## GW - 35/

## Land Farm REPORTS

YEAR(S):

2008



RECEIVED 2009 MAR 31 PM 1 12

March 27, 2009

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:

Plains Marketing, L.P. - 2008 Annual Report

Lea Station Landfarm - Discharge Permit #GW-351

Lea County, New Mexico

Dear Mr. Jones:

Enclosed for your review is a copy of the 2008 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 2009

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 – 2008

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 2008 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 93,891 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 and Cell-F. Approximately 12,096 cubic yards of impacted soil was transported to the Landfarm during the 2008 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 20, 2008, 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 and F) 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 188.6 mg/Kg for soil sample Cell E TZ G4 to 5,100 mg/Kg for soil sample Cell B TZ G1. Chloride concentrations ranged from less than the laboratory method detection limit (MDL) for soil samples Cell C TZ G1 and Cell E TZ G1-G4 to 106 mg/Kg for soil sample Cell D TZ G4. Please reference Table 1, 2008 Concentrations of Benzene, BTEX, TPH and Chloride in the Treatment Zone.

On November 13, 2008, Basin collected four (4) to five (5) four-point composite treatment zone soil samples from each of the treatment cells (Cells A, B, C, D, E and F) being utilized. The soil samples were analyzed for concentrations of TPH and chloride. The analytical results indicated TPH concentrations ranged from 36.1 mg/Kg for soil sample Cell C TZ G1 to 1,888 mg/Kg for soil sample Cell D TZ G5. Chloride concentrations ranged from less than the laboratory MDL for soil samples Cell A TZ G4-G5, Cell B TZ G1, G3, G4, G5, Cell C TZ G2-G5, Cell D TZ G5 and Cell E TZ G1-G4 to 193 mg/Kg for soil sample Cell F TZ G2.

The locations of soil samples collected in treatment cells A, B, C, D, E and F during the June and November 2008 sampling events are depicted on Figures 2, 3, 4, 5, 6 and 7, 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).

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 20, 2008, Basin collected 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, and D, four (4) grab samples from treatment Cell E and two (2) grab samples from treatment Cell F. 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 benzene, toluene, ethylbenzene and xylene (BTEX) using method EPA 8021b, TPH using method SW8015M and chloride using EPA 300. Please reference Table 4, 2008 Concentrations of Benzene, BTEX, TPH and Chloride in the Vadose Zone.

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

On November 14, 2008, Basin collected five (5) grab samples at a depth of three (3) to four (4) feet bgs (vadose zone) from treatment Cells A, B, C, D and F and four (4) grab samples from treatment Cell E. The grab samples were collected and analyzed for constituent concentrations of BTEX, TPH and chloride.

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

The analytical results indicated chloride concentrations were below the laboratory MDL in all soil samples, with the exception of soil sample Cell E VZ G3 (3'-4') which exhibited a chloride concentration of 32.1 mg/Kg. This chloride concentration is above the established background chloride concentration for the landfarm area of 10.6 mg/Kg but is still well within the range of concentrations which would be considered background levels.

The locations of soil samples collected in the vadose zone from treatment cells A, B, C, D, E and F during the June and November 2008 sampling events are depicted on Figures 2, 3, 4, 5, 6 and 7, 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. The laboratory analytical results indicate hydrocarbon impact soil placed in the treatment cells is naturally attenuating within the lifts. The laboratory analytical results collected from the treatment cells on November 13, 2008, indicated soil samples Cell C (G1 thru G5), Cell B (G5) and Cell E (G4) contain concentrations less than the NMOCD remedial goals (100 mg/Kg TPH).

## RECOMMENDATIONS

Based on analytical results of the soil samples collected from the treatment cells Cell C (G1 thru G5), Cell B (G5) and Cell E (G4), Plains requests NMOCD approval to transport the remediated soil from the respective landfarm cells to a soil staging area located near the entrance of Cell D. The remediated soil will be used as backfill material at Plains remediation sites in the future. Bi-monthly tilling of the treatment zones will continue during the 2009 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 8021b (BTEX), method 8015M (TPH) and method EPA 300 (chloride). Treatment zone soil samples will be analyzed using method 8015M (TPH) and method EPA 300 (chloride). An Annual Report will be submitted in 2010 documenting the results of the 2009 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 express 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 (<a href="mailto:edwardj.hansen@state.nm.us">edwardj.hansen@state.nm.us</a>)
Jeff Dann, Plains Marketing-Houston, Texas (<a href="mailto:jpdann@paalp.com">jpdann@paalp.com</a>)
Jason Henry, Plains Marketing-Lovington, New Mexico (<a href="mailto:jpdann@paalp.com">jpdann@paalp.com</a>)

**Enclosures:** 

## **Figures**

Figure 1: Lea Station Landfarm Survey map

Figure 2: Cell "A" Soil Sample Location Map – June and November 2008

Figure 3: Cell "B" Soil Sample Location Map – June and November 2008

Figure 4: Cell "C" Soil Sample Location Map – June and November 2008

Figure 5: Cell "D" Soil Sample Location Map – June and November 2008

Figure 6: Cell "E" Soil Sample Location Map – June and November 2008

Figure 7: Cell "F" Soil Sample Location Map – June and November 2008

## **Tables**

Table 1: 2008 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: 2008 Concentrations of Benzene, BTEX, TPH and Chloride in the Vadose Zone

## **Laboratory Analytical Reports**

## **Photographs**

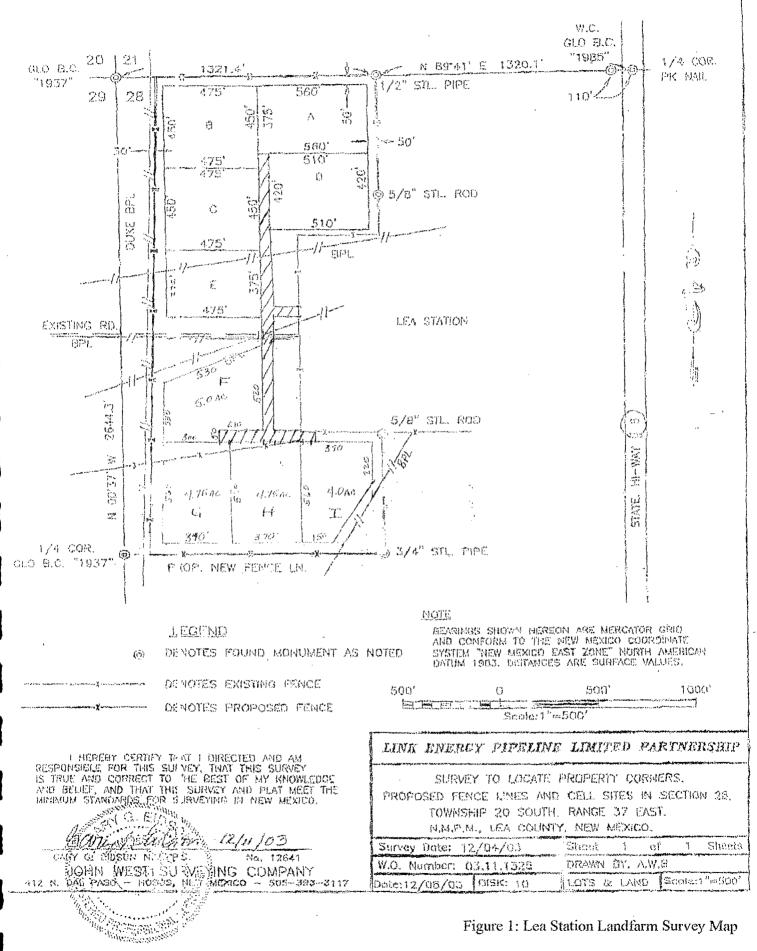


Figure 1: Lea Station Landfarm Survey Map



	,				
X	X	X	X	×	
×	×	×	x	×	
© Cell "A" VZ G1	o Cell "A" VZ G2	© Cell "A" VZ G3	⊚ Cell "A" VZ G4	© Cell "A" VZ G5	375'
X	X	X	X	х	
×	x	×	X	x	
Cell "A" TZ G1	Cell "A" TZ G2	Cell "A" TZ G3	Cell "A" TZ G4	Cell "A" TZ G5	
112'					<u> </u>
T	<del></del>	<del> 560'</del>			

10D 50 0 50 100

Distance in Feet

## LEGEND:

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

Figure 2
Cell "A" Soil Sample Location Map
June and November 2008
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Scale: 1" = 100"	Drawn By: CDS	Prepared By: CDS
March 15, 2009		
W 1/2 of NW 1/4 o	Section 287, Town	ship 20 South, Range 37 E



1	x	X	X	X	X	
	X • Cell "B" VZ G5	X  • Cell "B" VZ G4	X ● Cell "B" VZ G3	X ● Cell "B" VZ G2	X  • Cell "B" VZ G1	<b>450</b> '
	x	Х	х	X	×	
	x	X	х	X	X	
	Cell "B" TZ G5	Cell "B" TZ G4	Cell "B" TZ G3	Cell "B" TZ G2	Cell "B" TZ G1	
	95'		475'			

100 50 0 50 100 Distance in Feet

## LEGEND:

X . 4-Point Composite Treatment Cell Soil Sample Location

Vadose Zone Soft Semple Location

Figure 3
Cell "B" Soll Sample Location Map
June and November 2008
Plains Marketing, L.P.
Lea Stallon Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Scale: 1" = 100"	Drawn By: CDS	Prepared By: CDS
March 16, 2009		



X	х	X	х	х	
X  Cell "C" VZ G1  X	X ● Cell "C" VZ G2 X	X  • Cell "C" VZ G3	X ● Cell "C" VZ G4 X	X ● Cell "C" VZ G5 X	450'
X	X	x	x	X	
Cell "C" TZ G1	Cell "C" TZ G2	Cell "C" TZ G3	Cell "C" TZ G4	Cell "C" TZ G5	

100 50 0 50 100

Distance in Feet

LEGEND:

X 4-Point Composite Treatment Cell Soil Sample Location

Vadose Zone Soll Sample Location

Figure 4
Cell "C" Soil Sample Location Map
June and November 2008
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Scale: 1" = 100"	Drawn By: CDS	Prepared By: CDS
March 16, 2009		
	f Section 287, Town	shilp 20 South, Range 37 E

X	x	x	x	x	
×	х	x	×	x	
● Cell "D" VZ G5	● Cell "D" VZ G4	● Cell "D" VZ G3	● Cell "D" VZ G2	● Cell "D" VZ G1	420' 
X	X	X	X	X	
×	x	×	×	x	
Cell "D" TZ G5	Cell "D" TZ G4	Cell "D" TZ G3	Cell "D" TZ G2	Cell "D" TZ G1	
102'					
		510'			

100 50 0 50 100

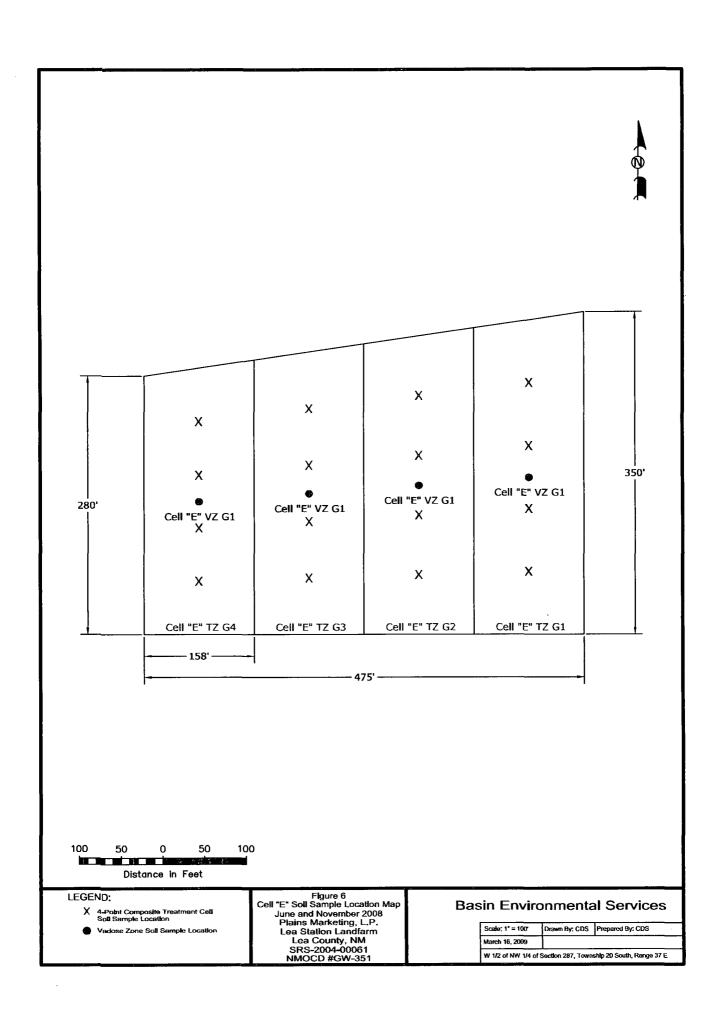
Distance in Feet

## LEGEND:

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

Figure 5
Cell "D" Soil Sample Location Map
June and November 2008
Plains Marketing, L.P.
Lea Station Landfarm
Lea County, NM
SRS-2004-00061
NMOCD #GW-351

Scale; 1" = 100"	Drawn By: CDS	Prepared By: CDS
March 16, 2009		



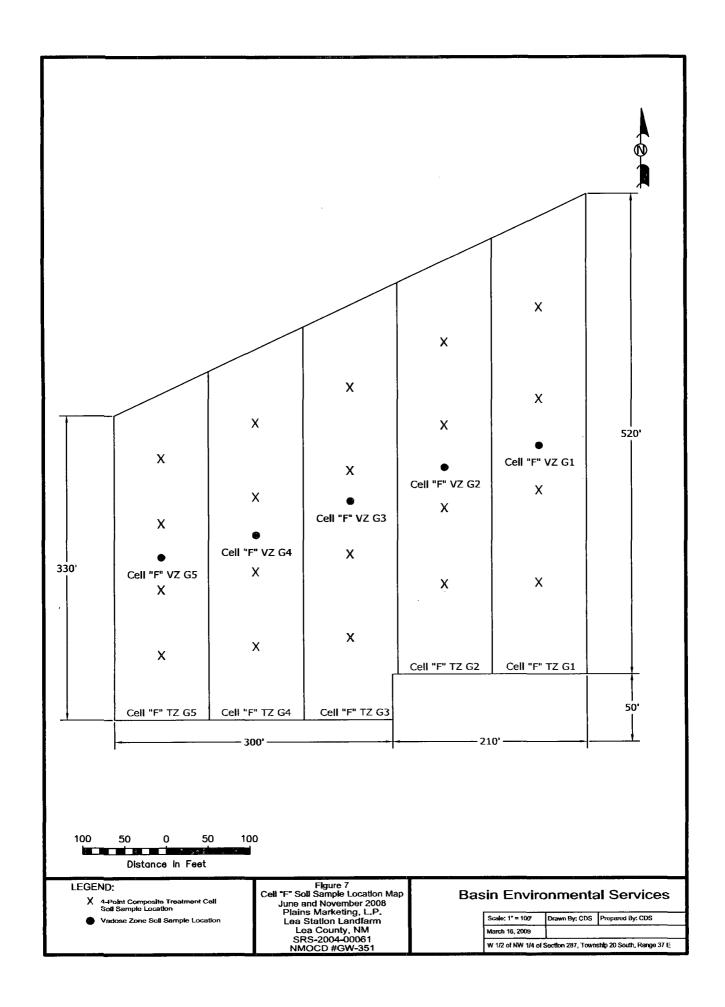


TABLE 1

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

	EPA 300	Chloride	(mg/kg)	52.2	59.0	30.0	36.6	8.2	A Section Control	26.7	36.5	34.4	30.7	12		<5.04	9.85	13.3	12.1	21.8	1. 2. 4. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	15.9	36.2	103	106	61.1		<5.04	<5.04	<5.02	<5.02
	TOTAL	ТРН	C6-C35 (ma/Ka)	3,293.7	3,535.3	2,515	2,003.5	580	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	5,100	3,940	1,107	1,051	366		701	982	861	531	552		3,119	3,690.3	3,733	2,630	2,645		1,089	1,661	639	188.6
		ORO	C28-C35 (ma/Ka)	763	774	615	554	196		1090	096	320	321	131		217	237	285	186	223	A STATE OF THE STA	629	730	763	640	565		371	521	217	72.6
	METHOD: 8015M	DRO	C <sub>12</sub> -C <sub>28</sub> (ma/Ka)	2510	2740	1900	1430	384		4010	2980	787	730	235	\$ 17 KM	484	745	929	345	329	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2460	2940	2970	1990	2080		718	1140	422	116
	ME	GRO	C <sub>6</sub> -C <sub>12</sub> (ma/Ka)	20.7	21.3	<15.1	19.5	<15.1		<15.2	<15.2	<15.1	<15.1	<15.1		<15.1	<15.2	<15.1	<15.2	<15.2	おおき ないな	<15.1	20.3	<15.1	<15.1	<15.1		<15.1	<15.1	<15.1	<15.1
		ВТЕХ	(mg/Kg)	•	-	-	,	1		4	-	-	_	_	A Company of the Comp	-	_	-	-	•		•	-	•	•	,		-	•	·	•
G, L.P. FARM MEXICO 00061 51	5030	ò	XYLENES (ma/Ka)	'	-	•	•	-		•	•	-	-	-		•	-	-	-	-	1000 may 1000 mg 1000	-	-	•	-	-		1	1	•	•
PLAINS MARKETING, L.P. LEA STATION LAND FARM LEA COUNTY, NEW MEXICO PLAINS SRS: 2004-00061 NMOCD #GW-351	METHOD: EPA SW 846-8021B, 5030	M,P.	XYLENES (ma/Ka)	,			-	1	Section & Section Sect	1	ı			ı		-	•	-	-	-		-	-	-	-	-		-	1	ı	•
PLAINS LEA STA LEA COU PLAINS	OD: EPA SW	ETHYL-	BENZENE (ma/Ka)	,	•		1	-		-	-	-	-	-	為。新原際	-	-	-	-	•	A	-	1	•	•	-	194	-	•		,
	METH	TOLUENE	(mg/Kg)		•			1		1	,	,	•	ı		-	-	•	-			-	•	-	,	-		-			-
		BENZENE		-	-	,												1	-	-	The second	•				•		1	-	-	-
		SAMPLE	DATE	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008		6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008	4	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008		6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008		6/20/2008	6/20/2008	6/20/2008	6/20/2008
		SAMPLE	(sbq)	-88	8	₩	.∞	£8		<u>.</u> 8		.∞	.∞	.∞		 8		8	్థ	&	湯がない	.∞	-80	80	.∞	8			8	.8	.8
		SAMPLE	LOCATION	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		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		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		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		Cell E TZ G 1	Cell E TZ G 2	Cell E TZ G 3	Cell E TZ G 4

