

GW - 351

Land farm
**MONITORING
REPORTS**

DATE:
2009



**PLAINS
MARKETING, L.P.**

March 30, 2010

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

Re: Plains Marketing, L.P. – 2009 Annual Report
Lea Station Landfarm – Discharge Permit #GW-351
Lea County, New Mexico

Dear Mr. Hansen:

Enclosed for your review is a copy of the 2009 Annual Report for the following Plains Marketing, L.P. facility:

Lea Station Landfarm GW-351 Section 28, T20S, R37E, Lea County

Basin Environmental Consulting, LLC (Basin) prepared this document and has vouched for its accuracy and completeness, and on behalf of Plains Marketing, L.P., I have personally reviewed this document and interviewed Basin personnel in order to verify the accuracy and completeness of this document. It is based upon these inquiries and reviews that Plains Marketing, L.P. submits the enclosed Annual Report for the above facility.

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains Marketing, L.P.

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

Basin Environmental Consulting, LLC

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



March 2010

Mr. Brad Jones
New Mexico Energy, Minerals and Natural Resources Department
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Annual Report – 2009
Plains Marketing, L. P. (231735)
Lea Station Landfarm – Discharge Permit #GW-351 (Plains Ref. # 2004-00061)
W ½ of the NW ¼ of Section 28, Township 20 South, Range 37 East
Lea County, New Mexico

Dear Mr. Jones:

Basin Environmental Consulting, LLC (Basin), at the request of Plains Marketing, L. P. (Plains), assumed maintenance responsibilities of the Lea Station Landfarm in October 2007. Basin, on behalf of Plains, is submitting the *2009 Annual Report* for the Plains Lea Station Landfarm. The Plains Lea Station Landfarm is being operated and maintained in accordance with New Mexico Oil Conservation Division (NMOCD), Natural Resources and Wildlife, Oil and Gas Surface Waste Management Facilities (Title 19 Chapter 15 Part 36). The Landfarm is operated by Plains as a “centralized” facility for Plains use only. A surveyor’s plat of the Lea Station Landfarm is provided as Figure 1.

DISPOSAL VOLUME

Receipt of impacted soil began in January 2004. As of December 31, 2008, a total of approximately 102,969 cubic yards of crude oil impacted soil from within the Plains crude oil transportation system have been emplaced in Cell A, Cell B, Cell C, Cell D, Cell E, Cell F, Cell G and Cell H. Approximately 9,078 cubic yards of impacted soil was transported to the Landfarm during the 2009 reporting period.

MAINTENANCE

Within 72-hours of being delivered to the landfarm, soil stockpiles were pushed down and contoured into a treatment lift. Mechanical disking of the soil contained in the treatment cells occurred every two weeks. Disking of the soil at ninety degree angles to the current windrow configuration allows for increased aeration within the lifts and more efficient movement of the soil, providing a potentially more favorable environment for bioremediation to occur within the lifts.

TREATMENT ZONE MONITORING

On June 16, 2009, Basin collected two (2) to five (5) four-point composite treatment zone soil samples from each of the treatment cells (Cells A, B, C, D, E, F, G and H) being utilized. The soil samples were analyzed for concentrations of total petroleum hydrocarbons (TPH) using method SW8015M and chloride, using method EPA 300. The analytical results indicated TPH concentrations ranged from 63.5 mg/Kg for soil sample Cell E TZ G4 to 9,119 mg/Kg for soil sample Cell G TZ G5. Chloride concentrations ranged from less than the laboratory method detection limit (MDL) for soil samples Cell E TZ G1, Cell E TZ G3, Cell E TZ G4 and Cell H TZ G1 to 207 mg/Kg for soil sample Cell F TZ G3. Please reference Table 1, 2009 Concentrations of Benzene, BTEX, TPH and Chloride in the Treatment Zone.

On October 27, 2009, Basin collected three (3) to five (5) four-point composite treatment zone soil samples from each of the treatment cells (Cells A, B, D, E, F, G and H) being utilized. The soil samples were analyzed for concentrations of TPH and chloride. The analytical results indicated TPH concentrations ranged from 264.2 mg/Kg for soil sample Cell A TZ G5 to 8,448 mg/Kg for soil sample Cell G TZ G2. Chloride concentrations ranged from less than the laboratory MDL for soil samples Cell E TZ G1 through G3 and Cell H TZ G3 to 154 mg/Kg for soil sample Cell F TZ G2.

The locations of soil samples collected in treatment cells A, B, C, D, E, F, G and H during the June and October 2009 sampling events are depicted on Figures 2, 3, 4, 5, 6, 7, 8 and 9 respectively. Laboratory analytical reports are attached.

VADOSE ZONE MONITORING

A single soil sample was collected on January 16, 2004, from the vadose zone in an undisturbed location within the Landfarm area to establish background concentrations of NMOCD constituents of concern (COCs) as listed below:

- Total petroleum hydrocarbons (TPH);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX);
- Anions and cations; and
- RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver).

Laboratory analytical results of the background samples indicated TPH was not detected at or above the laboratory MDL. Anions, cations, and RCRA metals concentrations of background samples were typical of native undisturbed soil. Please reference Table 2, Historic Concentrations of Hydrocarbons, Chlorides, Sulfates and Alkalinity in the Vadose Zone and Table 3, Historic Concentrations of Metals in the Vadose Zone.

On June 17 and 18, 2009, Basin collected two (2) to five (5) grab soil samples at a depth of three (3) to four (4) feet below ground surface (vadose zone) from treatment Cells A, B, C, D, E, F, G, and H. The soil samples were collected and submitted to the laboratory to determine the extent (if any) of impact to the underlying soil at the landfarm. The grab soil samples were collected and analyzed for constituent concentrations of BTEX using method EPA 8021b, TPH using method SW8015M and chloride using EPA 300. Please reference Table 4, 2009 Concentrations of Benzene, BTEX, TPH and Chloride in the Vadose Zone.

The laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were below the laboratory MDL for all soil samples submitted.

On October 27 and 28, 2009, Basin collected two (2) to five (5) grab soil samples at a depth of three (3) to four (4) feet below ground surface (vadose zone) from treatment Cells A, B, C, D, E, F, G, and H. The grab samples were collected and analyzed for constituent concentrations of BTEX, TPH and chloride.

The laboratory analytical results indicated benzene, BTEX and TPH concentrations were below the laboratory MDL for all soil samples submitted.

The laboratory analytical results indicated chloride concentrations were below established background chloride concentration of 10.6 mg/Kg, with the exception of soil samples Cell B VZ G1 (3'-4'), Cell G VZ G1(3'-4'), Cell G VZ G2 (3'-4'), Cell G VZ G3 (3'-4'), Cell G VZ G4 (3'-4') and Cell G VZ G5 (3'-4'), which exhibited chloride concentrations of 10.8 mg/Kg, 337 mg/Kg, 29.3 mg/Kg, 123 mg/Kg, 178 mg/Kg and 19.8 mg/Kg, respectively. Please reference Table 4, 2009 Concentrations of Benzene, BTEX, TPH and Chloride in the Vadose Zone.

On December 23, 2009, Basin collected two (2) grab samples at a depth of three (3) to four (4) feet bgs (vadose zone) in undisturbed regions to the south and to the west of treatment Cell G for additional background comparison purposes. Soil samples BG South of Cell G and BG West of Cell G were collected and analyzed for chloride concentrations. Laboratory analytical results indicated chloride concentrations for both, BG South of Cell G and BG West of Cell G, were 100 mg/Kg, which is greater than the previously established background chloride concentration. Field observations and analytical results indicate variances in soil properties may account for the differing chloride concentrations in the Cell G region. The location of soil samples BG South of Cell G and BG West of Cell G are depicted on Figure 10.

The locations of soil samples collected in the vadose zone from treatment cells A, B, C, D, E, F, G and H during the June and October 2009 sampling events are depicted on Figures 2, 3, 4, 5, 6, 7, 8 and 9, respectively.




CONCLUSIONS

The laboratory analytical results of vadose zone soil sampling indicate soil beneath the Lea Station Landfarm has not been affected above background levels established prior to the construction of the landfarm treatment cells with the exception of chlorides in Cell G. However, additional background sampling appears to indicate that background chloride concentrations in the area of Cell G may be higher than background concentrations in other areas of the landfarm. The laboratory analytical results indicate hydrocarbon impacted soil placed in the treatment cells is naturally attenuating within the lifts.

RECOMMENDATIONS

Bi-monthly tilling of the treatment zones will continue during the 2010 reporting period. Soil samples of the vadose and treatment zones will be collected and submitted to the laboratory for determination of constituent concentrations on a bi-annual schedule. Vadose zone soil samples will be analyzed using method EPA 8021b (BTEX), method SW8015M (TPH) and method EPA 300 (chloride). Treatment zone soil samples will be analyzed using method SW8015M (TPH) and method EPA 300 (chloride). An Annual Report will be submitted in March 2011, documenting the results of the 2010 treatment cell and vadose zone sampling events.

LIMITATIONS



Basin Environmental Consulting, LLC has prepared this Lea Station Landfarm Annual Report 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 Marketing, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the expressed consent of Basin Environmental Consulting, LLC and/or Plains Marketing, L.P.

Should you have any questions or concerns, please contact Jason Henry (575) 441-1099 or me at (575) 396-2378.

Sincerely,

Camille Bryant
Basin Environmental Consulting, LLC

Cc: Ed Hansen, NMOCD-Santa Fe, New Mexico (edwardj.hansen@state.nm.us)
Jeff Dann, Plains Marketing–Houston, Texas (jpdann@paalp.com)
Jason Henry, Plains Marketing–Lovington, New Mexico (jhenry@paalp.com)

Enclosures:

Figures

Figure 1: Lea Station Landfarm Survey map
Figure 2: Cell “A” Soil Sample Location Map – June and October 2009
Figure 3: Cell “B” Soil Sample Location Map – June and October 2009
Figure 4: Cell “C” Soil Sample Location Map – June and October 2009
Figure 5: Cell “D” Soil Sample Location Map – June and October 2009
Figure 6: Cell “E” Soil Sample Location Map – June and October 2009
Figure 7: Cell “F” Soil Sample Location Map – June and October 2009
Figure 8: Cell “G” Soil Sample Location Map – June and October 2009
Figure 9: Cell “H” Soil Sample Location Map – June and October 2009
Figure 10: BG South of Cell G and BG West of Cell G – December 2009

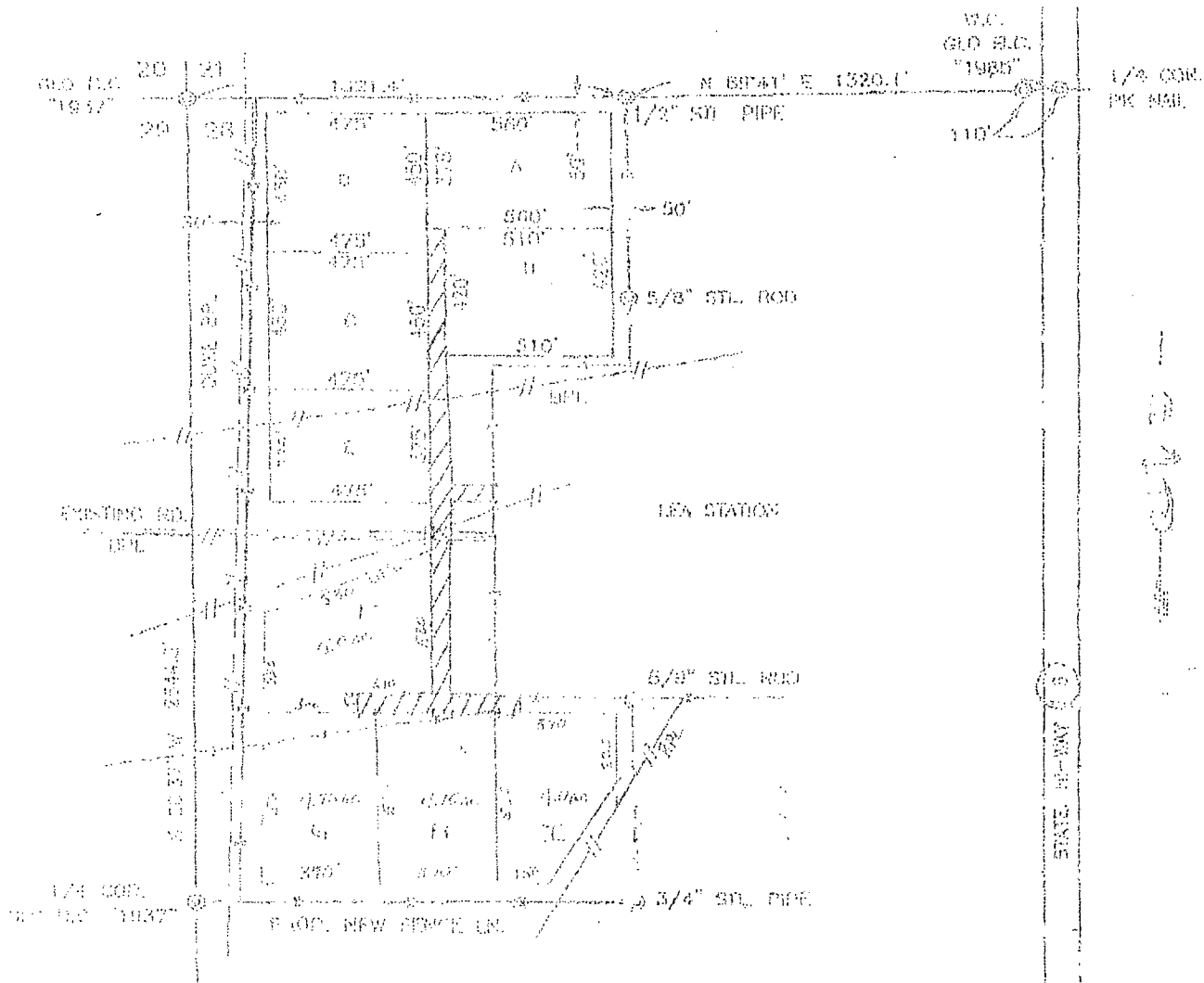
Tables

Table 1: 2009 Concentrations of Benzene, BTEX, TPH and Chlorides in the Treatment Zone.
Table 2: Historic Concentrations of Hydrocarbons, Chlorides, Sulfates and Alkalinity in the Vadose Zone.
Table 3: Historic Concentrations of Metals in the Vadose Zone
Table 4: 2009 Concentrations of Benzene, BTEX, TPH and Chloride in the Vadose Zone

Laboratory Analytical Reports

Photographs

Figures

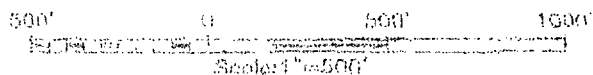


LEGEND

- DENOTES FOUND MONUMENT AS NOTED
- DENOTES EXISTING FENCE
- - - - - DENOTES PROPOSED FENCE

NOTE

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.



I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

[Signature]
 CAPT. C. E. BROWN, N.E.P.S.
 No. 12841

BROWN WEST SURVEYING COMPANY

1112 N. 14th Street - Room 207 - Albuquerque - 805-383-2117

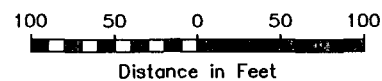
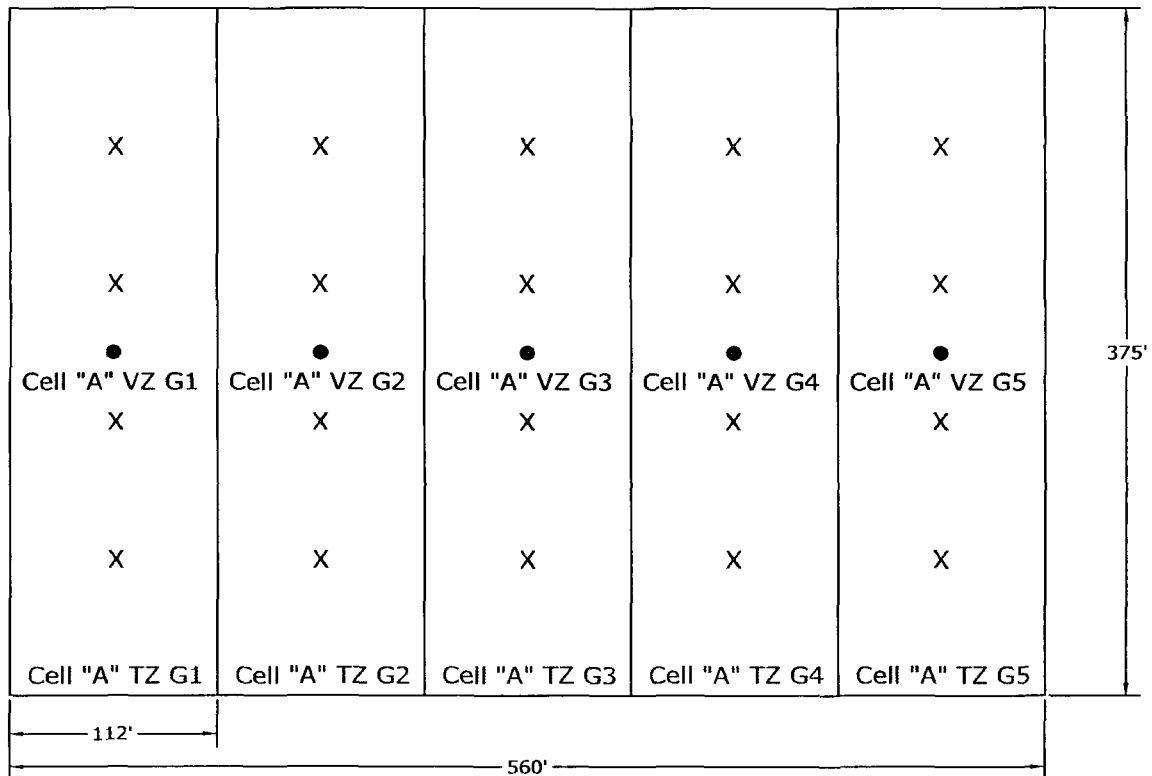
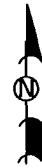
LINK ENERGY PIPELINE LIMITED PARTNERSHIP

SURVEY TO LOCATE PROPERTY EXHIBITS.

PROPOSED FENCE LINES AND CELL SITES IN SECTION 28,
 TOWNSHIP 20 SOUTH, RANGE 37 EAST,
 N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 12/04/03	Sheet 1 of 1 Sheets
W.O. Number: 03.11.1325	DRAWN BY: A.W.B.
Date: 12/08/03	DATE & LAND [Scale 1"=500']

Figure 1: Lea Station Landfarm Survey Map



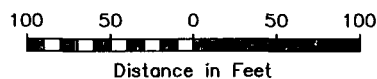
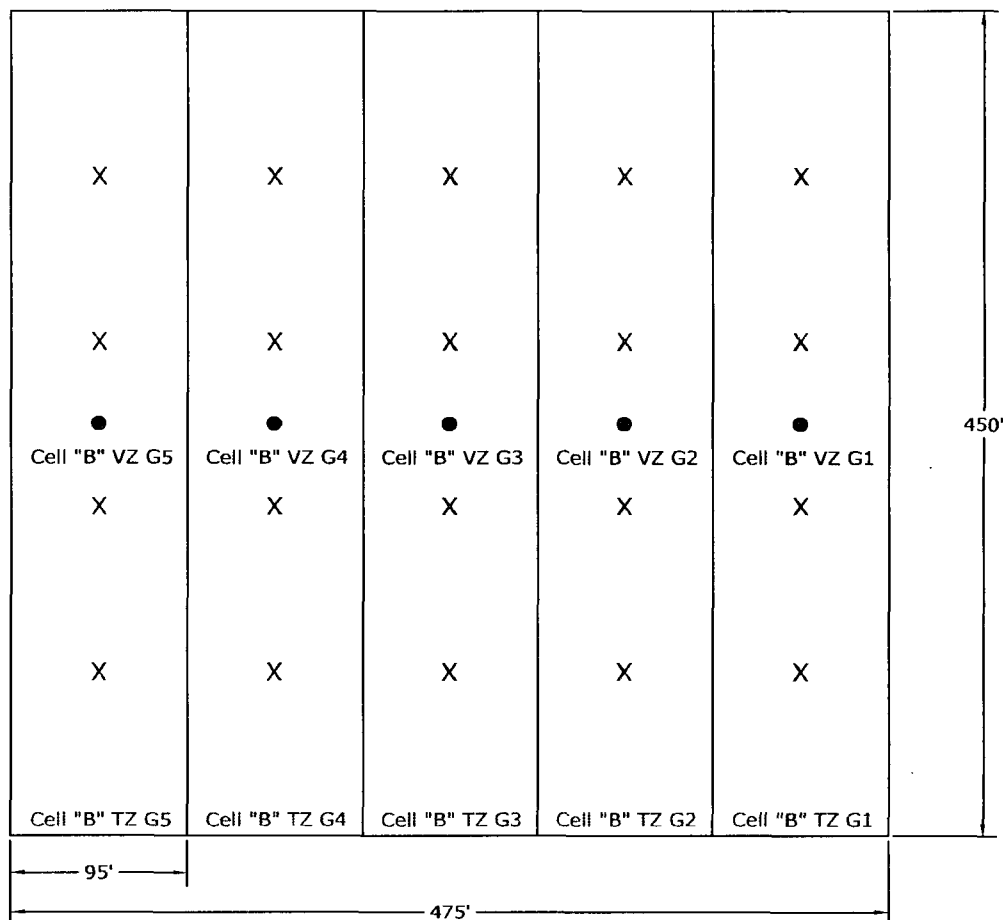
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 2
Cell "A" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 15, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



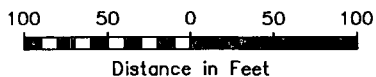
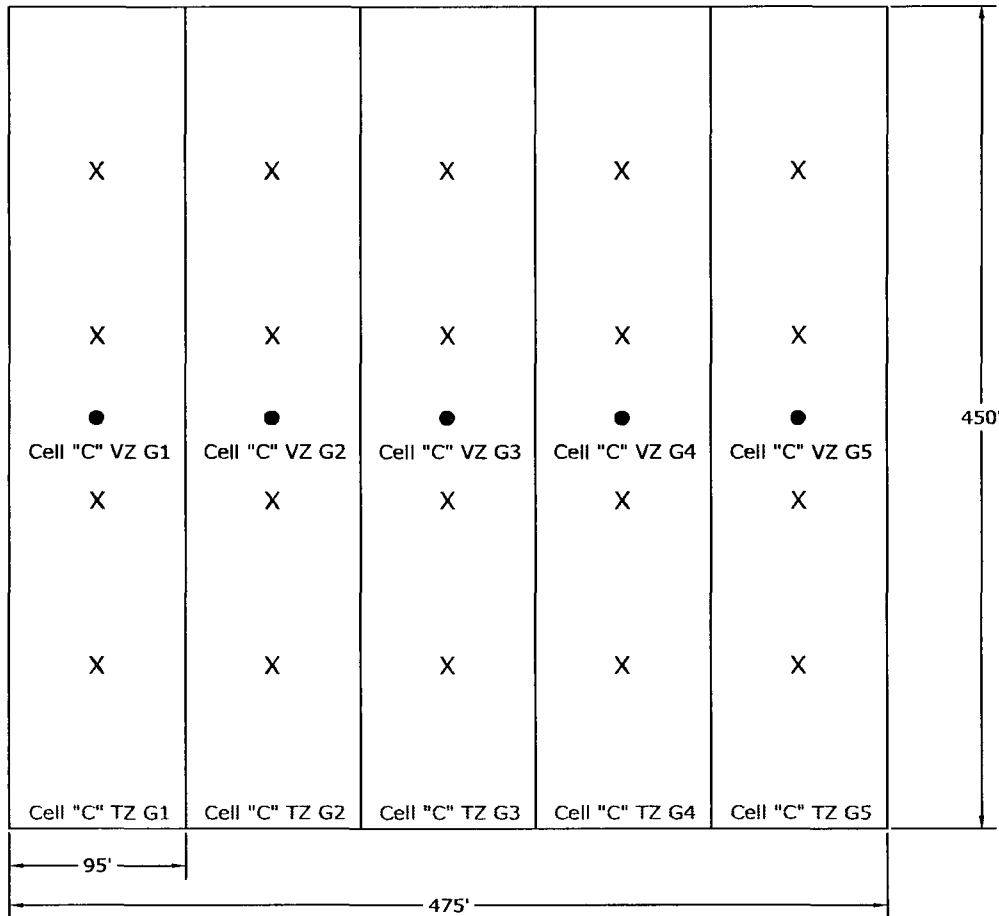
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 3
 Cell "B" Soil Sample Location Map
 June and November 2009
 Plains Marketing, L.P.
 Lea Station Landfarm
 Lea County, NM
 SRS-2004-00061
 NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



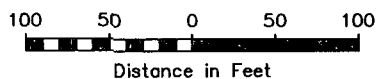
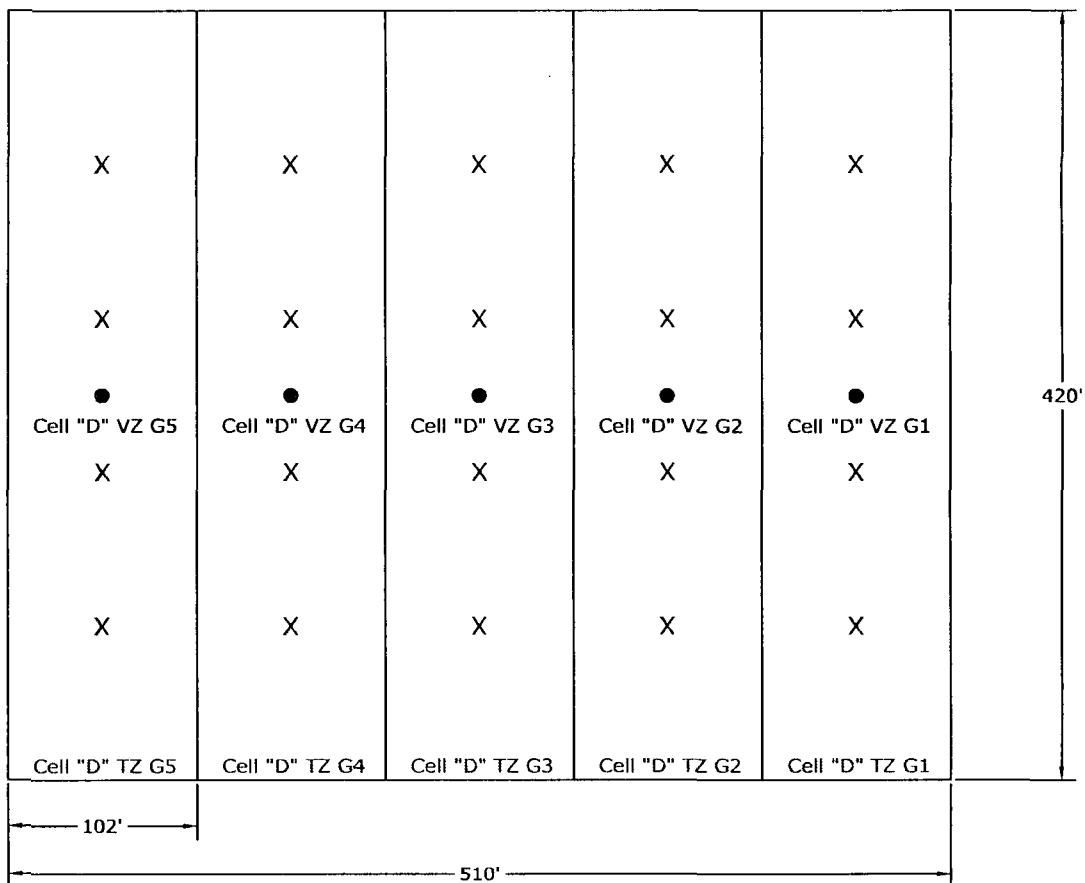
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 4
Cell "C" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

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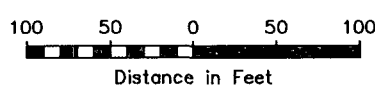
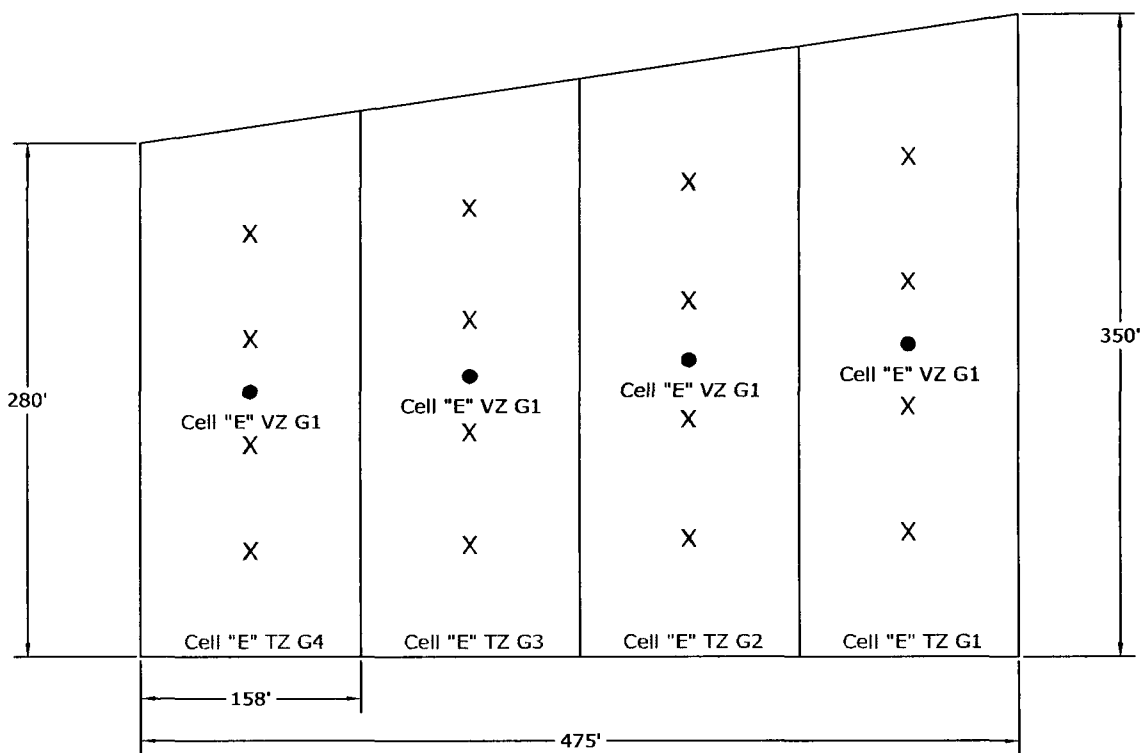
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 5
Cell "D" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
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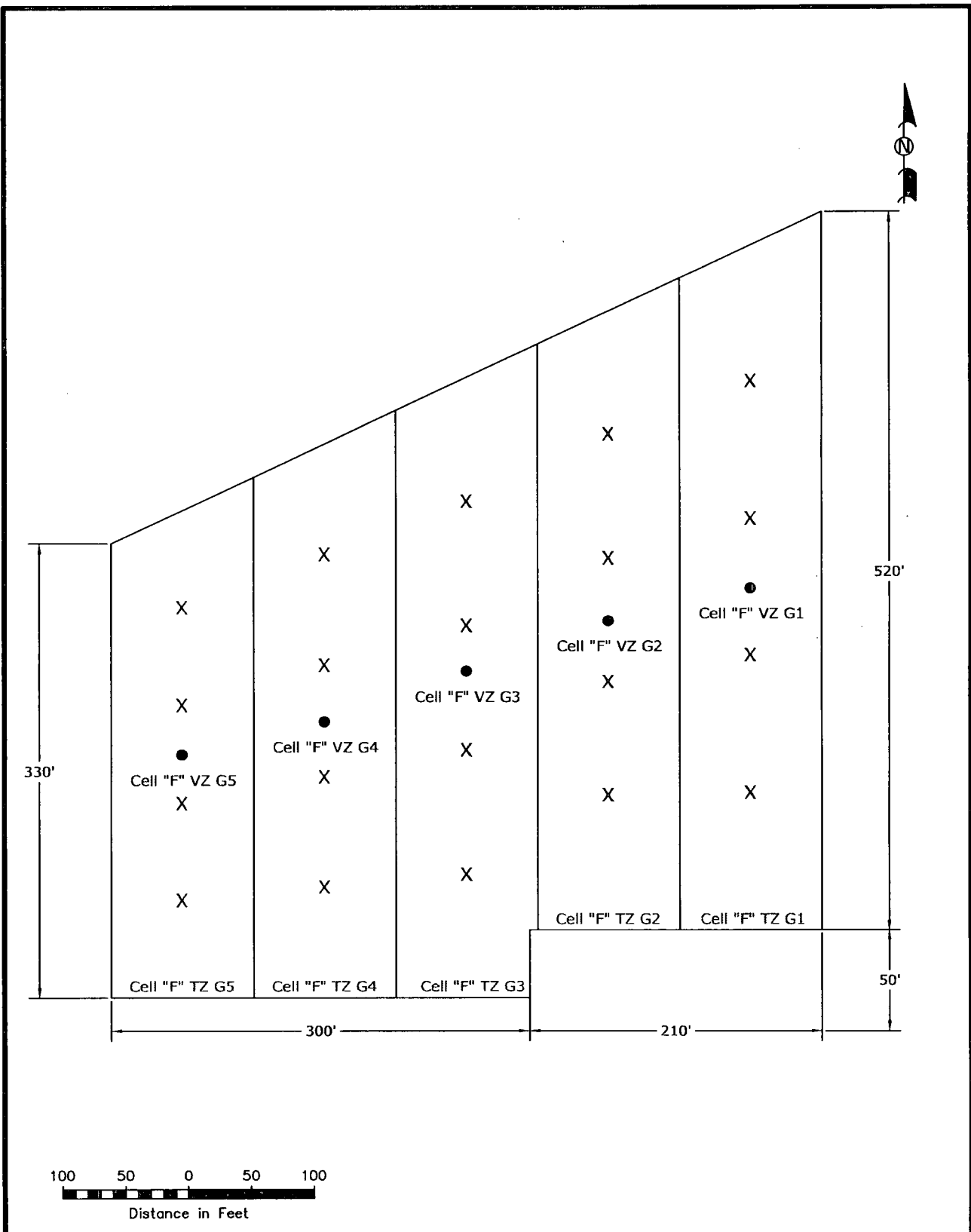


LEGEND:
X 4-Point Composite Treatment Cell
Soil Sample Location
● Vadose Zone Soil Sample Location

Figure 6
Cell "E" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



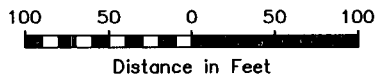
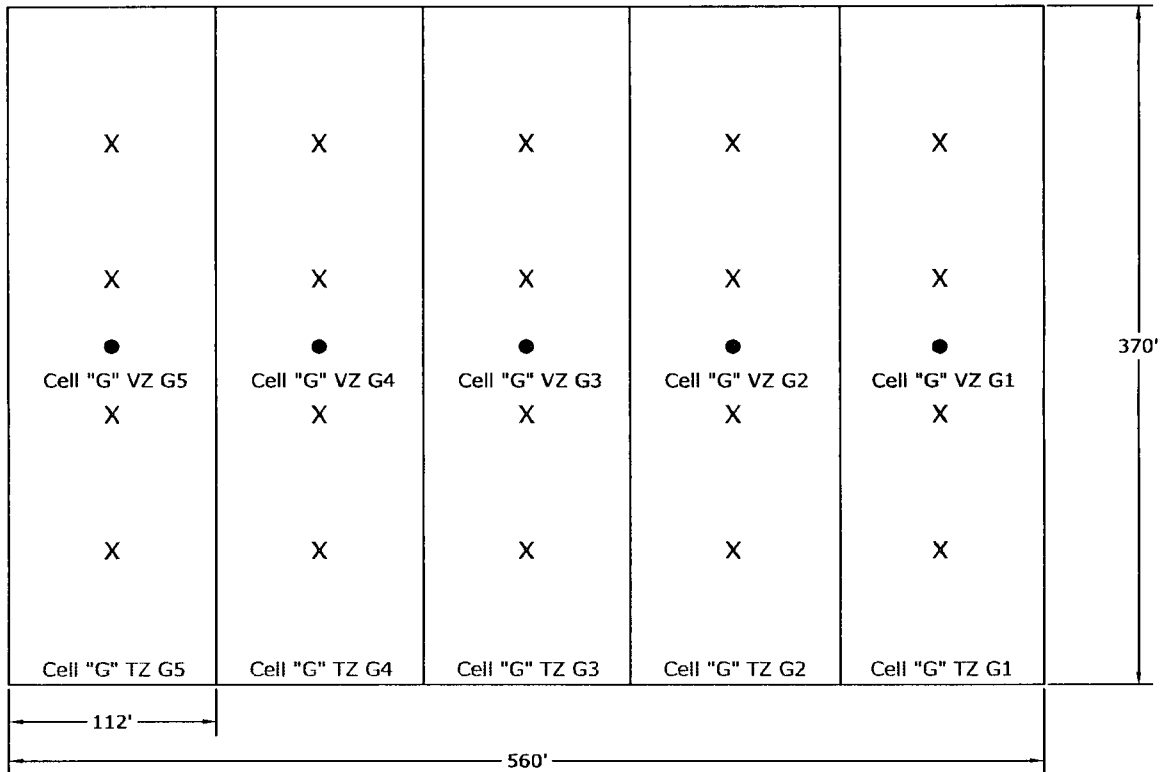
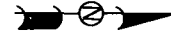
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 7
Cell "F" Soil Sample Location Map
 June and November 2009
 Plains Marketing, L.P.
 Lea Station Landfarm
 Lea County, NM
 SRS-2004-00061
 NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



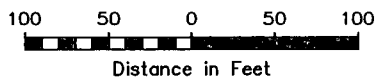
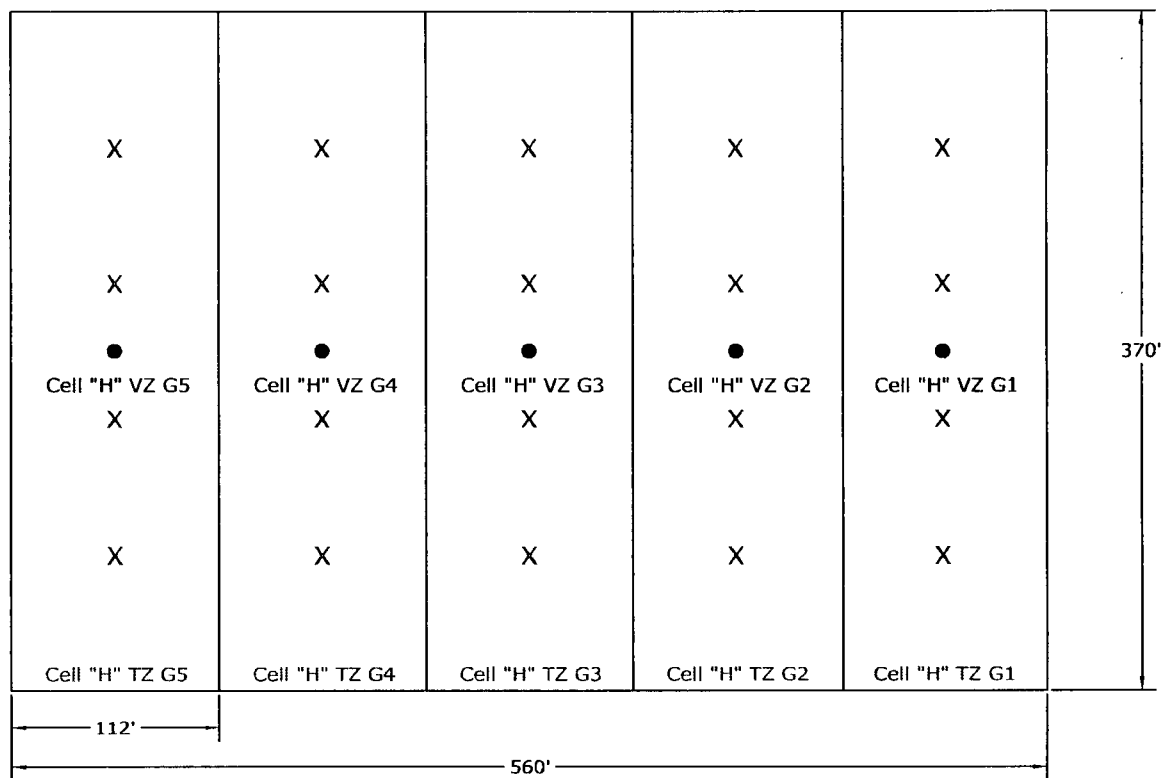
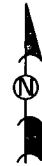
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 8
Cell "G" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



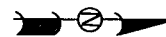
LEGEND:

- X 4-Point Composite Treatment Cell Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 9
Cell "H" Soil Sample Location Map
June and November 2009
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

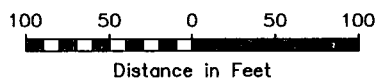
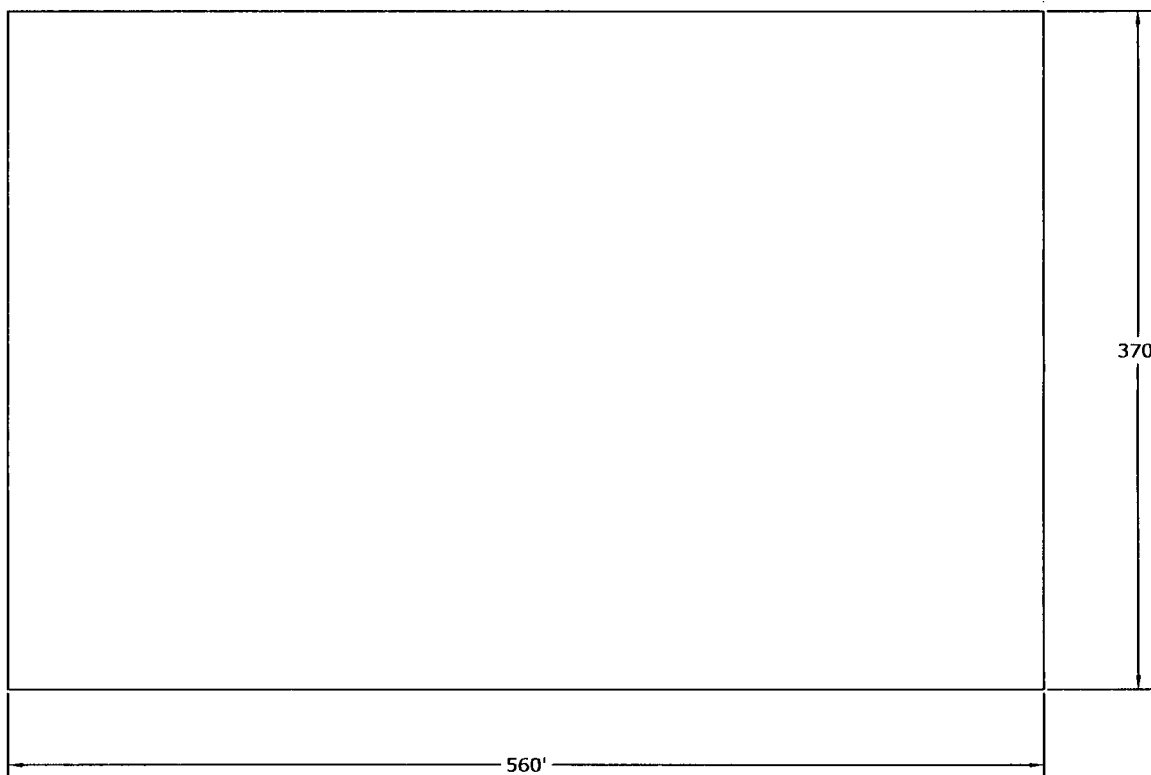
Basin Environmental Consulting

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March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		



● BG West of Cell G

● BG South of Cell G



LEGEND:

- X 4-Point Composite Treatment Cell
Soil Sample Location
- Vadose Zone Soil Sample Location

Figure 10
Cell "G" Background Soil Sample
Location Map
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Basin Environmental Consulting

Scale: 1" = 100'	Drawn By: CDS	Prepared By: CDS
March 16, 2010		
W 1/2 of NW 1/4 of Section 287, Township 20 South, Range 37 E		

Tables

TABLE 1

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOCD #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M				TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P.-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	Chloride (mg/kg)	
Cell A TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	794	184	978	38.5
Cell A TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1070	206	1,276	35.7
Cell A TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	889	182	1,071	30.1
Cell A TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	571	140	711	30.5
Cell A TZ G 5	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	176	71.2	247.2	17.5
Cell B TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1400	238	1,638	20
Cell B TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	954	206	1,160	14.7
Cell B TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	356	121	477	32
Cell B TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	210	76	286	21.5
Cell B TZ G 5	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	48.3	30.8	79.1	5.28
Cell C TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	112	56.4	168.4	36.6
Cell C TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	116	58	174	20.6
Cell C TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	177	75.7	252.7	16.7
Cell C TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	194	84.4	278.4	10.5
Cell C TZ G 5	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	225	87.2	312.2	10.8
Cell D TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	643	133	776	48.9
Cell D TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1000	185	1,185	80.8
Cell D TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1300	210	1,510	85
Cell D TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1320	196	1,516	25.7
Cell D TZ G 5	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	1090	169	1,259	10.4
Cell E TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	273	94.1	367.1	<5.0
Cell E TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	387	123	510	5.57
Cell E TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	139	59.5	198.5	<5.02
Cell E TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.0	37.3	26.2	63.5	<5.04

TABLE 1

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOCD #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M				TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	EPA 300 Chloride (mg/kg)	
Cell F TZ G 1	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	930	140	1,070	113
Cell F TZ G 2	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1090	155	1,245	162
Cell F TZ G 3	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1300	164	1,464	207
Cell F TZ G 4	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	1370	179	1,549	198
Cell F TZ G 5	8"	6/16/2009	-	-	-	-	-	-	-	<15.1	927	137	1,064	168
Cell G TZ G 1	8"	6/18/2009	-	-	-	-	-	-	-	<15.0	563	68.2	631.2	15.1
Cell G TZ G 2	8"	6/18/2009	-	-	-	-	-	-	-	180	3380	145	3,705	27.4
Cell G TZ G 3	8"	6/18/2009	-	-	-	-	-	-	-	875	5770	514	7,159	29.5
Cell G TZ G 4	8"	6/18/2009	-	-	-	-	-	-	-	858	6480	445	7,783	35.2
Cell G TZ G 5	8"	6/18/2009	-	-	-	-	-	-	-	761	7810	548	9,119	41
Cell H TZ G 1	8"	6/18/2009	-	-	-	-	-	-	-	459	2780	279	3,518	<5.02
Cell H TZ G 2	8"	6/18/2009	-	-	-	-	-	-	-	761	2710	284	3,755	10.3
Cell A TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	<15.5	891	54.5	945.5	51.2
Cell A TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	<16.2	518	28	546	29.7
Cell A TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	<15.2	1420	70.1	1,490.1	35.9
Cell A TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	<15.8	434	30.9	464.9	22.1
Cell A TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	<15.4	240	24.2	264.2	16.2
Cell B TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	<15.7	832	45.8	877.8	11.7
Cell B TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	<15.5	700	40.6	740.6	22
Cell B TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	<15.4	363	28.9	391.9	27.6
Cell B TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	<15.4	358	30.7	388.7	22.2
Cell B TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell C TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell C TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOCD #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M				TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	Chloride (mg/kg)	
Cell C TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell C TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell C TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell D TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	<15.7	516	33.3	549.3	60.1
Cell D TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	<15.7	1210	67.1	1,277.1	73
Cell D TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	<15.8	1340	77.8	1,417.8	110
Cell D TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	<15.4	1190	65.1	1,255.1	25.5
Cell D TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	<15.1	1320	65.6	1,385.6	11.5
Cell E TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	<15.2	544	48.7	592.7	<4.28
Cell E TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	<15.3	567	50.9	617.9	<4.28
Cell E TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	<15.2	250	28.8	278.8	<4.27
Cell E TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	-	-	-	-	-
Cell F TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	<15.6	771	42.3	813.3	122
Cell F TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	<15.8	982	58.2	1,040.2	154
Cell F TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	<15.6	1270	59.1	1,329.1	151
Cell F TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	<15.7	1230	55.4	1,285.4	135
Cell F TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	<15.2	953	52.3	1,005.3	100
Cell G TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	45.2	1570	59	1,674.2	20.4
Cell G TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	296	7910	242	8,448	23.2
Cell G TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	79.1	4200	85.1	4,364.2	50.9
Cell G TZ G 4	8"	10/27/2009	-	-	-	-	-	-	-	90.1	4410	85	4,585.1	53.3
Cell G TZ G 5	8"	10/27/2009	-	-	-	-	-	-	-	16.8	1470	54.3	1,541.1	42.6
Cell H TZ G 1	8"	10/27/2009	-	-	-	-	-	-	-	138	4170	83.7	4,391.7	26.8
Cell H TZ G 2	8"	10/27/2009	-	-	-	-	-	-	-	138	5190	85	5,413	15.8
Cell H TZ G 3	8"	10/27/2009	-	-	-	-	-	-	-	124	5050	94.6	5,268.6	<4.35



TABLE 2

HISTORIC CONCENTRATIONS OF HYDROCARBONS, CHLORIDES, SULFATES AND ALKALINITY IN THE VADOSE ZONE

PLAINS MARKETING, L.P.

