BLK / /     | BLK Ba                 | tch: 1 Matr           | ix: Solid             | L                       | L              |
| Units: mg/kg         | Date Analyzed: 04/20/09 05:31 | SU                     | JRROGATE RJ           | ECOVERY '             | STUDY                   |                |
| ТРН Ј                | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags          |
|                      | Analytes                      | L                      |                       | [D]                   | <u> </u> '              | <u> </u> :     |
| 1-Chlorooctane       |                               | 95.5                   | 100                   | 96                    | 70-135                  | <u> </u>       |
| o-Terphenyl          | 1                             | . 55.3                 | 50.0                  | 111                   | 70-135                  | 1.             |

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



0

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" - Sec 31

| Work Orders : 330358 | ,                             |                        | Project II            | <b>D:</b> 2009-0234   | 4                       |       |
|----------------------|-------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 756385  | Sample: 330358-005 / SMP      | Ba                     | itch: 1 Matri         | ix: Soil              |                         |       |
| Units: mg/kg         | Date Analyzed: 04/20/09 05:57 | SU                     | IRROGATE RI           | ECOVERY               | STUDY                   |       |
| ТРН                  | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                      | Analytes                      |                        |                       |                       |                         |       |
| 1-Chlorooctane       |                               | 101                    | 100                   | 101                   | 70-135                  |       |
| o-Terphenyl          |                               | 52.6                   | 50.0                  | 105                   | 70-135                  |       |
| Lab Batch #: 756385  | Sample: 330358-006 / SMP      | Ba                     | tch: 1 Matri          | ix: Soil              |                         |       |
| Units: mg/kg         | Date Analyzed: 04/20/09 06:22 | SU                     | <b>IRROGATE RI</b>    | ECOVERY               | STUDY                   |       |
| ТРНІ                 | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc       |                               | 98.1                   | 100                   | 98                    | 70-135                  |       |
| o-Terphenyl          |                               | 53.7                   | 50.0                  | 107                   | 70-135                  |       |
| Lab Batch #: 756385  | Sample: 330358-007 / SMP      | Ba                     | itch: 1 Matri         | ix: Soil              |                         |       |
| Units: mg/kg         | Date Analyzed: 04/20/09 06:47 | SU                     | RROGATE RI            | ECOVERY               | STUDY                   |       |
| ТРНІ                 | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|                      | Analytes                      | 100                    | 100                   | 11                    | 70.125                  |       |
| o-Terphenyl          |                               | 55.3                   | 50.0                  | 111                   | 70-135                  |       |
| T T D                |                               |                        | 50.0                  |                       | 10-155                  |       |
| Lab Batch #: /30385  | Sample: 330358-0087 SMP       | Ba                     | itch: 1 Matri         | ix: Soil              | 0711011                 |       |
| Units: mg/kg         | Date Analyzed: 04/20/09 07:12 | 50                     | RROGATE RI            |                       |                         |       |
| TPH I                | 3y SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| L-Chlorooctane       |                               | 97.1                   | 100                   | 07                    | 70 125                  |       |
| o-Terphenyl          |                               | 53.9                   | 50.0                  | 108                   | 70-135                  |       |
| Lab Batch #: 756385  | Sample: 330358-008 S / MS     |                        | taha l Matri          |                       | <u> </u>                |       |
| Lab Batch #. 196965  | Date Analyzed: 04/20/09 13:27 |                        |                       | COVEDV                | STUDV                   |       |
|                      |                               |                        |                       |                       |                         |       |
| ТРН І                | Analytes                      | Amount<br>Found<br>[A] | Amount<br>[B]         | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc       |                               | 116                    | 100                   | 116                   | 70-135                  |       |
|                      |                               |                        | 1 100                 | 1 110                 | 1 10-133                |       |

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



₽

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6" - Sec 31

Work Orders : 330358,

Project ID: 2009-0234

| Lab Batch #: 756385 | Sample: 330358-008 SD / N     | ASD Ba                 | tch: <sup>1</sup> Matr | ix: Soil              |                         |       |
|---------------------|-------------------------------|------------------------|------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg        | Date Analyzed: 04/20/09 13:53 | SU                     | <b>RROGATE R</b>       | ECOVERY               | STUDY                   |       |
| ТРН                 | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane      |                               | 115                    | 100                    | 115                   | 70-135                  |       |
| o-Terphenyl         |                               | 51.5                   | 50.0                   | 103                   | 70-135                  |       |

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

\*\*\* Poor recoveries due to dilution Surrogate Recovery [D] = 100 \* A / B

**BS / BSD Recoveries** 0 Ø 0 9



0

Project Name: DCP Plant to Lea Station 6" - Sec 31

Work Order #: 330358

Lab Batch ID: 756442 Analyst: ASA

Units: mg/kg

Date Prepared: 04/20/2009

Batch #: 1

Sample: 528575-1-BKS

**Project ID: 2009-0234** Date Analyzed: 04/21/2009 Matrix: Solid

|   | ~            |
|---|--------------|
|   | Ξ            |
|   | 2            |
|   | 5            |
|   | ~            |
|   | 2            |
|   |              |
|   | 5            |
| 1 | 5            |
| ļ | ដ            |
| l | ă            |
| l | 2            |
|   |              |
|   | Ξ            |
|   |              |
|   | 5            |
| ļ | $\simeq$     |
| Į |              |
| ł | Δ.           |
| I | Ð            |
| l | Ρ            |
| ł | E            |
|   | $\mathbf{Z}$ |
|   | Z            |
|   | 5            |
| l | ü            |
| ł | ÷            |
|   | 5            |
|   | 3            |
| l | 8            |
| I | -            |
| I | E)           |
| I | $\mathbf{Z}$ |
|   | F            |
| ł | 3            |
| F |              |
| Į | Ě            |
| I | 5            |
| İ | <u></u>      |
| l | 8            |
| Í | $\leq$       |
| ۱ | ¥            |
| ۱ | Z            |
| ۱ | Ą            |
| I | 님            |
| ۱ | æ            |
| ۱ |              |
| I |              |

| BTEX by EP.          | A 8021B             | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Dunlicate | Blk. Spk<br>Dup.<br>%R | RPD<br>%  | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------|---------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|-----------|-------------------------|---------------------------|------|
| Analytes             |                     | [                             | B              | [C]                      | [a]                  | [E]            | Result [F]                  | ย                      | 2         |                         |                           |      |
| Benzene              |                     | QN                            | 0.1000         | 0.0811                   | 81                   | 0.1            | 0.0811                      | 81                     | 0         | 70-130                  | 35                        |      |
| Toluene              |                     | QN                            | 0.1000         | 0.0769                   | 77                   | 0.1            | 0.0767                      | 77                     | 0         | 70-130                  | 35                        |      |
| Ethylbenzenc         |                     | QN                            | 0.1000         | 0.0804                   | 80                   | 0.1            | 0.0805                      | 81                     | 0         | 71-129                  | 35                        |      |
| m,p-Xylencs          |                     | ŊŊ                            | 0.2000         | 0.1661                   | 83                   | 0.2            | 0.1661                      | 83                     | 0         | 70-135                  | 35                        |      |
| o-Xylene             |                     | DN                            | 0.1000         | 0.0795                   | 80                   | 0.1            | 0.0796                      | 80                     | 0         | 71-133                  | 35                        |      |
| Analyst: ASA         |                     | Da                            | te Prepare     | od: 04/21/200            | 6                    |                |                             | Date Ar                | alyzed: 0 | 4/21/2009               |                           |      |
| Lab Batch ID: 756632 | Sample: 528674-1-BF | ξS                            | Batch          | #: 1                     |                      |                |                             |                        | Matrix: S | bild                    |                           |      |
| Units: mg/kg         | L                   |                               | BLANH          | K/BLANK S                | SPIKE / B            | LANK S         | PIKE DUPL                   | ICATE F                | RECOVE    | RY STUD                 | Y                         | I    |

|                   |                              |                |                          |                      |                |                             |                        |          |                         | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1    |
|-------------------|------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------------------|------|
| BTEX by EPA 8021B | Blank<br>ample Result<br>{A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Bik. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD             | Flag |
| Analytes          |                              |                | 5                        | [7]                  | []]            |                             | 5                      |          |                         |                                       |      |
| Benzene           | DN                           | 0.1000         | 0.0846                   | 85                   | 0.1            | 0.0873                      | 87                     | 3        | 70-130                  | 35                                    |      |
| Toluenc           | DN                           | 0.1000         | 0.0801                   | 80                   | 0.1            | 0.0833                      | 83                     | 4        | 70-130                  | 35                                    |      |
| Ethylbenzene      | QN                           | 0.1000         | 0.0845                   | 85                   | 0.1            | 0.0878                      | 88                     | 4        | 71-129                  | 35                                    |      |
| m,p-Xylenes       | QN                           | 0.2000         | 0.1755                   | 88                   | 0.2            | 0.1818                      | 16                     | 4        | 70-135                  | 35                                    |      |
| o-Xylene          | QN                           | 0.1000         | 0.0835                   | 84                   | 0.1            | 0.0858                      | 86                     | 3        | 71-133                  | 35                                    |      |

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

0 **BS / BSD Recoveries** 



Project Name: DCP Plant to Lea Station 6" - Sec 31

Work Order #: 330358 Analyst: BHW

Lab Batch ID: 756285

Date Prepared: 04/19/2009 Batch #: 1

Sample: 8406396-1-BKS

Project ID: 2009-0234 Date Analyzed: 04/19/2009 Matrix: Solid

| Units: mg/kg                            |                               | BLAN           | K /BLANK S               | PIKE / E             | SLANK S        | PIKE DUPL                   | JUATE                  | KECUVE     | KY SLUD                 | X                         |      |
|---|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|------------|-------------------------|---------------------------|------|
| TPH By SW8015 Mod                       | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>%   | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes                                |                               | <b>[</b> 8]    | [c]                      | [0]                  | [E]            | Result [F]                  | <u>ច</u>               |            |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons      | QN                            | 1000           | 1040                     | 104                  | 1000           | 1070                        | 107                    | 3          | 70-135                  | 35                        |      |
| C12-C28 Dicsel Range Hydrocarbons       | ND                            | 1000           | 1020                     | 102                  | 1000           | 1050                        | 105                    | 3          | 70-135                  | 35                        |      |
| Analyst: BHW                            | Da                            | te Prepar      | ed: 04/19/200            | 6(                   |                |                             | Date A                 | nalyzed: 0 | 4/20/2009               |                           |      |
| Lab Batch ID: 756385 Sample: 8406400-1- | -BKS                          | Batcl          | 1#: 1                    |                      |                |                             |                        | Matrix: S  | olid                    |                           |      |
| Units: mg/kg                            |                               | BLAN           | K /BLANK S               | SPIKE / E            | STANK S        | PIKE DUPL                   | ICATE                  | RECOVE     | RY STUD                 | Y                         |      |
| TPH By SW8015 Mod                       | Blank                         | Spike          | Blank                    | Blank                | Spike          | Blank                       | BIK. Spk               |            | Control                 | Control                   |      |
| •                                       | Sample Result                 | Added          | Spike                    | Spike                | Added          | Spike                       | Dup.                   | RPD        | Limits                  | Limits                    | Flag |
|   | [A]                           |                | Result                   | %R                   |                | Duplicate                   | %R                     | %          | %R                      | %RPD                      |      |
| Analytes                                |                               | [B]            | [ <u>c]</u>              | ā                    | [E]            | Result [F]                  | [0]                    | ·          |                         |                           |      |

35 35

70-135 70-135

ŝ

107 104

1070 1040

1000 1000

106 10

1000 1000

C6-C12 Gasoline Range Hydrocarbons C12-C28 Dicsel Range Hydrocarbons

1010 1060

Q Ð

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

 Image: Standard S



Project Name: DCP Plant to Lea Station 6" - Sec 31



Work Order #: 330358

Lab Batch ID: 756442 Date Analyzed: 04/21/2009

Batch #: 1 Matrix: Soil Analyst: ASA

QC- Sample ID: 330355-027 S

Date Prepared: 04/20/2009

Project ID: 2009-0234

| Reporting Units: mg/kg                            |                                  | W                  | ATRIX SPIK              | E / MATI         | RIX SPIF           | CE DUPLICAT                | FE RECO        | <b>DVERY S</b> | TUDY              |                   | Γ    |
|---|----------------------------------|--------------------|-------------------------|------------------|--------------------|----------------------------|----------------|----------------|-------------------|-------------------|------|
| BTEX by EPA 8021B                                 | Parent<br>Sample                 | Spike              | Spiked Sample<br>Result | Spiked<br>Sample | Spike              | Duplicate<br>Spiked Sample | Spiked<br>Dup. | RPD            | Control<br>Limits | Control<br>Limits | Flag |
| Analytes  | Result<br>[A]                    | Added<br>[B]       | <u>5</u>                | <b>8</b> %       | Added<br>[E]       | Result [F]                 | 6]<br>8        | %              | %R                | %RPD              |      |
| Benzene   | QN                               | 0.1293             | 0.0819                  | 63               | 0.1293             | 0.0867                     | 67             | 9              | 70-130            | 35                | ×    |
| Toluene   | ND                               | 0.1293             | 0.0752                  | 58               | 0.1293             | 0.0790                     | 61             | 5              | 70-130            | 35                | ×    |
| Ethylbenzenc                                      | ŊŊ                               | 0.1293             | 0.0778                  | 60               | 0.1293             | 0.0835                     | 65             | 7              | 71-129            | 35                | ×    |
| m.p-Xylencs                                       | ŊŊ                               | 0.2587             | 0.1172                  | 45               | 0.2587             | 0.1201                     | 46             | 2              | 70-135            | 35                | ×    |
| o-Xylene  | ND                               | 0.1293             | 0.0767                  | 59               | 0.1293             | 0.0814                     | 63             | 6              | 71-133            | 35                | ×    |
| Lab Batch ID: 756632<br>Date Analyzed: 04/22/2009 | QC- Sample ID:<br>Date Prepared: | 330466-<br>04/21/2 | 00 S                    | Bat<br>Ani       | tch #:<br>alyst: ≠ | l Matrix<br>\SA            | : Soil         |                |                   |                   |      |

| Reporting Units: mg/kg        |                                   | M                     | ATRIX SPIKI                    | TAM / E                       | RLX SPH               | KE DUPLICAT                              | FE RECO                     | <b>DVERY S</b> | STUDY                   |                           |      |
|-------------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B<br>Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>%       | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Benzene                       | QN                                | 0.1126                | 0.0617                         | 55                            | 0.1126                | 0.0627                                   | 56                          | 2              | 70-130                  | 35                        | ×    |
| Toluene                       | QN                                | 0.1126                | 0.0598                         | 53                            | 0.1126                | 0.0612                                   | 54                          | 2              | 70-130                  | 35                        | ×    |
| Ethylbenzene                  | QN                                | 0.1126                | 0.0652                         | 58                            | 0.1126                | 0.0662                                   | 59                          | 2              | 71-129                  | 35                        | ×    |
| m,p-Xylencs                   | QN                                | 0.2252                | 0.1341                         | 60                            | 0.2252                | 0.1364                                   | 61                          | 2              | 70-135                  | 35                        | ×    |
| o-Xylene                      | ND                                | 0.1126                | 0.0587                         | 52                            | 0.1126                | 0.0604                                   | 54                          | 3              | 71-133                  | 35                        | ×    |

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

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

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

 Image: Stampole
 

Project Name: DCP Plant to Lea Station 6" - Sec 31



Work Order #: 330358

Lab Batch ID: 756285

1 Matrix: Soil

Project ID: 2009-0234

| Lab Batch ID: 756285<br>Date Analyzed: 04/20/2009 | QC- Sample ID:<br>Date Prepared: | 330355-<br>04/19/20 | 030 S<br>09             | Bat<br>Ana       | ich #:<br>ilyst:     ] | l Matrix<br>BHW            | t: Soil        |                |                   |                   |      |  |
|---|----------------------------------|---------------------|-------------------------|------------------|------------------------|----------------------------|----------------|----------------|-------------------|-------------------|------|--|
| Reporting Units: mg/kg                            |                                  | M                   | ATRIX SPIKI             | E / MATH         | IIX SPI                | KE DUPLICA'                | TE RECO        | <b>DVERY S</b> | TUDY              |                   |      |  |
| TPH By SW8015 Mod                                 | Parent<br>Sample                 | Spike               | Spiked Sample<br>Result | Spiked<br>Sample | Spike                  | Duplicate<br>Spiked Sample | Spiked<br>Dup. | RPD            | Control<br>Limits | Control<br>Limits | Flag |  |
| Analytes  | Result<br>[A]                    | Added<br>[B]        | [C]                     | %R<br>[D]        | Added<br>[E]           | Result [F]                 | %R<br>[G]      | %              | %R                | %RPD              | 1    |  |
| C6-C12 Gasoline Range Hydrocarbons                | Q                                | 1180                | 1360                    | 115              | 1180                   | 1410                       | 611            | 4              | 70-135            | 35                |      |  |
| C12-C28 Diesel Range Hydrocarbons                 | ND                               | 1180                | 1330                    | 113              | 1180                   | 1380                       | 117            | 4              | 70-135            | 35                |      |  |
| Lab Batch ID: 756385                              | QC- Sample ID:                   | 330358-             | 008 S                   | Bat              | tch #:                 | 1 Matrix                   | t: Soil        |                |                   |                   |      |  |
| Date Analyzed: 04/20/2009                         | Date Prepared:                   | 04/19/20            | 60                      | Ana              | ilyst:                 | BHW                        |                |                |                   |                   |      |  |
| Reporting Units: mg/kg                            |                                  | M                   | ATRIX SPIKI             | E / MATH         | RIX SPI                | KE DUPLICA                 | TE REC         | <b>DVERY S</b> | TUDY              |                   |      |  |
| TPH By SW8015 Mod                                 | Parent<br>Semulo                 | - 11 - 2            | Spiked Sample           | Spiked           | - 11 - 21              | Duplicate                  | Spiked         | 444            | Control           | Control           | Ē    |  |

|                   | Flag                        |              |                                    |                                   |  |
|-------------------|-----------------------------|--------------|------------------------------------|-----------------------------------|--|
| Control           | Limits<br>%RPD              |              | 35                                 | 35                                |  |
| Control           | Limits<br>%R                |              | 70-135                             | 70-135                            |  |
|                   | RPD<br>%                    |              | 1                                  | 0                                 |  |
| Spiked            | Dup.<br>%R                  | [6]          | 112                                | 112                               |  |
| Duplicate         | Spiked Sample<br>Result [F] |              | 1130                               | 0/11                              |  |
|                   | Spike<br>Added              | <b>[E</b> ]  | 1010                               | 1010                              |  |
| Spiked            | Sample<br>%R                | ē            | 113                                | 112                               |  |
| Spiked Sample     | Result<br>[C]               |              | 1140                               | 0/11                              |  |
|                   | Spike<br>Added              | [ <b>B</b> ] | 1010                               | 0101                              |  |
| Parent            | Sample<br>Result            | [V]          | ND                                 | 43.3                              |  |
| TPH By SW8015 Mod |                             | Analytes     | C6-C12 Gasoline Range Hydrocarbons | C12-C28 Diesel Range Hydrocarbons |  |

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

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

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

Page 18 of 21



#### Sample Duplicate Recovery



#### Project Name: DCP Plant to Lea Station 6" - Sec 31

Work Order #: 330358

| Lab Batch #: 756187         |                                |                                      | Project I | <b>D:</b> 2009-023         | 34    |
|-----------------------------|--------------------------------|--------------------------------------|-----------|----------------------------|-------|
| Date Analyzed: 04/17/2009   | Date Prepared: 04/1            | 7/2009                               | Analy     | st: BEV                    |       |
| QC- Sample ID: 330355-021 D | Batch #: 1                     | ł                                    | Matr      | ix: Soil                   |       |
| Reporting Units: %          | SAMPLE                         | / SAMPLE                             | DUPLIC    | ATE REC                    | OVERY |
| Percent Moisture            | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result        | RPD       | Control<br>Limits<br>%RPD  | Flag  |
| Analyte                     |                                | [B]                                  |           |                            |       |
| Percent Moisture            | 7.90                           | 7.38                                 | 7         | 20                         |       |
| Lab Batch #: 756188         |                                |                                      |           |                            |       |
| Date Analyzed: 04/17/2009   | Date Prepared: 04/1            | 7/2009                               | Analy     | st: BEV                    |       |
| QC- Sample ID: 330358-004 D | Batch #: 1                     |                                      | Matri     | ix: Soil                   |       |
| Reporting Units: %          | SAMPLE                         | / SAMPLE                             | DUPLIC    | ATE REC                    | OVERY |
| Percent Moisture            | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result<br>[B] | RPD       | Control<br>Limits.<br>%RPD | Flag  |
| Analyte                     |                                |                                      |           |                            |       |
| Percent Moisture            | 1.28                           | 1.10                                 | 15        | 20                         |       |

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

|                              | Texas        |             |                |              |                | 1260<br>Ode | 90 We:<br>583; T | CHA<br>st i-20<br>exas | IN OF<br>East<br>79765 | Sicos                     | roov                                | REC                      | DRD                  | ND                        | Pho<br>Fau  | (SIS R<br>10: 431<br>: 431 | EQUI   | EST<br>1800<br>1713                        |            |                            |                             |
|------------------------------|--------------|-------------|----------------|--------------|----------------|-------------|------------------|------------------------|------------------------|---------------------------|-------------------------------------|--------------------------|----------------------|---------------------------|---|----------------------------|--|--|------------|----------------------------|-----------------------------|
| l Manager, Curt Stanley      |              |             |                |              |                |             |                  |                        |                        |                           |                                     | Projec                   | t Nam                | 00                        | plan  | t to Le                    | 50 Sta   | tion 6                                     | ŝ          | 30.31                      | _                           |
| any Name Basin Environmental | Servica Tect | hnolo       | gies. LLC      |              |                |             |                  |                        |                        |                           |                                     | đ                        | aject :              | : 200                     | 9-023   | _                          |  |  |            |                            |                             |
| any Address: P. O. Box 301   |              |             |                |              |                |             |                  |                        |                        |                           |                                     | Proj                     | set Lo               | : Lea                     | County  | NM.                        |  |  |            |                            |                             |
| ate/Zip: Lovington, NM 88260 |              |             |                |              |                |             |                  |                        |                        |                           |                                     |                          | D04                  | PAA                       | - J. Hc   | λu                         |  |  |            |                            |                             |
| one No: (575)005-7218        | 1            |             |                | Fax No:      | 5              | 5) 39       | -1429            |                        |                        |                           | Rey .                               | oor Fo                   | mat                  | ľ                         | Standar   | 13                         | Ē  | d Ha                                       |            | 30dN                       | S                           |
| r Signature: (L XI-R         | .J           |             |                | e-mail:      | δ <b>ι</b>     | Istar       | levic            | Das                    | in-co                  | Insu                      | ling.c                              | Ę                        |                      |                           | ľ   | ĺ                          |  |  |            | ł                          | Г                           |
|                              |              | /           |                |              |                |             |                  |                        |                        |                           |                                     | 1                        |                      | 1C                        | 2   |                            | ۶b   | E  | -          | Ē                          | \$.Q                        |
| 430358                       | 1            |             |                |              | L.3.           | E           |                  |                        |                        |                           | ľ                                   | Ц                        |                      | 101                       | 7   | $\left  \right $           | ×  |  |            |                            | 21.0                        |
| Fiéto code                   | diga Depth   | chqad gaiba | bolqmus2 ets0  | bölqma2 emiT | behard Filered | ica         | · 1011           | NOS/H                  | *O'S'IN                | Oster ( Spixedy)<br>Norre | or + Clonudward First Standard + Mo | 15108 (115108 ) 817 1143 | 9001 X1 9001 X1 1431 | ANDIA (CY, COA, MICERIAL) | 6694 (556 (560)<br>6694 (566 (560)<br>7694 (566 (560) | saispiov<br>esitaiovira    | 105 2021 80 20 20 20 20 20 20 20 20 20 20 20 20 20 | 100 K 100                                  | 102<br>S01 | , the second second reside | A 15 (subtros-ord) IAI HZUH |
| SB-1@10'                     |              | 1           | 04/15/09       | 1350         | F              | ×           | _                |                        |                        |                           | Sol                                 | ×                        | 1                    | 1                         | -   | -                          | ×  | <b> </b>                                   |            |                            |                             |
| SB-1@20'                     |              |             | 04/15/09       | 1400         | -              | ×           |                  |                        |                        |                           | ŝ                                   | ×                        |                      |                           |   |                            | ×  |  |            |                            |                             |
| SB-1@30'                     |              | -           | 04/15/09       | 1420         | -              | ×           |                  |                        |                        |                           | Soi                                 | Ě                        |                      |                           |   |                            | ×  |  | ··         |                            | -                           |
| SB-1 @40'                    | <u></u>      |             | 04/15/09       | 1430         | ÷              | X           |                  |                        | ,                      |                           | Sol                                 | ×                        |                      |                           |   | _                          | ×  |  |            |                            | -                           |
| SB-1 @50'                    |              |             | 04/15/09       | 1450         |                | ×           |                  |                        |                        |                           | Sol                                 | ×                        |                      | _                         |   | <u>.</u>                   | ×  |  |            |                            | -+                          |
| SB-1 @60'                    | _            |             | 04/15/09       | 1520         | -              | ×           |                  |                        |                        |                           | Sol                                 | <u>×</u>                 |                      |                           | _   |                            | ×  |  | -          |                            | -                           |
| 58-1 <i>@</i> 70'            |              |             | 04/15/09       | 1550         |                | ×           |                  |                        |                        |                           | ŝ                                   | ×                        |                      |                           |   |                            | ×  |  | $\dashv$   | $\uparrow$                 |                             |
| SB-1 @75'                    | _            | -           | 04/15/09       | 1620         |                | ×           |                  |                        |                        | _                         | Sol                                 | <u> </u>                 |                      |                           |   | _                          | ×  |  | _          |                            | -+                          |
|                              |              |             |                |              | -              |             |                  |                        |                        | _                         |                                     |                          |                      |                           |   |                            |  |  | ÷          | $\pm$                      | -+                          |
|                              |              | $\neg$      |                |              | $\neg$         |             |                  |                        |                        | _                         |                                     | -                        |                      |                           | 4   |                            | -  |  |            |                            | -                           |
|                              |              |             |                |              |                |             |                  |                        | •                      |                           |                                     |                          | 2 10 2               | sborat<br>Imple           | 22 CQ   | ens luit                   |  | 17. S. | QS.        |                            |                             |
| med - 17 - 17                | ent COC      | C           | lecewed by:    |              |                |             |                  |                        |                        | 80                        | æ                                   | e,                       | <u>, 200</u>         | trefs o<br>ustoov         | 000   | 0er(s)<br>1cont            | (3)<br>(5)   | Viale.                                     | (89)       | 4.4.VG                     |                             |
|                              | Little       | 1. ····     | cocaived by.   |              |                |             |                  |                        | †                      | õ                         | 2                                   | E.                       | 0                    | ad a l                    |   | elivere<br>Xent Ro         | 5<br>  | 2 . T                                      | Ð≻∦        | 4 4 66                     | 2.7                         |
| Date                         | , Ygna       | Ť           | book ed by ELO | 1            | 12             |             | ŀ                |                        |                        | 8                         | 10                                  | EU)                      | L.                   |                           |   |                            |  | 2  |            | ſ                          | . p                         |

#### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

| Client      | Plains /Basin   |                          |
|-------------|-----------------|--------------------------|
| Date/ Time: | 04-17-09 C 0807 | *********************    |
| Lab ID # :  | 330358          |                          |
| Initials.   | JMF             |                          |
|             | ,               | Sample Receipt Checklist |

0

6

6

0

0

0

Ø

0

0

1

0

0

F

0

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

Regarding:

Corrective Action Taken:

Check all that Apply:

1

See attached e-mail/ fax

and a second 
Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

# Analytical Report 335116

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

DCP Plant to Lea Station 6-Inch-Sec 31 2009-084

17-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



17-JUN-09

Ò

8 9

<u>A</u>

B

0

 $(\mathbf{B})$ 

Ø

E

Õ

۲

P

Ì

8 9

0

Ø



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

#### Reference: XENCO Report No: 335116 DCP Plant to Lea Station 6-Inch-Sec 31 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 335116. 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. 335116 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 335116

#### PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6-Inch-Sec 31

| Sample Id              | Matrix     | Date Collected  | Sample Depth | Lab Sample Id |
|------------------------|------------|-----------------|--------------|---------------|
| RP @ 15'               | S          | Jun-10-09 11:30 |              | 335116-001    |
| NSW @ 14.5'            | S          | Jun-10-09 11:50 |              | 335116-002    |
| SSW @ 14.5'            | S          | Jun-10-09 12:10 |              | 335116-003    |
| West Trench @ 6'       | S          | Jun-10-09 12:20 |              | 335116-004    |
| North Trench # 1 @ 4'  | S          | Jun-10-09 12:30 |              | 335116-005    |
| North Trench # 1 @ 8'  | S          | Jun-10-09 12:40 |              | 335116-006    |
| North Trench # 1 @ 12' | S          | Jun-10-09 12:50 |              | 335116-007    |
| North Trench # 1 @ 14' | S          | Jun-10-09 13:00 |              | 335116-008    |
| East Trench # 1 @ 4'   | S          | Jun-10-09 13:10 |              | 335116-009    |
| East Trench # 1 @ 14'  | S          | Jun-10-09 13:20 |              | 335116-010    |
| North Trench # 2 @ 4'  | <b>S</b> . | Jun-10-09 13:30 |              | 335116-011    |
| North Trench # 2 @ 8'  | S          | Jun-10-09 13:40 | ١            | 335116-012    |
| East Trench # 2 @ 4'   | S          | Jun-10-09 13:50 |              | 335116-013    |
| East Trench # 2 @ 14'  | S          | Jun-10-09 14:00 |              | 335116-014    |
| Stockpile              | S          | Jun-10-09 14:10 |              | 335116-015    |

Ð

#### CASE NARRATIVE



(1) (1)

Ð

0

0

۲

() () ()

۲

Ð

6

() ()

@ @

0

6

6

¢

0

Client Name: PLAINS ALL AMERICAN EH&S Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

Project ID: 2009-084 Work Order Number: 335116 Report Date: 17-JUN-09 Date Received: 06/11/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-762045 Percent Moisture None

Batch: LBA-762047 Percent Moisture None

Batch: LBA-762052 TPH by SW8015 Mod None

Batch: LBA-762264 BTEX-MTBE EPA 8021B SW8021BM

Batch 762264, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Samples affected are: 335116-005, -004, -011, -009, -013, -014, -012, -003. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

#### SW8021BM

Batch 762264, 4-Bromofluorobenzene recovered below QC limits: Data not confirmed by reanalysis. Samples affected are: 531836-1-BLK,335116-004,335116-014,335116-012,335116-013,335116-003,335116-005. Matrix Interference is suspected in sample surrogate failures.

Batch 762264, 4-Bromofluorobenzene recovered above QC limits: Data confirmed by reanalysis. Samples affected are: 335116-006, 335116-010

Batch: LBA-762423 BTEX-MTBE EPA 8021B None

**Certificate of Analysis Summary 335116** PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

Project Location: Lea County, NM

Contact: Jason Henry Project Id: 2009-084

6



()) 0

> Date Received in Lab: Thu Jun-11-09 08:35 am Report Date: 17-JUN-09

83.6 0.0555 0.1109 0.0555 0.1109 0.0555 0.0555 1.00 83.6 83.6 83.6 0.0555 RL RL R North Trench # 1 (@) 8' Jun-16-09 08:06 Jun-10-09 12:40 Jun-15-09 11:00 Jun-12-09 08:45 Jun-11-09 11:32 Jun-11-09 16:11 335116-006 m<u>g/kg</u>\_\_\_\_\_ SOIL 0.1930 3.900 3.179 7.079 915 1.009 10.73 3780 8.281 309 5004 mg/kg % North Trench # 1 (@) 4' ND 0.0012 ND 0.0012 RL 0.175 0.175 RL 1.00 ND 0.175 ND 0.175 ND 0.0023 ND 0.0012 ND 0.0012 R ND 0.0023 ND 0.0012 Jun-10-09 12:30 Jun-12-09 13:00 Jun-12-09 23:40 Jun-12-09 08:45 Jun-11-09 11:32 Jun-11-09 15:48 335116-005 Brent Barron, II SOIL Q az 14.52 mg/kg mg/kg % 1.00 16.9 16.9 16.9 mg/kg RL ND 0.0011 16.9 Project Manager: ND 0.0023 ND 0.0011 ND 0.0023 ND 0.0011 ND 0.0011 0.0011 RL R Jun-12-09 23:18 Jun-11-09 15:25 Jun-10-09 12:20 Jun-12-09 13:00 Jun-12-09 08:45 Jun-11-09 11:32 West Trench (a) 6' 335116-004 mg/kg\_\_\_\_\_ SOL QN QZ QN Q2 11.84 % mg/kg RL ND 0.0011 ND 0.0011 ND 0.0022 ND 0.0011 RL 1.00 ND 0.0022 16.7 16.7 16.7 ND 0.0011 ND 0.0011 R 16.7 Jun-12-09 13:00 Jun-12-09 08:45 Jun-11-09 11:32 Jun-11-09 15:02 Jun-10-09 12:10 Jun-12-09 22:57 SSW @ 14.5' 335116-003 SOIL 10.16 g QN QZ 102 mg/kg % 16.4 16.4 mg/kg RL 0.0019 0.0011 16.4 1.00 16.4 RL 0.0051 0.0022 ND 0.0011 0.0083 0.0011 R R 0.0012 0.0011 0.0083 0.0022 0.0165 0.0011 lun-12-09 22:35 Jun-12-09 08:45 Jun-11-09 14:38 Jun-10-09 11:50 Jun-12-09 13:00 Jun-11-09 11:32 VSW @ 14.5' 335116-002 SOIL 8.98 QN QN 26.1 26.1 mg/kg % 81.4 81.4 1.086 1.086 1.086 1.00 81.4 13.06 2.172 15.568 1.086 81.4 RL ND 2.172 2.508 1.086 R R Jun-15-09 11:00 Jun-16-09 08:49 Jun-11-09 11:32 Jun-11-09 14:15 Jun-10-09 11:30 Jun-12-09 08:45 RP @ 15' 335116-001 mg/kg ND mg/kg 809 QN SOIL 15.568 422 187 1418 7.91 % Lab Id: Field Id: Depth: Matrix: Sampled: Analyzed: Extracted: Extracted: Analyzed: Units/RL: Units/RL: Analyzed: Units/RL: Extracted: TPH By SW8015 Mod BTEX by EPA 8021B C6-C12 Gasoline Range Hydrocarbons **Percent Moisture** C12-C28 Diesel Range Hydrocarbons Analysis Requested C28-C35 Oil Range Hydrocarbons Percent Moisture Total Xylenes Ethylbenzene m,p-Xylenes Total BTEX Total TPH Benzene o-Xylene Toluene

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughou this manufacial report represent the test pugnent of XENCO Laboratories. XENCO Laboratories assumes to reportisitivity and makes to warranty to the red use of the data hereby presented Our liability is limited to the amount invoited for this work order unless otherwise agreed to it mritting.