TABLE 1

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

	L			METH	METHOD: EPA SW 846-8021B, 5030	846-8021B,	5030		ME	METHOD: 8015M	_	TOTAL	EPA 300
	SAMPLE	SAMPLE	DENZENE	TOILIENE		M,P.	ò	RTEX	GRO	DRO	ORO	TPH	Chlorida
LOCATION D	(bgs)	DATE	(mg/Kg)	(mg/Kg)	BENZENE (mg/Kg)	XYLENES (mg/Kg)	XYLENES (mg/Kg)	(mg/Kg)	C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	(mg/kg)
2000年の後の			1700000			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				45.	14.50	Same Comment	
Cell F TZ G 1		6/20/2008	1	-	-	-	•	•	36.5	1840	402	2,278.5	26.1
Cell F TZ G 2	8	6/20/2008	•		-	,		•	39.1	1730	350	2,119.1	5.9
					***						7 5 5	\$ 4 miles	
Cell A TZ G 1		11/13/2008	'	ı	٠	-	•	•	<15.6	396	247	643	36.3
Cell A TZ G 2	ъ В	11/13/2008	•	_	٠	•		•	<16.4	144	69.5	213.5	31.6
Cell A TZ G 3		11/13/2008		_	•		•	•	<16.2	115	66.1	181.1	10.9
Cell A TZ G 4		11/13/2008	•	-	-	•	-		<5.7	193	133	326	<5.24
Cell A TZ G 5		11/13/2008		ı	•		•	•	<16.2	63.4	36.9	100.3	<5.40
			* 5 *	10 mm 1 m				The state of the s	A Company of the second	1.36.		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Cell B TZ G 1		11/13/2008		_	-				<15.9	857	292	1,149	<5.30
Cell B TZ G 2	8	11/13/2008	<u>'</u>		-				<16.2	279	156	435	12
Cell B TZ G 3	8	11/13/2008	ı	ı	-	-	•	-	<16.1	75.6	20	125.6	<5.38
Cell B TZ G 4		11/13/2008	,	_	-	•	-		<16.1	110	45.6	155.6	<5.37
Cell B TZ G 5	۵	11/13/2008		_	-	-	-	,	<15.9	63	35.1	98.1	<5.28
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	18 TO T.		となるとなる	A STATE OF THE STATE OF			J. J	10 th 10 th			J. 18 6 6 5 1	19 5 9 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Cell C TZ G 1	 	11/13/2008	1	•		1	•	-	<16.2	36.1	<16.2	36.1	24.3
Cell C TZ G 2		11/13/2008	-	_	-	1	-	-	<16.1	52.6	19	71.6	<10.7
Cell C TZ G 3	8	11/13/2008	_		-	-		-	<16.3	46.8	22.4	69.2	<5.42
Cell C TZ G 4		11/13/2008	-	_	-	-		•	<15.9	50.7	16.9	67.6	<5.31
Cell C TZ G 5	 	11/13/2008	1	_	1	•		-	<16.3	53.8	27.7	81.5	<5.43
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2			San Broke Some	The same of the sa	· · · · · · · · · · · · · · · · · · ·				11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Cell D TZ G 1	 8	11/13/2008	,	-	1	,	,	_	<15.9	467	158	625	16.8
Cell D TZ G 2		11/13/2008	1	_	-	-	1		<16.0	373	134	202	20.3
Cell D TZ G 3		11/13/2008		-	1		•	•	<16.2	222	209	766	56.4
Cell D TZ G 4	8	11/13/2008	-		-	-	_	_	<15.9	515	206	721	9.85
Cell D TZ G 5	8	11/13/2008	-	-	•	-	-	_	<15.9	1510	378	1,888	<5.31
					* * * * * * * * * * * * * * * * * * *	1000				\$ 18 W			
Cell E TZ G 1	.8	11/13/2008	1		-	-	_	-	<15.8	109	76.2	185.2	<5.27
Cell E TZ G 2	8	11/13/2008			•	-	-	-	<15.8	167	101	268	<5.25

TABLE 1

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE TREATMENT ZONE

				MET	10D: EPA SV	METHOD: EPA SW 846-8021B, 5030	5030		ME	METHOD: 8015N		TOTAL	EPA 300
SAMPLE	SAMPLE	SAMPLE	רויים וליים ביים מיים ביים מיים ביים מיים ביים מיים ביים ב	10 T	ETHYL-	M,P-	ò	Vara	GRO	DRO	ORO	TH	Chloride
LOCATION	DEPIH	DATE	BENZENE (mr.(Kr.)	(ma/Ka)		BENZENE XYLENES XYLENES	XYLENES	(mg/Kg)	C <sub>6</sub> -C <sub>12</sub>	C <sub>12</sub> -C <sub>28</sub>	C28-C35	C <sub>6</sub> -C <sub>35</sub>	(ma/ka)
	(sga)		(64/6m)	(Bu/Bui)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(By/Bill)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(Burbin)
Cell E TZ G 3	8	11/13/2008	<u>'</u>	1				,	<15.8	62	44.8	123.8	<5.28
Cell E TZ G 4	-ω	11/13/2008			1	-		-	<16.1	20.4	17.4	37.8	<5.38
	3 . 3 . 3			がなる。				San	the state of the state of				
Cell F TZ G 1	8	11/13/2008	•	•	-	-			<16.7	214	109	323	166
Cell F TZ G 2	<u></u> ω	11/13/2008		1	-		,	•	<16.4	189	74.7	263.7	193
Cell F TZ G 3	8	11/13/2008	1	,	-	1	,		<16.7	415	99.6	511.6	131
Cell F TZ G 4	۵	11/13/2008				,	-		<16.1	431	98.7	529.7	140
Cell F TZ G 5	8	11/13/2008	1		-	-	-	•	<15.9	139	90	199	30.7
	***			10000000000000000000000000000000000000		The second second	· 有一个	180 186	The state of the state of				

Page 1 of 1

TABLE 2

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

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

Total kalinity ng/Kg)	<50	<u> </u>		433	433	085'1	240	220	220	225	,		,	
A P	* · · · · · · · · · · · · · · · · · · ·	<u>'</u>	,	4.	43	1,5					<u> </u>	<u> </u>	'	
Hydroxide Alkalinity (mg/Kg)	1		;	1	1	!	<0.500	<0.500	<0.500	<0.500	:	; 	!	
Bicarbonate Alkalinity (mg/Kg)	<50	:	1	ı	ли	п	240	180	220	225	;	1	;	;
Carbonate Alkalinity (mg/Kg)	0\$>	!		л	ли	л	<0.500	40.0	<0.500	<0.500	:	;	1	;
Sulfate (mg/Kg)	\$>	+		24.4	23.1	35.2	8.35	9.51	45.8	44.7		i	1	+
Chloride (mg/Kg)	10.60	;		9.37	7.74	20.9	1.17 ^	4.76 <sup>A</sup>	1.45 A	2.95 A		;	:	1
Total TPH (mg/Kg)	<5.0	<5.0	<5.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
TPH (as diesel) (mg/Kg)	<2.5	<2.5	<2.5	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
TPH (as gasoline) (mg/Kg)	<5.0	<5.0	<5.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Total BTEX (mg/Kg)	<0.040	<0.040	<0.040	0:30	<0.025	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
o-xylene (mg/Kg)	<0.020	<0.020	<0.020	0.0190 A	<0.025	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
m,p-xylene (mg/Kg)	<0.040	<0.040	<0.040	9680.0	0.0235 A	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Eythlbenzene (mg/Kg)	<0.020	<0.020	<0.020	0.0273	<0.025	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Toluene (mg/Kg)	<0.020	<0.020	<0.020	0.0159 A	<0.025	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Benzene (mg/Kg)	<0.020	<0.020	<0.020	<0.025	<0.025	<0.025	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Sample Depth (feet-bgs)	3.5-4.0	3.5-4.0	3.5-4.0	3.5-4.0	3.5-4.0	3.5-4.0	3.0 -4.0	3.0 -4.0	3.0 -4.0	3.0 -4.0	3.0 4.0	3.0 4.0	3.0-4.0	3.0 4.0
PID analyses (ppm)	1	;		0.80	1.20	0:30		;	;	ı		;	:	
Sample Date	16-Jan-04	31-Aug-04	31-Aug-04	28-Oct-05	28-Oct-05	28-Oct-05	26-Jul-06	26-Jul-06	26-Jul-06	26-Jul-06	14-Dec-06	14-Dec-06	14-Dec-06	14-Dec-06
Landfarm	Background	С	ш	В	C	ъ	¥	В	С	Э	Y	В	C	Ε
Sample ID	CESLELSLF11604BGS	SPLSLF83104CC-4'	SPLSLF83104CE-4'	Cell B Treatment Zone	Cell C Treatment Zone	Cell E Treatment Zone	Cell A Treatment Zone- 3' to 4'	Cell B Treatment Zone- 3' to 4'	Cell C Treatment Zone- 3' to 4'	Cell E Treatment Zone- 3' to 4'	Cell A Treatment Zone- 3' to 4'	Cell B Treatment Zone- 3' to 4'	Cell C Treatment Zone- 3' to 4'	Cell E Treatment Zone- 3' to 4'

A = Estimated value, analyte detected less than reported limit
-- = Not analyzed
nr = Not reported separately for the sample

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
NMOCD #GW-351

					Γ					i	1 000 0 0107				
			Comple Denth	SW-846 60	SW-846 6010 & 200.7	258.1 & 7670				S	SW-6010 & 200.7				
Sample ID	Landfarm Cell Sample Date	Sample Date	(fast box)	Calcium	Magnesium	Potassium	Sodium	Mercury	Chromium	Arsenic	Selenium	Silver (mo/Ko)	Cadmium	Barium	Lead
			(1661-168)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(931/971) 134116	(mg/Kg)	(mg/Kg)	(mg/Kg)
CESLELSLF11604BGS	Background	16-Jan-04	3.5-4.0	664	1,540	744	30.1	<0.04	4.42	 	<5.0	<2.5	4	15.2	~
SPLSLF83104CC-4'	ပ	31-Aug-04	3.5-4.0		-		+	1	!	1	-	-	-		1
SPLSLF83104CE-4'	Ξ	31-Aug-04	3.5-4.0		-	1	1	1	1	-	1	ı	1	1	1
Cell B Treatment Zone	В	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	၁	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	Э	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'	4	26-Jul-06	3.0 -4.0	47.8	5.82	4.48	2.26	0.009424 <sup>A</sup>	44.5	1.65 A	<7.51	1.01	<1.73	17.3	<0.740
Cell B Treatment Zone- 3' to 4'	В	26-Jul-06	3.0 -4.0	27.9	8.16	9.17	3.78	0.03174	47.5	3.33 A	1.71 <sup>A</sup>	<1.01	<1.73	147	<0.740
Cell C Treatment Zone- 3' to 4'	2	26-Jul-06	3.0 -4.0	\$1.5	90.9	3.07	12.1	0.009956 A	47.7>	0.953 <sup>A</sup>	<7.51	<1.01	<1.73	40.0	<0.740
Cell E Treatment Zone- 3' to 4'	Э	26-Jul-06	3.0 -4.0	57.5	10.3	16.0	9.17	0.01564	1.47 A	1.29 <sup>A</sup>	2.47 <sup>A</sup>	<1.01	<1.73	50.4	<0.740

A = Estimated value, analyte detected less than reported limit -= Not analyzed

**TABLE 4** 

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

				METT	FPA SW	METHOD: EPA SW 846-8021B 5030	5030		M	METHOD: 8015M		TOTAL	EPA 300
	SAMPLE					5					1		200
SAMPLE	DEPTH	SAMPLE	BENZENE	TOLUENE	ETHYL- RFN7FNF	M,P.	O- XVI FNES	BTEX	ogo C	DRO	ORO	H كا كا	Chloride
	(sbq)		(mg/Kg)	(mg/Kg)	(mg/Kg)		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/kg)
Cell A VZ G 1 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.30
Cell A VZ G 2 (3'-4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.16
Cell A VZ G 3 (3'4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15.4	<5.15
Cell A VZ G 4 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0	<5.32
Cell A VZ G 5 (3'-4')	3'-4'	6/20/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.25
The trighter to be the trans	360		\$1.5 m		S. S. S. S. S.			The second of the second	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	S. M. Sangar	F 18 14 8 13		
Cell B VZ G 1 (3'-4')		6/20/2008	<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 2 (3'-4')		6/20/2008	<0.0013	<0.0026	<0.0013	<0.0026	<0.0013	<0.0026	<19.3	<19.3	<19.3	<19.3	<6.44
Cell B VZ G 3 (3'4')	3' - 4'	6/20/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.31
Cell B VZ G 4 (3'-4')		6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<5.16
Cell B VZ G 5 (3'-4')		6/20/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.0	<15.0	<15.0	<15.0	<5.02
The state of the s		1. T.			1 - To 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Par Jack Com			15. 10 Y 14.		1800	3.00
Cell C VZ G 1 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	<5.41
Cell C VZ G 2 (3'-4')	3' - 4'	6/20/2008	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	<5.80
Cell C VZ G 3 (3'-4')	3' - 4	6/20/2008	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.8	<17.8	<17.8	<17.8	<5.94
Cell C VZ G 4 (3'-4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	<5.19
Cell C VZ G 5 (3'-4')	3'-4'	6/20/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	<5.46
				San	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		A. 3 C. W. 25		100 Sec. 100			16 and 16	
Cell D VZ G 1 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.2	<17.2	<17.2	<17.2	<5.73
Cell D VZ G 2 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	<5.68
Cell D VZ G 3 (3'-4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15.4	<5.15
Cell D VZ G 4 (3'-4')	3'-4'	6/20/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<5.63
Cell D VZ G-5 (3'-4')	3' - 4'	6/20/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	<5.58
				1 1 1 2 2 3 1 1 1							1. 1. 1. K.	1.00	
Cell E VZ G 1 (3'4')	3' - 4'	6/20/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	<5.45
Cell E VZ G 2 (3'4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	<5.24
	3' - 4'	6/20/2008	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.6	<17.6	<17.6	<17.6	<5.87
Cell E VZ G 4 (3'-4')	3' - 4'	6/20/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	<5.24
Cell F VZ G 1 (3'-4')	3'-4'	6/20/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.08
Cell F VZ G 2 (3'4')	3'-4'	6/20/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	<15.2	<15.2	<15.2	<5.06
	,				,				•				

**TABLE 4** 

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

				MET	OD: EPA SW	METHOD: EPA SW 846-8021B. 5030	5030		ME	METHOD: 8015M	Ţ	TOTAL	EPA 300
SAMPLE	SAMPLE	SAMPLE		1000	ETHYL-	M.P.	ó	7140	GRO	DRO	ORO	TPH	66:40
LOCATION	DEPIH	DATE	SENZENE (ma/Ka)	OLUENE (mc/Kg)	BENZENE	XYLENES	XYLENES	(שמינלמ)	C <sub>6</sub> -C <sub>12</sub>	C <sub>12</sub> -C <sub>28</sub>	C28-C35	C <sub>6</sub> -C <sub>35</sub>	(mo/kg)
	(sga)		(Bu/bm)	(mg/kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(Bu/Bill)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(Bu/Bill)
Cell A VZ G 1 (3'4')	3'-4'	11/14/2008	<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'	11/14/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0	<5.34
Cell A VZ G 3 (3'4')	3'-4'	11/14/2008	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	<5.76
Cell A VZ G 4 (3'-4')	3' - 4'	11/14/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	<5.71
Cell A VZ G 5 (3'4')	3' - 4'	11/14/2008	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.3	<18.3	<18.3	<18.3	<6.10
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							The state of the	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			
Cell B VZ G 1 (3'4')	3' - 4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	<5.61
Cell B VZ G 2 (3'4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	<5.55
Cell B VZ G 3 (3'-4')	3' - 4'	11/14/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.26
Cell B VZ G 4 (3'4')	3'-4'	11/14/2008	<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'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	<5.50
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1867 B			A
Cell C VZ G 1 (3'4')	3'-4'	11/14/2008	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.3	<18.3	<18.3	<18.3	<6.09
Cell C VZ G 2 (3'4')	3'-4'	11/14/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	<5.19
Cell C VZ G 3 (3'-4')	3' - 4'	11/14/2008	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.4	<18.4	<18.4	<18.4	<6.12
Cell C VZ G 4 (3'4')	3'-4'	11/14/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.2	<17.2	<17.2	<17.2	<5.74
Cell C VZ G 5 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	<5.60
からない というない ないかん				はないまたった		の 一次 一般を	3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3	1986年	A STATE OF THE STA			Sec. 15.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Cell D VZ G 1 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	<5.53
Cell D VZ G 2 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	<5.41
Cell D VZ G 3 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	<5.53
Cell D VZ G 4 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.2	<17.2	<17.2	<17.2	<5.73
Cell D VZ G 5 (3'-4')	3' - 4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	<5.61
					4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7	1 22						
Cell E VZ G 1 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	<5.44
Cell E VZ G 2 (3'-4')	3'-4'	11/14/2008	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	<5.21
Cell E VZ G 3 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	32.1
Cell E VZ G 4 (3'-4')	3'-4'	11/14/2008	<0.0011	<0.0022	< 0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	<5.40
Cell F VZ G 1 (3'-4')	3' - 4'	11/14/2008	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.29
Cell F VZ G 2 (3'-4')	3' - 4'	11/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.10
Cell F VZ G 3 (3'4')	3' - 4'	11/14/2008	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	<5.52