LEA STATION LANDFARM

LEA COUNTY, NEW MEXICO

PLAINS SRS #2004-00061

NMOCD #GW-351

Sample ID	Landfarm Cell	Sample Date	PID analyses (ppm)	Sample Depth (feet-bgs)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-xylene (mg/Kg)	o-xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)	Carbonate Alkalinity (mg/Kg)	Bicarbonate Alkalinity (mg/Kg)	Hydroxide Alkalinity (mg/Kg)	Total Alkalinity (mg/Kg)
CESLESLF11604BGS	Background	16-Jan-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	10.60	<5	<50	<50	--	<50
SPLSLF83104CC-4'	C	31-Aug-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	--	--	--	--	--	--
SPLSLF83104CE-4'	E	31-Aug-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	--	--	--	--	--	--
Cell B Treatment Zone	B	28-Oct-05	0.80	3.5-4.0	<0.025	0.0159 ^A	0.0273	0.0896	0.0190 ^A	0.30	<10.0	<10.0	<10.0	9.37	24.4	nr	nr	--	433
Cell C Treatment Zone	C	28-Oct-05	1.20	3.5-4.0	<0.025	<0.025	<0.025	0.0235 ^A	<0.025	<0.025	<10.0	<10.0	<10.0	7.74	23.1	nr	nr	--	433
Cell E Treatment Zone	E	28-Oct-05	0.30	3.5-4.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	20.9	35.2	nr	nr	--	1,580
Cell A Treatment Zone- 3' to 4'	A	26-Jul-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	1.17 ^A	8.35	<0.500	240	<0.500	240
Cell B Treatment Zone- 3' to 4'	B	26-Jul-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	4.76 ^A	9.51	40.0	180	<0.500	220
Cell C Treatment Zone- 3' to 4'	C	26-Jul-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	1.45 ^A	45.8	<0.500	220	<0.500	220
Cell E Treatment Zone- 3' to 4'	E	26-Jul-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	2.95 ^A	44.7	<0.500	225	<0.500	225
Cell A Treatment Zone- 3' to 4'	A	14-Dec-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell B Treatment Zone- 3' to 4'	B	14-Dec-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell C Treatment Zone- 3' to 4'	C	14-Dec-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell E Treatment Zone- 3' to 4'	E	14-Dec-06	--	3.0-4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
BG South of Cell "G"	G	23-Dec-09	--	--	--	--	--	--	--	--	--	--	--	100.00	--	--	--	--	--
BG West of Cell "G"	G	23-Dec-09	--	--	--	--	--	--	--	--	--	--	--	100.00	--	--	--	--	--

TABLE 3

HISTORIC CONCENTRATIONS OF METALS IN THE VADOSE ZONE
PLAINS MARKETING, L.P.
LEA STATION LANDFARM
LEA COUNTY, NEW MEXICO
PLAINS SRS 2004-00061
NMOC #GW-351

Sample ID	Landfarm Cell	Sample Date	Sample Depth (feet-bgs)	SW-846 6010 & 200.7			258.1 & 7670		SW-6010 & 200.7							Lead (mg/kg)
				Calcium (mg/kg)	Magnesium (mg/kg)	Potassium (mg/kg)	Sodium (mg/kg)	Mercury (mg/kg)	Chromium (mg/kg)	Arsenic (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Cadmium (mg/kg)	Barium (mg/kg)		
CESLEISLF11604BGS	Background	16-Jan-04	3.5-4.0	664	1,540	744	30.1	<0.04	4.42	<1	<5.0	<2.5	<2	15.2	<1	
SPLSLF83104CC-4'	C	31-Aug-04	3.5-4.0	--	--	--	--	--	--	--	--	--	--	--	--	
SPLSLF83104CE-4'	E	31-Aug-04	3.5-4.0	--	--	--	--	--	--	--	--	--	--	--	--	
Cell B Treatment Zone	B	28-Oct-05	3.5-4.0	30,400	1,350	235	1,420	0.01230 ^A	1.43	<0.400	<0.200	<0.250	0.423	35.8	2.30	
Cell C Treatment Zone	C	28-Oct-05	3.5-4.0	20,800	902	238	1,700	0.02204 ^A	3.81	<0.400	<0.200	<0.250	0.973	47.4	<0.550	
Cell E Treatment Zone	E	28-Oct-05	3.5-4.0	89,900	3,680	506	2,670	0.01847 ^A	3.52	1.36	<0.200	<0.250	1.13	111	2.80	
Cell A Treatment Zone- 3' to 4'	A	26-Jul-06	3.0-4.0	47.8	5.82	4.48	2.26	0.009424 ^A	<2.44	1.65 ^A	<7.51	1.01	<1.73	17.3	<0.740	
Cell B Treatment Zone- 3' to 4'	B	26-Jul-06	3.0-4.0	27.9	8.16	9.17	3.78	0.03174	<2.44	3.33 ^A	1.71 ^A	<1.01	<1.73	147	<0.740	
Cell C Treatment Zone- 3' to 4'	C	26-Jul-06	3.0-4.0	51.5	6.06	3.07	12.1	0.009956 ^A	<2.44	0.953 ^A	<7.51	<1.01	<1.73	40.0	<0.740	
Cell E Treatment Zone- 3' to 4'	E	26-Jul-06	3.0-4.0	57.5	10.3	16.0	9.17	0.01564	1.47 ^A	1.29 ^A	2.47 ^A	<1.01	<1.73	50.4	<0.740	

^A = Estimated value, analyte detected less than reported limit

-- = Not analyzed

TABLE 4

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOC #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M					TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P.-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	Chloride (mg/kg)		
Cell A VZ G 1 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	<15.4	<15.4	<15.4	<5.12		
Cell A VZ G 2 (3'-4')	3' - 4'	6/17/2009	<0.0009	<0.0019	<0.0009	<0.0019	<0.009	<0.0019	<14.0	<14.0	<14.0	<14.0	<4.65		
Cell A VZ G 3 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.02		
Cell A VZ G 4 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.05		
Cell A VZ G 5 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.05		
Cell B VZ G 1 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.01		
Cell B VZ G 2 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.03		
Cell B VZ G 3 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.02		
Cell B VZ G 4 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.03		
Cell B VZ G 5 (3'-4')	3' - 4'	6/17/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	<5.37		
Cell C VZ G 2 (3'-4')	3' - 4'	6/17/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	<5.49		
Cell C VZ G 3 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.05		
Cell C VZ G 4 (3'-4')	3' - 4'	6/17/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.1	<16.1	<16.1	<16.1	6.06		
Cell C VZ G 5 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.08		
Cell D VZ G 1 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.01		
Cell D VZ G 2 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	<15.4	<15.4	<15.4	<5.14		
Cell D VZ G 3 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.02		
Cell D VZ G 4 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.06		
Cell D VZ G 5 (3'-4')	3' - 4'	6/17/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.03		
Cell E VZ G 1 (3'-4')	3' - 4'	6/18/2009	<0.0051	<0.0103	<0.0051	<0.0103	<0.0051	<0.0103	<15.4	<15.4	<15.4	<15.4	<5.15		
Cell E VZ G 2 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.01		
Cell E VZ G 3 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.08		
Cell E VZ G 4 (3'-4')	3' - 4'	6/18/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.32		
Cell F VZ G 1 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.01		
Cell F VZ G 2 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<4.99		
Cell F VZ G 3 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.01		

TABLE 4

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOCD #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M					TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	Chloride (mg/kg)		
Cell F VZ G 4 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.08		
Cell F VZ G 5 (3'-4')	3' - 4'	6/18/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.25		
Cell G VZ G 1 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	169		
Cell G VZ G 2 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.16		
Cell G VZ G 3 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	153		
Cell G VZ G 4 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	88.4		
Cell G VZ G 5 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	75.6		
Cell H VZ G 1 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.04		
Cell H VZ G 2 (3'-4')	3' - 4'	6/18/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.07		
Cell A VZ G 1 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.17		
Cell A VZ G 2 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	5.75		
Cell A VZ G 3 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.11		
Cell A VZ G 4 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	<5.61		
Cell A VZ G 5 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	<5.38		
Cell B VZ G 1 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	<15.4	<15.4	<15.4	10.8		
Cell B VZ G 2 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.28		
Cell B VZ G 3 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.17		
Cell B VZ G 4 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.11		
Cell B VZ G 5 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.10		
Cell C VZ G 1 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	<5.23		
Cell C VZ G 2 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.4	<17.4	<17.4	<17.4	<5.79		
Cell C VZ G 3 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	<5.48		
Cell C VZ G 4 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	5.17		
Cell C VZ G 5 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	6.72		
Cell D VZ G 1 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.16		
Cell D VZ G 2 (3'-4')	3' - 4'	10/27/2009	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.7	<17.7	<17.7	<17.7	<5.89		

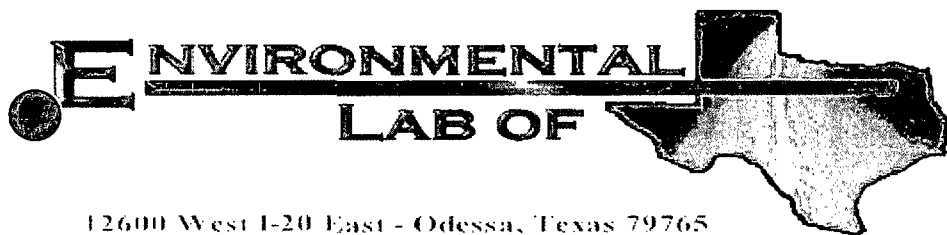
TABLE 4

2009 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

PLAINS MARKETING, L.P.
LEA STATION LAND FARM
LEA COUNTY, NEW MEXICO
PLAINS SRS: 2004-00061
NMOCD #GW-351

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M					TOTAL	
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	Chloride (mg/kg)		
Cell D VZ G 3 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.31		
Cell D VZ G 4 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	<5.55		
Cell D VZ G 5 (3'-4')	3' - 4'	10/27/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.11		
Cell E VZ G 1 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<5.63		
Cell E VZ G 2 (3'-4')	3' - 4'	10/27/2009	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<5.63		
Cell E VZ G 3 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.7	<15.7	<15.7	<15.7	5.26		
Cell E VZ G 4 (3'-4')	3' - 4'	10/28/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.06		
Cell F VZ G 1 (3'-4')	3' - 4'	10/28/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	7.36		
Cell F VZ G 2 (3'-4')	3' - 4'	10/28/2009	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.09		
Cell F VZ G 3 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.27		
Cell F VZ G 4 (3'-4')	3' - 4'	10/28/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	<5.20		
Cell F VZ G 5 (3'-4')	3' - 4'	10/28/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	<5.23		
Cell G VZ G 1 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	337		
Cell G VZ G 2 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	29.3		
Cell G VZ G 3 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	123		
Cell G VZ G 4 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	178		
Cell G VZ G 5 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	19.8		
Cell H VZ G 1 (3'-4')	3' - 4'	10/28/2009	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	<5.76		
Cell H VZ G 2 (3'-4')	3' - 4'	10/28/2009	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	<5.71		
Cell H VZ G 3 (3'-4')	3' - 4'	10/28/2009	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.8	<17.8	<17.8	<17.8	6.87		
Background	3' - 4'	1/16/2004	<0.02	<0.02	<0.02	<0.04	<0.02	<0.04	<5	<2.5	<2.5	<5	10.6		

Laboratory Reports



A Xenco Laboratories Company

Analytical Report

Prepared for:

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Lea Station Landfarm

Project Number: 2004-00061

Location: Sect. 28, T 20 S, R 37 E

Lab Order Number: 7D13017

Report Date: 04/23/07

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
A1	7D13017-01	Soil	04/12/07 16:50	04-13-2007 13:00
A2	7D13017-02	Soil	04/12/07 17:01	04-13-2007 13:00
A3	7D13017-03	Soil	04/12/07 17:30	04-13-2007 13:00
A4	7D13017-04	Soil	04/12/07 16:43	04-13-2007 13:00
A5	7D13017-05	Soil	04/12/07 16:35	04-13-2007 13:00
A6	7D13017-06	Soil	04/12/07 16:25	04-13-2007 13:00
A7	7D13017-07	Soil	04/12/07 16:12	04-13-2007 13:00
A8	7D13017-08	Soil	04/12/07 16:01	04-13-2007 13:00
A9	7D13017-09	Soil	04/12/07 15:53	04-13-2007 13:00

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Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A1 (7D13017-01) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		95.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	69.9	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	J [7.54]	10.0	"	"	"	"	"	"	J
Total Hydrocarbons	69.9	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		87.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		104 %	70-130		"	"	"	"	

A2 (7D13017-02) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	0.00269	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		90.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	21.4	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	118	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	31.0	10.0	"	"	"	"	"	"	
Total Hydrocarbons	170	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	

A3 (7D13017-03) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	0.00389	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		95.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	24.6	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A3 (7D13017-03) Soil									
Carbon Ranges C12-C28	162	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C28-C35	36.2	10.0	"	"	"	"	"	"	
Total Hydrocarbons	223	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		89.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		101 %	70-130		"	"	"	"	
A4 (7D13017-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	0.0859	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.179	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.320	0.0250	"	"	"	"	"	"	
Xylene (o)	0.168	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	163	20.0	mg/kg dry	2	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	924	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	170	20.0	"	"	"	"	"	"	
Total Hydrocarbons	1260	20.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		43.4 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		52.0 %	70-130		"	"	"	"	S-06
A5 (7D13017-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED71905	04/19/07	04/20/07	EPA 8021B	
Toluene	J [0.0129]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	0.0531	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0915	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0276	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93.2 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	661	50.0	mg/kg dry	5	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	7030	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	717	50.0	"	"	"	"	"	"	
Total Hydrocarbons	8410	50.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		17.7 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		37.6 %	70-130		"	"	"	"	S-06

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Page 3 of 11

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Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A6 (7D13017-06) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	J [0.00118]	0.00200	"	"	"	"	"	"	J
Xylene (p/m)	0.00230	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		85.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	50.6	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	523	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	70.6	10.0	"	"	"	"	"	"	
Total Hydrocarbons	645	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		99.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		115 %	70-130		"	"	"	"	

A7 (7D13017-07) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	0.132	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.567	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.64	0.0250	"	"	"	"	"	"	
Xylene (o)	1.98	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		111 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		148 %	75-125		"	"	"	"	S-04
Carbon Ranges C6-C12	641	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	2340	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	171	10.0	"	"	"	"	"	"	
Total Hydrocarbons	3150	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		113 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		135 %	70-130		"	"	"	"	S-04

A8 (7D13017-08) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	J [0.0116]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	0.0469	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0697	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0446	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		110 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	588	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A8 (7D13017-08) Soil									
Carbon Ranges C12-C28	2180	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C28-C35	155	10.0	"	"	"	"	"	"	
Total Hydrocarbons	2920	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		114 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		132 %	70-130		"	"	"	"	S-04
A9 (7D13017-09) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		77.8 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		77.4 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	118	10.0	mg/kg dry	1	ED71607	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	1500	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	197	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1820	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		104 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		124 %	70-130		"	"	"	"	

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Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A1 (7D13017-01) Soil									
% Moisture	17.4	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A2 (7D13017-02) Soil									
% Moisture	21.5	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A3 (7D13017-03) Soil									
% Moisture	24.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A4 (7D13017-04) Soil									
% Moisture	23.2	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A5 (7D13017-05) Soil									
% Moisture	6.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A6 (7D13017-06) Soil									
% Moisture	16.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A7 (7D13017-07) Soil									
% Moisture	16.4	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A8 (7D13017-08) Soil									
% Moisture	11.3	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
A9 (7D13017-09) Soil									
% Moisture	18.4	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED71607 - Solvent Extraction (GC)										
Blank (ED71607-BLK1)										
					Prepared: 04/16/07 Analyzed: 04/18/07					
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	47.0		mg/kg	50.0		94.0	70-130			
Surrogate: 1-Chlorooctadecane	59.3		"	50.0		119	70-130			
LCS (ED71607-BS1)										
					Prepared: 04/16/07 Analyzed: 04/18/07					
Carbon Ranges C6-C12	591	1.00	mg/kg wet	500		118	75-125			
Carbon Ranges C12-C28	472	1.00	"	500		94.4	75-125			
Carbon Ranges C28-C35	ND	1.00	"	0.00			75-125			
Total Hydrocarbons	1060	1.00	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	50.9		mg/kg	50.0		102	70-130			
Surrogate: 1-Chlorooctadecane	53.5		"	50.0		107	70-130			
LCS Dup (ED71607-BSD1)										
					Prepared: 04/16/07 Analyzed: 04/18/07					
Carbon Ranges C6-C12	591	10.0	mg/kg wet	500		118	75-125	0.00	20	
Carbon Ranges C12-C28	472	10.0	"	500		94.4	75-125	0.00	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125		20	
Total Hydrocarbons	1060	10.0	"	1000		106	75-125	0.00	20	
Surrogate: 1-Chlorooctane	51.5		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	46.8		"	50.0		93.6	70-130			
Calibration Check (ED71607-CCV1)										
					Prepared: 04/16/07 Analyzed: 04/18/07					
Carbon Ranges C6-C12	242		mg/kg	250		96.8	80-120			
Carbon Ranges C12-C28	243		"	250		97.2	80-120			
Total Hydrocarbons	484		"	500		96.8	80-120			
Surrogate: 1-Chlorooctane	52.8		"	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	54.1		"	50.0		108	70-130			

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1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71905 - EPA 5030C (GC)

Blank (ED71905-BLK1)

Prepared & Analyzed: 04/19/07

Benzene	ND	0.00100	mg/kg wet						
Toluene	ND	0.00100	"						
Ethylbenzene	ND	0.00100	"						
Xylene (p/m)	ND	0.00100	"						
Xylene (o)	ND	0.00100	"						
Surrogate: a,a,a-Trifluorotoluene	53.3		ug/kg	50.0		107	75-125		
Surrogate: 4-Bromofluorobenzene	47.5		"	50.0		95.0	75-125		

LCS (ED71905-BS1)

Prepared & Analyzed: 04/19/07

Benzene	0.0507	0.00100	mg/kg wet	0.0500		101	80-120		
Toluene	0.0512	0.00100	"	0.0500		102	80-120		
Ethylbenzene	0.0547	0.00100	"	0.0500		109	80-120		
Xylene (p/m)	0.101	0.00100	"	0.100		101	80-120		
Xylene (o)	0.0558	0.00100	"	0.0500		112	80-120		
Surrogate: a,a,a-Trifluorotoluene	52.6		ug/kg	50.0		105	75-125		
Surrogate: 4-Bromofluorobenzene	50.4		"	50.0		101	75-125		

LCS Dup (ED71905-BSD1)

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	0.0535	0.00100	mg/kg wet	0.0500		107	80-120	5.77	20
Toluene	0.0536	0.00100	"	0.0500		107	80-120	4.78	20
Ethylbenzene	0.0564	0.00100	"	0.0500		113	80-120	3.60	20
Xylene (p/m)	0.104	0.00100	"	0.100		104	80-120	2.93	20
Xylene (o)	0.0575	0.00100	"	0.0500		115	80-120	2.64	20
Surrogate: a,a,a-Trifluorotoluene	55.0		ug/kg	50.0		110	75-125		
Surrogate: 4-Bromofluorobenzene	52.2		"	50.0		104	75-125		

Calibration Check (ED71905-CCV1)

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	55.0		ug/kg	50.0		110	80-120		
Toluene	53.3		"	50.0		107	80-120		
Ethylbenzene	55.0		"	50.0		110	80-120		
Xylene (p/m)	99.8		"	100		99.8	80-120		
Xylene (o)	55.8		"	50.0		112	80-120		
Surrogate: a,a,a-Trifluorotoluene	53.1		"	50.0		106	75-125		
Surrogate: 4-Bromofluorobenzene	48.3		"	50.0		96.6	75-125		

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Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71905 - EPA 5030C (GC)

Matrix Spike (ED71905-MS1)

Source: 7D13016-09

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	0.129	0.00200	mg/kg dry	0.130	ND	99.2	80-120			
Toluene	0.126	0.00200	"	0.130	ND	96.9	80-120			
Ethylbenzene	0.133	0.00200	"	0.130	ND	102	80-120			
Xylene (p/m)	0.229	0.00200	"	0.260	ND	88.1	80-120			
Xylene (o)	0.126	0.00200	"	0.130	ND	96.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.2		ug/kg	50.0		94.4	75-125			
Surrogate: 4-Bromofluorobenzene	44.9		"	50.0		89.8	75-125			

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Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED71702 - General Preparation (Prep)										
Blank (ED71702-BLK1)				Prepared: 04/13/07 Analyzed: 04/14/07						
% Solids	100	0.1	%							
Blank (ED71702-BLK2)				Prepared: 04/13/07 Analyzed: 04/14/07						
% Solids	100	0.1	%							
Duplicate (ED71702-DUP1)				Source: 7D13016-01		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	79.1	0.1	%		79.6			0.630	20	
Duplicate (ED71702-DUP2)				Source: 7D13001-01		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	86.5	0.1	%		86.6			0.116	20	
Duplicate (ED71702-DUP3)				Source: 7D13008-05		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	86.2	0.1	%		87.0			0.924	20	
Duplicate (ED71702-DUP4)				Source: 7D13010-06		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	89.3	0.1	%		89.6			0.335	20	
Duplicate (ED71702-DUP5)				Source: 7D12010-20		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	91.6	0.1	%		90.8			0.877	20	
Duplicate (ED71702-DUP6)				Source: 7D13018-01		Prepared: 04/13/07 Analyzed: 04/14/07				
% Solids	73.1	0.1	%		77.9			6.36	20	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

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Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

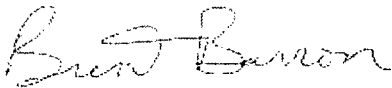
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

4/23/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Kcene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

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Chain of Custody Form

P.O. Box 1558, Eunice, NM 88231

[illegible]

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: Plains/ EPI
 Date/ Time: 4/13/07 1:00
 Sample ID #: TD3017
 Initials: CL

Sample Receipt Checklist

Client Initials

Temperature of container/ cooler?	Yes	No	2.0 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
Sample matrix/ properties agree with Chain of Custody?	Yes	No		
Containers supplied by ELOT?	Yes	No		
Samples in proper container/ bottle?	Yes	No	See Below	
Samples properly preserved?	Yes	No	See Below	
Sample bottles intact?	Yes	No		
Observations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	Yes	No		
Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
All samples received within sufficient hold time?	Yes	No	See Below	
Subcontract of sample(s)?	Yes	No	Not Applicable	
VOC samples have zero headspace?	Yes	No	Not Applicable	

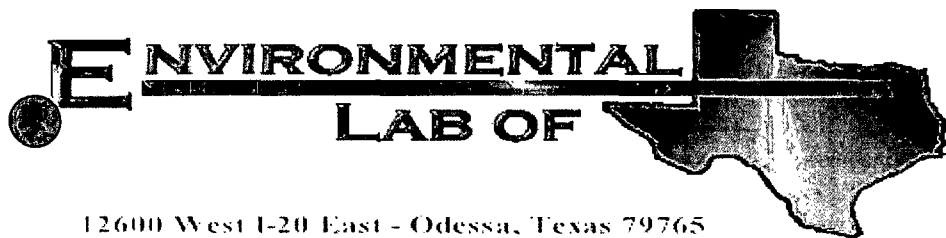
Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Lea Station Landfarm

Project Number: 2004-00061

Location: Sect, 28, T 20 S, R 37 E

Lab Order Number: 7D13016

Report Date: 04/23/07

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1	7D13016-01	Soil	04/12/07 14:10	04-13-2007 13:00
B2	7D13016-02	Soil	04/12/07 14:23	04-13-2007 13:00
B3	7D13016-03	Soil	04/12/07 14:39	04-13-2007 13:00
B4	7D13016-04	Soil	04/12/07 15:11	04-13-2007 13:00
B5	7D13016-05	Soil	04/12/07 15:01	04-13-2007 13:00
B6	7D13016-06	Soil	04/12/07 14:50	04-13-2007 13:00
B7	7D13016-07	Soil	04/12/07 13:45	04-13-2007 13:00
B8	7D13016-08	Soil	04/12/07 15:35	04-13-2007 13:00
B9	7D13016-09	Soil	04/12/07 15:25	04-13-2007 13:00

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Project Manager: Camille Reynolds

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Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1 (7D13016-01) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	J [0.00120]	0.00200	"	"	"	"	"	"	J
Xylene (p/m)	J [0.00196]	0.00200	"	"	"	"	"	"	J
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		78.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	48.3	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	872	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	127	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1050	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		91.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	

B2 (7D13016-02) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	0.00267	0.00200	"	"	"	"	"	"	
Xylene (p/m)	0.00454	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		80.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	88.1	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	1520	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	166	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1770	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		87.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		112 %	70-130		"	"	"	"	

B3 (7D13016-03) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		82.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	38.7	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B3 (7D13016-03) Soil									
Carbon Ranges C12-C28	1420	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C28-C35	169	10.0	"	"	"	"	"	"	
Total Hydrocarbons	1630	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		92.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		117 %	70-130		"	"	"	"	
B4 (7D13016-04) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		79.6 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		77.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	206	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	45.9	10.0	"	"	"	"	"	"	
Total Hydrocarbons	252	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		93.0 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		111 %	70-130		"	"	"	"	
B5 (7D13016-05) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.8 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		80.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	J [6.20]	20.0	mg/kg dry	"	ED71318	04/16/07	04/17/07	EPA 8015M	J
Carbon Ranges C12-C28	499	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	111	20.0	"	"	"	"	"	"	
Total Hydrocarbons	610	20.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		49.0 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		54.0 %	70-130		"	"	"	"	S-06

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Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B6 (7D13016-06) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	155	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	41.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	197	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

B7 (7D13016-07) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		79.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		78.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	12.0	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	175	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	32.7	10.0	"	"	"	"	"	"	
Total Hydrocarbons	220	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		88.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	

B8 (7D13016-08) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		86.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	20.0	mg/kg dry	"	ED71318	04/16/07	04/18/07	EPA 8015M	

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Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B8 (7D13016-08) Soil									
Carbon Ranges C12-C28	354	20.0	mg/kg dry	2	ED71318	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C28-C35	83.4	20.0	"	"	"	"	"	"	
Total Hydrocarbons	437	20.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		45.4 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		48.8 %	70-130		"	"	"	"	S-06
B9 (7D13016-09) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71905	04/19/07	04/19/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		78.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	10.8	10.0	mg/kg dry	1	ED71318	04/16/07	04/18/07	EPA 8015M	
Carbon Ranges C12-C28	180	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	41.1	10.0	"	"	"	"	"	"	
Total Hydrocarbons	232	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		88.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		104 %	70-130		"	"	"	"	

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Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

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General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1 (7D13016-01) Soil									
% Moisture	20.4	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B2 (7D13016-02) Soil									
% Moisture	13.3	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B3 (7D13016-03) Soil									
% Moisture	12.9	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B4 (7D13016-04) Soil									
% Moisture	20.7	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B5 (7D13016-05) Soil									
% Moisture	22.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B6 (7D13016-06) Soil									
% Moisture	23.3	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B7 (7D13016-07) Soil									
% Moisture	14.0	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B8 (7D13016-08) Soil									
% Moisture	24.1	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
B9 (7D13016-09) Soil									
% Moisture	23.0	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71318 - Solvent Extraction (GC)

Blank (ED71318-BLK1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	ND	10.0	mg/kg wet						
Carbon Ranges C12-C28	ND	10.0	"						
Carbon Ranges C28-C35	ND	10.0	"						
Total Hydrocarbons	ND	10.0	"						
Surrogate: 1-Chlorooctane	46.3		mg/kg	50.0		92.6	70-130		
Surrogate: 1-Chlorooctadecane	58.5		"	50.0		117	70-130		

LCS (ED71318-BS1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	624	10.0	mg/kg wet	500		125	75-125		
Carbon Ranges C12-C28	520	10.0	"	500		104	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125		
Total Hydrocarbons	1140	10.0	"	1000		114	75-125		
Surrogate: 1-Chlorooctane	59.8		mg/kg	50.0		120	70-130		
Surrogate: 1-Chlorooctadecane	58.2		"	50.0		116	70-130		

Calibration Check (ED71318-CCV1)

Prepared: 04/13/07 Analyzed: 04/18/07

Carbon Ranges C6-C12	242		mg/kg	250		96.8	80-120		
Carbon Ranges C12-C28	262		"	250		105	80-120		
Total Hydrocarbons	505		"	500		101	80-120		
Surrogate: 1-Chlorooctane	57.3		"	50.0		115	70-130		
Surrogate: 1-Chlorooctadecane	59.1		"	50.0		118	70-130		

Matrix Spike (ED71318-MS1)

Source: 7D13015-07

Prepared: 04/13/07 Analyzed: 04/18/07

Carbon Ranges C6-C12	745	10.0	mg/kg dry	639	ND	117	75-125		
Carbon Ranges C12-C28	580	10.0	"	639	ND	90.8	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		
Total Hydrocarbons	1330	10.0	"	1280	ND	104	75-125		
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130		
Surrogate: 1-Chlorooctadecane	56.0		"	50.0		112	70-130		

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Project: Lea Station Landfarm
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Project Manager: Camille Reynolds

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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71318 - Solvent Extraction (GC)

Matrix Spike Dup (ED71318-MSD1)

Source: 7D13015-07

Prepared: 04/13/07 Analyzed: 04/18/07

Carbon Ranges C6-C12	743	10.0	mg/kg dry	639	ND	116	75-125	0.858	20	
Carbon Ranges C12-C28	583	10.0	"	639	ND	91.2	75-125	0.440	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1330	10.0	"	1280	ND	104	75-125	0.00	20	
Surrogate: 1-Chlorooctane	55.9		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	57.7		"	50.0		115	70-130			

Batch ED71706 - EPA 5030C (GC)

Blank (ED71706-BLK1)

Prepared: 04/17/07 Analyzed: 04/18/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	53.5		ug/kg	50.0		107	75-125			
Surrogate: 4-Bromofluorobenzene	49.0		"	50.0		98.0	75-125			

CS (ED71706-BS1)

Prepared: 04/17/07 Analyzed: 04/18/07

Benzene	0.0546	0.00100	mg/kg wet	0.0500		109	80-120			
Toluene	0.0548	0.00100	"	0.0500		110	80-120			
Ethylbenzene	0.0579	0.00100	"	0.0500		116	80-120			
Xylene (p/m)	0.107	0.00100	"	0.100		107	80-120			
Xylene (o)	0.0589	0.00100	"	0.0500		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.5		ug/kg	50.0		111	75-125			
Surrogate: 4-Bromofluorobenzene	54.1		"	50.0		108	75-125			

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Project Number: 2004-00061
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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71706 - EPA 5030C (GC)

Calibration Check (ED71706-CCV1)

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	56.8		ug/kg	50.0		114	80-120			
Toluene	55.8		"	50.0		112	80-120			
Ethylbenzene	57.5		"	50.0		115	80-120			
Xylene (p/m)	105		"	100		105	80-120			
Xylene (o)	58.1		"	50.0		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	54.9		"	50.0		110	75-125			
Surrogate: 4-Bromofluorobenzene	49.6		"	50.0		99.2	75-125			

Matrix Spike (ED71706-MS1)

Source: 7D13015-02

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	0.130	0.00200	mg/kg dry	0.130	ND	100	80-120			
Toluene	0.128	0.00200	"	0.130	ND	98.5	80-120			
Ethylbenzene	0.133	0.00200	"	0.130	ND	102	80-120			
Xylene (p/m)	0.237	0.00200	"	0.259	ND	91.5	80-120			
Xylene (o)	0.129	0.00200	"	0.130	ND	99.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.3		ug/kg	50.0		92.6	75-125			
Surrogate: 4-Bromofluorobenzene	43.8		"	50.0		87.6	75-125			

Matrix Spike Dup (ED71706-MSD1)

Source: 7D13015-02

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	0.129	0.00200	mg/kg dry	0.130	ND	99.2	80-120	0.803	20	
Toluene	0.125	0.00200	"	0.130	ND	96.2	80-120	2.36	20	
Ethylbenzene	0.129	0.00200	"	0.130	ND	99.2	80-120	2.78	20	
Xylene (p/m)	0.224	0.00200	"	0.259	ND	86.5	80-120	5.62	20	
Xylene (o)	0.122	0.00200	"	0.130	ND	93.8	80-120	5.60	20	
Surrogate: a,a,a-Trifluorotoluene	46.2		ug/kg	50.0		92.4	75-125			
Surrogate: 4-Bromofluorobenzene	42.5		"	50.0		85.0	75-125			

Batch ED71905 - EPA 5030C (GC)

Blank (ED71905-BLK1)

Prepared & Analyzed: 04/19/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	53.3		ug/kg	50.0		107	75-125			
Surrogate: 4-Bromofluorobenzene	47.5		"	50.0		95.0	75-125			

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71905 - EPA 5030C (GC)

LCS (ED71905-BS1)

Prepared & Analyzed: 04/19/07

Benzene	0.0507	0.00100	mg/kg wet	0.0500		101	80-120			
Toluene	0.0512	0.00100	"	0.0500		102	80-120			
Ethylbenzene	0.0547	0.00100	"	0.0500		109	80-120			
Xylene (p/m)	0.101	0.00100	"	0.100		101	80-120			
Xylene (o)	0.0558	0.00100	"	0.0500		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	52.6		ug/kg	50.0		105	75-125			
Surrogate: 4-Bromofluorobenzene	50.4		"	50.0		101	75-125			

LCS Dup (ED71905-BS1)

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	0.0535	0.00100	mg/kg wet	0.0500		107	80-120	5.77	20	
Toluene	0.0536	0.00100	"	0.0500		107	80-120	4.78	20	
Ethylbenzene	0.0564	0.00100	"	0.0500		113	80-120	3.60	20	
Xylene (p/m)	0.104	0.00100	"	0.100		104	80-120	2.93	20	
Xylene (o)	0.0575	0.00100	"	0.0500		115	80-120	2.64	20	
Surrogate: a,a,a-Trifluorotoluene	55.0		ug/kg	50.0		110	75-125			
Surrogate: 4-Bromofluorobenzene	52.2		"	50.0		104	75-125			

Calibration Check (ED71905-CCV1)

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	55.0		ug/kg	50.0		110	80-120			
Toluene	53.3		"	50.0		107	80-120			
Ethylbenzene	55.0		"	50.0		110	80-120			
Xylene (p/m)	99.8		"	100		99.8	80-120			
Xylene (o)	55.8		"	50.0		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	53.1		"	50.0		106	75-125			
Surrogate: 4-Bromofluorobenzene	48.3		"	50.0		96.6	75-125			

Matrix Spike (ED71905-MS1)

Source: 7D13016-09

Prepared: 04/19/07 Analyzed: 04/20/07

Benzene	0.129	0.00200	mg/kg dry	0.130	ND	99.2	80-120			
Toluene	0.126	0.00200	"	0.130	ND	96.9	80-120			
Ethylbenzene	0.133	0.00200	"	0.130	ND	102	80-120			
Xylene (p/m)	0.229	0.00200	"	0.260	ND	88.1	80-120			
Xylene (o)	0.126	0.00200	"	0.130	ND	96.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.2		ug/kg	50.0		94.4	75-125			
Surrogate: 4-Bromofluorobenzene	44.9		"	50.0		89.8	75-125			

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1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch ED71702 - General Preparation (Prep)									
Blank (ED71702-BLK1)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Blank (ED71702-BLK2)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Duplicate (ED71702-DUP1)				Source: 7D13016-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	79.1	0.1	%		79.6		0.630	20	
Duplicate (ED71702-DUP2)				Source: 7D13001-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.5	0.1	%		86.6		0.116	20	
Duplicate (ED71702-DUP3)				Source: 7D13008-05		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.2	0.1	%		87.0		0.924	20	
Duplicate (ED71702-DUP4)				Source: 7D13010-06		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	89.3	0.1	%		89.6		0.335	20	
Duplicate (ED71702-DUP5)				Source: 7D12010-20		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	91.6	0.1	%		90.8		0.877	20	
Duplicate (ED71702-DUP6)				Source: 7D13018-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	73.1	0.1	%		77.9		6.36	20	

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Brent Barron

Date: 4/23/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

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Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: Plains/ EPI
 Date/ Time: 4/13/07 1:00
 b ID #: TD13016
 tials: CK

Sample Receipt Checklist

Client Initials

Temperature of container/ cooler?	Yes	No	2.0 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
Sample matrix/ properties agree with Chain of Custody?	Yes	No		
Containers supplied by ELOT?	Yes	No		
Samples in proper container/ bottle?	Yes	No	See Below	
Samples properly preserved?	Yes	No	See Below	
Sample bottles intact?	Yes	No		
Observations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	Yes	No		
Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
All samples received within sufficient hold time?	Yes	No	See Below	
Subcontract of sample(s)?	Yes	No	Not Applicable	
VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