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

Odessa Laboratory Director Brent Barron

Control Con PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: DCP Plant to Lea Station 6-Inch-Sec 31



Date Received in Lab: Thu Jun-11-09 08:35 am Report Date: 17-JUN-09

Contact: Jason Henry Project Id: 2009-084

Ø

o di co 6 

| Project Location: Lea County, NM   |            |                        |                        |                        | Keport Date:            | 60-NDC-/1               |                       |
|------------------------------------|------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-----------------------|
|                                    |            |                        |                        |                        | Project Manager: 1      | Srent Barron, II        |                       |
|                                    | Lab Id:    | 335116-007             | 335116-008             | 335116-009             | 335116-010              | 335116-011              | 335116-012            |
|                                    | Field Id:  | North Trench # 1 @ 12' | North Trench # 1 @ 14' | East Trench # 1 (@) 4' | East Trench # 1 (a) 14' | North Trench # 2 (a) 4' | North Trench # 2 @ 8' |
| naisan hay sistinu y               | Depth:     |                        |                        |                        |                         |                         |                       |
|                                    | Matrix:    | SOIL                   | SOIL                   | SOIL                   | SOIL                    | SOIL                    | SOIL                  |
|                                    | Sampled:   | Jun-10-09 12:50        | Jun-10-09 13:00        | Jun-10-09 13:10        | Jun-10-09 13:20         | Jun-10-09 13:30         | Jun-10-09 13:40       |
| BTEX by EPA 8021B                  | Extracted: | Jun-15-09 11:00        | Jun-15-09 11:00        | Jun-12-09 13:00        | Jun-15-09 11:00         | Jun-12-09 13:00         | Jun-12-09 13:00       |
|                                    | Analyzed:  | Jun-16-09 09:10        | Jun-16-09 09:32        | Jun-13-09 00:44        | Jun-16-09 08:27         | Jun-13-09 01:27         | Jun-13-09 02:52       |
|                                    | Units/RL:  | mg/kg RL               | mg/kg RL               | mg/kg RL               | mg/kg RL                | mg/kg RL                | mg/kg RL              |
| Benzene                            |            | ND 1.065               | ND 1.120               | ND 0.0011              | ND 0.0107               | ND 0.0011               | ND 0.0011             |
| Toluene                            |            | 4.508 2.130            | 5.384 2.239            | ND 0.0021              | 0.0540 0.0215           | ND 0.0021               | ND 0.0022             |
| Ethylbenzene                       |            | 3.918 1.065            | 4.516 1.120            | ND 0.0011              | 0.2889 0.0107           | 1100'0 QN               | ND 0.0011             |
| m,p-Xylenes                        |            | 12.62 2.130            | 14.36 2.239            | 0.0024 0.0021          | 2.033 0.0215            | ND 0.0021               | ND 0.0022             |
| o-Xylenc                           |            | 5.021 1.065            | 5.157 1.120            | ND 0.0011              | 1.419 0.0107            | 1100.0 DN               | ND 0.0011             |
| Total Xylenes                      |            | 17.641 1.065           | 19.517 1.120           | 0.0024 0.0011          | 3.452 0.0107            | 1100'0 QN               | ND 0.0011             |
| Total BTEX                         |            | 26.067 1.065           | 29.417 1.120           | 0.0024 0.0011          | 3.7949 0.0107           | ND 0.0011               | ND 0.0011             |
| Percent Moisture                   | Extracted: |                        |                        |                        |                         |                         |                       |
|                                    | Analyzed:  | Jun-12-09 08:45        | Jun-12-09 08:45        | Jun-12-09 08:45        | Jun-12-09 08:45         | Jun-12-09 08:45         | Jun-12-09 08:45       |
|                                    | Units/RL:  | % RL                   | % RL                   | % RL                   | % RL                    | % RL                    | % RL                  |
| Percent Moisture                   |            | 6.86 1.00              | 11.22 1.00             | 7.58 1.00              | 6.88 1.00               | 6.01 1.00               | 9.48 1.00             |
| TPH Bv SW8015 Mod                  | Extracted: | Jun-11-09 11:32        | Jun-11-09 11:32        | Jun-11-09 11:32        | Jun-11-09 11:32         | Jun-11-09 11:32         | Jun-11-09 11:32       |
|                                    | Analyzed:  | Jun-11-09 16:34        | Jun-11-09 16:57        | Jun-11-09 17:43        | Jun-11-09 18:06         | Jun-11-09 18:29         | Jun-11-09 18:52       |
|                                    | 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 |            | 900 80.4               | 823 84.5               | ND 16.1                | 194 80.5                | ND 15.9                 | ND 16.5               |
| C12-C28 Dicsel Range Hydrocarbons  |            | 5920 80.4              | 4910 84.5              | ND 16.1                | 2430 80.5               | ND 15.9                 | ND 16.5               |
| C28-C35 Oil Range Hydrocarbons     |            | 1610 80.4              | 1430 84.5              | ND 16.1                | 600 80.5                | ND 15.9                 | ND 16.5               |
| Total TPH                          |            | 8430 80.4              | 7163 84.5              | ND 16.1                | 3224 80.5               | ND 15.9                 | ND 16.5               |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed froughcut this analytical report traves in the sixty adgement of XENCO Laboratories. XENCO Laboratories assents on requestibility and makes no warranty in the end use of the data hereby presented. Our liability is limited to the amount invoised for this work order unless otherwise agreed to it in writing.

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

Odessa Laboratory Director Brent Barron

Certificate of Analysis Summary 335116 Certificate of Analysis Summary 335116 PLAINS ALL AMERICAN EH&S, Midland, TX 0 0

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31



Project Location: Lea County, NM Contact: Jason Henry **Project Id:** 2009-084

Date Received in Lab: Thu Jun-11-09 08:35 am Report Date: 17-JUN-09

|                                    |            | ł                    |                       |                 | Project Manager: Brent Barron, II |  |
|------------------------------------|------------|----------------------|-----------------------|-----------------|-----------------------------------|--|
|                                    | Lab Id:    | 335116-013           | 335116-014            | 335116-015      |                                   |  |
| Analysis Rounostod                 | Field Id:  | East Trench # 2 @ 4' | East Trench # 2 @ 14' | Stockpile       |                                   |  |
| Truthas areducated                 | Depth:     |                      |                       |                 |                                   |  |
|                                    | Matrix:    | SOIL                 | SOIL                  | SOIL            |                                   |  |
|                                    | Sampled:   | Jun-10-09 13:50      | Jun-10-09 14:00       | Jun-10-09 14:10 |                                   |  |
| BTEX hv EPA 8021B                  | Extracted: | Jun-12-09 13:00      | Jun-12-09 13:00       | Jun-15-09 11:00 |                                   |  |
|                                    | Analyzed:  | Jun-13-09 03:14      | Jun-13-09 03:35       | Jun-16-09 09:54 |                                   |  |
|                                    | Units/RL:  | mg/kg RL             | mg/kg RL              | mg/kg RL        |                                   |  |
| Benzene                            |            | 0100.0 UN            | ND 0.0011             | ND 1.071        |                                   |  |
| Toluene                            |            | ND 0.0021            | ND 0.0022             | ND 2.141        |                                   |  |
| Ethylbenzene                       |            | ND 0.0010            | ND 0.0011             | ND 1.071        |                                   |  |
| m,p-Xylenes                        |            | ND 0.0021            | ND 0.0022             | 10.50 2.141     |                                   |  |
| o-Xylcnc                           |            | ND 0.0010            | 1100.0 UN             | 2.527 1.071     |                                   |  |
| Total Xylenes                      |            | ND 0.0010            | ND 0.0011             | 13.027 1.071    |                                   |  |
| Total BTEX                         |            | ND 0.0010            | ND 0.0011             | 13.027 1.071    |                                   |  |
| Percent Moisture                   | Extracted: |                      |                       |                 |                                   |  |
|                                    | Analyzed:  | Jun-12-09 08:45      | Jun-12-09 08:45       | Jun-12-09 08:52 |                                   |  |
|                                    | Units/RL:  | % RL                 | % RL                  | % RL            |                                   |  |
| Percent Moisture                   |            | 4.00 1.00            | 11.86 1.00            | 6.78 1.00       |                                   |  |
| TPH Bv SW8015 Mod                  | Extracted: | Jun-11-09 11:32      | Jun-11-09 11:32       | Jun-11-09 11:32 |                                   |  |
|                                    | Analyzed:  | Jun-11-09 19:15      | Jun-11-09 19:38       | Jun-11-09 20:01 |                                   |  |
|                                    | Units/RL:  | mg/kg RL             | mg/kg RL              | mg/kg RL        |                                   |  |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 15.6              | ND 17.0               | 485 80.5        |                                   |  |
| C12-C28 Diesel Range Hydrocarbons  |            | ND 15.6              | ND 17.0               | 653 80.5        |                                   |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND 15.6              | ND 17.0               | 206 80.5        |                                   |  |
| Total TPH                          |            | ND 15.6              | ND 17.0               | 1344 80.5       |                                   |  |

This analytical report, and the entire data package is represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this manufaciel report research the basi Judgment of XENCO Laboratorias assumes to responsibility and makes no warranty to the rend use of the data hereby presented. Our liability is limited to the amount invoited for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director Brent Barron



P

0

0

0

0 0

0

6

() () ()

Ð

() ()

6

8



- 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.

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 - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

|   | 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 |
|   |                |                |

| <b>F F F F F F F F F F</b>                        |        |
|---|--------|
| $\left[ \begin{array}{c} \\ \end{array} \right] $ | mca    |
| 125   | LLL    |
| n   |        |
| 10000   | renner |

**()** 

## Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| Vork Orders : 335116 | ),<br>Samnle: 531836-1-BKS / F | KS B:  | Project II                      | D: 2009-084                 |                                   |            |
|----------------------|--------------------------------|--|---------------------------------|-----------------------------|-----------------------------------|------------|
| Units: mg/kg         | Date Analyzed: 06/12/09 20:47  | SI   | JRROGATE R                      | ECOVERY !                   | STUDY                             |            |
| BTE                  | X by EPA 8021B                 | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]           | Recovery<br>%R<br>(D)       | Control<br>Limits<br>%R           | Flags      |
| 1.4 Difluorobenzene  | Analytes                       | 0.0218                                       | - 0.0200                        | 106                         |                                   |            |
| 1,4-Difuorobenzene   |                                | 0.0275                                       | 0.0300                          | 100                         | 80-120                            | ·          |
|                      |                                | 0.0275                                       | 0.0300                          | · 74                        | 80-120                            |            |
| Lab Batch #: /62264  | Sample: 531830-1-880/8         | SD Ba  | atch:   Matri                   | ix: Solid                   | OTHER V                           |            |
| Units: mg/kg         | Date Analyzed: 06/12/09 21:09  | <u>.</u>                                     | JRRUGATE N                      |                             | STUDY                             |            |
| BTE                  | X by EPA 8021B<br>Analytes     | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]           | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R           | Flags      |
| 1,4-Difluorobenzene  |                                | 0.0319                                       | 0.0300                          | 106                         | 80-120                            | i .        |
| 4-Bromofluorobenzene |                                | 0.0262                                       | 0.0300                          | 87                          | 80-120                            | i          |
| Lab Batch #: 762264  | Sample: 531836-1-BLK / F       | LLK B:                                       | atch:   Matr                    | ix: Solid                   | <u> </u>                          |            |
| Units: mg/kg         | Date Analyzed: 06/12/09 21:53  | SI   | JRROGATE R                      | ECOVERY !                   | STUDY                             |            |
| BTE                  | X by EPA 8021B<br>Analytes     | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]           | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R           | Flags      |
| 1,4-Difluorobenzene  |                                | 0.0274                                       | 0.0300                          | 91                          | 80-120                            | i          |
| 4-Bromofluorobenzene |                                | 0.0166                                       | 0.0300                          | . 55                        | 80-120                            | *          |
| Lab Batch #: 762264  | Sample: 335116-002 / SMF       | , Ba   | atch: 1 Matr                    | ix: Soil                    | ·                                 |            |
| Units: mg/kg         | Date Analyzed: 06/12/09 22:35  | SI   | JRROGATE RI                     | ECOVERY ?                   | STUDY                             |            |
| BTE                  | X by EPA 8021B                 | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]           | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R           | Flags      |
| 1.4-Difluorobenzene  |                                | 0.0268                                       | 0.0300                          | 89                          | 80-120                            | [          |
| 4-Bromofluorobenzene |                                | 0.0274                                       | 0.0300                          | 91                          | 80-120                            | i          |
| Lab Batch #: 762264  | Sample: 335116-003 / SMF       | <u>اــــــــــــــــــــــــــــــــــــ</u> | atch: 1 Matr                    | ix: Soil                    | <u> </u>                          | ,          |
| Units: mg/kg         | Data Analyzada 06/12/00 22:57  | St   | JRROGATE RI                     | ECOVERY                     | STUDY                             | ······     |
|                      | Date Analyzed: 06/12/09 22:57  | -  |                                 | T                           |                                   | í <u> </u> |
| BTE                  | X by EPA 8021B<br>Analytes     | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]           | Recovery<br>%R<br>[D]       | Control<br>Limits<br>%R           | Flags      |
| BTE:                 | X by EPA 8021B<br>Analytes     | Amount<br>Found<br>[A]                       | True<br>Amount<br>[B]<br>0.0300 | Recovery<br>%R<br>[D]<br>88 | Control<br>Limits<br>%R<br>80-120 | Flags      |

\* 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.

| to all a manual and | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | 1. 2004 ANN 17 48 10 1 10 |
|---------------------|--|---------------------------|
| 577                 | M  | 20                        |
| 244                 |  | K Z                       |
| n-ma                |  | JED AL                    |
| 19.7.7              | K.R                                      | ગતાનગ                     |

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| Vork Orders : 335116<br>Lab Batch #: 762264 | ',<br>Sample: 335116-004 / SMP | B                      | Project II<br>atch: 1 Matr | D: 2009-084<br>ix: Soil |                         |  |
|---|--------------------------------|------------------------|----------------------------|-------------------------|-------------------------|--|
| Units: mg/kg                                | Date Analyzed: 06/12/09 23:18  | SU                     | JRROGATE RI                | ECOVERY                 | STUDY                   |  |
| BTEX  | Х by ЕРА 8021В                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R          | Control<br>Limits<br>%R | Flags  |
|   | Analytes                       |                        |                            | [D]                     |                         |  |
| 1,4-Difluorobenzene                         |                                | 0.0272                 | 0.0300                     | 91                      | 80-120                  |  |
| 4-Bromofluorobenzene                        |                                | 0.0208                 | 0.0300                     | 69                      | 80-120                  | <u>    *                                </u> |
| Lab Batch #: 762264                         | Sample: 335116-005 / SMP       | Ba                     | atch: 1 Matr               | ix: Soil                |                         |  |
| Units: mg/kg                                | Date Analyzed: 06/12/09 23:40  | SU                     | JRROGATE RI                | ECOVERY S               | STUDY                   |  |
| BTEX  | K by EPA 8021B                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags  |
| 1.4-Difluorobenzene                         | Anarytes                       | 0.0279                 | 0.0300                     | 93                      | 80-120                  | <u> </u>                                     |
| 4-Bromofluorobenzene                        |                                | 0.0183                 | 0.0300                     | 61                      | 80-120                  | *  |
| Lah Batch #: 762264                         | Sample: 335116-009 / SMP       | B                      | atch: 1 Matr               | ix: Soil                | L                       |  |
| Units: mg/kg                                | Date Analyzed: 06/13/09 00:44  |                        | JRROGATE RI                | ECOVERY                 | STUDY                   |  |
| BTE   | X by EPA 8021B                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags  |
| 1.4-Difluorobenzene                         |                                | 0.0262                 | 0.0300                     | 87                      | 80-120                  | <u> </u>                                     |
| 4-Bromofluorobenzene                        |                                | 0.0261                 | 0.0300                     | 87                      | 80-120                  | [  |
| Lab Batch #: 762264                         | Sample: 335116-011 / SMP       | B                      | atch: 1 Matr               | ix: Soil                | <u> </u>                |  |
| Units: mg/kg                                | Date Analyzed: 06/13/09 01:27  | SU                     | JRROGATE RI                | ECOVERY ?               | STUDY                   |  |
| BTEX  | K by EPA 8021B                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R          | Control<br>Limits<br>%R | Flags  |
|   | Analytes                       |                        |                            |                         |                         | <b> </b>                                     |
| 1,4-Difluorobenzene                         |                                | 0.0269                 | 0.0300                     | 90                      | 80-120                  | <b> </b>                                     |
| 4-Bromofluorodenzene                        |                                | 0.0247                 | 0.0300                     | 82                      | 80-120                  |  |
| Lab Batch #: 762264                         | Sample: 335116-012 / SMP       | Ba                     | itch: 1 Matri              | ix: Soil                |                         |  |
| Units: mg/kg                                | Date Analyzed: 06/13/09 02:52  | <u> </u>               | RRUGATE K                  | ECOVERY A               | STUDY                   | <del> </del>                                 |
| DUEL  |                                |                        | True                       |                         | Control                 | Flags  |
| BIE2  | X by EPA 8021B                 | Amount<br>Found<br>[A] | Amount<br>[B]              | Recovery<br>%R<br>[D]   | %R                      | i nigo                                       |
| BIE2  | X by EPA 8021B<br>Analytes     | Amount<br>Found<br>[A] | Amount<br>[B]              | Recovery<br>%R<br>[D]   | 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.

|   | $\sim \sim \sim \sim$ |
|---|-----------------------|
|   |                       |
| ł |                       |
|   |                       |
|   | 1 - Commenter         |
|   | Contractures          |
|   |                       |

## Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| <b>Work Orders :</b> 335116<br>Lab Batch #: 762264 | ,<br>Sample: 335116-013 / SMP | Ba                     | Project II<br>tch:   Matri | <b>):</b> 2009-084<br><b>x:</b> Soil |                         |          |
|--|-------------------------------|------------------------|----------------------------|--------------------------------------|-------------------------|----------|
| Units: mg/kg                                       | Date Analyzed: 06/13/09 03:14 | SU                     | RROGATE RE                 | COVERY                               | STUDY                   |          |
| BTEX   | X by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R                       | Control<br>Limits<br>%R | Flags    |
| 1403   | Analytes                      |                        |                            |                                      |                         |          |
| 1,4-Difluorobenzene                                |                               | 0.0272                 | 0.0300                     | 91                                   | 80-120                  |          |
| 4-Bromonuorobenzene                                |                               | 0.0197                 | 0.0300                     | 66                                   | 80-120                  | т<br>    |
| Lab Batch #: 762264                                | Sample: 335116-014 / SMP      | Ba                     | tch: 1 Matri               | x: Soil                              |                         |          |
| Units: mg/kg                                       | Date Analyzed: 06/13/09 03:35 | SU                     | RROGATE RE                 | COVERY                               | STUDY                   |          |
| BTEX   | Analytes                      | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]                | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene                                |                               | 0.0272                 | 0.0300                     | 91                                   | 80-120                  |          |
| 4-Bromofluorobenzene                               |                               | 0.0189                 | 0.0300                     | 63                                   | 80-120                  | *        |
| Lab Batch #: 762264                                | Sample: 335116-005 S / MS     | Ba Ba                  | tch: <sup>1</sup> Matri    | x: Soil                              | 1                       |          |
| Units: mg/kg                                       | Date Analyzed: 06/13/09 06:26 | SU                     | RROGATE RE                 | ECOVERY                              | STUDY                   |          |
| BTE  | X by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]                | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene                                | -5                            | 0.0313                 | 0.0300                     | 104                                  | 80-120                  |          |
| 4-Bromofluorobenzene                               |                               | 0.0257                 | 0.0300                     | 86                                   | 80-120                  |          |
| Lab Batch #: 762423                                | Sample: 531911-1-BKS / B      | KS Ba                  | tch: <sup>1</sup> Matri    | x: Solid                             |                         | <b>.</b> |
| Units: mg/kg                                       | Date Analyzed: 06/15/09 08:57 | SU                     | RROGATE RE                 | COVERY                               | STUDY                   |          |
| BTE  | X by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]                | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene                                |                               | 0.0328                 | 0.0300                     | 109                                  | 80-120                  |          |
| 4-Bromofluorobenzene                               |                               | 0.0251                 | 0.0300                     | 84                                   | 80-120                  |          |
| Lab Batch #: 762423                                | Sample: 531911-1-BSD / B      | SD Ba                  | tch:   Matri               | x: Solid                             |                         |          |
| Units: mg/kg                                       | Date Analyzed: 06/15/09 09:19 | SU                     | RROGATE RE                 | ECOVERY                              | STUDY                   |          |
| BTE  | X by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]                | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene                                | ·J                            | 0.0324                 | 0.0300                     | 108                                  | 80-120                  |          |
| 4-Bromofluorobenzene                               |                               | 0.0242                 | 0.0300                     | 81                                   | 80-120                  |          |
|  |                               |                        | 1                          |                                      | L                       |          |

\* 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



# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| Vork Orders : 335116  | ),<br>Sample: 531911-1-BLK / B  | IK Ba  | Project II   | D: 2009-084  |  |           |
|---|---|--|--|--|--|-----------|
| Units: mg/kg  | Date Analyzed: 06/15/09 10:03   | SU SU  | RROGATE RI   | ECOVERY !  | STUDY                                      |           |
| BTE   | X by EPA 8021B  | Amount<br>Found<br>[A]                                 | True<br>Amount<br>[B]  | Recovery<br>%R                                       | Control<br>Limits<br>%R                    | Flags     |
|   | Analytes  | ······································                 |  | וען  |  | L         |
| 1,4-Difluorobenzene   |   | 0.0286   | 0.0300   | 95   | 80-120                                     | l         |
| 4-Bromofluorobenzene  |   | 0.0146   | 0.0300   | 49   | 80-120                                     | **        |
| Lab Batch #: 762423   | Sample: 335116-006 / SMP  | Ba   | itch: 1 Matri  | ix: Soil   |  |           |
| Units: mg/kg  | Date Analyzed: 06/16/09 08:06   | SU   | RROGATE RI   | ECOVERY S  | STUDY                                      |           |
| BTE   | X by EPA 8021B<br>Analytes  | Amount<br>Found<br>[A]                                 | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]                                | Control<br>Limits<br>%R                    | Flags     |
| 1,4-Difluorobenzene   |   | 0.0239   | 0.0300   | 80   | 80-120                                     | [         |
| 4-Bromofluorobenzene  | _   | 0.0637   | 0.0300   | 212  | 80-120                                     | **        |
| Lab Batch #: 762423   | Sample: 335116-010 / SMP  | Ba   | tch: 1 Matr  | ix: Soil   | <u> </u>                                   |           |
| Units: mg/kg  | Date Analyzed: 06/16/09 08:27   | SU   | RROGATE RI   | ECOVERY (  | STUDY                                      |           |
| BTE   | X by EPA 8021B  | Amount<br>Found<br>[A]                                 | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]                                | Control<br>Limits<br>%R                    | Flags     |
| 1.4-Difluorobenzene   |   | 0.0243   | 0.0300   | 81   | 80-120                                     | í         |
| 4-Bromofluorobenzene  |   | 0.1400   | 0.0300   | 467  | 80-120                                     | **        |
| Lab Batch #: 762423   |   | <br>Ba   | tch: 1 Matr  | ix: Soil   | <u> </u>                                   |           |
| Units: mg/kg  | Date Analyzed: 06/16/09 08:49   | SU   | RROGATE RI   | ECOVERY (  | STUDY                                      |           |
| BTE   | X by EPA 8021B  | Amount<br>Found<br>[A]                                 | True<br>Amount<br>[B]  | Recovery<br>%R                                       | Control<br>Limits<br>%R                    | Flags     |
|   | Analytes  |  | <b></b>  | ועו  | L  | I         |
| 1 4-Difluorohenzene   | •   | 0.00.00  | 0.0200   | 83   | 80-120                                     | 1         |
|   |   | 0.0250   | 0.0300   |  | H  | • ••• ••• |
| 4-Bromofluorobenzene  |   | 0.0250   | 0.0300   | 81   | 80-120                                     |           |
| 4-Bromofluorobenzene<br>Lab Batch #: 762423                         | Sample: 335116-007 / SMP  | 0.0250<br>0.0244<br><b>Ba</b>                          | 0.0300<br>0.0300<br>tch: 1 Matri   | 81<br>ix: Soil                                       | 80-120                                     |           |
| 4-Bromofluorobenzene<br>Lab Batch #: 762423<br>Units: mg/kg         | Sample: 335116-007 / SMP<br>Date Analyzed: 06/16/09 09:10                               | 0.0250<br>0.0244<br>Ba<br>SU                           | 0.0300<br>0.0300<br>tch: 1 Matri<br>RROGATE RE                                     | 81<br>ix: Soil<br>COVERY S                           | 80-120                                     |           |
| 4-Bromofluorobenzene<br>Lab Batch #: 762423<br>Units: mg/kg<br>BTE2 | Sample: 335116-007 / SMP<br>Date Analyzed: 06/16/09 09:10<br>X by EPA 8021B             | 0.0250<br>0.0244<br>Ba<br>SU<br>Amount<br>Found<br>[A] | Itch: 1 Matr.<br>JRROGATE RI<br>Amount<br>[B]                                      | 81<br>ix: Soil<br>ECOVERY :<br>Recovery<br>%R<br>[D] | 80-120<br>STUDY<br>Control<br>Limits<br>%R | Flags     |
| 4-Bromofluorobenzene<br>Lab Batch #: 762423<br>Units: mg/kg<br>BTE2 | Sample: 335116-007 / SMP<br>Date Analyzed: 06/16/09 09:10<br>X by EPA 8021B<br>Analytes | 0.0250<br>0.0244<br>Ba<br>SU<br>Amount<br>Found<br>[A] | 0.0300<br>0.0300<br>itch: 1 Matr<br>JRROGATE RI<br>True<br>Amount<br>[B]<br>0.0300 | 81<br>ix: Soil<br>ECOVERY :<br>%R<br>[D]<br>82       | 80-120<br>STUDY<br>Control<br>Limits<br>%R | Flags     |

\* 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

| m     | nd nm                       | 3  |
|-------|-----------------------------|----|
| S d I | l'(do)                      |    |
| 1 CUL | LIN                         |    |
| n n   |                             | 1  |
| luaco | ROUMEB                      | ř. |
|       | तः (चार्यस्य क्रियम् व्यक्त | 1  |

**A** 

# Form 2 - Surrogate Recoveries

#### Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| Work Orders : 335116 | ,                                     | P                      | Project II              | <b>D:</b> 2009-084    |                         |           |
|----------------------|---------------------------------------|------------------------|-------------------------|-----------------------|-------------------------|-----------|
| Lab Batch #: 702423  | <b>Date Analyzed:</b> 06/16/09 09:32  | Ba<br>SU               | RROGATE RE              | COVERY                | STUDY                   |           |
| BTE                  | X by EPA 8021B                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags     |
| 1 4-Difluorohenzene  | 7 **********                          | 0.0245                 | 0.0300                  | 82                    | 80-120                  |           |
| 4-Bromofluorobenzene |                                       | 0.0241                 | 0.0300                  | 80                    | 80-120                  |           |
| Lab Batch #. 762423  | Sample: 335116-015 / SMP              | Ra                     | teh: 1 Matri            | v. Soil               |                         |           |
| Units: mg/kg         | Date Analyzed: 06/16/09 09:54         | SU                     | RROGATE RE              | COVERY                | STUDY                   |           |
| BTEX                 | K by EPA 8021B                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags     |
| 1.4-Difluorobenzene  | Anarytes                              | 0.0268                 | 0.0300                  | 80                    | 80.120                  |           |
| 4-Bromofluorobenzene |                                       | 0.0243                 | 0.0300                  | 81                    | 80-120                  |           |
| L                    | Sec. 235446 002 S / MS                | ' D-                   |                         | l Soil                |                         |           |
| Lab Batch #: 702423  | Sample: 333440-002 S7 MS              | ь ва<br>SU             | RROCATE RE              | X: SOIL               | STUDY                   |           |
| BTEX                 | X by EPA 8021B                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags     |
| 1.4-Difluorobenzene  |                                       | 0.0328                 | 0.0300                  | 109                   | 80-120                  |           |
| 4-Bromofluorobenzene |                                       | 0.0263                 | 0.0300                  | 88                    | 80-120                  |           |
| Lah Batch #: 762423  | Sample: 335446-002 SD / N             | 1SD Ba                 | tch:   Matri            | x: Soil               |                         | L <u></u> |
| Units: mg/kg         | Date Analyzed: 06/16/09 10:58         | SU                     | RROGATE RI              | ECOVERY               | STUDY                   |           |
| BTEX                 | X by EPA 8021B                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags     |
| 1,4-Difluorobenzene  |                                       | 0.0327                 | 0.0300                  | 109                   | 80-120                  |           |
| 4-Bromofluorobenzene |                                       | 0.0253                 | 0.0300                  | 84                    | 80-120                  |           |
| Lab Batch #: 762052  | Sample: 531713-1-BKS / B              | KS Ba                  | tch: <sup>1</sup> Matri | x: Solid              | I                       |           |
| Units: mg/kg         | Date Analyzed: 06/11/09 12:19         | SU                     | <b>RROGATE RI</b>       | ECOVERY               | STUDY                   |           |
| ТРН                  | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags     |
| 1-Chlorooctane       | · · · · · · · · · · · · · · · · · · · | 77.2                   | 99.9                    | 77                    | 70-135                  |           |
| o-Terphenyl          |                                       | 35.3                   | 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.

| $\left  \right\rangle \left\langle \right\rangle$ | ป.้ไ  | (())           |
|---|-------|----------------|
| In And  |       | $\sim\sim\sim$ |
| UUU   | 34.19 | ાત્મન          |

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| /ork Orders : 335116<br>Lab Batch #: 762052 | ,<br>Sample: 531713-1-BSD / B | SD Ba                  | Project II<br>atch: 1 Matr | D: 2009-084<br>ix: Solid |                         |       |
|---|-------------------------------|------------------------|----------------------------|--------------------------|-------------------------|-------|
| Units: mg/kg                                | Date Analyzed: 06/11/09 12:42 | SI                     | JRROGATE R                 | ECOVERY                  | STUDY                   |       |
| TPH   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R           | Control<br>Limits<br>%R | Flags |
|   | Analytes                      |                        |                            | [D]                      |                         |       |
| 1-Chlorooctane                              |                               | 81.3                   | 100                        | 81                       | 70-135                  |       |
| o-Terphenyl                                 |                               | 35.6                   | 50.0                       | 71                       | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 531713-1-BLK / B      | LK Ba                  | atch: <sup>1</sup> Matr    | ix: Solid                |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 13:06 | SU                     | URROGATE R                 | ECOVERY                  | STUDY                   |       |
| TPH   | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]    | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc                              |                               | 81.4                   | 100                        | 81                       | 70-135                  |       |
| o-Terphenyl                                 |                               | 41.4                   | 50.0                       | 83                       | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-001 / SMP      | B                      | atch: 1 Matr               | ix: Soil                 |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 14:15 | SU                     | URROGATE R                 | ECOVERY                  | STUDY                   |       |
| TPH   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R<br>[D]    | Control<br>Limits<br>%R | Flags |
| L-Chlorooctane                              |                               | 90.8                   | 99.9                       | 91                       | 70-135                  | +     |
| o-Terphenyl                                 |                               | 42.4                   | 50.0                       | 85                       | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-002 / SMP      | B                      | atch:   Matr               | ix: Soil                 |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 14:38 | SU                     | URROGATE R                 | ECOVERY                  | STUDY                   |       |
| TPH   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R           | Control<br>Limits<br>%R | Flags |
|   | Analytes                      |                        |                            | [D]                      |                         |       |
| 1-Chlorooctanc                              |                               | 85.8                   | 99.5                       | 86                       | 70-135                  |       |
| o-Terphenyl                                 |                               | 40.9                   | 49.8                       | 82                       | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-003 / SMP      | B                      | atch: 1 Matr               | ix: Soil                 |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 15:02 | SI                     | URROGATE R                 | ECOVERY                  | STUDY                   |       |
| ТРН   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]      | Recovery<br>%R           | Control<br>Limits<br>%R | Flags |
|   | Analytes                      | 00.5                   |                            |                          |                         |       |
| I-Chlorooctane                              |                               | 89.6                   | 100                        | 90                       | 70-135                  |       |
| o-I crphcnyl                                |                               | 44.8                   | 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.