**TABLE 4** 

## 2008 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN THE VADOSE ZONE

	D I GMAD			MET	METHOD: EPA SW 846-8021B, 5030	/ 846-8021B,	5030		ME	METHOD: 8015M	V	TOTAL	EPA 300
SAMPLE	DEPTH (bgs)	SAMPLE DATE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	ETHYL- M,P- O- ENZENE XYLENES XYLENES (mg/Kg) (mg/Kg) (mg/Kg)	O. XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (ma/Kq)	DRO C <sub>12</sub> -C <sub>28</sub> (ma/Ka)	ORO TPH C <sub>28</sub> -C <sub>35</sub> C <sub>6</sub> -C <sub>35</sub> (ma/Ka) (mg/Kg)	TPH C <sub>6</sub> -C <sub>35</sub> (ma/Ka)	Chloride (mg/kg)
Cell F VZ G 4 (3'-4')	3'-4'	11/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.04
Cell F VZ G 5 (3'4')	3'-4'	11/14/2008	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	<5.02
				Salar Salar			ě				100	7.4 7.4 20	
Background	3' - 4'	1/16/2004	<0.02	<0.02	<0.02	<0.04	<0.02	<0.04	<5	<2.5	.5	<5	10.6

## **Analytical Report 306426**

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306426
Lea Station Land Farm

Project Address: Lea County, NM

## Camille Reynolds:

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 306426. 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. 306426 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 306426**



## 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-20-08 08:00		306426-001
Cell A TZ G 2	S	Jun-20-08 08:10		306426-002
Cell A TZ G 3	S	Jun-20-08 08:20		306426-003
Cell A TZ G 4	S	Jun-20-08 08:30		306426-004
Cell A TZ G 5	S	Jun-20-08 08:40		306426-005



## Certificate of Analysis Summary 306426 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Contact: Camille Reynolds Project Location: Lea County, NM

**Project Id:** 2004-00061

Date Received in Lab: Mon Jun-23-08 05:06 pm

Project Manager: Brent Barron, II Report Date: 27-JUN-08

					110ject Managette Diene Dation, 11	tom Dance, in	
	Lab Id:	306426-001	306426-002	306426-003	306426-004	306426-005	
H. A. L.	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	
Anatysis Kequestea	Depth:						
	Matrix:	SOIL	SOLL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 08:00	Jun-20-08 08:10	Jun-20-08 08:20	Jun-20-08 08:30	Jun-20-08 08:40	
Increasic Anions by FPA 300	Extracted:						
	Analyzed:	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		52.2 5.04	59.0 5.04	30.0 5.05	36.6 5.04	8.16 5.04	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 07:50	Jun-25-08 07:50	Jun-25-08 07:50	Jun-25-08 07:50	Jun-25-08 07:50	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		ND 1.00	ND 1.00	00.1 dN	ND 1.00	ND 1.00	
TPH by CW8015 Mod	Extracted:	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	
DOM CTOOMS AG IT IT	Analyzed:	Jun-25-08 08:08	Jun-25-08 10:21	Jun-25-08 10:47	Jun-26-08 10:51	Jun-25-08 11:40	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		20.7 15.1	21.3 15.1	ND 15.1	19.5 15.1	ND 15.1	
C12-C28 Dieset Range Hydrocarbons		2510 15.1	2740 15.1	1900 15.1	1430 15.1	384 15.1	
C28-C35 Oil Range Hydrocarbons		763 15.1	774 15.1	615 15.1	554 15.1	1.51 961	
Total TPH		3293.7	3535.3	2515	2003.5	580	
				The state of the s			

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

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

Odessa Laboratory Director

## SCINCO CONTROL CONTROL

## **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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	FHORE	Гах
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



## Form 2 - Surrogate Recoveries





Work Order #: 306426

Project ID: 2004-00061

Lab Batch #: 726495

Sample: 306426-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctanc	71.5	100	72	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

Lab Batch #: 726495

Sample: 306426-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes  1-Chlorooctane	68.2	100	68	70-135	**
o-Terphenyl	35.9	50.0	72	70-135	

Lab Batch #: 726495

Sample: 306426-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	65.9	100	66	70-135	**
o-Terphenyl	34.5	50.0	69	70-135	**

Lab Batch #: 726495

Sample: 306426-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE F	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	70.9	100	71	70-135	
o-Terphenyl	36.0	50.0	72	70-135	

Lab Batch #: 726495

Sample: 306426-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	59.9	100	60	70-135	**
o-Terphenyl	30.6	50.0	61	70-135	**

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



## Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306426

**Project ID: 2004-00061** 

Lab Batch #: 726495

**Sample:** 306427-005 S / MS

Matrix: Soil

Units: mg/kg	{ SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	75.8	100	76	70-135	
o-Terphenyl	33.4	50.0	67	70-135	**

Lab Batch #: 726495

Sample: 306427-005 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctanc	75.1	100	75	70-135	
o-Terphenyl	33.3	50.0	67	70-135	**

Lab Batch #: 726495

**Sample:** 511212-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 726495

**Sample:** 511212-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	TPH by SW8015 Mod  Amount Found Amount Recovery Imits %R  Analytes  Amount Found Imits %R  [B] %R  [D]				
•	Found	Amount	%R	Limits	Flags
1-Chlorooctane	80.1	100	80	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 726495

Sample: 511212-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	80.4	100	80	70-135	
o-Terphenyl	37.0	50.0	74	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **Blank Spike Recovery**



Project Name: Lea Station Land Farm

**Work Order #:** 306426

Project ID:

2004-00061

Lab Batch #: 726416

Sample: 726416-1-BKS

Matrix: Solid

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SP	IKE REC	COVERY	STUDY
Inorganic Anions by EPA 300	Blank Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	IAI	[B]	[C]	[D]	70K	
Chloride	ND	10.0	11.3	113	75-125	



## BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 306426

Analyst: ASA

Sample: 511212-1-BKS Lab Batch ID: 726495

Batch #: 1

Date Prepared: 06/24/2008

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Matrix: Solid

Units: mg/kg		BLAIN	K/BLANKS	PINE / B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE KECUVERY STUDY	CAIE F	TACONE	KY SIUD	Y	
TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	[]	<u>[a]</u>	<u>a</u>	Result [F]	<u>5</u>	-			
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1080	108	1000	986	66	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	1120	112	1000	1010	101	10	70-135	35	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306426

Lab Batch #: 726416 Date Analyzed: 06/25/2008

QC- Sample ID: 306426-001 S

**Project ID:** 2004-00061

**Date Prepared:** 06/25/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	52.2	101	179	126	75-125	Х

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



## Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306426

Date Analyzed: 06/25/2008 Lab Batch ID: 726495

QC-Sample ID: 306427-005 S **Date Prepared:** 06/24/2008

Project ID: 2004-00061

Matrix: Soil Analyst: ASA Batch #:

eporting Units: mg/kg		M	ATRIX SPIKI	:/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE REC	VERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample		Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u></u>	% <b>R</b>		Result [F]	%R [G	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	937	94	1000	923	92	2	70-135	2	
C12-C28 Dicsel Range Hydrocarbons	235	0001	1130	90	0001	0601	98	5	70-135	5	

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

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

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



## **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306426

Lab Batch #: 726416

**Project ID:** 2004-00061

**Date Analyzed:** 06/25/2008

06/25/2008 Date Prepared:

Analyst: LATCOR

Batch #: QC-Sample ID: 306426-001 D

Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte			L		
Chloride	52.2	52.6	1	20	

Lab Batch #: 726278 **Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Batch #:

Analyst: IRO

QC-Sample ID: 306390-006 D

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.87	4.95	17	20	

## NPOES CHLOHIDES EPA 306.1 Project Name: LEA STATION LAND FARM TIRRO M.R.O.H CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project #: SR3: 2004-00061 PO#: PAA - C. J. Raynolds Project Loc: Les County, NM X Standard Report Format: 90° LI 80°82.9 SOIL SOIL SOIL SOIL SOR Sate cstanley@basinenv.com 12600 West I-20 East Odessa, Texas 79765 ر٥<u>.</u>٤,۵ HORN 10stH (505) 396-1429 Юн \*ONH A See otal #. of Containers Fax No: e-mail: 820 830 800 810 840 なるなら PAGE 01 OF 6/20/2008 6/20/2008 6/20/2008 6/20/2008 6/20/2008 Basin Environmental Service Technologies, LLC 100 | 100 | R Environmental Lab of Texas eginning Depth Lovington, NM 85260 (505) 441-2124-Company Address: P. O. Box 301 Curt Stanley CELL A TZ G 1 CELL A TZ G 2 CELLATZ 63 CELL A TZ G 4 CELL A TZ G S PIELD CODE ORDER# 306426 Sampler Signature: Project Manager; Company Name Telephone No. City/State/Zip: (lab use only) 9 8 1.69 33-

TAT implants

WEST AS AN INTERPRETATION TAT HEU

## **Environmental Lab of Texas**

	Variance/ Corrective Action Rep	port- Sample	e Log-In		
lient:	Plains				
ate/ Time:	06-23-08 @ 1706				
ab ID#:	306126				
itials:	AL				
	Sample Receipt	Checklist		<b>-</b> 11	
1 Tempere	nture of container/ cooler?	(Yes	No	4.0 °C	Initials
	container in good condition?	(Yes )	No		
	Seals intact on shipping container/ cooler?	Yes	No	(Nat Present)	
	Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
	Custody present?	(Yes)	No		
	instructions complete of Chain of Custody?	(Yes)	No		
	Custody signed when relinquished/ received?	(7es)	No		
	Custody agrees with sample label(s)?	रिक	No	ID written on Cont./ Lid	
	er label(s) legible and intact?	(Ves	No	Not Applicable	
	matrix/ properties agree with Chain of Custody?	(ves)	No	(чост-присына	
	ters supplied by ELOT?	Yes	No	<del> </del>	
	es in proper container/ bottle?	(Yes)	No	See Below	
	es properly preserved?	Yes	No	See Below	
	e bottles intact?	(Ves)	No	See below	
	vations documented on Chain of Custody?	(Va)	No		
	ners documented on Chain of Custody?	रिके	No	<del> </del>	
	ent sample amount for indicated test(s)?	1 (Pas)	No	001	
	poles received within sufficient hold time?			Soe Balow	
	<u> </u>	(Yes)	No	See Below	
	ntract of sample(s)?	Yes	No	Not Applicable	
#20 VOC s	amples have zero headspace?	(Yes)	No	Not Applicable	
	Variance Docu	mentation			
Contact:	Contacted by:		•	Date/ Time:	
Regarding:			<del></del>		
Corrective A	ction Taken:				
<del></del>					
Check all th	at Apply: See attached e-mail/ fax Cflent understands and wo Cooling process had begur				

### **Analytical Report 306427**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306427

Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306427. 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. 306427 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 306427**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell B TZ G 1	S	Jun-20-08 08:50		306427-001
Cell B TZ G 2	S	Jun-20-08 09:00		306427-002
Cell B TZ G 3	S	Jun-20-08 09:10		306427-003
Cell B TZ G 4	S	Jun-20-08 09:20		306427-004
Cell B TZ G 5	S	Jun-20-08 09:30		306427-005



# Certificate of Analysis Summary 306427 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Contact: Camille Reynolds Project Location: Lea County, NM

Project Id: 2004-00061

Date Received in Lab: Mon Jun-23-08 05:41 pm Report Date: 27-JUN-08

					Project Manager: Brent Barron, II	frent Barron, II	
	Lab Id:	306427-001	306427-002	306427-003	306427-004	306427-005	
A selection Description	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	
Anutysis Kequesteu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 08:50	Jun-20-08 09:00	Jun-20-08 09:10	Jun-20-08 09:20	Jun-20-08 09:30	
Inoroanic Anions by EPA 300	Extracted:						
	Analyzed:	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		26.7 5.07	36.5 10.1	34.4 5.04	30.7 5.04	12.0 5.02	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		1.39 1.00	1.17 1.00	ND 1.00	ND 1.00	ND 1.00	
TPH by SW8015 Mod	Extracted:	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	
	Analyzed:	Jun-25-08 14:46	Jun-26-08 11:18	Jun-25-08 15:40	Jun-25-08 16:06	Jun-25-08 16:33	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	The state of the s
C6-C12 Gasoline Range Hydrocarbons		ND 15.2	ND 15.2	ND 15.1	ND 15.1	ND 15.1	
C12-C28 Diesel Range Hydrocarbons		4010 15.2	2980 15.2	787 15.1	730 15.1	235 15.1	
C28-C35 Oil Range Hydrocarbons		1090 15.2	960 15.2	320 15.1	321 15.1	131 15.1	
Total TPH		9100	3940	1107	1051	366	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.

The interpresent expansive expressed throughout this analytical report represent the best judgment of XENCO Laboratories.

XENCO Laboratories assumes no responsibility and makes an warranty to the rid use of the data hereby presented.

Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306427

Project ID: 2004-00061

Lab Batch #: 726495

Sample: 306427-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	70.9	100	71	70-135	
o-Terphenyl	36.3	50.0	73	70-135	

Lab Batch #: 726495

Sample: 306427-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	84.0	100	84	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 726495

Sample: 306427-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]	1			
1-Chlorooctanc	65.2	100	65	70-135	**		
o-Terphenyl	34.2	50.0	68	70-135	**		

Lab Batch #: 726495

Sample: 306427-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	68.5	100	69	70-135	**
o-Terphenyl	35.2	50.0	70	70-135	

Lab Batch #: 726495

Sample: 306427-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	74.1	100	74	70-135	
o-Terphenyl	38.5	50.0	77	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306427

Project ID: 2004-00061

Lab Batch #: 726495

Sample: 306427-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	75.8	100	76	70-135	
o-Terphenyl	33.4	50.0	67	70-135	**

Lab Batch #: 726495

Sample: 306427-005 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			101		
I-Chlorooctane	75.1	100	75	70-135	
o-Terphenyl	33.3	50.0	67	70-135	**

Lab Batch #: 726495

**Sample:** 511212-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	88.1	100	88	70-135	<u> </u>
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 726495

**Sample:** 511212-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		100		70.125	
	80.1	100	80	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 726495

Sample: 511212-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R  D	Control Limits %R	Flags
I-Chlorocetane	80.4	100	80	70-135	
o-Tcrphenyl	37.0	50.0	74	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

**Work Order #:** 306427

Project ID:

2004-00061

Lab Batch #: 726416

Sample: 726416-1-BKS

Matrix: Solid

Date Analyzed: 06/25/2008

**Inorganic Anions by EPA 300** 

Analytes

**Date Prepared:** 06/25/2008

Analyst: LATCOR

Reporting Units: mg/kg

Chloride

B	atch #: 1	BLANK/E	BLANK SPI	KE REC	COVERYS	STUDY
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
	ND	10.0	11.3	113	75-125	

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







### Project Name: Lea Station Land Farm

Work Order #: 306427

Analyst: ASA

Date Prepared: 06/24/2008

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Lab Batch ID: 726495

Sample: 511212-1-BKS

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Batch #: 1 Units: mg/kg

OHAS. THE TE											
TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		[8]	[ <u>C</u> ]	<u>a</u>	Ξ	Result [F]	<u>[5</u>				
C6-C12 Gasoline Range Hydrocarbons	QX	1000	1080	108	1000	986	66	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	1120	112	1000	1010	101	10	70-135	35	

Relative Percent Difference RPD = 200\*(D-F)/(D+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 #: 306427

Lab Batch #: 726416 **Date Analyzed:** 06/25/2008

QC-Sample ID: 306426-001 S

**Date Prepared:** 06/25/2008

**Project ID:** 2004-00061

Analyst: LATCOR

Batch #:

Soil Matrix:

Reporting Units: mg/kg	MATE	XIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	52.2	101	179	126	75-125	Х

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



### Form 3 - MS / MSD Recoveries







Work Order #: 306427

Date Analyzed: 06/25/2008 Lab Batch ID: 726495

QC-Sample ID: 306427-005 S **Date Prepared:** 06/24/2008

Batch #: Analyst:

Matrix: Soil ASA

Project ID: 2004-00061

Flag Control Limits %RPD Control Limits 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 7 Spiked Dup. %R [G] 92 98 Duplicate Spiked Sample Result [F] 1090 923 Spike Added 1000 1000 Ξ Spiked Sample %R [D] 9 94 Spiked Sample Result 1130 C 937 Spike Added [B] 1000 1000 Parent Sample Result 235 ¥ 8 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E Matrix Spike Percent Recovery [D] = 100\*(C-A)BRelative Percent Difference RPD = 200\*(D-G)/(D+G)

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306427

Lab Batch #: 726416 Date Analyzed: 06/25/2008

Batch #:

**Project ID:** 2004-00061

**Date Prepared:** 06/25/2008

Analyst: LATCOR

QC- Sample ID: 306426-001 D

1 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[ <b>B</b> ]			
Chloride	52.2	52.6	1	20	

Lab Batch #: 726285

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306428-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	1.04	ND	NC	20	

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

					O NPDES	F	<u></u>	42' ¥SV	1.005 AGE 9200.1.1 RUSH TAT (Pre-screen's) 74. TAT brobants	x	×	×	×	×					2 z ©6	303 i 5 26	)z z ( 00,	dex come sear
QUEST 563-1800 563-1713	Project Name: LEA STATION LAND FARM				TRRPP		<u> </u>	ът.	TOST  MAGN  MAGN	Ê	Î		Î			1	‡			7	, 1	- -
ALYSIS REQUEST Phono: 432-563-1800 Fax: 432-563-1713	ATION LA	Project #: SRS: 2004-00061	NN Y	PO #: PAA · C. J. Reynolds		Anakeza For	- 221		Number As An Bar Col Cri For High 8 Volumes  Seminobelling							#	$^{\pm}$		Laboratory Comments: Sample Conteiners Infact?	Custody seeds on columns of custody seeds on columns of custody seeds on columns.	nple Hard Delivered by Samptar/Cean Rep.	1000 TO 100 TO 1
AND ANA	EA ST	SRS: 2	Project Loc: Les County, NIM	PAA . C.	Standard		100		Codons (Cs. SOs. Ascalingy) Anions (Ci. SOs. Ascalingy)							$\pm$	$\pm$		Laboratory Comments Sample Conteners inter	beats on col	Sample Hand Delivered by Samplar/Clear Re	27
RECORD A	roject Name	Project	Project Lox	ğ	Report Format:			<del></del>	TPH: 1X 1006 TX 1006 TPH: 1X 1006 TX 1006 TPH: 1X 1006 TX 1006	×	×	×	×	×		$\ddagger$	1	1	3.63	230 C	S.	
USTODY I	۵.	ı	1	1	Repo	E		rs Matrix	CA - Clorendastri 3-20kiego Capel (2004)	SOIL	SOIL	SOIL	SOIL	SOIL		1	$\downarrow$	-		Date	Date	Date Jens
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 422-563-1800 Fax: 432-563-1713						nenv.co		of Contains	NDM O <sub>2</sub> S <sub>2</sub> O <sub>3</sub>							1	1	-		-	-	
CHAIN OF 12600 West I-20 East Odessa, Texas 79765			***************************************		F1429	cstanley@basinenv.com		Preservation & / of Containers	H'20" HCI HIOP								+	-				
126/ Ode					(505) 386-1429	cstani		Pres	ingd Filtered  out 8, or Contrainers  to	×	1 X	×	۲ ۲	۲		‡						77
	01				Fax No:	e-mail:			belqma2 emiT	850	900	910	920	930								7
	PAGE 01 OF	ogles, LLC							belgmeS ateQ	6/20/2008	6/20/2003	6/20/2008	6/20/2008	6/20/2008						Received by.	Received by.	Received by ELOT.
as		Technol					)		ագլան ըջբեր	-						$oxed{I}$	T			Terrie	2	Time
Ţex.		J Service			()	1	/ ハ		վերոն ընդումերը	-		-		-	-	+	+	+		Date / 7258	4	-
ab of	antey	Basin Environmental Service Technologies, LLC	ox 301	Lovington, NM 88260	605) 441-2124	X X	1			-	. 2	.3	4	80						(C/7A	ä	Date
Environmental Lab of Texas	Project Manager. Curt Stanley	Company Name Basin E	Company Address: P. D. Box 301		_	Sampler Signature:		306427	FIELD CODE	CELL B TZ G 1	CELL B 12 G 2	CELL B TZ G 3	CELL B TZ G 4	CELL B TZ G 5				The state of the s	;; (		1	
Enviror	Project	Compar	Compar	City/State/Zip:	Telephone No:	Sampler	(tab use cubs)		(vino seu dzi) a BAJ	130	200-	<del>-</del>	જ્ય	Jsou-		-	-		Special Instructions:	To John States	Reimpurshed by	Relinquished by:

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client;	Plains					
Date/ Time;	06-23-08 6	2 1706				
Lab IO # :						
Initials:	AL					
		0	Ob 1.02 - 1			
		Sample Receipt	Cnecklist		_	illent initials
#1 Tempera	ture of container/ cooler	-2	(Yes)	No	प.ठ ∘टॉ	neminitals
	container in good cond		(Yes	No	7.0 0	
	Seals Intact on shipping		Yes	No	(Not Present)	
	Seals intact on sample		(Yes)	No	Not Present	
	Custody present?	,	(Yes)	No	- TION I COOK	
	instructions complete of	Chain of Custody?	(Yes)	No		
	Custody signed when re		(Yes)	No		
#8 Chain of	Custody agrees with sa	mple label(s)?	(Yes)	No	ID written on Cont./ Lid	
	er label(s) legible and int		(Yes)	No	Not Applicable	<del></del>
		with Chain of Custody?	(Yes)	No		
	ers supplied by ELOT?		(Yes)	No		
	s in proper container/ bo	ottle?	(Yes)	No	See Below	<del></del>
	s properly preserved?		Yes	No	See Below	
	bottles intact?		(Yes)	No	366 DEIGW	
	vations documented on (	Chain of Custody?	CYES	No		
	ners documented on Chi		(Yes)	No		<del></del>
	ent sample amount for in		(Ves)	No	See Below	
	ples received within suf		(Yes)	No	See Below	
	ntract of sample(s)?		Yes	No	(Not Applicable)	<del></del>
	amples have zero heads	pace?	(Yes)	No	Not Applicable	<del>  </del>
L					1 17007 (ppilozoto	LJ
		Variance Docu	mentation			
Contact:		Contacted by:			Date/ Time:	
		,		-		
Regarding:						
					*	
Corrective A	ction Taken:					
******************			····			
					W-11	
			<del></del>	~····		
Check all th		See attached e-mail/ fax			•	
		Client understands and wou				
		Cooling process had begun	shortly after	sampling	event	
		a grandense skypterny nepolity ridni rendensembelakeni in heke				
37					•	

### **Analytical Report 306428**

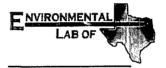
for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306428
Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306428. 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. 306428 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 306428**



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

Lea Station Land Farm

Sample 1d	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell C TZ G 1	S	Jun-20-08 09:40		306428-001
Cell C TZ G 2	S	Jun-20-08 09:50		306428-002
Cell C TZ G 3	S	Jun-20-08 10:00		306428-003
Cell C TZ G 4	S	Jun-20-08 10:10		306428-004
Cell C TZ G 5	S	Jun-20-08 10:20		306428-005



Contact: Camille Reynolds

Project Id: 2004-00061

Project Location: Lea County, NM

# Certificate of Analysis Summary 306428 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Mon Jun-23-08 05:41 pm

Report Date: 27-JUN-08

Brent Barron 11 Project Manager.

					Project Manager: Brent Barron, II	Brent Barron, 11	
	Lab Id:	306428-001	306428-002	306428-003	306428-004	306428-005	
Amelicie Doggested	Field 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	
maisan kadumu	Depth:						
	Matrix:	SOIL	TIOS	SOIL	SOIL	Non	
	Sampled:	Jun-20-08 09:40	Jun-20-08 09:50	Jun-20-08 10:00	Jun-20-08 10:10	Jun-20-08 10:20	
Inorganic Anions by FPA 300	Extracted:						
	Analyzed:	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.04	9.85 5.05	13.3 10.1	12.1 10.1	21.8 5.05	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 07:50	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		ND 1.00	1.04 1.00	ND 1.00	1.09 1.00	1.03 1.00	
TPH by SW8015 Mod	Extracted:	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	
	Analyzed:	Jun-25-08 12:07	Jun-25-08 12:33	Jun-25-08 12:59	Jun-25-08 13:26	Jun-26-08 11:45	
	Units/RL:	mg/kg RL	mg/kg R.L.	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.1	ND 15.2	ND 15.1	ND 15.2	ND 15.2	
C12-C28 Diesel Range Hydrocarbons		484 15.1	745 15.2	576 15.1	345 15.2	329 15.2	
C28-C35 Oil Range Hydrocarbons		217 15.1	237 15.2	285 15.1	186 15.2	223 15.2	
Total TPH		701	286	198	531	552	

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

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

Since 1990

Odessa Laboratory Director Brent Barron

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

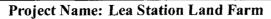
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Phone Fax (281) 589-0692 (281) 589-0695 11381 Meadowglen Lane Suite L Houston, Tx 77082-2647 9701 Harry Hines Blvd, Dallas, TX 75220 (214) 902 0300 (214) 351-9139 (210) 509-3334 (210) 509-3335 5332 Blackberry Drive, Suite 104, San Antonio, TX 78238 (813) 620-2033 (813) 620-2000 2505 N. Falkenburg Rd., Tampa, FL 33619 (305) 823-8555 5757 NW 158th St, Miami Lakes, FL 33014 (305) 823-8500 (770) 449-8800 (770) 449-5477 6017 Financial Dr., Norcross, GA 30071



### Form 2 - Surrogate Recoveries





Work Order #: 306428

Project ID: 2004-00061

Lab Batch #: 726495

Sample: 306427-005 S / MS

Batch:

Matrix: Soil

Units: mg/kg	su	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found {A}	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctanc	75.8	100	76	70-135	
o-Terphenyl	33.4	50.0	67	70-135	**

Lab Batch #: 726495

Sample: 306427-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroctane	75.1	100	75	70-135	
o-Terphenyl	33.3	50.0	67	70-135	**

Lab Batch #: 726495

Sample: 306428-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			101		
1-Chlorooctane	60.7	100	61	70-135	**
o-Terphenyl	31.0	50.0	62	70-135	**

Lab Batch #: 726495

Sample: 306428-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	70.0	100	70	70-135	
o-Terphenyl	35.4	50.0	71	70-135	

Lab Batch #: 726495

Sample: 306428-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.6	100	71	70-135	
o-Terphenyl	35.6	50.0	71	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306428

Lab Batch #: 726495

Sample: 306428-004 / SMP

**Project ID: 2004-00061** 

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		'-7	[D]		
1-Chlorooctane	65.7	100	66	70-135	**
o-Terphenyl	33.2	50.0	66	70-135	**

Lab Batch #: 726495

**Sample:** 306428-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes  1-Chlorooctane	79.1	100	79	70-135	
o-Terphenyl	40.2	50.0	80	70-135	

Lab Batch #: 726495

**Sample:** 511212-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 726495

**Sample:** 511212-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	-
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	80.1	100	80	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 726495

**Sample:** 511212-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes	00.4	100		70.125	
1-Chlorooctane	80.4	100	80	70-135	
o-Terphenyl	37.0	50.0	74	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306428

Project ID:

2004-00061

Lab Batch #: 726416

Sample: 726416-1-BKS

Matrix: Solid

Date Analyzed: 06/25/2008

Date Prepared: 06/25/2008

Renorting Units: mg/kg

Analyst: LATCOR 1 RIANK /RIANK SPIKE DECOVERY STUDY

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SP	KE REC	OVERY	ן אטיני
Inorganic Anions by EPA 300	Blank Result	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[6]	[C]	[D]	/0 K	
Chloride	ND	10.0	11.3	113	75-125	



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306428

Date Prepared: 06/24/2008

Batch #: 1

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Matrix: Solid

Lab Batch ID: 726495 Analyst: ASA

Sample: 511212-1-BKS

Flag Limits %RPD 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 01 6 Blk. Spk Dup. %R [G] 101 66 Blank Spike Duplicate Result [F] 1010 986 Spike Added 0001 1000 Blank Spike %R [D] 112 108 Blank Spike Result [C] 1120 1080 Spike Added 0001 1000 <u>B</u> Blank Sample Result ₹ N N 8 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Relative Percent Difference RPD = 200\*(D-F)/(D+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 #: 306428

Lab Batch #: 726416

**Date Analyzed:** 06/25/2008

QC- Sample ID: 306426-001 S

06/25/2008 Date Prepared:

**Project ID:** 2004-00061

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	52.2	101	179	126	75-125	Х

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



## Form 3 - MS / MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306428

Lab Batch ID: 726495

Date Analyzed: 06/25/2008

Project ID: 2004-00061

Matrix: Soil ASA Batch #: Analyst: QC-Sample ID: 306427-005 S Date Prepared: 06/24/2008

	M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	3 / MATE	IIX SPII	KE DUPLICA'	TE REC	VERY S	STUDY		
TPH by SW8015 Mod Sample Parent	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits		Flag
		<u>)</u>	<u> </u>	Added [E]	Added   Result [F]		<b>%</b>	%K	%RPD	
C6-C12 Gasoline Range Hydrocarbons	1000	937	94	1000	923	92	2	70-135	2	
C12-C28 Diesel Range Hydrocarbons	1000	1130	06	1000	0601	98	5	70-135	5	·

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

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

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



### Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 306428

Lab Batch #: 726416

Date Analyzed: 06/25/2008 Date Prepa

Project ID

**Project ID:** 2004-00061

**Date Prepared:** 06/25/2008

Analyst: LATCOR

QC- Sample ID: 306426-001 D Batch #:

Matrix: Soil

Reporting Units: mg/kg SAMPLE / SAMPLE DUPLICATE RECOVERY

Inorganic Anions by EPA 300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	52.2	52.6	1	20	

Lab Batch #: 726278

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306390-006 D

Batch #:

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

					O . 2011
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	5.87	4.95	17	20	

Lab Batch #: 726285

Date Analyzed: 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306428-002 D

Batch #:

Matrix: Soil

Reporting Units: % SAMPLE / SAMPLE DUPLICATE RECOVERY							
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag		
Analyte		. ,		İ			
Percent Moisture	1.04	ND	NC	20			

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-563-1800 ras 79765 Fax: 432-563-1713	Project Name: LEA STATION LAND FARM	Project #: SRS: 2004-00061	Project Loc: Lea County, NM	PO #: PAA . C. J. Raynolds	Repon Format: [X] Standard		Attalyzo For	X	es c	11D EW COLLARD AND AND AND AND AND AND AND AND AND AN	SOIL X	SOIL X	SOIL X	SOIL X	SOIL X				Laboratory Continents: Sample Containes Intest? VOCs Free of Headspace?	aug)	S S
CHAIN OF CUST 12600 West H20 East Odessa, Texas 79765	and the state of t	**************************************	***************************************		(505) 396-1429	cstanley@basinem.com			Preservation & For Containers	(Sea B. of Compleyes  1440,  1440,  1450,  1450,  1454	1 × 1	1 X	1 X	× -	1 X				de consultament	One	Date
	PAGE 01 OF 01	es, LLC			Fax No.	8-mail;			<u></u>	baktma2 atoO boktma2 amiT	6/20/2008 940	6/20/2008 950	6/20/2008 1000	6/20/2008 1010	6/20/2008 1020				and the second s	Recoived by:	Received by:
S	٥	Technolog					/		-	ըսգլսծ ըթեգք						1	1	1		706 R	·
Environmental Lab of Texas	Curt Stanley	Basin Environmental Service Technologies, LLC	, O. Box 301	Lovington, NM 89260	(505) 441-2124	大きなし	7	<u>~</u>	3	պ <b>ոս</b> -ը նպսսյենը	-	CELL C TZ G 2	CELL C TZ G 3	CELL C TZ G 4	CELL C TZ G S				Commenting and a comment of the comm	1 By E2 17	Daw
rironmenta	Project Manager. C	Company Name B	Company Address: P. O. Box 301	City/State/Zip:	Telephone No: (5	Sampler Signature:	in the second se	Q 10108	ORDER #: CO LC	And one only)	35 CELL CTZ G	-soc cert c	2003 CELL C	SOLL CELL C	201130 CELL C				Special Instructions:	- Andrew Seines	Particularies Dec

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

Client: F	lains					
Date/ Time:	06-23-08	C 1706				
.ab ID # :	306428					
nitials:	AL					
		Sample Receipt	Checklist			
			1 4 5		<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	iont Initials
	e of container/ cool		(Yes)	No No	4.0 °C	
	ntainer in good con		Yes	No	(Not Present)	
		g container/ cooler? bottles/ container?	(Yes)	No	Not Present	
		: bottles/ container?	(Yes)	No	Not Present	
	stody present?	4 Chain of Custody2	(Ves)	No	<del>   </del>	
		of Chain of Custody?	(Yes)		<del> </del>	
		relinquished/ received?		No No		
	stody agrees with s		(30)		ID written on Cont / Lid	
	bel(s) legible and in		Yes	No	Not Applicable	
		ee with Chain of Custody?	(Yes)	No		
	supplied by ELOT		Yes	No		
	proper container/ i	onie7	(Yes)	No	See Below	
	roperly preserved?		(Yes)	No	Sce Below	
14 Sample bo			(Yes)	No		
		Chain of Custody?	CABA	No		
	documented on C		(Yes)	No		
	sample amount for i		(Yes)	No	See Below	
18 Ali sample:	s received within su	ifficient hold time?	(Yes)	No	See Below	
#19 Subcontrac	ct of sample(s)?		Yes	No	(Not Applicable)	
#20 VOC samp	oles have zero head	Ispace?	(Yes)	No	Not Applicable	
		Variance Docu	mentation			
Contact:		Contacted by:		_	Date/ Time:	
Regarding:						
	····		······································			
Corrective Actio	n Taken:					
				····		
Check all that A	Apply:	See attached e-mail/ fax Client understands and wor Cooling process had begur	•		•	
	_		-			
and the second reserve to the second re-		And the second			art -	