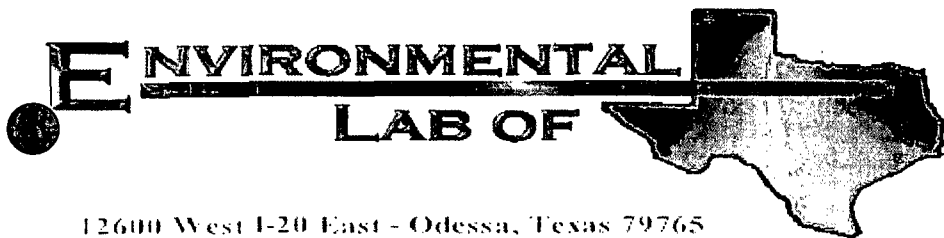
Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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



12600 West I-20 East - Odessa, Texas 79765

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Analytical Report

Prepared for:

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Lea Station Landfarm

Project Number: 2004-00061

Location: Sec. 28, T20S, R37E

Lab Order Number: 7D13014

Report Date: 04/18/07

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C1	7D13014-01	Soil	04/12/07 11:15	04-13-2007 13:00
C2	7D13014-02	Soil	04/12/07 11:36	04-13-2007 13:00
C3	7D13014-03	Soil	04/12/07 13:52	04-13-2007 13:00
C4	7D13014-04	Soil	04/12/07 12:53	04-13-2007 13:00
C5	7D13014-05	Soil	04/12/07 12:31	04-13-2007 13:00
C6	7D13014-06	Soil	04/12/07 12:10	04-13-2007 13:00
C7	7D13014-07	Soil	04/12/07 13:55	04-13-2007 13:00
C8	7D13014-08	Soil	04/12/07 13:28	04-13-2007 13:00
C9	7D13014-09	Soil	04/12/07 13:14	04-13-2007 13:00

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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C1 (7D13014-01) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED71704	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a.a.a-Trifluorotoluene		93.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		86.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	

C2 (7D13014-02) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71704	04/17/07	04/17/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a.a.a-Trifluorotoluene		87.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	28.3	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	28.3	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		86.6 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	

C3 (7D13014-03) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED71704	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a.a.a-Trifluorotoluene		104 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	18.3	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C3 (7D13014-03) Soil									
Carbon Ranges C12-C28	532	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C28-C35	121	10.0	"	"	"	"	"	"	
Total Hydrocarbons	671	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		89.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		103 %	70-130		"	"	"	"	
C4 (7D13014-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED71704	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		95.8 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	13.0	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	233	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	52.6	10.0	"	"	"	"	"	"	
Total Hydrocarbons	286	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		88.6 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		104 %	70-130		"	"	"	"	
C5 (7D13014-05) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71704	04/17/07	04/17/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		92.0 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		80.4 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	20.0	mg/kg dry	"	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	J [16.7]	20.0	"	"	"	"	"	"	J
Carbon Ranges C28-C35	ND	20.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	20.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		29.4 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		42.0 %	70-130		"	"	"	"	S-06

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

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Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6 (7D13014-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED71704	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.4 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	111	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	25.5	10.0	"	"	"	"	"	"	
Total Hydrocarbons	136	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		90.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	

C7 (7D13014-07) Soil

Benzene	ND	0.0250	mg/kg dry	25	ED71704	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	10.6	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	166	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	38.3	10.0	"	"	"	"	"	"	
Total Hydrocarbons	204	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		82.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-130		"	"	"	"	

C8 (7D13014-08) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71704	04/17/07	04/17/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		79.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		75.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	24.6	20.0	mg/kg dry	"	ED71317	04/13/07	04/16/07	EPA 8015M	

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C8 (7D13014-08) Soil									
Carbon Ranges C12-C28	98.8	20.0	mg/kg dry	2	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C28-C35	26.3	20.0	"	"	"	"	"	"	
Total Hydrocarbons	125	20.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		25.8 %	70-130		"	"	"	"	S-06
<i>Surrogate: 1-Chlorooctadecane</i>		37.6 %	70-130		"	"	"	"	S-06
C9 (7D13014-09) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71704	04/17/07	04/17/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a.a.a-Trifluorotoluene</i>		79.4 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		75.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	11.3	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	107	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	25.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	133	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		84.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		100 %	70-130		"	"	"	"	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C1 (7D13014-01) Soil									
% Moisture	26.6	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C2 (7D13014-02) Soil									
% Moisture	25.9	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C3 (7D13014-03) Soil									
% Moisture	12.2	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C4 (7D13014-04) Soil									
% Moisture	27.9	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C5 (7D13014-05) Soil									
% Moisture	29.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C6 (7D13014-06) Soil									
% Moisture	22.2	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C7 (7D13014-07) Soil									
% Moisture	10.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C8 (7D13014-08) Soil									
% Moisture	23.9	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
C9 (7D13014-09) Soil									
% Moisture	12.0	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71317 - Solvent Extraction (GC)

Blank (ED71317-BLK1)

Prepared: 04/13/07 Analyzed: 04/16/07

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	47.7		mg/kg	50.0		95.4	70-130			
Surrogate: 1-Chlorooctadecane	58.0		"	50.0		116	70-130			

LCS (ED71317-BS1)

Prepared: 04/13/07 Analyzed: 04/16/07

Carbon Ranges C6-C12	613	10.0	mg/kg wet	500		123	75-125			
Carbon Ranges C12-C28	492	10.0	"	500		98.4	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1110	10.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	55.2		mg/kg	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	54.5		"	50.0		109	70-130			

Calibration Check (ED71317-CCV1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	243		mg/kg	250		97.2	80-120			
Carbon Ranges C12-C28	252		"	250		101	80-120			
Total Hydrocarbons	496		"	500		99.2	80-120			
Surrogate: 1-Chlorooctane	54.1		"	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	57.1		"	50.0		114	70-130			

Matrix Spike (ED71317-MS1)

Source: 7D13014-01

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	775	10.0	mg/kg dry	681	ND	114	75-125			
Carbon Ranges C12-C28	592	10.0	"	681	ND	86.9	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1370	10.0	"	1360	ND	101	75-125			
Surrogate: 1-Chlorooctane	48.3		mg/kg	50.0		96.6	70-130			
Surrogate: 1-Chlorooctadecane	53.7		"	50.0		107	70-130			

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71317 - Solvent Extraction (GC)

Matrix Spike Dup (ED71317-MSD1)

Source: 7D13014-01

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	773	10.0	mg/kg dry	681	ND	114	75-125	0.00	20	
Carbon Ranges C12-C28	593	10.0	"	681	ND	87.1	75-125	0.230	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1370	10.0	"	1360	ND	101	75-125	0.00	20	
Surrogate: 1-Chlorooctane	46.9		mg/kg	50.0		93.8	70-130			
Surrogate: 1-Chlorooctadecane	50.6		"	50.0		101	70-130			

Batch ED71704 - EPA 5030C (GC)

Blank (ED71704-BLK1)

Prepared & Analyzed: 04/17/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	41.6		ug/kg	50.0		83.2	75-125			
Surrogate: 4-Bromofluorobenzene	41.6		"	50.0		83.2	75-125			

CS (ED71704-BS1)

Prepared & Analyzed: 04/17/07

Benzene	0.0524	0.00100	mg/kg wet	0.0500		105	80-120			
Toluene	0.0527	0.00100	"	0.0500		105	80-120			
Ethylbenzene	0.0524	0.00100	"	0.0500		105	80-120			
Xylene (p/m)	0.104	0.00100	"	0.100		104	80-120			
Xylene (o)	0.0558	0.00100	"	0.0500		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	50.6		ug/kg	50.0		101	75-125			
Surrogate: 4-Bromofluorobenzene	48.0		"	50.0		96.0	75-125			

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1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71704 - EPA 5030C (GC)

Calibration Check (ED71704-CCV1)

Prepared & Analyzed: 04/17/07

Benzene	58.8		ug/kg	50.0		118	80-120			
Toluene	57.8		"	50.0		116	80-120			
Ethylbenzene	59.0		"	50.0		118	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	60.1		"	50.0		120	80-120			
Surrogate: a,a,a-Trifluorotoluene	51.1		"	50.0		102	75-125			
Surrogate: 4-Bromofluorobenzene	50.6		"	50.0		101	75-125			

Matrix Spike (ED71704-MS1)

Source: 7D13009-06

Prepared & Analyzed: 04/17/07

Benzene	0.0993	0.00200	mg/kg dry	0.102	ND	97.4	80-120			
Toluene	0.100	0.00200	"	0.102	ND	98.0	80-120			
Ethylbenzene	0.102	0.00200	"	0.102	ND	100	80-120			
Xylene (p/m)	0.191	0.00200	"	0.203	ND	94.1	80-120			
Xylene (o)	0.104	0.00200	"	0.102	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	44.4		ug/kg	50.0		88.8	75-125			
Surrogate: 4-Bromofluorobenzene	43.5		"	50.0		87.0	75-125			

Matrix Spike Dup (ED71704-MSD1)

Source: 7D13009-06

Prepared & Analyzed: 04/17/07

Benzene	0.0959	0.00200	mg/kg dry	0.102	ND	94.0	80-120	3.55	20	
Toluene	0.0960	0.00200	"	0.102	ND	94.1	80-120	4.06	20	
Ethylbenzene	0.101	0.00200	"	0.102	ND	99.0	80-120	1.01	20	
Xylene (p/m)	0.185	0.00200	"	0.203	ND	91.1	80-120	3.24	20	
Xylene (o)	0.101	0.00200	"	0.102	ND	99.0	80-120	2.99	20	
Surrogate: a,a,a-Trifluorotoluene	46.0		ug/kg	50.0		92.0	75-125			
Surrogate: 4-Bromofluorobenzene	45.8		"	50.0		91.6	75-125			

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch ED71702 - General Preparation (Prep)									
Blank (ED71702-BLK1)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Blank (ED71702-BLK2)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Duplicate (ED71702-DUP1)				Source: 7D13016-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	79.1	0.1	%		79.6		0.630	20	
Duplicate (ED71702-DUP2)				Source: 7D13001-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.5	0.1	%		86.6		0.116	20	
Duplicate (ED71702-DUP3)				Source: 7D13008-05		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.2	0.1	%		87.0		0.924	20	
Duplicate (ED71702-DUP4)				Source: 7D13010-06		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	89.3	0.1	%		89.6		0.335	20	
Duplicate (ED71702-DUP5)				Source: 7D12010-20		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	91.6	0.1	%		90.8		0.877	20	
Duplicate (ED71702-DUP6)				Source: 7D13018-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	73.1	0.1	%		77.9		6.36	20	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Brent Barron

Date: 4/18/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

Company Name Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST																			
EPI Project Manager Jason Stegemoller		PRESERV.		DATE		TIME		BTEX 8021B		TPH 8015M		CHLORIDES (Cl)		SULFATES (SO ₄)		PH		Anions & Cations		RCRA Metals (8)		PAH	
Mailing Address P.O. BOX 1558		ACID/BASE		OTHER		OTHER		ICE/COOL		OTHER													
City, State, Zip Eunice New Mexico 88231		SLUDGE		CRUDE OIL		WASTEWATER		GROUND WATER		SOIL													
EPI Phone# / Fax# 505-394-3481 / 505-394-2601		OTHER:		SLUDGE		CRUDE OIL		WASTEWATER		SOIL													
Client Company Plains Marketing		# CONTAINERS		(G) RAB OR (C) OMP.		GROUND WATER		WASTEWATER		SOIL													
Facility Name Lea Station Landfarm																							
Location Sect. 28, T 20 S, R 37 E																							
Project Reference 2004-00061																							
EPI Sampler Name George Blackburn																							
SAMPLE I.D.																							
286716		1 C1		C 1																			
7D3014		2 C2		C 1																			
		3 C3		C 1																			
		4 C4		C 1																			
		5 C5		C 1																			
		6 C6		C 1																			
		7 C7		C 1																			
		8 C8		C 1																			
		9 C9		C 1																			
		10																					

Sampler Relinquished:		Received By:	
Date: 4-17-07		Date: 4-17-07	
Time: 1:00		Time: 1:00	
Relinquished By: [Signature]		Received By: (lab sign) [Signature]	
Delivered by:		Sample Cool & Intact	
		Yes No	
		Checked By: [Signature]	

E-mail results to: jstegemoller@envplus.net and cireynolds@paalp.net

REMARKS:

4oz glass 2.0
w/ labels on jar

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains/ EPI
 Date/ Time: 4/13/07 1:00
 Lab ID #: 7713014
 Initials: CK

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	Yes	No	2.0 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	Yes	No		
#6 Sample instructions complete of Chain of Custody?	Yes	No		
#7 Chain of Custody signed when relinquished/ received?	Yes	No		
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11 Containers supplied by ELOT?	Yes	No		
#12 Samples in proper container/ bottle?	Yes	No	See Below	
#13 Samples properly preserved?	Yes	No	See Below	
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Yes	No		
#16 Containers documented on Chain of Custody?	Yes	No		
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

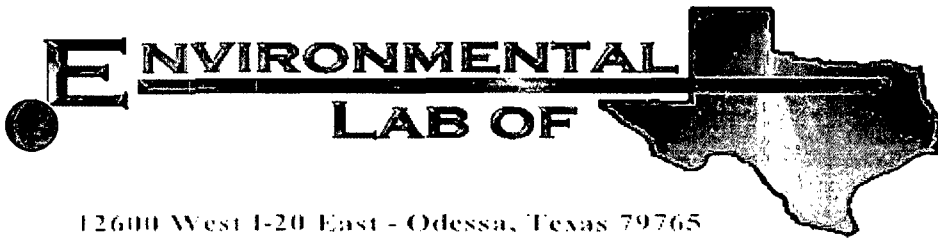
Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding _____

Corrective Action Taken: _____

Check all that Apply:

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



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Lea Station Landfarm

Project Number: 2004-00061

Location: Sec. 28, T20S, R37E

Lab Order Number: 7D13015

Report Date: 04/19/07

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E1	7D13015-01	Soil	04/12/07 07:00	04-13-2007 13:00
E2	7D13015-02	Soil	04/12/07 07:28	04-13-2007 13:00
E3	7D13015-03	Soil	04/12/07 08:01	04-13-2007 13:00
E4	7D13015-04	Soil	04/12/07 09:20	04-13-2007 13:00
E5	7D13015-05	Soil	04/12/07 08:55	04-13-2007 13:00
E6	7D13015-06	Soil	04/12/07 08:28	04-13-2007 13:00
E7	7D13015-07	Soil	04/12/07 10:55	04-13-2007 13:00
E8	7D13015-08	Soil	04/12/07 10:20	04-13-2007 13:00
E9	7D13015-09	Soil	04/12/07 09:50	04-13-2007 13:00

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E1 (7D13015-01) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71704	04/17/07	04/17/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		76.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.2 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	11.7	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	317	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	97.4	10.0	"	"	"	"	"	"	
Total Hydrocarbons	426	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		85.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	

E2 (7D13015-02) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		94.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	24.6	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	24.6	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		88.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		102 %	70-130		"	"	"	"	

E3 (7D13015-03) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		94.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.6 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	12.6	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	

Environmental Lab of Texas

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E3 (7D13015-03) Soil									
Carbon Ranges C12-C28	188	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C28-C35	49.5	10.0	"	"	"	"	"	"	
Total Hydrocarbons	237	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		90.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		107 %	70-130		"	"	"	"	
E4 (7D13015-04) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		92.0 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		84.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	12.4	10.0	mg/kg dry	1	ED71317	04/13/07	04/16/07	EPA 8015M	
Carbon Ranges C12-C28	141	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	34.8	10.0	"	"	"	"	"	"	
Total Hydrocarbons	188	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		99.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		117 %	70-130		"	"	"	"	
E5 (7D13015-05) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78.6 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		80.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	10.7	10.0	mg/kg dry	1	ED71317	04/13/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	185	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	48.9	10.0	"	"	"	"	"	"	
Total Hydrocarbons	234	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		96.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		114 %	70-130		"	"	"	"	

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E6 (7D13015-06) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		90.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.4 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	28.1	20.0	mg/kg dry	"	ED71317	04/13/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	434	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	125	20.0	"	"	"	"	"	"	
Total Hydrocarbons	587	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		42.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		55.8 %	70-130		"	"	"	"	S-06

E7 (7D13015-07) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		96.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-130		"	"	"	"	

E8 (7D13015-08) Soil

Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	

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1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E8 (7D13015-08) Soil									
Carbon Ranges C12-C28	42.2	10.0	mg/kg dry	1	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C28-C35	J [7.61]	10.0	"	"	"	"	"	"	J
Total Hydrocarbons	42.2	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		98.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	
E9 (7D13015-09) Soil									
Benzene	ND	0.00200	mg/kg dry	2	ED71706	04/17/07	04/18/07	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00200	"	"	"	"	"	"	
Surrogate: a.a.a-Trifluorotoluene		97.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	75-125		"	"	"	"	
Carbon Ranges C6-C12	ND	20.0	mg/kg dry	"	ED71318	04/16/07	04/17/07	EPA 8015M	
Carbon Ranges C12-C28	124	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	39.5	20.0	"	"	"	"	"	"	
Total Hydrocarbons	164	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		42.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		45.6 %	70-130		"	"	"	"	S-06

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Project: Lea Station Landfarm
Project Number: 2004-00061
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General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
E1 (7D13015-01) Soil									
% Moisture	9.3	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E2 (7D13015-02) Soil									
% Moisture	22.8	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E3 (7D13015-03) Soil									
% Moisture	21.6	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E4 (7D13015-04) Soil									
% Moisture	17.6	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E5 (7D13015-05) Soil									
% Moisture	12.1	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E6 (7D13015-06) Soil									
% Moisture	26.9	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E7 (7D13015-07) Soil									
% Moisture	21.7	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E8 (7D13015-08) Soil									
% Moisture	6.2	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	
E9 (7D13015-09) Soil									
% Moisture	24.7	0.1	%	1	ED71702	04/13/07	04/14/07	% calculation	

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71317 - Solvent Extraction (GC)

Blank (ED71317-BLK1)

Prepared: 04/13/07 Analyzed: 04/16/07

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	47.7		mg/kg	50.0		95.4	70-130			
Surrogate: 1-Chlorooctadecane	58.0		"	50.0		116	70-130			

LCS (ED71317-BS1)

Prepared: 04/13/07 Analyzed: 04/16/07

Carbon Ranges C6-C12	613	10.0	mg/kg wet	500		123	75-125			
Carbon Ranges C12-C28	492	10.0	"	500		98.4	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1110	10.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	55.2		mg/kg	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	54.5		"	50.0		109	70-130			

Calibration Check (ED71317-CCV1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	243		mg/kg	250		97.2	80-120			
Carbon Ranges C12-C28	252		"	250		101	80-120			
Total Hydrocarbons	496		"	500		99.2	80-120			
Surrogate: 1-Chlorooctane	54.1		"	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	57.1		"	50.0		114	70-130			

Matrix Spike (ED71317-MS1)

Source: 7D13014-01

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	775	10.0	mg/kg dry	681	ND	114	75-125			
Carbon Ranges C12-C28	592	10.0	"	681	ND	86.9	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1370	10.0	"	1360	ND	101	75-125			
Surrogate: 1-Chlorooctane	48.3		mg/kg	50.0		96.6	70-130			
Surrogate: 1-Chlorooctadecane	53.7		"	50.0		107	70-130			

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Project Manager: Camille Reynolds

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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71317 - Solvent Extraction (GC)

Matrix Spike Dup (ED71317-MSD1)

Source: 7D13014-01

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	773	10.0	mg/kg dry	681	ND	114	75-125	0.00	20	
Carbon Ranges C12-C28	593	10.0	"	681	ND	87.1	75-125	0.230	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1370	10.0	"	1360	ND	101	75-125	0.00	20	
Surrogate: 1-Chlorooctane	46.9		mg/kg	50.0		93.8	70-130			
Surrogate: 1-Chlorooctadecane	50.6		"	50.0		101	70-130			

Batch ED71318 - Solvent Extraction (GC)

Blank (ED71318-BLK1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	46.3		mg/kg	50.0		92.6	70-130			
Surrogate: 1-Chlorooctadecane	58.5		"	50.0		117	70-130			

LCS (ED71318-BS1)

Prepared: 04/13/07 Analyzed: 04/17/07

Carbon Ranges C6-C12	624	10.0	mg/kg wet	500		125	75-125			
Carbon Ranges C12-C28	520	10.0	"	500		104	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1140	10.0	"	1000		114	75-125			
Surrogate: 1-Chlorooctane	59.8		mg/kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	58.2		"	50.0		116	70-130			

Calibration Check (ED71318-CCV1)

Prepared: 04/13/07 Analyzed: 04/18/07

Carbon Ranges C6-C12	242		mg/kg	250		96.8	80-120			
Carbon Ranges C12-C28	262		"	250		105	80-120			
Total Hydrocarbons	505		"	500		101	80-120			
Surrogate: 1-Chlorooctane	57.3		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	50.1		"	50.0		118	70-130			

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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71318 - Solvent Extraction (GC)

Matrix Spike (ED71318-MS1)		Source: 7D13015-07		Prepared: 04/13/07		Analyzed: 04/18/07	
Carbon Ranges C6-C12	745	10.0	mg/kg dry	639	ND	117	75-125
Carbon Ranges C12-C28	580	10.0	"	639	ND	90.8	75-125
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125
Total Hydrocarbons	1330	10.0	"	1280	ND	104	75-125
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130
Surrogate: 1-Chlorooctadecane	56.0		"	50.0		112	70-130

Matrix Spike Dup (ED71318-MSD1)	Source: 7D13015-07			Prepared: 04/13/07 Analyzed: 04/18/07					
Carbon Ranges C6-C12	743	10.0	mg/kg dry	639	ND	116	75-125	0.858	20
Carbon Ranges C12-C28	583	10.0	"	639	ND	91.2	75-125	0.440	20
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20
Total Hydrocarbons	1330	10.0	"	1280	ND	104	75-125	0.00	20
Surrogate: 1-Chlorooctane	55.9		mg/kg	50.0		112	70-130		
Surrogate: 1-Chlorooctadecane	57.7		"	50.0		115	70-130		

Batch ED71704 - EPA 5030C (GC)

Blank (ED71704-BLK1)		Prepared & Analyzed: 04/17/07	
Benzene	ND	0.00100	mg/kg wet
Toluene	ND	0.00100	"
Ethylbenzene	ND	0.00100	"
Xylene (p/m)	ND	0.00100	"
Xylene (o)	ND	0.00100	"
Surrogate: a,a,a-Trifluorotoluene	41.6		ug/kg
Surrogate: 4-Bromofluorobenzene	41.6		"

LCS (ED71704-BS1)		Prepared & Analyzed: 04/17/07	
Benzene	0.0524	0.00100	mg/kg wet
Toluene	0.0527	0.00100	"
Ethylbenzene	0.0524	0.00100	"
Xylene (p/m)	0.104	0.00100	"
Xylene (o)	0.0558	0.00100	"
Surrogate: a,a,a-Trifluorotoluene	50.6		ug/kg
Surrogate: 4-Bromofluorobenzene	48.0		"

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Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch ED71704 - EPA 5030C (GC)

Calibration Check (ED71704-CCV1)

Prepared & Analyzed: 04/17/07

Benzene	58.8		ug/kg	50.0		118	80-120			
Toluene	57.8		"	50.0		116	80-120			
Ethylbenzene	59.0		"	50.0		118	80-120			
Xylene (p/m)	109		"	100		109	80-120			
Xylene (o)	60.1		"	50.0		120	80-120			
Surrogate: a,a,a-Trifluorotoluene	51.1		"	50.0		102	75-125			
Surrogate: 4-Bromofluorobenzene	50.6		"	50.0		101	75-125			

Matrix Spike (ED71704-MS1)

Source: 7D13009-06

Prepared & Analyzed: 04/17/07

Benzene	0.0993	0.00200	mg/kg dry	0.102	ND	97.4	80-120			
Toluene	0.100	0.00200	"	0.102	ND	98.0	80-120			
Ethylbenzene	0.102	0.00200	"	0.102	ND	100	80-120			
Xylene (p/m)	0.191	0.00200	"	0.203	ND	94.1	80-120			
Xylene (o)	0.104	0.00200	"	0.102	ND	102	80-120			
Surrogate: a,a,a-Trifluorotoluene	44.4		ug/kg	50.0		88.8	75-125			
Surrogate: 4-Bromofluorobenzene	43.5		"	50.0		87.0	75-125			

Matrix Spike Dup (ED71704-MSD1)

Source: 7D13009-06

Prepared & Analyzed: 04/17/07

Benzene	0.0959	0.00200	mg/kg dry	0.102	ND	94.0	80-120	3.55	20	
Toluene	0.0960	0.00200	"	0.102	ND	94.1	80-120	4.06	20	
Ethylbenzene	0.101	0.00200	"	0.102	ND	99.0	80-120	1.01	20	
Xylene (p/m)	0.185	0.00200	"	0.203	ND	91.1	80-120	3.24	20	
Xylene (o)	0.101	0.00200	"	0.102	ND	99.0	80-120	2.99	20	
Surrogate: a,a,a-Trifluorotoluene	46.0		ug/kg	50.0		92.0	75-125			
Surrogate: 4-Bromofluorobenzene	45.8		"	50.0		91.6	75-125			

Batch ED71706 - EPA 5030C (GC)

Blank (ED71706-BLK1)

Prepared: 04/17/07 Analyzed: 04/18/07

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	53.5		ug/kg	50.0		107	75-125			
Surrogate: 4-Bromofluorobenzene	49.0		"	50.0		98.0	75-125			

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch ED71706 - EPA 5030C (GC)

LCS (ED71706-BS1)

Prepared: 04/17/07 Analyzed: 04/18/07

Benzene	0.0546	0.00100	mg/kg wet	0.0500		109	80-120			
Toluene	0.0548	0.00100	"	0.0500		110	80-120			
Ethylbenzene	0.0579	0.00100	"	0.0500		116	80-120			
Xylene (p/m)	0.107	0.00100	"	0.100		107	80-120			
Xylene (o)	0.0589	0.00100	"	0.0500		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.5		ug/kg	50.0		111	75-125			
Surrogate: 4-Bromofluorobenzene	54.1		"	50.0		108	75-125			

Calibration Check (ED71706-CCV1)

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	56.8		ug/kg	50.0		114	80-120			
Toluene	55.8		"	50.0		112	80-120			
Ethylbenzene	57.5		"	50.0		115	80-120			
Xylene (p/m)	105		"	100		105	80-120			
Xylene (o)	58.1		"	50.0		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	54.9		"	50.0		110	75-125			
Surrogate: 4-Bromofluorobenzene	49.6		"	50.0		99.2	75-125			

Matrix Spike (ED71706-MS1)

Source: 7D13015-02

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	0.130	0.00200	mg/kg dry	0.130	ND	100	80-120			
Toluene	0.128	0.00200	"	0.130	ND	98.5	80-120			
Ethylbenzene	0.133	0.00200	"	0.130	ND	102	80-120			
Xylene (p/m)	0.237	0.00200	"	0.259	ND	91.5	80-120			
Xylene (o)	0.129	0.00200	"	0.130	ND	99.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	46.3		ug/kg	50.0		92.6	75-125			
Surrogate: 4-Bromofluorobenzene	43.8		"	50.0		87.6	75-125			

Matrix Spike Dup (ED71706-MSD1)

Source: 7D13015-02

Prepared: 04/17/07 Analyzed: 04/19/07

Benzene	0.129	0.00200	mg/kg dry	0.130	ND	99.2	80-120	0.803	20	
Toluene	0.125	0.00200	"	0.130	ND	96.2	80-120	2.36	20	
Ethylbenzene	0.129	0.00200	"	0.130	ND	99.2	80-120	2.78	20	
Xylene (p/m)	0.224	0.00200	"	0.259	ND	86.5	80-120	5.62	20	
Xylene (o)	0.122	0.00200	"	0.130	ND	93.8	80-120	5.60	20	
Surrogate: a,a,a-Trifluorotoluene	46.2		ug/kg	50.0		92.4	75-125			
Surrogate: 4-Bromofluorobenzene	42.5		"	50.0		85.0	75-125			

Environmental Lab of Texas

A Xenco Laboratories Company

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Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch ED71702 - General Preparation (Prep)									
Blank (ED71702-BLK1)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Blank (ED71702-BLK2)				Prepared: 04/13/07 Analyzed: 04/14/07					
% Solids	100	0.1	%						
Duplicate (ED71702-DUP1)				Source: 7D13016-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	79.1	0.1	%		79.6		0.630	20	
Duplicate (ED71702-DUP2)				Source: 7D13001-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.5	0.1	%		86.6		0.116	20	
Duplicate (ED71702-DUP3)				Source: 7D13008-05		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	86.2	0.1	%		87.0		0.924	20	
Duplicate (ED71702-DUP4)				Source: 7D13010-06		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	89.3	0.1	%		89.6		0.335	20	
Duplicate (ED71702-DUP5)				Source: 7D12010-20		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	91.6	0.1	%		90.8		0.877	20	
Duplicate (ED71702-DUP6)				Source: 7D13018-01		Prepared: 04/13/07 Analyzed: 04/14/07			
% Solids	73.1	0.1	%		77.9		6.36	20	

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

Project: Lea Station Landfarm
Project Number: 2004-00061
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: _____



Date: 4/19/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 13 of 13

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains/ EPI
 Date/ Time: 4/13/07 1:00
 Lab ID #: 1713015
 Initials: CK

Sample Receipt Checklist

Client Initials

1	Temperature of container/ cooler?	Yes	No	2.0 °C	
2	Shipping container in good condition?	Yes	No		
3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
5	Chain of Custody present?	Yes	No		
6	Sample instructions complete of Chain of Custody?	Yes	No		
7	Chain of Custody signed when relinquished/ received?	Yes	No		
8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
9	Container label(s) legible and intact?	Yes	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
11	Containers supplied by ELOT?	Yes	No		
12	Samples in proper container/ bottle?	Yes	No	See Below	
13	Samples properly preserved?	Yes	No	See Below	
14	Sample bottles intact?	Yes	No		
15	Preservations documented on Chain of Custody?	Yes	No		
16	Containers documented on Chain of Custody?	Yes	No		
17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
18	All samples received within sufficient hold time?	Yes	No	See Below	
19	Subcontract of sample(s)?	Yes	No	Not Applicable	
20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

☐
☐
☐

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

Analytical Report 356767

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-061

29-DEC-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



29-DEC-09

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

Reference: XENCO Report No: **356767**
Lea Station Land Farm
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 356767. 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. 356767 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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



Sample Cross Reference 356767



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

BG South of Cell "G"

BG West of Cell "G"

Matrix

S

S

Date Collected

Dec-23-09 10:05

Dec-23-09 10:10

Sample Depth

Lab Sample Id

356767-001

356767-002



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-061

Work Order Number: 356767

Report Date: 29-DEC-09

Date Received: 12/23/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-787397 Percent Moisture

None

Batch: LBA-787406 Inorganic Anions In Soil by E300

None



Certificate of Analytical Summary 356767
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2004-061
Contact: Jason Henry
Project Location: Lea County, NM
Project Name: Lea Station Land Farm
Date Received in Lab: Wed Dec-23-09 04:40 pm
Report Date: 29-DEC-09
Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	356767-001	356767-002		
		Field Id:	BG South of Cell "G"	BG West of Cell "G"		
		Depth:				
		Matrix:	SOIL	SOIL		
		Sampled:	Dec-23-09 10:05	Dec-23-09 10:10		
Inorganic Anions In Soil by E300		Extracted:				
		Analyzed:	Dec-28-09 10:41	Dec-28-09 10:41		
		Units/RL:	mg/kg RL 100 5.06	mg/kg RL 100 5.14		
Percent Moisture		Extracted:				
		Analyzed:	Dec-28-09 17:00	Dec-28-09 17:00		
		Units/RL:	% RL 1.14 1.00	% RL 2.73 1.00		
Percent Moisture						

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

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

Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 356767

Project ID:

2004-061

Lab Batch #: 787406

Sample: 787406-1-BKS

Matrix: Solid

Date Analyzed: 12/28/2009

Date Prepared: 12/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK/BLANK SPIKE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.73	97	75-125	

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

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

BRL - Below Reporting Limit



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 356767

Lab Batch #: 787406

Date Analyzed: 12/28/2009

Date Prepared: 12/28/2009

Project ID: 2004-061

Analyst: LATCOR

QC- Sample ID: 356767-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		ND	101	103	102	75-125

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

BRL - Below Reporting Limit



Sample Duplicate Recovery

Project Name: Lea Station Land Farm

Work Order #: 356767

Lab Batch #: 787406

Project ID: 2004-061

Date Analyzed: 12/28/2009

Date Prepared: 12/28/2009

Analyst: LATCOR

QC- Sample ID: 356767-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

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

Lab Batch #: 787397

Date Analyzed: 12/28/2009

Date Prepared: 12/28/2009

Analyst: MOV

QC- Sample ID: 356767-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	1.14	1.04	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



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

**12600 West I-20 East
Odessa, Texas 79765**

Phone: 432-583-1800
Fax: 432-583-1713

Project Manager: Camille Bryant

Project Name: Lea Station Land Farm

Company Name BasIn Environmental Service Technologies, LLC

Project #: 2004-061

Company Address: P.O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA- J. Henry

Telephone No: (575) 805-7210

Fax No: (505) 396-1429

Sampler Signature:

cibryant@basin-consulting.com

(lab use only)

356767

[illegible]

Special Instructions:

Laboratory Comments:

Simple Containers Interact?

VOCs Free of Headspace?

Labels on containers

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Sampler/Client Rep. ?

by Courier? UPS DH

40291955
Tombstone / 1100 Bore/41:

Temperature Upon Receipt:

6

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains
 Date/ Time: 12-26-23 09:16:40
 Lab ID #: 356767
 Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	22.6 °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	<u>Not Applicable</u>

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 335964

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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**



25-JUN-09

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

Reference: XENCO Report No: **335964**
Lea Station Land Farm
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 335964. 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. 335964 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335964



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell A TZ G 1	S	Jun-16-09 09:00		335964-001
Cell A TZ G 2	S	Jun-16-09 09:05		335964-002
Cell A TZ G 3	S	Jun-16-09 09:10		335964-003
Cell A TZ G 4	S	Jun-16-09 09:15		335964-004
Cell A TZ G 5	S	Jun-16-09 09:20		335964-005



Certificate of Analysis Summary 335964
PLAINS ALL AMERICAN EH&S, Midland, TX



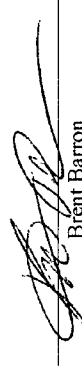
Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: Lea Station Land Farm
Date Received in Lab: Fri Jun-19-09 08:40 am
Report Date: 25-JUN-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335964-001	335964-002	335964-003	335964-004	335964-005
	Field Id:	Cell A TZ G 1	Cell A TZ G 2	Cell A TZ G 3	Cell A TZ G 4	Cell A TZ G 5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by EPA 300	Sampled:	Jun-16-09 09:00	Jun-16-09 09:05	Jun-16-09 09:10	Jun-16-09 09:15	Jun-16-09 09:20
	Extracted:					
	Analyzed:	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44
	Units/RL:	mg/kg RL 38.5 5.01	mg/kg RL 35.7 5.02	mg/kg RL 30.1 5.03	mg/kg RL 30.5 5.03	mg/kg RL 17.5 5.02
Percent Moisture	Chloride					
	Extracted:					
	Analyzed:	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:23
	Units/RL:	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00
TPH By SW8015 Mod	Percent Moisture					
	Extracted:	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57
	Analyzed:	Jun-23-09 10:17	Jun-23-09 10:43	Jun-23-09 11:09	Jun-23-09 11:35	Jun-23-09 12:02
	Units/RL:	mg/kg RL ND 15.0	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.0
	C6-C12 Gasoline Range Hydrocarbons					
	C12-C28 Diesel Range Hydrocarbons	794 15.0	1070 15.1	889 15.1	571 15.1	176 15.0
	C28-C35 Oil Range Hydrocarbons	184 15.0	206 15.1	182 15.1	140 15.1	71.2 15.0
	Total TPH	978 15.0	1276 15.1	1071 15.1	711 15.1	247.2 15.0

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335964,

Lab Batch #: 763323

Sample: 532416-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763323

Sample: 532416-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763323

Sample: 532416-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 08:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.9	100	76	70-135	
o-Terphenyl	39.1	50.0	78	70-135	

Lab Batch #: 763323

Sample: 335964-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 10:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	82.5	99.8	83	70-135	
o-Terphenyl	44.5	49.9	89	70-135	

Lab Batch #: 763323

Sample: 335964-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 10:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335964,

Lab Batch #: 763323

Sample: 335964-003 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 11:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	99.8	83	70-135	
o-Terphenyl	45.0	49.9	90	70-135	

Lab Batch #: 763323

Sample: 335964-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 11:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.3	99.9	84	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 763323

Sample: 335964-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 12:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.0	99.7	84	70-135	
o-Terphenyl	45.2	49.9	91	70-135	

Lab Batch #: 763323

Sample: 335951-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.6	119	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

Lab Batch #: 763323

Sample: 335951-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 18:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	99.7	88	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335964

Project ID:

SRS: 2004-00061

Lab Batch #: 763125

Sample: 763125-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.01	90	90-110	

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

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

- Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 335964

Analyst: BHW

Lab Batch ID: 763323

Sample: 532416-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH By SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	ND	1000	773	77	1000	736	74	5	70-135	35	
	ND	1000	715	72	1000	763	76	6	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335964

Lab Batch #: 763125

Date Analyzed: 06/22/2009

QC- Sample ID: 335964-001 S

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

Analyst: LATCOR

Date Prepared: 06/22/2009

Batch #: 1

Matrix: Soil

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		38.5	100	135	97	80-120

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335964

Lab Batch ID: 763323

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335951-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009 Analyst: BHW

Reporting Units: mg/kg											
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	56.8	998	943	89	999	895	84	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	603	998	1600	100	999	1390	79	14	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335964

Lab Batch #: 763125

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	38.5	39.6	3	20	

Lab Batch #: 763001

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335900-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.45	10.1	7	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

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

Client: Plains / Basin
Date/ Time: 06-19-09 08:40
Lab ID #: 335964
Initials: JMF

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.6 °C	
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container? / <u>label</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#6 Sample Instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#11 Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>Not Applicable</u>	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335966

for

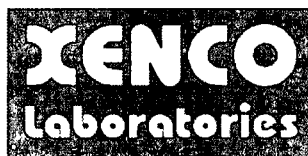
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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

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Midland - Corpus Christi - Atlanta



25-JUN-09

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

Reference: XENCO Report No: **335966**
Lea Station Land Farm
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 335966. 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. 335966 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335966



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell B TZ G 1	S	Jun-16-09 09:30		335966-001
Cell B TZ G 2	S	Jun-16-09 09:35		335966-002
Cell B TZ G 3	S	Jun-16-09 09:40		335966-003
Cell B TZ G 4	S	Jun-16-09 09:45		335966-004
Cell B TZ G 5	S	Jun-16-09 09:50		335966-005



Certificate of Analysis Summary 335966
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335966-001	335966-002	335966-003	335966-004	335966-005
	Field Id:	Cell B TZ G 1	Cell B TZ G 2	Cell B TZ G 3	Cell B TZ G 4	Cell B TZ G 5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by EPA 300	Sampled:	Jun-16-09 09:30	Jun-16-09 09:35	Jun-16-09 09:40	Jun-16-09 09:45	Jun-16-09 09:50
	Extracted:					
	Analyzed:	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44
	Units/RL:	mg/kg RL 20.0 5.05	mg/kg RL 14.7 5.04	mg/kg RL 32.0 5.03	mg/kg RL 21.5 5.04	mg/kg RL 5.28 5.02
Percent Moisture	Extracted:					
	Analyzed:	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:23	Jun-22-09 10:30
	Units/RL:	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00
	Percent Moisture					
TPH By SW8015 Mod	Extracted:	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57	Jun-22-09 08:57
	Analyzed:	Jun-23-09 12:28	Jun-23-09 13:21	Jun-23-09 13:47	Jun-23-09 14:13	Jun-23-09 14:40
	Units/RL:	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.0	mg/kg RL ND 15.1	mg/kg RL ND 15.0
	C6-C12 Gasoline Range Hydrocarbons	1400 15.1	954 15.1	356 15.0	210 15.1	48.3 15.0
C12-C28 Diesel Range Hydrocarbons		238 15.1	206 15.1	121 15.0	76.0 15.1	30.8 15.0
	C28-C35 Oil Range Hydrocarbons	1638 15.1	1160 15.1	477 15.0	286 15.1	79.1 15.0
Total TPH						

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335966,

Project ID: SRS: 2004-00061

Lab Batch #: 763323

Sample: 532416-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763323

Sample: 532416-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763323

Sample: 532416-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 08:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.9	100	76	70-135	
o-Terphenyl	39.1	50.0	78	70-135	

Lab Batch #: 763323

Sample: 335966-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 12:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.5	99.6	83	70-135	
o-Terphenyl	50.1	49.8	101	70-135	

Lab Batch #: 763323

Sample: 335966-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 13:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.5	99.8	85	70-135	
o-Terphenyl	47.6	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335966,

Project ID: SRS: 2004-00061

Lab Batch #: 763323

Sample: 335966-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 13:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.6	99	70-135	
o-Terphenyl	51.6	49.8	104	70-135	

Lab Batch #: 763323

Sample: 335966-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 14:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	99.8	82	70-135	
o-Terphenyl	43.8	49.9	88	70-135	

Lab Batch #: 763323

Sample: 335966-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 14:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.8	99.8	80	70-135	
o-Terphenyl	42.5	49.9	85	70-135	

Lab Batch #: 763323

Sample: 335951-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.6	119	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

Lab Batch #: 763323

Sample: 335951-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 18:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	99.7	88	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335966

Project ID:

SRS: 2004-00061

Lab Batch #: 763125

Sample: 763125-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.01	90	90-110	

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

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

- Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 335966

Analyst: BHW

Lab Batch ID: 763323

Sample: 532416-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH By SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		C6-C12 Gasoline Range Hydrocarbons	ND	1000	773	77	1000	736	74	5	70-135	35
		C12-C28 Diesel Range Hydrocarbons	ND	1000	715	72	1000	763	76	6	70-135	35

Analytes

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: Lea Station Land Farm

Work Order #: 335966

Lab Batch #: 763125

Date Analyzed: 06/22/2009

QC- Sample ID: 335964-001 S

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Analyst: LATCOR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	38.5	100	135	97	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335966

Lab Batch ID: 763323

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335951-001 S

Batch #: I Matrix: Soil

Date Prepared: 06/22/2009 Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH By SW8015 Mod												
Analytes												
C6-C12 Gasoline Range Hydrocarbons		56.8	998	943	89	999	895	84	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons		603	998	1600	100	999	1390	79	14	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

Applicable N = See Narrative, EQL = Estimated Quantitation Limit

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335966

Lab Batch #: 763125

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	38.5	39.6	3	20	

Lab Batch #: 763001

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335900-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	9.45	10.1	7	20	

Lab Batch #: 763002

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

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

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335966
Initials: JMF

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u> No	<u>1.6</u>	°C
#2	Shipping container in good condition?	<u>Yes</u> No		
#3	Custody Seals intact on shipping container/ cooler?	Yes No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? / <u>label</u>	<u>Yes</u> No	<u>Not Present</u>	
#5	Chain of Custody present?	<u>Yes</u> No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u> No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u> No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u> No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u> No		
#11	Containers supplied by ELOT?	<u>Yes</u> No		
#12	Samples in proper container/ bottle?	<u>Yes</u> No	See Below	
#13	Samples properly preserved?	<u>Yes</u> No	See Below	
#14	Sample bottles intact?	<u>Yes</u> No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u> No		
#16	Containers documented on Chain of Custody?	<u>Yes</u> No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u> No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u> No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u> No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335967