| man    |                |
|--------|----------------|
|        | $((\bigcirc))$ |
| INK    | $\mathcal{N}$  |
| llahar | forflag.       |
| Low a  | man            |

## Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| <b>Vork Orders :</b> 335116 | ,                             | D                      | Project II            | D: 2009-084           |                         |       |
|-----------------------------|-------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 702052         | Date Analyzed: 06/11/09 15:25 | Ва<br>SL               | JRROGATE R            | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                      |                        |                       |                       |                         |       |
| 1-Chlorooctanc              |                               | 85.2                   | 99.6                  | 86                    | 70-135                  |       |
| o-Terphenyl                 |                               | 41.9                   | 49.8                  | 84                    | 70-135                  |       |
| Lab Batch #: 762052         | Sample: 335116-005 / SMP      | Ba                     | atch:   Matr          | ix: Soil              |                         |       |
| Units: mg/kg                | Date Analyzed: 06/11/09 15:48 | SU                     | JRROGATE R            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| I-Chlorooctane              |                               | 0.871                  | 0.996                 | 87                    | 70-135                  |       |
| o-Terphenyl                 |                               | 0.431                  | 0.498                 | 87                    | 70-135                  |       |
| Lab Batch #: 762052         | Sample: 335116-006 / SMP      | Ba                     | atch:   Matr          | ix: Soil              | 1                       | I     |
| Units: mg/kg                | Date Analyzed: 06/11/09 16:11 | SU                     | JRROGATE R            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 97.9                   | 99.5                  | 98                    | 70-135                  |       |
| o-Terphenyl                 |                               | 42.7                   | 49.8                  | 86                    | 70-135                  |       |
| Lab Batch #: 762052         | Sample: 335116-007 / SMP      | Ba                     | atch: 1 Matr          | ix: Soil              |                         |       |
| Units: mg/kg                | Date Analyzed: 06/11/09 16:34 | SU                     | JRROGATE R            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc              |                               | 118                    | 99.8                  | 118                   | 70-135                  |       |
| o-Terphenyl                 |                               | 46.5                   | 49.9                  | 93                    | 70-135                  |       |
| Lab Batch #: 762052         | Sample: 335116-008 / SMP      | Ba                     | atch: 1 Matr          | ix: Soil              |                         |       |
| Units: mg/kg                | Date Analyzed: 06/11/09 16:57 | su                     | JRROGATE R            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 106                    | 100                   | 106                   | 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: DCP Plant to Lea Station 6-Inch-Sec 31

| Vork Orders : 335116<br>Lab Batch #: 762052 | ,<br>Sample: 335116-009 / SMP | Ba                     | Project II            | D: 2009-084<br>ix: Soil |                         | ·     |
|---|-------------------------------|------------------------|-----------------------|-------------------------|-------------------------|-------|
| Units: mg/kg                                | Date Analyzed: 06/11/09 17:43 | SU                     | RROGATE R             | ECOVERY                 | STUDY                   |       |
| ТРН   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R          | Control<br>Limits<br>%R | Flags |
|   | Analytes                      |                        |                       |                         |                         | -     |
| 1-Chlorooctane                              |                               | 81.3                   | 99.5                  | 82                      | 70-135                  |       |
| o-rerpinenyi                                | L                             | 41.8                   | 49.8                  | 84                      | /0-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-010 / SMP      | Ba                     | itch: 1 Matr          | ix: Soil                | OTHER &                 |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 18:06 | SU                     | RROGATE R             | ECOVERY                 | STUDY                   |       |
| ТРН   | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags |
| I-Chlorooctane                              |                               | 95.8                   | 100                   | 96                      | 70-135                  |       |
| o-Terphenyl                                 |                               | 44.4                   | 50.0                  | 89                      | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-011 / SMP      | Ba                     | tch: 1 Matr           | ix: Soil                | ,                       |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 18:29 | SU                     | JRROGATE R            | ECOVERY                 | STUDY                   |       |
| TPH   | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags |
| I-Chlorooctanc                              |                               | 90.5                   | 99.8                  | 91                      | 70-135                  |       |
| o-Terphenyl                                 |                               | 45.9                   | 49.9                  | 92                      | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-012 / SMP      | Ba                     | tch: 1 Matr           | ix: Soil                |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/09 18:52 | SU                     | JRROGATE R            | ECOVERY                 | STUDY                   |       |
| ТРН   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R          | Control<br>Limits<br>%R | Flags |
|   | Analytes                      |                        |                       | [D]                     |                         |       |
| 1-Chlorooctane                              |                               | 85.7                   | 99.6                  | 86                      | 70-135                  |       |
| o-Terphenyl                                 |                               | 41.9                   | 49.8                  | 84                      | 70-135                  |       |
| Lab Batch #: 762052                         | Sample: 335116-013 / SMP      | Ba                     | ntch: 1 Matr          | ix: Soil                |                         |       |
| Units: mg/kg                                | Date Analyzed: 06/11/00 10:15 | SU                     | <b>IRROGATE R</b>     | ECOVERY                 | STUDY                   |       |
|   | Date Analyzed: 00/11/09 19:15 |                        |                       |                         |                         |       |
| ТРН   | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags |
| TPH   | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags |

\* 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.

()

| 1000    | $\sim \sim \sim$      |
|---------|-----------------------|
| 15 11 - | 1 C ( a)              |
| 17.75   | N N N V               |
|         | $\sim \sim \sim \sim$ |
| llidm   | monta                 |
|         |                       |

#### Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

| Work Orders : 335116, |                               |                        | Project IE              | <b>):</b> 2009-084    |                         |       |
|-----------------------|-------------------------------|------------------------|-------------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 762052   | Sample: 335116-014 / SMP      | Bat                    | tch:   Matri            | x: Soil               |                         |       |
| Units: mg/kg          | Date Analyzed: 06/11/09 19:38 | SU.                    | RROGATE RE              | COVERY                | STUDY                   |       |
| ТРН В                 | y SW8015 Mod<br>Analytes      | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc        |                               | 86.5                   | 99.9                    | 87                    | 70-135                  |       |
| o-Terphenyl           |                               | 41.6                   | 50.0                    | 83                    | 70-135                  |       |
| Lab Batch #: 762052   | Sample: 335116-015 / SMP      | Bat                    | tch:   Matri            | x: Soil               |                         |       |
| Units: mg/kg          | Date Analyzed: 06/11/09 20:01 | SU                     | RROGATE RE              | COVERY                | STUDY                   |       |
| ТРН В                 | y SW8015 Mod                  | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                       | Analytes                      |                        |                         |                       |                         |       |
| 1-Chlorooctanc        |                               | 87.6                   | 100                     | 88                    | 70-135                  |       |
| o-lerphenyl           | ,                             | 41.6                   | 50.0                    | 83                    | 70-135                  |       |
| Lab Batch #: 762052   | Sample: 335099-001 S / MS     | Bat                    | tch: <sup>1</sup> Matri | x: Soil               |                         |       |
| Units: mg/kg          | Date Analyzed: 06/11/09 21:31 | SU                     | RROGATE RE              | COVERY                | STUDY                   |       |
| ТРН В                 | y SW8015 Mod                  | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                       | Analytes                      |                        |                         | (D)                   |                         |       |
| 1-Chlorooctane        |                               | 100                    | 100                     | 100                   | 70-135                  |       |
| o-Terphenyl           |                               | 41.1                   | 50.0                    | 82                    | 70-135                  |       |
| Lab Batch #: 762052   | Sample: 335099-001 SD / M     | SD Bat                 | tch:   Matri            | x: Soil               |                         |       |
| Units: mg/kg          | Date Analyzed: 06/11/09 21:54 | SU                     | RROGATE RE              | <b>ECOVERY</b>        | STUDY                   |       |
| ТРН В                 | y SW8015 Mod<br>Analytes      | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>{D} | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc        |                               | 95.1                   | 100                     | 95                    | 70-135                  |       |
| o-Terphenyl           |                               | 41.6                   | 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

**BS / BSD Recoveries** 



**Disordentee** 0 Ø

Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

Work Order #: 335116 Analyst: ASA

Lab Batch ID: 762264

Date Prepared: 06/12/2009

Batch #: 1

Sample: 531836-1-BKS

Date Analyzed: 06/12/2009 Matrix: Solid

**Project ID: 2009-084** 

**BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

| Units: mg/kg         |                     |                        | BLAN           | K /BLANK S     | PIKE / F       | ILANK S        | PIKE DUPL               | ICATE            | RECOVE     | RY STUD           | Y                 |      |
|----------------------|---------------------|------------------------|----------------|----------------|----------------|----------------|-------------------------|------------------|------------|-------------------|-------------------|------|
| BTEX by EP           | A 8021B             | Blank<br>Sample Result | Spike<br>Added | Blank<br>Spike | Blank<br>Spike | Spike<br>Added | Blank<br>Spike          | Blk. Spk<br>Dup. | RPD        | Control<br>Limits | Control<br>Limits | Flag |
| Analytes             |                     | [ <u>v</u> ]           | [B]            | Result<br>[C]  | 8%<br>[D]      | [E]            | Duplicate<br>Result [F] | %R<br>[G]        | %          | %К                | %RPD              |      |
| Benzene              |                     | ND                     | 0.1000         | 0.0919         | 92             | 0.1            | 0.0932                  | 93               | -          | 70-130            | 35                |      |
| Toluene              |                     | ND                     | 0.1000         | 0.0894         | 89             | 0.1            | 0.0907                  | 16               | -          | 70-130            | 35                |      |
| Ethylbenzenc         |                     | DN                     | 0.1000         | 0.0935         | 94             | 0.1            | 0.0943                  | 94               | -          | 71-129            | 35                |      |
| m,p-Xylenes          |                     | ND                     | 0.2000         | 0.1889         | 64             | 0.2            | 0.1900                  | 95               | 1          | 70-135            | 35                |      |
| o-Xylene             |                     | DN                     | 0.1000         | 0.0903         | 06             | 0.1            | 0.0901                  | 90               | 0          | 71-133            | 35                |      |
| Analyst: ASA         |                     | Da                     | te Prepar      | ed: 06/15/200  | 6              |                |                         | Date Ar          | nalyzed: 0 | 6/15/2009         |                   |      |
| Lab Batch ID: 762423 | Sample: 531911-1-BF | (S                     | Batch          | 1#: 1          |                |                |                         |                  | Matrix: S  | olid              |                   |      |

| Units: mg/kg      |                               | BLAN           | K /BLANK S               | PIKE / B             | LANK S         | PIKE DUPL                   | ICATE 1                | RECOVE   | RY STUD                 | Y                         |      |
|-------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes          |                               | [8]            |                          | a                    | [E]            | Result [F]                  | [0]                    |          |                         | -                         |      |
| Benzene           | QN                            | 0.1000         | 0.1144                   | 114                  | 0.1            | 0.1077                      | 108                    | 9        | 70-130                  | 35                        |      |
| Toluene           | DN                            | 0.1000         | 0.1103                   | 011                  | 0.1            | 0.1039                      | 104                    | 6        | 70-130                  | 35                        |      |
| Ethylbenzene      | QN .                          | 0.1000         | 0.1125                   | 113                  | 0.1            | 0.1065                      | 107                    | 5        | 71-129                  | 35                        |      |
| m,p-Xylcncs       | QN                            | 0.2000         | 0.2279                   | 114                  | 0.2            | 0.2154                      | 108                    | 6        | 70-135                  | 35                        |      |
| o-Xylenc          | ΟN                            | 0.1000         | 0.1068                   | 107                  | 0.1            | 0.1007                      | 101                    | 9        | 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

Œ 



a constant

**BS / BSD Recoveries** 



Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

Work Order #: 335116

Lab Batch ID: 762052 Analyst: BHW

Sample: 531713-1-BKS

Date Prepared: 06/11/2009 Batch #: 1

**Project ID:** 2009-084 Date Analyzed: 06/11/2009 Matrix: Solid

| TUDY          |
|---------------|
| OVERY S       |
| E REC         |
| LICAT         |
| <b>TE DUP</b> |
| VK SPIK       |
| / BLAN        |
| SPIKE         |
| BLANK         |
| TANK /        |
| BI            |
|               |
|               |

| Units: mg/kg                       |                               | BLANI          | K /BLANK S               | PIKE / B             | LANK S         | PIKE DUPL                   | ICATE I                | RECOVE   | CRY STUD                | Y                         |      |
|------------------------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| TPH By SW8015 Mod                  | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes                           |                               | [B]            | [C]                      | [D]                  | [E]            | Result [F]                  | [6]                    |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons | ND                            | 666            | 704                      | 01                   | 1000           | 710                         | 71                     | 1        | 70-135                  | 35                        |      |
| C12-C28 Dicsel Range Hydrocarbons  | DN                            | 666            | 811                      | 18                   | 1000           | 820                         | 82                     | 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: DCP Plant to Lea Station 6-Inch-Sec 31

Work Order #: 335116 0 Lab Batch #: 762264 Ø Date Analyzed: 06/13/2009

OC- Sample ID: 335116-005 S

0

0 

0 6 Ð 0 0 0 0 Ø • 6 Ø 6 0 Ō 0 Ø æ æ 

**Project ID:** 2009-084 Date Prepared: 06/12/2009 Analyst: ASA Botoh #. 1 N. . . . . . C .....

| QC- Sample ID: 555110-005 5 | Baten #:                   | I              |                                | Matrix:   | Soil                    |      |
|-----------------------------|----------------------------|----------------|--------------------------------|-----------|-------------------------|------|
| Reporting Units: mg/kg      | MATE                       | RIX / MA       | TRIX SPIKE                     | RECOV     | VERY STU                | DY   |
| BTEX by EPA 8021B           | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result<br>[C] | %R<br>[D] | Control<br>Limits<br>%R | Flag |
| Analytes                    | [7.5]                      | [0]            |                                |           |                         |      |
| Benzene                     | ND                         | 0.1168         | 0.0688                         | 59        | 70-130                  | x    |
| Toluene                     | ND                         | 0.1168         | 0.0278                         | 24        | 70-130                  | X    |
| Ethylbenzene                | ND                         | 0.1168         | 0.0396                         | 34        | 71-129                  | X    |
| m,p-Xylenes                 | ND                         | 0.2335         | 0.0220                         | 9         | 70-135                  | X    |
| o-Xyłene                    | ND                         | 0.1168         | 0.0684                         | 59        | 71-133                  | х    |

 $finite{Definition} The formula to  Clative Percent Difference [E] = 200\*(C-A)/(C+B) Il Results are based on MDL and Validated for QC Purposes

RL - Below Reporting Limit

Ŧ

 Image: Stamp
 Form 3 - MS / MSD Recoveries



Project Name: DCP Plant to Lea Station 6-Inch-Sec 31



Work Order #: 335116

Date Analyzed: 06/16/2009 Lab Batch ID: 762423

ASA -Analyst: Batch #:

Matrix: Soil

**Project ID: 2009-084** 

QC- Sample ID: 335446-002 S Date Prepared: 06/15/2009

| Reporting Units: mg/kg |                  | Σ            | ATRIX SPIKI             | E / MATI         | RIX SPII     | KE DUPLICAT                | <b>FE REC</b>  | <b>VERY</b> | STUDY             |                   |      |
|------------------------|------------------|--------------|-------------------------|------------------|--------------|----------------------------|----------------|-------------|-------------------|-------------------|------|
| BTEX by EPA 8021B      | Parent<br>Sample | Spike        | Spiked Sample<br>Result | Spiked<br>Sample | Spike        | Duplicate<br>Spiked Sample | Spiked<br>Dup. | RPD         | Control<br>Limits | Control<br>Limits | Flag |
| Analytes               | Result<br>[A]    | Added<br>[B] |                         | %R<br>[D]        | Added<br>[E] | Result [F]                 | %R<br>[G]      | %           | %R                | %RPD              |      |
| Benzene                | QN               | 0.1061       | 0.0913                  | 86               | 0.1061       | 0.0927                     | 87             | 2           | 70-130            | 35                |      |
| Toluene                | ŊŊ               | 0.1061       | 0.0821                  | 77               | 0.1061       | 0.0807                     | 76             | 2           | 70-130            | 35                |      |
| Ethylbenzene           | ŊŊ               | 0.1061       | 0.0787                  | 74               | 0.1061       | 0.0737                     | 69             | 7           | 71-129            | 35                | ×    |
| m,p-Xylencs            | QN               | 0.2122       | 0.1538                  | 72               | 0.2122       | 0.1441                     | 68             | 7           | 70-135            | 35                | ×    |
| o-Xylene               | DN               | 0.1061       | 0.0733                  | 69               | 0.1061       | 0.0711                     | 67             | 3           | 71-133            | 35                | ×    |
| Lab Batch ID: 762052 Q | C- Sample ID:    | 335099-      | -001 S                  | Bat              | tch #:       | 1 Matrix                   | : Soil         |             |                   |                   |      |

| /62052        | 06/11/2009     | mg/kg                   |
|---------------|----------------|-------------------------|
| Lab Batch LU: | Date Analyzed: | <b>Reporting Units:</b> |

Date Prepared: 06/11/2009

| Mat |       |
|-----|-------|
| ÷   | 11110 |
| #:  |       |

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH Rv SW2015 Mod                  | Farent |       | Spiked Sample | Spiked     |       | Duplicate     | Spiked   |     | Control | Control |      |
|------------------------------------|--------|-------|---------------|------------|-------|---------------|----------|-----|---------|---------|------|
| notal CTADIA C ART IT IT           | Sample | Spike | Result        | Sample     | Spike | Spiked Sample | Dup.     | RPD | Limits  | Limits  | Flag |
|                                    | Result | Added | [C]           | %R         | Added | Result [F]    | %R       | %   | %R      | %RPD    |      |
| Analytes                           | [A]    | [B]   |               | <u>[</u> ] | [E]   |               | <u>5</u> |     |         |         |      |
| C6-C12 Gasoline Range Hydrocarbons | QN     | 1140  | 927           | 81         | 1140  | 606           | 80       | 2   | 70-135  | 35      |      |
| C12-C28 Diesel Range Hydrocarbons  | ND     | 1140  | 1160          | 102        | 1140  | 0911          | 102      | 0   | 70-135  | 35      |      |

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

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

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

Page 21 of 25



# Sample Duplicate Recovery



#### Project Name: DCP Plant to Lea Station 6-Inch-Sec 31

Work Order #: 335116

| Lab Batch #: 762045         |                                |                               | Project I | <b>D</b> : 2009-084       | 4     |
|-----------------------------|--------------------------------|-------------------------------|-----------|---------------------------|-------|
| Date Analyzed: 06/12/2009 D | ate Prepared: 06/1             | 2/2009                        | Analy     | st: BEV                   |       |
| QC- Sample ID: 335099-001 D | Batch #: 1                     |                               | Matr      | ix: Soil                  |       |
| Reporting Units: %          | SAMPLE                         | / SAMPLE                      | DUPLIC    | ATE REC                   | OVERY |
| Percent Moisture            | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result | RPD       | Control<br>Limits<br>%RPD | Flag  |
| Analyte                     |                                | (B)                           |           |                           |       |
| Percent Moisture            | 12.5                           | 12.7                          | 1         | 20                        |       |
| Lab Batch #: 762047         |                                |                               |           |                           |       |
| Date Analyzed: 06/12/2009 D | ate Prepared: 06/1             | 2/2009                        | Analy     | st: BEV                   |       |
| QC- Sample ID: 335116-015 D | Batch #: 1                     |                               | Matr      | ix: Soil                  |       |
| Reporting Units: %          | SAMPLE                         | / SAMPLE                      | DUPLIC    | ATE REC                   | OVERY |
| Percent Moisture            | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result | RPD       | Control<br>Limits<br>%RPD | Flag  |
| Analyte                     |                                | [0]                           |           |                           |       |
| Percent Moisture            | 6.78                           | 7.42                          | 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

❹ Ø 0 Ð Ø ₽ O Ø Ø 0 0 Ø ወ Ø Ð 0 Ð Ø Ø Ð ℗ Ø Ø ₿ B Ø ₽ ₿ Ø  $\mathbf{O}$ 

# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

2 Project Name: DCP Plant to Lea Station 6-inch - Sec 31 TAT brebnard × × × 00= × C NPDES Lone Star 111 24 '81 ISE IN TAT HEUR ç , ż CUININA E 300 sid teal 1984 miled AGB ¥000700§ 2.6 HAq Phone: 432-563-1800 Fax: 432-563-1713 Птякр WU U'N 뜅 D PICters Rep. 7 7 UPS D (6+208) 310 Temperature Upon Repeipt Sample Containers Intect? enter a companye Labels of collarie (s) Custody seels on conta Cliendly seels on conta VOCs Free of Headspa Project Loc: Les County, NM PO #: PAA - J. Henry ectivals Sample Hand Deliver Report Format: X Standard Project #: 2009-084 ell gri d'i 10 60 eli gA, 24 jaiseli by Contern 030 / 483 / 848 TCLP: Note (Ct, BOA, Al ()s , exi (gM , 62) crobs( 9001 X1 \$001 X1 Hda 8:35 Time Ime 00100 415108) 1918 Hal × × e. × × × × clbryant@basin-consulting.com Soil Soli Soil Soil Soff Soil Soll Soil Soil Soil Dultille HARMA BUCKNEEDER Data Date CAPAR ( CPOCKY) (HAG) andM 12600 West 1-20 East Odesta, Texas 79785 10-34W HOWN 'OSI H (505) 398-1429 C X YON OH ONH Macie N. Hrold t 20.4 00 × × × XX × × × × mietrioD to . e tetol \*-\*\* Ŧ -\*\*\* \*\* 00/0214 04 Fax No: CAMILLE SELANN & Mail 1130 1150 1210 1220 1230 1240 1250 1300 1310 1320 pelomes anal g PAGE 01 OF by ELO 6/10/2009 6/10/2009 6/10/2009 6/10/2009 6/10/2009 6/10/2009 6/10/2009 6/10/2003 6/10/2009 6/10/2009 Received by. leceived by: Basin Environmental Service Technologies, LLC beigms8 ws0 10/11/19/0835 finding Depth ame uiqaŭ grinning Depth 4 Lovington, NM 88260 Date Company Address: 2800 Plains Hwy Camille Bryant (575) 605-7210 335110 FIELD CODE North Trench #1 @ 12' North Trench #1 @ 14' North Trench #1 @ 4 North Trench #1 @ 8' Of East Trench #1 @ 4' 10 East Trench #1 @ 14' pecial Instructions: Sampler Signalulat West Trench @ 6' Project Manager Company Name Telephone No: City/State/Zip: SSW @ 14.5' NSW @ 14.5' RP @ 15' (lab dse only) ORDER #: approved in noustred | 8 8 07 3 3 R  $\mathscr{B}$ (Ajuo asn gej) g 0

Ø Õ Ø ⊕ ወ Đ 0 Ø ₽ 働 Ø Ð • Ø ⊕ ₿ • B Ð Ø ወ 0 0 

# Environmental Lab of Texas

,

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

TAT bisbrieta × × × × Project Name: DCP Plant to Lea Station 6-inch - Sec 31 O NPOES SAL 62' 12 142 ADE and) TAT HEUS  $\mathbf{p}$ Chlorides E 300 1441 16543 milling A93 e HAG g ( .M.H.O.N Phone: 432-583-1800 Fax: 432-583-1713 TRRP DHL. ICH Ċ 015 x 210 10 000 01 200 x 2100 Sample Containers Intect? femperature Upon Receipt in Clerk Rep. Lebels on Cortainer(s), Custody seets on contain Custody seets on contain Custody seets on contain Sample Hand Delivared Laboratory Comments Project Loc: Lea County, NM PO # PAA - J. Henry X Standard by SampicifC Project #: 2009-084 \*5 6H 4H 10 50 68 6V FA 18H 09014831846 A (NOC (D) = OK 'EN 'DN 'EO) W Report Format: :Hai 9001 X.L 9001 X1 i Ķ Time au -e 89109 ( WO109 1:817 × × clbryant@basin-consulting.com Soil Soll Soll Soll Soll antimeter and Pe/11/09 | Datte Date Other ( Spr GEVED ROOM 12600 West I-20 East Odessa. Toxas 79765 'O'S'EN HOPN 'QS<sup>4</sup>H (505) 396-1429 15 X YON KOH "ONH how Waller F-20-1 == × ×× × otal 9. of Co Derezia Pist SPUL MULLE ROUPAT C-Mail Fax No: 1350 1400 1410 1330 1340 belqma2 envT 3 PAGE 02 OF Ned by ELOT 6/10/2003 6/10/2009 6/10/2009 6/10/2009 6/10/2009 sceived by: socived by: Basin Environmental Service Technologies, LLC balome2 ata0 uidag Buipu 0/11/09/08/31 224 a Li uidaO Buluuis Lovington, NM 88250 Oate Company Address: 2800 Plains Hwy **Camille Bryant** 575) 605-7210 335/10 FIELD CODE North Trench #2 @ 4' North Trench #2 @ 8' East Trench #2 @ 14 East Trench #2 @ 4' Project Manager. Sampter slightetuite Company Name City/State/Zip: Telephone No Stockpile scial instructions (lab ase only) ORDER #: II 5  $c_{2}$ (yino pau dai) a BA

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

| Client:     | Basin Mains   |
|-------------|---------------|
| Date/ Time: | 06/11/09 8:35 |
| Lab ID # ·  | 335116        |
| Initials:   | and           |
| 1           |               |

#### Sample Receipt Checklist

| #1  | Temperature of container/ cooler?                      | CI65  | No | 2.6 °C                   |
|-----|--|-------|----|--------------------------|
| #2  | Shipping container in good condition?                  | Tes   | No |                          |
| #3  | Custody Seals intact on shipping container/ cooler?    | Yes   | No | Not Present>             |
| #4  | Custody Seals intact on sample bottles/ container?     | CYES  | No | Not Present              |
| #5  | Chain of Custody present?                              | des   | No |                          |
| #6  | Sample instructions complete of Chain of Custody?      | CYEs  | No |                          |
| #7  | Chain of Custody signed when relinquished/ received?   | Nes   | No |                          |
| #8  | Chain of Custody agrees with sample label(s)?          | Yes   | No | iD written on Cont./ Lid |
| #9  | Container label(s) legible and intact?                 | (Y.os | No | Not Applicable           |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (YES  | No |                          |
| #11 | Containers supplied by ELOT?                           | (Tes  | No |                          |
| #12 | Samples in proper container/ bottle?                   | (Yes) | No | See Below                |
| #13 | Samples properly preserved?                            | (Yes  | No | Sec Below                |
| #14 | Sample bottles intact?                                 | (Y.es | No |                          |
| #15 | Preservations documented on Chain of Custody?          | Nes   | No |                          |
| #16 | Containers documented on Chain of Custody?             | (Yes  | No |                          |
| #17 | Sufficient sample amount for indicated test(s)?        | (Yes  | No | See Balow                |
| #18 | All samples received within sufficient hold time?      | Nes   | No | See Below                |
| #19 | Subcontract of sample(s)?                              | Yes   | No | Not Applicable           |
| #20 | VOC samples have zero headspace?                       | Tes   | No | Not Applicable           |

Contact: Regarding:

Corrective Action Taken.

Check all that Apply:

See altached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Date/ Time:

Ø 0 0

0 

Ð

# Analytical Report 335449

for

#### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

DCP Plant to Lea Station-Sec 31

2009-084

17-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


17-JUN-09

**(a**)

Ð

(†) (†)

**()** 

1

Ø

Ø

0

0

٩

0

**()** 

Ô

4



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

Reference: XENCO Report No: **335449 DCP Plant to Lea Station-Sec 31** Project Address: E of Eunice, 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 335449. 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. 335449 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 335449



# PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station-Sec 31

| Sample Id   | Matrix | Date Collected  | Sample Depth | Lab Sample Id |
|-------------|--------|-----------------|--------------|---------------|
| ESW @ 14.5' | S      | Jun-12-09 11:05 | 14.5 ft      | 335449-001    |
| WSW @ 14.5' | S      | Jun-12-09 11:10 | 14.5 ft      | 335449-002    |

## CASE NARRATIVE



Ő

0

(†) (†)

P

Ø

Ø

0

0

•

0 Ð 0 0 Ð

Ø

Client Name: PLAINS ALL AMERICAN EH&S Project Name: DCP Plant to Lea Station-Sec 31

Project ID: 2009-084 Work Order Number: 335449 Report Date: 17-JUN-09 Date Received: 06/12/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-762328 Percent Moisture None

Batch: LBA-762422 TX1005 None

Batch: LBA-762511 BTEX-MTBE EPA 8021B SW8021BM

Batch 762511, 4-Bromofluorobenzene recovered below QC limits; Data not confirmed by reanalysis. Samples affected are: 531972-1-BLK,335449-002,335449-001. Sample surrogate failures due to Matrix interference.  Color Contribution of Color C Ċ **Q** 36334 <u>P</u>



Project Location: E of Eunice, NM Contact: Jason Henry Project Id: 2009-084

Report Date: 17-JUN-09

Date Received in Lab: Fri Jun-12-09 04:15 pm

|                                    |            |                 |                 | Project Manager: Brent Barron, II |  |
|------------------------------------|------------|-----------------|-----------------|-----------------------------------|--|
|                                    | Lab Id:    | 335449-001      | 335449-002      |                                   |  |
| Analycic Donnoctod                 | Field Id:  | ESW @ 14.5'     | WSW @ 14.5'     |                                   |  |
| naicanhay ciclinity                | Depth:     | 14.5- A         | 14.5- A         |                                   |  |
|                                    | Matrix:    | SOIL            | SOIL            |                                   |  |
|                                    | Sampled:   | Jun-12-09 11:05 | Jun-12-09 11:10 |                                   |  |
| BTEX by EPA 8021B                  | Extracted: | Jun-15-09 17:00 | Jun-15-09 17:00 |                                   |  |
|                                    | Analyzed:  | Jun-16-09 13:50 | Jun-16-09 14:11 |                                   |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        |                                   |  |
| Benzene                            |            | ND 0.0010       | 1100.0 UN       |                                   |  |
| Toluenc                            |            | ND 0.0020       | ND 0.0022       |                                   |  |
| Ethylbenzene                       |            | ND 0.0010       | 1100.0 UN       |                                   |  |
| m,p-Xylenes                        |            | ND 0.0020       | ND 0.0022       |                                   |  |
| o-Xylene                           |            | ND 0.0010       | ND 0.0011       |                                   |  |
| Total Xylencs                      |            | ND 0.0010       | ND 0.0011       |                                   |  |
| Total BTEX                         |            | ND 0.0010       | ND 0.0011       |                                   |  |
| Percent Moisture                   | Extracted: |                 |                 |                                   |  |
|                                    | Analyzed:  | Jun-16-09 08:47 | Jun-16-09 08:47 |                                   |  |
|                                    | Units/RL:  | % RL            | % RL            |                                   |  |
| Percent Moisture                   |            | 3.03 1.00       | 10.19 1.00      |                                   |  |
| TPH Bv SW8015 Mod                  | Extracted: | Jun-15-09 13:01 | Jun-15-09 13:01 |                                   |  |
|                                    | Analyzed:  | Jun-15-09 21:08 | Jun-15-09 21:33 |                                   |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        |                                   |  |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 15.5         | ND 16.7         |                                   |  |
| C12-C28 Dicsel Range Hydrocarbons  |            | 16.9 15.5       | ND 16.7         |                                   |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND 15.5         | ND 16.7         |                                   |  |
| Total TPH                          |            | 16.9 15.5       | ND 16.7         |                                   |  |
|                                    |            |                 |                 |                                   |  |

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

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

Odessa Laboratory Director Brent Barron



Ø

6

0

0

Sec. 3

() ()

(\*) (\*)

() ()

0

00

**()** 

0

@ @



- 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.