### **Analytical Report 306429**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306429

Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306429. 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. 306429 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 306429**



### 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-20-08 10:30	306429-001
Cell D TZ G 2	S	Jun-20-08 10:40	306429-002
Cell D TZ G 3	S	Jun-20-08 10:50	306429-003
Cell D TZ G 4	S	Jun-20-08 11:00	306429-004
Cell D TZ G 5	S	Jun-20-08 11:10	306429-005



# Certificate of Analysis Summary 306429 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Project 1d: 2004-00061

Contact: Camille Reynolds Project Location: Lea County, NM

Date Received in Lab: Mon Jun-23-08 05:42 pm

Report Date: 27-JUN-08
Project Manager: Brent Barron

					Project Manager: Brent Barron, II	3rent Barron, II	
	Lab Id:	306429-001	306429-002	306429-003	306429-004	306429-005	
Analysis Donnordad	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	
naisanhay sistinuv	Depth:						
	Matrix:	TIOS	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 10:30	Jun-20-08 10:40	Jun-20-08 10:50	Jun-20-08 11:00	Jun-20-08 11:10	
Inorganic Anions by EPA 300	Extracted:						
	Analyzed:	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	Jun-25-08 20:58	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		15.9 5.04	36.2 5.03	103 5.03	106 5.04	61.1 5.03	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		ND 1.00	ND 1.00	ND 1.00	ND 1.00	ND 1.00	
TPH by SW8015 Mod	Extracted:	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	Jun-24-08 17:30	
	Analyzed:	Jun-25-08 16:59	Jun-25-08 17:25	Jun-25-08 17:52	Jun-25-08 18:18	Jun-25-08 18:44	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.1	20.3	ND 15.1	ND 15.1	ND 15.1	
C12-C28 Diesel Range Hydrocarbons		2460 15.1	2940 15.1	2970 15.1	1.51 0661	2080 15.1	
C28-C35 Oil Range Hydrocarbons		659 15.1	730 15.1	763 15.1	640 15.1	1.51 595	
Total TPH		3119	3690.3	3733	2630	2645	

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

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

Since 1990

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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



### Form 2 - Surrogate Recoveries





Work Order #: 306429

Lab Batch #: 726495

Project ID: 2004-00061

Sample: 306427-005 S / MS

Matrix: Soil Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	75.8	100	76	70-135				
o-Terphenyl	33.4	50.0	67	70-135	**			

Lab Batch #: 726495

**Sample:** 306427-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	75.1	100	75	70-135				
o-Terphenyl	33.3	50.0	67	70-135	**			

Lab Batch #: 726495

Sample: 306429-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
Analytes									
1-Chlorooctane	70.1	100	70	70-135					
o-Terphenyl	36.3	50.0	73	70-135					

Lab Batch #: 726495

Sample: 306429-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	74.3	100	74	70-135	
o-Terphenyl	38.5	50.0	77	70-135	

Lab Batch #: 726495

Sample: 306429-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
1-Chlorooctane	66,2	100	66	70-135	**					
o-Terphenyl	33.7	50.0	67	70-135	**					

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries





Work Order #: 306429

Project ID: 2004-00061

Lab Batch #: 726495

Sample: 306429-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	74.3	100	74	70-135			
o-Terphenyl	38.8	50.0	78	70-135			

Lab Batch #: 726495

Sample: 306429-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	72.7	100	73	70-135			
o-Terphenyl	38.0	50.0	76	70-135			

Lab Batch #: 726495

**Sample:** 511212-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[ <b>D</b> ]				
1-Chlorooctane	88.1	100	88	70-135			
o-Terphenyl	41.0	50.0	82	70-135			

Lab Batch #: 726495

Sample: 511212-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	80.1	100	80	70-135		
o-Terphenyl	41.8	50.0	84	70-135		

Lab Batch #: 726495

**Sample:** 511212-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	80.4	100	80	70-135		
o-Terphenyl	37.0	50.0	74	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306429

Project ID:

2004-00061

Lab Batch #: 726416

Sample: 726416-1-BKS

Matrix: Solid

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: LATCOR

Reporting Units: mg/kg	BLANK/BLANK SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	:
Chloride	ND	10.0	11.3	113	75-125	



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306429

**Date Prepared:** 06/24/2008

Batch #: 1

**Project ID: 2004-00061** Date Analyzed: 06/25/2008

Matrix: Solid

Lab Batch ID: 726495 Analyst: ASA

Sample: 511212-1-BKS

Flag Limits %RPD 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD 2 6 Dup. %R [G] 66 [ □ Blank Spike Duplicate Result [F] 1010 986 Spike Added 1000 1000  $\Xi$ Blank Spike %R [D] 112 801 Blank Spike Result [C] 1120 1080 Spike Added 1000 1000 <u>B</u> Blank Sample Result ₹ ND Ð TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306429

Lab Batch #: 726416

**Date Analyzed:** 06/25/2008

QC- Sample ID: 306426-001 S

Project ID: 2004-00061

**Date Prepared:** 06/25/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
[A]	{B}	1			
52.2	101	179	126	75-125	х
	Parent Sample Result	Parent Sample Spike Result Added [A] [B]	Parent Sample Result Added [A]  [B]  Spiked Sample Result [C]	Parent Sample Result Added [A] [B]  Spiked Sample Result   %R [C]   [D]	Sample Spike Result %R Limits Result Added [C] [D] %R  [A] {B}

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

All Results are based on MDL and Validated for QC Purposes



## Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306429

Lab Batch ID: 726495

Date Analyzed: 06/25/2008

Project ID: 2004-00061

Matrix: Soil Batch #:

Analyst: ASA QC-Sample ID: 306427-005 S Date Prepared: 06/24/2008

eporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA	TE REC	VERY S	TUDY		П
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u></u>	[ <u>D</u>	Added [E]	Result [F]		%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QN	1000	937	94	1000	923	92	2	70-135	2	
C12-C28 Dicsel Range Hydrocarbons	235	1000	1130	06	1000	0601	98	5	70-135	5	

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306429

Lab Batch #: 726416

Project ID: 2004-00061

Date Analyzed: 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: LATCOR

QC- Sample ID: 306426-001 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		• • •			
Chloride	52.2	52.6	1	20	

Lab Batch #: 726285

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306428-002 D

Batch #:

Matrix: Soil

Reporting Units: %

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	1.04	ND	NC	20	

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

						ž 8	.00 VY 8553,	est 1-2 Texas	12600 West I-20 East Odessa, Texas 79765						Phone Fax:	14.20 East 732-563-1800 Phone: 432-563-1800 Fax: 432-563-1713	63-1800			
Project Manager:	Curt Stanloy		PAGE 01 OF	F 01			I				а.	roject	Name	LEA	TATE	Project Name: LEA STATION LAND FARM	AD FA	X.		
Company Name	Basin Environmental Service Technologies, LLC	vice Techn	ologies, LL.C									Pro	ject #	SRS	2004	Project #: SRS: 2004-00061				- 1
Company Address: P. D. Box 301	P. O. Box 301					- 1	1					Projec	1100	C sel	Project Loc: Les County, NM	×				
City/State/Zip:	Lowington, NM 88260												P0 #	PAA.	C. J. R	PO #: PAA - C. J. Reynolds		ļ		
Telephone No:	(505) 44 (-2124			Fax No:	· ·	(505) 396-1429	6-142	ca			Repo	Report Format:	nat:	X S	X Standard		TRRP		∏ NPDES	SES
Sampler Signature:	イオジナ			е-та	Oil	stan	ev(6	bas	cstanley@basinenv.com	mos										
1	( 00%	]										Ш		5		Ansayze For			T	E24 62
ORDER# > U64(7	171					Ĕ	Servas	ion & f	Preservation & f of Container	thers	Matrix	85	-	-	04					'ŝr
FIELC	FIELD CODE	diga grinninga B diga grinninga diga grinni	boldinais otisti	belymaß emfT ,	bonds to the	Total #. of Containers	HC1 HMO <sup>7</sup>	.02,1	HOUN CA-Sten	Other ( Specify)	CM - CLOUNDANCE 2-2014201 CM - DUNKUD MITEL 21-2010	STOR WOLD 1'016 THAI	(PH; TX 1006 TX 1006 GBSoos (Ca, Mg, Ra, K)	SAR / ESP / CEC Arrions (Co., SCA., Assaintity)	лонајее Мешк. Ла Ад Ва Со Ст Ро Нg S	- satisvovinae ess xerusetecenersel xere	нови.	CHLORIDES EPA 300.1		At laubense org TAT HRUR
CELL	CELL D TZ G 1		6/20/2008	1030	-	×	-		_	F	SOIL	×	-	-				×		×
CELLI	CELL D 12 G 2		6/20/2008	1040	-	×				-	SOIL	×	-	-			-	×		
CELL	CELL D TZ G 3		6/20/2008	1050	H	×					SOIL	×		-				×		
CELLI	CELL D TZ G 4		6/20/2008	1100	-	×	-				SOIL	×		-				×		
CEIT I	CELL D TZ G \$		6/20/2008	1110		×	$\vdash$			H	SOIL	×		$\vdash$				×		
		-			-		-										$\exists$		$\Box$	7
		+			+	#	-		#	T		丰			$\pm$	$\pm$		1	1	
		+			╁	1	╁		#	$\mp$		1	-	+	1	1	上	士	Ţ	1
		_			+	二	-		L	-		上	-	-						
special Instructions:					1	1	1					1	2 % E	orator Tree Or	Laboratory Comments Sampla Containers Inter VOCs Free of Headsnee	Laboratory Comments: Sampla Containers Intact VOCs Free of Headsneed		4370	60	zz
大	1423 bi	175 JE	Received by:						<u> </u>	Oats		Ē	∄83 	20 co	Labels on container(s) Obstody seals on contain Custintly seals on coller	opler(s	3	80°		PES
eshquismed by:	शब्दा	Time	Received by,				1		1	Site O		eus.	Sa	pple He by Sam	Sample Hand Deliverer by Sampler/Gent R by Courtery	httle Hand Delivered by Samplar/Client Rep. by Courter? UPS	, <u>F</u>		500 m	220
Returnshed by:	Date	Time	Repeived by ELOT	1,1	1				-	Date		all a	Date Terris	7	22	4 82 0 035				ç

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains				
Date/ Time: 06-23-08 @ 1706				
Lab ID#: 306 429				•
Initials: AL				
Sample Receipt	Checklist	•		
	· · · · · · · · · · · · · · · · · · ·			nt Initials
#1 Temperature of container/ cooler?	(Yes)	No	4.0 .0	
#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)?	(Jeb)	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?	প্রে	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	
Contact: Contacted by:  Regarding:	mentation		Date/ Time:	
Corrective Action Taken:	·			
Check all that Apply:  See attached e-mail/ fax Client understands and wou Cooling process had begun			•	
	gynenen – i skulere	gge gge		

### **Analytical Report 306430**

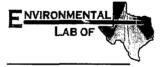
for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306430 Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306430. 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. 306430 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 306430**



### 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-20-08 11:00		306430-001
Cell E TZ G 2	S	Jun-20-08 11:30		306430-002
Cell E TZ G 3	S	Jun-20-08 11:40		306430-003
Cell E TZ G 4	S	Jun-20-08 11:50		306430-004



Contact: Camille Reynolds Project Location: Lea County, NM

**Project 1d: 2004-00061** 

# Certificate of Analysis Summary 306430 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Mon Jun-23-08 05:42 pm Report Date: 27-JUN-08

					Project Manager: Brent Barron, Il	ron, II
	Lab Id:	306430-001	306430-002	306430-003	306430-004	
Analysis Damasta	Field Id:	Cell E TZ G i	Cell E TZ G 2	Cell E TZ G 3	Cell E TZ G 4	
Anutysis Nequesieu	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 11:00	Jun-20-08 11:30	Jun-20-08 11:40	Jun-20-08 11:50	
Inorganic Anions by FPA 300	Extracted:					
	Analyzed:	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	
	Units/RL:	mg/kg RL	mg/kg R.L.	mg/kg RL	mg/kg RL	
Chloride		ND 5.04	ND 5.04	ND 5.02	ND 5.02	
Percent Moisture	Extracted:					
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		ND 1.00	00.1 UN	ND 1.00	ND 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	
	Analyzed:	Jun-25-08 23:37	Jun-26-08 00:04	Jun-26-08 00:30	Jun-26-08 00:57	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.1	ND 15.1	ND 15.1	ND 15.1	
C12-C28 Diesel Range Hydrocarbons		718 15.1	1140 15.1	422 15.1	116 15.1	
C28-C35 Oil Range Hydrocarbons		371 15.1	521 15.1	217 15.1	72.6 15.1	
Total TPH		1089	1991	639	188.6	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restances of thoughout file sandycial report research the object of XENCO Laboratories. XENCO Laboratories assumes so responsibility and makes no warranty to the end use of the data threthy presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

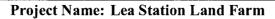
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477
	(281) 589-0692 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500



### Form 2 - Surrogate Recoveries





Work Order #: 306430

Project ID: 2004-00061

Lab Batch #: 726461

Sample: 306430-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	St	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	, ,		[D]		
1-Chlorooctane	70.4	100	70	70-135	
o-Terphenyl	36.5	50.0	73	70-135	

Lab Batch #: 726461

Sample: 306430-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			ושו		
1-Chlorooctane	75.0	100	75	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

Lab Batch #: 726461

Sample: 306430-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1-Chlorooctanc	73.0	100	73	70-135	
o-Terphenyl	36.8	50.0	74	70-135	

Lab Batch #: 726461

Sample: 306430-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	68.9	100	69	70-135	**
o-Terphenyl	34.7	50.0	69	70-135	**

Lab Batch #: 726461

Sample: 306432-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	}		{ <b>D</b> ]		
1-Chlorooctane	85.2	100	85	70-135	
o-Terphenyl	40.1	50.0	80	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

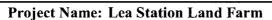
Surrogate Recovery [D] = 100 \* A / B

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries





Work Order #: 306430

Project ID: 2004-00061

Lab Batch #: 726461

Sample: 306432-001 SD / MSD

Matrix: Soil Batch:

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	40.2	50.0	80	70-135	

Lab Batch #: 726461

**Sample:** 511196-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.8	100	82	70-135	
o-Terphenyl	38.8	50.0	78	70-135	

Lab Batch #: 726461

**Sample:** 511196-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	79.8	100	80	70-135			
o-Terphenyl	42.4	50.0	85	70-135			

Lab Batch #: 726461

**Sample:** 511196-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	81.0	100	81	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



### Project Name: Lea Station Land Farm

Work Order #: 306430

Project ID:

2004-00061

Lab Batch #: 726538

Sample: 726538-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Reporting Units: mg/kg

RLANK /RLANK SPIKE RECOVERY STUDY

Keporting Ontis: hig/kg	aten #:	DLANK/D	LANK SPI	KE KEC	OVERYS	1001
Inorganic Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	11.7	117	75-125	



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306430

Date Prepared: 06/25/2008

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Lab Batch ID: 726461 Analyst: ASA

Sample: 511196-1-BKS

Matrix: Solid Batch #: 1

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	KECOVE	KY STUD	Į,	
TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		<b>8</b>	[c]	[ <u>Q</u> ]	<u>E</u>	Result [F]	<u>.</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	868	06	1000	068	68	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	888	68	1000	882	88	1	70-135	35	

Relative Percent Difference RPD = 200\*((D-F)/(D+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 #:** 306430

Lab Batch #: 726538

QC- Sample ID: 306430-001 S

**Date Analyzed:** 06/26/2008

Date Prepared:

**Project ID:** 2004-00061

06/26/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

•	Reporting Units: mg/kg	MATE	RIX' / MA	TRIX SPIKE	RECOV	ERY STU	DY
	Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
1	Analytes						
	Chloride	ND	101	122	121	75-125	F

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



## Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306430

Lab Batch ID: 726461

Date Analyzed: 06/26/2008 Repor

QC-Sample ID: 306432-001 S

Batch #:

Analyst: ASA Date Prepared: 06/25/2008

Matrix: Soil

Project ID: 2004-00061

porting Units: mg/kg		W	ATRIX SPIKI	[/MAT]	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE REC	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample S	Spiked Sample	spike	S	Spiked Dup.	GAN	Control Limits	Control Limits	Flag
Analytes	Result [A]		[C]	<u>5</u> 8	Added [E]	Result [F]	%R [G]	%	% <b>R</b>	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QN	0901	0001	94	1060	992	94	0	70-135	0	
C12-C28 Diesel Range Hydrocarbons	QN	0901	1010	95	1060	0001	94	-	70-135	1	

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306430

Lab Batch #: 726538

\_ \_ \_

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

**Date Analyzed:** 06/26/2008 **D**: **QC- Sample ID:** 306430-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Inorganic Anions by EPA 300

Parent Sample Sample Control

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

Lab Batch #: 726285

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306428-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.04	ND	NC	20	