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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

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Midland - Corpus Christi - Atlanta



25-JUN-09

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

Reference: XENCO Report No: **335967**
Lea Station Land Farm
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 335967. 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. 335967 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335967



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

Cell C TZ G 1
Cell C TZ G 2
Cell C TZ G 3
Cell C TZ G 4
Cell C TZ G 5

Matrix

S
S
S
S
S

Date Collected

Jun-16-09 10:00
Jun-16-09 10:05
Jun-16-09 10:10
Jun-16-09 10:15
Jun-16-09 10:20

Sample Depth

Lab Sample Id

335967-001
335967-002
335967-003
335967-004
335967-005



Certificate of Analysis Summary 335967

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	335967-001	Cell C TZ G 1	SOIL	Jun-16-09 10:00	335967-002	Cell C TZ G 2	SOIL	Jun-16-09 10:05	335967-003	Cell C TZ G 3	SOIL	Jun-16-09 10:10	335967-004	Cell C TZ G 4	SOIL	Jun-16-09 10:15	335967-005	Cell C TZ G 5	SOIL	Jun-16-09 10:20
		Field Id:																				
		Depth:																				
		Matrix:																				
		Sampled:																				
Anions by EPA 300		Extracted:																				
		Analyzed:																				
		Units/RL:																				
Chloride																						
Percent Moisture		Extracted:																				
		Analyzed:																				
		Units/RL:																				
Percent Moisture																						
TPH By SW8015 Mod		Extracted:																				
		Analyzed:																				
		Units/RL:																				
C6-C12 Gasoline Range Hydrocarbons																						
C12-C28 Diesel Range Hydrocarbons																						
C28-C35 Oil Range Hydrocarbons																						
Total TPH																						

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335967,

Project ID: SRS: 2004-00061

Lab Batch #: 763323

Sample: 532416-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763323

Sample: 532416-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763323

Sample: 532416-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 08:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.9	100	76	70-135	
o-Terphenyl	39.1	50.0	78	70-135	

Lab Batch #: 763323

Sample: 335967-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 15:06

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	100	83	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 763323

Sample: 335967-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 15:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	99.8	85	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335967,

Lab Batch #: 763323

Sample: 335967-003 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 15:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.9	99.8	81	70-135	
o-Terphenyl	43.8	49.9	88	70-135	

Lab Batch #: 763323

Sample: 335967-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 16:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.7	99.7	96	70-135	
o-Terphenyl	50.2	49.9	101	70-135	

Lab Batch #: 763323

Sample: 335967-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 16:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	84.8	99.7	85	70-135	
o-Terphenyl	45.6	49.9	91	70-135	

Lab Batch #: 763323

Sample: 335951-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	119	99.6	119	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

Lab Batch #: 763323

Sample: 335951-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 18:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.6	99.7	88	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335967

Project ID:

SRS: 2004-00061

Lab Batch #: 763125

Sample: 763125-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.01	90	90-110	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

- Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 335967

Analyst: BHW

Lab Batch ID: 763323

Sample: 532416-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
			[A]	[B]	[C]	[D]	[E]	[F]	[G]				
		C6-C12 Gasoline Range Hydrocarbons	ND	1000	773	77	1000	736	74	5	70-135	35	
		C12-C28 Diesel Range Hydrocarbons	ND	1000	715	72	1000	763	76	6	70-135	35	

Analytes

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: Lea Station Land Farm



Work Order #: 335967

Lab Batch #: 763125

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335964-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	38.5	100	135	97	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes



Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335967

Lab Batch ID: 763323

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335951-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009 Analyst: BHW

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH By SW8015 Mod											
Analytes											
C6-C12 Gasoline Range Hydrocarbons	56.8	998	943	89	999	895	84	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	603	998	1600	100	999	1390	79	14	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335967

Lab Batch #: 763125

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	38.5	39.6	3	20	

Lab Batch #: 763002

Date Prepared: 06/22/2009

Analyst: BEV

Date Analyzed: 06/22/2009

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

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

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12660 West 120 East
Odessa, Texas 79765

Project Manager: Camille Bryant

Company Name: Easin Environmental Services Technologies, LLC

Company Address: P. O. Box 301

City/State/Zip: Lovington, NM 87030

Telephone No: (575) 695-7219

Sampler Signature: *Camille Bryant*

Fax No: (575) 395-1429

e-mail: cbryant@basin-consulting.com

PAGE 01 OF 01

Project Name: LEA STATION LAND FARM

Project #: SRS: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: ☒ Standard ☐ TERP ☐ NPDES

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Time Filtered	Total # of Containers	Preservation & / or Comments	Matrix	Analyte For	Standard TAT
01	CELL CTZ G 1			6/16/2009	1000		1	None	SOIL	SOIL	X
02	CELL CTZ G 2			6/16/2009	1005		1	None	SOIL	SOIL	X
03	CELL CTZ G 3			6/16/2009	1010		1	None	SOIL	SOIL	X
04	CELL CTZ G 4			6/16/2009	1015		1	None	SOIL	SOIL	X
05	CELL CTZ G 5			6/16/2009	1020		1	None	SOIL	SOIL	X
06											
07											
08											
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Special Instructions:

Analyzed by: *Camille Bryant* Date: 6/16/09 Time: 1500
 Verified by: *Camille Bryant* Date: 6/16/09 Time: 0840
 Received by: *Camille Bryant* Date: 6/16/09 Time: 0840
 Received by: *Camille Bryant* Date: 6/16/09 Time: 0840

Laboratory Comments:
 Vials Free of Headspace?
 Labels on Containers?
 Custody seals on containers?
 Custody seals on containers?
 Sample Hand Delivered?
 by Carrier?
 by Carrier?
 Temperature Upon Receipt: 1.6 °C

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335967
Initials: JMF

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u> No <u>1.6</u> °C		
#2	Shipping container in good condition?	<u>Yes</u> No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u> No <u>Not Present</u>		
#4	Custody Seals intact on sample bottles/ container? <u>/Lid</u>	<u>Yes</u> No <u>Not Present</u>		
#5	Chain of Custody present?	<u>Yes</u> No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u> No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u> No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u> No ID written on Cont./ Lid		
#9	Container label(s) legible and intact?	<u>Yes</u> No <u>Not Applicable</u>		
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u> No		
#11	Containers supplied by ELDT?	<u>Yes</u> No		
#12	Samples in proper container/ bottle?	<u>Yes</u> No <u>See Below</u>		
#13	Samples properly preserved?	<u>Yes</u> No <u>See Below</u>		
#14	Sample bottles intact?	<u>Yes</u> No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u> No		
#16	Containers documented on Chain of Custody?	<u>Yes</u> No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u> No <u>See Below</u>		
#18	All samples received within sufficient hold time?	<u>Yes</u> No <u>See Below</u>		
#19	Subcontract of sample(s)?	<u>Yes</u> No <u>Not Applicable</u>		
#20	VOC samples have zero headspace?	<u>Yes</u> No <u>Not Applicable</u>		

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335968

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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**



25-JUN-09

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

Reference: XENCO Report No: **335968**
Lea Station Land Farm
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 335968. 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. 335968 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335968



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

Matrix

Date Collected

Sample Depth

Lab Sample Id

Cell D TZ G 1

S

Jun-16-09 10:30

335968-001

Cell D TZ G 2

S

Jun-16-09 10:35

335968-002

Cell D TZ G 3

S

Jun-16-09 10:40

335968-003

Cell D TZ G 4

S

Jun-16-09 10:45

335968-004

Cell D TZ G 5

S

Jun-16-09 10:50

335968-005



Certificate of Analysis Summary 335968
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am
Report Date: 25-JUN-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335968-001	335968-002	335968-003	335968-004	335968-005
	Field Id:	Cell D TZ G 1	Cell D TZ G 2	Cell D TZ G 3	Cell D TZ G 4	Cell D TZ G 5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by EPA 300	Sampled:	Jun-16-09 10:30	Jun-16-09 10:35	Jun-16-09 10:40	Jun-16-09 10:45	Jun-16-09 10:50
	Extracted:					
	Analyzed:	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44	Jun-22-09 09:44
	Units/RL:	mg/kg RL 48.9 5.05	mg/kg RL 80.8 5.04	mg/kg RL 85.0 5.04	mg/kg RL 25.7 5.03	mg/kg RL 10.4 5.01
Percent Moisture	Extracted:					
	Analyzed:	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30
	Units/RL:	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00
	Percent Moisture					
TPH By SW8015 Mod	Extracted:	Jun-22-09 08:57	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49
	Analyzed:	Jun-23-09 17:18	Jun-23-09 22:10	Jun-23-09 22:36	Jun-23-09 23:02	Jun-23-09 23:28
	Units/RL:	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.1	mg/kg RL ND 15.0
	C6-C12 Gasoline Range Hydrocarbons					
	C12-C28 Diesel Range Hydrocarbons	643 15.1	1000 15.1	1300 15.1	1320 15.1	1090 15.0
	C28-C35 Oil Range Hydrocarbons	133 15.1	185 15.1	210 15.1	196 15.1	169 15.0
	Total TPH	776 15.1	1185 15.1	1510 15.1	1516 15.1	1259 15.0

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

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

Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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 5757 NW 158th St, Miami Lakes, FL 33014
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335968,

Lab Batch #: 763323

Sample: 532416-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763323

Sample: 532416-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 07:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.8	100	81	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763323

Sample: 532416-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 08:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.9	100	76	70-135	
o-Terphenyl	39.1	50.0	78	70-135	

Lab Batch #: 763323

Sample: 335968-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.3	99.9	79	70-135	
o-Terphenyl	42.4	50.0	85	70-135	

Lab Batch #: 763323

Sample: 335951-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.6	119	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

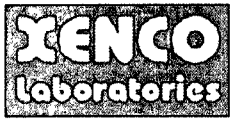
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335968,

Lab Batch #: 763323

Sample: 335951-001 SD / MSD

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 18:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.6	99.7	88	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 763339

Sample: 532423-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 20:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763339

Sample: 532423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 763339

Sample: 532423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 763339

Sample: 335968-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 22:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.8	99.6	88	70-135	
o-Terphenyl	46.5	49.8	93	70-135	

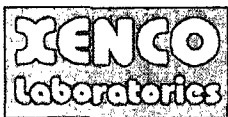
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335968,

Project ID: SRS: 2004-00061

Lab Batch #: 763339

Sample: 335968-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 22:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.5	99.8	82	70-135	
o-Terphenyl	44.4	49.9	89	70-135	

Lab Batch #: 763339

Sample: 335968-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 23:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.1	99.8	83	70-135	
o-Terphenyl	48.7	49.9	98	70-135	

Lab Batch #: 763339

Sample: 335968-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 23:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.6	100	84	70-135	
o-Terphenyl	44.2	50.0	88	70-135	

Lab Batch #: 763339

Sample: 335973-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 763339

Sample: 335973-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.2	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.



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335968

Project ID:

SRS: 2004-00061

Lab Batch #: 763125

Sample: 763125-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK / BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.01	90	90-110	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

ND - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335968

Analyst: BHW

Lab Batch ID: 763323

Sample: 532416-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

TPH By SW8015 Mod

Analytes

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

Analyst: BHW

Lab Batch ID: 763339

Sample: 532423-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

TPH By SW8015 Mod

Analytes

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg	TPH By SW8015 Mod	Analytes										
		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1000	773	77	1000	736	74	5	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1000	715	72	1000	763	76	6	70-135	35	

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
			[A]	[B]	[C]	[D]	[E]	[F]	[G]					
	C6-C12 Gasoline Range Hydrocarbons		ND	1000	763	76	1000	735	74	4	70-135	35		
	C12-C28 Diesel Range Hydrocarbons		ND	1000	748	75	1000	723	72	3	70-135	35		

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



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335968

Lab Batch #: 763125

Date Analyzed: 06/22/2009

QC- Sample ID: 335964-001 S

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	38.5	100	135	97	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BDL - Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335968

Lab Batch ID: 763323

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335951-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Reporting Units: mg/kg											
	TPH By SW8015 Mod										
	Analytes										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spiked Sample Result [F]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	56.8	998	943	89	895	895	84	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	603	998	1600	100	1390	1390	79	14	70-135	35	

Lab Batch ID: 763339

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

QC- Sample ID: 335973-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1020	820	80	1020	807	79	2	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1020	910	89	1020	900	88	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335968

Lab Batch #: 763125

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	38.5	39.6	3	20	

Lab Batch #: 763002

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12600 West 120 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 87100
Telephone No: (505) 605-7210
Sample Signature: *Camille Bryant*
Project Name: LEA STATION LAND FARM
Project #: SRK5-2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: ☒ Standard ☐ TRRP ☐ NPDES
Fax No: (575) 396-1439
e-mail: cbryant@basin-consulting.com

LAB # (Lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field # of Containers	Matrix	Preservation & Containers	Analysis For
01	CELL DTZ G 1			6/16/2009	1030	1	SOIL	1 X	CHLORIDES EPA 300.1
02	CELL DTZ G 2			6/16/2009	1035	1	SOIL	1 X	CHLORIDES EPA 300.1
03	CELL DTZ G 3			6/16/2009	1040	1	SOIL	1 X	CHLORIDES EPA 300.1
04	CELL DTZ G 4			6/16/2009	1045	1	SOIL	1 X	CHLORIDES EPA 300.1
05	CELL DTZ G 5			6/16/2009	1050	1	SOIL	1 X	CHLORIDES EPA 300.1
									RUSH FAT (Pre-Stressed) 74.44, 77.14
									Standard FAT

Special Instructions:

Relinquished by: *Camille Bryant* Date: 6/18/09 Time: 1500
Received by: *Carl D. Stief* Date: 6/18/09 Time: 1500
Relinquished by: *Carl D. Stief* Date: 6/18/09 Time: 1500
Received by: *James H. Hester* Date: 6/19/09 Time: 0840

Temperature: 1.6°C

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 33968
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u>	°C
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? <u>/label</u>	<u>Yes</u>	No	<u>Not Present</u>	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELDT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335969

for

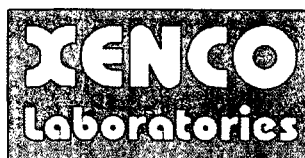
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

26-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**



26-JUN-09

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

Reference: XENCO Report No: **335969**
Lea Station Land Farm
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 335969. 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. 335969 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335969



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell E TZ G 1	S	Jun-16-09 11:00		335969-001
Cell E TZ G 2	S	Jun-16-09 11:05		335969-002
Cell E TZ G 3	S	Jun-16-09 11:10		335969-003
Cell E TZ G 4	S	Jun-16-09 11:15		335969-004



Certificate of Analysis Summary 335969

PLAINS ALL AMERICAN E&S, Midland, TX



Project Id: SRS: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 26-JUN-09

Project Manager: Brent Barron, II

Analysis Requested			Lab Id:	335969-001	335969-002	335969-003	335969-004	
Anions by EPA 300	Field Id:	Cell E TZ G 1	SOIL	Cell E TZ G 2	SOIL	Cell E TZ G 3	SOIL	Cell E TZ G 4
	Depth:							
	Matrix:							
	Sampled:	Jun-16-09 11:00	Jun-16-09 11:05	Jun-16-09 11:10	Jun-16-09 11:15			
	Extracted:							
Percent Moisture	Analyzed:	Jun-22-09 15:38	Jun-22-09 15:38	Jun-22-09 15:38	Jun-22-09 15:38			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL			
		ND 5.00	5.57 5.02	ND 5.02	ND 5.04			
	Extracted:							
	Analyzed:	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:43			
TPH By SW8015 Mod	Units/RL:	% RL	% RL	% RL	% RL			
		ND 1.00	ND 1.00	ND 1.00	ND 1.00			
	Extracted:							
	Analyzed:	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49			
	Units/RL:	Jun-23-09 23:54	Jun-24-09 00:20	Jun-24-09 00:45	Jun-24-09 01:11			
C6-C12 Gasoline Range Hydrocarbons		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL			
		ND 15.0	ND 15.0	ND 15.0	ND 15.0			
		273 15.0	387 15.0	139 15.0	37.3 15.0			
		94.1 15.0	123 15.0	59.5 15.0	26.2 15.0			
		367.1 15.0	510 15.0	198.5 15.0	63.5 15.0			

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

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


Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477
9701 Harry Hines Blvd , Dallas, TX 75220
5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335969,

Lab Batch #: 763339

Sample: 532423-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 20:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763339

Sample: 532423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 763339

Sample: 532423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 763339

Sample: 335969-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 23:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.6	99.9	84	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 763339

Sample: 335969-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 00:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.0	99.8	86	70-135	
o-Terphenyl	45.4	49.9	91	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335969,

Project ID: SRS: 2004-00061

Lab Batch #: 763339

Sample: 335969-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 00:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	99.8	86	70-135	
o-Terphenyl	44.8	49.9	90	70-135	

Lab Batch #: 763339

Sample: 335969-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 01:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.5	99.5	86	70-135	
o-Terphenyl	45.6	49.8	92	70-135	

Lab Batch #: 763339

Sample: 335973-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 763339

Sample: 335973-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.2	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.



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335969

Project ID:

SRS: 2004-00061

Lab Batch #: 763126

Sample: 763126-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.17	92	90-110	

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

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

ND - Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 335969

Analyst: BHW

Lab Batch ID: 763339

Sample: 532423-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
Analytes	TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1000	763	76	1000	735	74	4	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1000	748	75	1000	723	72	3	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335969

Lab Batch #: 763126

Date Analyzed: 06/22/2009

QC- Sample ID: 335969-001 S

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

Analyst: LATCOR

Date Prepared: 06/22/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	100	91.4	91	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BDL - Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335969

Lab Batch ID: 763339

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC-Sample ID: 335973-001 S

Date Prepared: 06/22/2009

Batch #: 1 Matrix: Soil

Analyst: BHW

Reporting Units: mg/kg											
TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1020	820	80	1020	807	79	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1020	910	89	1020	900	88	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335969

Lab Batch #: 763126

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335969-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

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

Lab Batch #: 763002

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

Lab Batch #: 763005

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335973-002 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

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

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335969
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u>	*C
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? <u>/label</u>	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335970

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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**



25-JUN-09

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

Reference: XENCO Report No: **335970**
Lea Station Land Farm
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 335970. 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. 335970 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335970



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell F TZ G 1	S	Jun-16-09 11:30		335970-001
Cell F TZ G 2	S	Jun-16-09 11:35		335970-002
Cell F TZ G 3	S	Jun-16-09 11:40		335970-003
Cell F TZ G 4	S	Jun-16-09 11:45		335970-004
Cell F TZ G 5	S	Jun-16-09 11:50		335970-005



Certificate of Analysis Summary 335970

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	335970-001	335970-002	335970-003	335970-004	335970-005
	Extracted:	Analyzed:	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg
Anions by EPA 300	Jun-22-09 15:38	Jun-22-09 15:38	ND	113	5.02	Jun-22-09 15:38	Jun-22-09 15:38	Jun-22-09 15:38	Jun-22-09 15:38	Jun-22-09 15:38
	Units/RL:	mg/kg	RL	113	5.02	mg/kg	RL	mg/kg	RL	mg/kg
Percent Moisture	Jun-22-09 10:30	Jun-22-09 10:30	ND	1.00	1.00	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30	Jun-22-09 10:30
	Units/RL:	%	RL	1.00	1.00	%	RL	%	RL	%
TPH By SW8015 Mod	Jun-22-09 09:49	Jun-22-09 09:49	ND	1.00	1.00	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49	Jun-22-09 09:49
	Units/RL:	mg/kg	RL	1.00	1.00	mg/kg	RL	mg/kg	RL	mg/kg
C6-C12 Gasoline Range Hydrocarbons	ND	ND	15.1	930	15.1	ND	1090	ND	ND	ND
C12-C28 Diesel Range Hydrocarbons	140	140	15.1	140	15.1	155	1370	1370	1370	927
C28-C35 Oil Range Hydrocarbons	1070	1070	15.1	1070	15.1	1245	164	1464	1549	1064
Total TPH										

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335970,

Project ID: SRS: 2004-00061

Lab Batch #: 763339

Sample: 532423-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 20:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763339

Sample: 532423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 763339

Sample: 532423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 763339

Sample: 335970-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 01:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 763339

Sample: 335970-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 02:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	49.9	50.0	100	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335970,

Project ID: SRS: 2004-00061

Lab Batch #: 763339

Sample: 335970-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 02:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.8	100	87	70-135	
o-Terphenyl	53.8	50.0	108	70-135	

Lab Batch #: 763339

Sample: 335970-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 03:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 763339

Sample: 335970-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 03:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.6	100	84	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 763339

Sample: 335973-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 763339

Sample: 335973-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.2	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.



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335970

Project ID:

SRS: 2004-00061

Lab Batch #: 763126

Sample: 763126-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.17	92	90-110	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335970

Analyst: BHW

Lab Batch ID: 763339

Sample: 532423-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Date Prepared: 06/22/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		C6-C12 Gasoline Range Hydrocarbons	ND	1000	763	76	1000	735	74	4	70-135	35		
		C12-C28 Diesel Range Hydrocarbons	ND	1000	748	75	1000	723	72	3	70-135	35		

Relative Percent Difference $RPD = 200 * [(C-F) / (C+F)]$

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

Blank Spike Duplicate Recovery $[G] = 100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335970

Lab Batch #: 763126

Date Analyzed: 06/22/2009

QC- Sample ID: 335969-001 S

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Analyst: LATCOR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	100	91.4	91	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BPL - Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335970

Lab Batch ID: 763339

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335973-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	TPH By SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	C6-C12 Gasoline Range Hydrocarbons	ND	1020	820	80	1020	807	79	2	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1020	910	89	1020	900	88	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335970

Lab Batch #: 763126

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335969-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

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

Lab Batch #: 763002

Date Prepared: 06/22/2009

Analyst: BEV

Date Analyzed: 06/22/2009

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

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

Client: Plains / Basin
Date/ Time: 06 19-09 C 0840
Lab ID #: 335970
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	1.6	°C
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? <u>/1.6</u>	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335982

for

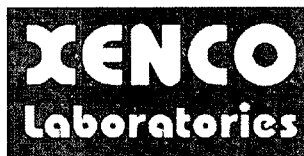
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

24-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**



24-JUN-09

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

Reference: XENCO Report No: **335982**
Lea Station Land Farm
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 335982. 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. 335982 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335982



PLAINS ALL AMERICAN EH&S, Midland, TX
Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell G TZ G 1	S	Jun-18-09 13:00		335982-001
Cell G TZ G 2	S	Jun-18-09 13:20		335982-002
Cell G TZ G 3	S	Jun-18-09 13:40		335982-003
Cell G TZ G 4	S	Jun-18-09 14:00		335982-004
Cell G TZ G 5	S	Jun-18-09 14:20		335982-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335982

Report Date: 24-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763007 Percent Moisture

AD2216A

Batch 763007, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 335982-005, -001, -002, -003, -004.

Batch: LBA-763129 Inorganic Anions by EPA 300

None

Batch: LBA-763233 TPH by SW8015 Mod

None



Certificate of Analysis Summary 335982
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: Lea Station Land Farm
Date Received in Lab: Fri Jun-19-09 08:40 am
Report Date: 24-JUN-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335982-001	335982-002	335982-003	335982-004	335982-005
	Field Id:	Cell G TZ G 1	Cell G TZ G 2	Cell G TZ G 3	Cell G TZ G 4	Cell G TZ G 5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by EPA 300	Sampled:	Jun-18-09 13:00	Jun-18-09 13:20	Jun-18-09 13:40	Jun-18-09 14:00	Jun-18-09 14:20
	Extracted:					
	Analyzed:	Jun-23-09 02:04	Jun-23-09 02:04	Jun-23-09 02:04	Jun-23-09 02:04	Jun-23-09 02:04
	Units/RL:	mg/kg RL 15.1 5.02	mg/kg RL 27.4 5.01	mg/kg RL 29.5 5.03	mg/kg RL 35.2 5.02	mg/kg RL 41.0 5.02
Percent Moisture	Extracted:					
	Analyzed:	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52
	Units/RL:	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00	% RL ND 1.00
	Percent Moisture					
TPH By SW8015 Mod	Extracted:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
	Analyzed:	Jun-22-09 20:57	Jun-22-09 21:47	Jun-23-09 13:15	Jun-23-09 13:41	Jun-23-09 14:06
	Units/RL:	mg/kg RL ND 15.0	mg/kg RL 180 15.0	mg/kg RL 875 75.5	mg/kg RL 858 75.3	mg/kg RL 761 75.2
	C6-C12 Gasoline Range Hydrocarbons					
C12-C28 Diesel Range Hydrocarbons		563 15.0	3380 15.0	5770 75.5	6480 75.3	7810 75.2
		68.2 15.0	145 15.0	514 75.5	445 75.3	548 75.2
C28-C35 Oil Range Hydrocarbons		631.2 15.0	3705 15.0	7159 75.5	7783 75.3	9119 75.2
Total TPH						

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335982,

Project ID: SRS: 2004-00061

Lab Batch #: 763233

Sample: 532361-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 15:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.5	100	79	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763233

Sample: 532361-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	36.3	50.0	73	70-135	

Lab Batch #: 763233

Sample: 532361-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	100	81	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 763233

Sample: 335982-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 20:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.5	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763233

Sample: 335982-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 21:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	100	86	70-135	
o-Terphenyl	40.0	50.0	80	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335982,

Project ID: SRS: 2004-00061

Lab Batch #: 763233

Sample: 335979-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 01:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335979-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 02:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	39.2	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335982-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 13:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	100	85	70-135	
o-Terphenyl	35.9	50.0	72	70-135	

Lab Batch #: 763233

Sample: 335982-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 13:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.4	100	86	70-135	
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 763233

Sample: 335982-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 14:06

SURROGATE RECOVERY STUDY

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335982

Project ID:

SRS: 2004-00061

Lab Batch #: 763129

Sample: 763129-1-BKS

Matrix: Solid

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	8.91	89	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335982

Analyst: BHW

Lab Batch ID: 763233

Sample: 532361-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Matrix: Solid

Units: mg/kg

TPH By SW8015 Mod

Analytes

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
			[A]	[B]	[C]	[D]	[E]	[F]	[G]					
	C6-C12 Gasoline Range Hydrocarbons		ND	1000	713	71	1000	711	71	0	70-135	35		
	C12-C28 Diesel Range Hydrocarbons		ND	1000	754	75	1000	738	74	2	70-135	35		

Relative Percent Difference RPD = $200 * [(C-F) / (C+F)]$

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335982

Lab Batch #: 763129

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335981-003 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		153	204	337	90	80-120

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 335982

Lab Batch ID: 763233

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335979-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY							
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %
C6-C12 Gasoline Range Hydrocarbons	ND	1030	863	84	1030	865	84	0
C12-C28 Diesel Range Hydrocarbons	ND	1030	1030	100	1030	1040	101	1
								Control Limits %RPD
								Control Limits %R
								35
								35

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335982

Lab Batch #: 763129

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Analyst: LATCOR

QC- Sample ID: 335981-003 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	153	149	3	20	

Lab Batch #: 763007

Date Prepared: 06/22/2009

Analyst: BEV

Date Analyzed: 06/22/2009

QC- Sample ID: 335979-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.83	3.63	25	20	F

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

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 339982
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	(Yes)	No	1.6	°C
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container? /label	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

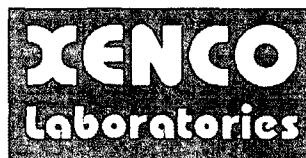
Analytical Report 335983
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-00061

25-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



25-JUN-09

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

Reference: XENCO Report No: **335983**
Lea Station Land Farm
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 335983. 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. 335983 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

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Sample Cross Reference 335983



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell H TZ G 1	S	Jun-18-09 15:00		335983-001
Cell H TZ G 2	S	Jun-18-09 15:20		335983-002



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-00061

Work Order Number: 335983

Report Date: 25-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763007 Percent Moisture

AD2216A

Batch 763007, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 335983-001.

Batch: LBA-763013 Percent Moisture

None

Batch: LBA-763129 Inorganic Anions by EPA 300

None

Batch: LBA-763339 TPH by SW8015 Mod

None



Certificate of Analytical Summary 335983
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335983-001	335983-002		
	Field Id:	Cell H TZ G 1	Cell H TZ G 2		
	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	Jun-18-09 15:00	Jun-18-09 15:20		
	Extracted:				
Anions by EPA 300	Analyzed:	Jun-23-09 02:04	Jun-23-09 02:04		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		ND 5.02	10.3 5.01		
Percent Moisture	Extracted:				
	Analyzed:	Jun-22-09 10:52	Jun-22-09 11:00		
	Units/RL:	% RL	% RL		
Percent Moisture		ND 1.00	ND 1.00		
TPH By SW8015 Mod	Extracted:	Jun-22-09 09:49	Jun-22-09 09:49		
	Analyzed:	Jun-24-09 06:19	Jun-24-09 06:44		
	Units/RL:	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		459 75.2	761 75.2		
C12-C28 Diesel Range Hydrocarbons		2780 75.2	2710 75.2		
C28-C35 Oil Range Hydrocarbons		279 75.2	284 75.2		
Total TPH		3518 75.2	3755 75.2		

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
5757 NW 158th St, Miami Lakes, FL 33014	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(305) 823-8500	(305) 823-8555
842 Cantwell Lane, Corpus Christi, TX 78408	(432) 563-1800	(432) 563-1713
	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Orders : 335983,

Project ID: 2004-00061

Lab Batch #: 763339

Sample: 532423-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 20:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763339

Sample: 532423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 763339

Sample: 532423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 763339

Sample: 335983-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 06:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 763339

Sample: 335983-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 06:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.9	100	97	70-135	
o-Terphenyl	51.6	50.0	103	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: Lea Station Land Farm

Work Orders : 335983,
Lab Batch #: 763339

Sample: 335973-001 S / MS

Project ID: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 763339

Sample: 335973-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.2	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.



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335983

Project ID:

2004-00061

Lab Batch #: 763129

Sample: 763129-1-BKS

Matrix: Solid

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	8.91	89	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335983

Analyst: BHW

Lab Batch ID: 763339

Sample: 532423-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH By SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
C6-C12 Gasoline Range Hydrocarbons		ND	1000	763	76	1000	735	74	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons		ND	1000	748	75	1000	723	72	3	70-135	35	

Relative Percent Difference $RPD = 200 * [(C-F) / (C+F)]$

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

Blank Spike Duplicate Recovery $[G] = 100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335983

Lab Batch #: 763129

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335981-003 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	153	204	337	90	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order # : 335983

Lab Batch ID: 763339

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 335973-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

Reporting Units: mg/kg											
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1020	820	80	1020	807	79	2	70-135	35
	C12-C28 Diesel Range Hydrocarbons	ND	1020	910	89	1020	900	88	1	70-135	35

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335983

Lab Batch #: 763129

Date Analyzed: 06/23/2009

QC- Sample ID: 335981-003 D

Reporting Units: mg/kg

Project ID: 2004-00061

Analyst: LATCOR

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	153	149	3	20	

Lab Batch #: 763007

Date Analyzed: 06/22/2009

QC- Sample ID: 335979-001 D

Reporting Units: %

Date Prepared: 06/22/2009

Analyst: BEV

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.83	3.63	25	20	F

Lab Batch #: 763013

Date Analyzed: 06/22/2009

QC- Sample ID: 335983-002 D

Reporting Units: %

Date Prepared: 06/22/2009

Analyst: BEV

Batch #: 1

Matrix: Soil

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

Spike Relative Difference $RPD = 200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12600 West I-20 East
Odessa, Texas 79785
Phone: 432-563-1800
Fax: 432-563-1713

Project Name: LEA STATION LAND FARM

Project #: SRS: 2004-00061

Project Loc.: Lea County, NM

PO #: PAA - J. Henry

Report Format:

com

Special Instructions:

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335983
Initials: JMF

Sample Receipt Checklist

			Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	1.1 °C
#2 Shipping container in good condition?	<u>Yes</u>	No	
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4 Custody Seals intact on sample bottles/ container? / <u>1 each</u>	<u>Yes</u>	No	Not Present
#5 Chain of Custody present?	<u>Yes</u>	No	
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11 Containers supplied by ELOT?	<u>Yes</u>	No	
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13 Samples properly preserved?	<u>Yes</u>	No	See Below
#14 Sample bottles intact?	<u>Yes</u>	No	
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19 Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335973

for

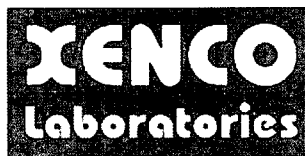
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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**



25-JUN-09

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

Reference: XENCO Report No: **335973**
Lea Station Land Farm
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 335973. 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. 335973 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Sample Cross Reference 335973



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell A VZ G 1 (3'-4')	S	Jun-17-09 08:00	3 - 4 ft	335973-001
Cell A VZ G 2 (3'-4')	S	Jun-17-09 08:20	3 - 4 ft	335973-002
Cell A VZ G 3 (3'-4')	S	Jun-17-09 08:40	3 - 4 ft	335973-003
Cell A VZ G 4 (3'-4')	S	Jun-17-09 09:00	3 - 4 ft	335973-004
Cell A VZ G 5 (3'-4')	S	Jun-17-09 09:20	3 - 4 ft	335973-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335973

Report Date: 25-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763002 Percent Moisture

None

Batch: LBA-763005 Percent Moisture

None

Batch: LBA-763080 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763080, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 335973-005.

Batch: LBA-763126 Inorganic Anions by EPA 300

None

Batch: LBA-763339 TPH by SW8015 Mod

None



Project Name: Lea Station Land Farm


Project Location: Lea County, NM

Report Date: 25-JUN-09

Project Manager: Brent Barron, II

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

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Since 1990


Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477	Phone	Fax
9701 Harry Hines Blvd , Dallas, TX 75220	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
2505 North Falkenburg Rd, Tampa, FL 33619	(210) 509-3334	(210) 509-3335
5757 NW 158th St, Miami Lakes, FL 33014	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(305) 823-8500	(305) 823-8555
842 Cantwell Lane, Corpus Christi, TX 78408	(432) 563-1800	(432) 563-1713
	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335973,

Project ID: SRS: 2004-00061

Lab Batch #: 763080

Sample: 532266-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 12:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 763080

Sample: 532266-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 763080

Sample: 532266-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 763080

Sample: 335973-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 19:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 763080

Sample: 335973-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 19:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335973,

Lab Batch #: 763080

Sample: 335973-003 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 21:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 763080

Sample: 335973-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 21:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 763080

Sample: 335973-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 21:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0230	0.0300	77	80-120	*

Lab Batch #: 763080

Sample: 335973-005 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 00:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 763080

Sample: 335973-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 01:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0337	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.



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335973,

Lab Batch #: 763339

Sample: 532423-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 20:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 763339

Sample: 532423-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.3	100	76	70-135	
o-Terphenyl	36.1	50.0	72	70-135	

Lab Batch #: 763339

Sample: 532423-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	37.1	50.0	74	70-135	

Lab Batch #: 763339

Sample: 335973-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 04:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.8	100	85	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 763339

Sample: 335973-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 04:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.7	100	80	70-135	
o-Terphenyl	44.2	50.0	88	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335973,

Project ID: SRS: 2004-00061

Lab Batch #: 763339

Sample: 335973-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 05:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	89.8	100	90	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 763339

Sample: 335973-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 05:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	89.4	100	89	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 763339

Sample: 335973-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 05:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	81.8	100	82	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 763339

Sample: 335973-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 763339

Sample: 335973-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	45.2	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.



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335973

Project ID:

SRS: 2004-00061

Lab Batch #: 763126

Sample: 763126-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.17	92	90-110	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335973

Analyst: ASA

Lab Batch ID: 763080

Sample: 532266-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/19/2009

Batch #: 1

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0934	93	0.1	0.0934	93	0	70-130	35
	Toluene	ND	0.1000	0.0916	92	0.1	0.0916	92	0	70-130	35
	Ethylbenzene	ND	0.1000	0.0980	98	0.1	0.0976	98	0	71-129	35
	m,p-Xylenes	ND	0.2000	0.1972	99	0.2	0.1960	98	1	70-135	35
	o-Xylene	ND	0.1000	0.0938	94	0.1	0.0929	93	1	71-133	35

Analyst: BHW

Lab Batch ID: 763339

Sample: 532423-1-BKS

Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/23/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	TPH By SW8015 Mod										
	C6-C12 Gasoline Range Hydrocarbons	ND	1000	763	76	1000	735	74	4	70-135	35
	C12-C28 Diesel Range Hydrocarbons	ND	1000	748	75	1000	723	72	3	70-135	35

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



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335973

Lab Batch #: 763126

Date Analyzed: 06/22/2009

QC- Sample ID: 335969-001 S

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Analyst: LATCOR

Matrix: Soil

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		ND	100	91.4	91	80-120

Matrix Spike Percent Recovery [D] = $100 \cdot (C-A)/B$

Relative Percent Difference [E] = $200 \cdot (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335973

Lab Batch ID: 763080

Date Analyzed: 06/20/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335973-005 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/19/2009 Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										Flag
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	
BTEX by EPA 8021B											
Benzene	ND	0.1008	0.0832	83	0.1008	0.0869	86	4	70-130	35	
Toluene	ND	0.1008	0.0816	81	0.1008	0.0852	85	4	70-130	35	
Ethylbenzene	ND	0.1008	0.0869	86	0.1008	0.0913	91	5	71-129	35	
m,p-Xylenes	ND	0.2016	0.1742	86	0.2016	0.1829	91	5	70-135	35	
o-Xylene	ND	0.1008	0.0814	81	0.1008	0.0860	85	5	71-133	35	

Lab Batch ID: 763339

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

QC- Sample ID: 335973-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009 Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										Flag
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	
TPH By SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	ND	1020	820	80	1020	807	79	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1020	910	89	1020	900	88	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335973

Lab Batch #: 763126

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335969-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Lab Batch #: 763002

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335966-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Lab Batch #: 763005

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335973-002 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1900
Fax: 432-563-1713

Project Name: LEA STATION LAND FARM

Project #: SRS: 2004-00061

Project Loc: Lea County, NM

PO#: PAA - J. Henry

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

e-mail: cibnvent@basin-consulting.comPage 16 of 17

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335973
Initials: JMF

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.6 °C	
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#4 Custody Seals intact on sample bottles/ container? / <u>labeled</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335976

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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**



25-JUN-09

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

Reference: XENCO Report No: **335976**
Lea Station Land Farm
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 335976. 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. 335976 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335976



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell B VZ G 1 (3'-4')	S	Jun-17-09 09:40	3 - 4 ft	335976-001
Cell B VZ G 2 (3'-4')	S	Jun-17-09 10:00	3 - 4 ft	335976-002
Cell B VZ G 3 (3'-4')	S	Jun-17-09 10:20	3 - 4 ft	335976-003
Cell B VZ G 4 (3'-4')	S	Jun-17-09 10:40	3 - 4 ft	335976-004
Cell B VZ G 5 (3'-4')	S	Jun-17-09 11:00	3 - 4 ft	335976-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335976

Report Date: 25-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763005 Percent Moisture

None

Batch: LBA-763080 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763080, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 335976-001,335976-005,335976-004,335976-003.

Batch: LBA-763126 Inorganic Anions by EPA 300

None

Batch: LBA-763311 TPH by SW8015 Mod

None



Certificate of Analysis Summary 335976

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lea Station Land Farm

Project Id: SRS: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested																										
Anions by EPA 300	Lab Id:	335976-001	Cell B VZ G 1 (3'-4')	3-4 ft	SOIL	Jun-17-09 09:40	335976-002	Cell B VZ G 2 (3'-4')	3-4 ft	SOIL	Jun-17-09 10:00	335976-003	Cell B VZ G 3 (3'-4')	3-4 ft	SOIL	Jun-17-09 10:20	335976-004	Cell B VZ G 4 (3'-4')	3-4 ft	SOIL	Jun-17-09 10:40	335976-005	Cell B VZ G 5 (3'-4')	3-4 ft	SOIL	Jun-17-09 11:00
	Field Id:																									
	Depth:																									
	Matrix:																									
	Sampled:																									
BTEX by EPA 8021B	Extracted:																									
	Analyzed:																									
	Units/RL:																									
Chloride	Extracted:																									
	Analyzed:																									
	Units/RL:																									
Percent Moisture	Extracted:																									
	Analyzed:																									
	Units/RL:																									
TPH By SW8015 Mod	Extracted:																									
	Analyzed:																									
	Units/RL:																									
C6-C12 Gasoline Range Hydrocarbons	Extracted:																									
	Analyzed:																									
	Units/RL:																									
C12-C28 Diesel Range Hydrocarbons	Extracted:																									
	Analyzed:																									
	Units/RL:																									
C28-C35 Oil Range Hydrocarbons	Extracted:																									
	Analyzed:																									
	Units/RL:																									
Total TPH	Extracted:																									
	Analyzed:																									
	Units/RL:																									

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

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


Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.



BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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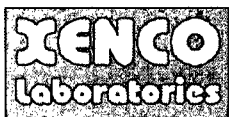
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 5757 NW 158th St, Miami Lakes, FL 33014
 12600 West I-20 East, Odessa, TX 79765
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(281) 240-4200	(281) 240-4280
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116





Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335976,

Project ID: SRS: 2004-00061

Lab Batch #: 763080

Sample: 532266-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 12:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 763080

Sample: 532266-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 763080

Sample: 532266-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 763080

Sample: 335976-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 22:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0228	0.0300	76	80-120	*

Lab Batch #: 763080

Sample: 335976-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 22:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

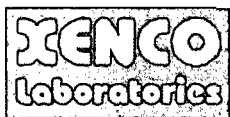
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335976,

Project ID: SRS: 2004-00061

Lab Batch #: 763080

Sample: 335976-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 22:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0235	0.0300	78	80-120	*

Lab Batch #: 763080

Sample: 335976-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 23:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0230	0.0300	77	80-120	*

Lab Batch #: 763080

Sample: 335976-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 23:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0231	0.0300	77	80-120	*

Lab Batch #: 763080

Sample: 335973-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 00:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 763080

Sample: 335973-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 01:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

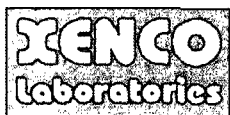
* Surrogate outside of Laboratory QC limits

** 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.



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335976,

Lab Batch #: 763311

Sample: 532405-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 04:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	77.3	100	77	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

Lab Batch #: 763311

Sample: 532405-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	73.8	100	74	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763311

Sample: 532405-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 763311

Sample: 335976-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 05:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 763311

Sample: 335976-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 06:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	80.2	100	80	70-135	
o-Terphenyl	39.5	50.0	79	70-135	

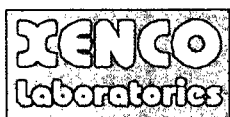
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335976,

Project ID: SRS: 2004-00061

Lab Batch #: 763311

Sample: 335976-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 06:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	79.0	100	79	70-135	
o-Terphenyl	38.8	50.0	78	70-135	

Lab Batch #: 763311

Sample: 335976-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 07:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.7	100	76	70-135	
o-Terphenyl	35.9	50.0	72	70-135	

Lab Batch #: 763311

Sample: 335976-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 07:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	81.2	99.8	81	70-135	
o-Terphenyl	40.0	49.9	80	70-135	

Lab Batch #: 763311

Sample: 335976-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 763311

Sample: 335976-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335976

Project ID:

SRS: 2004-00061

Lab Batch #: 763126

Sample: 763126-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.17	92	90-110	

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

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

- Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 335976

Analyst: ASA

Lab Batch ID: 763080

Sample: 532266-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/19/2009

Matrix: Solid

Date Prepared: 06/19/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	BTEX by EPA 8021B										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0934	93	0.1	0.0934	93	0	70-130	35
	Toluene	ND	0.1000	0.0916	92	0.1	0.0916	92	0	70-130	35
	Ethylbenzene	ND	0.1000	0.0980	98	0.1	0.0976	98	0	71-129	35
	m,p-Xylenes	ND	0.2000	0.1972	99	0.2	0.1960	98	1	70-135	35
	o-Xylene	ND	0.1000	0.0938	94	0.1	0.0929	93	1	71-133	35

Analyst: BHW

Lab Batch ID: 763311

Sample: 532405-1-BKS

Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/23/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH By SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	720	72	1000	709	71	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	798	80	1000	772	77	3	70-135	35	

Relative Percent Difference RPD = $200 * [(C-F) / (C+F)]$

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / (E)$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335976

Lab Batch #: 763126

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335969-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	100	91.4	91	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335976

Lab Batch ID: 763080

Date Analyzed: 06/20/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335973-005 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/19/2009 Analyst: ASA

Reporting Units: mg/kg											
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1008	0.0832	83	0.1008	0.0869	86	4	70-130	35
	Toluene	ND	0.1008	0.0816	81	0.1008	0.0852	85	4	70-130	35
	Ethylbenzene	ND	0.1008	0.0869	86	0.1008	0.0913	91	5	71-129	35
	m,p-Xylenes	ND	0.2016	0.1742	86	0.2016	0.1829	91	5	70-135	35
	o-Xylene	ND	0.1008	0.0814	81	0.1008	0.0860	85	5	71-133	35

Lab Batch ID: 763311

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

QC- Sample ID: 335976-004 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009 Analyst: BHW

Reporting Units: mg/kg											
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	ND	502	413	82	502	404	80	2	70-135	35	
	ND	502	528	105	502	454	90	15	70-135	35	
	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335976

Lab Batch #: 763126

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335969-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

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

Lab Batch #: 763005

Date Prepared: 06/22/2009

Analyst: BEV

Date Analyzed: 06/22/2009

QC- Sample ID: 335973-002 D

Batch #: 1

Matrix: Soil

Reporting Units: %

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

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

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

Client: Plains / Basin
Date/ Time: 06-19-09 08:40
Lab ID #: 335976
Initials: JMF

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<u>Yes</u>	No	1.6 °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container? / <u>label</u>	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335977

for

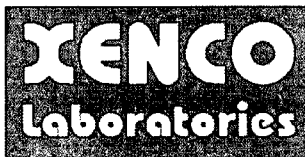
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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



25-JUN-09

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

Reference: XENCO Report No: **335977**
Lea Station Land Farm
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 335977. 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. 335977 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335977



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell C VZ G 1 (3'-4')	S	Jun-17-09 11:20	3 - 4 ft	335977-001
Cell C VZ G 2 (3'-4')	S	Jun-17-09 11:40	3 - 4 ft	335977-002
Cell C VZ G 3 (3'-4')	S	Jun-17-09 12:00	3 - 4 ft	335977-003
Cell C VZ G 4 (3'-4')	S	Jun-17-09 12:20	3 - 4 ft	335977-004
Cell C VZ G 5 (3'-4')	S	Jun-17-09 12:40	3 - 4 ft	335977-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061
Work Order Number: 335977

Report Date: 25-JUN-09
Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763005 Percent Moisture
None

Batch: LBA-763080 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763080, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 335977-002.

Batch: LBA-763126 Inorganic Anions by EPA 300
None

Batch: LBA-763127 Inorganic Anions by EPA 300
None

Batch: LBA-763311 TPH by SW8015 Mod
None



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335977

Report Date: 25-JUN-09

Date Received: 06/19/2009

*Batch: LBA-763367 BTEX-MTBE EPA 8021B
SW8021BM*

Batch 763367, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532430-1-BLK, 335977-004, 335977-005, 335977-003.

SW8021BM

Batch 763367, Benzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 335977-005, -003, -004.

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



Certificate of Analysis Summary 335977

PLAINS ALL AMERICAN E&S, Midland, TX



Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am
Report Date: 25-JUN-09
Project Manager: Brent Barron, II

Analysis Requested				Lab Id: Field Id:	335977-001 Cell C VZ G 1 (3'-4') 3-4 ft SOIL	335977-002 Cell C VZ G 2 (3'-4') 3-4 ft SOIL	335977-003 Cell C VZ G 3 (3'-4') 3-4 ft SOIL	335977-004 Cell C VZ G 4 (3'-4') 3-4 ft SOIL	335977-005 Cell C VZ G 5 (3'-4') 3-4 ft SOIL
				Sampled:	Jun-17-09 11:20	Jun-17-09 11:40	Jun-17-09 12:00	Jun-17-09 12:20	Jun-17-09 12:40
Anions by EPA 300				Extracted:					
				Analyzed:	Jun-22-09 15:38	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46
				Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					RL	RL	RL	RL	RL
					ND 5.37	ND 5.49	ND 5.05	6.06 5.39	ND 5.08
Chloride									
BTX by EPA 8021B				Extracted:	Jun-19-09 14:47	Jun-19-09 14:47	Jun-23-09 10:00	Jun-23-09 10:00	Jun-23-09 10:00
				Analyzed:	Jun-19-09 23:56	Jun-20-09 00:17	Jun-24-09 01:28	Jun-24-09 01:49	Jun-24-09 02:11
				Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					RL	RL	RL	RL	RL
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
Benzene									
					ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0022	ND 0.0020
Toluene									
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
Ethylbenzene									
					ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0022	ND 0.0020
m,p-Xylenes									
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
o-Xylene									
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
Total Xylenes									
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
Total BTX									
					ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010
Percent Moisture				Extracted:					
				Analyzed:	Jun-22-09 10:43	Jun-22-09 10:43	Jun-22-09 10:43	Jun-22-09 10:43	Jun-22-09 10:43
				Units/RL:	%	%	%	%	%
					RL	RL	RL	RL	RL
					6.81 1.00	8.98 1.00	ND 1.00	7.16 1.00	1.59 1.00
Percent Moisture									
TPH By SW8015 Mod				Extracted:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
				Analyzed:	Jun-23-09 08:04	Jun-23-09 08:28	Jun-23-09 08:53	Jun-23-09 09:43	Jun-23-09 10:08
				Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					RL	RL	RL	RL	RL
					ND 16.1	ND 16.5	ND 15.1	ND 16.1	ND 15.2
C6-C12 Gasoline Range Hydrocarbons									
					ND 16.1	ND 16.5	ND 15.1	ND 16.1	ND 15.2
C12-C28 Diesel Range Hydrocarbons									
					ND 16.1	ND 16.5	ND 15.1	ND 16.1	ND 15.2
C28-C35 Oil Range Hydrocarbons									
					ND 16.1	ND 16.5	ND 15.1	ND 16.1	ND 15.2
Total TPH									
					ND 16.1	ND 16.5	ND 15.1	ND 16.1	ND 15.2

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335977,

Lab Batch #: 763080

Sample: 532266-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 12:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 763080

Sample: 532266-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 763080

Sample: 532266-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/19/09 13:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

Lab Batch #: 763080

Sample: 335977-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/19/09 23:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 763080

Sample: 335977-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 00:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0235	0.0300	78	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Orders : 335977,

Lab Batch #: 763080

Sample: 335973-005 S / MS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 00:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 763080

Sample: 335973-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/20/09 01:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 763367

Sample: 532430-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 09:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 763367

Sample: 532430-1-BSO / BSO

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 09:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 763367

Sample: 532430-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 10:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0211	0.0300	70	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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





Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335977,

Project ID: SRS: 2004-00061

Lab Batch #: 763367

Sample: 335977-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 01:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0225	0.0300	75	80-120	*

Lab Batch #: 763367

Sample: 335977-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 01:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0224	0.0300	75	80-120	*

Lab Batch #: 763367

Sample: 335977-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 02:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0160	0.0300	53	80-120	*

Lab Batch #: 763367

Sample: 335977-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 06:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 763367

Sample: 335977-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

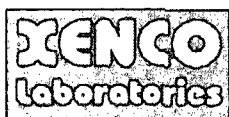
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335977,

Project ID: SRS: 2004-00061

Lab Batch #: 763311

Sample: 532405-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 04:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.3	100	77	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

Lab Batch #: 763311

Sample: 532405-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.8	100	74	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763311

Sample: 532405-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 763311

Sample: 335977-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 08:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 763311

Sample: 335977-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 08:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.4	100	80	70-135	
o-Terphenyl	40.5	50.0	81	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335977,

Project ID: SRS: 2004-00061

Lab Batch #: 763311

Sample: 335977-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 08:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.2	99.7	81	70-135	
o-Terphenyl	40.7	49.9	82	70-135	

Lab Batch #: 763311

Sample: 335977-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 09:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.4	99.7	80	70-135	
o-Terphenyl	39.8	49.9	80	70-135	

Lab Batch #: 763311

Sample: 335977-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 10:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.4	100	79	70-135	
o-Terphenyl	39.7	50.0	79	70-135	

Lab Batch #: 763311

Sample: 335976-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 763311

Sample: 335976-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335977

Project ID:

SRS: 2004-00061

Lab Batch #: 763126

Sample: 763126-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.17	92	90-110	

Lab Batch #: 763127

Sample: 763127-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.12	91	90-110	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335977

Analyst: ASA

Lab Batch ID: 763080

Sample: 532266-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/19/2009

Matrix: Solid

Date Prepared: 06/19/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.0934	93	0.1	0.0934	93	0	70-130	35	
Toluene		ND	0.1000	0.0916	92	0.1	0.0916	92	0	70-130	35	
Ethylbenzene		ND	0.1000	0.0980	98	0.1	0.0976	98	0	71-129	35	
m,p-Xylenes		ND	0.2000	0.1972	99	0.2	0.1960	98	1	70-135	35	
o-Xylene		ND	0.1000	0.0938	94	0.1	0.0929	93	1	71-133	35	

Analyst: ASA

Date Prepared: 06/23/2009

Date Analyzed: 06/23/2009

Lab Batch ID: 763367

Sample: 532430-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021B		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		ND	0.1000	0.1069	107	0.1	0.1081	108	1	70-130	35	
Toluene		ND	0.1000	0.1033	103	0.1	0.1051	105	2	70-130	35	
Ethylbenzene		ND	0.1000	0.1087	109	0.1	0.1118	112	3	71-129	35	
m,p-Xylenes		ND	0.2000	0.2185	109	0.2	0.2246	112	3	70-135	35	
o-Xylene		ND	0.1000	0.1041	104	0.1	0.1070	107	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



Project Name: Lea Station Land Farm

Work Order #: 335977

Analyst: BHW

Lab Batch ID: 763311

Sample: 532405-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	C6-C12 Gasoline Range Hydrocarbons	ND	1000	720	72	1000	709	71	2	70-135	35
	C12-C28 Diesel Range Hydrocarbons	ND	1000	798	80	1000	772	77	3	70-135	35

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



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335977

Lab Batch #: 763126

Date Analyzed: 06/22/2009

QC- Sample ID: 335969-001 S

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

Analyst: LATCOR

Date Prepared: 06/22/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	100	91.4	91	80-120	

Lab Batch #: 763127

Date Analyzed: 06/22/2009

QC- Sample ID: 335977-002 S

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	110	108	98	80-120	

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

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335977

Lab Batch ID: 763080

Date Analyzed: 06/20/2009

Project ID: SRS: 2004-00061

QC- Sample ID: 335973-005 S

Date Prepared: 06/19/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1008	0.0832	83	0.1008	0.0869	86	4	70-130	35	
	Toluene	ND	0.1008	0.0816	81	0.1008	0.0852	85	4	70-130	35	
	Ethylbenzene	ND	0.1008	0.0869	86	0.1008	0.0913	91	5	71-129	35	
	m,p-Xylenes	ND	0.2016	0.1742	86	0.2016	0.1829	91	5	70-135	35	
	o-Xylene	ND	0.1008	0.0814	81	0.1008	0.0860	85	5	71-133	35	

Lab Batch ID: 763367

Date Analyzed: 06/24/2009

QC- Sample ID: 335977-003 S

Date Prepared: 06/23/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	ND	0.1009	0.0578	57	0.1007	0.0771	77	29	70-130	35	X
		Toluene	ND	0.1009	0.0576	57	0.1007	0.0742	74	25	70-130	35	X
		Ethylbenzene	ND	0.1009	0.0411	41	0.1007	0.0554	55	30	71-129	35	X
		m,p-Xylenes	ND	0.2018	0.1281	63	0.2014	0.1588	79	21	70-135	35	X

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

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

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



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order # : 335977

Lab Batch ID: 763311

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335976-004 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	TPH By SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
	C6-C12 Gasoline Range Hydrocarbons	ND	502	413	82	502	404	80	2	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	502	528	105	502	454	90	15	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335977

Lab Batch #: 763126

Date Analyzed: 06/22/2009

QC- Sample ID: 335969-001 D

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

Analyst: LATCOR

Date Prepared: 06/22/2009

Batch #: 1

Matrix: Soil

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

Lab Batch #: 763127

Date Analyzed: 06/22/2009

QC- Sample ID: 335977-002 D

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Analyst: LATCOR

Batch #: 1

Matrix: Soil

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

Lab Batch #: 763005

Date Analyzed: 06/22/2009

QC- Sample ID: 335973-002 D

Reporting Units: %

Date Prepared: 06/22/2009

Analyst: BEV

Batch #: 1

Matrix: Soil

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

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
13600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1890
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: 505-665-7210
Sampler Signatures: *Camille Bryant*
Project Name: LEA STATION LAND FARM
Project #: SKS: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: ☒ Standard ☐ TRRP ☐ NPDES
Fax No: (505) 396-1429
e-mail: cbryant@basin-consulting.com

Lab use only: ORDER #: 335977

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Preparation & # of Containers	Matrix	Analyte For
01	CELL C VZ G 1 (3' - 4')		6/17/2009	1120			1	X	SOIL
02	CELL C VZ G 2 (3' - 4')		6/17/2009	1140			1	X	SOIL
03	CELL C VZ G 3 (3' - 4')		6/17/2009	1200			1	X	SOIL
04	CELL C VZ G 4 (3' - 4')		6/17/2009	1220			1	X	SOIL
05	CELL C VZ G 5 (3' - 4')		6/17/2009	1240			1	X	SOIL

Special Instructions:

Requested by: *Camille Bryant* Date: 6/13/09 Time: 1500
 Requested by: *CHC* Date: 6/19/09 Time: 0830
 Requested by: *CHC* Date: 6/19/09 Time: 0830

Received by: *CHC* Date: 6/18/09 Time: 1500
 Received by: *CHC* Date: 6/19/09 Time: 0830
 Received by: *CHC* Date: 6/19/09 Time: 0830

Temperature Upon Receipt: 11.0 °C

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

Client: PICINS / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335977
Initials: JMF

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.6	°C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Present	
#4	Custody Seals intact on sample bottles/ container? (labels)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Present	
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ID written on Cont./ Lic	
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#11	Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Below	
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335978

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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



25-JUN-09

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

Reference: XENCO Report No: **335978**
Lea Station Land Farm
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 335978. 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. 335978 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335978



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell D VZ G 1 (3'-4')	S	Jun-17-09 13:00	3 - 4 ft	335978-001
Cell D VZ G 2 (3'-4')	S	Jun-17-09 13:20	3 - 4 ft	335978-002
Cell D VZ G 3 (3'-4')	S	Jun-17-09 13:40	3 - 4 ft	335978-003
Cell D VZ G 4 (3'-4')	S	Jun-17-09 14:00	3 - 4 ft	335978-004
Cell D VZ G 5 (3'-4')	S	Jun-17-09 14:20	3 - 4 ft	335978-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335978

Report Date: 25-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763005 Percent Moisture

None

Batch: LBA-763127 Inorganic Anions by EPA 300

None

Batch: LBA-763218 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763218, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532286-1-BLK, 335980-005 D, 335978-004, 335978-005, 335978-002, 335978-001, 335978-003. Matrix interference is suspected in sample surrogate failures.

Batch: LBA-763311 TPH by SW8015 Mod

None



Certificate of Analysis Summary 335978

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	335978-001	335978-002	335978-003	335978-004	335978-005
	Extracted:	Analyzed:	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg
Anions by EPA 300	Chloride	Jun-22-09 20:46	ND	5.01	5.14	ND	5.02	ND	5.06	ND
		Jun-22-09 20:46	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
		Jun-22-09 20:46	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
BTEX by EPA 8021B	Benzene	Jun-20-09 17:30	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
	Toluene	Jun-20-09 17:30	ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
	Ethylbenzene	Jun-20-09 17:30	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Percent Moisture	m,p-Xylenes	Jun-21-09 01:26	ND	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
	o-Xylene	Jun-21-09 01:26	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
	Total Xylenes	Jun-21-09 01:26	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
TPH By SW8015 Mod	Total BTEX	Jun-21-09 01:26	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
		Jun-22-09 10:43	ND	1.00	2.77	1.00	ND	1.00	1.17	1.00
		Jun-22-09 10:43	%	RL	%	RL	%	RL	%	RL
C6-C12 Gasoline Range Hydrocarbons		Jun-22-09 10:17	ND	15.0	ND	15.4	ND	15.0	ND	15.1
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C12-C28 Diesel Range Hydrocarbons		Jun-22-09 10:17	ND	15.0	ND	15.4	ND	15.0	ND	15.1
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C28-C35 Oil Range Hydrocarbons		Jun-22-09 10:17	ND	15.0	ND	15.4	ND	15.0	ND	15.1
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Total TPH		Jun-22-09 10:17	ND	15.0	ND	15.4	ND	15.0	ND	15.1
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
		Jun-23-09 11:24	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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2505 North Falkenburg Rd, Tampa, FL 33619
5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335978,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 532286-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 763218

Sample: 532286-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763218

Sample: 532286-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 01:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*

Lab Batch #: 763218

Sample: 335978-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 01:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0181	0.0300	60	80-120	*

Lab Batch #: 763218

Sample: 335978-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 01:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0223	0.0300	74	80-120	*

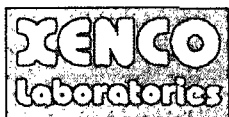
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335978,

Lab Batch #: 763218

Sample: 335978-003 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 02:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0184	0.0300	61	80-120	*

Lab Batch #: 763218

Sample: 335978-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 02:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0214	0.0300	71	80-120	*

Lab Batch #: 763218

Sample: 335978-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 02:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0211	0.0300	70	80-120	*

Lab Batch #: 763218

Sample: 335980-005 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 09:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

Lab Batch #: 763311

Sample: 532405-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 04:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	77.3	100	77	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335978,

Lab Batch #: 763311

Sample: 532405-1-BSD / BSD

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	73.8	100	74	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763311

Sample: 532405-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 763311

Sample: 335978-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 11:24

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	77.7	99.8	78	70-135	
o-Terphenyl	37.5	49.9	75	70-135	

Lab Batch #: 763311

Sample: 335978-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 11:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	75.6	100	76	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763311

Sample: 335978-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 12:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	74.7	99.7	75	70-135	
o-Terphenyl	37.1	49.9	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335978,

Lab Batch #: 763311

Sample: 335978-004 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 12:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	73.1	99.9	73	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 763311

Sample: 335978-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 14:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.0	100	76	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 763311

Sample: 335976-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 763311

Sample: 335976-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335978

Project ID:

SRS: 2004-00061

Lab Batch #: 763127

Sample: 763127-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.12	91	90-110	

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

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

L - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335978

Analyst: ASA

Lab Batch ID: 763218

Sample: 532286-1-BKS

Date Prepared: 06/20/2009

Batch #: 1

Project ID: SRS: 2004-00061

Date Analyzed: 06/21/2009

Matrix: Solid

Units: mg/kg

Units: mg/kg											
Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0949	95	0.1	0.0973	97	2	70-130	35
	Toluene	ND	0.1000	0.0914	91	0.1	0.0940	94	3	70-130	35
	Ethylbenzene	ND	0.1000	0.0950	95	0.1	0.0988	99	4	71-129	35
	m,p-Xylenes	ND	0.2000	0.1916	96	0.2	0.1988	99	4	70-135	35
	o-Xylene	ND	0.1000	0.0913	91	0.1	0.0943	94	3	71-133	35

Analyst: BHW

Lab Batch ID: 763311

Sample: 532405-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
			[A]	[B]	[C]	[D]	[E]	[F]	[G]				
		C6-C12 Gasoline Range Hydrocarbons	ND	1000	720	72	1000	709	71	2	70-135	35	
		C12-C28 Diesel Range Hydrocarbons	ND	1000	798	80	1000	772	77	3	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335978

Lab Batch #: 763127

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335977-002 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	110	108	98	80-120	

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

BPL - Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335978

Lab Batch ID: 763311

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335976-004 S

Date Prepared: 06/22/2009

Batch #: 1

Analyst: BHW

Matrix: Soil

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	502	413	82	502	404	80	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	502	528	105	502	454	90	15	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335978

Lab Batch #: 763127

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335977-002 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Lab Batch #: 763218

Date Analyzed: 06/21/2009

Date Prepared: 06/20/2009

Analyst: ASA

QC- Sample ID: 335980-005 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	

Lab Batch #: 763005

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335973-002 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Spike Relative Difference $RPD = 200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 06-19-09 0840
 Lab ID #: 335978
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.6 °C
#2	Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#4	Custody Seals intact on sample bottles/ container? /label	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present
#5	Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#11	Containers supplied by ELDT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#12	Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#13	Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#14	Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#16	Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable
#20	VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335979

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

24-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



24-JUN-09

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

Reference: XENCO Report No: **335979**
Lea Station Land Farm
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 335979. 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. 335979 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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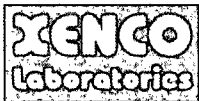
Sample Cross Reference 335979



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell E VZ G 1 (3'-4')	S	Jun-18-09 08:50	3 - 4 ft	335979-001
Cell E VZ G 2 (3'-4')	S	Jun-18-09 09:10	3 - 4 ft	335979-002
Cell E VZ G 3 (3'-4')	S	Jun-18-09 09:30	3 - 4 ft	335979-003
Cell E VZ G 4 (3'-4')	S	Jun-18-09 09:50	3 - 4 ft	335979-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335979

Report Date: 24-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763007 Percent Moisture

AD2216A

Batch 763007, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 335979-004, -002, -001, -003.

Batch: LBA-763127 Inorganic Anions by EPA 300

None

Batch: LBA-763218 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763218, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532286-1-BLK, 335980-005 D, 335979-004, 335979-003, 335979-001, 335979-002. Matrix interference is suspected in sample surrogate failures.

Batch: LBA-763233 TPH by SW8015 Mod

None



Certificate of Analysis Summary 335979

PLAINS ALL AMERICAN EHS, Midland, TX



Project Id: SRS: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Project Name: Lea Station Land Farm

Date Received in Lab: Fri Jun-19-09 08:40 am

Report Date: 24-JUN-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	335979-001	335979-002	335979-003	335979-004
	Field Id:	Cell E VZ G 1 (3'-4')	Cell E VZ G 2 (3'-4')	Cell E VZ G 3 (3'-4')	Cell E VZ G 4 (3'-4')
	Depth:	3-4 ft	3-4 ft	3-4 ft	3-4 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-18-09 08:50	Jun-18-09 09:10	Jun-18-09 09:30	Jun-18-09 09:50
Anions by EPA 300	Extracted:				
	Analyzed:	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46
	Units/RL:	mg/kg RL ND 5.15	mg/kg RL ND 5.01	mg/kg RL ND 5.08	mg/kg RL ND 5.32
BTEX by EPA 8021B	Extracted:	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30
	Analyzed:	Jun-21-09 03:13	Jun-21-09 03:35	Jun-21-09 03:57	Jun-21-09 04:19
	Units/RL:	mg/kg RL ND 0.0051	mg/kg RL ND 0.0010	mg/kg RL ND 0.0010	mg/kg RL ND 0.0011
		ND 0.0103	ND 0.0020	ND 0.0020	ND 0.0021
		ND 0.0051	ND 0.0010	ND 0.0010	ND 0.0011
Percent Moisture	Extracted:	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52
	Analyzed:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
	Units/RL:	% RL 2.83 1.00	% RL ND 1.00	% RL 1.53 1.00	% RL 5.94 1.00
		2.83 1.00	ND 1.00	1.53 1.00	5.94 1.00
		ND 0.0051	ND 0.0010	ND 0.0010	ND 0.0011
TPH By SW8015 Mod	Extracted:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
	Analyzed:	Jun-22-09 17:09	Jun-22-09 17:34	Jun-22-09 18:00	Jun-22-09 18:25
	Units/RL:	mg/kg RL ND 15.4	mg/kg RL ND 15.0	mg/kg RL ND 15.2	mg/kg RL ND 15.9
		ND 15.4	ND 15.0	ND 15.2	ND 15.9
		ND 15.4	ND 15.0	ND 15.2	ND 15.9
Total TPH	Extracted:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
	Analyzed:	Jun-22-09 17:09	Jun-22-09 17:34	Jun-22-09 18:00	Jun-22-09 18:25
	Units/RL:	mg/kg RL ND 15.4	mg/kg RL ND 15.0	mg/kg RL ND 15.2	mg/kg RL ND 15.9
		ND 15.4	ND 15.0	ND 15.2	ND 15.9
		ND 15.4	ND 15.0	ND 15.2	ND 15.9

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335979,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 532286-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 763218

Sample: 532286-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763218

Sample: 532286-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 01:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*

Lab Batch #: 763218

Sample: 335979-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 03:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0205	0.0300	68	80-120	*

Lab Batch #: 763218

Sample: 335979-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 03:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0180	0.0300	60	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335979,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 335979-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 03:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0218	0.0300	73	80-120	*

Lab Batch #: 763218

Sample: 335979-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 04:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0177	0.0300	59	80-120	*

Lab Batch #: 763218

Sample: 335980-005 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 09:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

Lab Batch #: 763233

Sample: 532361-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 15:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	78.5	100	79	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763233

Sample: 532361-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.2	100	76	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335979,

Project ID: SRS: 2004-00061

Lab Batch #: 763233

Sample: 532361-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	100	81	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 763233

Sample: 335979-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 17:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	100	81	70-135	
o-Terphenyl	40.2	50.0	80	70-135	

Lab Batch #: 763233

Sample: 335979-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 17:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	100	81	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 763233

Sample: 335979-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 18:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.0	100	81	70-135	
o-Terphenyl	39.2	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335979-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 18:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.3	100	79	70-135	
o-Terphenyl	38.5	50.0	77	70-135	

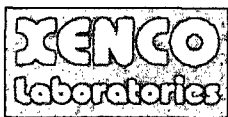
* Surrogate outside of Laboratory QC limits

** 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: Lea Station Land Farm

Work Orders : 335979,

Project ID: SRS: 2004-00061

Lab Batch #: 763233

Sample: 335979-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 01:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335979-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 02:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	39.2	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335979

Project ID:

SRS: 2004-00061

Lab Batch #: 763127

Sample: 763127-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

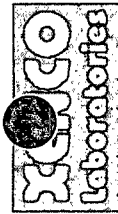
BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.12	91	90-110	

Blank Spike Recovery [D] = $100 \times [C]/[B]$

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335979

Analyst: ASA

Lab Batch ID: 763218

Project ID: SRS: 2004-00061

Date Analyzed: 06/21/2009

Sample: 532286-1-BKS

Date Prepared: 06/20/2009

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	BTEX by EPA 8021B	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
			[A]	[B]	[C]	[D]	[E]	[F]	[G]					

Analyst: BHW

Lab Batch ID: 763233

Sample: 532361-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/22/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
			[A]	[B]	[C]	[D]	[E]	[F]	[G]				
			ND	1000	713	71	1000	711	71	0	70-135	35	
		C6-C12 Gasoline Range Hydrocarbons	ND	1000	754	75	1000	738	74	2	70-135	35	
		C12-C28 Diesel Range Hydrocarbons											

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: Lea Station Land Farm



Work Order #: 335979

Lab Batch #: 763127

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335977-002 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	6.33	110	108	92	80-120	

Matrix Spike Percent Recovery [D] = $100 \cdot (C-A)/B$

Relative Percent Difference [E] = $200 \cdot (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

- Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 335979

Lab Batch ID: 763233

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335979-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	TPH By SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes											
	C6-C12 Gasoline Range Hydrocarbons	ND	1030	863	84	1030	865	84	0	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1030	1030	100	1030	1040	101	1	70-135	35	

Matrix Spike Percent Recovery [D] = $100 \cdot (C-A)/B$

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335979

Lab Batch #: 763127

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335977-002 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	6.33	6.01	5	20	

Lab Batch #: 763218

Date Analyzed: 06/21/2009

Date Prepared: 06/20/2009

Analyst: ASA

QC- Sample ID: 335980-005 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	
a,a,a-Trifluorotoluene	0.032	0.032	0	35	

Lab Batch #: 763007

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335979-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.83	3.63	25	20	F

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-7713

Telephone No. (713) 605-7210 Fax No. (573) 306-1429 Report Format: ☒ Standard ☐ TRAP ☐ NPDES
 Sample Signature: *Carolee Boudant* e-mail: clbrvant@basin-consulting.com

[illegible]

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

Client: Plains / Basin
Date/ Time: 06-19-09 08:40
Lab ID #: 335979
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	1.6	°C
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? <u>/label</u>	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335980

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

25-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



25-JUN-09

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

Reference: XENCO Report No: **335980**
Lea Station Land Farm
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 335980. 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. 335980 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335980



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell F VZ G 1 (3'-4')	S	Jun-18-09 10:40	3 - 4 ft	335980-001
Cell F VZ G 2 (3'-4')	S	Jun-18-09 11:00	3 - 4 ft	335980-002
Cell F VZ G 3 (3'-4')	S	Jun-18-09 11:20	3 - 4 ft	335980-003
Cell F VZ G 4 (3'-4')	S	Jun-18-09 11:40	3 - 4 ft	335980-004
Cell F VZ G 5 (3'-4')	S	Jun-18-09 12:00	3 - 4 ft	335980-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061
Work Order Number: 335980

Report Date: 25-JUN-09
Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763007 Percent Moisture
AD2216A

Batch 763007, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 335980-001, -005, -002, -004, -003.

Batch: LBA-763127 Inorganic Anions by EPA 300
None

Batch: LBA-763218 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763218, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532286-1-BLK, 335980-005 D, 335980-004, 335980-005, 335980-002, 335980-001, 335980-003. Matrix interference is suspected in sample surrogate failures.

Batch: LBA-763311 TPH by SW8015 Mod
None



Certificate of Analysis Summary 335980
PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lea Station Land Farm

Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am

Report Date: 25-JUN-09

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	335980-001	335980-002	335980-003	335980-004	335980-005
Field Id:		Cell F VZ G 1 (3'-4')	Cell F VZ G 2 (3'-4')	Cell F VZ G 3 (3'-4')	Cell F VZ G 4 (3'-4')	Cell F VZ G 5 (3'-4')	
Depth:		3-4 ft	3-4 ft	3-4 ft	3-4 ft	3-4 ft	
Matrix:		SOIL	SOIL	SOIL	SOIL	SOIL	
Sampled:		Jun-18-09 10:40	Jun-18-09 11:00	Jun-18-09 11:20	Jun-18-09 11:40	Jun-18-09 12:00	
Anions by EPA 300		Extracted:					
Analyzed:		Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46	Jun-22-09 20:46	
Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.01	ND 4.99	ND 5.01	ND 5.08	ND 5.25	
BTEX by EPA 8021B		Extracted:					
Analyzed:		Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	
Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0011	
Toluene		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0021	
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0011	
m,p-Xylenes		ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0020	ND 0.0021	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0011	
Total Xylenes		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0011	
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0011	
Percent Moisture		Extracted:					
Analyzed:		Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	
Units/RL:		% RL	% RL	% RL	% RL	% RL	
Percent Moisture		ND 1.00	ND 1.00	ND 1.00	ND 1.57	ND 1.00	
TPH By SW8015 Mod		Extracted:					
Analyzed:		Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	
Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.2	ND 15.8	
C12-C28 Diesel Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.2	ND 15.8	
C28-C35 Oil Range Hydrocarbons		ND 15.0	ND 15.0	ND 15.0	ND 15.2	ND 15.8	
Total TPH		ND 15.0	ND 15.0	ND 15.0	ND 15.2	ND 15.8	

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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12600 West I-20 East, Odessa, TX 79765
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335980,

Lab Batch #: 763218

Sample: 532286-1-BKS / BKS

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 763218

Sample: 532286-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763218

Sample: 532286-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 01:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*

Lab Batch #: 763218

Sample: 335980-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 04:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0159	0.0300	53	80-120	*

Lab Batch #: 763218

Sample: 335980-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 05:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0168	0.0300	56	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335980,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 335980-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 06:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0195	0.0300	65	80-120	*

Lab Batch #: 763218

Sample: 335980-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 06:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0218	0.0300	73	80-120	*

Lab Batch #: 763218

Sample: 335980-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 06:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0193	0.0300	64	80-120	*

Lab Batch #: 763218

Sample: 335980-005 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 09:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

Lab Batch #: 763311

Sample: 532405-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 04:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	77.3	100	77	70-135	
o-Terphenyl	37.9	50.0	76	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335980,

Lab Batch #: 763311

Sample: 532405-1-BSD / BSD

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.8	100	74	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763311

Sample: 532405-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 05:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.3	100	83	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 763311

Sample: 335980-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 15:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.9	100	78	70-135	
o-Terphenyl	36.0	50.0	72	70-135	

Lab Batch #: 763311

Sample: 335980-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 15:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.7	100	76	70-135	
o-Terphenyl	35.6	50.0	71	70-135	

Lab Batch #: 763311

Sample: 335980-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 16:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.4	100	83	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335980,

Lab Batch #: 763311

Sample: 335980-004 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 16:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	36.2	50.0	72	70-135	

Lab Batch #: 763311

Sample: 335980-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 16:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.3	100	78	70-135	
o-Terphenyl	36.0	50.0	72	70-135	

Lab Batch #: 763311

Sample: 335976-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 763311

Sample: 335976-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 17:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335980

Project ID:

SRS: 2004-00061

Lab Batch #: 763127

Sample: 763127-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.12	91	90-110	

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

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

L - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335980

Analyst: ASA

Lab Batch ID: 763218

Sample: 532286-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/21/2009

Batch #: 1

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0949	95	0.1	0.0973	97	2	70-130	35
	Toluene	ND	0.1000	0.0914	91	0.1	0.0940	94	3	70-130	35
	Ethylbenzene	ND	0.1000	0.0950	95	0.1	0.0988	99	4	71-129	35
	m,p-Xylenes	ND	0.2000	0.1916	96	0.2	0.1988	99	4	70-135	35
	o-Xylene	ND	0.1000	0.0913	91	0.1	0.0943	94	3	71-133	35

Analyst: BHW

Lab Batch ID: 763311

Sample: 532405-1-BKS

Units: mg/kg

Date Prepared: 06/22/2009

Date Analyzed: 06/23/2009

Batch #: 1

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	ND	1000	720	72	1000	709	71	2	70-135	35	
	ND	1000	798	80	1000	772	77	3	70-135	35	

Relative Percent Difference RPD = $200 * [(C-F) / (C+F)]$

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335980

Lab Batch #: 763127

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Project ID: SRS: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335977-002 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	110	108	98	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335980

Project ID: SRS: 2004-00061

Lab Batch ID: 763311

QC- Sample ID: 335976-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/23/2009

Date Prepared: 06/22/2009

Analyst: BHW

Reporting Units: mg/kg

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	TPH By SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
	C6-C12 Gasoline Range Hydrocarbons	ND	502	413	82	502	404	80	2	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	502	528	105	502	454	90	15	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335980

Lab Batch #: 763127

Project ID: SRS: 2004-00061

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

QC- Sample ID: 335977-002 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Lab Batch #: 763218

Date Analyzed: 06/21/2009

Date Prepared: 06/20/2009

Analyst: ASA

QC- Sample ID: 335980-005 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	

Lab Batch #: 763007

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: BEV

QC- Sample ID: 335979-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.83	3.63	25	20	F

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West 1-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
PAGE 01 OF 01

Project Name: LEA STATION LAND FARM

Company Name	Bas'n Environmental Service Technologies, LLC
--------------	---

Project #: SRS: 2004-00051

Company Address: P. O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J. Henry

Telephone No: 7575 695-7210

Fax No: (575) 395-1429
Record Format:

Sampler Signature

e-mail: cjbvramt@basin-consulting.com

(A)gus 35m qe1

338900

ORDER #.	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Time of Day	Preservation & # of Containers	Matrix	TOTAL	Volatiles	Semi-volatiles	PCB's	PCP's	HCB	CHLORIDES EPA 300.1	RUSH TAT (pre-determined) 24 hr. 12 hr.	Standard TAT
338920	CELL F VZ G 1 (3' - 4')			6/18/2009	1040	1200	1	1	X	SOIL	X	X	X	X	X	X	X
01	CELL F VZ G 2 (3' - 4')			6/18/2009	1100	1200	1	1	X	SOIL	X	X	X	X	X	X	X
02	CELL F VZ G 3 (3' - 4')			6/18/2009	1120	1200	1	1	X	SOIL	X	X	X	X	X	X	X
03	CELL F VZ G 4 (3' - 4')			6/18/2009	1140	1200	1	1	X	SOIL	X	X	X	X	X	X	X
05	CELL F VZ G 5 (3' - 4')			6/18/2009	1200	1200	1	1	X	SOIL	X	X	X	X	X	X	X

Special Instructions:

Laboratory Comments:

Received by Date	Received by Date	Time	Date
		1500	6/18/09
			Amelia Bryant
			Submitted by
			Reviewed by Date
			CAT - R

[illegible]

Dispatched by	Date	Time	Received by ELO:

2

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335980
Initials: JMF

Sample Receipt Checklist

			Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u> No	<u>1.6</u> °C	
#2	Shipping container in good condition?	<u>Yes</u> No		
#3	Custody Seals intact on shipping container/ cooler?	Yes No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? <u>labeled</u>	<u>Yes</u> No	<u>Not Present</u>	
#5	Chain of Custody present?	<u>Yes</u> No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u> No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u> No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u> No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u> No		
#11	Containers supplied by ELOT?	<u>Yes</u> No		
#12	Samples in proper container/ bottle?	<u>Yes</u> No	See Below	
#13	Samples properly preserved?	<u>Yes</u> No	See Below	
#14	Sample bottles intact?	<u>Yes</u> No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u> No		
#16	Containers documented on Chain of Custody?	<u>Yes</u> No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u> No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u> No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u> No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335981

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

SRS: 2004-00061

01-JUL-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



01-JUL-09

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

Reference: XENCO Report No: **335981**
Lea Station Land Farm
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 335981. 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. 335981 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 335981



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell G VZ G 1 (3'-4')	S	Jun-18-09 12:30	3 - 4 ft	335981-001
Cell G VZ G 2 (3'-4')	S	Jun-18-09 12:35	3 - 4 ft	335981-002
Cell G VZ G 3 (3'-4')	S	Jun-18-09 12:40	3 - 4 ft	335981-003
Cell G VZ G 4 (3'-4')	S	Jun-18-09 12:45	3 - 4 ft	335981-004
Cell G VZ G 5 (3'-4')	S	Jun-18-09 12:50	3 - 4 ft	335981-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: SRS: 2004-00061

Work Order Number: 335981

Report Date: 01-JUL-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763007 Percent Moisture

AD2216A

Batch 763007, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 335981-002, -005, -001, -004, -003.

Batch: LBA-763127 Inorganic Anions by EPA 300

None

Batch: LBA-763129 Inorganic Anions by EPA 300

None

Batch: LBA-763218 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763218, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532286-1-BLK, 335980-005 D, 335981-004, 335981-005, 335981-002, 335981-001, 335981-003.