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 - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

|   | 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 |
|   |                |                |

|    | <u>.</u> |       | . يقتمون |
|----|----------|-------|----------|
| b  | (1)      | ' ( d | 0)       |
|    |          | Y     | $\simeq$ |
| UU | ઝઝર      | .1Ot  | હ્ય      |

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station-Sec 31

| Work Orders : 335449 | ),<br>0 1 631073 1 DKG ( D   | <b>V</b> C <b>D</b>    | Project II              | <b>D:</b> 2009-084    |                         |          |
|----------------------|--|------------------------|-------------------------|-----------------------|-------------------------|----------|
| Lab Batch #: 702311  | Sample: 551972-1-BKS7 B  | KS Bai                 | RROGATE RI              | x: Sona<br>ECOVERY    | STUDY                   |          |
| BTE                  | X by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  | EX by EPA 8021B         Amount<br>Found<br>[A]         True<br>Amount<br>[B]         True<br>Amount<br>[B]         Control<br>Limits<br>%R         Flags           Analytes         0.0328         0.0300         109         80-120         -           0.0328         0.0300         86         80-120         -           Sample: 531972-1-BSD / BSD         Batch:         1         Matrix: Solid         -           Date Analyzed: 06/16/09 12:02         SURROGATE RECOVERY STUDY         -         -           EX by EPA 8021B         Amount<br>[A]         True<br>[A]         Recovery<br>[B]         Control<br>Limits<br>%R         Flags           Analytes         0.0324         0.0300         108         80-120         -           Sample: 531972-1-BLK / BLK         Batch:         1         Matrix: Solid         -           Sample: 531972-1-BLK / BLK         Batch:         1         Matrix: Solid         -           Sample: 531972-1-BLK / BLK         Batch:         1         Matrix: Solid         -           Date Analyzed: 06/16/09 12:45         SURROGATE RECOVERY STUDY         -         -           EX by EPA 8021B         Amount<br>[A]         True<br>Amount<br>[B]         Recovery<br>%R<br>[D]         Control<br>Limits<br>%R         Flags           Manalytes         0.0146         0.03 |                        |                         |                       |                         |          |
| 4-Bromofluorobenzene |  |                        |                         |                       |                         |          |
| Lab Batch #: 762511  | Sample: 531972-1-BSD / B   | SD Ba                  | tch: 1 Matri            | x: Solid              | L                       |          |
| Units: mg/kg         | Date Analyzed: 06/16/09 12:02  | SU                     | RROGATE RI              | COVERY                | STUDY                   |          |
| BTE                  | X by EPA 8021B<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  |  | 0.0324                 | 0.0300                  | 108                   | 80-120                  |          |
| 4-Bromofluorobenzene |  | 0.0251                 | 0.0300                  | 84                    | 80-120                  |          |
| Lab Batch #: 762511  | Sample: 531972-1-BLK / B   | LK Bai                 | tch:   Matri            | x: Solid              |                         |          |
| Units: mg/kg         | Date Analyzed: 06/16/09 12:45  | SU                     | RROGATE RI              | ECOVERY               | STUDY                   |          |
| BTE                  | X by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  |  | 0.0285                 | 0.0300                  | 95                    | 80-120                  |          |
| 4-Bromofluorobenzene |  | 0.0146                 | 0.0300                  | 49                    | 80-120                  | *        |
| Lab Batch #: 762511  | Sample: 335449-001 / SMP   | Bai                    | tch: <sup>1</sup> Matri | ix: Soil              | •                       |          |
| Units: mg/kg         | Date Analyzed: 06/16/09 13:50  | SU                     | RROGATE RI              | ECOVERY               | STUDY                   | <u> </u> |
| BTE                  | X by EPA 8021B<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  | -  | 0.0282                 | 0.0300                  | 94                    | 80-120                  |          |
| 4-Bromofluorobenzene |  | 0.0175                 | 0.0300                  | 58                    | 80-120                  | *        |
| Lab Batch #: 762511  | Sample: 335449-002 / SMP   | Ba                     | tch: 1 Matri            | ix: Soil              |                         |          |
| Units: mg/kg         | Date Analyzed: 06/16/09 14:11  | SU                     | RROGATE RI              | ECOVERY               | STUDY                   |          |
| BTE                  | X by EPA 8021B<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  |  | 0.0287                 | 0.0300                  | 96                    | 80-120                  |          |
| 4-Bromofluorobenzene |  | 0.0159                 | 0.0300                  | 53                    | 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.

Ø

| magain market |
|---|
| 5(1)((0)  |
| COUCE   |
| In-A-marine   |
| [Genterrier   |
| Reprintentien   |

•

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station-Sec 31

| Vork Orders : 335449 | ,<br>Sample: 335322-007 S / MS        | Ra  | Project II   | <b>):</b> 2009-084  |                         |          |
|----------------------|---------------------------------------|---|--|---|-------------------------|----------|
| Units: mg/kg         | Date Analyzed: 06/16/09 21:59.        | SU  | JRROGATE RI  | ECOVERY   | STUDY                   |          |
| BTE                  | X by EPA 8021B                        | Amount<br>Found<br>[A]  | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags    |
| 1.4 Difluorobenzene  |                                       | 0.0228  | 0.0200   | 100   | 80.120                  | ·        |
| 4-Bromofluorobenzene |                                       | 0.0328  | 0.0300   | ATE RECOVERY STUDY           'ue         Control           junt         Recovery         Limits         Flags           300         109         80-120         300         94         80-120           300         94         80-120         300         94         80-120           Matrix: Solid         ATE RECOVERY STUDY         Imits         Flags           'ue         Recovery         Control         Limits           0unt         Recovery         %R         [D]           300         110         80-120         300           300         110         80-120         300           300         94         80-120         300           300         94         80-120         300           Matrix: Solid         ATE RECOVERY STUDY         Flags           'ue         Recovery         Control         Limits           00         98         70-135         300           0.0         80         70-135         300           0.0         80         70-135         300           0.0         97         70-135         300           0.0         97         70-135         300 </td <td></td> |                         |          |
| Lab Batch #. 762511  |                                       | ISD Ba  | Matr   | L<br>iv: Solid  | l                       | <u> </u> |
| Units: mg/kg         | Date Analyzed: 06/16/09 22:21         | SI SI   | JRROGATE RI  | ECOVERY   | STUDY                   |          |
| BTE                  | X by EPA 8021B                        | Amount<br>Found<br>[A]  | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags    |
| 1,4-Difluorobenzene  | <u>-</u>                              | 0.0329  | 0.0300   | 110   | 80-120                  |          |
| 4-Bromofluorobenzene |                                       | 0.0282  | 0.0300   | 94  | 80-120                  |          |
| Lab Batch #: 762422  | Sample: 531914-1-BKS / B              | KS Ba   | atch: 1 Matr   | ix: Solid   |                         |          |
| Units: mg/kg         | Date Analyzed: 06/15/09 16:54         | su  | JRROGATE RI  | ECOVERY   | STUDY                   |          |
| TPH                  | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A]  | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags    |
| 1-Chlorooctane       | · · · · · · · · · · · · · · · · · · · | 98.2  | 100  |   | 70-135                  |          |
| o-Terphenyl          |                                       | 39.8  | JRROGATE RECOVERY STUDY           True<br>Amount<br>[B]         Recovery<br>%R<br>[D]         Control<br>Limits<br>%R         Flags           0.0300         110         80-120         94         80-120           0.0300         94         80-120         94         80-120           atch:         1         Matrix: Solid         100         94         80-120           True<br>Amount<br>[B]         Recovery<br>%R<br>[D]         Control<br>Limits<br>%R         Flags           100         98         70-135         100         100         98         70-135         100 |   |                         |          |
| Lab Batch #: 762422  | Sample: 531914-1-BSD / B              | SD Ba   | atch: 1 Matr   | ix: Solid   | <u> </u>                | · · · ·  |
| Units: mg/kg         | Date Analyzed: 06/15/09 17:20         | SU  | JRROGATE RI  | ECOVERY   | STUDY                   |          |
| ТРН                  | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A]  | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags    |
| I-Chlorooctanc       |                                       | Image: Non-state indext inde |  |   |                         |          |
| o-Terphenyl          |                                       | 39.3  | 50.0   | 79  | 70-135                  |          |
| Lab Batch #: 762422  | Sample: 531914-1-BLK / B              | LK Ba   | atch: 1 Matr   | ix: Solid   |                         |          |
| Units: mg/kg         | Date Analyzed: 06/15/09 17:45         | SU  | JRROGATE RI  | ECOVERY   | STUDY                   |          |
| ТРН                  | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A]  | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R | Flags    |
| 1-Chlorooctane       |                                       | 87.1  | 100  | 87  | 70-135                  | <u> </u> |
| o-Terphenyl          |                                       | 44.3  | 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

| $\sim$ |              |   |
|--------|--------------|---|
| DC     | ปี ( ( ( 0 ) | Í |
|        | m            |   |
| Inch.  | manna        |   |
|        |              | 1 |

() ()

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station-Sec 31

| Work Orders : 335449 | ),<br>Samplar 335449-001 / SMP   | Pa   | Project II              | <b>):</b> 2009-084    |                         |       |
|----------------------|--|--|-------------------------|-----------------------|-------------------------|-------|
| Lan Balcii #. 702422 | Date Analyzed: 06/15/09 21:08  | Ba<br>SU   | RROGATE RE              | COVERY                | STUDY                   |       |
| TPH                  | By SW8015 Mod<br>Analytes  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane       |  | IAI         IBI         %R<br>IDI         Flags           8015 Mod         Amount<br>IAI         Amount<br>IAI         True<br>Amount<br>IBI         Recovery<br>%R<br>IDI         Control<br>Limits<br>%R         Flags           8015 Mod         97.6         100         98         70-135         -           97.6         100         98         70-135         -         -           sample: 335446-003 S / MS         Batch:         1         Matrix: Soil         -           sample: 335446-003 S / MS         Batch:         1         Matrix: Soil         -           8015 Mod         Amount<br>IAI         True<br>Amount<br>IBI         Recovery<br>%R<br>IDI         Control<br>Limits<br>%R         Flags           41.9         49.9         84         70-135         -           5         99.7         105         70-135         -           6         105         99.7         105         70-135         - |                         |                       |                         |       |
| o-Terphenyl          |  |  |                         |                       |                         |       |
| Lab Batch #: 762422  | Sample: 335449-002 / SMP   |  |                         |                       |                         |       |
| Units: mg/kg         | Date Analyzed: 06/15/09 21:33  | SU   | RROGATE RE              | COVERY                | STUDY                   |       |
| ТРН                  | By SW8015 Mod  | 46.5         50.0         93         70-135           nple: 335449-002 / SMP         Batch:         I         Matrix: Soil           yzed: 06/15/09 21:33         SURROGATE RECOVERY STUDY           Mod         Amount<br>[A]         True<br>[A]         Recovery<br>[B]         Control<br>Limits<br>%R         Flags           97.6         100         98         70-135         Flags           97.6         100         98         70-135         Flags           mple: 335446-003 S / MS         Batch:         1         Matrix: Soil         99           yzed: 06/15/09 22:22         SURROGATE RECOVERY STUDY         Matrix: Soil         99           Mod         Amount<br>Found<br>[A]         True<br>Amount<br>[B]         Recovery<br>%R         Control<br>Limits<br>%R         Flags           105         99.7         105         70-135         Flags  |                         |                       |                         |       |
| 1-Chlorooctanc       | Anarytes   | 97.6   | 100                     | 08                    | 70 135                  |       |
| o-Terphenyl          |  | Amount<br>Found<br>[A]True<br>Amount<br>[B]Recovery<br>%R<br>[D]Control<br>Limits<br>%RFlags92.51009370-13546.550.09370-1352/SMPBatch:1Matrix: Soil:33SURROGATE RECOVERY STUDYAmount<br>Found<br>[A]True<br>(B]Recovery<br>%R<br>(D]Control<br>Limits<br>%R97.61009870-13597.61009870-13597.61009870-13597.61009870-13597.61009870-13549.550.09970-1353 S/MSBatch:1Matrix: Soil2:22SURROGATE RECOVERY STUDYAmount<br>Found<br>[A]True<br>Amount<br>[B]Recovery<br>%R<br>%R<br>[D]10599.710570-1353 SD / MSDBatch:1Matrix: Soil2:47SURROGATE RECOVERY STUDYAmount<br>[A]True<br>Matrix: Soil2:47Amount<br>[A]True<br>Matrix: SoilControl<br>Limits<br>%R<br>(B]   |                         |                       |                         |       |
| Lah Batch #: 762422  | Sample: 335446-003 S / MS  | Ra   | tch:   Matri            | v Soil                |                         |       |
| Units: mg/kg         | Date Analyzed: 06/15/09 22:22  | SU   | RROGATE RE              | COVERY                | STUDY                   |       |
| TPH                  | By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                      | Date Analyzed: 06/15/09 21:33SURROGATE RECOVERY STUDYH By SW8015 ModAmount<br>[A]True<br>Amount<br>[B]Recovery<br>%RControl<br>Limits<br>%RAnalytes97.61009870-13597.61009870-1351009897.61009970-13597.6100989970-13597.61009970-135100989970-135100999970-135100999970-135100909970-1351009192:22SURROGATE RECOVERY STUDYH By SW8015 ModAmount<br>[A]True<br>[B]Recovery<br>%R<br>%R101101%R |  |                         |                       |                         |       |
| I-Chlorooctane       |  | 105  | 99.7                    | 105                   | 70-135                  |       |
| o-Terphenyl          |  | 41.9   | 49.9                    | 84                    | 70-135                  |       |
| Lab Batch #: 762422  | Sample: 335446-003 SD / MS   | SD Ba  | tch: <sup>1</sup> Matri | x: Soil               |                         |       |
| Units: mg/kg         | Date Analyzed: 06/15/09 22:47  | SU   | RROGATE RE              | ECOVERY               | STUDY                   |       |
| ТРН                  | By SW8015 Mod<br>Analytes  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc       |  | 109  | 99.8                    | 109                   | 70-135                  |       |
| o-Terphenyl          |  | 45.7   | 49.9                    | 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



**BS / BSD Recoveries** 



Project Name: DCP Plant to Lea Station-Sec 31

Work Order #: 335449 Analyst: ASA

Lab Batch ID: 762511

Date Prepared: 06/15/2009

Batch #: 1

Sample: 531972-1-BKS

**Project ID:** 2009-084 Date Analyzed: 06/16/2009 Matrix: Solid **BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

| Units: mg/kg         |                    |                        | BLANI          | K /BLANK S     | PIKE / E       | BLANK S        | PIKE DUPL              | ICATE                   | RECOVE    | RY STUD                  | Y                 |      |
|----------------------|--------------------|------------------------|----------------|----------------|----------------|----------------|------------------------|-------------------------|-----------|--------------------------|-------------------|------|
| BTEX by EPA          | 8021B              | Blank<br>Sample Result | Spike<br>Added | Blank<br>Spike | Blank<br>Spike | Spike<br>Added | Blank<br>Spike         | Blk. Spk<br>Dup.<br>% D | RPD       | Control<br>Limits<br>% n | Control<br>Limits | Flag |
| Analytes             |                    | [v]                    | [ <b>B</b> ]   |                |                | (E)            | Dupicate<br>Result [F] | <u>[</u> ]              | 2         | N 0/                     | MALU              |      |
| Benzene              |                    | DN                     | 0.1000         | 0.1102         | 110            | 0.1            | 0.1069                 | 107                     | ñ         | 70-130                   | 35                |      |
| Toluenc              |                    | ND                     | 0.1000         | 0.1068         | 107            | 1.0            | 0.1032                 | 103                     | ñ         | 70-130                   | 35                |      |
| Ethylbenzene         |                    | ΟN                     | 0.1000         | 0.1114         | 111            | 0.1            | 0.1077                 | 801                     | 3         | 71-129                   | 35                |      |
| m,p-Xylencs          |                    | ND                     | 0.2000         | 0.2247         | 112            | 0.2            | 0.2169                 | 801                     | 4         | 70-135                   | 35                |      |
| o-Xylene             |                    | ΟN                     | 0.1000         | 0.1067         | 107            | 0.1            | 0.1029                 | 103                     | 4         | 71-133                   | 35                |      |
| Analyst: BHW         |                    | Da                     | te Prepare     | ed: 06/15/200  | 6              |                |                        | Date Ar                 | alyzed: 0 | 6/15/2009                |                   |      |
| Lab Batch ID: 762422 | Sample: 531914-1-B | KS                     | Batch          | 1 #: 1         |                |                |                        |                         | Matrix: S | olid                     |                   |      |

| Units: mg/kg                       |                        | BLAN         | K /BLANK S     | PIKE / B       | LANK S | PIKE DUPL      | ICATE           | RECOVE | RY STUD           | Y                 |        |
|------------------------------------|------------------------|--------------|----------------|----------------|--------|----------------|-----------------|--------|-------------------|-------------------|--------|
| TPH By SW8015 Mod                  | Blank<br>Samnla Result | Spike        | Blank<br>Snike | Blank<br>Snike | Spike  | Blank<br>Snike | Blk. Spk<br>Dun | RPD    | Control<br>Limits | Control<br>Limits | Flag   |
|                                    | [A]                    |              | Result         | %R             | nonnu  | Duplicate      | %R              | %      | %R                | %RPD              | 0<br>! |
| Analytes                           |                        | [ <b>B</b> ] | [C]            | [D]            | [E]    | Result [F]     | <u>5</u>        |        |                   |                   |        |
| C6-C12 Gasoline Range Hydrocarbons | QN                     | 1000         | 867            | 87             | 0001   | 862            | 86              | 1      | 70-135            | 35                |        |
| C12-C28 Diesel Range Hydrocarbons  | ŊŊ                     | 0001         | 1050           | 105            | 1000   | 1030           | 103             | 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



Project Name: DCP Plant to Lea Station-Sec 31



Work Order #: 335449

Lab Batch ID: 762511 Date Analyzed: 06/16/2009 Reporting Units: mg/kg

**Project ID:** 2009-084

QC- Sample ID: 335322-007 S Date Prepared: 06/15/2009

Batch #: 1 Matrix: Solid Analyst: ASA

| Keporting Units: mg/kg                            |                                   | M                     | ATRIX SPIKI                    | E / MATI                      | RIX SPIF              | <b>(E DUPLICA)</b>                       | FE RECO                     | <b>DVERY S</b> | TUDY                    |                           | _    |
|---|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B<br>Analytes                     | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>%       | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Benzene   | QN                                | 0.1208                | 0.1118                         | 93                            | 0.1208                | 0.1119                                   | 93                          | 0              | 70-130                  | 35                        |      |
| Toluene   | QN                                | 0.1208                | 0.1090                         | 96                            | 0.1208                | 0.1087                                   | 90                          | 0              | 70-130                  | 35                        |      |
| Ethylbenzene                                      | QN                                | 0.1208                | 0.1151                         | 95                            | 0.1208                | 0.1140                                   | 94                          | _              | 71-129                  | 35                        |      |
| m,p-Xylenes                                       | ŊŊ                                | 0.2416                | 0.2315                         | 96                            | 0.2416                | 0.2299                                   | 95                          | -              | 70-135                  | 35                        |      |
| o-Xylene  | ΟN                                | 0.1208                | 0.1081                         | 89                            | 0.1208                | 0.1078                                   | 89                          | 0              | 71-133                  | 35                        |      |
| Lab Batch ID: 762422<br>Date Analyzed: 06/15/2009 | QC- Sample ID:<br>Date Prepared:  | 335446-<br>06/15/2(   | -003 S<br>009                  | Bat<br>Ans                    | tch #:<br>alyst: E    | 1 Matrix<br>3HW                          | :: Soil                     |                |                         |                           |      |
| Reporting Units: mg/kg                            |                                   | W                     | ATRIX SPIKI                    | E/MATI                        | RIX SPH               | <b>(E DUPLICA)</b>                       | <b>FE RECO</b>              | <b>DVERY S</b> | TUDY                    |                           |      |

|                                    |              | M     | ATKIX SPIKE   | LIAM / 2     | ALX SPH | KE DUPLICA    | IE KECC | VEKY S | YUUY    |         |      |
|------------------------------------|--------------|-------|---------------|--------------|---------|---------------|---------|--------|---------|---------|------|
| TPH Rv CW8015 Mod                  | Parent       |       | Spiked Sample | Spiked       |         | Duplicate     | Spiked  |        | Control | Control |      |
| noth ctop to fa tt tt              | Sample       | Spike | Result        | Sample       | Spike   | Spiked Sample | Dup.    | RPD    | Limits  | Limits  | Flag |
|                                    | Result       | Added |               | %R           | Added   | Result [F]    | %Β      | %      | %В      | %RPD    | ı    |
| Analytes                           | [ <b>A</b> ] | [B]   |               | [ <b>q</b> ] | [E]     |               | [0]     |        |         |         |      |
| C6-C12 Gasoline Range Hydrocarbons | QN           | 1020  | 953           | 93           | 1030    | 979           | 95      | ۳<br>۳ | 70-135  | 35      |      |
| C12-C28 Diesel Range Hydrocarbons  | QN           | 1020  | 1220          | 120          | 1030    | 1190          | 116     | 2      | 70-135  | 35      |      |

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

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

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

|   | ς. | r         | 'n  | Y,    | Y.  | ς, |
|---|----|-----------|-----|-------|-----|----|
|   | 2  | Ł         | L   | ۲¢    | Y.  | 2  |
| I | n- | <u>آب</u> | n.  | ĥ     | 9   | 'n |
| Ł | Ŷ  | بيجيه     | ų۲, | 0.900 | 140 | 1  |

Ð

Ø

# Sample Duplicate Recovery



### Project Name: DCP Plant to Lea Station-Sec 31

Work Order #: 335449

| Lab Batch #: 762328         |                                |                               | <b>Project I</b> | <b>D:</b> <sup>2009-084</sup> | 1     |
|-----------------------------|--------------------------------|-------------------------------|------------------|-------------------------------|-------|
| Date Analyzed: 06/16/2009   | Date Prepared: 06/1            | 6/2009                        | Analy            | st: BEV                       |       |
| QC- Sample ID: 335446-001 D | Batch #: 1                     |                               | Matr             | ix: Soil                      |       |
| Reporting Units: %          | SAMPLE                         | SAMPLE                        | DUPLIC           | ATE REC                       | OVERY |
| Percent Moisture            | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result | RPD              | Control<br>Limits<br>%RPD     | Flag  |
| Analyte                     |                                | [ <b>B</b> ]                  |                  |                               |       |
| Percent Moisture            | 19.0                           | 19.3                          | 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

Ð



⊕

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

| Client:     | Basin    | Plains |
|-------------|----------|--------|
| Date/ Time: | 6.17.09  | 16:15  |
| Lab iD # :  | <u> </u> | 9449   |
| Initials:   | GL       |        |

### Sample Receipt Checklist

| #1  | Temperature of container/ cooler?                      | (Yes) | No | 1.1 °C                  |
|-----|--|-------|----|-------------------------|
| #2  | Shipping container in good condition?                  | Yes   | No |                         |
| #3  | Custody Seals intact on shipping container/ cooler?    | Yes   | No | Not Present             |
| #4  | Custody Seals intact on sample bottles/ container?     | Yès   | 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 relinguished/ received?   | (Yes) | No |                         |
| #8  | Chain of Custody agrees with sample label(s)?          | (Yes) | No | ID written on ContJ 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?                       | Nes   | No | Not Applicable          |

Variance Documentation

Date/ Time:

Contact:

•

P

Ð

@ @

() ()

0

Ø Ð Ð 0 1 0 **() ()** 0 ( Ø

Contacted by:

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 345778

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

DCP Plant to Lea Station 6-Inch Sec 31

2009-084

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 (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-SEP-09

t ()

0

**(** 

Ð

() ()

**(**])

Ø

**()** 

()

(

**(b**)

Ð

Ø

0

働

0

Ð

(B) (B)

(†) (†)

0 0

0

000



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

### Reference: XENCO Report No: 345778 DCP Plant to Lea Station 6-Inch Sec 31 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 345778. 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. 345778 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



(†) (†)

Ð

❶

0

0 P • Ð 0 0 0 ⊕ Ð ₿ Ð Ð 0 Ð



# Sample Cross Reference 345778

# PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6-Inch Sec 31

| Sample Id  | Matrix | Date Collected  | Sample Depth | Lab Sample Id |
|------------|--------|-----------------|--------------|---------------|
| MW-2 @ 15' | S      | Sep-21-09 10:00 |              | 345778-001    |
| MW-2 @ 30' | S      | Sep-21-09 10:30 |              | 345778-002    |
| MW-2 @ 45' | S      | Sep-21-09 11:10 |              | 345778-003    |
| MW-2 @ 60' | S      | Sep-21-09 11:50 |              | 345778-004    |
| MW-2 @ 75' | S      | Sep-21-09 12:40 |              | 345778-005    |
| MW-3 @ 15' | S      | Sep-22-09 11:00 |              | 345778-006    |
| MW-3 @ 30' | S      | Sep-22-09 11:40 |              | 345778-007    |
| MW-3 @ 45' | S      | Sep-22-09 12:20 |              | 345778-008    |
| MW-3 @ 60' | S      | Sep-22-09 13:40 |              | 345778-009    |
| MW-4 @ 15' | S      | Sep-22-09 15:00 |              | 345778-010    |
| MW-4 @ 30' | S      | Sep-22-09 15:50 |              | 345778-011    |
| MW-4 @ 45' | S      | Sep-22-09 16:30 |              | 345778-012    |
| MW-4 @ 60' | S      | Sep-22-09 17:20 |              | 345778-013    |
| MW-1 @ 10' | S      | Sep-23-09 08:30 |              | 345778-014    |
| MW-1 @ 20' | S      | Sep-23-09 08:55 |              | 345778-015    |
| MW-1 @ 30' | S      | Sep-23-09 09:15 |              | 345778-016    |
| MW-1 @ 40' | S      | Sep-23-09 09:50 |              | 345778-017    |
| MW-1 @ 50' | S      | Sep-23-09 10:40 |              | 345778-018    |
| MW-1 @ 60' | S      | Sep-23-09 11:35 |              | 345778-019    |

### CASE NARRATIVE



(1) (1)

Ð

0

働

**()** 

() ()

B

B

**()** 

0

0

0

0

**(B**)

Ø

Ð

⊕

0

❹

(†) (†)

0

0

0

€

0

Client Name: PLAINS ALL AMERICAN EH&S Project Name: DCP Plant to Lea Station 6-Inch Sec 31

Project ID: 2009-084 Work Order Number: 345778

Report Date: 30-SEP-09 Date Received: 09/23/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-774064 Percent Moisture None

Batch: LBA-774382 TPH by SW8015 Mod None

Batch: LBA-774486 BTEX-MTBE EPA 8021B None

Batch: LBA-774737 BTEX-MTBE EPA 8021B SW8021BM

Batch 774737, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 345778-016, -017, -019, -014, -015, -008, -018. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

### SW8021BM

Batch 774737, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis Samples affected are: 345778-014. 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis Samples affected are: 345778-016,345778-017,345778-015,345778-019,345778-018.



# Certificate of Analysis Summary 345778 PLAINS ALL AMERICAN EH&S, Midland, TX





1

1

Contact: Jason Henry Project Id: 2009-084 ¢ Ρ.

Date Received in Lab: Wed Sep-23-09 05:10 pm Renort Date: 30-SEP-09

| roject Location: Lea County, NM    |            |                 |                 |                 | · · · · · · · · · · · · · · · · · · · |                  |                 |
|------------------------------------|------------|-----------------|-----------------|-----------------|---------------------------------------|------------------|-----------------|
|                                    |            |                 |                 |                 | Project Manager:                      | Brent Barron, II |                 |
|                                    | Lab Id:    | 345778-001      | 345778-002      | 345778-003      | 345778-004                            | 345778-005       | 345778-006      |
| A sector Damaged                   | Field Id:  | MW-2 @ 15'      | MW-2 @ 30'      | MW-2 @ 45'      | MW-2 @ 60'                            | MW-2 @ 75'       | MW-3 @ 15'      |
| naisanhay sistinuy                 | Depth:     |                 |                 |                 |                                       |                  |                 |
|                                    | Matrix:    | SOIL            | SOIL            | SOIL            | SOIL                                  | TIOS             | SOIL            |
|                                    | Sampled:   | Sep-21-09 10:00 | Sep-21-09 10:30 | Sep-21-09 11:10 | Sep-21-09 11:50                       | Sep-21-09 12:40  | Sep-22-09 11:00 |
| BTEX by EPA 8021B                  | Extracted: | Sep-25-09 15:30 | Sep-25-09 15:30 | Sep-25-09 15:30 | Sep-25-09 15:30                       | Sep-25-09 15:30  | Sep-25-09 15:30 |
|                                    | Analyzed:  | Sep-26-09 07:24 | Sep-26-09 07:44 | Sep-26-09 08:04 | Sep-26-09 08:23                       | Sep-26-09 08:43  | Sep-26-09 09:03 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL                              | mg/kg RL         | mg/kg RL        |
| Benzene                            |            | ND 0.0011       | ND 0.0011       | ND 0.0010       | ND 0.0011                             | ND 0.0013        | ND 0.0011       |
| Toluenc                            |            | ND 0.0021       | ND 0.0021       | ND 0.0020       | ND 0.0021                             | ND 0.0026        | ND 0.0022       |
| Ethylbenzene                       | -          | ND 0.0011       | ND 0.0011       | ND 0.0010       | ND 0.0011                             | ND 0.0013        | ND 0.0011       |
| m,p-Xylencs                        |            | ND 0.0021       | ND 0.0021       | ND 0.0020       | ND 0.0021                             | ND 0.0026        | ND 0.0022       |
| o-Xylenc                           |            | ND 0.0011       | ND 0.0011       | ND 0.0010       | ND 0.0011                             | ND 0.0013        | ND 0.0011       |
| Total Xylencs                      |            | ND 0.0011       | ND 0.0011       | 0100.0 UN       | 1100.0 UN                             | ND 0.0013        | ND 0.0011       |
| Total BTEX                         |            | ND 0.0011       | ND 0.0011       | 0100.0 UN       | ND 0.0011                             | ND 0.0013        | ND 0.0011       |
| Percent Moisture                   | Extracted: |                 |                 |                 |                                       |                  |                 |
|                                    | Analyzed:  | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59                       | Sep-25-09 08:59  | Sep-25-09 08:59 |
|                                    | Units/RL:  | % RL            | % RL            | % RL            | % RL                                  | % RL             | % RL            |
| Percent Moisture                   |            | 7.07 1.00       | 6.78 1.00       | 1.08 1.00       | 7.07 1.00                             | 22.0 1.00        | 7.92 1.00       |
| TPH By SW8015 Mod                  | Extracted: | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11                       | Sep-26-09 12:11  | Sep-26-09 12:11 |
|                                    | Analyzed:  | Sep-27-09 14:41 | Sep-27-09 15:06 | Sep-27-09 15:30 | Sep-27-09 15:55                       | Sep-27-09 16:20  | Sep-27-09 16:45 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL                              | mg/kg RL         | mg/kg RL        |
| C6-C12 Gasoline Range Hydrocarbons | -          | ND 16.1         | ND 16.1         | ND 15.1         | ND 16.1                               | ND 19.2          | ND 16.3         |
| C12-C28 Diesel Range Hydrocarbons  |            | ND 16.1         | ND 16.1         | ND 15.1         | ND 16.1                               | ND 19.2          | ND 16.3         |
| C28-C35 Oil Range Hydrocarbons     |            | ND 16.1         | 1.91 DN         | ND 15.1         | ND 16.1                               | ND 19.2          | ND 16.3         |
| Total TPH                          | r<br>      | ND 16.1         | ND 16.1         | ND 15.1         | ND 16.1                               | ND 19.2          | ND 16.3         |

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 reponsibility 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Manager Brent Barron, II

Certificate of Analysis Summary 345778 PLAINS ALL AMERICAN EH&S, Midland, TX 6 6 MONTOIN ø (fil



Ð

Project Id: 2009-084 Contact: Jason Henry Project Location: Lea County. NM

() ()