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

					NPDES		Ţ	W Z. '	a (achthaire)	TAT HZUR	×	Ť	×	Ť	1			#	1 2	z z z( 0000	(00)	Ex Lone Sur
2UEST 63-1800 63-1713	ND FARM				TRRP					CHTOBEDER HOBW GOL	×	×	×	×						1		2 C
/ALYSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713	Project Name: LEA STATION LAND FARM	004-00061	nty, NM	PO#: PAA · C. J. Reynolds			Anatyze r or.	Ž	a CaCrebege	Vokative Semivotes								#	Comments:	Headspace flame(s) on containe	on coordig Delivered Incless Rep	Security CPS
AND ANA Pł	re: LEA ST	Project #: SRS: 2004-00061	Project Loc: Les County, NM	#: PAA - C.	X Slandard			TOLP	C Value (A)	Colona (Ca. Mg Aniona (Ca. SCM SAR / ESP / CE				1				#	abountory C	ACS Free of Head abels on contained setedy seals on co	Custody seels on copiese Sample Hand Delivere by Samplan Clein R	John J.
, RECORD	Project Nam	Project	Project Lo	М	Report Format:			Ц	9001 X1 19103 (173198)	2001 XI 1903 1.816 H9T 1.816 H9T	×	×	×	×	#	<u> </u>		+	1	*	ami	sun)
cusropr	-	***************************************	-	vagaserracios		uo.			SORS-15 ASIA	CW = Crountw.  Cuber ( Specify)  Your	SOIL	SOIL	SOIL	SOIL				_		Dete	Dais	Chie
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 422-563-1900 Nav 70165						ostanley@basinenv.com			Nessivation & F. Colleans	CHS'N)					+			#			<del> </del>	
CHAIN OF 12600 West I-20 East Odessa, Texas 79765				***************************************	(505) 396-1429	tanley@b			One Assault	HCI HMO <sup>2</sup> Kris	×	×	×	×	-			#				
			-		Fax No: (50	e-mail; cs		•	5200.1	Field Felland	-	-	-	Ŧ				1				9
	10 40				ř.	5			De	AgmaS emiT	1120	1130	1140	1150				_				
	PAGE 01 OF	ogles, LLC			***************************************				þ	elqme& aleQ	6/20/2003	6/20/2008	6/20/2008	6/20/2008						Receives by:	Roceived by:	13/4 partiana)
S		chnol	Ì				,	1	,	Ending Dept										Sui J	201	True
Геха		Service To				1	5		yida	oG gainalge6					+	-		-	-			+
Environmental Lab of Texas	Curt Seamley	Basin Environmental Service Technologies, LLC	O. Box 301	Levington, NM 83260	1505) 411-7124	X - X		) -		<u> ತಿ</u> ರಂ	1561	TZ G 2	TZ G 3	1264		***************************************		***************************************		are	3 3 3 4 4 7 7 7 7	Daia
menta			Company Address: P. O. Box 301			Sampler Signature:	′	30/413		FRELD CODE	CELL ETZ G	CELL E TZ G 2	CELL E TZ G 3	CELL E 12 G 4					22	U		
vironi	Project Manager:	Company Name	Company	City/State/Zlp.	Tetephone No:	Sampler :		-	ii J	7,	-	. 2	3	T,	-,   -,   :		1		Special Instructions:	) All Maries	Signal Si	Reunquathed by.
ш								e e	outy)	seu dell # ElA.	18	8	-003	786		1.	11	1	Specia	#		Reting

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

olient Plains				
Pate/ Time: 06-23-08 @ 1706				
ab ID#: 306430				
nitials: AL				
0	<b>A</b> I <b>1</b> .0 . 2		•	
Sample Receipt	Cnecklist		,	llent Initials
1 Temperature of container/ cooler?	(Yes)	No	40 ° c	nent initials
22 Shipping container in good condition?	C 89V)	No	<u> </u>	
3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
44 Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
5 Chain of Custody present?	(Yes)	No	14001 163010	
6 Sample instructions complete of Chain of Custody?	(Yes)	No		<del></del>
	(Yes)	No	<del> </del>	
77 Chain of Custody signed when relinquished/ received? 88 Chain of Custody agrees with sample label(s)?	ক্টে	No	ID written on Cont./ Lid	
	(Yes)	No	Not Applicable	
Container label(s) legible and intact?     Sample matrix/ properties agree with Chain of Custody?	( est	No	ivot Applicable	
		No	<del> </del>	
f11 Containers supplied by ELOT?	Yes			
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
413 Samples properly preserved?	(Yes)	. No	See Below	
#14 Sample bottles intact?	(Yes)	No	<del> </del>	
#15 Preservations documented on Chain of Custody?		No	<u> </u>	
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for Indicated test(s)?	(Yes)	. No	Sec Bolow	
#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	
Vastanaa Baas		•		
Variance Docu	mentation			
Contact: Contacted by:			'Date/ Time:	
Contract by		-	ooko miio.	
Regarding:				
11030121113		4 <del>0. A. 40. N</del>		
Corrective Action Taken:				
<b>"</b>				
	· · · · · · · · · · · · · · · · · · ·		······································	
			·····	
Check all that Apply: See attached e-mail/ fax				
Client understands and wo	uld like to pro	ceed wit	h analysis	
Cooling process had begun	n shortly after	samplin	g event	
Australia -	•	•	-	
•				
The same and the same the same the same the same that the	معه والمجار والمعارض المارات	-	in the second se	

### **Analytical Report 306431**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306431
Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306431. 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. 306431 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 306431**



### 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-20-08 12:00		306431-001
Cell F TZ G 2	S	Jun-20-08 12:10		306431-002



# Certificate of Aralysis Summary 300431 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Contact: Camille Reynolds

Project Id: 2004-00061

Project Location: Lea County, NM

Date Received in Lab: Mon Jun-23-08 05:42 pm Report Date: 27-JUN-08

Project Manager: Brent Barron, Il

	Lab Id:	306431-001	306431-002	
A Look Dannach	Field Id:	Cell F TZ G 1	Cell F TZ G 2	
Anaiysis nequesieu	Depth:			
	Matrix:	SOIL	SOIL	
	Sampled:	Jun-20-08 12:00	Jun-20-08 12:10	
Inorganic Anions by FPA 300	Extracted:			
	Analyzed:	Jun-26-08 06:26	Jun-26-08 06:26	
	Units/RL:	mg/kg RL	mg/kg RL	
Chloride		26.1 5.03	5.90 5.03	
Percent Moisture	Extracted:			
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	To the state of th
Percent Moisture		ND 1.00	ND 1.00	
TPH hy SW8015 Mod	Extracted:	Jun-25-08 10:00	Jun-25-08 10:00	
5011	Analyzed:	Jun-26-08 01:23	Jun-26-08 01:50	
	Units/RL:	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		36.5 15.1	39.1 15.1	
C12-C28 Diesel Range Hydrocarbons		1840 15.1	1730 15.1	
C28-C35 Oil Range Hydrocarbons		402 15.1	350 15.1	
Total TPH		2278.5	2119.1	

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 present in the big indigement of XENCO Laboratories. XENCO Laboratories assumes no responsibility and ratkes an warranty up the end use of the data breighy presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



### Form 2 - Surrogate Recoveries





Work Order #: 306431

Lab Batch #: 726461

Sample: 306431-001 / SMP

Batch:

Project ID: 2004-00061 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes		' '	[D]	:				
1-Chlorooctane	61.6	100	62	70-135	**			
o-Terphenyl	31.7	50.0	63	70-135	**			

Lab Batch #: 726461

Sample: 306431-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes		İ	[D]					
I-Chlorooctane	71.7	100	72	70-135				
o-Terphenyl	36.5	50.0	73	70-135				

Lab Batch #: 726461

Sample: 306432-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
I-Chlorooctane	85.2	100	85	70-135				
o-Terphenyl	40.1	50.0	80	70-135				

Lab Batch #: 726461

**Sample:** 306432-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY								
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	85.7	100	86	70-135					
o-Terphenyl	40.2	50.0	80	70-135					

Lab Batch #: 726461

Sample: 511196-1-BKS/BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctane	81.8	100	82	70-135				
o-Terphenyl	38.8	50.0	78	70-135	-			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

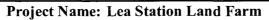
Surrogate Recovery [D] = 100 \* A / B

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries





Work Order #: 306431

**Project ID: 2004-00061** 

Lab Batch #: 726461

Sample: 511196-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	79.8	100	80	70-135				
o-Terphenyl	42.4	50,0	85	70-135				

Lab Batch #: 726461

**Sample:** 511196-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Analytes 1-Chlorooctanc	81.0	100	81	70-135				
o-Terphenyl	38.3	50.0	77	70-135				

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306431

Project ID:

2004-00061

Lab Batch #: 726538

Sample: 726538-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	161	[C]	[D]	/0K	
Chloride	ND	10.0	11.7	117	75-125	

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







Project Name: Lea Station Land Farm

Work Order #: 306431

Analyst: ASA

Lab Batch ID: 726461

Date Prej

Sample: 511196-1-BKS

Date Prepared: 06/25/2008

Batch #: 1

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Matrix: Solid

35

70-135

68 88

890

0001

68

888

90

0001

E E

C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons

Analytes

Flag Limits %RPD Control BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R RPD % Blk. Spk Dup. %R [G] Blank Spike Duplicate Result [F] Spike Added E Blank Spike %R [D] Blank Spike Result Spike Added <u>B</u> Blank Sample Result ₹ TPH by SW8015 Mod Units: mg/kg

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306431

Lab Batch #: 726538 **Date Analyzed:** 06/26/2008

QC- Sample ID: 306430-001 S

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	<del></del>	<del> </del>	<del>                                  </del>		75.105	ļ
Chloride	ND	[ 101	122	121	75-125	r

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

Ill Results are based on MDL and Validated for QC Purposes



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306431

Date Analyzed: 06/26/2008 Lab Batch ID: 726461

QC-Sample ID: 306432-001 S **Date Prepared:** 06/25/2008

Batch #: Analyst:

Matrix: Soil ASA

**Project ID: 2004-00061** 

Flag Limits %RPD Control 0 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 0 Spiked Dup. %R [G] 94 8 Duplicate Spiked Sample Result [F] 1000 992 Spike Added 1060 1060 Spiked Sample %R [D] 4 95 Spiked Sample Result 1000 1010 <u>C</u> Spike Added [B] 1060 1060 Parent Sample Result [A] ND S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

Matrix Spike Percent Recovery [D] =  $100^{\circ}$ (C-A)/B Relative Percent Difference RPD =  $200^{\circ}$ (D-G)/(D+G)

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306431

Lab Batch #: 726538

Date Analyzed: 06/26/2008

Project ID: 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

QC-Sample ID: 306430-001 D

Matrix: Soil

Reporting Units: mg/kg	ŠA	MPLE / SAMPLE	DUPLICATE	RECOVERY

Batch #:

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

Lab Batch #: 726285

Date Analyzed: 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306428-002 D

**Percent Moisture** 

Analyte

Batch #:

Matrix: Soil

Reporting	Units:	%
Treporting	Cints.	/ 0

Percent Moisture

Parent Sample	Sample		Control	OVERY
Result [A]	Duplicate Result [B]	RPD	Limits %RPD	Flag
1.04	ND	NC	20	

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

The second	Environm	Environmental Lab of Texas	xas				4· O	CHAIN OF 12600 West H20 East Odessa, Texas 79765	Yest C	1AIN 20 Ea	94 52 53 52	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-563-1805 pass 79765	OY RE	CORL	ANE	ANA	IALYSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713	REQ 132-56 132-56	UEST 3-1800			
man in	Project Manager:	ger: Curt Stanley		à	PAGE 01 OF	01				İ	Į	١	Proj	Project Name: LEA STATION LAND FARM	19:	S S	ATIO	¥.	D FA	×		
i internet j	Company Name	me Basin Environmental Service Technologies, LLC	dog Tech	poloni	es, LLC							1		Project #: SRS: 2004-00061	S #	18: 2	004-0	1061				
77.75	Company Ado	Company Address: P.O. Box 301									- 1	1	ď	Project Loc: Lea County, NM	98	Con	N. W					
, og sk	City/State/Zip:	Lovington, kik 83260										1		Ĕ,	# b	A-C	PO #: PAA - C. J. Reynolds	solos				
	Telephone No:					Fax No:	(505)	(505) 396-1429	623			<u>.</u> 	Report Format:	ormal	<u></u>	X Standard	P. O		□ rkkp		Ž	NPDES
	Sampler Signatura,	ature. (1) 41-)+	ì			e-mail:	elso	cstanlev@basinenv.com	<u>@ba;</u>	sinen	20	E	£.							1	l	F
	1	2/421		}			I									TOTAL	Analyze Fo		-		-	\$24 E2 1
ere Server	ORDER#	0 5			***************************************		Ü	Preservation 5 £	ation s	100,000 101,001	TTGRIPE	2	gur	86:	-	-	_	CHS.				65 /
	(Vinc etu del) # 84.	FIELD 0006:	ritga D gninniga B	Ending Depth	belgma2 smG	befqnis2 umiT	Field Filmod Total A. of Containings So	HNO.	H <sup>2</sup> 30°	HONN O.R.AN	<b>8</b> (104)	om «durking water st—Bung Other (Specify)	NO * MON-BOTTON OF STREET A CORNER	18 ( 16198 ) 1,615 1H9T	Continue (Cit, SOA, Alkaliety)	Weinler Au Ag 66 CO Cr Pb Hg SAR 785P 7000	zei@czoV	Brate and and a cried at	вся 🚅	CHLORIDES EPA 300.1	:	f (whereasty TAT HRUH
75		CELL F TZ G 1	-	-	6/20/2008	1200	1 X	-				Ø	SOIL	×	-				_	×		_
	-602	CELL FTZ G 2		-	6/20/2008	1210	Ť					ι'n	SOIL	×	$\dashv$				_	×	-	
p, w. <sub>w</sub> w			$\dagger$	-					$\Box$			-	1		-				-	1	+	_
****			$\dagger$	+	1		#	#	4	$\pm$	#	+	7	7	+	1	1	-	+	1	+	7
			$\dagger$	+		1	#	丰	-		1	+	+	1	+	1	1	-	+	工	+	1
٠., .			+	+-			+	#	+	士	1	+	†	-	+	1	#	1	+	上	╁	1
			$\vdash$	-					F			-			+				-		-	
				-					F			Н			$\vdash$							
			-	-					L			_	T		-							
	Special Instructions:										1		1		Series Solves	0,000	Laboratory Comments: Snipple Containers Impac? VOCs Free of Headspace?	rition ?	*		6	ž z
	ひくが	(423/C)	1001	1	Received by:							Date	<u> </u>	9111	100	on con y seed	Labels on definitionis) Custody seals on containe Contains seals on containe	tamer Selfat	•		5	2 <b>3</b> G
	Remarking by	1100	SHIP)	1	Received by:							Date	Ĕ	l (Line	Samp	to Samples	Sample Hand Dalivered by SamplenClairi Rep. 7 by County?	4	, , ,		Sec.	i
	Relinguished by:	Date	Time	8	Mad by ELDI	7	100		1		_	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N 1		Tempe	Z B	Temperature Upon Receipt	擔	Ter 3	3	÷	ပ

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

0.				
client: Plains				
Date/ Time: 06-23-08 @ 1706				
ab 10#: 306431				
nitials: AL				
Sample Receipt	Checklist		_	
, , , , , , , , , , , , , , , , , , , ,	T 700 S T	No	प.ठ •टी	lient Initials
1 Temperature of container/ cooler?	(Yes)	No No	9.0	
2 Shipping container in good condition? 3 Custody Seals Intact on shipping container/ cooler?	Yes	No	CNot Present	
	(Yes)	No	Not Present	
	(Yes)	No	NOT FIESEIN	
5 Chain of Custody present? 6 Sample instructions complete of Chain of Custody?	(Yes)	No		
	(Yes)	No		<b> </b>
	CVes	No	ID written on Cont 1177	<b> </b>
Chain of Custody agrees with sample label(s)?	Ves	No	ID written on Cont./ Lid Not Applicable	<del>  </del>
69 Container label(s) legible and intact?	Ges	No	Not Applicable	<del> </del>
Sample matrix/ properties agree with Chain of Custody?	Yes	No		<del></del>
111 Containers supplied by ELOT?	Yes	No	See Below	<del> </del>
112 Samples in proper container/ bottle?	Yes	No	·	<del> </del>
#13 Samples properly preserved?	(Yes)	No	See Below	<del> </del>
#14 Sample bottles intact?	(VE)	No		<del>  </del>
#15 Preservations documented on Chain of Custody?			<del> </del>	
#16 Containers documented on Chain of Custody?	(Sep)	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	<del></del>
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	<b></b>
#20 VOC samples have zero headspace?	(Yes')	. No	Not Applicable	<u> </u>
Variance Docu	ımentation			
Contact: Contacted by:			Date/ Time:	
		-		
Regarding:				
Corrective Action Taken:				
		<del> </del>		
	<del> </del>	<del></del>		
Check all that Apply: See attached e-mail/ fax				
Client understands and wo	uld like to pro	ceed with	n analysis	
Cooling process had begu			•	
<u> </u>	•		=	
•				
- 2.4 P Approximation of the Conference of th	بوديس يندر ينس			
and the state of t	3.	e day " ja s magan manan mana m		

### **Analytical Report 306432**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306432

Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306432. 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. 306432 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 306432**



### 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-20-08 12:20	3 - 4 ft	306432-001
Cell A VZ G 2 (3'-4')	S	Jun-20-08 12:30	3 - 4 ft	306432-002
Cell A VZ G 3 (3'-4')	S	Jun-20-08 12:40	3 - 4 ft	306432-003
Cell A VZ G 4 (3'-4')	S	Jun-20-08 12:50	3 - 4 ft	306432-004
Cell A VZ G 5 (3'-4')	S	Jun-20-08 13:00	3 - 4 ft	306432-005