Batch: LBA-763233 TPH by SW8015 Mod

None



Certificate of Analysis Summary 335981

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Name: Lea Station Land Farm

Project Id: SRS: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am


Report Date: 01-JUL-09

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	335981-001	335981-002	335981-003	335981-004	335981-005
		Field Id:	Cell G VZ G 1 (3'-4')	Cell G VZ G 2 (3'-4')	Cell G VZ G 3 (3'-4')	Cell G VZ G 4 (3'-4')	Cell G VZ G 5 (3'-4')
		Depth:	3-4 ft	3-4 ft	3-4 ft	3-4 ft	3-4 ft
		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
		Sampled:	Jun-18-09 12:30	Jun-18-09 12:35	Jun-18-09 12:40	Jun-18-09 12:45	Jun-18-09 12:50
Anions by EPA 300		Extracted:					
		Analyzed:	Jun-22-09 20:46	Jun-22-09 20:46	Jun-23-09 02:04	Jun-23-09 02:04	Jun-23-09 02:04
		Units/RL:	mg/kg RL 169 10.2	mg/kg RL ND 5.16	mg/kg RL 153 10.2	mg/kg RL 88.4 10.3	mg/kg RL 75.6 10.2
BTEX by EPA 8021B		Extracted:	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30	Jun-20-09 17:30
		Analyzed:	Jun-21-09 07:11	Jun-21-09 07:33	Jun-21-09 07:55	Jun-21-09 08:16	Jun-21-09 08:37
		Units/RL:	mg/kg RL ND 0.0010	mg/kg RL ND 0.0010	mg/kg RL ND 0.0010	mg/kg RL ND 0.0010	mg/kg RL ND 0.0010
Benzene			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Toluene			ND 0.0020	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0020
Ethylbenzene			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
m,p-Xylenes			ND 0.0020	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0020
o-Xylene			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total Xylenes			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX			ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Percent Moisture		Extracted:					
		Analyzed:	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52	Jun-22-09 10:52
		Units/RL:	% RL 1.92 1.00	% RL 3.18 1.00	% RL 2.14 1.00	% RL 3.08 1.00	% RL 1.69 1.00
TPH By SW8015 Mod		Extracted:	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17	Jun-22-09 10:17
		Analyzed:	Jun-22-09 18:51	Jun-22-09 19:16	Jun-22-09 19:42	Jun-22-09 20:07	Jun-22-09 20:32
		Units/RL:	mg/kg RL ND 15.3	mg/kg RL ND 15.5	mg/kg RL ND 15.3	mg/kg RL ND 15.5	mg/kg RL ND 15.3
C6-C12 Gasoline Range Hydrocarbons			ND 15.3	ND 15.5	ND 15.3	ND 15.5	ND 15.3
C12-C28 Diesel Range Hydrocarbons			ND 15.3	ND 15.5	ND 15.3	ND 15.5	ND 15.3
C28-C35 Oil Range Hydrocarbons			ND 15.3	ND 15.5	ND 15.3	ND 15.5	ND 15.3
Total TPH			ND 15.3	ND 15.5	ND 15.3	ND 15.5	ND 15.3

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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 Certified and approved by numerous States and Agencies.
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Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335981,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 532286-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 763218

Sample: 532286-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763218

Sample: 532286-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 01:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*

Lab Batch #: 763218

Sample: 335981-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 07:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0208	0.0300	69	80-120	*

Lab Batch #: 763218

Sample: 335981-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 07:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0162	0.0300	54	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335981,

Project ID: SRS: 2004-00061

Lab Batch #: 763218

Sample: 335981-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 07:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0226	0.0300	75	80-120	*

Lab Batch #: 763218

Sample: 335981-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 08:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0225	0.0300	75	80-120	*

Lab Batch #: 763218

Sample: 335981-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 08:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0227	0.0300	76	80-120	*

Lab Batch #: 763218

Sample: 335980-005 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 09:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

Lab Batch #: 763233

Sample: 532361-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 15:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	78.5	100	79	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335981,

Lab Batch #: 763233

Sample: 532361-1-BSD / BSD

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	36.3	50.0	73	70-135	

Lab Batch #: 763233

Sample: 532361-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.1	100	81	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 763233

Sample: 335981-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 18:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	100	83	70-135	
o-Terphenyl	41.1	50.0	82	70-135	

Lab Batch #: 763233

Sample: 335981-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 19:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	41.7	50.0	83	70-135	

Lab Batch #: 763233

Sample: 335981-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 19:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.4	100	80	70-135	
o-Terphenyl	39.7	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335981,

Lab Batch #: 763233

Sample: 335981-004 / SMP

Project ID: SRS: 2004-00061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 20:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.3	100	82	70-135	
o-Terphenyl	40.7	50.0	81	70-135	

Lab Batch #: 763233

Sample: 335981-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 20:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	100	85	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 763233

Sample: 335979-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 01:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335979-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 02:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	39.2	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335981

Project ID:

SRS: 2004-00061

Lab Batch #: 763127

Sample: 763127-1-BKS

Matrix: Solid

Date Analyzed: 06/22/2009

Date Prepared: 06/22/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.12	91	90-110	

Lab Batch #: 763129

Sample: 763129-1-BKS

Matrix: Solid

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	8.91	89	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335981

Analyst: ASA

Lab Batch ID: 763218

Sample: 532286-1-BKS

Units: mg/kg

Project ID: SRS: 2004-00061

Date Analyzed: 06/21/2009

Matrix: Solid

Date Prepared: 06/20/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0949	95	0.1	0.0973	97	2	70-130	35
	Toluene	ND	0.1000	0.0914	91	0.1	0.0940	94	3	70-130	35
	Ethylbenzene	ND	0.1000	0.0950	95	0.1	0.0988	99	4	71-129	35
	m,p-Xylenes	ND	0.2000	0.1916	96	0.2	0.1988	99	4	70-135	35
	o-Xylene	ND	0.1000	0.0913	91	0.1	0.0943	94	3	71-133	35

Analyst: BHW

Lab Batch ID: 763233

Sample: 532361-1-BKS

Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Date Analyzed: 06/22/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
			[A]	[B]	[C]	[D]	[E]	[F]	[G]					
			ND	1000	713	71	1000	711	71	0	70-135	35		
			ND	1000	754	75	1000	738	74	2	70-135	35		

Relative Percent Difference RPD = $200 * [(C-F)/(C+F)]$

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

Blank Spike Duplicate Recovery [G] = $100 * (F)/(E)$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335981

Lab Batch #: 763127

Date Analyzed: 06/22/2009

QC- Sample ID: 335977-002 S

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

Analyst: LATCOR

Date Prepared: 06/22/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	ND	110	108	98	80-120	

Lab Batch #: 763129

Date Analyzed: 06/23/2009

QC- Sample ID: 335981-003 S

Reporting Units: mg/kg

Date Prepared: 06/23/2009


Analyst: LATCOR

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	153	204	337	90	80-120	

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

 Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335981

Lab Batch ID: 763233

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

Project ID: SRS: 2004-00061

QC- Sample ID: 335979-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 06/22/2009

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	TPH By SW8015 Mod											
	Analytes											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons	ND	1030	863	84	1030	865	84	0	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1030	1030	100	1030	1040	101	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335981

Lab Batch #: 763127

Date Analyzed: 06/22/2009

QC- Sample ID: 335977-002 D

Reporting Units: mg/kg

Date Prepared: 06/22/2009

Batch #: 1

Project ID: SRS: 2004-00061

Analyst: LATCOR

Matrix: Soil

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

Lab Batch #: 763129

Date Analyzed: 06/23/2009

QC- Sample ID: 335981-003 D

Reporting Units: mg/kg

Date Prepared: 06/23/2009

Batch #: 1

Analyst: LATCOR

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	153	149	3	20	

Lab Batch #: 763218

Date Analyzed: 06/21/2009

QC- Sample ID: 335980-005 D

Reporting Units: mg/kg

Date Prepared: 06/20/2009

Batch #: 1

Analyst: ASA

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	
a,a,a-Trifluorotoluene	0.032	0.032	0	35	

Lab Batch #: 763007

Date Analyzed: 06/22/2009

QC- Sample ID: 335979-001 D

Reporting Units: %

Date Prepared: 06/22/2009

Batch #: 1

Analyst: BEV

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	2.83	3.63	25	20	F

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

12500 West 1-20 East
Odessa, Texas 79765

Project Manager: Camilla Bryant

Fax No.:

e-mail:

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335981
Initials: JMF

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.6 °C	
#2 Shipping container in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#4 Custody Seals intact on sample bottles/ container? / label	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Present	
#5 Chain of Custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ID written on Cont / Lid	
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#13 Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#14 Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	See Below	
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	NOT APPLICABLE	
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 335984

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-00061

24-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



24-JUN-09

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

Reference: XENCO Report No: **335984**
Lea Station Land Farm
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 335984. 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. 335984 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 335984



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id

Cell H VZ G 1 (3'-4')

Cell H VZ G 2 (3'-4')

Matrix

S

S

Date Collected

Jun-18-09 16:00

Jun-18-09 16:20

Sample Depth

3 - 4 ft

3 - 4 ft

Lab Sample Id

335984-001

335984-002



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-00061

Work Order Number: 335984

Report Date: 24-JUN-09

Date Received: 06/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763013 Percent Moisture

None

Batch: LBA-763129 Inorganic Anions by EPA 300

None

Batch: LBA-763218 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763218, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532286-1-BLK,335980-005 D,335984-001.

Batch: LBA-763233 TPH by SW8015 Mod

None

Batch: LBA-763367 BTEX-MTBE EPA 8021B

SW8021BM

Batch 763367, 4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 532430-1-BLK,335984-002.

SW8021BM

Batch 763367, Benzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 335984-002.

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



Certificate of Analysis Summary 335984
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm




Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jun-19-09 08:40 am
Report Date: 24-JUN-09
Project Manager: Brent Barron, II

<i>Analysis Requested</i>		Lab Id:	335984-001	335984-002		
		Field Id:	Cell H VZ G 1 (3'-4')	Cell H VZ G 2 (3'-4')		
		Depth:	3-4 ft	3-4 ft		
		Matrix:	SOIL	SOIL		
		Sampled:	Jun-18-09 16:00	Jun-18-09 16:20		
Anions by EPA 300		Extracted:				
		Analyzed:	Jun-23-09 02:04	Jun-23-09 02:04		
		Units/RL:	mg/kg RL	mg/kg RL		
Chloride			ND 5.04	ND 5.07		
BTEX by EPA 8021B		Extracted:	Jun-20-09 17:30	Jun-23-09 10:00		
		Analyzed:	Jun-21-09 08:58	Jun-24-09 02:32		
		Units/RL:	mg/kg RL	mg/kg RL		
Benzene			ND 0.0010	ND 0.0010		
Toluene			ND 0.0020	ND 0.0020		
Ethylbenzene			ND 0.0010	ND 0.0010		
m,p-Xylenes			ND 0.0020	ND 0.0020		
o-Xylene			ND 0.0010	ND 0.0010		
Total Xylenes			ND 0.0010	ND 0.0010		
Total BTEX			ND 0.0010	ND 0.0010		
Percent Moisture		Extracted:				
		Analyzed:	Jun-22-09 11:00	Jun-22-09 11:00		
		Units/RL:	% RL	% RL		
Percent Moisture			ND 1.00	1.32 1.00		
TPH By SW8015 Mod		Extracted:	Jun-22-09 10:17	Jun-22-09 10:17		
		Analyzed:	Jun-22-09 23:26	Jun-22-09 23:50		
		Units/RL:	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons			ND 15.1	ND 15.2		
C12-C28 Diesel Range Hydrocarbons			ND 15.1	ND 15.2		
C28-C35 Oil Range Hydrocarbons			ND 15.1	ND 15.2		
Total TPH			ND 15.1	ND 15.2		

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

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Brent Barron
Odessa Laboratory Director



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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 5757 NW 158th St, Miami Lakes, FL 33014
 12600 West I-20 East, Odessa, TX 79765
 842 Cantwell Lane, Corpus Christi, TX 78408

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335984,

Project ID: 2004-00061

Lab Batch #: 763218

Sample: 532286-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 763218

Sample: 532286-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 00:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 763218

Sample: 532286-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/21/09 01:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0199	0.0300	66	80-120	*

Lab Batch #: 763218

Sample: 335984-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 08:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0210	0.0300	70	80-120	*

Lab Batch #: 763218

Sample: 335980-005 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/21/09 09:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0229	0.0300	76	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335984,

Project ID: 2004-00061

Lab Batch #: 763367

Sample: 532430-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 09:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 763367

Sample: 532430-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 09:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 763367

Sample: 532430-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/09 10:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0211	0.0300	70	80-120	*

Lab Batch #: 763367

Sample: 335984-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 02:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0209	0.0300	70	80-120	*

Lab Batch #: 763367

Sample: 335977-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 06:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335984,

Project ID: 2004-00061

Lab Batch #: 763367

Sample: 335977-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/24/09 07:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 763233

Sample: 532361-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 15:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	78.5	100	79	70-135	
o-Terphenyl	35.5	50.0	71	70-135	

Lab Batch #: 763233

Sample: 532361-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	36.3	50.0	73	70-135	

Lab Batch #: 763233

Sample: 532361-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/22/09 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	81.1	100	81	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 763233

Sample: 335984-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 23:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	84.6	100	85	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 335984,

Project ID: 2004-00061

Lab Batch #: 763233

Sample: 335984-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/22/09 23:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.3	100	84	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 763233

Sample: 335979-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 01:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

Lab Batch #: 763233

Sample: 335979-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/09 02:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	39.2	50.0	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 335984

Project ID:

2004-00061

Lab Batch #: 763129

Sample: 763129-1-BKS

Matrix: Solid

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	8.91	89	80-120	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335984

Analyst: ASA

Lab Batch ID: 763218

Sample: 532286-1-BKS

Date Prepared: 06/20/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 06/21/2009

Matrix: Solid

Units: mg/kg

Units: mg/kg											
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1000	0.0949	95	0.1	0.0973	97	2	70-130	35
	Toluene	ND	0.1000	0.0914	91	0.1	0.0940	94	3	70-130	35
	Ethylbenzene	ND	0.1000	0.0950	95	0.1	0.0988	99	4	71-129	35
	m,p-Xylenes	ND	0.2000	0.1916	96	0.2	0.1988	99	4	70-135	35
	o-Xylene	ND	0.1000	0.0913	91	0.1	0.0943	94	3	71-133	35

Analyst: ASA

Lab Batch ID: 763367

Sample: 532430-1-BKS

Date Prepared: 06/23/2009

Batch #: 1

Date Analyzed: 06/23/2009

Matrix: Solid

Units: mg/kg

Units: mg/kg											
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.1069	107	0.1	0.1081	108	1	70-130	35	
Toluene	ND	0.1000	0.1033	103	0.1	0.1051	105	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1087	109	0.1	0.1118	112	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.2185	109	0.2	0.2246	112	3	70-135	35	
o-Xylene	ND	0.1000	0.1041	104	0.1	0.1070	107	3	71-133	35	

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

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 335984

Analyst: BHW

Lab Batch ID: 763233

Sample: 532361-1-BKS

Date Prepared: 06/22/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 06/22/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH By SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		C6-C12 Gasoline Range Hydrocarbons	ND	1000	713	71	1000	711	0	70-135	35	
		C12-C28 Diesel Range Hydrocarbons	ND	1000	754	75	1000	738	2	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 335984

Lab Batch #: 763129

Date Analyzed: 06/23/2009

Date Prepared: 06/23/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 335981-003 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	153	204	337	90	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BDL - Below Reporting Limit



Form 3 - MMSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 335984

Lab Batch ID: 763367

Date Analyzed: 06/24/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 335977-003 S

Date Prepared: 06/23/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1009	0.0578	57	0.1007	0.0771	77	29	70-130	35	X
	Toluene	ND	0.1009	0.0576	57	0.1007	0.0742	74	25	70-130	35	X
	Ethylbenzene	ND	0.1009	0.0411	41	0.1007	0.0554	55	30	71-129	35	X
	m,p-Xylenes	ND	0.2018	0.1281	63	0.2014	0.1588	79	21	70-135	35	X
	o-Xylene	ND	0.1009	0.0618	61	0.1007	0.0744	74	19	71-133	35	X

Lab Batch ID: 763233

Date Analyzed: 06/23/2009

Reporting Units: mg/kg

QC- Sample ID: 335979-001 S

Date Prepared: 06/22/2009

Batch #: 1 Matrix: Soil

Analyst: BHW

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	ND	1030	863	84	1030	865	84	0	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1030	1030	100	1030	1040	101	1	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 335984

Lab Batch #: 763129

Date Analyzed: 06/23/2009

QC- Sample ID: 335981-003 D

Reporting Units: mg/kg

Project ID: 2004-00061

Analyst: LATCOR

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	153	149	3	20	

Lab Batch #: 763218

Date Analyzed: 06/21/2009

QC- Sample ID: 335980-005 D

Reporting Units: mg/kg

Date Prepared: 06/20/2009

Analyst: ASA

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	ND	ND	NC	35	
m,p-Xylenes	ND	ND	NC	35	
o-Xylene	ND	ND	NC	35	
a,a,a-Trifluorotoluene	0.032	0.032	0	35	

Lab Batch #: 763013

Date Analyzed: 06/22/2009

QC- Sample ID: 335983-002 D

Reporting Units: %

Date Prepared: 06/22/2009

Analyst: BEV

Batch #: 1

Matrix: Soil

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

Spike Relative Difference $RPD = 200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

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

Client: Plains / Basin
Date/ Time: 06-19-09 0840
Lab ID #: 335984
Initials: JMF

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	1.1°C	°C
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? / <u>label</u>	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 349964

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

29-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



29-OCT-09

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

Reference: XENCO Report No: **349964**
Lea Station Land Farm
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 349964. 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. 349964 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349964



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell A TZ G1	S	Oct-27-09 07:30		349964-001
Cell A TZ G2	S	Oct-27-09 07:40		349964-002
Cell A TZ G3	S	Oct-27-09 07:50		349964-003
Cell A TZ G4	S	Oct-27-09 08:00		349964-004
Cell A TZ G5	S	Oct-27-09 08:05		349964-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349964

Report Date: 29-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779308 Percent Moisture

None

Batch: LBA-779341 Determination of Inorganic Anions In Water By Ion

None

Batch: LBA-779359 TPH by SW8015 Mod

None



Certificate of Analysis Summary 349964
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm

Report Date: 29-OCT-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	349964-001	349964-002	349964-003	349964-004	349964-005
	Field Id:	Cell A TZ G1	Cell A TZ G2	Cell A TZ G3	Cell A TZ G4	Cell A TZ G5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-27-09 07:30	Oct-27-09 07:40	Oct-27-09 07:50	Oct-27-09 08:00	Oct-27-09 08:05
Determination of Inorganic Anions In Water By Ion	Extracted:					
	Analyzed:	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34
	Units/RL:	mg/kg RL 51.2 4.34	mg/kg RL 29.7 4.54	mg/kg RL 35.9 4.27	mg/kg RL 22.1 4.44	mg/kg RL 16.2 4.34
Percent Moisture	Extracted:					
	Analyzed:	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00
	Units/RL:	% RL 3.17 1.00	% RL 7.52 1.00	% RL 1.59 1.00	% RL 5.46 1.00	% RL 3.12 1.00
TPH by SW8015 Mod	Extracted:					
	Analyzed:	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45
	Units/RL:	mg/kg RL 891 15.5	mg/kg RL 518 16.2	mg/kg RL 1420 15.2	mg/kg RL 434 15.8	mg/kg RL 240 15.4
C6-C12 Gasoline Range Hydrocarbons		BRL 15.5	BRL 16.2	BRL 15.2	BRL 15.8	BRL 15.4
C12-C28 Diesel Range Hydrocarbons		891 15.5	518 16.2	1420 15.2	434 15.8	240 15.4
C28-C35 Oil Range Hydrocarbons		54.5 15.5	28.0 16.2	70.1 15.2	30.9 15.8	24.2 15.4
Total TPH		946 15.5	546 16.2	1490 15.2	465 15.8	264 15.4

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349964,

Lab Batch #: 779359

Sample: 541825-1-BKS / BKS

Project ID: 2004-0061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	97.1	105	70-135	
o-Terphenyl	43.6	48.5	90	70-135	

Lab Batch #: 779359

Sample: 541825-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 779359

Sample: 541825-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 19:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.6	99.8	91	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 779359

Sample: 349964-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/28/09 22:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	176	200	88	70-135	
o-Terphenyl	93.1	100	93	70-135	

Lab Batch #: 779359

Sample: 349964-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/28/09 22:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349964,

Project ID: 2004-0061

Lab Batch #: 779359

Sample: 349964-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/28/09 23:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	89.0	100	89	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

Lab Batch #: 779359

Sample: 349964-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 00:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	88.4	99.5	89	70-135	
o-Terphenyl	46.9	49.8	94	70-135	

Lab Batch #: 779359

Sample: 349964-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 00:31

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	173	199	87	70-135	
o-Terphenyl	91.6	99.5	92	70-135	

Lab Batch #: 779359

Sample: 349959-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	99.2	99.6	100	70-135	
o-Terphenyl	42.9	49.8	86	70-135	

Lab Batch #: 779359

Sample: 349959-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	103	100	103	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349964

Project ID:

2004-0061

Lab Batch #: 779341

Sample: 779341-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.2	102	75-125	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 349964

Analyst: BEV

Lab Batch ID: 779359

Sample: 541825-1-BKS

Units: mg/kg

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Matrix: Solid

Date Prepared: 10/28/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH by SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
C6-C12 Gasoline Range Hydrocarbons		<15.0	971	998	103	1000	1030	103	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons		<15.0	971	977	101	1000	1010	101	3	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Land Farm

Work Order #: 349964

Lab Batch #: 779341

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Project ID: 2004-0061

Analyst: LATCOR

QC- Sample ID: 349964-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	51.2	103	152	98	75-125	

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

- Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order # : 349964

Lab Batch ID: 779359

Date Analyzed: 10/29/2009

Reporting Units: mg/kg

Project ID: 2004-0061

QC- Sample ID: 349959-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/28/2009

Analyst: BEV

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY							
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %
C6-C12 Gasoline Range Hydrocarbons	<15.2	1010	905	90	1010	953	94	5
C12-C28 Diesel Range Hydrocarbons	27.7	1010	894	86	1010	954	92	6
								35
								35

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349964

Lab Batch #: 779341

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	51.2	44.6	14	20	

Lab Batch #: 779308

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349959-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.17	<1.00	NC	20	

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

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:

Basin Env. / Plains

Date/ Time:

10.27.09 16:50

Lab ID #:

349964

Initials:

AL

Sample Receipt Checklist

Client Initials

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

Variance Documentation

Contact:

Contacted by:

Date/ Time:

Regarding:

Corrective Action Taken:

Check all that Apply:

☐

See attached e-mail/ fax

☐

Client understands and would like to proceed with analysis

☐

Cooling process had begun shortly after sampling event

Analytical Report 349965

for

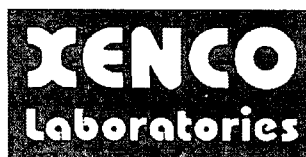
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

29-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)

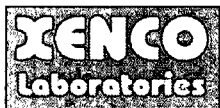
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

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)



29-OCT-09

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

Reference: XENCO Report No: **349965**
Lea Station Land Farm
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 349965. 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. 349965 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349965



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell B TZ G1	S	Oct-27-09 08:15		349965-001
Cell B TZ G2	S	Oct-27-09 08:25		349965-002
Cell B TZ G3	S	Oct-27-09 08:35		349965-003
Cell B TZ G4	S	Oct-27-09 08:45		349965-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349965

Report Date: 29-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779308 Percent Moisture

None

Batch: LBA-779341 Inorganic Anions by EPA 300

None

Batch: LBA-779359 TPH by SW8015 Mod

None



Certificate of Analysis Summary 349965
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 29-OCT-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	349965-001	349965-002	349965-003	349965-004	
	Field Id:	Cell B TZ G1	Cell B TZ G2	Cell B TZ G3	Cell B TZ G4	
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Oct-27-09 08:15	Oct-27-09 08:25	Oct-27-09 08:35	Oct-27-09 08:45	
Determination of Inorganic Anions In Water By Ion	Extracted:					
	Analyzed:	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		11.7 4.42	22.0 4.37	27.6 4.35	22.2 4.34	
Percent Moisture	Extracted:					
	Analyzed:	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		5.06 1.00	3.86 1.00	3.36 1.00	3.25 1.00	
TPH by SW8015 Mod	Extracted:					
	Analyzed:	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		BRL 15.7	BRL 15.5	BRL 15.4	BRL 15.4	
C12-C28 Diesel Range Hydrocarbons		832 15.7	700 15.5	363 15.4	358 15.4	
C28-C35 Oil Range Hydrocarbons		45.8 15.7	40.6 15.5	28.9 15.4	30.7 15.4	
Total TPH		878 15.7	741 15.5	392 15.4	389 15.4	

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349965,

Lab Batch #: 779359

Sample: 541825-1-BKS / BKS

Project ID: 2004-0061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	97.1	105	70-135	
o-Terphenyl	43.6	48.5	90	70-135	

Lab Batch #: 779359

Sample: 541825-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 779359

Sample: 541825-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 19:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.6	99.8	91	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 779359

Sample: 349965-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 00:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	73.6	99.5	74	70-135	
o-Terphenyl	38.5	49.8	77	70-135	

Lab Batch #: 779359

Sample: 349965-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 01:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.8	99.6	87	70-135	
o-Terphenyl	45.4	49.8	91	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349965,

Lab Batch #: 779359

Sample: 349965-003 / SMP

Project ID: 2004-0061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 01:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.5	99.5	91	70-135	
o-Terphenyl	47.8	49.8	96	70-135	

Lab Batch #: 779359

Sample: 349965-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 02:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.7	99.5	95	70-135	
o-Terphenyl	50.1	49.8	101	70-135	

Lab Batch #: 779359

Sample: 349959-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	99.2	99.6	100	70-135	
o-Terphenyl	42.9	49.8	86	70-135	

Lab Batch #: 779359

Sample: 349959-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349965

Project ID:

2004-0061

Lab Batch #: 779341

Sample: 779341-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.2	102	75-125	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 349965

Analyst: BEV

Lab Batch ID: 779359

Sample: 541825-1-BKS

Date Prepared: 10/28/2009

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH by SW8015 Mod	Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
			<15.0	971	998	103	1000	1030	103	3	70-135	35		
			<15.0	971	977	101	1000	1010	101	3	70-135	35		

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 349965

Lab Batch #: 779341

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Project ID: 2004-0061

Analyst: LATCOR

QC- Sample ID: 349964-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	51.2	103	152	98	75-125	

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

Below Reporting Limit



Form 3 - MMSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 349965

Lab Batch ID: 779359

Date Analyzed: 10/29/2009

Reporting Units: mg/kg

Project ID: 2004-0061

QC- Sample ID: 349959-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/28/2009

Analyst: BEV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Reporting Units: mg/kg	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH by SW8015 Mod											
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<15.2	1010	905	90	1010	953	94	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	27.7	1010	894	86	1010	954	92	6	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349965

Lab Batch #: 779341

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	51.2	44.6	14	20	

Lab Batch #: 779308

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349959-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.17	<1.00	NC	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:

Basin Env. / Plains

Date/ Time:

10.27.09 16:50

Lab ID #:

349965

Initials:

AL

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>3.10 °C</u>	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

Contact:

Contacted by:

Date/ Time:

Regarding:

Corrective Action Taken:

Check all that Apply:

☐

See attached e-mail/ fax

☐

Client understands and would like to proceed with analysis

☐

Cooling process had begun shortly after sampling event

Analytical Report 349969

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

30-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



30-OCT-09

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

Reference: XENCO Report No: **349969**
Lea Station Land Farm
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 349969. 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. 349969 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349969



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell D TZ G1	S	Oct-27-09 08:55		349969-001
Cell D TZ G2	S	Oct-27-09 09:05		349969-002
Cell D TZ G3	S	Oct-27-09 09:15		349969-003
Cell D TZ G4	S	Oct-27-09 09:25		349969-004
Cell D TZ G5	S	Oct-27-09 09:35		349969-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349969

Report Date: 30-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779308 Percent Moisture

None

Batch: LBA-779311 Percent Moisture

None

Batch: LBA-779341 Inorganic Anions by EPA 300

None

Batch: LBA-779359 TPH by SW8015 Mod

None

Batch: LBA-779637 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779637, o-Terphenyl recovered below QC limits . Matrix interferences is suspected;

Sample data confirmed by re-analysis

Samples affected are: 349969-003 SD, 349969-004. QC data not confirmed by reanalysis.

1-Chlorooctane recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 349969-004.

SW8015MOD_NM

Batch 779637, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 349969-003, -004, -005.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits



Certificate of Analysis Summary 349969
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 30-OCT-09
Project Manager: Brent Barron, II

<i>Analysis Requested</i>		<i>Lab Id:</i>	<i>Field Id:</i>	<i>Depth:</i>	<i>Matrix:</i>	<i>Sampled:</i>	<i>349969-001</i>	<i>349969-002</i>	<i>349969-003</i>	<i>349969-004</i>	<i>349969-005</i>
			Cell D TZ G1		SOIL	Oct-27-09 08:55		Cell D TZ G2	Cell D TZ G3	Cell D TZ G4	Cell D TZ G5
Determination of Inorganic Anions In Water By Ion											
Chloride	<i>Extracted:</i>										
	<i>Analyzed:</i>		Oct-28-09 12:34								
	<i>Units/RL:</i>		mg/kg RL								
			60.1	4.40				73.0	110	25.5	11.5
Percent Moisture											
Percent Moisture	<i>Extracted:</i>										
	<i>Analyzed:</i>		Oct-28-09 17:00								
	<i>Units/RL:</i>		% RL					% RL	% RL	% RL	% RL
			4.57	1.00				4.76	4.77	2.66	
TPH by SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	<i>Extracted:</i>		Oct-28-09 10:45					Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45
	<i>Analyzed:</i>		Oct-29-09 02:42					Oct-29-09 03:08	Oct-29-09 07:51	Oct-29-09 08:16	Oct-29-09 08:42
	<i>Units/RL:</i>		mg/kg RL					mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
			BRL	15.7				BRL	BRL	BRL	BRL
C12-C28 Diesel Range Hydrocarbons			516	15.7				1210	1340	1190	1320
			33.3	15.7				67.1	77.8	65.1	65.6
			549	15.7				1277	1418	1255	1386
Total TPH											

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

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

Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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 12600 West I-20 East, Odessa, TX 79765
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349969,

Project ID: 2004-0061

Lab Batch #: 779359

Sample: 541825-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	97.1	105	70-135	
o-Terphenyl	43.6	48.5	90	70-135	

Lab Batch #: 779359

Sample: 541825-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 18:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 779359

Sample: 541825-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/28/09 19:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.6	99.8	91	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 779359

Sample: 349969-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 02:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.7	100	87	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 779359

Sample: 349969-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.6	99.5	87	70-135	
o-Terphenyl	45.5	49.8	91	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349969,

Lab Batch #: 779359

Sample: 349959-001 S / MS

Project ID: 2004-0061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.6	100	70-135	
o-Terphenyl	42.9	49.8	86	70-135	

Lab Batch #: 779359

Sample: 349959-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 03:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

Lab Batch #: 779637

Sample: 541929-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 779637

Sample: 541929-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	98.0	100	70-135	
o-Terphenyl	42.1	49.0	86	70-135	

Lab Batch #: 779637

Sample: 541929-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 07:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349969,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 349969-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 07:51

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	81.8	100	82	70-135	
o-Terphenyl	43.7	50.0	87	70-135	

Lab Batch #: 779637

Sample: 349969-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 08:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	59.4	99.8	60	70-135	**
o-Terphenyl	31.0	49.9	62	70-135	**

Lab Batch #: 779637

Sample: 349969-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 08:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	92.5	100	93	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 779637

Sample: 349969-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	89.3	99.7	90	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 779637

Sample: 349969-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	71.3	100	71	70-135	
o-Terphenyl	30.8	50.0	62	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349969

Project ID:

2004-0061

Lab Batch #: 779341

Sample: 779341-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.2	102	75-125	

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

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

- Below Reporting Limit



BS / BSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 349969

Analyst: BEV

Lab Batch ID: 779359

Sample: 541825-1-BKS

Units: mg/kg

Date Prepared: 10/28/2009

Batch #: 1

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	971	998	103	1000	1030	103	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	971	977	101	1000	1010	101	3	70-135	35	

Analyst: BEV

Lab Batch ID: 779637

Sample: 541929-1-BKS

Date Prepared: 10/28/2009

Batch #: 1

Date Analyzed: 10/29/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH by SW8015 Mod	Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons		<15.0	998	947	95	980	978	100	3	70-135	35		
	C12-C28 Diesel Range Hydrocarbons		<15.0	998	924	93	980	961	98	4	70-135	35		

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

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / (E)$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 349969

Lab Batch #: 779341

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Project ID: 2004-0061

Analyst: LATCOR

QC- Sample ID: 349964-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	51.2	103	152	98	75-125	

Matrix Spike Percent Recovery [D] = $100 \cdot (C-A)/B$

Relative Percent Difference [E] = $200 \cdot (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

Below Reporting Limit



Form 3 - N/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 349969

Lab Batch ID: 779359

Date Analyzed: 10/29/2009

Reporting Units: mg/kg

Project ID: 2004-0061

QC- Sample ID: 349959-001 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/28/2009

Analyst: BEV

Reporting Units: mg/kg		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons		<15.2	1010	905	90	1010	953	94	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons		27.7	1010	894	86	1010	954	92	6	70-135	35	

Lab Batch ID: 779637

Date Analyzed: 10/30/2009

Reporting Units: mg/kg

QC- Sample ID: 349969-003 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/28/2009

Analyst: BEV

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	858	82	1050	677	64	24	70-135	35	X
	C12-C28 Diesel Range Hydrocarbons	1340	1050	1730	37	1050	1410	7	20	70-135	35	X

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349969

Lab Batch #: 779341

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	51.2	44.6	14	20	

Lab Batch #: 779308

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349959-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.17	<1.00	NC	20	

Lab Batch #: 779311

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349969-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	2.01	NC	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

12600 West I-20 East
Odessa, Texas 79766
Phone: 432-663-1800
Fax: 432-663-1713

Project Manager: Camille Bryant PAGE 01 OF 01

Company Name: Basin Environmental Service Technologies, LLC

Company Address: 2800 Plains Hwy

City/State/Zip: Lovington, NM 88260

Telephone No: (575) 441-2244

Sampler Signature: *Camille Bryant* e-mail: cibryant@basin-consulting.com

Project Name: Lea Station Land Farm

Project #: 2004-0081

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 349909

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Matrix	Preservation & # of Containers	Analyze For:
01	Cell D TZ G1			10/27/2009	0855		1	Soil	HNO ₃ HCl (NOA X 2) H ₂ SO ₄ NaOH Na ₂ S ₂ O ₈ None (PAH) Other (Specify) DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015N 8015B TPB: TX 1005 TX 1008 Cadions (Ca, Mg, Na, K) Anions (Cl, SO ₄ , Alkalinity) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles Semivolatiles BTEX 8021BU/5030 or BTEX 8280 RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Standard TAT
02	Cell D TZ G2			10/27/2009	0905		1	Soil		
03	Cell D TZ G3			10/27/2009	0915		1	Soil		
04	Cell D TZ G4			10/27/2009	0925		1	Soil		
05	Cell D TZ G5			10/27/2009	0935		1	Soil		

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
<i>Camille Bryant</i>	10/27/09	1450			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Laboratory Comments:

Sample Chain of Custody:

VOCs Free of Headspace?

Labels on containers?

Custody seals on container(s)?

Container(s) sealed on location?

Sample Hand Delivered by Sampler/Client Rep.?

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:

Basin Env. / Plains

Date/ Time:

10.27.09 16.50

Lab ID #:

349969

Initials:

AL

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>3.0</u> °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

Contact:

Contacted by:

Date/ Time:

Regarding:

Corrective Action Taken:

Check all that Apply:

☐

See attached e-mail/ fax

☐

Client understands and would like to proceed with analysis

☐

Cooling process had begun shortly after sampling event

Analytical Report 349971

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

30-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



30-OCT-09

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

Reference: XENCO Report No: **349971**
Lea Station Land Farm
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 349971. 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. 349971 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349971



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell E TZ G1	S	Oct-27-09 09:45		349971-001
Cell E TZ G2	S	Oct-27-09 09:55		349971-002
Cell E TZ G3	S	Oct-27-09 10:05		349971-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349971

Report Date: 30-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779311 Percent Moisture

None

Batch: LBA-779341 Inorganic Anions by EPA 300

None

Batch: LBA-779637 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779637, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; QC data not confirmed by re-analysis

Samples affected are: 349969-003 SD.

SW8015MOD_NM

Batch 779637, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 349971-001, -003, -002.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits



Certificate of Analysis Summary 349971
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 30-OCT-09
Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	349971-001	349971-002	349971-003		
	<i>Field Id:</i>	Cell E TZ G1	Cell E TZ G2	Cell E TZ G3		
	<i>Depth:</i>					
	<i>Matrix:</i>	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-27-09 09:45	Oct-27-09 09:55	Oct-27-09 10:05		
Determination of Inorganic Anions In Water By Ion	<i>Extracted:</i>					
	<i>Analyzed:</i>	Oct-28-09 12:34	Oct-28-09 12:34	Oct-28-09 12:34		
	<i>Units/RL:</i>	mg/kg RL BRL 4.28	mg/kg RL BRL 4.28	mg/kg RL BRL 4.27		
Percent Moisture	<i>Extracted:</i>					
	<i>Analyzed:</i>	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00		
	<i>Units/RL:</i>	% RL 1.92 1.00	% RL 1.89 1.00	% RL 1.70 1.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45		
	<i>Analyzed:</i>	Oct-29-09 09:09	Oct-29-09 09:35	Oct-29-09 10:00		
	<i>Units/RL:</i>	mg/kg RL BRL 15.2	mg/kg RL BRL 15.3	mg/kg RL BRL 15.2		
C6-C12 Gasoline Range Hydrocarbons		544 15.2	567 15.3	250 15.2		
C12-C28 Diesel Range Hydrocarbons		48.7 15.2	50.9 15.3	28.8 15.2		
C28-C35 Oil Range Hydrocarbons		593 15.2	618 15.3	279 15.2		
Total TPH						

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349971,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 541929-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 779637

Sample: 541929-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	98.0	100	70-135	
o-Terphenyl	42.1	49.0	86	70-135	

Lab Batch #: 779637

Sample: 541929-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 07:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 779637

Sample: 349971-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 09:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.5	94	70-135	
o-Terphenyl	48.8	49.8	98	70-135	

Lab Batch #: 779637

Sample: 349971-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 09:35

SURROGATE RECOVERY STUDY

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349971,
Lab Batch #: 779637

Sample: 349971-003 / SMP

Project ID: 2004-0061

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 10:00

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	99.5	91	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 779637

Sample: 349969-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	99.7	90	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 779637

Sample: 349969-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.3	100	71	70-135	
o-Terphenyl	30.8	50.0	62	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349971

Project ID:

2004-0061

Lab Batch #: 779341

Sample: 779341-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.2	102	75-125	

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

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

- Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 349971

Analyst: BEV

Lab Batch ID: 779637

Sample: 541929-1-BKS

Units: mg/kg

Project ID: 2004-0061

Date Analyzed: 10/29/2009

Matrix: Solid

Date Prepared: 10/28/2009

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	998	947	95	980	978	100	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	998	924	93	980	961	98	4	70-135	35	

Analytes

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: Lea Station Land Farm



Work Order #: 349971

Lab Batch #: 779341

Date Analyzed: 10/28/2009

QC- Sample ID: 349964-001 S

Reporting Units: mg/kg

Date Prepared: 10/28/2009

Batch #: 1

Project ID: 2004-0061

Analyst: LATCOR

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	51.2	103	152	98	75-125	

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

Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Land Farm



Work Order # : 349971

Project ID: 2004-0061

Lab Batch ID: 779637

QC- Sample ID: 349969-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/30/2009

Date Prepared: 10/28/2009

Analyst: BEV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	858	82	1050	677	64	24	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	1340	1050	1730	37	1050	1410	7	20	70-135	35	X

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349971

Lab Batch #: 779341

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	51.2	44.6	14	20	

Lab Batch #: 779311

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349969-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	2.01	NC	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 10.27.09 16:50
 Lab ID #: 349971
 Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	3.10 °C
#2	Shipping container in good condition?	(Yes)	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present
#5	Chain of Custody present?	(Yes)	No	
#6	Sample instructions complete of Chain of Custody?	(Yes)	No	
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No	
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No	
#11	Containers supplied by ELOT?	(Yes)	No	
#12	Samples in proper container/ bottle?	(Yes)	No	See Below
#13	Samples properly preserved?	(Yes)	No	See Below
#14	Sample bottles intact?	(Yes)	No	
#15	Preservations documented on Chain of Custody?	(Yes)	No	
#16	Containers documented on Chain of Custody?	(Yes)	No	
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below
#18	All samples received within sufficient hold time?	(Yes)	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 349972

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

30-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



30-OCT-09

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

Reference: XENCO Report No: **349972**
Lea Station Land Farm
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 349972. 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. 349972 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349972



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell F TZ G1	S	Oct-27-09 10:15		349972-001
Cell F TZ G2	S	Oct-27-09 10:25		349972-002
Cell F TZ G3	S	Oct-27-09 10:35		349972-003
Cell F TZ G4	S	Oct-27-09 10:45		349972-004
Cell F TZ G5	S	Oct-27-09 10:55		349972-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349972

Report Date: 30-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779311 Percent Moisture

None

Batch: LBA-779341 Inorganic Anions by EPA 300

None

Batch: LBA-779345 Determination of Inorganic Anions In Water By Ion

None

Batch: LBA-779637 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779637, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 349972-002, -004, -001, -005, -003.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 779637, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; QC data not confirmed by re-analysis

Samples affected are: 349969-003 SD.



Certificate of Analysis Summary 349972
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 30-OCT-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	349972-001	Field Id:	349972-002	Depth:	349972-003	Matrix:	349972-004	Sampled:	349972-005
		Cell F TZ G1		Cell F TZ G2		Cell F TZ G3		Cell F TZ G4		Cell F TZ G5
		SOIL		SOIL		SOIL		SOIL		SOIL
		Oct-27-09 10:15		Oct-27-09 10:25		Oct-27-09 10:35		Oct-27-09 10:45		Oct-27-09 10:55
		mg/kg RL		mg/kg RL		mg/kg RL		mg/kg RL		mg/kg RL
Determination of Inorganic Anions In Water By Ion	Extracted:	Oct-28-09 12:34		Oct-28-09 12:34		Oct-28-09 12:34		Oct-28-09 18:03		Oct-28-09 18:03
	Analyzed:									
	Units/RL:	122 4.38		154 4.44		151 4.37		135 4.40		100 4.28
Percent Moisture	Extracted:									
	Analyzed:	Oct-28-09 17:00		Oct-28-09 17:00		Oct-28-09 17:00		Oct-28-09 17:00		Oct-28-09 17:00
	Units/RL:	% RL		% RL		% RL		% RL		% RL
TPH by SW8015 Mod	Extracted:	Oct-28-09 10:45		Oct-28-09 10:45		Oct-28-09 10:45		Oct-28-09 10:45		Oct-28-09 10:45
	Analyzed:	Oct-29-09 10:25		Oct-29-09 10:51		Oct-29-09 11:17		Oct-29-09 11:42		Oct-29-09 12:32
	Units/RL:	mg/kg RL		mg/kg RL		mg/kg RL		mg/kg RL		mg/kg RL
C6-C12 Gasoline Range Hydrocarbons	Extracted:	BRL 15.6		BRL 15.8		BRL 15.6		BRL 15.7		BRL 15.2
	Analyzed:									
	Units/RL:	771 15.6		982 15.8		1270 15.6		1230 15.7		953 15.2
C12-C28 Diesel Range Hydrocarbons	Extracted:	42.3 15.6		58.2 15.8		59.1 15.6		55.4 15.7		52.3 15.2
	Analyzed:									
	Units/RL:	813 15.6		1040 15.8		1329 15.6		1285 15.7		1005 15.2
Total TPH	Extracted:									
	Analyzed:									
	Units/RL:									

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

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

Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349972,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 541929-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 779637

Sample: 541929-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	98.0	100	70-135	
o-Terphenyl	42.1	49.0	86	70-135	

Lab Batch #: 779637

Sample: 541929-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 07:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 779637

Sample: 349972-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 10:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.3	100	75	70-135	
o-Terphenyl	39.4	50.0	79	70-135	

Lab Batch #: 779637

Sample: 349972-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 10:51

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.2	99.8	91	70-135	
o-Terphenyl	47.4	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349972,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 349972-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 11:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	99.9	86	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 779637

Sample: 349972-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 11:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.6	99.8	84	70-135	
o-Terphenyl	44.3	49.9	89	70-135	

Lab Batch #: 779637

Sample: 349972-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 12:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.1	99.6	82	70-135	
o-Terphenyl	43.0	49.8	86	70-135	

Lab Batch #: 779637

Sample: 349969-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	99.7	90	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 779637

Sample: 349969-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.3	100	71	70-135	
o-Terphenyl	30.8	50.0	62	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349972

Project ID:

2004-0061

Lab Batch #: 779341

Sample: 779341-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.2	102	75-125	

Lab Batch #: 779345

Sample: 779345-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.6	106	75-125	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

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

BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 349972

Analyst: BEV

Lab Batch ID: 779637

Sample: 541929-1-BKS

Date Prepared: 10/28/2009

Batch #: 1

Project ID: 2004-0061

Date Analyzed: 10/29/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
TPH by SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
C6-C12 Gasoline Range Hydrocarbons		<15.0	998	947	95	980	978	100	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons		<15.0	998	924	93	980	961	98	4	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 349972

Lab Batch #: 779341

Date Analyzed: 10/28/2009

QC- Sample ID: 349964-001 S

Reporting Units: mg/kg

Project ID: 2004-0061

Analyst: LATCOR

Date Prepared: 10/28/2009

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	51.2	103	152	98	75-125	

Lab Batch #: 779345

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349972-004 S

Reporting Units: mg/kg

Batch #: 1

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	135	105	242	102	75-125	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - NELAP / MSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 349972

Project ID: 2004-0061

Lab Batch ID: 779637

QC- Sample ID: 349969-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/30/2009

Date Prepared: 10/28/2009

Analyst: BEV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	858	82	1050	677	64	24	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	1340	1050	1730	37	1050	1410	7	20	70-135	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

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

ND = Not Detected, J = Present Below Reporting Limit, P = Present in Blank, NR = Not Requested, I = Interference, NA = Not

Applicable N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349972

Lab Batch #: 779341

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349964-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	51.2	44.6	14	20	

Lab Batch #: 779345

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349972-004 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	135	131	3	20	

Lab Batch #: 779311

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349969-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	2.01	NC	20	

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 10.27.09 16.50
 Lab ID #: 349972
 Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>(Yes)</u>	No	<u>3.0</u> °C
#2	Shipping container in good condition?	<u>(Yes)</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>(Not Present)</u>
#4	Custody Seals intact on sample bottles/ container?	<u>(Yes)</u>	No	<u>Not Present</u>
#5	Chain of Custody present?	<u>(Yes)</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>(Yes)</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>(Yes)</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>(Yes)</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>(Yes)</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>(Yes)</u>	No	
#11	Containers supplied by ELDT?	<u>(Yes)</u>	No	
#12	Samples in proper container/ bottle?	<u>(Yes)</u>	No	See Below
#13	Samples properly preserved?	<u>(Yes)</u>	No	See Below
#14	Sample bottles intact?	<u>(Yes)</u>	No	
#15	Preservations documented on Chain of Custody?	<u>(Yes)</u>	No	
#16	Containers documented on Chain of Custody?	<u>(Yes)</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>(Yes)</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>(Yes)</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>(Not Applicable)</u>
#20	VOC samples have zero headspace?	<u>(Yes)</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

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

Analytical Report 349974

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

30-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



30-OCT-09

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

Reference: XENCO Report No: **349974**
Lea Station Land Farm
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 349974. 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. 349974 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349974



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell G TZ G1	S	Oct-27-09 11:05		349974-001
Cell G TZ G2	S	Oct-27-09 11:15		349974-002
Cell G TZ G3	S	Oct-27-09 11:25		349974-003
Cell G TZ G4	S	Oct-27-09 11:35		349974-004
Cell G TZ G5	S	Oct-27-09 11:45		349974-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349974

Report Date: 30-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779311 Percent Moisture

None

Batch: LBA-779345 Inorganic Anions by EPA 300

None

Batch: LBA-779637 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779637, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 349974-003, -004, -002, -001, -005.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 779637, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; QC data not confirmed by re-analysis

Samples affected are: 349969-003 SD.