Date Received in Lab: Wed Sep-23-09 05:10 pm Report Date: 30-SEP-09 Project Name: DCP Plant to Lea Station 6-Inch Sec 31

|                                    |            |                 |                 |                 | Project Manager: H | srent Barron, II |                 |
|------------------------------------|------------|-----------------|-----------------|-----------------|--------------------|------------------|-----------------|
|                                    | Lab Id:    | 345778-007      | 345778-008      | 345778-009      | 345778-010         | 345778-011       | 345778-012      |
| A sector Descreted                 | Field Id:  | MW-3 @ 30'      | MW-3 @ 45'      | MW-3 @ 60'      | MW-4 @ 15'         | MW-4 @ 30'       | MW-4 @ 45'      |
| Analysis Nequesieu                 | Depth:     |                 |                 |                 |                    |                  |                 |
|                                    | Matrix:    | SOIL            | SOIL            | SOIL            | SOIL               | SOIL             | SOIL            |
|                                    | Sampled:   | Sep-22-09 11:40 | Sep-22-09 12:20 | Sep-22-09 13:40 | Sep-22-09 15:00    | Scp-22-09 15:50  | Sep-22-09 16:30 |
| BTEX by EPA 8021B                  | Extracted: | Sep-25-09 15:30 | Sep-29-09 12:00 | Sep-25-09 15:30 | Sep-25-09 15:30    | Sep-25-09 15:30  | Sep-25-09 15:30 |
|                                    | Analyzed:  | Sep-26-09 09:36 | Sep-29-09 12:22 | Sep-26-09 10:16 | Sep-26-09 10:36    | Sep-26-09 11:37  | Sep-26-09 11:57 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL           | mg/kg RL         | mg/kg RL        |
| Benzene                            |            | ND 0.0011       | ND 0.0010       | 0.0025 0.0011   | ND 0.0010          | ND 0.0010        | ND 0.0010       |
| Tolucne                            |            | ND 0.0021       | ND 0.0020       | 0.0027 0.0021   | ND 0.0020          | ND 0.0021        | ND 0.0021       |
| Ethylbenzene                       |            | ND 0.0011       | ND 0.0010       | ND 0.0011       | ND 0.0010          | ND 0.0010        | ND 0.0010       |
| m,p-Xylenes                        | -          | ND 0.0021       | ND 0.0020       | ND 0.0021       | ND 0.0020          | ND 0.0021        | ND 0.0021       |
| o-Xylene                           |            | ND 0.0011       | ND 0.0010       | ND 0.0011       | ND 0.0010          | ND 0.0010        | ND 0.0010       |
| Total Xylenes                      |            | ND 0.0011       | ND 0.0010       | ND 0.0011       | ND 0.0010          | ND 0.0010        | ND 0.0010       |
| Total BTEX                         |            | ND 0.0011       | ND 0.0010       | 0.0052 0.0011   | ND 0.0010          | ND 0.0010        | ND 0.0010       |
| Percent Moisture                   | Extracted: |                 |                 |                 |                    |                  |                 |
|                                    | Analyzed:  | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59    | Sep-25-09 08:59  | Sep-25-09 08:59 |
|                                    | Units/RL:  | % RL            | % RL            | % RL            | % RL               | % RL             | % RL            |
| Percent Moisture                   |            | 6.82 1.00       | ND 1.00         | 6.18 1.00       | 2.97 1.00          | 4.60 1.00        | 3.75 1.00       |
| TPH By SW8015 Mod                  | Extracted: | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11    | Sep-26-09 12:11  | Sep-26-09 12:11 |
|                                    | Analyzed:  | Sep-27-09 17:09 | Sep-27-09 17:34 | Sep-27-09 17:58 | Sep-27-09 18:49    | Sep-27-09 19:14  | Sep-27-09 19:39 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL           | mg/kg RL         | mg/kg RL        |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 16.0         | ND 15.0         | ND 16.0         | ND 15.4            | ND 15.7          | ND 15.6         |
| C12-C28 Diesel Range Hydrocarbons  |            | ND 16.0         | ND 15.0         | ND 16.0         | ND 15.4            | ND 15.7          | ND 15.6         |
| C28-C35 Oil Range Hydrocarbons     |            | ND 16.0         | ND 15.0         | ND 16.0         | ND 15.4            | ND 15.7          | ND 15.6         |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed introughout this analytical report represent the best jubitment 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

Odessa Laboratory Manager Brent Barron, II

15.6

Q

15.7

12

15.4

QZ

16.0

Q

15.0

Q

16.0

g

Total TPH

COCTINICATE OF ANALYSIS Summary 345778 B 0 





Contact: Jason Henry Project Id: 2009-084

E  Date Received in Lab: Wed Sep-23-09 05:10 pm Report Date: 30-SEP-09

| Project Location: Lea County, NM   |            |                 |                 |                 | Report Date:       | 50-SEP-09                |                 |
|------------------------------------|------------|-----------------|-----------------|-----------------|--------------------|--------------------------|-----------------|
|                                    |            |                 |                 |                 | Project Manager: 1 | <b>Brent Barron</b> , II |                 |
|                                    | Lab Id:    | 345778-013      | 345778-014      | 345778-015      | 345778-016         | 345778-017               | 345778-018      |
| Audicie Damardad                   | Field Id:  | MW-4 @ 60'      | MW-1 @ 10'      | MW-I @ 20'      | MW-1 @ 30'         | MW-1 @ 40'               | MW-1 @ 50'      |
| naisanhay sistinuv                 | Depth:     |                 |                 |                 |                    |                          |                 |
|                                    | Matrix:    | SOIL            | SOIL            | NIOS            | TIOS               | SOIL                     | SOIL            |
|                                    | Sampled:   | Sep-22-09 17:20 | Scp-23-09 08:30 | Scp-23-09 08:55 | Scp-23-09 09:15    | Scp-23-09 09:50          | Scp-23-09 10:40 |
| BTEX by EPA 8021B                  | Extracted: | Sep-25-09 15:30 | Sep-29-09 12:00 | Sep-29-09 12:00 | Sep-29-09 12:00    | Sep-29-09 12:00          | Sep-29-09 12:00 |
|                                    | Analyzed:  | Sep-26-09 12:17 | Sep-29-09 14:44 | Sep-29-09 15:04 | Sep-29-09 13:23    | Sep-29-09 13:43          | Sep-29-09 14:03 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL           | mg/kg RL                 | mg/kg RL        |
| Benzene                            |            | ND 0.0012       | ND 0.0058       | ND 0.0052       | ND 0.0505          | ND 0.0499                | ND 0.0503       |
| Tolucne                            |            | ND 0.0025       | ND 0.0116       | 0.0113 0.0104   | 0.1577 0.1011      | 0.1298 0.0999            | ND 0.1006       |
| Ethylbenzene                       |            | ND 0.0012       | ND 0.0058       | 0.3744 0.0052   | 1.516 0.0505       | 1.984 0.0499             | 1.127 0.0503    |
| m,p-Xylencs                        |            | ND 0.0025       | 0.0248 0.0116   | 1.794 0.0104    | 6.373 0.1011       | 8.349 0.0999             | 4.364 0.1006    |
| o-Xylene                           |            | ND 0.0012       | 0.0111 0.0058   | 0.6959 0.0052   | 2.244 0.0505       | 2.981 0.0499             | 1.652 0.0503    |
| Total Xylenes                      |            | ND 0.0012       | 0.0359 0.0058   | 2.490 0.0052    | 8.617 0.0505       | 11.330 0.0499            | 6.016 0.0503    |
| Total BTEX                         |            | ND 0.0012       | 0.0359 0.0058   | 2.876 0.0052    | 10.291 0.0505      | 13.444 0.0499            | 7.143 0.0503    |
| Percent Moisture                   | Extracted: |                 |                 |                 |                    |                          |                 |
|                                    | Analyzed:  | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59 | Sep-25-09 08:59    | Sep-25-09 08:59          | Sep-25-09 08:59 |
|                                    | Units/RL:  | % RL            | % RL            | % RL            | % RL               | % RL                     | % RL            |
| Percent Moisture                   |            | 19.5 1.00       | 13.9 1.00       | 3.58 1.00       | 1.07 1.00          | ND 1.00                  | 1.00 1.00       |
| TPH By SW8015 Mod                  | Extracted: | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11 | Sep-26-09 12:11    | Sep-26-09 12:11          | Sep-26-09 12:11 |
|                                    | Analyzed:  | Sep-27-09 20:03 | Sep-27-09 20:28 | Sep-27-09 20:54 | Sep-27-09 21:19    | Sep-27-09 21:43          | Sep-27-09 22:07 |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        | mg/kg RL           | mg/kg RL                 | mg/kg RL        |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 18.6         | 137 87.1        | 344 77.6        | 674 75.8           | 988 75.7                 | 700 75.4        |
| C12-C28 Diesel Range Hydrocarbons  |            | ND 18.6         | 149 87.1        | 440 77.6        | 616 75.8           | 550 75.7                 | 529 75.4        |
| C28-C35 Oil Range Hydrocarbons     |            | ND 18.6         | ND 87.1         | ND 77.6         | ND 75.8            | ND 75.7                  | ND 75.4         |
| Total TPH                          |            | ND 18.6         | 286 87.1        | 784 77.6        | 1290 75.8          | 1538 75.7                | 1229 75.4       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restite servessed introughout thin 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Manager Brent Barron, II

İ

| Certificate of Analysis Summary 345778 | PLAINS ALL AMERICAN EH&S, Midland, TX |
|--|---------------------------------------|
| CALLON                                 | Cartesta                              |
|  |                                       |



Contact: Jason Henry Project Id: 2009-084

Date Received in Lab: Wed Sep-23-09 05:10 pm Project Name: DCP Plant to Lea Station 6-Inch Sec 31

Report Date: 30-SEP-09

| Project Location: Lea County, NM |            |                 | Report Date: 30-SEP-09            |
|----------------------------------|------------|-----------------|-----------------------------------|
|                                  |            |                 | Project Manager: Brent Barron, II |
|                                  | Lab Id:    | 345778-019      |                                   |
| Analisio Damastad                | Field Id:  | MW-1 @ 60'      |                                   |
| naisan hay sisting               | Depth:     |                 |                                   |
|                                  | Matrix:    | SOIL            |                                   |
|                                  | Sampled:   | Sep-23-09 11:35 |                                   |
| BTEX by EPA 8021B                | Extracted: | Sep-29-09 12:00 |                                   |
|                                  | Analyzed:  | Sep-29-09 14:23 |                                   |
|                                  | Units/RL:  | mg/kg RL        |                                   |
| Benzene                          |            | ND 0.0501       |                                   |
| Tolucnc                          |            | ND 0.1002       |                                   |
| Ethylbenzene                     |            | 0.5080 0.0501   |                                   |
| m,p-Xylencs                      |            | 2.155 0.1002    |                                   |
| o-Xylene                         |            | 0.8998 0.0501   |                                   |
| Total Xylenes                    |            | 3.055 0.0501    |                                   |
| Total BTEX                       |            | 3.563 0.0501    |                                   |
| Percent Moisture                 | Extracted: |                 |                                   |
|                                  | Analyzed:  | Sep-25-09 08:59 |                                   |
|                                  | Units/RL:  | % RL            |                                   |
| Percent Moisture                 |            | ND 1.00         |                                   |
| TPH By SW8015 Mod                | Extracted: | Sep-26-09 12:11 |                                   |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations mat neerall expressed introughout this analytical report represent the best juggment 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.

75.3 75.3 75.3 75.3

476 mg/kg

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons C28-C35 Oil Range Hydrocarbons

Total TPH

448 ND 924

Ł

Sep-27-09 22:32

Analyzed: Units/RL: Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Manager Brent Barron, II



() ()

(

₿

1

8 8

0

0 0

6

() ()

B

@ **(**)

Ð



- 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.

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 - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

|   | 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 |
|   |                |                |

| · ·        |                              |                                |
|------------|------------------------------|--------------------------------|
| 000        | 500                          | mi sita i                      |
| 15 21 -    | 411/                         | day                            |
| 124.       | -1.1                         | $\mathcal{Q} \cap \mathcal{V}$ |
|            | JUL 1                        |                                |
| n n        |                              |                                |
| Index      |                              | ന്നുവ                          |
|            | بعبابه                       | 0. A S M . A . A . A . A       |
| Later Alle | 1 <u>1</u> <u>1</u> <u>1</u> | 11 11 200 2 2 1                |

0

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Units: mg/kg     Date Analyzed: 09/26/09 06:04     SURROGATE RECOVERY STUDY       BTEX by EPA 8021B     Amount<br>[A]     True<br>Amount<br>[A]     Recovery<br>%R<br>[D]     Control<br>Limits<br>%R       1.4-Difluorobenzene     0.0299     0.0300     100     80-120       4-Bromofluorobenzene     0.0299     0.0300     103     80-120       Lab Batch #: 774486     Sample: 538951-1-BSD / BSD     Batch:     1     Matrix: Solid       Units: mg/kg     Date Analyzed: 09/26/09 06:24     SURROGATE RECOVERY STUDY       BTEX by EPA 8021B     Amount<br>Found<br>[A]     True<br>Amount<br>[A]     Control<br>Limits<br>%R       Analytes     Analytes     Control<br>0.0310     Control<br>0.0300 | Flags |
|---|-------|
| BTEX by EPA 8021BAmount<br>Found<br>[A]True<br>Amount<br>[B]Recovery<br>%R<br>[D]Control<br>Limits<br>%R<br>%RAnalytes0.02990.030010080-1201.4-Difluorobenzene0.02990.030010080-1204-Bromofluorobenzene0.03100.030010380-120Lab Batch #: 774486Sample: 538951-1-BSD / BSDBatch:1Matrix: SolidUnits: mg/kgDate Analyzed: 09/26/09 06:24SURROGATE RECOVERY STUDYBTEX by EPA 8021BAmount<br>Found<br>[A]True<br>(A]Recovery<br>(B]Control<br>Limits<br>%R<br>%R  | Flags |
| Analytes     I     I       1,4-Difluorobenzene     0.0299     0.0300     100     80-120       4-Bromofluorobenzene     0.0310     0.0300     103     80-120       Lab Batch #: 774486     Sample: 538951-1-BSD / BSD     Batch:     1     Matrix: Solid       Units: mg/kg     Date Analyzed: 09/26/09 06:24     SURROGATE RECOVERY STUDY       BTEX by EPA 8021B     Amount<br>Found<br>[A]     True<br>[B]     Recovery<br>%R<br>[D]     Control<br>Limits<br>%R  | Flags |
| 1.4-Difficition       0.0299       0.0300       100       80-120         4-Bromoliluorobenzene       0.0310       0.0300       103       80-120         Lab Batch #: 774486       Sample: 538951-1-BSD / BSD       Batch:       1       Matrix: Solid         Units: mg/kg       Date Analyzed: 09/26/09 06:24       SURROGATE RECOVERY STUDY         BTEX by EPA 8021B       Amount Found [B]       7% R [D]       Control Limits % R         Analytes       [D]       % R       % R       % R   | Flags |
| Lab Batch #: 774486     Sample: 538951-1-BSD / BSD     Batch:     1     Matrix: Solid       Units: mg/kg     Date Analyzed: 09/26/09 06:24     SURROGATE     RECOVERY STUDY       BTEX by EPA 8021B     Amount<br>[A]     True<br>[B]     Control<br>%R<br>%R     Control<br>Limits       Analytes     J     J     J     J  | Flags |
| Lab Batch #: 774486     Sample: 538951-1-BSD / BSD     Batch:     Matrix: Solid       Units: mg/kg     Date Analyzed: 09/26/09 06:24     SURROGATE     RECOVERY STUDY       BTEX by EPA 8021B     Amount     True     Control       Limits     [A]     [B]     %R     %R       [A]     [D]     %R     %R  | Flags |
| Units: mg/kg     Date Analyzed: 09/26/09 06:24     SURROGATE RECOVERY STUDY       BTEX by EPA 8021B     Amount<br>Found<br>[A]     True<br>Amount<br>[B]     Control<br>Limits<br>%R       Analytes     [B]     %R  | Flags |
| BTEX by EPA 8021B     Amount<br>Found     True<br>Amount     Control<br>Limits       Analytes     [A]     [B]     %R     %R   | Flags |
|   |       |
| 1,4-Difluorobenzene 0.0301 0.0300 100 80-120  |       |
| 4-Bromofluorobenzene 0.0311 0.0300 104 80-120   |       |
| Lab Batch #: 774486 Sample: 538951-1-BLK / BLK Batch: 1 Matrix: Solid   |       |
| Units: mg/kg Date Analyzed: 09/26/09 07:04 SURROGATE RECOVERY STUDY   |       |
| BTEX by EPA 8021B     Amount<br>Found     True<br>Amount     Control<br>Limits       Analytes     [A]     [B]     %R<br>[D]     %R  | Flags |
| 1,4-Difluorobenzene 0.0265 0.0300 88 80-120   |       |
| 4-Bromofluorobenzene 0.0304 0.0300 101 80-120   |       |
| Lab Batch #: 774486         Sample: 345778-001 / SMP         Batch:         Matrix: Soil  |       |
| Units: mg/kg Date Analyzed: 09/26/09 07:24 SURROGATE RECOVERY STUDY   |       |
| BTEX by EPA 8021B     Amount<br>Found     True<br>Amount     Control<br>Limits       Analytes     [A]     [B]     %R     %R   | Flags |
| 1,4-Difluorobenzene 0.0268 0.0300 89 80-120   |       |
| 4-Bromofluorobenzene 0.0316 0.0300 105 80-120   |       |
| Lab Batch #: 774486         Sample: 345778-002 / SMP         Batch:         1         Matrix: Soil  |       |
| Units: mg/kg Date Analyzed: 09/26/09 07:44 SURROGATE RECOVERY STUDY   |       |
| BTEX by EPA 8021BAmount<br>Found<br>[A]True<br>Amount<br>[B]Control<br>Limits<br>%R<br>[D]Analytes  | Flags |
| 1,4-Difluorobenzene 0.0271 0.0300 90 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



Ø

Ô

# Form 2 - Surrogate Recoveries

## Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Work Orders : 345778. | Sample: 345778-003 / SMP      | Pata                   | Project II             | D: 2009-084           |                         |       |
|-----------------------|-------------------------------|------------------------|------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg          | Date Analyzed: 09/26/09 08:04 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| ВТЕХ                  | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>{D} | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |                               | 0.0270                 | 0.0300                 | 90                    | 80-120                  |       |
| 4-Bromofluorobenzene  |                               | 0.0317                 | 0.0300                 | 106                   | 80-120                  |       |
| Lab Batch #: 774486   | Sample: 345778-004 / SMP      | Bate                   | h: 1 Matrix            | Soil                  |                         |       |
| Units: mg/kg          | Date Analyzed: 09/26/09 08:23 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                  | K by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |                               | 0.0263                 | 0.0300                 | 88                    | 80-120                  |       |
| 4-Bromofluorobenzene  |                               | 0.0304                 | 0.0300                 | 101                   | 80-120                  |       |
| Lab Batch #: 774486   | Sample: 345778-005 / SMP      | Batc                   | h: <sup>1</sup> Matrix | Soil                  | L                       |       |
| Units: mg/kg          | Date Analyzed: 09/26/09 08:43 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                  | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |                               | 0.0264                 | 0.0300                 | 88                    | 80-120                  |       |
| 4-Bromofluorobenzene  |                               | 0.0297                 | 0.0300                 | 99                    | 80-120                  |       |
| Lab Batch #: 774486   | Sample: 345778-006 / SMP      | Bate                   | h: 1 Matrix            | :Soil                 |                         |       |
| Units: mg/kg          | Date Analyzed: 09/26/09 09:03 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| ВТЕХ                  | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |                               | 0.0270                 | 0.0300                 | 90                    | 80-120                  |       |
| 4-Bromofluorobenzene  |                               | 0.0325                 | 0.0300                 | 108                   | 80-120                  |       |
| Lab Batch #: 774486   | Sample: 345778-007 / SMP      | Bate                   | h: 1 Matrix            | :Soil                 |                         |       |
| Units: mg/kg          | Date Analyzed: 09/26/09 09:36 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| ВТЕХ                  | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |                               | 0.0270                 | 0.0300                 | 90                    | 80-120                  |       |
| 4-Bromofluorobenzene  |                               | 0.0336                 | 0.0300                 | 112                   | 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.

61

| Call Canada and |      | one many ways with the |
|-----------------|------|------------------------|
| SA              | NP   | 201                    |
| KY7             | LA   | NL                     |
| In-m-           |      | PPAS -                 |
| <u>uni</u>      | vir. | mæ                     |

() ()

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Vork Orders : 345778.<br>Lab Batch #: 774486 | ,<br>Sample: 345778-009 / SMP | Batc                     | Project II<br>h: <sup>1</sup> Matrix | D: 2009-084<br>: Soil |                         |       |
|--|-------------------------------|--------------------------|--------------------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg                                 | Date Analyzed: 09/26/09 10:16 | SU                       | RROGATE R                            | ECOVERY               | STUDY                   |       |
| втех   | K by EPA 8021B                | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]                | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|  | Analytes                      |                          |                                      | [D]                   |                         |       |
| 1,4-Difluorobenzene                          |                               | 0.0258                   | 0.0300                               | 86                    | 80-120                  |       |
| 4-Bromofluorobenzene                         |                               | 0.0292                   | 0.0300                               | 97                    | 80-120                  |       |
| Lab Batch #: 774486                          | Sample: 345778-010 / SMP      | Batc                     | h: <sup>1</sup> Matrix               | :Soil                 |                         |       |
| Units: mg/kg                                 | Date Analyzed: 09/26/09 10:36 | SU                       | RROGATE R                            | ECOVERY               | STUDY                   | _     |
| втех   | K by EPA 8021B                | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]                | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|  | Analytes                      |                          |                                      |                       |                         |       |
| 1,4-Difluorobenzene                          |                               | 0.0266                   | 0.0300                               | 89                    | 80-120                  |       |
| 4-Bromofluorobenzene                         |                               | 0.0314                   | 0.0300                               | 105                   | 80-120                  | l     |
| Lab Batch #: 774486                          | Sample: 345778-011 / SMP      | IP Batch: I Matrix: Soil |                                      |                       |                         |       |
| Units: mg/kg                                 | Date Analyzed: 09/26/09 11:37 | SU                       | RROGATE R                            | ECOVERY               | STUDY                   |       |
| втех   | K by EPA 8021B                | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]                | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1.4-Difluorobenzene                          |                               | 0.0261                   | 0.0300                               | 87                    | 80-120                  |       |
| 4-Bromofluorobenzene                         |                               | 0.0313                   | 0.0300                               | 104                   | 80-120                  |       |
| Lab Batab #: 774486                          | Sample: 345778-012 / SMP      | Bate                     | h:   Matrix                          | ·Soil                 |                         | L,    |
| Units: mg/kg                                 | Date Analyzed: 09/26/09 11:57 | SU                       | RROGATE R                            | ECOVERY               | STUDY                   |       |
| BTEX   | K by EPA 8021B                | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]                | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1 4-Difluorobenzene                          |                               | 0.0264                   | 0.0300                               | 88                    | 80-120                  |       |
| 4-Bromofluorobenzene                         |                               | 0.0313                   | 0.0300                               | 104                   | 80-120                  |       |
| Lab Batch #: 774486                          | Sample: 345778-013 / SMP      | Batc                     | h: 1 Matrix                          | :Soil                 | 1                       | L     |
| Units: mg/kg                                 | Date Analyzed: 09/26/09 12:17 | SU                       | RROGATE R                            | ECOVERY               | STUDY                   |       |
| втех   | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]                | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene                          |                               | 0.0255                   | 0.0300                               | 85                    | 80-120                  |       |
| 4-Bromofluorobenzene                         |                               | 0.0284                   | 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



働

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| 'ork Orders : 345778<br>Lab Batch #: 774486 | ,<br>Sample: 345778-001 S / M | S Batcl                | Project II<br>h: <sup>1</sup> Matrix  | D: 2009-084<br>:Soil  |                         |          |
|---|-------------------------------|------------------------|---------------------------------------|-----------------------|-------------------------|----------|
| Units: mg/kg                                | Date Analyzed: 09/26/09 14:58 | SUI                    | RROGATE RI                            | ECOVERY               | STUDY                   |          |
| BTE   | X by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                 | Recovery<br>%R        | Control<br>Limits<br>%R | Flags    |
|   | Analytes                      |                        | I                                     | [D]                   |                         |          |
| 1,4-Difluorobenzene                         |                               | 0.0280                 | 0.0300                                | 93                    | 80-120                  |          |
| 4-Bromofluorobenzene                        |                               | 0.0316                 | 0.0300                                | 105                   | 80-120                  |          |
| Lab Batch #: 774486                         | Sample: 345778-001 SD / M     | MSD Batch              | n: 1 Matrix                           | ;:Soil                |                         |          |
| Units: mg/kg                                | Date Analyzed: 09/26/09 15:19 | SUI                    | RROGATE RI                            | ECOVERY               | STUDY                   |          |
| втеу  | K by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                 | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags    |
| 1.4-Difluorobenzene                         |                               | 0.0287                 | 0.0300                                | 96                    | 80-120                  | <u> </u> |
| 4-Bromofluorobenzene                        |                               | 0.0312                 | 0.0300                                | 104                   | 80-120                  | <u> </u> |
| Lah Ratch #. 774737                         | Samule: 539121-1-BKS / F      | KS Batel               |                                       | - Solid               | ى                       | <u></u>  |
| Units: mg/kg                                | Date Analyzed: 09/29/09 09:44 | SU                     | RROGATE RI                            | ECOVERY               | STUDY                   | <b>.</b> |
| BTE   | X by EPA 8021B                | Amount<br>Found        | True<br>Amount                        | Recovery              | Control<br>Limits       | Flags    |
|   | Analytes                      | [A]                    | [B]                                   | %к<br>[D]             | %R                      |          |
| 1,4-Difluorobenzene                         |                               | 0.0303                 | 0.0300                                | 101                   | 80-120                  | ·        |
| 4-Bromofluorobenzene                        |                               | 0.0307                 | 0.0300                                | 102                   | 80-120                  |          |
| Lab Batch #: 774737                         | Sample: 539121-1-BSD / B      | SD Batch               | a: 1 Matrix                           | :Solid                |                         |          |
| Units: mg/kg                                | Date Analyzed: 09/29/09 10:04 | SUI                    | RROGATE RE                            | ECOVERY               | STUDY                   |          |
| втел  | X by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                 | Recovery<br>%R        | Control<br>Limits<br>%R | Flags    |
|   | Analytes                      |                        |                                       | [D]                   | !                       | ۱        |
| 1,4-Difluorobenzene                         |                               | 0.0301                 | 0.0300                                | 100                   | 80-120                  |          |
| 4-Bromofluorobenzene                        |                               | 0.0295                 | 0.0300                                | 98                    | 80-120                  |          |
| Lab Batch #: 774737                         | Sample: 539121-1-BLK / B      | LK Batch               | a:   Matrix                           | :Solid                |                         |          |
| Units: mg/kg                                | Date Analyzed: 09/29/09 10:44 | SUI                    | RROGATE RI                            | ECOVERY               | STUDY                   |          |
| BTE   | X by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                 | Recovery<br>%R        | Control<br>Limits<br>%R | Flags    |
|   | Analytes                      |                        | l                                     | {D}                   |                         |          |
| 1,4-Difluorobenzene                         |                               | 0.0266                 | 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.

Ø

|   | $\sim \sim \sim \sim \sim$ |
|---|----------------------------|
|   | ンイゴ ( ( ( o )              |
| ł | WIND                       |
|   |                            |
|   | CONTINUE                   |
|   | 이 히 프 피 이 곳이 귀엽 관계가 있다.    |

() () ()

•

0 働 • 0 0 0 Ø 6 Ð Ð

() ()

₿

0

B

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Work Orders : 345778 | ,<br>Sample: 345778-008 / SMP | Batel                  | Project II             | <b>):</b> 2009-084    |                         |       |
|----------------------|-------------------------------|------------------------|------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg         | Date Analyzed: 09/29/09 12:22 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                      | Analytes                      |                        |                        | ַןטן<br>              |                         |       |
| 1,4-Difluorobenzene  |                               | 0.0267                 | 0.0300                 | 89                    | 80-120                  |       |
| 4-Bromofluorobenzene |                               | 0.0300                 | 0.0300                 | 100                   | 80-120                  |       |
| Lab Batch #: 774737  | Sample: 345778-016 / SMP_     | Batel                  | h: <sup> </sup> Matrix | :Soil                 |                         |       |
| Units: mg/kg         | Date Analyzed: 09/29/09 13:23 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>{B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                               | 0.0250                 | 0.0300                 | 83                    | 80-120                  |       |
| 4-Bromofluorobenzene |                               | 0.0456                 | 0.0300                 | 152                   | 80-120                  | **    |
| Lab Batch #: 774737  | Sample: 345778-017 / SMP      | Batcl                  | h: <sup> </sup> Matrix | : Soil                |                         |       |
| Units: mg/kg         | Date Analyzed: 09/29/09 13:43 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| ВТЕУ                 | X by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                               | 0.0240                 | 0.0300                 | 80                    | 80-120                  |       |
| 4-Bromofluorobenzene |                               | 0.0514                 | 0.0300                 | 171                   | 80-120                  | **    |
| Lab Batch #: 774737  | Sample: 345778-018 / SMP      | Batcl                  | h: 1 Matrix            | :Soil                 |                         | · ·   |
| Units: mg/kg         | Date Analyzed: 09/29/09 14:03 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| I,4-Difluorobenzene  |                               | 0.0250                 | 0.0300                 | 83                    | 80-120                  |       |
| 4-Bromofluorobenzene |                               | 0.0415                 | 0.0300                 | 138                   | 80-120                  | **    |
| Lab Batch #: 774737  | Sample: 345778-019 / SMP      | Batcl                  | h: 1 Matrix            | Soil                  |                         |       |
| Units: mg/kg         | Date Analyzed: 09/29/09 14:23 | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTEX                 | K by EPA 8021B<br>Analytes    | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene  |                               | 0.0261                 | 0.0300                 | 87                    | 80-120                  |       |
| 4-Bromofluorobenzene |                               | 0.0414                 | 0.0300                 | 138                   | 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

|       | $\mathbf{D}$            |
|-------|-------------------------|
|       | $( \mathcal{Q} \circ )$ |
|       | $\sim \sim 1$           |
| 10000 | 0763                    |
|       |                         |

@ @

# Form 2 - Surrogate Recoveries

### Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Work Orders : 345778, | Sample: 345778-014 / SMP                                 | Batel                  | Project II               | <b>D:</b> 2009-084    |                         |       |
|-----------------------|--|------------------------|--------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg          | Date Analyzed: 09/29/09 14:44                            | SU                     | RROGATE RI               | COVERY                | STUDY                   |       |
| BTEX                  | by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                       | Analytes   | 0.0227                 | 0.0200                   | 70                    | 80.120                  | **    |
| 4. Bromofluorobenzene |  | 0.0237                 | 0.0300                   | 105                   | 80-120                  | **    |
|                       |  | 0.0314                 | 0.0300                   | 105                   | 00-120                  |       |
| Lab Batch #: 7/4/37   | Sample: 345778-0157 SMP<br>Date Analyzed: 09/29/09 15:04 | Batel                  | h: Matrix:<br>RROGATE RI | COVERY                | STUDY                   |       |
| BTEX                  | by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1.4-Difluorobenzene   |  | 0.0245                 | 0.0300                   | 82                    | 80-120                  |       |
| 4-Bromofluorobenzene  |  | 0.0773                 | 0.0300                   | 258                   | 80-120                  | **    |
| Lab Batch #: 774737   | Sample: 346027-001 S / MS                                | Batel                  | h· 1 Matrix              | : Soil                |                         | L     |
| Units: mg/kg          | Date Analyzed: 09/29/09 20:48                            | SU                     | RROGATE RI               | COVERY                | STUDY                   |       |
| BTEX                  | by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1 A Difluorabenzane   | Analytes   | 0.0202                 | 0.0200                   | 07                    | 80.120                  |       |
| 4-Bromofluorobenzene  |  | 0.0292                 | 0.0300                   | 97                    | 80-120                  |       |
|                       |  | (CD D )                | 0.0300                   | 0.0                   | 00-120                  |       |
|                       | Sample: 346027-001 SD7 W                                 | Batci                  | REACTE RE                | COVERV                | STUDY                   |       |
| BTEX                  | by EPA 8021B   | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene   |  | 0.0286                 | 0.0300                   | 95                    | 80-120                  |       |
| 4-Bromofluorobenzene  |  | 0.0320                 | 0.0300                   | 107                   | 80-120                  |       |
| Lab Batch #: 774382   | Sample: 538882-1-BKS / BI                                | KS Batel               | h: 1 Matrix:             | Solid                 | •                       |       |
| Units: mg/kg          | Date Analyzed: 09/27/09 13:01                            | SU                     | RROGATE RI               | COVERY                | STUDY                   |       |
| TPH B                 | y SW8015 Mod<br>Analytes                                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane        |  | 92.5                   | 100                      | 93                    | 70-135                  |       |
| o-Terphenyl           |  | 36.3                   | 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

|   | $\sim \sim \sim \sim$ | 2       |
|---|-----------------------|---------|
| ł |                       | ).      |
|   |                       | E.      |
|   | long to factor        | 8<br>20 |
|   | a change and a second |         |

# Form 2 - Surrogate Recoveries

## Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| Work Orders : 345778 | ,<br>,                        |                        | Project II              | <b>D:</b> 2009-084    |                         |       |
|----------------------|-------------------------------|------------------------|-------------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 7/4382  | Sample: 538882-1-BSD / B      | SD Bate                | ch: Matrix              | Solid                 | STUDY                   |       |
| Units: mg/kg         | Date Analyzed: 09/27/09 13:26 | 50                     |                         | LUVERI                |                         |       |
| ТРН                  | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>(B)   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                      | Analytes                      |                        |                         | [D]                   |                         |       |
| 1-Chlorooctane       |                               | 95.9                   | 100                     | 96                    | 70-135                  |       |
| o-Terphenyl          |                               | 37.1                   | 50.0                    | 74                    | 70-135                  |       |
| Lab Batch #: 774382  | Sample: 538882-1-BLK / B      | LK Bate                | ch: 1 Matrix            | Solid                 |                         |       |
| Units: mg/kg         | Date Analyzed: 09/27/09 13:51 | SL                     | JRROGATE RI             | ECOVERY               | STUDY                   |       |
| ТРН                  | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane       |                               | 83.6                   | 100                     | 84                    | 70-135                  |       |
| o-Terphenyl          |                               | 39.6                   | 50.0                    | 79                    | 70-135                  |       |
| Lab Batch #: 774382  | Sample: 345778-001 / SMP      | Bato                   | ch: 1 Matrix            | :Soil                 | L                       |       |
| Units: mg/kg         | Date Analyzed: 09/27/09 14:41 | SU                     | JRROGATE RI             | ECOVERY               | STUDY                   | -     |
| ТРН                  | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                      | Analytes                      |                        |                         | [D]                   |                         |       |
| 1-Chlorooctane       |                               | 74.3                   | 99.8                    | 74                    | 70-135                  |       |
| o-Terphenyl          |                               | 36.3                   | 49.9                    | 73                    | 70-135                  |       |
| Lab Batch #: 774382  | Sample: 345778-002 / SMP      | Bato                   | ch: <sup>1</sup> Matrix | :Soil                 |                         |       |
| Units: mg/kg         | Date Analyzed: 09/27/09 15:06 | SU                     | JRROGATE RI             | ECOVERY               | STUDY                   |       |
| ТРН                  | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane       | Anarytes                      | 89.4                   | 00.8                    | 00                    | 70-135                  |       |
| o-Terphenyl          |                               | 41.5                   | 49.9                    | 83                    | 70-135                  | -     |
| Lab Batch #: 774382  | Sample: 345778-003 / SMP      | Bate                   | h. 1 Matrix             | Soil                  |                         |       |
| Units: mg/kg         | Date Analyzed: 09/27/09 15:30 | SL                     | JRROGATE RI             | ECOVERY               | STUDY                   |       |
| TPH                  | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc       |                               | 74.4                   | 99.9                    | 74                    | 70-135                  | ·     |
| o-Terphenyl          |                               | 37.0                   | 50.0                    | 74                    | 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