Contact: Camille Reynolds Project Location: Lea County, NM

**Project Id: 2004-00061** 

# Certificate of Analysis Summary 306432 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Mon Jun-23-08 05:53 pm Report Date: 27-JUN-08

Project Manager: Brent Barron, Il

					I I Uject Manager. Dient Darion, in	DICHI Darion, 11	
	Lab Id:	306432-001	306432-002	306432-003	306432-004	306432-005	
A section Descripted	Field Id:	Cell A VZ G I (3'4')	Cell A VZ G 2 (3'-4')	Cell A VZ G 3 (3'4')	Cell A VZ G 4 (3'-4')	Cell A VZ G 5 (3'4')	
Huniyas Nequesied	Depth:	3-4 ft	3-4 ft	34 ₽	3-4 ft	3.4 ft	
	Matrix:	SOIL	SOIL	TIOS	SOIL	SOIL	
	Sampled:	Jun-20-08 12:20	Jun-20-08 12:30	Jun-20-08 12:40	Jun-20-08 12:50	Jun-20-08 13:00	
BTEX by FPA 8021B	Extracted:	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	
	Analyzed:	Jun-25-08 20:30	Jun-25-08 20:54	Jun-25-08 21:17	Jun-25-08 21:41	Jun-25-08 22:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzenc		ND 0.0011	ND 0.0010	ND 0:0010	ND 0.0011	ND 0.0011	
Toluene		ND 0.0021	ND 0.0021	ND 0.0021	ND 0.0021	ND 0.0021	
Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0011	
m,p-Xylenes		ND 0.0021	ND 0.0021	ND 0.0021	ND 0.0021	ND 0.0021	
o-Xylene		ND 0.0011	ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0011	
Total Xylenes		ND	ND	QN	QN	QN	
Total BTEX		ND	ND	QN	QN	ND	
Inorganic Anions by EPA 300	Extracted:						
	Analyzed:	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.30	ND 5.16	ND 5.15	ND 5.32	ND 5.25	
Percent Moisture	Extracted:	!					
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.72 1.00	3.05 1.00	2.84 1.00	6.03 1.00	4.80 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	
	Analyzed:	Jun-26-08 15:56	Jun-26-08 02:43	Jun-26-08 03:10	Jun-26-08 03:36	Jun-26-08 04:29	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.9	ND 15.5	ND 15.4	ND 16.0	ND 15.8	
C12-C28 Diesel Range Hydrocarbons	_	ND 15.9	ND 15.5	ND 15.4	0.91 QN	ND 15.8	
C28-C35 Oil Range Hydrocarbons		0S1 QN	ND 15.5	ND 15.4	0.91 QN	ND 15.8	
Total TPH		ND	ND	ND	ND	ND	

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

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

Brent Barron Odessa Laboratory Director

### ENCO Laboratories

### Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
11381 Mcadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477







Work Order #: 306432

Lab Batch #: 726470

Sample: 306432-001 / SMP

**Project ID: 2004-00061** 

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes  1,4-Diffuorobenzene	0.0221	0.0300	110	80-120			
4-Bromofluorobenzene	0.0331	0.0300	100	80-120			

Lab Batch #: 726470

Sample: 306432-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 726470

Sample: 306432-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 726470

Sample: 306432-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 726470

Sample: 306432-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0334	0.0300	111	80-120			
4-Bromofluorobenzene	0.0302	0.0300	101	80-120			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



**Work Order #: 306432** Lab Batch #: 726470

**Project ID: 2004-00061** 

Sample: 306434-005 S / MS Matrix: Soil Batch:

Units: mg/kg	Found Amount Recovery Limits [A] [B] %R %R [D]	STUDY			
BTEX by EPA 8021B	Found	Amount		Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0393	0.0300	131	80-120	**

Lab Batch #: 726470

Sample: 306434-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	-
4-Bromofluorobenzene	0.0396	0.0300	132	80-120	**

Lab Batch #: 726470

Sample: 511203-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0276	0.0300	92	80-120			
4-Bromofluorobenzene	0.0302	0.0300	101	80-120			

Lab Batch #: 726470

Sample: 511203-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0342	0.0300	114	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 726470

Sample: 511203-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120			
4-Bromofluorobenzene	0.0324	0.0300	108	80-120			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



Work Order #: 306432

Project ID: 2004-00061

Lab Batch #: 726461

Sample: 306432-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	76.7	100	77	70-135			
o-Terphenyl	39.9	50.0	80	70-135			

Lab Batch #: 726461

Sample: 306432-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	85.2	100	85	70-135			
o-Terphenyl	40.1	50.0	80	70-135			

Lab Batch #: 726461

Sample: 306432-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	85.7	100	86	70-135				
o-Terphenyl	40.2	50.0	80	70-135				

Lab Batch #: 726461

Sample: 306432-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes							
I-Chlorooctane	73.3	100	73	70-135			
o-Terphenyl	38.6	50.0	77	70-135			

Lab Batch #: 726461

Sample: 306432-003 / SMP

Batch: 1

Matrix: Soil

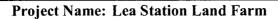
Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	72.1	100	72	70-135	-		
o-Terphenyl	38.4	50,0	77	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306432

Lab Batch #: 726461

Sample: 306432-004 / SMP

Project ID: 2004-00061

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	73.0	100	73	70-135		
o-Terphenyl	38.5	50.0	77	70-135		

Lab Batch #: 726461

Sample: 306432-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	75.2	100	75	70-135			
o-Terphenyl	39.9	50.0	80	70-135			

Lab Batch #: 726461

Sample: 511196-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	81.8	100	82	70-135				
o-Terphenyl	38.8	50.0	78	70-135				

Lab Batch #: 726461

Sample: 511196-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctanc	79.8	100	80	70-135			
o-Terphenyl	42.4	50.0	85	70-135			

Lab Batch #: 726461

Sample: 511196-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	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	38.3	50.0	77	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

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



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306432

Project ID:

2004-00061

Lab Batch #: 726538

Sample: 726538-1-BKS

Matrix: Solid

Date Analyzed: 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Reporting Units: mg/kg

Batch #:

I RIANK/BLANK SPIKE RECOVERY STUDY

Reporting Units: mg/kg	Batch #:	itch#:   BLANK/BLANK SPIKE RECOVERY SI			STUDY	
Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		15,	[C]	[D]	70K	
Chloride	ND	10.0	11.7	117	75-125	



### BS / BSD Recoveries



### Project Name: Lea Station Land Farm

Work Order #: 306432

Lab Batch ID: 726470 Analyst: BRB

Sample: 511203-1-BKS

Date Prepared: 06/25/2008

Batch #: 1

**Project ID:** 2004-00061 **Date Analyzed:** 06/25/2008

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	CATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>e</u>	[C]	[ <u>a</u> ]	<u>=</u>	Result [F]	[G]				
Вепzепс	QN	0.1000	0.0941	64	0.1	0.1093	601	15	081-02	35	
Tolucne	QN	0.1000	9060'0	16	0.1	0.1058	901	15	081-02	35	
Ethylbenzene	QN	0.1000	0.1002	001	0.1	0.1173	211	16	71-129	35	
m,p-Xylenes	ND	0.2000	0.2034	102	0.2	0.2381	611	16	70-135	35	
o-Xylene	QN	0.1000	0.0985	66	0.1	0.1154	\$11	91	21-12	35	

Analyst: ASA

Lab Batch ID: 726461

**Date Prepared:** 06/25/2008

Batch #: 1

Sample: 511196-1-BKS

Date Analyzed: 06/25/2008 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Besult	Spike	Blank	Blank	Spike	Blank	Bik. Spk	_	Control I imits	Control	Flac
	Sample Nesult	nannu.	Result	%R	nanny	Duplicate	%R	%	%R	%RPD	9
Analytes		<u>[8]</u>	[0]	[Q]	<u>a</u>	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	ND	1000	868	06	0001	068	68	ı	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	888	68	1000	882	88	1	70-135	35	

Relative Percent Difference RPD = 200\*(D-F)/(D+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 #:** 306432

Lab Batch #: 726538

QC-Sample ID: 306430-001 S

Date Analyzed: 06/26/2008 Date Prepare

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Soil

Batch #: 1 \_\_\_\_ Matrix:

Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions b	•	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes				ļl			
Chloride		ND	101	122	121	75-125	F

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



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306432

Lab Batch ID: 726470

Date Analyzed: 06/26/2008

QC-Sample ID: 306434-005 S

BRB

Analyst: Date Prepared: 06/25/2008

Matrix: Soil Batch #:

Project ID: 2004-00061

Reporting Units: mg/kg		W	ATRIX SPIK	7 MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
BTEX by EPA 8021B	Parent Sample		nple	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	[0]		Result [F]	R G	%	%R	%RPD	)
Benzene	QN	0.1092	0.1041	95	0.1092	0.1081	66	4	70-130	0	
Toluenc	ND	0.1092	0.0989	91	0.1092	0.1032	95	4	70-130	0	
Ethylbenzene	QN	0.1092	0.1060	26	0.1092	0.1112	102	5	71-129	0	
m,p-Xylcnes	QN	0.2184	0.2156	66	0.2184	0.2264	104	5	70-135	0	
o-Xylene	ND	0.1092	0.1050	96	0.1092	0.1115	102	9	71-133	0	

Lab Batch ID: 726461

QC-Sample ID: 306432-001 S **Date Prepared:** 06/25/2008

Matrix: Soil ASA Batch #: Analyst:

Flag Limits %RPD Control 0 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 0 Spiked Dup. %R [G] 4 94 Duplicate Spiked Sample Result [F] 1000 992 Spike Added 0901 0901 Spiked Sample %R [D] 95 94 Spiked Sample Result 1010 1000  $\overline{\Omega}$ Spike Added [B] 1060 0901 Parent Sample Result [A] N N 2 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Date Analyzed: 06/26/2008 Reporting Units: mg/kg

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

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

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306432

**Lab Batch #:** 726538 **Date Analyzed:** 06/26/2008

\_ \_ \_

Project ID: 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

**QC- Sample ID:** 306430-001 D **Batch #:** 

Inorganic Anions by EPA 300

**Analyte** 

**Percent Moisture** 

Analyte

Matrix: Soil

Reporting Units: mg/kg

SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
110	N.ITS	20	20	

Lab Batch #: 726290

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306432-001 D

Batch #:

Matrix: Soil

Reporting Units: %

Percent Moisture

SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
5.72	5.68	ī	20	

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

					S	1	\$m /	/ '00%	as (endergravity TAT HRUR TAT brishnat?	×	×	×	и	×	7	Ţ.	F	-	72			3
	- 1				NPDES		T	2. 67	et (antenzami TAT M2119			-	-		$\dashv$	+	╁	╁	2 2		ZZ	
																			(2)	30-1	ĵØ.	1.0
L 0 m	3	١			_		-	<del></del>	CHLORIDES EPA 300.1	×	×	×	×	×	_	_	_	L	1		, i	5
JES1 1180 1171	F				O TRRP		-	*********	104 M ROM	-				-		+-	╁	┼	18-			Ę
2.563	₹	19	- 1	8			ğ 🍱	0	sa xara so ceoesarroy xara	×	·×	×	×	×	土				. ⊊ %	ě		1
IAL YSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713	Project Name: LEA STATION LAND FARM	Project #: SRS: 2004-00061	2	PO #: PAA - C. J. Reynolds				_	Semi-orange						1	Ţ		Ŀ	Comments chorn life	dontainents) als on contain als dis front sis	A R	Formpelliffe Units Receipt
L YS hone	E	900	Project Loc: Lea County, NM	œ.	X Standard		Y YEAR	-	Mossiles As Ag Ba Col (2 Po Hg 5 Volksiles	-	-		$\vdash$	-		+-	╀	╀	L 4	Cabels on contained a Cultilody seals on con Custon's seals of con	84.	03
ANA G	AS	Ś	Š	0	Stan		ě,	at-	080148814AA						+	+	╁	$\dagger$	5 0	833	1	
ONI	쁴	8	3	₹.	X		힏		(yhisissia, NO2, IO) prosen						1				81 6			3 7 8
9	4ame	# 139	11.00	60				-	TPH TX 1005 TX 1006 Celora (Ch. Mg, Nh, K)					-		+	┾	-	1.8.5	- 300	35	
000	act is	Proj	rojec		Form			es	108 M810E )1-815 Hall	×	×	×	×	×	+	+	╁	╁		lme.	a	Ture.
Y RE	o.		ď.		Report Format:	•		ĕ	אים - אינוף פסנים אים במפענע טעה		7	7	=	=1		$\top$	T	Τ	1		Γ_	
90					ď.			2	ом — осопламата. 2—горгов Ом — осопламата. 2— горгов	SQ	SOIL	SOIL	SOIL	SOIL								18
Sno			-	Ì	1	ş		SS	(Spacit) (Spacity)						士				1	Oate	Date	a C
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-563-1800 Kas: 432-563-1711						cstanley@basinenv.com		Preservation 8.) of Container	KARA.	_					-	$\perp$	L					4.3
CHAIN OF 12600 West I-20 East Odessa, Texas 70765						iner		of CC	HOEN CO <sub>2</sub> O <sub>2</sub> en	-			-		-	+	╀	╁╴	1			1
St. F. S.						pas		E C	<b>'</b> 0s'н						士					<b>!</b> .		
We.				ĺ	1423	œ,		vack	HCI .							I	L	L	]			
2600 Zees					396	ane		989	HIAO*	×	×	×	×	×	-	-	┼	╀	1	1.		
40					(505) 396-1429	55		L.	eteriumno to . N kilo	1=	-	-	-	-	$\dashv$	┿	十	╁╴	1			
						, .			boyanis bwi						1							6
	OF 81				Fax No.	e-mail;			beigmas amiT	1220	1230	1240	1250	1300								1
	PAGE 01 0	ogies, LLC					1		bakima2 ela0	6/20/2008	6/20/2008	6/20/2008	8/20/2008	6/20/2008						Received by:	Received by:	Parsoppe By File
(A)		thuck							thqsQ gaibai	ľ						T	Γ	Γ		8		
ž X		vice Tec				Ш	)		dinning Depth											170C	ew)	Time
<u>-</u>		satal Ser		8260	4		<u> </u>	<del></del>			*									23/1/2	Date	Cate
Lapo	Curt Stanley	Basin Environmental Service Technologies, LLC	P. O. Box 301	Lowingrom, NM 88260	(105) 441-2124	X		Ú	. 300	1(3:4)	2 (3'- 4')	3 (3' - 4')	4 (3'- 4')	5(3.4)				***************************************		73		-
entai			dress: P.O	·	•	nature:	į	525	EPELD COOR	CELL A VZ G 1 (3- 4')	CELL A VZ G 2 (3'- 4')	CELL A VZ G 3 (3' - 4')	CELL A VZ G 4 (3'- 4")	CELL A VZ G 5 (3'-4')				***************************************		4	1	
Environmental Lab of Texas	Project Manager.	Сотралу Nате	Company Address:	City/State/Zip:	Telephone No:	Sampler Signeture:	(Kuo	200 #		ਹ	Ö								Special Instructions:	MINE	し当屋	hed by:
Ĕ							(App aga ga)	ORDER #:	(vino esu dai) t 8A.	100	2/00	3	100	503-					Special	Santulare.	Reinquis	Relinquished by

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

Client:	Plains				
	06-23-08 @ 1706				
Date/ Time:	, ,	·			
Lab ID #:	306432				
Initials:	AL				
	*				
	Sample Receipt (	Checklist	,		
		- <del> </del>			llent Initials
	ature of container/ cooler?	(Yes)	<u>No</u>	4.0 °C	
	container in good condition?	des >	No .		<del></del>
	Seals intact on shipping container/ cooler?	Yes	No	Not Present>	
	Seals intact on sample bottles/ container?	(Yes)	No.	Not Present	
	Custody present?	(Yes)	No		
	instructions complete of Chain of Custody?	Yes	No		
	Custody signed when relinquished/ received?	(Yes.)	No_		
	Custody agrees with sample label(s)?	Yes	No	10 written on Cont./ Lid	
	er label(s) legible and intact?.	Yes-	No.	Not Applicable	
#10 Sample	matrix/ properties agree with Chain of Custody?	Ves_	No		
#11 Contain	ners supplied by ELOT?	(Yes_/	No		
#12 Sample	es in proper container/ bottle?	Yes	No	See Below	
	es properly preserved?	Yes)	No	See Below	***************************************
	bottles intact?	(Yes)	No	1	
	vations documented on Chain of Custody?	(Yes)	No		
	ners documented on Chain of Custody?	Yes)	No	<b></b>	
	ent sample amount for indicated test(s)?	(Yes)	No	See Below	***************************************
	toles received within sufficient hold time?	(Yes)	No	See Below	
	ntract of sample(s)?	Yes	No	(Not Applicable)	
	amples have zero headspace?	Yes	No	Not Applicable	
[#20 VOC S	amples have zero neadspace?	V 168	NO	Not Applicable	
	Variance Docum	nentation			•
				•	
Contact:	Contacted by:			Date/ Time:	
	·				
Regarding:				***	
		<del></del>		<del></del>	<del></del>
Corrective A	action Taken;				
		*************	····		
Check all the	at Apply: See attached e-mail/ fax				
J. 1	Client understands and would	d like to pro	ceed with	n analysis	
	Cooling process had begun				
				•	

### **Analytical Report 306433**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

30-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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