Certificate of Analysis Summary 349974
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 30-OCT-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	349974-001	349974-002	349974-003	349974-004	349974-005
	Field Id:	Depth:	Matrix:	Sampled:	Sampled:	Cell G TZ G1	Cell G TZ G2	Cell G TZ G3	Cell G TZ G4	Cell G TZ G5
Determination of Inorganic Anions In Water By Ion	SOIL					Oct-27-09 11:05	Oct-27-09 11:15	Oct-27-09 11:25	Oct-27-09 11:35	Oct-27-09 11:45
	Extracted:					Oct-28-09 18:03	Oct-28-09 18:03	Oct-28-09 18:03	Oct-28-09 18:03	Oct-28-09 18:03
	Analyzed:					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Percent Moisture	Units/RL:					20.4	23.2	50.9	53.3	42.6
	Extracted:					RL	RL	RL	RL	RL
	Analyzed:					4.28	4.31	4.35	4.31	4.28
TPH by SW8015 Mod	Units/RL:					1.90	2.55	3.55	2.66	1.95
	Extracted:					1.00	1.00	1.00	1.00	1.00
	Analyzed:					RL	RL	RL	RL	RL
C6-C12 Gasoline Range Hydrocarbons	Units/RL:					45.2	296	79.1	90.1	16.8
	Extracted:					15.3	77.0	15.5	15.4	15.2
	Analyzed:					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C12-C28 Diesel Range Hydrocarbons	Units/RL:					1570	7910	4200	4410	1470
	Extracted:					15.3	77.0	15.5	15.4	15.2
	Analyzed:					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C28-C35 Oil Range Hydrocarbons	Units/RL:					59.0	242	85.1	85.0	54.3
	Extracted:					15.3	77.0	15.5	15.4	15.2
	Analyzed:					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total TPH	Units/RL:					1674	8448	4364	4585	1541
	Extracted:					15.3	77.0	15.5	15.4	15.2
	Analyzed:					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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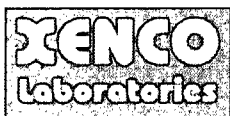
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 2505 North Falkenburg Rd, Tampa, FL 33619
 5757 NW 158th St, Miami Lakes, FL 33014
 12600 West I-20 East, Odessa, TX 79765
 842 Cantwell Lane, Corpus Christi, TX 78408

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349974,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 541929-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 779637

Sample: 541929-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	98.0	100	70-135	
o-Terphenyl	42.1	49.0	86	70-135	

Lab Batch #: 779637

Sample: 541929-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 07:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 779637

Sample: 349974-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 12:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	69.5	99.8	70	70-135	
o-Terphenyl	36.9	49.9	74	70-135	

Lab Batch #: 779637

Sample: 349974-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 13:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.9	99.5	78	70-135	
o-Terphenyl	41.9	49.8	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349974,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 349974-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 14:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	100	88	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 779637

Sample: 349974-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 14:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.5	92	70-135	
o-Terphenyl	48.0	49.8	96	70-135	

Lab Batch #: 779637

Sample: 349974-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 18:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 779637

Sample: 349969-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	99.7	90	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 779637

Sample: 349969-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.3	100	71	70-135	
o-Terphenyl	30.8	50.0	62	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349974

Project ID:

2004-0061

Lab Batch #: 779345

Sample: 779345-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.6	106	75-125	

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

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

BPL - Below Reporting Limit



Project Name: Lea Station Land Farm

Work Order #: 349974

Analyst: BEV

Lab Batch ID: 779637

Sample: 541929-1-BKS

Date Prepared: 10/28/2009

Batch #: 1

Project ID: 2004-0061

Date Analyzed: 10/29/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH by SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
			[A]	[B]	[C]	[D]	[E]	[F]	[G]				
	C6-C12 Gasoline Range Hydrocarbons		<15.0	998	947	95	980	978	100	3	70-135	35	
	C12-C28 Diesel Range Hydrocarbons		<15.0	998	924	93	980	961	98	4	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 349974

Lab Batch #: 779345

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Project ID: 2004-0061

Analyst: LATCOR

QC- Sample ID: 349972-004 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	135	105	242	102	75-125	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - M / MSD Recoveries

Project Name: Lea Station Land Farm

Work Order # : 349974

Lab Batch ID: 779637

Date Analyzed: 10/30/2009

Reporting Units: mg/kg

Project ID: 2004-0061

QC- Sample ID: 349969-003 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/28/2009

Analyst: BEV

Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	858	82	1050	677	64	24	70-135	35	X
	C12-C28 Diesel Range Hydrocarbons	1340	1050	1730	37	1050	1410	7	20	70-135	35	X

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349974

Lab Batch #: 779345

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349972-004 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	135	131	3	20	

Lab Batch #: 779311

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349969-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	2.01	NC	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12800 West I-20 East
Odessa, Texas 79766

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

Project Manager: Camille Bryant PAGE 01 OF 01

Company Name Basin Environmental Service Technologies, LLC

Company Address: 2800 Plains Hwy

City/State/Zip: Lovington, NM 88280

Telephone No: (505) 441-2244

Sampler Signature: *C.H.D. Gandy for C.S. Bryant* e-mail: cbryant@basin-consulting.com

Project Name: Lea Station Land Farm

Project #: 2004-0061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 349974

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers												Matrix	Analyze For:																
								Is	HNO ₃	HCl (NOA X 2)	H ₂ SO ₄	NaOH	Na ₂ B ₂ O ₇	None (PAH)	Other (Specify)	DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	TPH: 418.1 8015M		TPH: TX 1005 TX 1008	Carbon (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8280	RCI	N.O.R.M.	PAH	EPA Paine Filter Test	Chlorides 300	RUSH TAT (Per-Schedule) 24, 48, 72 hrs	Standard TAT		
01	Cell G TZ G1			10/27/2009	1105		1	X																							X		X				
02	Cell G TZ G2			10/27/2009	1115		1	X																							X		X				
03	Cell G TZ G3			10/27/2009	1125		1	X																							X		X				
04	Cell G TZ G4			10/27/2009	1135		1	X																							X		X				
05	Cell G TZ G5			10/27/2009	1145		1	X																							X		X				
																													</								

Special Instructions:

Relinquished by: *C.H.D. Gandy*

Date: 10/27/09 Time: 1650

Received by:

Date: Time:

Date: Time:

Date: Time:

Laboratory Comments:

Sample Container Issues?

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Container(s) sealed at collection(s)

Sample Hand Delivered

by Sampler/Client Rep. ?

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 10-27-09 16:50
 Lab ID #: 349974
 Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>(Yes)</u>	No	3.0 °C
#2	Shipping container in good condition?	<u>(Yes)</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>(Not Present)</u>
#4	Custody Seals intact on sample bottles/ container?	<u>(Yes)</u>	No	Not Present
#5	Chain of Custody present?	<u>(Yes)</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>(Yes)</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>(Yes)</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>(Yes)</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>(Yes)</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>(Yes)</u>	No	
#11	Containers supplied by ELOT?	<u>(Yes)</u>	No	
#12	Samples in proper container/ bottle?	<u>(Yes)</u>	No	See Below
#13	Samples properly preserved?	<u>(Yes)</u>	No	See Below
#14	Sample bottles intact?	<u>(Yes)</u>	No	
#15	Preservations documented on Chain of Custody?	<u>(Yes)</u>	No	
#16	Containers documented on Chain of Custody?	<u>(Yes)</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>(Yes)</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>(Yes)</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>(Not Applicable)</u>
#20	VOC samples have zero headspace?	<u>(Yes)</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 349976

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Land Farm

2004-0061

30-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 (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



30-OCT-09

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

Reference: XENCO Report No: **349976**
Lea Station Land Farm
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 349976. 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. 349976 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 349976



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell H TZ G1	S	Oct-27-09 11:55		349976-001
Cell H TZ G2	S	Oct-27-09 12:00		349976-002
Cell H TZ G3	S	Oct-27-09 12:10		349976-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Land Farm

Project ID: 2004-0061

Work Order Number: 349976

Report Date: 30-OCT-09

Date Received: 10/27/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779311 Percent Moisture

None

Batch: LBA-779345 Inorganic Anions by EPA 300

None

Batch: LBA-779637 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779637, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 349976-002, -001, -003.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 779637, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; QC data not confirmed by re-analysis

Samples affected are: 349969-003 SD.



Certificate of Analysis Summary 349976
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Land Farm



Project Id: 2004-0061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Oct-27-09 04:50 pm
Report Date: 30-OCT-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	349976-001	349976-002	349976-003	
	Field Id:	Cell H TZ G1	Cell H TZ G2	Cell H TZ G3	
	Depth:				
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Oct-27-09 11:55	Oct-27-09 12:00	Oct-27-09 12:10	
Determination of Inorganic Anions In Water By Ion	Extracted:				
	Analyzed:	Oct-28-09 18:03	Oct-28-09 18:03	Oct-28-09 18:03	
	Units/RL:	mg/kg RL 26.8 4.48	mg/kg RL 15.8 4.41	mg/kg RL BRL 4.35	
Percent Moisture	Extracted:				
	Analyzed:	Oct-28-09 17:00	Oct-28-09 17:00	Oct-28-09 17:00	
	Units/RL:	% RL 6.21 1.00	% RL 4.83 1.00	% RL 3.44 1.00	
TPH by SW8015 Mod	Extracted:	Oct-28-09 10:45	Oct-28-09 10:45	Oct-28-09 10:45	
	Analyzed:	Oct-29-09 15:05	Oct-30-09 10:19	Oct-30-09 10:45	
	Units/RL:	mg/kg RL 138 16.0	mg/kg RL 138 15.8	mg/kg RL 124 15.5	
C6-C12 Gasoline Range Hydrocarbons		4170 16.0	5190 15.8	5050 15.5	
C12-C28 Diesel Range Hydrocarbons		83.7 16.0	85.0 15.8	94.6 15.5	
C28-C35 Oil Range Hydrocarbons		4392 16.0	5413 15.8	5269 15.5	
Total TPH					

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

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

Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349976,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 541929-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	41.2	49.9	83	70-135	

Lab Batch #: 779637

Sample: 541929-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 06:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	98.0	100	70-135	
o-Terphenyl	42.1	49.0	86	70-135	

Lab Batch #: 779637

Sample: 541929-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/29/09 07:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 779637

Sample: 349976-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/29/09 15:05

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	100	92	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 779637

Sample: 349976-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 10:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.1	100	82	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders : 349976,

Project ID: 2004-0061

Lab Batch #: 779637

Sample: 349976-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 10:45

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.8	100	80	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

Lab Batch #: 779637

Sample: 349969-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	99.7	90	70-135	
o-Terphenyl	38.9	49.9	78	70-135	

Lab Batch #: 779637

Sample: 349969-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 11:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.3	100	71	70-135	
o-Terphenyl	30.8	50.0	62	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Land Farm

Work Order #: 349976

Project ID:

2004-0061

Lab Batch #: 779345

Sample: 779345-1-BKS

Matrix: Solid

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.420	10.0	10.6	106	75-125	

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

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

BRL - Below Reporting Limit



Work Order #: 349976
Analyst: BEV
Lab Batch ID: 779637
Units: mg/kg

Project ID: 2004-0061
Date Analyzed: 10/29/2009
Matrix: Solid

Project Name: Lea Station Land Farm

Date Prepared: 10/28/2009
Batch #: 1
Sample: 541929-1-BKS

BS / BSD Recoveries



BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Units: mg/kg										
	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	998	947	95	980	978	100	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	998	924	93	980	961	98	4	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 349976

Lab Batch #: 779345

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Project ID: 2004-0061

Analyst: LATCOR

QC- Sample ID: 349972-004 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	135	105	242	102	75-125	

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

BRL - Below Reporting Limit



Form 3 - NO/MSD Recoveries

Project Name: Lea Station Land Farm

Work Order #: 349976

Lab Batch ID: 779637

Date Analyzed: 10/30/2009

Reporting Units: mg/kg

Project ID: 2004-0061

QC- Sample ID: 349969-003 S

Date Prepared: 10/28/2009

Batch #: 1 Matrix: Soil

Analyst: BEV

Reporting Units: mg/kg											
TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	858	82	1050	677	64	24	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	1340	1050	1730	37	1050	1410	7	20	70-135	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 349976

Lab Batch #: 779345

Project ID: 2004-0061

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: LATCOR

QC- Sample ID: 349972-004 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	135	131	3	20	

Lab Batch #: 779311

Date Analyzed: 10/28/2009

Date Prepared: 10/28/2009

Analyst: WRU

QC- Sample ID: 349969-005 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	2.01	NC	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

**12600 West I-20 East
Odessa, Texas 79765**

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

Project Manager: Camille Bryant PAGE 01 OF 01

Project Name: Lea Station Land Farm

Company Name	Basin Environmental Service Technologies, LLC
--------------	---

Project #: 2004-0081

Company Address: 2800 Plains Hwy

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88280

PO #: PAA - J. Henry

Telephone No: (575) 441-2244

Fax No: (575) 398-1429

Report Format:

NPDES

Sampler Signature:

cibryant@basin-consulting.com

(if) Frank J. C. / ~~Bauer~~ e-mail:

(lab use only)

ORDER #:

349976

[illegible]

Special Instructions:

Laboratory Comments:

Received by:	Date	Time
Reinhold	1	7

Received by:	Date	Time
--------------	------	------

Sample Containers Intact?
VOCs Free of Headspace?
Labels on containers?

Relinquished by: (11) <i>[Signature]</i>	Date 10/27/09	Time 16:50	Received by:
---	------------------	---------------	--------------

Received by:	Date	Time
--------------	------	------

Custody seals on container(s)
Custody seals on cooler(s)
Sample Hand Delivered
by Sampler/Client Rep. ?

Relinquished by:	Date	Time	Received by: <u>ELOT</u>
------------------	------	------	--------------------------

Received by <i>EJ</i>	Date	Time
<i>11-27-09</i>	<i>11-27-09</i>	<i>11:50</i>

by Courier? UPS DHL
40291453
Temperature Upon Receipt:

Reimbursed by:

65:07 50.72-01

4029143
Temperature Upon Receipt:

200

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Env. / Plains
 Date/ Time: 10-27-09 16:50
 Lab ID #: 349970
 Initials: AL

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	(Yes)	No	3.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

Check all that Apply:

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

Analytical Report 350342

for

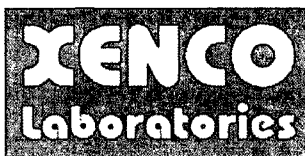
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



05-NOV-09

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

Reference: XENCO Report No: **350342**
Lea Station Landfarm
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 350342. 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. 350342 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 350342



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell A G-1	S	Oct-27-09 12:35		350342-001
VZ Cell A G-2	S	Oct-27-09 12:45		350342-002
VZ Cell A G-3	S	Oct-27-09 13:00		350342-003
VZ Cell A G-4	S	Oct-27-09 13:11		350342-004
VZ Cell A G-5	S	Oct-27-09 13:25		350342-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350342

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779763 Percent Moisture

None

Batch: LBA-779806 BTEX by EPA 8021

None

Batch: LBA-779937 Determination of Inorganic Anions In Water By Ion

None

Batch: LBA-779973 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779973, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 350342-003.



Certificate of Analysis Summary 350342

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am

Report Date: 05-NOV-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350342-001	350342-002	350342-003	350342-004	350342-005
	Field Id: Depth: Matrix: Sampled:	VZ Cell A G-1 SOIL Oct-27-09 12:35	VZ Cell A G-2 SOIL Oct-27-09 12:45	VZ Cell A G-3 SOIL Oct-27-09 13:00	VZ Cell A G-4 SOIL Oct-27-09 13:11	VZ Cell A G-5 SOIL Oct-27-09 13:25
BTEX by EPA 8021	Extracted:	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00
	Analyzed:	Oct-30-09 20:27	Oct-30-09 20:48	Oct-30-09 21:10	Oct-30-09 21:31	Oct-30-09 21:53
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0011	BRL 0.0011
	Toluene	BRL 0.0021	BRL 0.0021	BRL 0.0020	BRL 0.0022	BRL 0.0021
Determination of Inorganic Anions In Water By Ion	Ethylbenzene	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0011	BRL 0.0011
	m,p-Xylenes	BRL 0.0021	BRL 0.0021	BRL 0.0020	BRL 0.0022	BRL 0.0021
	o-Xylene	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0011	BRL 0.0011
Percent Moisture	Xylenes, Total	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0011	BRL 0.0011
	Total BTEX	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0011	BRL 0.0011
Chloride	Extracted:	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39
	Analyzed:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Units/RL:	BRL 5.17	5.75 5.28	BRL 5.11	BRL 5.61	BRL 5.38
TPH by SW8015 Mod	Extracted:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Analyzed:	% RL	% RL	% RL	% RL	% RL
	Units/RL:	3.24 1.00	5.36 1.00	2.12 1.00	10.8 1.00	7.02 1.00
C6-C12 Gasoline Range Hydrocarbons	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Nov-02-09 11:11	Oct-30-09 22:29	Nov-02-09 11:40	Oct-30-09 23:22	Nov-02-09 16:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C12-C28 Diesel Range Hydrocarbons	Extracted:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1
	Analyzed:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1
	Units/RL:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1
Total TPH	Extracted:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1
	Analyzed:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1
	Units/RL:	BRL 15.5	BRL 15.8	BRL 15.3	BRL 16.8	BRL 16.1

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



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

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

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

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

- F** RPD exceeded lab control limits.

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

- U** Analyte was not detected.

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

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

- K** Sample analyzed outside of recommended hold time.

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

- BRL** Below Reporting Limit.

- RL** Reporting Limit

- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350342,

Lab Batch #: 779806

Sample: 542066-1-BKS / BKS

Project ID: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:00

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 542066-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 779806

Sample: 542066-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:05

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350342-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 20:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 779806

Sample: 350342-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 20:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350342,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 350342-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 21:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 779806

Sample: 350342-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 21:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 779806

Sample: 350342-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 21:53

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350350-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 779806

Sample: 350350-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 05:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350342,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 542162-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.7	99	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 779973

Sample: 542162-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	99.6	92	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 779973

Sample: 542162-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	100	96	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 779973

Sample: 350342-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 22:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	44.2	50.0	88	70-135	

Lab Batch #: 779973

Sample: 350342-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 23:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.2	99.8	82	70-135	
o-Terphenyl	43.2	49.9	87	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350342,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 350342-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 11:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	64.3	50.0	129	70-135	

Lab Batch #: 779973

Sample: 350342-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 11:40

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	126	99.9	126	70-135	
o-Terphenyl	69.9	50.0	140	70-135	*

Lab Batch #: 779973

Sample: 350342-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 16:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	111	99.9	111	70-135	
o-Terphenyl	65.3	50.0	131	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350342

Project ID:

2004-00061

Lab Batch #: 779937

Sample: 779937-1-BKS

Matrix: Solid

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.3	103	75-125	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350342

Analyst: ASA

Lab Batch ID: 779806

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Sample: 542066-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg													
Analytes	BTEX by EPA 8021		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene		<0.0010	0.1000	0.0812	81	0.1	0.0802	80	1	70-130	35	
	Toluene		<0.0020	0.1000	0.0791	79	0.1	0.0785	79	1	70-130	35	
	Ethylbenzene		<0.0010	0.1000	0.0822	82	0.1	0.0786	79	4	71-129	35	
	m,p-Xylenes		<0.0020	0.2000	0.1700	85	0.2	0.1707	85	0	70-135	35	
	o-Xylene		<0.0010	0.1000	0.0849	85	0.1	0.0848	85	0	71-133	35	

Analyst: BEV

Lab Batch ID: 779973

Sample: 542162-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH by SW8015 Mod	Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons		<15.0	997	801	80	996	744	75	7	70-135	35		
	C12-C28 Diesel Range Hydrocarbons		<15.0	997	771	77	996	718	72	7	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: Lea Station Landfarm



Work Order #: 350342

Lab Batch #: 779937

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350342-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		<5.17	114	121	106	75-125

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

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350342

Lab Batch ID: 779806

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-005 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/30/2009

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	<0.0010	0.1021	0.0722	71	0.1013	0.0728	72	1	70-130	35	
		Toluene	<0.0020	0.1021	0.0723	71	0.1013	0.0718	71	1	70-130	35	
		Ethylbenzene	<0.0010	0.1021	0.0721	71	0.1013	0.0720	71	0	71-129	35	
		m,p-Xylenes	<0.0020	0.2042	0.1548	76	0.2026	0.1544	76	0	70-135	35	
		o-Xylene	<0.0010	0.1021	0.0779	76	0.1013	0.0773	76	1	71-133	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350342

Lab Batch #: 779937

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.17	<5.17	NC	20	

Lab Batch #: 779763

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.24	2.74	17	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 @ 0855
 Lab ID #: 350342
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / labels	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

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

Analytical Report 350346

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



05-NOV-09

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

Reference: XENCO Report No: **350346**
Lea Station Landfarm
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 350346. 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. 350346 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 350346



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell B G-1	S	Oct-27-09 13:39		350346-001
VZ Cell B G-2	S	Oct-27-09 13:48		350346-002
VZ Cell B G-3	S	Oct-27-09 13:59		350346-003
VZ Cell B G-4	S	Oct-27-09 14:09		350346-004
VZ Cell B G-5	S	Oct-27-09 14:19		350346-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350346

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779763 Percent Moisture

None

Batch: LBA-779806 BTEX by EPA 8021

None

Batch: LBA-779937 Inorganic Anions by EPA 300

None

Batch: LBA-779973 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779973, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 350346-004.



Certificate of Analysis Summary 350346

PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: 2004-00061

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am

Report Date: 05-NOV-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350346-001	350346-002	350346-003	350346-004	350346-005
	Field Id:	VZ Cell B G-1	VZ Cell B G-2	VZ Cell B G-3	VZ Cell B G-4	VZ Cell B G-5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-27-09 13:39	Oct-27-09 13:48	Oct-27-09 13:59	Oct-27-09 14:09	Oct-27-09 14:19
BTX by EPA 8021	Extracted:	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00	Oct-30-09 13:00
	Analyzed:	Oct-30-09 22:14	Oct-30-09 22:35	Oct-30-09 22:57	Oct-30-09 23:18	Oct-30-09 23:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Benzene		BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0020	BRL 0.0020
Toluene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Ethylbenzene		BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0020	BRL 0.0020
m,p-Xylenes		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
o-Xylene		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Xylenes, Total		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Total BTX		BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010	BRL 0.0010
Determination of Inorganic Anions In Water By Ion						
Chloride	Extracted:	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39
	Analyzed:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Units/RL:	10.8 5.15	BRL 5.28	BRL 5.17	BRL 5.11	BRL 5.10
Percent Moisture						
Percent Moisture	Extracted:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Analyzed:	% RL	% RL	% RL	% RL	% RL
	Units/RL:	2.90 1.00	5.25 1.00	3.24 1.00	2.16 1.00	1.89 1.00
TPH by SW8015 Mod						
TPH by SW8015 Mod	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Nov-02-09 12:06	Nov-02-09 12:31	Nov-02-09 12:58	Nov-02-09 13:24	Nov-02-09 13:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		BRL 15.4	BRL 15.8	BRL 15.5	BRL 15.3	BRL 15.2
C12-C28 Diesel Range Hydrocarbons		BRL 15.4	BRL 15.8	BRL 15.5	BRL 15.3	BRL 15.2
C28-C35 Oil Range Hydrocarbons		BRL 15.4	BRL 15.8	BRL 15.5	BRL 15.3	BRL 15.2
Total TPH		BRL 15.4	BRL 15.8	BRL 15.5	BRL 15.3	BRL 15.2

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350346,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 542066-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:00

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 542066-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 779806

Sample: 542066-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:05

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350346-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 22:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 779806

Sample: 350346-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 22:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350346,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 350346-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 22:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 779806

Sample: 350346-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 23:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 779806

Sample: 350346-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/30/09 23:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 779806

Sample: 350350-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 779806

Sample: 350350-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 05:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

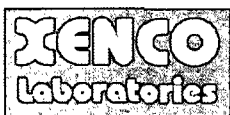
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350346,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 542162-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.7	99	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 779973

Sample: 542162-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	99.6	92	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 779973

Sample: 542162-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	100	96	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 779973

Sample: 350346-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 12:06

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	64.0	50.0	128	70-135	

Lab Batch #: 779973

Sample: 350346-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 12:31

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	66.9	50.0	134	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: Lea Station Landfarm

Work Orders : 350346,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 350346-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 12:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	64.6	50.0	129	70-135	

Lab Batch #: 779973

Sample: 350346-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 13:24

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.8	126	70-135	
o-Terphenyl	71.1	49.9	142	70-135	*

Lab Batch #: 779973

Sample: 350346-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 13:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	64.1	49.8	129	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350346

Project ID:

2004-00061

Lab Batch #: 779937

Sample: 779937-1-BKS

Matrix: Solid

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.3	103	75-125	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350346

Analyst: ASA

Lab Batch ID: 779806

Sample: 542066-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	<0.0010	0.1000	0.0812	81	0.1	0.0802	80	1	70-130	35
	Toluene	<0.0020	0.1000	0.0791	79	0.1	0.0785	79	1	70-130	35
	Ethylbenzene	<0.0010	0.1000	0.0822	82	0.1	0.0786	79	4	71-129	35
	m,p-Xylenes	<0.0020	0.2000	0.1700	85	0.2	0.1707	85	0	70-135	35
	o-Xylene	<0.0010	0.1000	0.0849	85	0.1	0.0848	85	0	71-133	35

Analyst: BEV

Date Prepared: 10/30/2009

Date Analyzed: 10/30/2009

Lab Batch ID: 779973

Sample: 542162-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH by SW8015 Mod											
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<15.0	997	801	80	996	744	75	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	771	77	996	718	72	7	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: Lea Station Landfarm



Work Order #: 350346

Lab Batch #: 779937

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350342-001 S

Batch #: I

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	<5.17	114	121	106	75-125	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

- Below Reporting Limit



Form 3 - MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 350346

Lab Batch ID: 779806

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-005 S Batch #: 1 Matrix: Soil

Date Prepared: 10/30/2009 Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	<0.0010	0.1021	0.0722	71	0.1013	0.0728	72	1	70-130	35
	Toluene	<0.0020	0.1021	0.0723	71	0.1013	0.0718	71	1	70-130	35
	Ethylbenzene	<0.0010	0.1021	0.0721	71	0.1013	0.0720	71	0	71-129	35
	m,p-Xylenes	<0.0020	0.2042	0.1548	76	0.2026	0.1544	76	0	70-135	35
	o-Xylene	<0.0010	0.1021	0.0779	76	0.1013	0.0773	76	1	71-133	35

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not

ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350346

Lab Batch #: 779937

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.17	<5.17	NC	20	

Lab Batch #: 779763

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.24	2.74	17	20	

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

BRL - Below Reporting Limit

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-583-1800
Fax: 432-583-1713

Project Manager: Camille Bryant

Company Name: Basin Environmental Consulting, LLC

Company Address: P.O. Box 381

City/State/Zip: Livingston, NM 88260

Telephone No: (575) 665-7210

Sampler Signature: Camille Bryant

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Fax No: (505) 396-1429

e-mail: cibryant@basin-consulting.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 350340

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW - Drinking water SL - Sludge	CW - Groundwater S - Soil/Soil	NP - Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg S	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	NORM	Chlorides 300	RUSH TAT (Pre-Schedule) 24.
01	VZ Cell B G-1			10/27/09	1339		1	X											X	X							X				X
02	VZ Cell B G-2			10/27/09	1348		1	X											X	X							X				X
03	VZ Cell B G-3			10/27/09	1359		1	X											X	X							X				X
04	VZ Cell B G-4			10/27/09	1409		1	X											X	X							X				X
05	VZ Cell B G-5			10/27/09	1419		1	X											X	X							X				X

Special Instructions:

Laboratory Comments:

Requisitioned by: <u>Camille Bryant</u>	Date: <u>10/29/09</u>	Time: <u>1500</u>	Received by: <u>J. Henry</u>	Date: <u>10/29/09</u>	Time: <u>1500</u>
Requisitioned by: <u>J. Henry</u>	Date: <u>10/30/09</u>	Time: <u>0855</u>	Received by: <u>J. Henry</u>	Date: <u>10/30/09</u>	Time: <u>0855</u>
Requisitioned by: <u>J. Henry</u>	Date: <u>10/30/09</u>	Time: <u>0855</u>	Received by: <u>J. Henry</u>	Date: <u>10/30/09</u>	Time: <u>0855</u>

☒ Sample Free of Headspace?
☒ Labels are attached?
☒ Custody seals on container(s) / (check)
☒ Sample Hand Delivered
☒ by Sampler/Client Rep?
☐ by Courier?
☐ UPS
☐ DHL
☐ FedEx
☐ Lone Star
 Temperature Upon Receipt: 1.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350346
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	Yes	No	6.6 °C
#2	Shipping container in good condition?	Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present
#4	Custody Seals intact on sample bottles/ container? / lab 15	Yes	No	Not Present
#5	Chain of Custody present?	Yes	No	
#6	Sample instructions complete of Chain of Custody?	Yes	No	
#7	Chain of Custody signed when relinquished/ received?	Yes	No	
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No	
#11	Containers supplied by ELOT?	Yes	No	
#12	Samples in proper container/ bottle?	Yes	No	See Below
#13	Samples properly preserved?	Yes	No	See Below
#14	Sample bottles intact?	Yes	No	
#15	Preservations documented on Chain of Custody?	Yes	No	
#16	Containers documented on Chain of Custody?	Yes	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18	All samples received within sufficient hold time?	Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	Not Applicable
#20	VOC samples have zero headspace?	Yes	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 350348
for
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



05-NOV-09

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

Reference: XENCO Report No: **350348**
Lea Station Landfarm
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 350348. 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. 350348 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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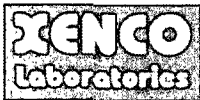
Sample Cross Reference 350348



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell C G-1	S	Oct-27-09 14:29		350348-001
VZ Cell C G-2	S	Oct-27-09 14:39		350348-002
VZ Cell C G-3	S	Oct-27-09 14:49		350348-003
VZ Cell C G-4	S	Oct-27-09 14:59		350348-004
VZ Cell C G-5	S	Oct-27-09 15:09		350348-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350348

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779763 Percent Moisture

None

Batch: LBA-779806 BTEX by EPA 8021

None

Batch: LBA-779937 Inorganic Anions by EPA 300

None

Batch: LBA-779973 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779973, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 350348-003.



Certificate of Analysis Summary 350348
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350348-001	350348-002	350348-003	350348-004	350348-005
	Field Id: Depth: Matrix: Sampled:	VZ Cell C G-1 SOIL Oat-27-09 14:29	VZ Cell C G-2 SOIL Oat-27-09 14:39	VZ Cell C G-3 SOIL Oat-27-09 14:49	VZ Cell C G-4 SOIL Oat-27-09 14:59	VZ Cell C G-5 SOIL Oat-27-09 15:09
BTEX by EPA 8021	Extracted:	Oat-30-09 13:00	Oat-30-09 13:00	Oat-30-09 13:00	Oat-30-09 13:00	Oat-30-09 13:00
	Analyzed:	Oat-31-09 00:43	Oat-31-09 01:05	Oat-31-09 01:26	Oat-31-09 01:47	Oat-31-09 02:09
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	ND 0.0010	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011
	Toluene	ND 0.0021	ND 0.0023	ND 0.0022	ND 0.0020	ND 0.0022
Ethylbenzene		ND 0.0010	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011
	m,p-Xylenes	ND 0.0021	ND 0.0023	ND 0.0022	ND 0.0020	ND 0.0022
	o-Xylene	ND 0.0010	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011
Xylenes, Total		ND 0.0010	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011
	Total BTEX	ND 0.0010	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011
Determination of Inorganic Anions In Water By Ion	Extracted:					
	Analyzed:	Oat-30-09 16:39	Oat-30-09 16:39	Oat-30-09 16:39	Oat-30-09 16:39	Oat-30-09 16:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 5.23	ND 5.79	ND 5.48	5.17 5.05	6.72 5.44
Percent Moisture	Extracted:					
	Analyzed:	Oat-30-09 17:00	Oat-30-09 17:00	Oat-30-09 17:00	Oat-30-09 17:00	Oat-30-09 17:00
	Units/RL:	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.42 1.00	13.6 1.00	8.79 1.00	ND 1.00	8.09 1.00
TPH by SW8015 Mod	Extracted:	Oat-30-09 14:45	Oat-30-09 14:45	Oat-30-09 14:45	Oat-30-09 14:45	Oat-30-09 14:45
	Analyzed:	Nov-02-09 14:15	Oat-31-09 03:24	Nov-03-09 09:39	Oat-31-09 04:18	Oat-31-09 04:44
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 15.7	ND 17.4	ND 16.4	ND 15.1	ND 16.3
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 17.4	ND 16.4	ND 15.1	ND 16.3
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 17.4	ND 16.4	ND 15.1	ND 16.3
Total TPH		ND 15.7	ND 17.4	ND 16.4	ND 15.1	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 responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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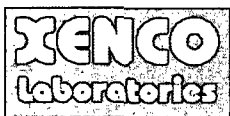
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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350348,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 542066-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:00

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 542066-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 779806

Sample: 542066-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:05

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350348-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 00:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 779806

Sample: 350348-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 01:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350348,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 350348-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 01:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 779806

Sample: 350348-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 01:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 779806

Sample: 350348-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 02:09

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350350-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 779806

Sample: 350350-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 05:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

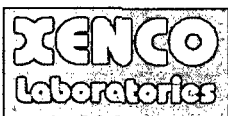
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350348,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 542162-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	99.2	99.7	99	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 779973

Sample: 542162-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	91.7	99.6	92	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 779973

Sample: 542162-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.6	100	96	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 779973

Sample: 350348-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 03:24

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.3	100	88	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 779973

Sample: 350348-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:18

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	99.6	99.5	100	70-135	
o-Terphenyl	49.5	49.8	99	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350348,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 350348-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	100	86	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

Lab Batch #: 779973

Sample: 350348-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 14:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	67.2	50.0	134	70-135	

Lab Batch #: 779973

Sample: 350348-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 09:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	99.5	122	70-135	
o-Terphenyl	70.1	49.8	141	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350348

Project ID:

2004-00061

Lab Batch #: 779937

Sample: 779937-1-BKS

Matrix: Solid

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	11.0	11.3	103	75-125	

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

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

RL - Below Reporting Limit



Project Name: Lea Station Landfarm

Work Order #: 350348

Analyst: ASA

Lab Batch ID: 779806

Sample: 542066-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	BTEX by EPA 8021												
	Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	ND	0.1000	0.0812	81	0.1	0.0802	80	1	70-130	35	
		Toluene	ND	0.1000	0.0791	79	0.1	0.0785	79	1	70-130	35	
		Ethylbenzene	ND	0.1000	0.0822	82	0.1	0.0786	79	4	71-129	35	
		m,p-Xylenes	ND	0.2000	0.1700	85	0.2	0.1707	85	0	70-135	35	
		o-Xylene	ND	0.1000	0.0849	85	0.1	0.0848	85	0	71-133	35	

Analyst: BEV

Lab Batch ID: 779973

Sample: 542162-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	997	801	80	996	744	75	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	997	771	77	996	718	72	7	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: Lea Station Landfarm



Work Order #: 350348

Lab Batch #: 779937

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350342-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	114	121	106	75-125	

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

BRL - Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350348

Lab Batch ID: 779806

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-005 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/30/2009 Analyst: ASA

Reporting Units: mg/kg											
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Analytes	BTEx by EPA 8021										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	ND	0.1021	0.0722	71	0.1013	0.0728	72	1	70-130	35
	Toluene	ND	0.1021	0.0723	71	0.1013	0.0718	71	1	70-130	35
	Ethylbenzene	ND	0.1021	0.0721	71	0.1013	0.0720	71	0	71-129	35
	m,p-Xylenes	ND	0.2042	0.1548	76	0.2026	0.1544	76	0	70-135	35
	o-Xylene	ND	0.1021	0.0779	76	0.1013	0.0773	76	1	71-133	35

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350348

Lab Batch #: 779937

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	

Lab Batch #: 779763

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.24	2.74	17	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 330348
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / <u>labels</u>	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 350350

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



05-NOV-09

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

Reference: XENCO Report No: **350350**
Lea Station Landfarm
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 350350. 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. 350350 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 350350



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id

Matrix

Date Collected

Sample Depth

Lab Sample Id

VZ Cell D G-1

S

Oct-27-09 15:19

350350-001

VZ Cell D G-2

S

Oct-27-09 15:29

350350-002

VZ Cell D G-3

S

Oct-27-09 15:39

350350-003

VZ Cell D G-4

S

Oct-27-09 15:49

350350-004

VZ Cell D G-5

S

Oct-27-09 15:59

350350-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350350

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779763 Percent Moisture

None

Batch: LBA-779806 BTEX by EPA 8021

None

Batch: LBA-779937 Inorganic Anions by EPA 300

None

Batch: LBA-779973 TPH by SW8015 Mod

SW8015MOD_NM

Batch 779973, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 350350-005.

Batch: LBA-780097 BTEX by EPA 8021

SW8021BM

Batch 780097, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 350350-002, -003.