# Form 2 - Surrogate Recoveries



| ,                             |  | Project I   | <b>D:</b> 2009-084  |  |   |
|-------------------------------|--|---|---|--|---|
| Sample: 345778-0047 SMP       | Bato   | Ch: I Matrix  | FCOVERV   | STUDY  |   |
| Date Analyzed: 09/27/09 15:55 |  |   |   |  |   |
| By SW8015 Mod                 | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R  | Control<br>Limits<br>%R  | Flags   |
| Analytes                      |  |   | [D]   | l i  |   |
|                               | 73.0   | 99.9  | 73  | 70-135   |   |
|                               | 36.5   | 50.0  | 73  | 70-135   |   |
| Sample: 345778-005 / SMP      | Bate   | ch:   Matrix  | :Soil   |  |   |
| Date Analyzed: 09/27/09 16:20 | SU   | <b>JRROGATE R</b>   | ECOVERY   | STUDY  |   |
| By SW8015 Mod                 | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R  | Flags   |
|                               | 79.9   | 100   | 80  | 70-135   |   |
|                               | 37.3   | 50.0  | 75  | 70-135   |   |
| Sample: 345778-006 / SMP      | Batc   | h: 1 Matrix   | :: Soil   | 1  |   |
| Date Analyzed: 09/27/09 16:45 | SU   | RROGATE R   | ECOVERY   | STUDY  |   |
| By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D]   | Control<br>Limits<br>%R  | Flags   |
|                               | 71.8   | 100   | 72  | 70-135   |   |
|                               | 35.6   | 50.0  | 71  | 70-135   |   |
| Sample: 345778-007 / SMP      | Batc   | ch: I Matrix  | :Soil   | ·  |   |
| Date Analyzed: 09/27/09 17:09 | SU   | RROGATE R   | ECOVERY   | STUDY  |   |
| 3y SW8015 Mod                 | Amount<br>Found<br>[A]   | True<br>Amount<br>[B]   | Recovery<br>%R  | Control<br>Limits<br>%R  | Flags   |
| Analytes                      | 72.4   | 00.7  | 74  | 70.125   |   |
|                               | 35.9   | 49.9  | 72  | 70-135   |   |
| Sample: 345778-008 / SMP      |  | h. 1 Matrix   | <br>Soil  |  |   |
| Date Analyzed: 09/27/09 17:34 | Batt   | RROGATE R   | ECOVERY   | STUDY  |   |
| By SW8015 Mod                 | Amount<br>Found<br>[A]   | True<br>Amount<br> B  | Recovery<br>%R  | Control<br>Limits<br>%R  | Flags   |
| Amplutes                      | 1. •1  | ( '~'   | 1 (0)   | ו  |   |
| Analytes                      |  | 00.5  | {D}   |  |   |
|                               | Sample: 345778-004 / SMP<br>Date Analyzed: 09/27/09 15:55<br>By SW8015 Mod<br>Analytes<br>Sample: 345778-005 / SMP<br>Date Analyzed: 09/27/09 16:20<br>By SW8015 Mod<br>Analytes<br>Sample: 345778-006 / SMP<br>Date Analyzed: 09/27/09 16:45<br>By SW8015 Mod<br>Analytes<br>Sample: 345778-007 / SMP<br>Date Analyzed: 09/27/09 17:09<br>By SW8015 Mod<br>Analytes<br>Sample: 345778-008 / SMP<br>Date Analyzed: 09/27/09 17:34<br>By SW8015 Mod | Sample:345778-004 / SMPBateDate Analyzed:09/27/09 15:55SUBy SW8015 ModAmount<br>Found<br>[A]Analytes73.036.5Sample:345778-005 / SMPBateDate Analyzed:09/27/09 16:20SUBy SW8015 ModAmount<br>Found<br>[A]Amount<br>Found<br>[A]Analytes79.937.3Sample:345778-006 / SMPBate Analyzed:09/27/09 16:45SUBy SW8015 ModAmount<br>Found<br>[A]Analytes71.835.6Sample:345778-007 / SMPBate Analyzed:09/27/09 17:09SUBy SW8015 ModAmount<br>Found<br>[A]Analytes71.835.6Sample:345778-007 / SMPBate Analyzed:09/27/09 17:09SUBy SW8015 ModAmount<br>Found<br>[A]Analytes73.435.9Sample:345778-008 / SMPBate Analyzed:09/27/09 17:34SUBy SW8015 ModAmount<br>Found<br>[A]Analytes73.435.9Sample:345778-008 / SMPBate Analyzed:09/27/09 17:34SUBy SW8015 ModAmount<br>Found<br>[A]Analytes73.4Sample:345778-008 / SMPBateMount<br>Found<br>[A]Analytes73.4Sample:345778-008 / SMPBateAmount<br>Found<br>[A]BateAmount<br>Found<br>[A]BateAmount<br>Found<br>[A] </td <td>Sample: 345778-004 / SMPBatch:1MatrixDate Analyzed: 09/27/09 15:55SURROGATE RBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>Amount<br/>[B]Analytes73.099.936.550.0Sample: 345778-005 / SMPBatch:1Date Analyzed: 09/27/09 16:20SURROGATE RBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>Amount<br/>[B]Analytes79.910037.350.0Sample: 345778-006 / SMPBatch:1Matrix<br/>Found<br/>[A]1B]Analytes79.910037.350.0Sample: 345778-006 / SMPBatch:1Date Analyzed: 09/27/09 16:45SURROGATE RBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>Amount<br/>[B]Analytes71.810035.650.0Sample: 345778-007 / SMP<br/>Batch:Batch:1Matrix<br/>Date Analyzed: 09/27/09 17:09SURROGATE RBy SW8015 ModAmount<br/>[A]True<br/>Amount<br/>[A]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br/>Batch:Matrix<br/>Amount<br/>[A]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br/>Batch:Matrix<br/>Amount<br/>[A]Bate Analyzed: 09/27/09 17:34SURROGATE RBy SW8015 ModAmount<br/>[A]True<br/>Amount<br/>[B]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br/></td> <td>Sample: 345778-004 / SMPProject ID: 2009-084Batch:1Matrix: SoilDate Analyzed: 09/27/09 15:55SURROGATE RECOVERYBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>(B]Recovery<br/>%RAnalytes73.099.973Canadystan36.550.073Sample:345778-005 / SMP<br/>36.5Batch:1Matrix: SoilDate Analyzed:09/27/09 16:20SURROGATE RECOVERYBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>Matrix: SoilRecovery<br/>%RDate Analyzed:09/27/09 16:20SURROGATE RECOVERYBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>Batch:Recovery<br/>%RDate Analyzed:09/27/09 16:45SURROGATE RECOVERYBy SW8015 ModAmount<br/>Found<br/>[A]True<br/>[B]Recovery<br/>%RDate Analyzed:09/27/09 16:45SURROGATE RECOVERYBy SW8015 ModAmount<br/>[A]True<br/>[B]Recovery<br/>%RAnalytes1Matrix:SoilDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br/>[A]True<br/>[B]Recovery<br/>%RDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br/>[A]True<br/>[B]Recovery<br/>%RDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br/>[A]True<br/>[B]Recovery<br/>%RBatch:1Matrix:SoilDate Analyzed:09/27/09 17:34SUROGATE RECOVERY&lt;</td> <td>Project ID: 2009-084           Sample: 345778-004 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 15:55         SURROGATE         RECOVERY         STUDY           By SW8015 Mod         Amount<br/>Found         True<br/>Amount<br/>[A]         Matrix: Soil         Control<br/>Limits<br/>%R           Analytes         73.0         99.9         73         70-135           Sample: 345778-005 / SMP         Batch:         1         Matrix: Soil         Control<br/>Limits           Date Analyzed: 09/27/09 16:20         SURROGATE         Recovery<br/>formation         Control<br/>Limits         Control<br/>Limits           By SW8015 Mod         Amount<br/>Found<br/>[A]         Matrix: Soil         Control<br/>Limits         Limits           Analytes         79.9         100         80         70-135           Sample: 345778-006 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 16:45         SURROGATE         Recovery<br/>formation         Control<br/>Limits           Sy SW8015 Mod         Amount<br/>Found<br/>[A]         True<br/>Amount<br/>Found<br/>[A]         Matrix: Soil         Control<br/>Limits           Surgers         345778-007 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 17:09         SUROGATE         Re</td> | Sample: 345778-004 / SMPBatch:1MatrixDate Analyzed: 09/27/09 15:55SURROGATE RBy SW8015 ModAmount<br>Found<br>[A]True<br>Amount<br>[B]Analytes73.099.936.550.0Sample: 345778-005 / SMPBatch:1Date Analyzed: 09/27/09 16:20SURROGATE RBy SW8015 ModAmount<br>Found<br>[A]True<br>Amount<br>[B]Analytes79.910037.350.0Sample: 345778-006 / SMPBatch:1Matrix<br>Found<br>[A]1B]Analytes79.910037.350.0Sample: 345778-006 / SMPBatch:1Date Analyzed: 09/27/09 16:45SURROGATE RBy SW8015 ModAmount<br>Found<br>[A]True<br>Amount<br>[B]Analytes71.810035.650.0Sample: 345778-007 / SMP<br>Batch:Batch:1Matrix<br>Date Analyzed: 09/27/09 17:09SURROGATE RBy SW8015 ModAmount<br>[A]True<br>Amount<br>[A]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br>Batch:Matrix<br>Amount<br>[A]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br>Batch:Matrix<br>Amount<br>[A]Bate Analyzed: 09/27/09 17:34SURROGATE RBy SW8015 ModAmount<br>[A]True<br>Amount<br>[B]Analytes73.499.735.949.9Sample: 345778-008 / SMP<br> | Sample: 345778-004 / SMPProject ID: 2009-084Batch:1Matrix: SoilDate Analyzed: 09/27/09 15:55SURROGATE RECOVERYBy SW8015 ModAmount<br>Found<br>[A]True<br>(B]Recovery<br>%RAnalytes73.099.973Canadystan36.550.073Sample:345778-005 / SMP<br>36.5Batch:1Matrix: SoilDate Analyzed:09/27/09 16:20SURROGATE RECOVERYBy SW8015 ModAmount<br>Found<br>[A]True<br>Matrix: SoilRecovery<br>%RDate Analyzed:09/27/09 16:20SURROGATE RECOVERYBy SW8015 ModAmount<br>Found<br>[A]True<br>Batch:Recovery<br>%RDate Analyzed:09/27/09 16:45SURROGATE RECOVERYBy SW8015 ModAmount<br>Found<br>[A]True<br>[B]Recovery<br>%RDate Analyzed:09/27/09 16:45SURROGATE RECOVERYBy SW8015 ModAmount<br>[A]True<br>[B]Recovery<br>%RAnalytes1Matrix:SoilDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br>[A]True<br>[B]Recovery<br>%RDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br>[A]True<br>[B]Recovery<br>%RDate Analyzed:09/27/09 17:09SURROGATE RECOVERYBy SW8015 ModAmount<br>[A]True<br>[B]Recovery<br>%RBatch:1Matrix:SoilDate Analyzed:09/27/09 17:34SUROGATE RECOVERY< | Project ID: 2009-084           Sample: 345778-004 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 15:55         SURROGATE         RECOVERY         STUDY           By SW8015 Mod         Amount<br>Found         True<br>Amount<br>[A]         Matrix: Soil         Control<br>Limits<br>%R           Analytes         73.0         99.9         73         70-135           Sample: 345778-005 / SMP         Batch:         1         Matrix: Soil         Control<br>Limits           Date Analyzed: 09/27/09 16:20         SURROGATE         Recovery<br>formation         Control<br>Limits         Control<br>Limits           By SW8015 Mod         Amount<br>Found<br>[A]         Matrix: Soil         Control<br>Limits         Limits           Analytes         79.9         100         80         70-135           Sample: 345778-006 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 16:45         SURROGATE         Recovery<br>formation         Control<br>Limits           Sy SW8015 Mod         Amount<br>Found<br>[A]         True<br>Amount<br>Found<br>[A]         Matrix: Soil         Control<br>Limits           Surgers         345778-007 / SMP         Batch:         1         Matrix: Soil           Date Analyzed: 09/27/09 17:09         SUROGATE         Re |

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

3

٩

<u>h</u>.

Surrogate Recovery [D] = 100 \* A / B

|           | _ |
|-----------|---|
|           |   |
| 2(],((()) | 2 |
|           | ļ |
| Monorate  | Ś |
|           | ż |

Ø

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| <b>Vork Orders :</b> 345778 | ,<br>Sample: 345778-009 / SMP | Bate                   | Project II              | D: 2009-084           |                         |       |
|-----------------------------|-------------------------------|------------------------|-------------------------|-----------------------|-------------------------|-------|
| Units: mg/kg                | Date Analyzed: 09/27/09 17:58 | SU                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| ТРН І                       | 3y SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                      |                        |                         | [D]                   |                         |       |
| 1-Chlorooctane              |                               | 76.8                   | 100                     | 77                    | 70-135                  |       |
| o-Terphenyl                 |                               | 35.6                   | 50.0                    | 71                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-010 / SMP      | Bate                   | h: i Matrix             | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 18:49 | SU                     | RROGATE RI              | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 74.2                   | 99.6                    | 74                    | 70-135                  |       |
| o-Terphenyl                 |                               | 35.4                   | 49.8                    | 71                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-011 / SMP      | Bato                   | h: <sup>1</sup> Matrix  | :Soil                 | 1                       |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 19:14 | SL                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| ТРН 1                       | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              | Analytes                      | 71.2                   | 8 00                    | 71                    | 70 135                  |       |
| o-Terphenyl                 |                               | 36.3                   | 49.9                    | 73                    | 70-135                  |       |
| Lab Batab # 77/382          | Semple: 345778-012 / SMP      | Patr                   | h. 1 Matrix             | Soil                  |                         |       |
| Lab Balch #: 774302         | Date Analyzed: 00/27/00 10:30 | SU                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| TPH I                       | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                      |                        |                         | {D}                   |                         |       |
| 1-Chlorooctane              |                               | 75.4                   | 99.8                    | 76                    | 70-135                  |       |
| o-Terphenyl                 |                               | 36.0                   | 49.9                    | 72                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-013 / SMP      | Bato                   | :h: <sup>1</sup> Matrix | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 20:03 | st                     | <b>IRROGATE R</b>       | ECOVERY               | STUDY                   |       |
| ТРН                         | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 84.4                   | 100                     | 84                    | 70-135                  |       |
| o-Terphenyl                 |                               | 39.3                   | 50.0                    | 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

| 1) d : |         |
|--------|---------|
|        |         |
| 1 Roth | montha  |
| Jan    | nconnac |

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| <b>Work Orders :</b> 345778 | 3,<br>Samalar 245778 014 / SMR        | D - 4 -                | Project I               | <b>D:</b> 2009-084    |                         |       |
|-----------------------------|---------------------------------------|------------------------|-------------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 774382         | Date Analyzed: 09/27/09 20:28         | Batc<br>SU             | RROGATE R               | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod                         | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                              |                        |                         |                       |                         |       |
| 1-Chlorooctane              |                                       | 71.6                   | 100                     | 72                    | 70-135                  |       |
| o-Terphenyl                 |                                       | 35.7                   | 50.0                    | 71                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-015 / SMP              | Bate                   | :h: <sup>1</sup> Matrix | ::Soil                |                         |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 20:54         | SU                     | IRROGATE R              | ECOVERY               | STUDY                   |       |
| ТРН                         | By SW8015 Mod                         | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                                       | 76.5                   | 99.8                    | 77                    | 70-135                  |       |
| o-Terphenyl                 |                                       | 36.7                   | 49.9                    | 74                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-016 / SMP              | Bata                   | l<br>vh· 1 Matriv       | I<br>•• Soil          |                         |       |
| Linits: mg/kg               | Date Analyzed: 09/27/09 21:19         | SU                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod                         | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                              |                        |                         | [D]                   |                         |       |
| 1-Chlorooctane              |                                       | 81.3                   | 100                     | 81                    | 70-135                  |       |
| o-Terphenyl                 |                                       | 35.9                   | 50.0                    | 72                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-017 / SMP              | Batc                   | h: 1 Matrix             | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 21:43         | SU                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| ТРН                         | By SW8015 Mod                         | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                              |                        | ļ                       | ועו                   |                         |       |
| 1-Chlorooctane              | · · · · · · · · · · · · · · · · · · · | 81.2                   | 100                     | 81                    | 70-135                  |       |
| o-Terphenyl                 |                                       | 35.9                   | 50.0                    | 72                    | 70-135                  |       |
| Lab Batch #: 774382         | Sample: 345778-018 / SMP              | Bate                   | h: <sup>1</sup> Matrix  | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 09/27/09 22:07         | SU                     | RROGATE R               | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B]   | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                                       | 81.8                   | 99.5                    | 82                    | 70-135                  |       |
| o-Terphenyl                 |                                       | 35.3                   | 49.8                    | 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.

1



# Form 2 - Surrogate Recoveries

# Project Name: DCP Plant to Lea Station 6-Inch Sec 31

| <b>Vork Orders :</b> 345778<br>Lab Batch #: 774382 | Sample: 345778-019 / SMP              | Batc                   | Project II<br>h: <sup> </sup> Matrix:<br>RROGATE RE | D: 2009-084<br>Soil   | STUDY                   |       |
|--|---------------------------------------|------------------------|---|-----------------------|-------------------------|-------|
| TPH I  | By SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                               | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane                                     | •                                     | 81.7                   | 99.6  | 82                    | 70-135                  |       |
| o-Terphenyl  |                                       | 36.9                   | 49.8  | 74                    | 70-135                  |       |
| Lab Batch #: 774382                                | Sample: 345778-001 S / MS             | Batc                   | h: l Matrix:  | :Soil                 |                         |       |
| Units: mg/kg                                       | Date Analyzed: 09/27/09 22:56         | SU                     | RROGATE RE  | ECOVERY               | STUDY                   |       |
| ТРН І  | 3y SW8015 Mod<br>Analvtes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                               | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane                                     |                                       | 92.6                   | 100   | 93                    | 70-135                  |       |
| o-Terphenyl  | · · · · · · · · · · · · · · · · · · · | 36.2                   | 50.0  | 72                    | 70-135                  |       |
| Lab Batch #: 774382                                | Sample: 345778-001 SD / N             | ISD Bate               | h:   Matrix:  | Soil                  | <u>.</u>                |       |
| Units: mg/kg                                       | Date Analyzed: 09/27/09 23:21         | SU                     | RROGATE RE  | ECOVERY               | STUDY                   |       |
| ТРН І  | 3y SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B]                               | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc                                     |                                       | 108                    | 99.9  | 108                   | 70-135                  |       |
| o-Terphenyl  |                                       | 39.4                   | 50.0  | 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



**BS / BSD Recoveries** 



Project Name: DCP Plant to Lea Station 6-Inch Sec 31

Work Order #: 345778 Analyst: ASA

Lab Batch ID: 774486

Units: mg/kg

Sample: 538951-1-BKS

Date Prepared: 09/25/2009 Batch #: 1

**Project ID:** 2009-084 Date Analyzed: 09/26/2009 Matrix: Solid

|   | 5                 |
|---|-------------------|
|   | 5                 |
|   |                   |
|   | Ξ                 |
|   |                   |
|   | 9                 |
|   | $\mathbf{\Sigma}$ |
|   | 2                 |
|   | E J               |
|   | $\mathbf{\Sigma}$ |
| l | 5                 |
| I | X                 |
| I | 2                 |
| I | H                 |
| ļ | 2                 |
| l | - 1               |
| 1 | μ.                |
| I |                   |
| I | $\triangleleft$   |
| I | C                 |
| l | Ţ                 |
|   |                   |
|   | 6                 |
|   |                   |
|   | Ω                 |
|   | r_1               |
| l |                   |
| ļ | ×                 |
| 1 | 5                 |
|   |                   |
| Ì |                   |
| Ì | X                 |
|   | Z                 |
|   | ◄                 |
|   | Ľ.                |
|   | 8                 |
|   |                   |
| l | r-1               |
|   |                   |
| Ī | Ľ                 |
|   | a                 |
|   | 5                 |
| 1 | 1                 |
|   | ¥                 |
|   | Z                 |
| l | $\mathbf{<}$      |
| I |                   |
| l | B                 |
|   | -                 |
|   | $\mathbf{\Sigma}$ |
|   | 7                 |
|   | 7                 |
|   | Ľ                 |
|   | ~                 |
|   | (and a second     |
|   |                   |
|   |                   |

| BTEX by EPA 8021B | Blank<br>Sample Result | Spike<br>Added | Blank<br>Spike      | Blank<br>Spike | Spike<br>Added | Blank<br>Spike          | Bik. Spk<br>Dup. | RPD       | Control<br>Limits | Control<br>Limits | Flag |
|-------------------|------------------------|----------------|---------------------|----------------|----------------|-------------------------|------------------|-----------|-------------------|-------------------|------|
| Analytes          | V                      | [B]            | Result<br>[C]       | %R<br>[D]      | [E]            | Duplicate<br>Result [F] | <u>[</u> و]      | %         | %K                | %RPD              |      |
| Benzene           | QN                     | 0.1000         | 0.0845              | 85             | 0.1            | 0.0852                  | 85               | 1         | 70-130            | 35                |      |
| Tolucne           | QN                     | 0.1000         | 0.0832              | 83             | 0.1            | 0.0839                  | 84               | -         | 70-130            | 35                |      |
| Ethylbenzene      | ND                     | 0.1000         | 0.0842              | 84             | 0.1            | 0.0854                  | 85               | -         | 71-129            | 35                |      |
| m,p-Xylenes       | QN                     | 0.2000         | 0.1852              | 93             | 0.2            | 0.1874                  | 94               | -         | 70-135            | 35                |      |
| o-Xylcne          | DN                     | 0.1000         | 0.0904              | 90             | 0.1            | 0.0915                  | 92               | 1         | 71-133            | 35                |      |
| Analyst: ASA      | Da                     | tte Prepare    | <b>d:</b> 09/29/200 | 6              |                |                         | Date An          | alyzed: 0 | 9/29/2009         |                   |      |

Lab Batch ID: 774737

Batch #: 1 Sample: 539121-1-BKS

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Matrix: Solid

| Units: mg/kg      |                               | BLAN           | K /BLANK S               | PIKE / B             | LANK S         | PIKE DUPL                   | ICATE                  | RECOVE   | RY STUD                 | Y                         |      |
|-------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes          |                               | [ <b>B</b> ]   | [C]                      | [d]                  | [E]            | Result [F]                  | [6]                    |          |                         |                           |      |
| Benzene           | ŊŊ                            | 0.1000         | 0.0977                   | 86                   | 0.1            | 0.0959                      | 96                     | 2        | 70-130                  | 35                        |      |
| Toluene           | ŊŊ                            | 0.1000         | 0.0961                   | 96                   | 0.1            | 0.0944                      | 94                     | 2        | 70-130                  | 35                        |      |
| Ethylbenzene      | ŊŊ                            | 0.1000         | 0.0980                   | 86                   | 0.1            | 0.0958                      | 96                     | 2        | 71-129                  | 35                        |      |
| m,p-Xylencs       | QN                            | 0.2000         | 0.2147                   | 107                  | 0.2            | 0.2099                      | 105                    | 2        | 70-135                  | 35                        |      |
| o-Xylenc          | QN                            | 0.1000         | 0.1027                   | 103                  | 1.0            | 0.0994                      | 66                     | 3        | 71-133                  | 35                        |      |

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 Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|

Mondates 0 1. 2.2

**BS / BSD Recoveries** 

6



Project Name: DCP Plant to Lea Station 6-Inch Sec 31

Work Order #: 345778 Analyst: BHW

Lab Batch ID: 774382

Date Prepared: 09/26/2009

Batch #: 1

Sample: 538882-1-BKS

**Project ID: 2009-084** Date Analyzed: 09/27/2009 Matrix: Solid

| Units: mg/kg                       |                        | BLAN           | K /BLANK S     | PIKE / B       | LANK S         | PIKE DUPI              | ICATE 1          | RECOVE | RY STUD           | Y                 |      |
|------------------------------------|------------------------|----------------|----------------|----------------|----------------|------------------------|------------------|--------|-------------------|-------------------|------|
| TPH By SW8015 Mod                  | Blank<br>Sample Result | Spike<br>Added | Blank<br>Spike | Blank<br>Spike | Spike<br>Added | Blank<br>Spike         | Blk. Spk<br>Dup. | RPD    | Control<br>Limits | Control<br>Limits | Flag |
| Analytes                           |                        | [B]            |                | 10]<br>X%      | [E]            | Dupncare<br>Result [F] | <b>X</b> %       | %      | 70 K              | %K/U              |      |
| C6-C12 Gasoline Range Hydrocarbons | DN                     | 1000           | 687            | 06             | 1000           | 816                    | 92               | 2      | 70-135            | 35                |      |
| C12-C28 Dicsel Range Hydrocarbons  | QN                     | 1000           | 1020           | 102            | 1000           | 0901                   | 901              | 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

 Image: Startage
 





Work Order #: 345778

Date Analyzed: 09/26/2009 Lab Batch ID: 774486

**Reporting Units:** mg/kg

**Project ID: 2009-084** 

QC- Sample ID: 345778-001 S Date Prepared: 09/25/2009

Matrix: Soil ASA Analyst: Batch #:

-

|   |                                   | [A]                   |                                |                               | II JO VIV             | VE DUFLICA.                              | IE RECU                     | VENT     | 10010                   |                           |      |
|---|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B<br>Analytes                     | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Benzene   | QN                                | 0.1076                | 0.0763                         | 11                            | 0.1076                | 0.0783                                   | 73                          | e        | 70-130                  | 35                        |      |
| Toluene   | ŊŊ                                | 0.1076                | 0.0810                         | 75                            | 0.1076                | 0.0800                                   | 74                          | -        | 70-130                  | 35                        |      |
| Ethylbenzene                                      | QN                                | 0.1076                | 0.0813                         | 76                            | 0.1076                | 0.0804                                   | 75                          | -        | 71-129                  | 35                        |      |
| m,p-Xylencs                                       | QN                                | 0.2152                | 0.1836                         | 85                            | 0.2152                | 0.1796                                   | 83                          | 2        | 70-135                  | 35                        |      |
| o-Xylene  | ND                                | 0.1076                | 0.0891                         | 83                            | 0.1076                | 0.0873                                   | 81                          | 2        | 71-133                  | 35                        |      |
| Lab Batch ID: 774737<br>Date Analyzed: 09/29/2009 | C- Sample ID:<br>Date Prepared:   | 346027-<br>09/29/2    | -001 S<br>209                  | Ba<br>An                      | tch #:<br>alyst: /    | l Matrix<br>ASA                          | :: Soil                     |          |                         |                           |      |

| Reporting Units: mg/kg        |                                   | A                     | ATRIX SPIK                     | E / MAT                       | RIX SPII              | KE DUPLICA'                              | FE RECO                     | <b>VERY</b> | STUDY                   |                           |      |
|-------------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|-------------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B<br>Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>%    | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Benzene                       | 0.0020                            | 0.1066                | 0.0584                         | 53                            | 0.1066                | 0.0580                                   | 53                          | -           | 70-130                  | 35                        | ×    |
| Tolucne                       | 0.0157                            | 0.1066                | 0.0598                         | 41                            | 0.1066                | 0.0593                                   | 41                          | -           | 70-130                  | 35                        | ×    |
| Ethylbenzene                  | 0.0077                            | 0.1066                | 0.0594                         | 48                            | 0.1066                | 0.0594                                   | 48                          | 0           | 71-129                  | 35                        | ×    |
| m,p-Xylencs                   | 0.0112                            | 0.2132                | 0.1292                         | 55                            | 0.2132                | 0.1291                                   | 55                          | 0           | 70-135                  | 35                        | ×    |
| o-Xylene                      | 0.0047                            | 0.1066                | 0.0592                         | 51                            | 0.1066                | 0.0587                                   | 51                          | -           | 71-133                  | 35                        | ×    |

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

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

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



Project Name: DCP Plant to Lea Station 6-Inch Sec 31



Work Order #: 345778

Date Analyzed: 09/27/2009 Lab Batch ID: 774382

QC- Sample ID: 345778-001 S Date Prepared: 09/26/2009

Matrix: Soil -Analyst: BHW

Batch #:

Project ID: 2009-084

| Reporting Units: mg/kg             |                            | M            | ATRIX SPIKI             | Z/MATI           | HAS XIX | KE DUPLICAT                | fe reco        | VERY S | TUDY              |                   |      |
|------------------------------------|----------------------------|--------------|-------------------------|------------------|---------|----------------------------|----------------|--------|-------------------|-------------------|------|
| TPH By SW8015 Mod                  | Parent<br>Sample<br>Decute | Spike        | Spiked Sample<br>Result | Spiked<br>Sample | Spike   | Duplicate<br>Spiked Sample | Spiked<br>Dup. | RPD    | Control<br>Limits | Control<br>Limits | Flag |
| Analytes                           | [A]                        | Added<br>[B] |                         | 10]              | E]      | Kesult [F]                 | <u>1</u>       | %      | %0K               | %KPD              |      |
| C6-C12 Gasoline Range Hydrocarbons | DN                         | 1080         | 968                     | 06               | 1080    | 1140                       | 901            | 16     | 70-135            | 35                |      |
| C12-C28 Dicsel Range Hydrocarbons  | ND                         | 1080         | 1140                    | 106              | 1080    | 1300                       | 120            | 13     | 70-135            | 35                |      |

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

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

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



# Sample Duplicate Recovery



#### Project Name: DCP Plant to Lea Station 6-Inch Sec 31

Work Order #: 345778

| Lab Batch #: 774064         |                |                             |                               | Project I | <b>D:</b> <sup>2009-084</sup> | 1     |
|-----------------------------|----------------|-----------------------------|-------------------------------|-----------|-------------------------------|-------|
| Date Analyzed: 09/25/2009   | Date Prepared: | 09/25/2009                  | Anal                          | yst:BEV   |                               |       |
| QC- Sample ID: 345778-001 D | Batch #:       | 1                           | Mat                           | rix: Soil |                               |       |
| Reporting Units: %          | S              | AMPLE                       | SAMPLE                        | DUPLIC    | ATE REC                       | OVERY |
| Percent Moisture            | Par            | ent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result | RPD       | Control<br>Limits<br>%RPD     | Flag  |
| Analyte                     |                |                             | [ <b>B</b> ]                  |           |                               |       |
| Percent Moisture            |                | 7.07                        | 7.41                          | 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 B

IAI Disbrield × ×× × × × × × zzzzazz Project Name: DCP Plant to Lea Station 6-Inch Sec 31 NPDES Lone Star #4125 (84 (45 (9)(control-erro) TAT HBU ç ODE 3 sebirolric 6265 007 EPA Paint Flast Test Laboratory Commentar: Sentido Contratory Commentar: Sentido Contratorio Contratorio VOXOS Free of Headespace? Labore and an octavitation () Labore and an octavitation () Custory and an octavitation () HAG 🗌 такр Phone: 432-563-1800 Fax: 432-563-1713 .M.A.O.N CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST eHe iDB X 0929 XB18 OCCUPIER DIE × × × х × × × Temperature Upon Receipt: ampled Client Rep CPS Sample Hand Delivered Project Loc: Lea County, NM PO #. PAA - J. Henry X Standard Project #: 2009-084 45 BH GH IN DO BE B SAR / ESP / CEC 2 wions (Cl, BC4; Ahz (N .SN .QM .60) and Report Format: 5001 X1 3441 9001 X1 9.73 0117.16 ime firms 1443 × The second 1'91> × × × × muco Aponda Soil Soil Soll Soil Soll Soll Soil Soil Soil Soil Date Date (Vitrage ) variation cstanlev@basinenv.com (HAR) arow 12600 West I-20 East Odessa, Texas 79765 OX6-EN HOW ,02,H (C X YON IDH (575) 396-1429 ONH × × × 00 × × × × × × enseriatino D to .a lase -\*\* -\*\*\* ~ fain burefird bu Fax No: e-mail: 1110 1240 1500 1150 1000 1030 1100 1140 1220 1340 beigmag emil 03 Anora PAGE 01 OF 9/21/2009 9/21/2009 9/21/2009 9/22/2009 9/21/2009 9/22/2009 9/22/2009 9/22/2009 9/21/2009 9/22/2009 Received by: Received by: Basin Environmental Service Technologies, LLC beldmes etc0 yidag Bujpuj 1710 Rine Environmental Lab of Texas Inte ŝ dinaing Deph Plesen Lovington, NM 58260 Date, Vale Date 2300 Plains Hwy いば -2244 Curt Stanley 345778 (575) 441-MW-2 @ 15' MW-2 @ 30' NW-2 @ 45' MW-2 @ 60' NW-2 @ 75' MW-3@15 MW-3 @ 30' NW-3 @ 45 MW-3 @ 60' MW-4 @ 15' FIELD CODE -Company Address: Sampler Signature: Project Manager Company Name Telephone No: City/State/Zip: ectal Instructions (lab use only). inguished by ORDER #: ŝ 20 3 28 8 53 0 õ (Aiuo eśn dej) # Gu

# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

|              | _          |               |            | 1          |             |           |             |                  | ſ     | TAT bisonsiz                              | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         |      | 1.A           | Y 1.            |                   |   |
|--------------|------------|---------------|------------|------------|-------------|-----------|-------------|------------------|-------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|---------------|-----------------|-------------------|---|
|              | 6.3        |               |            |            | SEC<br>SEC  |           |             | n et             | .92   | AUSH TAT (Pre-standard 24, 4              |           |           |           |           |           |           |           |           | -         |      | 1. (z z       |                 | in the second     | U U   |
|              | Se         |               |            |            | NP(         |           |             |                  |       | Chiorides E 300                           |           |           |           |           |           |           |           |           |           |      | 107           | <u> </u>        |                   |   |
|              | 2          |               |            |            |             |           |             | •                |       | 1201 1000 1018 AGB                        |           |           |           |           |           |           |           |           |           | ·    | 66            | 6035            | ക്ക               |   |
|              | 5          |               |            |            |             |           |             |                  |       | HA9                                       |           |           |           |           |           |           |           |           |           |      |               | ,               | 3                 | Ĵ   |
| 713          | UQ1        |               |            |            | бЪ          |           |             |                  |       | .M.B.O.N                                  |           |           |           |           |           |           |           |           |           |      | <u>.</u>      | $\sim \gamma$   |                   | , ,   |
| 5.1          | Stat       |               |            |            | H           |           |             |                  |       |   |           |           |           |           |           |           |           |           |           |      |               |                 | Ē                 |   |
| 32-5         | e3         |               |            |            | <u> </u>    |           | ž -         | ×+               |       | 10154 6021816099 01 BTEX 625              | ×         | ×         |           | _×        | ×         | <u> </u>  | <u>×</u>  | ×         | ×         |      | 1.1           | ine.<br>Visit   | - 8 v             | ceipt   |
| भूम्<br>प्र  | 8          |               | ŴN         | 2          |             |           | 82.         |                  |       | eolatio Amaŭ                              |           |           | _         |           |           |           |           |           |           |      | nent<br>S Int | otts)           | e a d             | ga  |
| й н          | ant        | 7             | ιţλ'       | Hên        | pard        |           | Anal        | $\left  \right $ |       | Activities in the color of the color      |           |           |           |           |           |           |           |           |           |      | omo<br>Presi  | 40.5            | Έğ.               | 50  |
| a            | ā          | õ             | Cou        |            | ČE L        |           | á,          | 5t               |       | RAR/ ESP/ CEC                             |           |           |           |           |           |           |           | {         |           |      | の日日           | con<br>eats     | fand<br>Die gener | 1-1-25  |
|              | - Õ        | 200           | 3          | PAA        | เรา         |           | 1<br>2<br>1 | 10               |       | (Vrinsleal A, MOS, JD) enclared           |           |           |           |           |           |           |           | -         |           |      |               | 5.2 g           | 18.8.8            |   |
|              | 'ag'       | `             | ÿ          | *          |             |           |             |                  |       | Cations (Ca, Mg, Va, K)                   |           |           |           |           |           |           |           |           |           |      | 1             | 133             |                   | <u> </u>  |
|              | N8N        | sject         | ב<br>ד     | S.         | mat         |           |             | ٢                | ***   | 8001 AT 2001 XT (H9T                      |           |           |           |           | -         | -         |           | -         |           |      |               | T               | <u> </u>          |   |
|              | 18         | Pre           | roje       |            | For         |           |             |                  | 62    | 109 (MS108) 1'819 -Hd1                    | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         |      |               | Ê               | Ê                 | 18 3  |
|              | 5.<br>0.   |               | ۵          |            | ۲ŏ          |           |             | ٦,               | 5     | HURMOR ADDRESS ADDRESS OBJECT             |           | _         | _         | _         | _         |           | _         | -         | _         |      | 1             | <b></b>         | <b>[</b>          |   |
|              |            |               |            |            | Sei S       |           |             |                  | DBW.  | CW= Onumber States                        | ŝ         | Sci       | So        | Soi       | ŝ         | ŝ         | So        | ŝ         | Soi       |      |               |                 | 1                 | v   |
|              | 1          | 1             |            | ł          |             | _         |             | ŀ                | +     | signification of the states of the states |           |           |           |           |           |           |           |           |           |      |               | -               | 5                 | 19 0  |
|              |            |               |            |            |             | 5         |             |                  | ۶ł    | (Store ( Somethy)                         |           |           |           |           |           | -         |           |           |           |      |               | G               | 2                 | 6 63  |
| 88 st        |            |               |            |            |             | N.C       |             |                  | Į.    | forsien                                   |           |           |           |           |           |           |           |           |           |      | 1             |                 | <u> </u>          | 0   |
| 797<br>797   |            |               |            |            |             | 2e        |             |                  | š     | HOM                                       |           |           | -         |           |           |           |           |           |           | •    |               |                 |                   |   |
| x115         |            |               |            |            |             | Se        |             |                  |       | *05 <sup>4</sup> H                        |           |           |           |           |           |           |           |           |           | ~~~~ |               |                 |                   |   |
| Vest<br>, Te |            |               |            |            | 8           | õ         |             |                  | ŝ     | HCI (NOV X 3)                             |           |           |           |           |           |           |           |           |           |      |               | 1               |                   | ľ   |
| 1 00         |            |               |            |            | -1-<br>92   | θY        |             | 1                |       | "ONH                                      |           |           |           |           |           |           |           |           | -         |      |               |                 | 1                 | -   |
| 6 126<br>Oct |            |               |            |            | 5) 36       | he        |             | Ľ                | Ī     | ÷21                                       | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         | ×         |      | 1             |                 |                   |   |
|              |            |               |            |            | 15          | S         |             | _                | Τ     | nanisino) to .a intera                    | -         | -         |           |           |           | -         |           |           |           |      |               |                 |                   |   |
|              |            |               |            |            |             |           |             |                  |       | bereti Piefi                              |           |           |           |           |           |           |           |           |           |      | 1             |                 |                   | È l   |
| /            | - 05       |               |            |            | Fax No.     | e-mail.   |             |                  |       | beigma2 emit                              | 1550      | 1630      | 1720      | 0830      | 0855      | 0915      | 0550      | 1040      | 1135      |      |               |                 |                   | 29  |
|              | PAGE 02 05 | gies, LLC     |            |            |             |           |             |                  |       | საქოვნ აჩიე                               | 9/22/2009 | 9/22/2009 | 9/22/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 | 9/23/2009 |      |               | Recorded by.    | Received by,      | Record DV ELD   |
| Ι            |            | ech nok       |            |            |             | 3         |             |                  |       | Ending Depth                              |           |           |           |           |           |           |           |           |           |      |               | 1 0             | e                 | 2   |
|              |            | I NICE        |            |            |             | C-F       |             |                  |       | digad galanigad                           |           |           |           |           |           |           |           |           |           | _    |               | 1               | F                 | F   |
|              | م.<br>۲    | ironmental Se | s Hwy      | NM 68260   | 244         | 0.0       | -           |                  | _     |   |           |           |           |           |           |           |           |           |           |      |               | 0#ce<br>9/23/46 | Date              | Date  |
|              | Curl Stank | Basin Envi    | 2800 Plain | Lovington, | (575) 441-2 | XU        |             | SU S             | 7.0   | LD CODE                                   | 4@30'     | 4 @ 45'   | -4 @ 60'  | -1 @ 10   | -1 @ 20'  | -1 @ 30'  | -1 @ 40'  | -1@50     | -1 @ 50'  |      |               |                 | -                 | - And a second se |
|              | anager:    | Name          | Address    | /Zip:      | o No.       | Signature |             | Zel              | 2     | 96  | WW        | MM        | MM        | MW        | MM        | MW        | MW        | WW        | MW        |      |               | [wh             |                   |   |
|              | Project M  | Company       | Company    | City/State | Telephon    | Sampler ( | trity)      |                  | H.    |   |           |           |           |           |           |           |           |           |           |      | istructions.  | X:H             | )) /apa           | ed by:  |
|              |            |               |            |            |             |           | (lab use o  | opuqu            | Vanyo | (Vino seu dai) a BAJ                      | Ξ         | . 21.     | 5         | 14        | 5         | 10        | -         | 6         | 2         |      | Special It    | using a         | Relercust         | Referquésh  |

#### Environmental Lab of Texas

#### Variance/ Corrective Action Report- Sample Log-In

| Client     | Brisin Env. | Plains     |
|------------|-------------|------------|
| Date/ Time | 9.23.09     | 17:10      |
| Lab ID # 1 | 3457        | 7 <u>0</u> |
| initials:  | <u> </u>    |            |

#### Sample Receipt Checklist

|     |  |        |    |                 | CI                | ient Init |
|-----|--|--------|----|-----------------|-------------------|-----------|
| #1  | Temperature of container/ cooler?                      | Yés    | No | 4.1             | ° C               |           |
| #2  | Shipping container in good condition?                  | (Yes)  | No |                 |                   |           |
| #3  | Custody Seals intact on shipping container/ cooler?    | Yes    | No | Not Pres        | ient <sup>)</sup> |           |
| #4  | Custody Seals intact on sample bottles/ container?     | (Yes') | No | Not Pres        | sent              |           |
| #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?                 | CYES   | No | Not Appli       | cable             |           |
| #10 | Sample matrix/ properties agree with Chain of Custody? | Yes    | No |                 |                   |           |
| #11 | Containers supplied by ELOT?                           | Yes    | No |                 |                   |           |
| #12 | Samples in proper container/ bottle?                   | (Les)  | No | See Be          | tow               |           |
| #13 | Samples properly preserved?                            | (Yes)  | No | See Be          | iow               |           |
| #14 | Sample bottles intact?                                 | (Tes)  | No |                 |                   |           |
| #15 | Preservations documented on Chain of Custody?          | Tes    | No |                 |                   |           |
| #16 | Containers documented on Chain of Custody?             | (Yes)  | No |                 |                   |           |
| #17 | Sufficient sample amount for indicated test(s)?        | (Yes)  | No | See Be          | low               |           |
| #18 | All samples received within sufficient hold time?      | (Yes)  | No | See Be          | low               |           |
| #19 | Subcontract of sample(s)?                              | Yes    | No | Not Appli       | cable )           |           |
| #20 | VOC samples have zero headspace?                       | Yes')  | No | Not Appl        | cable             |           |

#### Variance Documentation

\_\_\_\_

Date/ Time:

Contact: Regarding:

Corrective Action Taken:

Check all that Apply:

See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

# Analytical Report 347770

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

DCP Plant to Lea Station 6 Inch Sec 31

2009-084

13-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)



13-OCT-09

8

Ð

0

6

(

**(** 

Ð

6

Ø

0

6

() ()



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

#### Reference: XENCO Report No: 347770 DCP Plant to Lea Station 6 Inch Sec 31 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 347770. 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. 347770 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

Page 2 of 16

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





# Sample Cross Reference 347770

# PLAINS ALL AMERICAN EH&S, Midland, TX

DCP Plant to Lea Station 6 Inch Sec 31

| Sample Id | Matrix | Date Collected Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------------|---------------|
| SP-1      | S      | Oct-08-09 13:30             | 347770-001    |
| SP-2      | S      | Oct-08-09 13:40             | 347770-002    |
| SP-3      | S      | Oct-08-09 13:50             | 347770-003    |





Ċ,

#### Client Name: PLAINS ALL AMERICAN EH&S Project Name: DCP Plant to Lea Station 6 Inch Sec 31

 Project ID:
 2009-084

 Work Order Number:
 347770

Report Date: 13-OCT-09 Date Received: 10/09/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-776505 TX1005 None

Batch: LBA-776553 BTEX-MTBE EPA 8021B SW8021BM

Batch 776553, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis Samples affected are: 347770-001.

#### SW8021BM

Batch 776553, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 347770-001, -002, -003. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-776634 Percent Moisture None

Batch: LBA-776812 TX1005 None



Contact: Jason Henry

Certificate of Analysis Summary 347770 PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: DCP Plant to Lea Station 6 Inch Sec 31



Date Received in Lab: Fri Oct-09-09 08:17 am

Report Date: 13-OCT-09

| Project Location: Lea County, NM   |            |                 |                 |                 | Keport Date:            | 13-001-09        |   |
|------------------------------------|------------|-----------------|-----------------|-----------------|-------------------------|------------------|---|
|                                    |            |                 |                 |                 | <b>Project Manager:</b> | Brent Barron, II |   |
|                                    | Lab Id:    | 347770-001      | 347770-002      | 347770-003      |                         | -                |   |
| Analysis Danuastad                 | Field Id:  | SP-I            | ŚP-2            | SP-3            |                         |                  |   |
| naisanhay sistinut                 | Depth:     |                 |                 |                 |                         |                  |   |
|                                    | Matrix:    | SOIL            | SOIL            | SOIL            |                         |                  | _ |
|                                    | Sampled:   | Oct-08-09 13:30 | Oct-08-09 13:40 | Oct-08-09 13:50 |                         |                  |   |
| BTEX by EPA 8021B                  | Extracted: | Oct-09-09 13:00 | Oct-09-09 13:00 | Oct-09-09 13:00 |                         |                  |   |
|                                    | Analyzed:  | Oct-09-09 16:54 | Oct-09-09 17:16 | Oct-09-09 17:37 |                         |                  |   |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        |                         |                  | ; |
| Benzene                            |            | ND 0.0010       | ND 0.0010       | ND 0.0010       |                         |                  |   |
| Tolucne                            |            | 0.0022 0.0021   | ND 0.0021       | ND 0.0021       | }                       |                  |   |
| Ethylbenzene                       |            | 0.0055 0.0010   | 0.0019 0.0010   | 0100.0 UN       | , 40 APR                | ]                |   |
| m,p-Xylenes                        |            | 0.0343 0.0021   | 0.0042 0.0021   | ND 0.0021       |                         |                  |   |
| o-Xylenc                           |            | 0.0217 0.0010   | 0.0038 0.0010   | ND 0.0010       |                         |                  |   |
| Total Xylencs                      |            | 0.0560 0.0010   | 0.0080 0.0010   | ND 0.0010       |                         |                  |   |
| Total BTEX                         |            | 0.0637 0.0010   | 0.0099 0.0010   | ND 0.0010       |                         |                  |   |
| Percent Moisture                   | Extracted: |                 |                 |                 |                         |                  |   |
|                                    | Analyzed:  | Oct-12-09 13:38 | Oct-12-09 13:38 | Oct-12-09 13:38 |                         |                  |   |
|                                    | Units/RL:  | % RL            | % RL            | % RL            |                         |                  |   |
| Percent Moisture                   | •          | 3.65 1.00       | 5.15 1.00       | 5.20 1.00       |                         |                  |   |
| TPH By SW8015 Mod                  | Extracted: | Oct-09-09 13:00 | Oct-09-09 13:00 | Oct-09-09 15:18 |                         |                  |   |
|                                    | Analyzed:  | Oct-11-09 17:30 | Oct-11-09 17:56 | Oct-12-09 19:18 |                         |                  |   |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        | mg/kg RL        |                         |                  |   |
| C6-C12 Gasoline Range Hydrocarbons |            | 55.1 15.6       | 22.4 15.8       | ND 15.8         |                         |                  |   |
| C12-C28 Diesel Range Hydrocarbons  |            | 489 15.6        | 189 15.8        | ND 15.8         |                         |                  |   |
| C28-C35 Oil Range Hydrocarbons     |            | 28.5 15.6       | ND 15.8         | ND 15.8         |                         |                  |   |
| Total TPH                          |            | 573 15.6        | 211 15.8        | ND 15.8         | t                       |                  |   |

This analytical report, and the entite data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed introughout this analytical report represent the besi juggment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and marks 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 - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Manager Brent Barron, II



**(**) ()

Sec. 2

6) ()

6

**()** 

(\*) (\*)

a g

9 9

6



- 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.

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 - Corpus Christi - Midland/Odessa - Tampa - Miami - Latin America

|   | FIIOIC         | гах            |
|---|----------------|----------------|
| 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 |
|   |                |                |

| $\square \square \square \square \square \square$ |
|---|
| ) < <b></b> ( < 0 )                               |
|   |
| Reflection  |
|   |

# Form 2 - Surrogate Recoveries

#### Project Name: DCP Plant to Lea Station 6 Inch Sec 31

| <b>Work Orders :</b> 347770 | ),<br>Samalar 5400000 1 BKS / B      |                        | Project II             | <b>D:</b> 2009-084    |                         |       |
|-----------------------------|--------------------------------------|------------------------|------------------------|-----------------------|-------------------------|-------|
| Lan Balen #: 170555         | <b>Date Analyzed:</b> 10/09/09 12:01 | SU SU                  | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTE                         | X by EPA 8021B                       | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene         |                                      | 0.0305                 | 0.0300                 | 102                   | 80-120                  |       |
| 4-Bromofluorobenzene        |                                      | 0.0300                 | 0.0300                 | 100                   | 80-120                  |       |
| Lab Batch #: 776553         | Sample: 540222-1-BSD / B             | SD Batc                | h: <sup>1</sup> Matrix | Solid                 |                         |       |
| Units: mg/kg                | Date Analyzed: 10/09/09 12:22        | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTE                         | X by EPA 8021B<br>Analytes           | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene         | ······                               | 0.0301                 | 0.0300                 | 100                   | 80-120                  |       |
| 4-Bromofluorobenzene        |                                      | 0.0299                 | 0.0300                 | 100                   | 80-120                  |       |
| Lab Batch #: 776553         | Sample: 540222-1-BLK / E             | BLK Bate               | h: <sup> </sup> Matrix | :Solid                | I                       |       |
| Units: mg/kg                | Date Analyzed: 10/09/09 13:05        | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTE                         | X by EPA 8021B<br>Analytes           | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene         |                                      | 0.0272                 | 0.0300                 | 91                    | 80-120                  |       |
| 4-Bromofluorobenzene        |                                      | 0.0300                 | 0.0300                 | 100                   | 80-120                  |       |
| Lab Batch #: 776553         | Sample: 347770-001 / SMF             | Bate                   | h: <sup>1</sup> Matrix | :Soil                 | 1                       |       |
| Units: mg/kg                | Date Analyzed: 10/09/09 16:54        | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTE                         | X by EPA 8021B<br>Analytes           | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene         |                                      | 0.0257                 | 0.0300                 | 86                    | 80-120                  |       |
| 4-Bromofluorobenzene        |                                      | 0.0399                 | 0.0300                 | 133                   | 80-120                  | *     |
| Lab Batch #: 776553         | Sample: 347770-002 / SMF             | Bate                   | h: <sup>1</sup> Matrix | Soil                  | •                       |       |
| Units: mg/kg                | Date Analyzed: 10/09/09 17:16        | SU                     | RROGATE RI             | ECOVERY               | STUDY                   |       |
| BTE                         | X by EPA 8021B<br>Analytes           | Amount<br>Found<br>[A] | True<br>Amount<br>[B]  | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluorobenzene         |                                      | 0.0271                 | 0.0300                 | 90                    | 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.

| 23  | ĴE | R   | ٩ |
|-----|----|-----|---|
| lot | ac | COT | œ |

# Form 2 - Surrogate Recoveries

#### Project Name: DCP Plant to Lea Station 6 Inch Sec 31

| Work Orders : 347770  | ,                             |                        | Project II            | <b>b:</b> 2009-084     |                         |          |
|-----------------------|-------------------------------|------------------------|-----------------------|------------------------|-------------------------|----------|
| Lab Batch #: //6553   | Sample: 34/770-0037 SMP       | Batel                  | h: 1 Matrix:          | Soil                   | TUDV                    |          |
| Units: mg/kg          | Date Analyzed: 10/09/09 17:37 |                        | KRUGATE KE            |                        |                         |          |
| ВТЕХ                  | K by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R         | Control<br>Limits<br>%R | Flags    |
|                       | Analytes                      |                        |                       | [D]                    |                         |          |
| 1,4-Difluorobenzene   |                               | 0.0267                 | 0.0300                | 89                     | 80-120                  |          |
| 4-Bromofluorobenzene  |                               | 0.0304                 | 0.0300                | 101                    | 80-120                  |          |
| Lab Batch #: 776553   | Sample: 347823-001 S / MS     | Batcl                  | h: I Matrix:          | Soil                   |                         |          |
| Units: mg/kg          | Date Analyzed: 10/09/09 22:54 | SU                     | RROGATE RE            | ECOVERY                | STUDY                   |          |
| BTEX                  | Analytas                      | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]  | Control<br>Limits<br>%R | Flags    |
| 1.4-Difluorobenzene   | Analytes                      | 0.0288                 | 0.0300                | 06                     | 80.120                  |          |
| 4-Bromofluorobenzene  |                               | 0.0334                 | 0.0300                |                        | 80-120                  |          |
| <b>1 D D H 77(55)</b> | 0 1 247922 001 SD / N         |                        |                       | Call                   | 00120                   |          |
| Lab Batch #: //0003   | Sample: 347823-001 SD7 W      | ISD Batch              | h: I Matrix           | SOIL                   | STUDY                   |          |
| Units: mg/kg          | Date Analyzed: 10/09/09 23:16 | 50.                    | KRUGATE KI            |                        |                         |          |
| BTEX                  | K by EPA 8021B                | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>.[D] | Control<br>Limits<br>%R | Flags    |
| 1.4-Difluorobenzene   |                               | 0.0289                 | 0.0300                | 96                     | 80.120                  |          |
| 4-Bromofluorobenzene  |                               | 0.0324                 | 0.0300                | 108                    | 80-120                  |          |
| Lab Ratab #1 776505   | Semple: 540186-1-BKS / B      | KS Patal               | h. 1 Matrix           | Solid                  |                         |          |
| Lab Balch #. 770505   | Date Analyzed: 10/11/09 08:10 | SU                     | RROGATE RI            | COVERY                 | STUDY                   |          |
| TPH I                 | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D]  | Control<br>Limits<br>%R | Flags    |
| I-Chlorooctane        | j                             | 103                    | 100                   | 103                    | 70-135                  | <u> </u> |
| o-Terphenyl           |                               | 44.8                   | 50.0                  | 90                     | 70-135                  |          |
| Lab Batch #: 776505   | Sample: 540186-1-BSD / B      | SD Batel               | h: 1 Matrix:          | :Solid                 |                         |          |
| Units: mg/kg          | Date Analyzed: 10/11/09 08:36 | SU                     | RROGATE RI            | ECOVERY                | STUDY                   |          |
| ТРН І                 | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>{D}  | Control<br>Limits<br>%R | Flags    |
| 1-Chlorooctane        |                               | 109                    | 100                   | 109                    | 70-135                  |          |
| o-Terphenyl           | ······                        | 48.3                   | 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.

12:50

|     |     |               | _             |
|-----|-----|---------------|---------------|
| ~   |     | $\sim$        |               |
| 150 | 1 1 | ' I C         | (0)           |
| 11  |     |               | $\mathcal{S}$ |
|     | n   | 8 - A - A - A | 0             |
| 110 | លោ  | സ             | ngg.          |
| 1   |     |               |               |

() ()

0

0 0

0

B

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6 Inch Sec 31

| <b>Vork Orders :</b> 347770 | ,                             |                        | Project II            | D: 2009-084           |                         |       |
|-----------------------------|-------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 770303         | Sample: 340180-1-BLK / B      | LN Bate                | RROGATE R             | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R        | Control<br>Limits<br>%R | Flags |
|                             | Analytes                      |                        |                       | [D]                   |                         |       |
| 1-Chlorooctane              |                               | 93.9                   | 100                   | 94                    | 70-135                  |       |
| o-Terphenyl                 |                               | 48.9                   | 50.0                  | 98                    | 70-135                  |       |
| Lab Batch #: 776505         | Sample: 347770-001 / SMP      | Batc                   | h: 1 Matrix           | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 10/11/09 17:30 | SU                     | RROGATE R             | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctanc              |                               | 96.9                   | 100                   | 97                    | 70-135                  |       |
| o-Terphenyl                 |                               | 47.1                   | 50.0                  | 94                    | 70-135                  |       |
| Lab Batch #: 776505         | Sample: 347770-002 / SMP      | Batc                   | h:   Matrix           | :Soil                 | <b>I</b>                |       |
| Units: mg/kg                | Date Analyzed: 10/11/09 17:56 | SU                     | RROGATE R             | ECOVERY               | STUDY                   |       |
| TPH                         | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 98.4                   | 100                   | 98                    | 70-135                  |       |
| o-Tcrphenyl                 |                               | 48.2                   | 50.0                  | 96                    | 70-135                  |       |
| Lab Batch #: 776505         | Sample: 347445-001 S / MS     | Batc                   | h: I Matrix           | :Soil                 | • <u> </u>              |       |
| Units: mg/kg                | Date Analyzed: 10/11/09 18:21 | SU                     | RROGATE R             | ECOVERY               | STUDY                   |       |
| ТРН                         | By SW8015 Mod                 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | 106                    | 100                   | 106                   | 70-135                  |       |
| o-Terphenyl                 |                               | 41.5                   | 50.0                  | 83                    | 70-135                  |       |
| Lab Batch #: 776505         | Sample: 347445-001 SD / N     | ISD Bate               | h:   Matrix           | :Soil                 | L                       |       |
| Units: mg/kg                | Date Analyzed: 10/11/09 18:47 | su                     | RROGATE R             | ECOVERY               | STUDY                   |       |
| TPH 1                       | By SW8015 Mod<br>Analytes     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |                               | · 107                  | 100                   | 107                   | 70-135                  |       |
| o-Terphenyl                 |                               | 41.3                   | 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.

| ĺ | $\sim \sim \sim \sim \sim$   |
|---|--|
|   | いべ ゴ ' ( ぺ の )   |
| 1 |  |
|   | 0-   |
|   | CONTROUMES -   |
|   | 나는 그는 그는 그는 그는 것을 가장하는 것을 하는 것을 수가 있다. 이렇는 것을 하는 것을 수가 있는  것을 것을 수가 않아? 것을 것을 수가 있는 것을 것을 수가 않아? 것을 수가 않아? 것을 것 같이 않아? 것 않아? 것 같이 않아? 것 같이 않아? 것 같이 않아? 것 같이 않아? 것 같이 않아? 것 같이 않아? 것 않아? 않아? 것 같이 않아? 않아? 않아? 것 않아? 않아? 않아? 않아? 않아? 않아? 않아? 않아? 않아? 않아? |

**OO** 

0

# Form 2 - Surrogate Recoveries

Project Name: DCP Plant to Lea Station 6 Inch Sec 31

| <b>Vork Orders :</b> 347770 | ,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>,<br>, | 1/ C                   | Project II            | <b>D:</b> 2009-084    |                         |       |
|-----------------------------|---|------------------------|-----------------------|-----------------------|-------------------------|-------|
| Lab Batch #: 776812         | Sample: 540368-1-BKS / B  | KS Bate                | RROGATE RI            | ECOVERY               | STUDY                   |       |
| TPH I                       | By SW8015 Mod<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| I-Chlorooctane              |   | 106                    | 99.9                  | 106                   | 70-135                  |       |
| o-Terphenyl                 | ······································  | 44.0                   | 50.0                  | 88                    | 70-135                  |       |
| Lab Batch #: 776812         | Sample: 540368-1-BSD / B  | SD Bate                | h: 1 Matrix           | :Solid                |                         |       |
| Units: mg/kg                | Date Analyzed: 10/12/09 16:23   | SU                     | RROGATE RI            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |   | 109                    | 99.8                  | 109                   | 70-135                  |       |
| o-Terphenyl                 |   | 44.1                   | 49.9                  | 88                    | 70-135                  | ·     |
| Lab Batch #: 776812         | Sample: 540368-1-BLK / B  | BLK Bate               | h: 1 Matrix           | :Solid                |                         |       |
| Units: mg/kg                | Date Analyzed: 10/12/09 16:48   | SU                     | RROGATE RI            | ECOVERY               | STUDY                   |       |
| ТРН І                       | By SW8015 Mod<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |   | 98.2                   | 99.5                  | 99                    | 70-135                  |       |
| o-Terphenyl                 |   | 48.9                   | 49.8                  | 98                    | 70-135                  |       |
| Lab Batch #: 776812         | Sample: 347770-003 / SMF  | Batc                   | h:   Matrix           | :Soil                 |                         |       |
| Units: mg/kg                | Date Analyzed: 10/12/09 19:18   | SU                     | RROGATE RI            | ECOVERY               | STUDY                   | -45-4 |
| ТРН І                       | By SW8015 Mod<br>Analytes   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>{D} | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane              |   | 81.5                   | 99.6                  | 82                    | 70-135                  |       |
| o-Terphenyl                 |   | 39.9                   | 49.8                  | 80                    | 70-135                  |       |

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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

loborolog  $\bigcirc$ 

**BS / BSD Recoveries** 



Ű

() ()

Project Name: DCP Plant to Lea Station 6 Inch Sec 31

Work Order #: 347770 Analyst: ASA

Lab Batch ID: 776553

Date Prepared: 10/09/2009

Batch #: ]

Sample: 540222-1-BKS

Date Analyzed: 10/09/2009 Matrix: Solid

Project ID: 2009-084

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

Flag

| Units: mg/kg                  |                               | BLANI                 | K /BLANK S                      | PIKE / B                    | LANK S                | PIKE DUPL                                 | ICATE F                       | LECOVE   | RY STUD                 | Y                         |
|-------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|
| BTEX by EPA 8021B<br>Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD |
| Benzene                       | QN                            | 0.1000                | 0.0984                          | 98                          | 0.1                   | 0.0973                                    | 67                            | _        | 70-130                  | 35                        |
| Tolucne                       | QN                            | 0.1000                | 0.0967                          | 26                          | 0.1                   | 0.0956                                    | 96                            | -        | 70-130                  | 35                        |
| Ethylbenzene                  | QN                            | 0.1000                | 0.0986                          | 66                          | 0.1                   | 0.0970                                    | - 26                          | 5        | 71-129                  | 35                        |
| m,p-Xylencs                   | QN                            | 0.2000                | 0.2154                          | 108                         | 0.2                   | 0.2121                                    | 106                           | 2        | 70-135                  | 35                        |
| 0-Xvlene                      | CIN                           | 0.1000                | 0 1038                          | 104                         | -                     | 0 1023                                    | 102                           | -        | 71,133                  | 35                        |

| .                    |                    |               |              |               |              |         |            |             |           |           |         |      |
|----------------------|--------------------|---------------|--------------|---------------|--------------|---------|------------|-------------|-----------|-----------|---------|------|
| o-Xylcne             |                    | QN            | 0.1000       | 0.1038        | 104          | 0.1     | 0.1023     | 102         | 1         | 71-133    | 35      |      |
| Analyst: BHW         |                    | D             | tte Prepar   | ed: 10/09/200 | 6            |         |            | Date A      | alyzed: 1 | 0/11/2009 |         |      |
| Lab Batch ID: 776505 | Sample: 540186-1-B | KS            | Batch        | ∎#: ]         |              |         |            |             | Matrix: S | olid      |         |      |
| Units: mg/kg         |                    |               | BLAN         | K /BLANK S    | SPIKE / E    | ILANK S | FIKE DUPI  | ICATE       | RECOVE    | RY STUD   | Y       |      |
| TPH Bv SW801         | 15 Mod             | Blank         | Spike        | Blank         | Blank        | Spike   | Blank      | Blk. Spk    |           | Control   | Control |      |
| 6                    |                    | Sample Result | Added        | Spike         | Spike        | Added   | Spike      | Dup.        | RPD       | Limits    | Limits  | Flag |
|                      |                    | [Y]           |              | Result        | %R           |         | Duplicate  | %R          | %         | %R        | %RPD    |      |
| Anglytes             |                    |               | [ <u>B</u> ] | [c]           | [ <u>a</u> ] | E       | Result [F] | [ <u></u> ] |           |           |         |      |

35 35

70-135 70-135

4 ŝ

8 92

899 921

1000 0001

88 86

884 855

QN Ð

C6-C12 Gasoline Range Hydrocarbons C12-C28 Dicsel Range Hydrocarbons

Analytes

0001 1000 **B** 

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 Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|

<u>Aborellorites</u> 0 

**BS / BSD Recoveries** 



Project Name: DCP Plant to Lea Station 6 Inch Sec 31

Work Order #: 347770 Analyst: BEV

Lab Batch ID: 776812

Date Prepared: 10/09/2009

Batch #: 1

Sample: 540368-1-BKS

**Project ID:** 2009-084 Date Analyzed: 10/12/2009 Matrix: Solid **BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

| Units: mg/kg                       |                               | BLAN           | K /BLANK S               | PIKE / B             | LANK S         | PIKE DUPL                   | ICATE I                | RECOVE   | RY STUD                 | Y                         |      |
|------------------------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| TPH By SW8015 Mod                  | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Bik. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes                           |                               | [B]            | [c]                      | a                    | [E]            | Result [F]                  | <u>[</u>               |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons | QN                            | 666            | 935                      | 94                   | 866            | 944                         | 95                     | 1        | 70-135                  | 35                        |      |
| C12-C28 Dicscl Range Hydrocarbons  | DN                            | 666            | 891                      | 89                   | 866            | 889                         | 89                     | 0        | 70-135                  | 35                        |      |
|                                    |                               |                |                          |                      |                |                             |                        |          |                         |                           |      |

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 Relative Percent Difference RPD = 200\* (C-F)/(C+F)

(clouding)

0

E S S

Project Name: DCP Plant to Lea Station 6 Inch Sec 31



.

Work Order # : 347770

Date Analyzed: 10/09/2009 Lab Batch ID: 776553

Project ID: 2009-084

QC- Sample ID: 347823-001 S Date Prepared: 10/09/2009

Matrix: Soil -ASA Analyst: Batch #:

| Reporting Units: mg/kg                            |                                   | W                     | ATRIX SPIKI                    | E / MATI                      | RIX SPII              | KE DUPLICAT                              | FE RECO              | <b>OVERY</b> | STUDY                   |                           |      |
|---|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|----------------------|--------------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B<br>Analytes                     | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>GG | RPD<br>%     | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Benzene   | QN                                | 0.1000                | 0.0371                         | 37                            | 0.0998                | 0.0361                                   | 36                   | 3            | 70-130                  | 35                        | ×    |
| Tolucne   | QN                                | 0.1000                | 0.0388                         | 39                            | 0.0998                | 0.0376                                   | 38                   | 3            | 70-130                  | 35                        | ×    |
| Ethylbenzene                                      | 0.0011                            | 0.1000                | 0.0389                         | 38                            | 0.0998                | 0.0386                                   | 38                   | -            | 71-129                  | 35                        | ×    |
| m,p-Xylenes                                       | 0.0068                            | 0.2000                | 0.0879                         | 41                            | 0.1996                | 0.0864                                   | 40                   | 2            | 70-135                  | 35                        | ×    |
| o-Xylene  | 0.0027                            | 0.1000                | 0.0453                         | 43                            | 0.0998                | 0.0450                                   | 42                   | -            | 71-133                  | 35                        | Х    |
| Lab Batch ID: 776505<br>Date Analyzed: 10/11/2009 | QC- Sample ID:<br>Date Prepared:  | 347445-<br>10/09/2(   | -001 S<br>009                  | Ba<br>An                      | tch #:<br>alyst: ]    | l Matrix<br>BHW                          | : Soil               |              |                         |                           |      |
| Reporting Units: mg/kg                            |                                   | M                     | ATRIX SPIKI                    | E / MATI                      | RIX SPII              | KE DUPLICAT                              | re reco              | OVERY S      | STUDY                   |                           |      |

|                                    |              |       | ALKIA SFINI   |              |       | NE PUFLICA    | IE RECO | VENIC |         |          |      |
|------------------------------------|--------------|-------|---------------|--------------|-------|---------------|---------|-------|---------|----------|------|
| TDH R. CW8015 Mad                  | Parent       |       | Spiked Sample | Spiked       |       | Duplicate     | Spiked  |       | Control | Control  |      |
| nntal ctrop as c for the           | Sample       | Spike | Result        | Sample       | Spike | Spiked Sample | Dup.    | RPD   | Limits  | Limits   | Flag |
|                                    | Result       | Added |               | %R           | Added | Result [F]    | %R      | %     | %R      | %RPD     |      |
| Analytes                           | [ <b>A</b> ] | [B]   |               | [ <u>[</u> ] | Ξ     |               | [0]     |       |         | <u>.</u> |      |
| C6-C12 Gasoline Range Hydrocarbons | QN           | 1010  | 616           | 16           | 1010  | 937           | 93      | 2     | 70-135  | 35       |      |
| C12-C28 Dicsel Range Hydrocarbons  | 127          | 0101  | 901           | 17           | 1010  | 616           | 78      | 2     | 70-135  | 35       |      |

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

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

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

Page 13 of 16



94 198 1.4

•

# **Sample Duplicate Recovery**



### Project Name: DCP Plant to Lea Station 6 Inch Sec 31

Work Order #: 347770

| Lab Batch #:            | 776634           |             |                         |                               | Project I  | <b>D:</b> 2009-084        | 1     |
|-------------------------|------------------|-------------|-------------------------|-------------------------------|------------|---------------------------|-------|
| Date Analyzed:          | 10/12/2009       | Date Prepai | ed: 10/12/2009          | Ana                           | lyst:BEV   |                           |       |
| QC- Sample ID:          | 346934-001 D     | Batel       | h#: 1                   | Mat                           | rix: Solid |                           |       |
| <b>Reporting Units:</b> | %                |             | SAMPLE /                | SAMPLE                        | DUPLIC     | ATE REC                   | OVERY |
|                         | Percent Moisture |             | Parent Sample<br>Result | Sample<br>Duplicate<br>Result | RPD        | Control<br>Limits<br>%RPD | Flag  |
|                         | Analyte          |             |                         | [B]                           |            |                           |       |
| ercent Moisture         |                  |             | 3.17                    | 3.39                          | 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



# 0 Ö

|                      | Variance/ Corrective Action R  | eport- Sampi  | le Log-Ir       | r  |         |
|----------------------|--|---|-----------------|--|---------|
| Chent.               | Plains Basin   |   |                 |  |         |
| Date/ Time           | 10/10/109 817  |   |                 |  |         |
| lah ID #             | 347770   |   |                 |  |         |
| Initials             | (a) i d  |   |                 |  |         |
|                      | Sample Receip  | t Checklist   |                 |  |         |
|                      |  |   |                 | Client                                   | nitlais |
| #1 Temperature of    | container/ cooler?   | (ମ୍ବିଚ୍ଚ)   | No              | 3.6 °C                                   |         |
| #2 Shipping contail  | her in good condition?   | (Yes)   | No              |  |         |
| #3 Custody Seals i   | ntact on shipping container/ cooler?   | Yes   | No              | SNot Present                             |         |
| #4 Custody Seals i   | ntact on sample bottles/ container?  | <yes< td=""><td>No</td><td>Not Present</td><td></td></yes<> | No              | Not Present                              |         |
| #5 Chain of Custoo   | ly present?  | (Yes)   | No              |  |         |
| #6 Sample Instruct   | ions complete of Chain of Custody?   | Tes   | No              |  |         |
| #7 Chain of Custor   | ly signed when relinquished/ received?   | Yes   | , No            |  |         |
| #8 Chain of Custor   | ly agrees with sample label(s)?  | Ceò   | No              | ID written on ConL/ Lid                  |         |
| #9 Container label   | s) legible and intact?   | (Yès  | No              | Not Applicable                           |         |
| #10 Sample matrix    | properties agree with Chain of Custody?  | (Yes'   | No              |  |         |
| #11 Containers sup   | plied by ELOT?   | Yês   | No              |  |         |
| #12 Samples in pro   | per container/ bottie?   | (Yēs  | No              | See Below                                |         |
| #13 Samples prope    | irly preserved?  | (Yes  | No              | Sce Below                                |         |
| #14 Sample bottles   | intact?  | (Yes)   | No              | 1  |         |
| #15 Preservations    | documented on Chain of Custody?  | (Yes  | No              | · · · · · · · · · · · · · · · · · · ·    |         |
| #16 Containers doo   | cumented on Chain of Custody?  | Yes   | No              | ·····                                    |         |
| #17 Sufficient same  | amount for indicated test(s)?  | Yes   | No              | Sea Below                                |         |
| #18 All samples rec  | eived within sufficient hold time?   | (Yes)   | No              | See Below                                |         |
| #19 Subcontract of   | semple(s)?   | Yes   | No              |  |         |
| #20 VOC samples      | have zero headspace?   | (Yes)   | No              | Not Applicable                           |         |
|                      | Variance Doci  | umentation  | ······          |  |         |
| Contact:             | Contacted by:  |   | -               | Date/ Time:                              |         |
| Regarding:           |  |   |                 |  |         |
| Corrective Action Ta | iken,  |   |                 |  |         |
| Check all that Apply | See attached e-mail/ fax     Olient understands and wo     Conting process had begun | uid like to prod  | ceed with       | n analysis                               |         |
|                      | Last 2000, proceed ned obge  | . Starty und  | - un reprint 12 | , -, -, -, -, -, -, -, -, -, -, -, -, -, |         |

# Appendix C Photographs

÷ Ò (B e ۲ Ø 



•

DCP Plant to Lea Station 6-Inch Sec 31 excavation, looking southeast



DCP Plant to Lea Station 6-Inch Sec 31 excavation, looking east



DCP Plant to Lea Station 6-Inch Sec 31 excavation, looking north prior to liner installation



DCP Plant to Lea Station 6-Inch Sec 31 excavation, looking north, liner installation in progress



**Ó O O** 

DCP Plant to Lea Station 6-Inch Sec 31 excavation, water packing backfill material



DCP Plant to Lea Station 6-Inch Sec 31, North Trench #1 and East Trench #1 Soil Amendments being placed in Trenches

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

| Release Notification and Corrective Action         OPERATOR         Name of Company       Prints Pipeline, LP         Address       2830 Hby 214 – Berver City, Tr. 7922       Telephone No. (573) 441-1049         Contract Jacon Reary         Lease No.         Lackiny Type Pipeline         Surface Owner NM SLO       Lower City, Tr. 7922         Contact Jacon Reary       Lease No.         Lower School No. (573) 441-1049         Lackiny Type Pipeline         Lower School No. (573) 442- Aper P Specific Scool Cook         Lower School No. (573) 443-1049         Lacking Control Not Not Not Not Not Not Not Not Not Not   | District I<br>1625 N. French<br>District II<br>201 W. Grand<br><u>District III</u><br>1600 Rio Brazo<br><u>District IV</u><br>1220 S. St. Fran | Dr., Hobbs,<br>Avenuc, Arto<br>Road, Azte<br>cis Dr., Santa                                | NM 88240<br>osia, NM 88210<br>c, NM 87410<br>a Fc, NM 87505  | л<br><br>  | Sta<br>Energy Min<br>Oil C<br>C 1220<br>Sa  | ate of<br>nerals<br>Conser<br>South<br>inta Fe                | New Me><br>and Natura<br>vation Di<br>St. France, NM 87:                     | tico<br>al Resources<br>vision<br>ois Dr.<br>505   | RE<br>Al<br>HO  | CEIV<br>PR 2 9 20<br>BBSO(  | ED<br>Qubmit<br>SD <sup>istri</sup>                          | Revised C<br>2 Copies<br>ct Office<br>with Ru             | Form C-14<br>Detober 10, 20<br>to appropria<br>in accordan<br>le 116 on bac<br>side of for |
|---|--|--|--|--|---|---|--|--|---|---|--|---|--|
| OPTERATOR         Distant Report         Initial Report         Image of Company           Address         2500 Hwy 214 – Denver City, 73 7923         Telephone No. (572) 441-1099         Facility Nume         DCC Plant to Las Station 6-incle Sec. 31         Facility Nume         DCC Plant to Las Station 6-incle Sec. 31         Facility Nume         Lesse No.           Surface Owner NM BL/0         Mineral Owner         Lesse No.         Lesse No.         ECOCATION OF RELEASE         County           Lait Letter         Section         Tuwnship         Range         Feel from the         NarWesk Line         County           Lait Letter         Section         Tuwnship         Range         Feel from the         NarWesk Line         County           Lait Letter         Section         Tuwnship         Range         Feel from the         North/Court Plant B         Date and Hoor of Courterse         Lesse No.           Laiting Encode         Crute OB         Not Required         Laiting Encode Plant B         Date and Hoor of Dotecovery         Line and Hoor of Dotecovery           Was a Whetercourse Reached?         Yes         No< Not Required  |  |  |  | Rel  | ease Notific  | ation   | and Co   | orrective /  | (ctio   | n   |  | ár  |  |
| Name of Company       Prime Pipeline, LP       Contact       Jacon Reary         Address       2500 Hoy 244 - Derver City, TV 2923       Telephone NO. (573) 441-1099       Facility Type       Pipeline         Surface Owner NM SLO       Mineral Owner       Lease No.       Lease No.         Link Letter       Social       Township       Range       Feel from the       North/South Line       County       Lease No.         Latitude       N 32       Stell       Feel from the       North/South Line       County       Lea         Latitude       N 32       Stell       Feel from the       North/South Line       County       Lea         Latitude       N 32       Stell       Feel from the       Data and Hour of Occurrence       Data and Hour of Occurrence       Data and Hour of Occurrence       Data and Hour of Discovery       Uatareet       Uatareet       Adv20200 Fiscovery       Uatareet       Data and Hour of Discovery       Uatareet       Data and Hour of Discovery       Uatareet       Data and Hour of Discovery       Uatareet       Uatareet       Adv20200 Fiscovery       Uatareet       Data and Hour of Discovery       Uatareet       Data and Hour of Discovery       Uatareet       Uatareet       Stell       Data and Hour of Discovery       Uatareet       Data and Hour of Discovery       Uatareet       Data   |  |  |  |  |   |   | <b>OPER</b> A  | ATOR   | (   | 🛛 Initi   | al Kepor   | 1]]   | Final Rep  |
| Addiess       200 Hey 14* - Devie Un; Ar 2023       Technike No. 10* Pipeline         Surface Dumer NM SLO       Mineral Downer       I.easily Name         Surface Owner NM SLO       Mineral Owner       I.easily Name         Surface Owner NM SLO       North/South Line       Feet from the       Easy West Line       Convy         Lastitude N 32.52723* Longitude W 103.2906*       NATURE OF RELEASE       Volume Recovered       0.bbits       Date and Hour of Discovery         Ustaware       Ustaware       Ustaware       Ustaware       0.4229209       15:00         Was immediate Notice Given?       Yes       No El Not Required       Lars Of Mon? on 04292020       0.9000 (revised to reportable on 0429202)         Was a Watercourse Resched?       Yes El No       If YES, Yolume Impacting five Watercourse.       If a Watercourse was Impacted, Describe Publy.*         Describe Cause of Problem and Remedial Action Taken.*       Storing of the pipeline eit file release, point is approximately '' Yes, Yolume Impacting five Watercourse.       If a Watercourse was Impacted, Describe Publy.*         Describe Cause of Problem and Remedial Action Taken.*       Storing tin the gravi  | Name of Co   | mpany  | Plains Pipe  | line, LP   |   |   | Contact  | Jason Henr   | <u>y `-</u><br>1000                                     |   |  |   |  |
| Surface Downer N89 S4.0       Mineral Owner       Lease No.         Linit Letter       Section       Twoeship       Range       Peet from the       NorfwSouth Line       Feet from the       County         La       Attacket       31       208       37E       Peet from the       NorfwSouth Line       Feet from the       County         Latitude       N32.52733* Longitude       W 183.2906*       NATURE OF RELEASE       Date and Hour of Discovery       Using and Hour of Discovery       <   | Facility Nar   | ne   | DCP Plant to   | Lea Sta  | tion 6-inch Sec. 3  | 1   | Facility Typ   | pe Pipeline  | 10)/  |   |  |   |  |
| Instrume       Instrum       Instrume       Instrume  | Surface Ow   | ner NM §   | 0.43   |  | Mineral O   | wner  |  |  |   | Lease N   | 10.  |   |  |
| Link Latter       Section       Township       Range       Feet from the       Nork/South Line       Feet from the       Cast/West Line       County         Lafitude       N 32.52733 <sup>6</sup> Longitude       W 103.2906 <sup>6</sup> NATURE OF RELEASE       NATURE OF RELEASE         Type of Kelease       Grade Oll       Volume of Release 20 bits       Volume Recovered       0 bits         Source of Release       Grade Oll       Volume of Release 20 bits       Volume of Release 20 bits       Volume of Release 20 bits         Source of Release       Grade Oll       Volume of Release 20 bits       Volume of Release 20 bits       Volume of Release 20 bits         Was fininediate Notice Grant       If Yes, To Whom? on 04/29/2009       Date and Hour of Discovery       Unknown         Was a Watercourse Reuchee??       If Yes, To Whom? on 04/29/2009       Date and Hour       04/02/2009         Was a Watercourse was Inspaced. Describe Fully.*       If Yes, Voleme Impacting the Watercourse.       If Yes, Voleme Impacting the value of the release. Throughput the subject file is 660 bits/ds/ap and the operating pressure of the pipeline is 45 pis. The depth of the pipeline at the release, piel is approximat 2° bp, The B125 concentration in the Grupt is tess than 10 ppm and the gravity of the crade is 65:         Describe Canse of Problem and Remedial Action Taken.*       The release of rude resulted in a surface stain that measured approximately 6° x 8°. The impacted area will he rewediated  |  |  |  |  | T O O A   | THE   | I ADDI FOR   | NER NER  | acey u  | ARE API #   | 30.02  | 5.0630  | 0.00.000   |
| K       31       206       37E       Canadian M       Latitude       Nature M   | Linit Lefter   | Section  | Township   | Range  | LUCA  | North/  | N OF KE  | LEASE<br>Feet from the   | East/   | West Line   | County   |   |  |
| Latitude N 32.52733* Longitude W 103.7906*         Pres of Release       Crude OI         Date and Hour O Cocurate       Date and Hour O Cocurate         Was Immediate Notice Given?       Yes         Yes       No         Was Immediate Notice Given?       Yes         Yes       No         Was Immediate Notice Given?       Yes         Yes       No         Was a Matercourse Resolve?       Date and Hour         Was a Watercourse Resolve?       Yes         Yes       No         If YES, To Whom? on 04729/2009 (cvised to reportable on 04/29/2009)         Was a Watercourse was Impacted, Describe Fully.*         Describe Cause of Problem and Remedial Action Taken.*         External corrosion of 6* inch pipeline caused a release of crude oil. A Clamp was installed on the pipeline to mitigate the release. Throughput the solid/divide time is 660 bibl/divide is less than 10 appm and the gravity of the crude is 65:         Describe Cause of Problem and Remedial Action Taken.*         The released crude resulted in a surface stain that measured approximately 6' x 8'. The impacted area will be remediated per applicable gaidelines.         In redby certify that the information given above is true and complete to the best of my knowledge and understand that preses which may endange public behath or the crude is adopting the crude is control in actions for releases which may endange public behath or the environment. In addition, NMOCD acceptance  | K  | 3 <u>1</u>   | 205  | 37E  |   | . with  | oraan Dino   |  |   | TO USE DATE   | Lea  |   |  |
| NATURE OF RELEASE         Type of Release       Crude OI       Volume Recovered       0 bbls         Source of Release       0° Steel Pipeline       Date and Hour of Discovere       Date and Hour of Discovere         Was Immediate Notice Given?       Press       No       If YES, To Whon? on 0429/2009       15:00         By Whon?       Jace and Hour       0429/2009       09:00 (revised to reportable on 04/29/2009         Was a Watercourse Reached?       Yes       No       If YES, Volome Impacting the Watercourse.         If a Watercourse was Impacted. Describe Fully.*       If YES, Volome Impacting the Watercourse.       If a Watercourse was Impacted. Describe Fully.*         Describe Cause of Problem and Remedial Action Taken.*       *       The optimization in the crude is less than 10 ppm and the gravity of the crude is 55:         Describe Cause of Problem and Remedial Action Taken.*       *       *         External Affected and Champ Action Taken.*       *       *         External time is 660 biblotaly and the operating pressure of the pipeline is 45 psi. The depth of the pipeline, it the release, point is approximate?       *         The relaxed crude resulted in a surface stain flast measured approximately 6' x 8'. The impacted area will be remediated per applicable gaidelines.       *         I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursue and ange r   |  |  | ۱  |  | Latitude N 32   | 2.52733   | <sup>9</sup> Longitud  | e W 103.2906   |   |   | L  |   |  |
| Type of Release       Crude Oil       Volume of Release       20 bits       Volume of Release       20 bits         Source of Release       6° Steel Pipeline       Date and Hour of Occurrence       Date and Hour of Occurrence       Date and Flour of Discovery         Was Immediate Notice Given?       Yes       No       No </td <td></td> <td></td> <td></td> <td></td> <td>NAT</td> <td>TRE</td> <td>OF REL</td> <td>EASE</td> <td></td> <td></td> <td></td> <td></td> <td>)</td>  |  |  |  |  | NAT   | TRE   | OF REL   | EASE   |   |   |  |   | )  |
| Source of Release     6" Steel Pipeline     Date and Hour of Occurrence     Date and Hour of 0.500 very       Was Immediate Notice Given?     [] Yes     No [S] Not Required     If YES, To Whom? on 04/32/2009     15:00       By Whon? Jason Benry     Date and Hour of 02000 (crevised to reportable on 04/29/2000 (crevised to crevised to crevised to crevised to crevised to crevised to crevise of crevised to crevised to crevised to crevised to crevised to crevised to crevised to crevised to crevise of crevised to crevise crevised to crevised to cr | Type of Rele   | ise Cru  | ıde Oil  |  | 1468.2  |   | Volume of  | f Release 20 bb  | ls  | Volume F  | lecovered  | 0 bbls  |  |
| Was fumediate Notice Given?       Yes       No       Not Required       If YES, To Whom? on 64/29/2009       Data of Not         By Whom? Jason Henry       Data and Houry       Data ande  | Source of Re   | ease 6"  | Steel Pipeline   | 2  |   |   | Date and I   | lour of Occurren   | ce  | Date and 04/02/200  | Hour of I<br>19 15-00  | Discovery   | 1  |
| Yes       No       No <t< td=""><td>Was Immedia</td><td>ite Notice (</td><td>Given?</td><td></td><td></td><td></td><td>If YES, To</td><td>o Whom? on 04/2</td><td>9/2009</td><td>1 0 11 0 21 200</td><td>10100</td><td></td><td></td></t<>   | Was Immedia  | ite Notice (   | Given?   |  |   |   | If YES, To   | o Whom? on 04/2  | 9/2009  | 1 0 11 0 21 200   | 10100  |   |  |
| By Mhon? Jason Heary       Date and Hour       04729200 %0 09:00 (revised to reportable on 0472920         Was a Wutercourse Reached?       If Yes Z No       If Yes, Volume Impacting the Watercourse.         If a Watercourse was Impacted, Describe Fully.*       If a Watercourse was Impacted, Describe Fully.*         Describe Canse of Problem and Remedial Action Taken.*       External corrosion of 6° inch pipeline caused a release of crude oil. A clampi was installed on the pipeline is the release. Throughput the subject line is 660 bbl3(va) and the operating pressure of the pipeline is 45 psi. The depth of the pipeline jst the release, point is approximately 2' bgs. The H25 concentration in the grupt is less than 10 ppm and the gravity of the crude is 65:         Describe Area Affected and Cheanup Action Taken.*       The released crude resulted in a surface stain that measured approximately 6' x 8'. 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 poperasors are regulations all poperasors was regulations allow protests which may endanger regulations allowed their operation shave failed to adequately investigate and remediate contamination that pose a threat to groundlense which may other federal, state, or toeil laws and/or regulations.         Signuture:       Wash and Heury and   |  |  |  | Yes  | No 🛛 Not Re   | quired  | Larry Joi  | inson (initial est   | imate =   | 2-3 bbls ba   | sed on si  | nall surf   | face stain)  |
| □ Yes ⊠ No         If a Wittercourse was Impacted, Describe Fully.*         Describe Cause of Problem and Remedial Action Taken.*         External corrosion of 6° inch pipeline caused a release of crude oil. A clamp was installed on the pipeline to mitigate the release. Throughput the subject line is 660 bbls/day and the operating pressure of the pipeline is 45 psi. The depth of the pipeline at the release point is appreximat 2° bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 55:         Describe Area Affected and Cleanup Action Taken.*         The released crude resulted in a surface stain that measured approximately 6' x 8'. 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 operations have failed to adquately investigue and recent as Trained as Trained Report does not relieve the operator for containation that pose a threat to ground water, surface water, human head 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:       Date:         Printed Name:       Jason Benry         Field Name:       Jason Benry         Printed Name:       Jason Benry         Printed Name:       Jason Benry         Printed Name:       Jason Benry         Printed Name:       Jason Benry         Prin   | By Whom? .<br>Was a Water  | ason Heni  | y<br>.hed?   | ·  | · · · · · · · · · · · · · · · · · · ·   |   | Date and I   | -lour 04/29/20<br>olume Impacting  | 09 @ 0<br>the Wa  | 9:00 (revise)<br>tercourse.   | d to repo  | rtable of   | n 04/29/2005   |
| If a Watercourse was Impacted, Describe Fully.*         Describe Cause of Problem and Remedial Action Taken.*         External corrosion of 6° incl. pipeline caused a release of crude oil. A clamp was installed on the pipeline to mitigate the release. Throughput the subject line is 660 bbls/day and the operating pressure of the pipeline is 45 psi. The depth of the pipeline, it the release point is approximate?         2° bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 65:         Describe Area Affected and Cleanup Action Taken.*         The released crude resulted in a surface stain that measured approximately 6' x 8'. 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" dees not releave the operator of liability should their operations have field to adquately investigate and remediate contamination lab pose a threat to ground water, numan heal or the environment. In addition, NMOCD acceptance of a C-141 report by the NMOCD marked as "Final Report" dees not releave the operator of inshifty for compliance with any other federal, state, or local laws and/or regulations.         Signature:       Amon         Printed Name:       Jason Benry         Printed Name:       Jason Benry         Printed Name:       Jason Benry   |  | ,  |  | Yes 🛛  | ] No  |   |  |  |   |   |  |   |  |
| Describe Area Affected and Cleanup Action Taken.* .<br>The released crude resulted in a surface stain that measured approximately 6' x 8'. The impacted area will be remediated per applicable<br>guidelines.<br>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<br>regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger<br>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<br>should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human heal<br>or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other<br>federal, state, or local laws and/or regulations.<br>Signature: Asson Menry<br>Printed Name: Jason Menry<br>Title: Remediation Coordinator<br>E-mail Address: jheury@paalp.com<br>Date: $0.4 (2.9)/(2.009)$ Phone: (575) 441-1099<br>Attach Additional Sheets If Necessary<br>FGtRLO 9V205 7827  | External cor<br>the subject li<br>2' bas. The  | rosion of 6<br>ne is 660 b<br>H2S conce  | " inch pipelin<br>bls/day and the  | e caused<br>he opera   | a release of crud<br>ting pressure of t   | e.oil. A<br>he pipel<br>1 and th                              | clamp was<br>ine is 45 psi<br>e pravity of                                   | installed on the<br>. The depth of t<br>the crude is 65:   | pipelin<br>he pipe                                      | e to mitigate<br>line at the r  | e the rele<br>elease po                                      | ase. Thu<br>int is ap                                     | roughput fo<br>proximately   |
| The released crude resulted in a surface stain that measured approximately 6' x 8'. The impacted area will be remediated per applicable guidelines.<br>Thereby 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 operators have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human heal 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.<br>Signature: Assoc Menry Approved by District Similar Difference of a C-141 report by District Similar Difference of Approval Date: $4 \cdot 29 \cdot 09$ Expiration Date: $6 \cdot 29 \cdot 09$<br>E-mail Address: jlieury@paalp.com Conditions of Approval: Attached []<br>Date: $0 + 2 + 2 + 2 + 2 + 0 + 2 + 2 + 0 + 2 + 2$   | Describe Are   | a Affected   | and Cleanup A  | ction Ta   | ken.* .   |   | <u></u>  |  |   |   |  |   |  |
| 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 heal 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:       Asson       OIL CONSERVATION DIVISION         Printed Name:       Jason Henry       Approved by District NMMENTAL ENGINEER         Title:       Remediation Coordinator       Approval Date: $4 \cdot 29 \cdot 09$ Expiration Date: $6 \cdot 79 \cdot 09$ E-mail Address:       Jiteury@pastp.com       Conditions of Approval:       Attached []         Date: $04 \cdot 2.9 / 2c09$ Phone: (575) 441-1099       Grift 27.27         Additional Sheets If Necessary       FGtRL09/205 782.7       FGtRL09/205 782.7  | The released guidelines.   | crude res  | utted in a surf  | ace stain  | that measured a   | pproxin   | nately 6' x 8  | ". The impacted  | l area v  | vill be reme  | liated pe  | r applics   | able .   |
| Signature:       Date:       OIL CONSERVATION DIVISION         Printed Name:       Jason Menry       Approved by District Rhoth BMMENTAL ENGINEER         Title:       Remediation Coordinator       Approval Date:       4.29.09         E-mail Address:       Juleury@paalp.com       Conditions of Approval:       Attached []         Date:       04/29/2009       Phone: (575) 441-1099       Conditions of Approval:       Attached []         Attached Additional Sheets If Necessary       FGKRL09/2057827       FGKRL09/2057827       FGKRL09/2057827  | I hereby certi<br>regulations al<br>public health<br>should their c<br>or the enviror<br>federal, state,                                       | fy that the i<br>l operators<br>or the envir<br>perations h<br>iment. In a<br>or local law | nformation giv<br>are required to<br>ronment. The<br>ave failed to a<br>ddition, NMO<br>vs and/or regu | ven above<br>o report a<br>acceptan<br>dequately<br>CD acceptations, | e is true and compl<br>nd/or file certain re-<br>ce of a C-141 repo<br>investigate and re-<br>ptance of a C-141 r | ete to the<br>elease no<br>rt by the<br>emediate<br>report de | te best of my<br>otifications a<br>NMOCD m<br>e contaminat<br>pes not reliev | knowledge and<br>nd perform corre-<br>harked as "Final l<br>ion that pose a th<br>ve the operator of | understa<br>ctive ac<br>Report"<br>reat to g<br>respons | and that purs<br>tions for rele<br>does not reli<br>ground water<br>sibility for co | uant to N<br>cases whi<br>eve the o<br>, surface<br>omplianc | MOCD t<br>ch may e<br>perator o<br>water, hu<br>e with an | rules and<br>indanger<br>if liability<br>uman health<br>iy other                           |
| Signature:       Jason Menry       Approved by District RNMR MENTAL ENGINEER         Printed Name:       Jason Menry       Approved by District RNMR MENTAL ENGINEER         Title:       Remediation Coordinator       Approval Date: 4.29.09       Expiration Date: 6.29.09         E-mail Address:       Interry@paalp.com       Conditions of Approval:       Attached []         Date:       04/209/2009       Phone: (\$75) 441-1099       Attached []         Attach Additional Sheets If Necessary       FGtRL09/205 782.7  |  |  | /  | 2/   |   |   |  | OIL CON  | SER   | VATION  | DIVIS  | ION   |  |
| Printed Name:       Jason Henry       Approved by District NUMPRONMENTAL ENGINEER         Title:       Remediation Coordinator       Approval Date: 4.29.09       Expiration Date: 6.29.09         E-mail Address:       Henry@paalp.com       Conditions of Approval:       Attached []         Date:       04/29/2009       Phone: (\$75) 441-1099       Conditions of Approval:       Attached []         Attach Additional Sheets If Necessary       FGtRL09/2057827       FGtRL09/2057827       FGtRL09/2057827  | Signature:   | Jas  | on f   | Den  | res   |   |  | . has  | Jones   | phinse  | 3 Thurs  |   |  |
| Title:Remediation CoordinatorApproval Date: $4.79.09$ Expiration Date: $6.79.09$ E-mail Address:Jheary@paalp.comConditions of Approval:Attached []Date: $04/2.9/2009$ Phone: (575) 441-1099Zent 09.4.210Attach Additional Sheets If NecessaryFGtRL09V2057827  | Printed Name   | : Jason H  | енгу   |  | 0   |   | Approved by  | Districe Suppres   | <b>M</b> ME   | NTAL EN   | GINEE  | R   |  |
| E-mail Address: jheury@paalp.com Conditions of Approval: Attached [] Date: 04/29/2009 Phone: (575) 441-1099 Attach Additional Sheets If Necessary FGrRL09V2057827   | l'itle: Reme   | liation Co   | ordinator  |  |   |   | Approval Da  | 10: 4.29.04  | }   | Expiration I  | Date:  | 6.29.   | 09   |
| Date: $04/2.9/2009$ Phone: (575) 441-1099<br>Attach Additional Sheets If Necessary<br>FGtRL09V2057827   | E-mail Addre   | ss: jlieurv  | @paalp.com   |  |   | 1   | Conditions o   | f Approval:  |   |   |  | , r   |  |
| FGIRL0912057827   | Date: 04<br>Attach Addit   | 2.9/2<br>ional Shee  | 2609<br>ets If Necessa   | Phone  | : (575) 441-1099  |   |  |  |   |   | Attach   | ed [_]<br>\$09,   | 4.2166   |
|   |  |  | £6   | IRLO   | 91/205782   | 7   |  |  |   |   |  |   |  |