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



Certificate of Analytical Summary 350350
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350350-001	350350-002	350350-003	350350-004	350350-005
	Field Id: Depth: Matrix: Sampled:	VZ Cell D G-1 SOIL Oct-27-09 15:19	VZ Cell D G-2 SOIL Oct-27-09 15:29	VZ Cell D G-3 SOIL Oct-27-09 15:39	VZ Cell D G-4 SOIL Oct-27-09 15:49	VZ Cell D G-5 SOIL Oct-27-09 15:59
BTEX by EPA 8021	Extracted:	Oct-30-09 13:00	Nov-02-09 15:00	Nov-02-09 15:00	Oct-30-09 13:00	Oct-30-09 13:00
	Analyzed:	Oct-31-09 02:30	Nov-03-09 01:46	Nov-03-09 02:07	Oct-31-09 02:51	Oct-31-09 03:12
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	BRL 0.0010	BRL 0.0012	BRL 0.0011	BRL 0.0011	BRL 0.0010
	Toluene	BRL 0.0021	BRL 0.0024	BRL 0.0021	BRL 0.0022	BRL 0.0020
Determination of Inorganic Anions In Water By Ion	Ethylbenzene	BRL 0.0010	BRL 0.0012	BRL 0.0011	BRL 0.0011	BRL 0.0010
	m,p-Xylenes	BRL 0.0021	BRL 0.0024	BRL 0.0021	BRL 0.0022	BRL 0.0020
	o-Xylene	BRL 0.0010	BRL 0.0012	BRL 0.0011	BRL 0.0011	BRL 0.0010
Percent Moisture	Xylenes, Total	BRL 0.0010	BRL 0.0012	BRL 0.0011	BRL 0.0011	BRL 0.0010
	Total BTEX	BRL 0.0010	BRL 0.0012	BRL 0.0011	BRL 0.0011	BRL 0.0010
TPH by SW8015 Mod	Extracted:	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39	Oct-30-09 16:39
	Analyzed:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Units/RL:	BRL 5.16	BRL 5.89	BRL 5.31	BRL 5.55	BRL 5.11
Percent Moisture	Extracted:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Analyzed:	% RL	% RL	% RL	% RL	% RL
Total TPH	Units/RL:	3.17 1.00	15.1 1.00	5.79 1.00	9.93 1.00	2.24 1.00
	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Nov-02-09 14:41	Oct-31-09 05:38	Oct-31-09 06:05	Oct-31-09 06:32	Nov-02-09 15:06
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	C6-C12 Gasoline Range Hydrocarbons	BRL 15.5	BRL 17.7	BRL 15.9	BRL 16.7	BRL 15.3
Total TPH	C12-C28 Diesel Range Hydrocarbons	BRL 15.5	BRL 17.7	BRL 15.9	BRL 16.7	BRL 15.3
	C28-C35 Oil Range Hydrocarbons	BRL 15.5	BRL 17.7	BRL 15.9	BRL 16.7	BRL 15.3
Total TPH	Units/RL:	BRL 15.5	BRL 17.7	BRL 15.9	BRL 16.7	BRL 15.3
	Total TPH	BRL 15.5	BRL 17.7	BRL 15.9	BRL 16.7	BRL 15.3

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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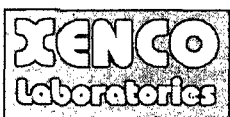
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Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350350,

Lab Batch #: 779806

Sample: 542066-1-BKS / BKS

Project ID: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:00

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 542066-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 19:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 779806

Sample: 542066-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:05

SURROGATE RECOVERY STUDY

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

Lab Batch #: 779806

Sample: 350350-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 02:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 779806

Sample: 350350-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 02:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350350,

Project ID: 2004-00061

Lab Batch #: 779806

Sample: 350350-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 03:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 779806

Sample: 350350-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 04:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 779806

Sample: 350350-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 05:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 780097

Sample: 542219-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/09 23:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 00:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350350,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 542219-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 01:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 780097

Sample: 350350-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 01:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350350-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 02:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 780097

Sample: 350350-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350350-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350350,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 542162-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 20:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	99.2	99.7	99	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 779973

Sample: 542162-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	91.7	99.6	92	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 779973

Sample: 542162-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/30/09 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.6	100	96	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 779973

Sample: 350350-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 05:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.9	100	89	70-135	
o-Terphenyl	45.5	50.0	91	70-135	

Lab Batch #: 779973

Sample: 350350-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 06:05

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

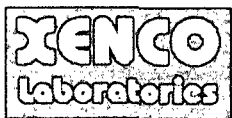
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350350,

Project ID: 2004-00061

Lab Batch #: 779973

Sample: 350350-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 06:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 779973

Sample: 350350-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 14:41

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	65.1	50.0	130	70-135	

Lab Batch #: 779973

Sample: 350350-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/02/09 15:06

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	74.2	50.0	148	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350350

Project ID: 2004-00061

Lab Batch #: 779937

Sample: 779937-1-BKS

Matrix: Solid

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.3	103	75-125	

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

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

L - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350350

Analyst: ASA

Lab Batch ID: 779806

Sample: 542066-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	<0.0010	0.1000	0.0812	81	0.1	0.0802	80	1	70-130	35
	Toluene	<0.0020	0.1000	0.0791	79	0.1	0.0785	79	1	70-130	35
	Ethylbenzene	<0.0010	0.1000	0.0822	82	0.1	0.0786	79	4	71-129	35
	m,p-Xylenes	<0.0020	0.2000	0.1700	85	0.2	0.1707	85	0	70-135	35
	o-Xylene	<0.0010	0.1000	0.0849	85	0.1	0.0848	85	0	71-133	35

Analyst: ASA

Lab Batch ID: 780097

Sample: 542219-1-BKS

Date Prepared: 11/02/2009

Batch #: 1

Date Analyzed: 11/02/2009

Matrix: Solid

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
BTEX by EPA 8021											
Analytes											
	Benzene	<0.0010	0.1000	0.0928	93	0.1	0.0935	94	1	70-130	35
	Toluene	<0.0020	0.1000	0.0899	90	0.1	0.0914	91	2	70-130	35
	Ethylbenzene	<0.0010	0.1000	0.0910	91	0.1	0.0920	92	1	71-129	35
	m,p-Xylenes	<0.0020	0.2000	0.1982	99	0.2	0.2010	101	1	70-135	35
	o-Xylene	<0.0010	0.1000	0.0986	99	0.1	0.0996	100	1	71-133	35

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

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350350

Analyst: BEV

Lab Batch ID: 779973

Sample: 542162-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
TPH by SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes		C6-C12 Gasoline Range Hydrocarbons	<15.0	997	801	80	996	744	75	7	70-135	35	
		C12-C28 Diesel Range Hydrocarbons	<15.0	997	771	77	996	718	72	7	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: Lea Station Landfarm

Work Order #: 350350

Lab Batch #: 779937

Date Analyzed: 10/30/2009

QC- Sample ID: 350342-001 S

Reporting Units: mg/kg

Date Prepared: 10/30/2009

Batch #: 1

Project ID: 2004-00061

Analyst: LATCOR

Matrix: Soil

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		<5.17	114	121	106	75-125

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

BRL - Below Reporting Limit



Form 3 - NO₂/MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350350

Lab Batch ID: 779806

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-005 S

Batch #: 1 Matrix: Soil

Date Prepared: 10/30/2009

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0010	0.1021	0.0722	71	0.1013	0.0728	72	1	70-130	35	
Toluene	<0.0020	0.1021	0.0723	71	0.1013	0.0718	71	1	70-130	35	
Ethylbenzene	<0.0010	0.1021	0.0721	71	0.1013	0.0720	71	0	71-129	35	
m,p-Xylenes	<0.0020	0.2042	0.1548	76	0.2026	0.1544	76	0	70-135	35	
o-Xylene	<0.0010	0.1021	0.0779	76	0.1013	0.0773	76	1	71-133	35	

Lab Batch ID: 780097

Date Analyzed: 11/03/2009

Reporting Units: mg/kg

QC- Sample ID: 350350-003 S

Batch #: 1 Matrix: Soil

Date Prepared: 11/02/2009

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0011	0.1061	0.0555	52	0.1061	0.0568	54	2	70-130	35	X
Toluene	<0.0021	0.1061	0.0567	53	0.1061	0.0572	54	1	70-130	35	X
Ethylbenzene	<0.0011	0.1061	0.0581	55	0.1061	0.0585	55	1	71-129	35	X
m,p-Xylenes	<0.0021	0.2123	0.1259	59	0.2123	0.1269	60	1	70-135	35	X
o-Xylene	<0.0011	0.1061	0.0631	59	0.1061	0.0629	59	0	71-133	35	X

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350350

Lab Batch #: 779937

Project ID: 2004-00061

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: LATCOR

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.17	<5.17	NC	20	

Lab Batch #: 779763

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350342-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.24	2.74	17	20	

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

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350350
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / <u>labels</u>	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 350351

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



05-NOV-09

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

Reference: XENCO Report No: **350351**
Lea Station Landfarm
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 350351. 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. 350351 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 350351



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id

Matrix

Date Collected

Sample Depth

Lab Sample Id

VZ Cell E G-1

S

Oct-27-09 16:09

350351-001

VZ Cell E G-2

S

Oct-27-09 16:19

350351-002

VZ Cell E G-3

S

Oct-28-09 07:10

350351-003

VZ Cell E G-4

S

Oct-28-09 07:20

350351-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350351

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779764 Percent Moisture

None

Batch: LBA-779820 TPH by SW8015 Mod

None

Batch: LBA-779943 Determination of Inorganic Anions In Water By Ion

None

Batch: LBA-780097 BTEX by EPA 8021

SW8021BM

Batch 780097, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 350351-003, -001, -004, -002.

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



Certificate of Analytical Summary 350351
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350351-001	350351-002	350351-003	350351-004
	Field Id: Depth: Matrix: Sampled:	VZ Cell E G-1 SOIL Oct-27-09 16:09	VZ Cell E G-2 SOIL Oct-27-09 16:19	VZ Cell E G-3 SOIL Oct-28-09 07:10	VZ Cell E G-4 SOIL Oct-28-09 07:20
BTEX by EPA 8021	Extracted:	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00
	Analyzed:	Nov-03-09 02:28	Nov-03-09 02:50	Nov-03-09 03:11	Nov-03-09 03:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
Determination of Inorganic Anions In Water By Ion	Benzene	BRL 0.0023	BRL 0.0023	BRL 0.0021	BRL 0.0020
	Toluene	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
	Ethylbenzene	BRL 0.0023	BRL 0.0023	BRL 0.0021	BRL 0.0020
	m,p-Xylenes	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
	o-Xylene	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
Percent Moisture	Xylenes, Total	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
	Total BTEX	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0010
TPH by SW8015 Mod	Extracted:	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56
	Analyzed:	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 5.63	BRL 5.63	5.26 5.26	BRL 5.06
Total TPH	Extracted:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Analyzed:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Units/RL:	% RL	% RL	% RL	% RL
		11.2 1.00	11.2 1.00	5.01 1.00	1.24 1.00
Total TPH	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Oct-31-09 12:14	Oct-31-09 12:39	Oct-31-09 13:04	Oct-31-09 13:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 16.9	BRL 16.9	BRL 15.7	BRL 15.1
Total TPH	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Oct-31-09 12:14	Oct-31-09 12:39	Oct-31-09 13:04	Oct-31-09 13:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 16.9	BRL 16.9	BRL 15.7	BRL 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 represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350351,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 542219-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/09 23:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 00:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 01:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 780097

Sample: 350351-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 02:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 780097

Sample: 350351-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 02:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350351,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 350351-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 03:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 780097

Sample: 350351-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 03:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 780097

Sample: 350350-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350350-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 779820

Sample: 542075-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350351,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 542075-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 779820

Sample: 542075-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 11:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 779820

Sample: 350351-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 12:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	100	98	70-135	
o-Terphenyl	51.4	50.0	103	70-135	

Lab Batch #: 779820

Sample: 350351-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 12:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	100	99	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 779820

Sample: 350351-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 13:04

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	99.5	97	70-135	
o-Terphenyl	49.6	49.8	100	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350351,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 350351-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 13:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	99.7	98	70-135	
o-Terphenyl	48.2	49.9	97	70-135	

Lab Batch #: 779820

Sample: 350365-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 20:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 779820

Sample: 350365-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 21:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350351

Project ID:

2004-00061

Lab Batch #: 779943

Sample: 779943-1-BKS

Matrix: Solid

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.1	101	75-125	

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

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

BRL - Below Reporting Limit



Project Name: Lea Station Landfarm

Work Order #: 350351

Analyst: ASA

Lab Batch ID: 780097

Date Prepared: 11/02/2009

Batch #: 1

Sample: 542219-1-BKS

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
BTEX by EPA 8021		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Benzene		<0.0010	0.1000	0.0928	93	0.1	0.0935	94	1	70-130	35	
Toluene		<0.0020	0.1000	0.0899	90	0.1	0.0914	91	2	70-130	35	
Ethylbenzene		<0.0010	0.1000	0.0910	91	0.1	0.0920	92	1	71-129	35	
m,p-Xylenes		<0.0020	0.2000	0.1982	99	0.2	0.2010	101	1	70-135	35	
o-Xylene		<0.0010	0.1000	0.0986	99	0.1	0.0996	100	1	71-133	35	

Analyst: BEV

Lab Batch ID: 779820

Sample: 542075-1-BKS

Date Prepared: 10/30/2009

Batch #: 1

Date Analyzed: 10/31/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
TPH by SW8015 Mod		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
C6-C12 Gasoline Range Hydrocarbons		<15.0	997	887	89	998	861	86	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons		<15.0	997	835	84	998	809	81	3	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Landfarm



Work Order #: 350351

Lab Batch #: 779943

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350351-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.63	124	129	104	75-125	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - NELAP/MSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 350351

Project ID: 2004-00061

Lab Batch ID: 780097

QC- Sample ID: 350350-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 11/03/2009

Date Prepared: 11/02/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	<0.0011	0.1061	0.0555	52	0.1061	0.0568	54	2	70-130	35	X
		Toluene	<0.0021	0.1061	0.0567	53	0.1061	0.0572	54	1	70-130	35	X
		Ethylbenzene	<0.0011	0.1061	0.0581	55	0.1061	0.0585	55	1	71-129	35	X
		m,p-Xylenes	<0.0021	0.2123	0.1259	59	0.2123	0.1269	60	1	70-135	35	X
		o-Xylene	<0.0011	0.1061	0.0631	59	0.1061	0.0629	59	0	71-133	35	X

Lab Batch ID: 779820

QC- Sample ID: 350365-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2009

Date Prepared: 10/30/2009

Analyst: BEV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons	<17.8	1180	1060	90	1180	969	82	9	70-135	35		
	C12-C28 Diesel Range Hydrocarbons	<17.8	1180	1030	87	1180	940	80	9	70-135	35		

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350351

Lab Batch #: 779943

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.63	<5.63	NC	20	

Lab Batch #: 779764

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	11.2	10.8	3	20	

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

Project Manager: Camille Bryant

Company Name: Basin Environmental Consulting, LLC

Company Address: P.O. Box 381

City/State/Zip: Lovington, NM 88260

Telephone No: (505) 605-7210

Sampler Signature: Camille Bryant

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Fax No: (505) 396-1428

e-mail: cibryant@basin-consulting.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 350351

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Matrix	Preservation & # of Containers	Other (Specify)	DW - Drinking Water SL - SUDG	GW - Groundwater S - Soil/Soil	NP - Non-Portable Specify OTH	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	VZ Cell E G-1			10/27/09	1609		1	X						X	X							X				X
02	VZ Cell E G-2			10/27/09	1619		1	X						X	X							X				X
03	VZ Cell E G-3			10/28/09	0710		1	X						X	X							X				X
04	VZ Cell E G-4			10/28/09	0720		1	X						X	X							X				X

Special Instructions:

Relinquished by: Camille Bryant

Date: 10/29/09 1500

Relinquished by: Camille Bryant

Date: 10/30/09 0855

Relinquished by: Camille Bryant

Date: 10/30/09 0855

Relinquished by: Camille Bryant

Date: 10/30/09 0855

Received by: Camille Bryant

Date: 10/29/09 1500

Received by: Camille Bryant

Date: 10/30/09 0855

Received by: Camille Bryant

Date: 10/30/09 0855

Received by: Camille Bryant

Date: 10/30/09 0855

Laboratory Comments:

VOCs Free of Headspace?

Custody seals on container(s) / kbs

Sample Hand Delivered

by Sampler/Client Rep.?

by Courier?

Temperature Upon Receipt:

1.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350351
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / labels	<u>Yes</u>	No	<u>Not Present</u>
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 350353

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



05-NOV-09

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

Reference: XENCO Report No: **350353**
Lea Station Landfarm
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 350353. 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. 350353 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 350353



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell F G-1	S	Oct-28-09 07:40		350353-001
VZ Cell F G-2	S	Oct-28-09 07:50		350353-002
VZ Cell F G-3	S	Oct-28-09 08:00		350353-003
VZ Cell F G-4	S	Oct-28-09 08:10		350353-004
VZ Cell F G-5	S	Oct-28-09 08:25		350353-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350353

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779764 Percent Moisture

None

Batch: LBA-779820 TPH by SW8015 Mod

None

Batch: LBA-779943 Inorganic Anions by EPA 300

None

Batch: LBA-780097 BTEX by EPA 8021

SW8021BM

Batch 780097, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 350353-003, -005, -004, -001, -002.

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



Certificate of Analysis Summary 350353
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350353-001	350353-002	350353-003	350353-004	350353-005
	Field Id:	VZ Cell F G-1	VZ Cell F G-2	VZ Cell F G-3	VZ Cell F G-4	VZ Cell F G-5
	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-28-09 07:40	Oct-28-09 07:50	Oct-28-09 08:00	Oct-28-09 08:10	Oct-28-09 08:25
BTEX by EPA 8021	Extracted:	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00
	Analyzed:	Nov-03-09 03:54	Nov-03-09 04:16	Nov-03-09 04:37	Nov-03-09 04:58	Nov-03-09 06:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
Toluene		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
Ethylbenzene		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
m,p-Xylenes		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
o-Xylene		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
Xylenes, Total		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
Total BTEX		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0020	BRL 0.0020	BRL 0.0021	BRL 0.0021	BRL 0.0021
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
		BRL 0.0010	BRL 0.0010	BRL 0.0011	BRL 0.0010	BRL 0.0010
Determination of Inorganic Anions In Water By Ion	Extracted:					
	Analyzed:	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		7.36 5.04	BRL 5.09	BRL 5.27	BRL 5.20	BRL 5.23
Percent Moisture	Extracted:					
	Analyzed:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
	Units/RL:	% RL	% RL	% RL	% RL	% RL
		BRL 1.00	1.76 1.00	5.08 1.00	3.92 1.00	4.31 1.00
TPH by SW8015 Mod	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
	Analyzed:	Oct-31-09 13:54	Oct-31-09 14:18	Oct-31-09 14:43	Oct-31-09 15:08	Oct-31-09 15:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
C6-C12 Gasoline Range Hydrocarbons		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
C12-C28 Diesel Range Hydrocarbons		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
C28-C35 Oil Range Hydrocarbons		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
Total TPH		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7
		BRL 15.1	BRL 15.3	BRL 15.8	BRL 15.6	BRL 15.7

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350353,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 542219-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/09 23:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 00:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 01:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 780097

Sample: 350353-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 03:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 780097

Sample: 350353-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 04:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350353,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 350353-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 04:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 780097

Sample: 350353-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 04:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 350353-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 06:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 350350-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350350-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350353,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 542075-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

Lab Batch #: 779820

Sample: 542075-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 779820

Sample: 542075-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 11:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 779820

Sample: 350353-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 13:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	100	94	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

Lab Batch #: 779820

Sample: 350353-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 14:18

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	202	200	101	70-135	
o-Terphenyl	102	100	102	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350353,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 350353-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 14:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	99.7	93	70-135	
o-Terphenyl	48.0	49.9	96	70-135	

Lab Batch #: 779820

Sample: 350353-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 15:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	100	94	70-135	
o-Terphenyl	48.1	50.0	96	70-135	

Lab Batch #: 779820

Sample: 350353-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 15:33

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 779820

Sample: 350365-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 20:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 779820

Sample: 350365-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 21:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350353

Project ID:

2004-00061

Lab Batch #: 779943

Sample: 779943-1-BKS

Matrix: Solid

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.1	101	75-125	

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

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

- Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350353

Analyst: ASA

Date Prepared: 11/02/2009

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Lab Batch ID: 780097

Sample: 542219-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Analytes	BTEX by EPA 8021											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	Benzene	<0.0010	0.1000	0.0928	93	0.1	0.0935	94	1	70-130	35	
	Toluene	<0.0020	0.1000	0.0899	90	0.1	0.0914	91	2	70-130	35	
	Ethylbenzene	<0.0010	0.1000	0.0910	91	0.1	0.0920	92	1	71-129	35	
	m,p-Xylenes	<0.0020	0.2000	0.1982	99	0.2	0.2010	101	1	70-135	35	
	o-Xylene	<0.0010	0.1000	0.0986	99	0.1	0.0996	100	1	71-133	35	

Analyst: BEV

Date Prepared: 10/30/2009

Date Analyzed: 10/31/2009

Lab Batch ID: 779820

Sample: 542075-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	C6-C12 Gasoline Range Hydrocarbons	<15.0	997	887	89	998	861	86	3	70-135	35
	C12-C28 Diesel Range Hydrocarbons	<15.0	997	835	84	998	809	81	3	70-135	35

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

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / (E)$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Lea Station Landfarm



Work Order #: 350353

Lab Batch #: 779943

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350351-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300		MATRIX / MATRIX SPIKE RECOVERY STUDY				
Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R
Chloride		<5.63	124	129	104	75-125

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

Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350353

Lab Batch ID: 780097

Date Analyzed: 11/03/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-003 S

Date Prepared: 11/02/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
		Benzene	<0.0011	0.1061	0.0555	52	0.1061	0.0568	54	2	70-130	35	X
		Toluene	<0.0021	0.1061	0.0567	53	0.1061	0.0572	54	1	70-130	35	X
		Ethylbenzene	<0.0011	0.1061	0.0581	55	0.1061	0.0585	55	1	71-129	35	X
		m,p-Xylenes	<0.0021	0.2123	0.1259	59	0.2123	0.1269	60	1	70-135	35	X
		o-Xylene	<0.0011	0.1061	0.0631	59	0.1061	0.0629	59	0	71-133	35	X

Lab Batch ID: 779820

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

QC- Sample ID: 350365-003 S

Date Prepared: 10/30/2009

Batch #: 1 Matrix: Soil

Analyst: BEV

Reporting Units: mg/kg												
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons	<17.8	1180	1060	90	1180	969	82	9	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	<17.8	1180	1030	87	1180	940	80	9	70-135	35	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$

Relative Percent Difference $RPD = 200 \times (C-F)/(C+E)$

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350353

Lab Batch #: 779943

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.63	<5.63	NC	20	

Lab Batch #: 779764

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	11.2	10.8	3	20	

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

**12600 West I-20 East
Odessa, Texas 79765**

Phone: 432-583-1800
Fax: 432-563-1713

Project Manager:

Camille Bryant

Project Name: Lea Station Landfarm

Company Name

Basin Environmental Consulting, LLC

Project #: 2004-00061

Company Address:

P.O. Box 381

Project Loc: Lea County, NM

City/State/Zip:

Lovington, NM 88260

PQ #: PAA - J. Henry

Telephone No.:

(575) 805-7210

Fax No.:

Sampler Signature:

e-mail:

cibryant@basin-consulting.com

(tab use only)

350353

[illegible]

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350353
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	1.6 °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / labels	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 350362

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



05-NOV-09

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

Reference: XENCO Report No: **350362**
Lea Station Landfarm
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 350362. 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. 350362 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 350362



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id

Matrix

Date Collected

Sample Depth

Lab Sample Id

VZ Cell G G-1

S

Oct-28-09 08:40

350362-001

VZ Cell G G-2

S

Oct-28-09 08:55

350362-002

VZ Cell G G-3

S

Oct-28-09 09:10

350362-003

VZ Cell G G-4

S

Oct-28-09 09:25

350362-004

VZ Cell G G-5

S

Oct-28-09 09:40

350362-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061
Work Order Number: 350362

Report Date: 05-NOV-09
Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779764 Percent Moisture
None

Batch: LBA-779820 TPH by SW8015 Mod
None

Batch: LBA-779943 Inorganic Anions by EPA 300
None

Batch: LBA-780097 BTEX by EPA 8021
SW8021BM

Batch 780097, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 350362-004, -002, -005, -001, -003.
The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-780329 TPH by SW8015 Mod
None



Certificate of Analytical Summary 350362
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

<i>Analysis Requested</i>		<i>Lab Id:</i>	<i>Field Id:</i>	<i>Depth:</i>	<i>Matrix:</i>	<i>Sampled:</i>	350362-001	350362-002	350362-003	350362-004	350362-005
					SOIL	Oct-28-09 08:40	VZ Cell G G-1	SOIL	Oct-28-09 09:10	SOIL	Oct-28-09 09:40
BTEX by EPA 8021		<i>Extracted:</i>	Nov-02-09 15:00		Nov-02-09 15:00		Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00
		<i>Analyzed:</i>	Nov-03-09 06:23		Nov-03-09 06:44		Nov-03-09 07:05	Nov-03-09 07:27	Nov-03-09 07:48	Nov-03-09 07:48	Nov-03-09 07:48
		<i>Units/RL:</i>	mg/kg RL		mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene			BRL 0.0011		BRL 0.0011		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011
Toluene			BRL 0.0022		BRL 0.0022		BRL 0.0022	BRL 0.0022	BRL 0.0022	BRL 0.0022	BRL 0.0022
Ethylbenzene			BRL 0.0011		BRL 0.0011		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011
m,p-Xylenes			BRL 0.0022		BRL 0.0022		BRL 0.0022	BRL 0.0022	BRL 0.0022	BRL 0.0022	BRL 0.0022
o-Xylene			BRL 0.0011		BRL 0.0011		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011
Xylenes, Total			BRL 0.0011		BRL 0.0011		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011
Total BTEX			BRL 0.0011		BRL 0.0011		BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011	BRL 0.0011
Determination of Inorganic Anions In Water By Ion		<i>Extracted:</i>									
		<i>Analyzed:</i>	Nov-02-09 15:56		Nov-02-09 15:56		Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56
		<i>Units/RL:</i>	mg/kg RL		mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride			337 11.0		29.3 5.57		123 11.2	178 10.8	19.8 5.41		
Percent Moisture		<i>Extracted:</i>									
		<i>Analyzed:</i>	Oct-30-09 17:00		Oct-30-09 17:00		Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00
		<i>Units/RL:</i>	% RL		% RL		% RL	% RL	% RL	% RL	% RL
Percent Moisture			8.79 1.00		10.2 1.00		10.6 1.00	7.52 1.00	7.66 1.00		
TPH by SW8015 Mod		<i>Extracted:</i>	Oct-30-09 14:45		Nov-04-09 10:45		Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45
		<i>Analyzed:</i>	Oct-31-09 16:23		Nov-04-09 15:00		Oct-31-09 17:13	Oct-31-09 17:38	Oct-31-09 18:03	Oct-31-09 18:03	Oct-31-09 18:03
		<i>Units/RL:</i>	mg/kg RL		mg/kg RL		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons			BRL 16.4		BRL 16.7		BRL 16.8	BRL 16.2	BRL 16.2	BRL 16.2	BRL 16.2
C12-C28 Diesel Range Hydrocarbons			BRL 16.4		BRL 16.7		BRL 16.8	BRL 16.2	BRL 16.2	BRL 16.2	BRL 16.2
C28-C35 Oil Range Hydrocarbons			BRL 16.4		BRL 16.7		BRL 16.8	BRL 16.2	BRL 16.2	BRL 16.2	BRL 16.2
Total TPH			BRL 16.4		BRL 16.7		BRL 16.8	BRL 16.2	BRL 16.2	BRL 16.2	BRL 16.2

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350362,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 542219-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/02/09 23:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 00:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 780097

Sample: 542219-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 01:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 780097

Sample: 350362-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 06:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 780097

Sample: 350362-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 06:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350362,

Project ID: 2004-00061

Lab Batch #: 780097

Sample: 350362-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 07:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 780097

Sample: 350362-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 07:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350362-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 07:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 780097

Sample: 350350-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 780097

Sample: 350350-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350362,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 542075-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

Lab Batch #: 779820

Sample: 542075-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 779820

Sample: 542075-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 11:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 779820

Sample: 350362-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 16:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.9	98	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 779820

Sample: 350362-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 17:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	100	92	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350362,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 350362-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 17:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	91.4	100	91	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 779820

Sample: 350362-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 18:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 779820

Sample: 350365-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 20:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 779820

Sample: 350365-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 21:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

Lab Batch #: 780329

Sample: 542375-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/09 13:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	105	99.8	105	70-135	
o-Terphenyl	43.4	49.9	87	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350362,

Lab Batch #: 780329

Sample: 542375-1-BSD / BSD

Project ID: 2004-00061

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/09 13:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	43.9	50.0	88	70-135	

Lab Batch #: 780329

Sample: 542375-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/04/09 14:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	85.5	100	86	70-135	
o-Terphenyl	48.0	50.0	96	70-135	

Lab Batch #: 780329

Sample: 350362-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/04/09 15:00

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.8	100	87	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 780329

Sample: 350777-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/09 02:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	42.3	50.0	85	70-135	

Lab Batch #: 780329

Sample: 350777-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/05/09 02:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	107	99.6	107	70-135	
o-Terphenyl	44.5	49.8	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350362

Project ID:

2004-00061

Lab Batch #: 779943

Sample: 779943-1-BKS

Matrix: Solid

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Chloride	<0.500	11.0	11.1	101	75-125	

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

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

RL - Below Reporting Limit



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350362

Analyst: ASA

Lab Batch ID: 780097

Sample: 542219-1-BKS

Batch #: 1

Date Prepared: 11/02/2009

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	BTEX by EPA 8021										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	<0.0010	0.1000	0.0928	93	0.1	0.0935	94	1	70-130	35
	Toluene	<0.0020	0.1000	0.0899	90	0.1	0.0914	91	2	70-130	35
	Ethylbenzene	<0.0010	0.1000	0.0910	91	0.1	0.0920	92	1	71-129	35
	m,p-Xylenes	<0.0020	0.2000	0.1982	99	0.2	0.2010	101	1	70-135	35
	o-Xylene	<0.0010	0.1000	0.0986	99	0.1	0.0996	100	1	71-133	35

Analyst: BEV

Date Prepared: 10/30/2009

Date Analyzed: 10/31/2009

Lab Batch ID: 779820

Sample: 542075-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	997	887	89	998	861	86	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	835	84	998	809	81	3	70-135	35	

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

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

Blank Spike Duplicate Recovery [G] = $100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350362

Analyst: BEV

Lab Batch ID: 780329

Sample: 542373-1-BKS

Units: mg/kg

Date Prepared: 11/04/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 11/04/2009

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH by SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	998	905	91	999	920	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	998	758	76	999	801	80	6	70-135	35	

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



Form 3 - MS Recoveries

Project Name: Lea Station Landfarm



Work Order #: 350362

Lab Batch #: 779943

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350351-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	<5.63	124	129	104	75-125	

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

- Below Reporting Limit



Form 3 - MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350362

Lab Batch ID: 780097

Date Analyzed: 11/03/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350350-003 S

Date Prepared: 11/02/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
BTEX by EPA 8021												
Analytes												
	Benzene	<0.0011	0.1061	0.0555	52	0.1061	0.0568	54	2	70-130	35	N
	Toluene	<0.0021	0.1061	0.0567	53	0.1061	0.0572	54	1	70-130	35	X
	Ethylbenzene	<0.0011	0.1061	0.0581	55	0.1061	0.0585	55	1	71-129	35	X
	m,p-Xylenes	<0.0021	0.2123	0.1259	59	0.2123	0.1269	60	1	70-135	35	X
	o-Xylene	<0.0011	0.1061	0.0631	59	0.1061	0.0629	59	0	71-133	35	X

Lab Batch ID: 779820

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

QC- Sample ID: 350365-003 S

Date Prepared: 10/30/2009

Batch #: 1 Matrix: Soil

Analyst: BEV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY													
Reporting Units: mg/kg	TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	C6-C12 Gasoline Range Hydrocarbons	<17.8	1180	1060	90	1180	969	82	9	70-135	35		
	C12-C28 Diesel Range Hydrocarbons	<17.8	1180	1030	87	1180	940	80	9	70-135	35		

Lab Batch ID: 780329

Date Analyzed: 11/05/2009

Reporting Units: mg/kg

QC- Sample ID: 350777-001 S

Date Prepared: 11/04/2009

Batch #: 1 Matrix: Soil

Analyst: BEV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Reporting Units: mg/kg											
TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<17.3	1150	1080	94	1150	1110	97	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<17.3	1150	1120	97	1150	1150	100	3	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350362

Lab Batch #: 779943

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.63	<5.63	NC	20	

Lab Batch #: 779764

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	11.2	10.8	3	20	

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

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350362
 Initials: JMF

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C
#2	Shipping container in good condition?	<u>Yes</u>	No	
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>
#4	Custody Seals intact on sample bottles/ container? / <u>labels</u>	<u>Yes</u>	No	Not Present
#5	Chain of Custody present?	<u>Yes</u>	No	
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No	
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No	
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	
#11	Containers supplied by ELOT?	<u>Yes</u>	No	
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below
#13	Samples properly preserved?	<u>Yes</u>	No	See Below
#14	Sample bottles intact?	<u>Yes</u>	No	
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No	
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No	
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 350365

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

05-NOV-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida (E86240),

South Carolina (96031001), Louisiana (04154), Georgia (917)



05-NOV-09

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

Reference: XENCO Report No: **350365**
Lea Station Landfarm
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 350365. 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. 350365 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 350365



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id

Matrix

Date Collected

Sample Depth

Lab Sample Id

VZ Cell H G-1

S

Oct-28-09 09:55

350365-001

VZ Cell H G-2

S

Oct-28-09 10:10

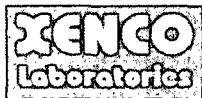
350365-002

VZ Cell H G-3

S

Oct-28-09 10:25

350365-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order Number: 350365

Report Date: 05-NOV-09

Date Received: 10/30/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-779764 Percent Moisture

None

Batch: LBA-779820 TPH by SW8015 Mod

None

Batch: LBA-779943 Inorganic Anions by EPA 300

None

Batch: LBA-780096 BTEX by EPA 8021

SW8021BM

Batch 780096, Benzene, Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 350365-001, -002, -003.

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



Certificate of Analysis Summary 350365
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm



Project Id: 2004-00061
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Oct-30-09 08:55 am
Report Date: 05-NOV-09
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	350365-001	350365-002	350365-003		
	Field Id: Depth: Matrix: Sampled:	VZ Cell H G-1 SOIL Oct-28-09 09:55	VZ Cell H G-2 SOIL Oct-28-09 10:10	VZ Cell H G-3 SOIL Oct-28-09 10:25		
BTX by EPA 8021	Extracted:	Nov-02-09 15:00	Nov-02-09 15:00	Nov-02-09 15:00		
	Analyzed:	Nov-03-09 10:41	Nov-03-09 11:03	Nov-03-09 11:24		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	BRL 0.0012	BRL 0.0011	BRL 0.0012		
	Toluene	BRL 0.0023	BRL 0.0023	BRL 0.0024		
Determination of Inorganic Anions In Water By Ion	Ethylbenzene	BRL 0.0012	BRL 0.0011	BRL 0.0012		
	m,p-Xylenes	BRL 0.0023	BRL 0.0023	BRL 0.0024		
	o-Xylene	BRL 0.0012	BRL 0.0011	BRL 0.0012		
Percent Moisture	Xylenes, Total	BRL 0.0012	BRL 0.0011	BRL 0.0012		
	Total BTX	BRL 0.0012	BRL 0.0011	BRL 0.0012		
TPH by SW8015 Mod	Extracted:	Nov-02-09 15:56	Nov-02-09 15:56	Nov-02-09 15:56		
	Analyzed:	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons	Units/RL:	BRL 5.76	BRL 5.71	6.87 5.92		
	Chloride					
C12-C28 Diesel Range Hydrocarbons	Extracted:	Oct-30-09 17:00	Oct-30-09 17:00	Oct-30-09 17:00		
	Analyzed:	% RL	% RL	% RL		
C28-C35 Oil Range Hydrocarbons	Units/RL:	13.1 1.00	12.5 1.00	15.5 1.00		
	Percent Moisture					
Total TPH	Extracted:	Oct-30-09 14:45	Oct-30-09 14:45	Oct-30-09 14:45		
	Analyzed:	Oct-31-09 18:29	Oct-31-09 18:56	Oct-31-09 19:22		
Total TPH	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
	C6-C12 Gasoline Range Hydrocarbons	BRL 17.3	BRL 17.1	BRL 17.8		
Total TPH	C12-C28 Diesel Range Hydrocarbons	BRL 17.3	BRL 17.1	BRL 17.8		
	C28-C35 Oil Range Hydrocarbons	BRL 17.3	BRL 17.1	BRL 17.8		
Total TPH	Units/RL:	BRL 17.3	BRL 17.1	BRL 17.8		
	Total TPH					

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

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Brent Barron, II
Odessa Laboratory Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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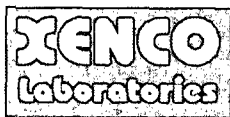
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5757 NW 158th St, Miami Lakes, FL 33014
12600 West I-20 East, Odessa, TX 79765
842 Cantwell Lane, Corpus Christi, TX 78408

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350365,

Project ID: 2004-00061

Lab Batch #: 780096

Sample: 542220-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 09:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 780096

Sample: 542220-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 09:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 780096

Sample: 542220-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/03/09 10:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 780096

Sample: 350365-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 10:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 780096

Sample: 350365-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 11:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350365,

Project ID: 2004-00061

Lab Batch #: 780096

Sample: 350365-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 11:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 780096

Sample: 350365-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 14:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 780096

Sample: 350365-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/03/09 14:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 779820

Sample: 542075-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

Lab Batch #: 779820

Sample: 542075-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 10:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350365,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 542075-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/09 11:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 779820

Sample: 350365-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 18:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

Lab Batch #: 779820

Sample: 350365-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 18:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.9	100	83	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 779820

Sample: 350365-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 19:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	53.9	50.0	108	70-135	

Lab Batch #: 779820

Sample: 350365-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 20:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

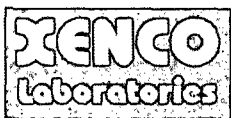
* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 350365,

Project ID: 2004-00061

Lab Batch #: 779820

Sample: 350365-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/09 21:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

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

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



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 350365

Project ID:

2004-00061

Lab Batch #: 779943

Sample: 779943-1-BKS

Matrix: Solid

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Determination of Inorganic Anions In Water By Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<0.500	11.0	11.1	101	75-125	

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

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

BL - Below Reporting Limit



Project Name: Lea Station Landfarm

Work Order #: 350365

Analyst: ASA

Lab Batch ID: 780096

Sample: 542220-1-BKS

Units: mg/kg

Date Prepared: 11/02/2009

Batch #: 1

Project ID: 2004-00061

Date Analyzed: 11/03/2009

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
Analytes	BTEX by EPA 8021											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	Benzene	<0.0010	0.1000	0.0925	93	0.1	0.0950	95	3	70-130	35	
	Toluene	<0.0020	0.1000	0.0892	89	0.1	0.0924	92	4	70-130	35	
	Ethylbenzene	<0.0010	0.1000	0.0897	90	0.1	0.0933	93	4	71-129	35	
	m,p-Xylenes	<0.0020	0.2000	0.1947	97	0.2	0.2033	102	4	70-135	35	
	o-Xylene	<0.0010	0.1000	0.0970	97	0.1	0.1017	102	5	71-133	35	

Analyst: BEV

Lab Batch ID: 779820

Sample: 542075-1-BKS

Units: mg/kg

Date Prepared: 10/30/2009

Batch #: 1

Date Analyzed: 10/31/2009

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH by SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	<15.0	997	887	89	998	861	86	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	835	84	998	809	81	3	70-135	35	

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

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

Blank Spike Duplicate Recovery $[G] = 100 * (F) / [E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 350365

Lab Batch #: 779943

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 350351-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.63	124	129	104	75-125	

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

Below Reporting Limit



Form 3 - MSMSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 350365

Lab Batch ID: 780096

Date Analyzed: 11/03/2009

Reporting Units: mg/kg

Project ID: 2004-00061

QC- Sample ID: 350365-003 S

Date Prepared: 11/02/2009

Batch #: 1 Matrix: Soil

Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										Flag
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	
BTEX by EPA 8021											
Benzene	<0.0012	0.1184	0.0797	67	0.1184	0.0767	65	4	70-130	35	X
Toluene	<0.0024	0.1184	0.0781	66	0.1184	0.0751	63	4	70-130	35	X
Ethylbenzene	<0.0012	0.1184	0.0782	66	0.1184	0.0758	64	3	71-129	35	X
m,p-Xylenes	<0.0024	0.2368	0.1693	71	0.2368	0.1650	70	3	70-135	35	
o-Xylene	<0.0012	0.1184	0.0851	72	0.1184	0.0820	69	4	71-133	35	X

Lab Batch ID: 779820

Date Analyzed: 10/31/2009

Reporting Units: mg/kg

QC- Sample ID: 350365-003 S

Date Prepared: 10/30/2009

Batch #: 1 Matrix: Soil

Analyst: BEV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										Flag
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	
TPH by SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	<17.8	1180	1060	90	1180	969	82	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<17.8	1180	1030	87	1180	940	80	9	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 350365

Lab Batch #: 779943

Project ID: 2004-00061

Date Analyzed: 11/02/2009

Date Prepared: 11/02/2009

Analyst: LATCOR

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Determination of Inorganic Anions In Water By Ion Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.63	<5.63	NC	20	

Lab Batch #: 779764

Date Analyzed: 10/30/2009

Date Prepared: 10/30/2009

Analyst: WRU

QC- Sample ID: 350351-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	11.2	10.8	3	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$

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

BRL - Below Reporting Limit

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

**12800 West I-20 East
Odessa, Texas 79765**

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

Project Manager: Camille Bryant

Project Name: Lea Station Landfarm

Company Name	Basin Environmental Consulting, LLC
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Project #: 2004-00061

Company Address: P.O. Box 381

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: PAA - J. Henry

Telephone No: (575) 805-7210

Fax No: (505) 398-1429

Sampler Signature:

cjbryant@basin-consulting.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

☐ TRRP



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(lab use only)

ORDER #: 550365

[illegible]

Special Instructions:

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time	Remarks
Amber Bryant	10/29/09	1:50	Cheryl Smith	10/29/09	2:00	VOCs Free of Headspace? <input checked="" type="checkbox"/> N Custody seals on containers intact <input checked="" type="checkbox"/> N Sample Hand Delivered by Sample Client Rep. ? <input checked="" type="checkbox"/> Y by Courier? <input type="checkbox"/> UPS <input type="checkbox"/> DHL <input type="checkbox"/> FedEx <input type="checkbox"/> Lone Star <input type="checkbox"/> N Temperature Upon Receipt: 1.6 °C
Cheryl Smith	10/30/09	08:55	Received by: Elaine Fitch	10/30/09	08:55	

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin
 Date/ Time: 10-30-09 0855
 Lab ID #: 350365
 Initials: JMF

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>1.6</u> °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container? / labels	<u>Yes</u>	No	Not Present	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

Check all that Apply:

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

Photographs



Lea Station Landfarm Cell A



Lea Station Landfarm Cell B



Lea Station Landfarm Cell C



Lea Station Landfarm Cell D



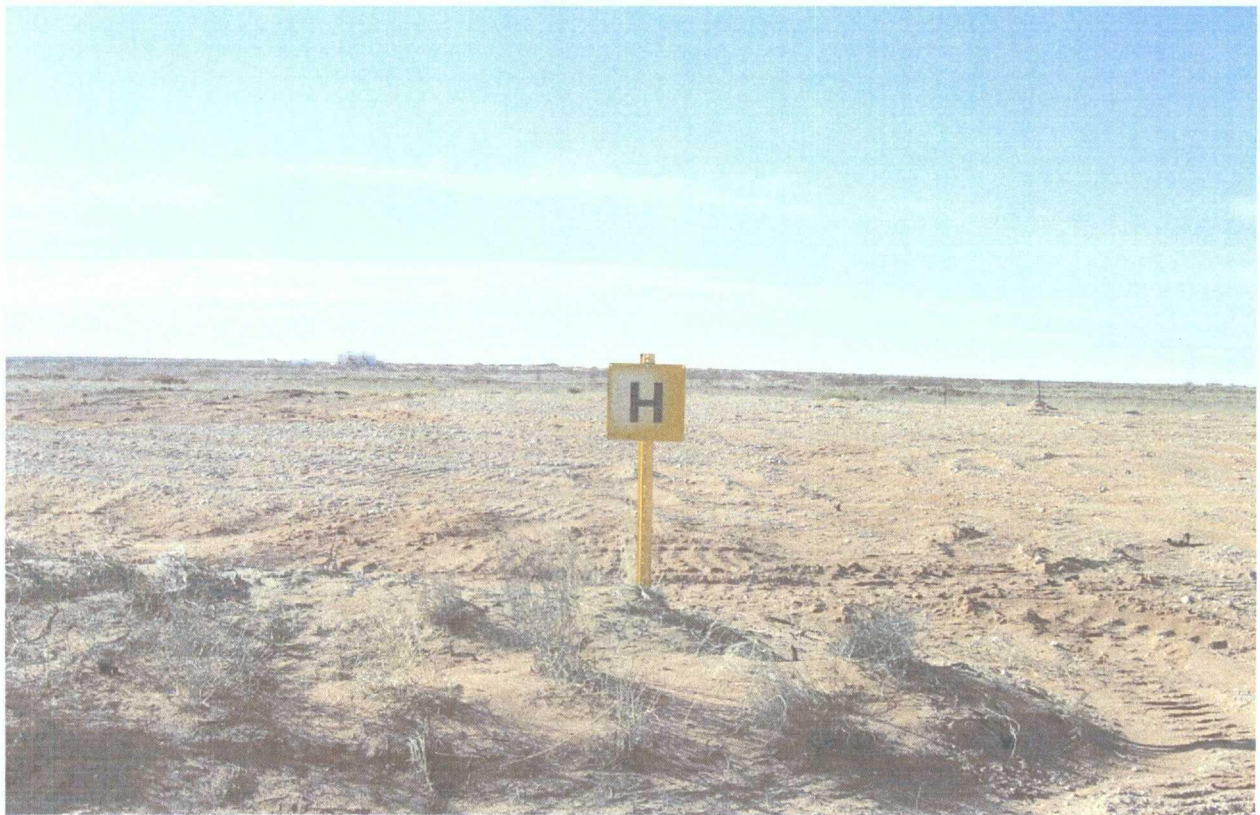
Lea Station Landfarm Cell E



Lea Station Landfarm Cell F



Lea Station Landfarm Cell G



Lea Station Landfarm Cell H