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

Reference: XENCO Report No: 306433 Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306433. 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. 306433 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 306433**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell B VZ G 1 (3'-4')	S	Jun-20-08 13:10	3 - 4 ft	306433-001
Cell B VZ G 2 (3'-4')	S	Jun-20-08 13:20	3 - 4 ft	306433-002
Cell B VZ G 3 (3'-4')	S	Jun-20-08 13:30	3 - 4 ft	306433-003
Cell B VZ G 4 (3'-4')	S	Jun-20-08 13:40	3 - 4 ft	306433-004
Cell B VZ G 5 (3'-4')	S	Jun-20-08 13:50	3 - 4 ft	306433-005



Contact: Camille Reynolds

Project Id: 2004-00061

Project Location: Lea County, NM

# Certificate of Analysis Summary 300433 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Mon Jun-23-08 05:57 pm

Report Date: 30-JUN-08

Project Manager: Brent Barron, II

					righter managers Drem Danion, in	Jieni Danion, ii	
	Lab Id:	306433-001	306433-002	306433-003	306433-004	306433-005	
Learning Description	Field Id:	Cell B VZ G I (3'-4')	Cell B VZ G 2 (3'4')	Cell B VZ G 3 (3'4')	Cell B VZ G 4 (3'-4')	Cell B VZ G 5 (3'-4')	
Anaiysis Kequesiea	Depth:	3-4 ft	3-4 ₩	3-4 €	3-4 ₩	3-4 ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 13:10	Jun-20-08 13:20	Jun-20-08 13:30	Jun-20-08 13:40	Jun-20-08 13:50	
RTEX by FPA 8021B	Extracted:	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	
	Analyzed:	Jun-25-08 22:28	Jun-25-08 22:52	Jun-25-08 23:15	Jun-25-08 23:39	Jun-26-08 00:03	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0010	ND 0.0013	ND 0.0011	ND 0.0010	ND 0.0010	
Toluene		ND 0.0020	ND 0.0026	ND 0.0021	ND 0.0021	ND 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0013	ND 0.0011	ND 0.0010	ND 0.0010	
m,p-Xylenes		ND 0.0020	ND 0.0026	ND 0.0021	ND 0.0021	0.0032 0.0020	
o-Xylenc		ND 0.0010	ND 0.0013	ND 0.0011	ND 0.0010	0.0012 0.0010	
Total Xylenes		ND	QN	ND	QN	0.0044	
Total BTEX		NO	ND	ON	ND	0.0044	
Inorganic Anions by EPA 300	Extracted:						
	Analyzed:	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.11	ND 6.44	ND 5.31	ND 5.16	ND 5.02	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	-
Percent Moisture		2.12 1.00	22.3 1.00	5.78 1.00	3.01 1.00	ND 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	
	Analyzed:	Jun-26-08 04:55	Jun-26-08 05:22	Jun-26-08 05:49	Jun-26-08 06:15	Jun-26-08 06:42	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.3	ND 19.3	ND 15.9	ND 15.5	ND 15.0	
C12-C28 Diesel Range Hydrocarbons		ND 15.3	ND 19.3	ND 15.9	ND 15.5	ND 15.0	
C28-C35 Oil Range Hydrocarbons		ND 15.3	ND 19.3	ND 15.9	ND 15.5	ND 15.0	
Total TPH		ND	ND	ND	ND	ND	

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 busylogment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty on the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing. Since 1990

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

Odessa Laboratory Director Brent Barron

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477
	(281) 589-0692 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500



Project Name: Lea Station Land Farm



Work Order #: 306433

Project ID: 2004-00061

Lab Batch #: 726470

Sample: 306433-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 726470

Sample: 306433-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			(D)				
1,4-Difluorobenzene	0.0337	0.0300	112	80-120			
4-Bromofluorobenzene	0.0298	0.0300	99	80-120			

Lab Batch #: 726470

Sample: 306433-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0330	0.0300	110	80-120			
4-Bromofluorobenzene	0.0297	0.0300	99	80-120			

Lab Batch #: 726470

Sample: 306433-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0333	0.0300	111	80-120		
4-Bromofluorobenzene	0.0301	0.0300	100	80-120		

Lab Batch #: 726470

Sample: 306433-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
· · · · · · · · · · · · · · · · · · ·						
1,4-Difluorobenzene	0.0324	0.0300	108	80-120		
4-Bromofluorobenzene	0.0322	0.0300	107	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306433

**Project ID:** 2004-00061

Lab Batch #: 726470

Sample: 306434-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0260	0.0300	87	80-120		
4-Bromofluorobenzene	0.0393	0.0300	131	80-120	**	

Lab Batch #: 726470

**Sample:** 306434-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	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	0.0396	0.0300	132	80-120	**	

Lab Batch #: 726470

Sample: 511203-1-BKS / BKS

Batch: 1

l Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	11		[D]	,,,,,			
1,4-Difluorobenzene	0.0276	0.0300	92	80-120			
4-Bromofluorobenzene	0.0302	0.0300	101	80-120			

Lab Batch #: 726470

Sample: 511203-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0342	0.0300	114	80-120		
4-Bromofluorobenzene	0.0300	0.0300	100	80-120		

Lab Batch #: 726470

0 Sample:

Sample: 511203-1-BSD / BSD

Batch: 1

Matrix: Solid

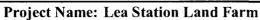
Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			(6)			
1,4-Difluorobenzene	0.0280	0.0300	93	80-120		
4-Bromofluorobenzene	0.0324	0.0300	108	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306433

Project ID: 2004-00061

Lab Batch #: 726461

Sample: 306432-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D]			
1-Chlorooctane	85.2	100	85	70-135	_	
o-Terphenyl	40.1	50.0	80	70-135		

Lab Batch #: 726461

**Sample:** 306432-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	85.7	100	86	70-135		
o-Terphenyl	40.2	50.0	80	70-135		

Lab Batch #: 726461

Sample: 306433-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
I-Chlorooctane	73.7	100	74	70-135		
o-Terphenyl	37.9	50.0	76	70-135		

Lab Batch #: 726461

Sample: 306433-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	72.5	100	73	70-135	<del></del>
o-Terphenyl	38.5	50.0	77	70-135	

Lab Batch #: 726461

Sample: 306433-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.6	100	71	70-135	<del>-</del>
o-Terphenyl	37.1	50.0	74	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution





Project Name: Lea Station Land Farm

Work Order #: 306433

Project ID: 2004-00061

Lab Batch #: 726461

Sample: 306433-004 / SMP

1 Matrix: Soil Batch:

Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH by SW801	15 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1-Chlorooctanc		66.7	100	67	70-135	**
o-Terphenyl		34.3	50.0	69	70-135	**

Lab Batch #: 726461

**Sample:** 306433-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	65.5	100	66	70-135	**
o-Terphenyl	32.8	50.0	66	70-135	**

Lab Batch #: 726461

**Sample:** 511196-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	81.8	100	82	70-135	
o-Terphenyl	38.8	50.0	78	70-135	

Lab Batch #: 726461

Sample: 511196-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	` `		[D]		
1-Chlorooctanc	79.8	100	80	70-135	
o-Terphenyl	42.4	50.0	85	70-135	

Lab Batch #: 726461

**Sample:** 511196-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY	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	38.3	50.0	77	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306433

Project ID:

2004-00061

Lab Batch #: 726538

Sample: 726538-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

Date Prepared: 06/26/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK/I	BLANK SPI	KE REC	OVERYS	STUDY
Inorganic Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R   [D]	%R	
Chloride	ND	10.0	11.7	117	75-125	







### Project Name: Lea Station Land Farm

Work Order #: 306433

Lab Batch ID: 726470 Analyst: BRB

Date Prepared: 06/25/2008

**Project ID: 2004-00061** 

Date Analyzed: 06/25/2008

Units: mg/kg

Batch #: 1 Sample: 511203-1-BKS

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

Units: Highes											
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes	<u>.</u>	<u>s</u>	[C]	[0]	[E]	Result [F]	[6]				
Benzene	Q	0.1000	0.0941	94	0.1	0.1093	601	15	70-130	35	
Toluene	QN	0.1000	9060'0	16	1.0	0.1058	901	15	70-130	35	
Ethylbenzene	QV.	0.1000	0.1002	100	1.0	0.1173	117	91	71-129	35	
m,p-Xylenes	ND	0.2000	0.2034	102	0.2	0.2381	611	91	70-135	35	
o-Xylene	QN	0.1000	0.0985	66	0.1	0.1154	115	16	71-133	35	

Analyst: ASA

Date Prepared: 06/25/2008

Date Analyzed: 06/25/2008 Matrix: Solid

Lab Batch ID: 726461	Sample: 511196-1-BKS	1KS	Batch	Batch #: 1					Matrix: Solid	olid		
Units: mg/kg			BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Υ	
TPH by SW8015 Mod	15 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes			[ <u>B</u> ]	[C]	[Q]	[E]	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	rrbons	QN	1000	868	06	1000	890	68	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	bons	QN	1000	888	68	0001	882	88	-	70-135	35	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306433

Lab Batch #: 726538 Date Analyzed: 06/26/2008

OC-Sample ID: 306430-001 S

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

1 .

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
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	101	122	121	75-125	F

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

Il Results are based on MDL and Validated for QC Purposes



## Form 3 - MS/MSD Recoveries



### Project Name: Lea Station Land Farm

Work Order #: 306433

Lab Batch ID: 726470

Date Analyzed: 06/26/2008

QC- Sample ID: 306434-005 S Date Prepared: 06/25/2008

\_ Batch #:

**Project ID: 2004-00061** 

BRB

Matrix: Soil Analyst:

	W	ATKIX SPIKI	( / MAT	RIX SPIF	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE KEC	JVEKY	IODI		
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
Q.	0.1092	0.1041	95	0.1092	0.1081	66	4	70-130	0	
QN	0.1092	0.0989	16	0.1092	0.1032	95	4	70-130	0	
QN	0.1092	0901.0	-64	0.1092	0.1112	102	5	71-129	0	
ΩN	0.2184	0.2156	66	0.2184	0.2264	104	5	70-135	0	
ND	0.1092	0.1050	96	0.1092	0.1115	102	9	71-133	0	
8. 8. A.   .   .   .   .   .	mple esult (A   ND ND ND ND ND ND ND ND ND ND ND ND ND	Spike Added [B] (0.1092 0.1092 0.1092 0.1092 0.1092	Spike Sample Added Added [C]         Spiked Sample Result [C]           Added [C]         [C]           0.1092 0.1041         0.1092           0.1092 0.1060         0.1060           0.2184 0.2156         0.1092	Spike Sample Added (C)         Spiked Sample Result (C)           Added (D)         (C)           (D)         (D)           (D)         (D)<	Spike Result Added (ICI)         Spiked Sample Result (ICI)         Spike Added (ICI)         Sample (ICI)         Added Added (ICI)           0.1092         0.1041         95         0.1092           0.1092         0.00889         91         0.1092           0.1092         0.1060         97         0.1092           0.2184         0.2156         99         0.2184           0.1092         0.1050         96         0.1092	Spike Result Added (ICI)         Spiked Sample Result (ICI)         Spike Added (ICI)         Sample (ICI)         Added Added (ICI)           0.1092         0.1041         95         0.1092           0.1092         0.00889         91         0.1092           0.1092         0.1060         97         0.1092           0.2184         0.2156         99         0.2184           0.1092         0.1050         96         0.1092	Spike Result Added (C)         Spiked Sample Sample Sample (C)         Spike Sample Sample Sample (C)         Spiked Sample Sample (C)         Spiked Sample Sample (C)         Spiked Sample Sample (C)         Spiked Sam	Spiked Sample Added Spiked Sample (C)         Spiked Sample (C)         Spike Sample (C)         Spiked Sa	Spike Result Added (CI)         Spiked Sample Spiked Sample (CI)         Spiked Sample Spiked Sample (CI)         Spiked Sam	Spiked Sample Sample Added Solution (B)         Spiked Sample (C)         Spiked

Date Analyzed: 06/26/2008 Lab Batch ID: 726461

QC-Sample ID: 306432-001 S Date Prepared: 06/25/2008

Matrix: Soil ASA -Analyst: Batch #:

Reporting Units: mg/kg		M.	ATRIX SPIKI	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample S	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
•	Result	Added	<u></u>	%R	Added	Result [F]	%R	%	%R	%RPD	
Analytes	<b>[</b> ¥]	<u>B</u>		<u>a</u>	[E]		[6]				
C6-C12 Gasoline Range Hydrocarbons	QN	0901	0001	94	1060	266	94	0	70-135	0	
C12-C28 Diesel Range Hydrocarbons	QN	1060	0101	95	1060	1000	94	1	70-135	1	

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

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

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



Chloride

### Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 306433

Lab Batch #: 726538 Date Analyzed: 06/26/2008 Project ID: 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

QC- Sample ID: 306430-001 D

**Inorganic Anions by EPA 300** 

Analyte

**Percent Moisture** 

Analyte

Batch #:

Matrix: Soil

Reporting Units: mg/kg

	SAMPLE /	SAMPLE	DUPLIC	ALE REC	OVERY
,	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	ND	ND	20	20	

**Lab Batch #:** 726290 **Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC- Sample ID: 306432-001 D

Batch #:

5.72

Matrix: Soil

20

Reporting Units: %

Percent Moisture

SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12500 West L20 Est Phone: 422-583-1800 Odossa, Texas 19765	1 OF 01 Project Name: LEA STATION LAND FARM	Project #: SRS: 2004-00061	- C	And the state of t	eynoids	Fax No. (505) 396-1428 Report Formati X Standard TRRP NPDES	e-nai: cstanlev@basihenv.com	D. D. GENERAL ACTUAL AC	TOTAL X	Theodosans and analyses of the High State of the	CHI OBSII NOBSW NO	08 1310 11 X SOIL X X X X	08 1320 11 X '	08 1330 11 X X SOIL X X X X	08 1340 1 X SOIL X X X X	08 1350 1 X X X X X					Santracy Commonits: Santracy Commonits: (Santracy Commonits in the Commonity of the Commoni		Date Ime Sapple Hand Defeuted  Sapple Hand D	4×20 200
	PAGE 01 OF	qies, LLC				Angeneningaliseides		,		ıbşıa ·	ns2 steO	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008						Renaived by:	Received by:	Received by ELOP
<b>(2)</b>		Facturolo			-					<u> </u>	Ending D	-		-								100	200	et.c.
ě		ervice				(	4	ノつ		Depth	Beginning Brinning		L				_	 _	_			-	1	ļ
of J		nmental S			M 83260	\$		F				,		,		,						10 25 (M	Date	1
Environmental Lab of Texas	Project Manager. Curt Stanley			é	City/State/Zip: Lovington, NM 88260	Telephone No: (5#5) 441-2124	Sampler Signature:		ORDER # 506 432		FIELD CODE	CELL B VZ G 1 (3'-4')	CELL B VZ G 2 (3' - 4')	CELL B VZ G 3 (3'- 4')	CELL B VZ G 4 (3' - 4')	CELL B VZ G 5 (3' - 4')					uctions:		1	<del></del>
Envir		`	,	3	ਲੈਂ	Tele	Sam	(dp rize only)	JRDER #:	(Auo esti	ds() # 8A	-								1 24	Special Instructions	The state of the s	Resuguished by	

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

		, ,			
Client:	Plains				
Date/ Time:	06-23-08 @ 1706				
.ab ID # :	306433				
nitials:	AL				
iiiiais.					
	Sample Recei	pt Checklist			
					lient Initials
1 Temper	ature of container/.cooler?	(Yes)	No	4.0 °C	
2 Shipping	g container in good condition?	(Yes)	No		
3 Custody	Seals Intact on shipping container/ cooler?	Yes	No	Not Present	
4 Custody	y Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
	of Custody present?	(Yes)	No		
6 Sample	instructions complete of Chain of Custody?	Yes	No		
	of Custody signed when relinquished/ received?	(Yes.)	No		
8 Chain o	of Custody agrees with sample label(s)?	(Yes-	No .	ID written on Cont./ Lid	·
9 Contain	ner label(s) legible and intact?	Yes	No	Not Applicable	
10 Sample	e matrix/ properties agree with Chain of Custody?	√es∠	No-		
	ners supplied by ELOT?	(Yes.	No		
	es in proper container/ bottle?	Yes )	No	See Below	
	es properly preserved?	Yes)	No	See Below	
	le bottles intact?	(Yes	No		
	rvations documented on Chain of Custody?	(Yes)	No		
	iners documented on Chain of Custody?	Yes	No		
±17 Sufficie	ent sample amount for indicated test(s)?	Yes	No	See Below	<del>                                      </del>
	mples received within sufficient hold time?	Yes	No	See Below	<del>  </del>
	ontract of sample(s)?	Yes	No	(Not Applicable)	+
	samples have zero headspace?	Yes	No	Not Applicable	<del> </del>
Contact:	Variance Do  Contacted by:	cumentation	•	Date/ Time:	***************************************
Regarding:					
Corrective	Action Taken;				
			-		
Check all ti	hat Apply:  See attached e-mail/ fax Client understands and Cooling process had be	would like to pro		•	
ga aga eg partas .				Ų	

### **Analytical Report 306434**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306434

Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306434. 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. 306434 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 306434**



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

Lea Station Land Farm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell C VZ G 1 (3'-4')	S	Jun-20-08 14:00	3 - 4 ft	306434-001
Cell C VZ G 2 (3'-4')	S	Jun-20-08 14:10	3 - 4 ft	306434-002
Cell C VZ G 3 (3'-4')	S	Jun-20-08 14:20	3 - 4 ft	306434-003
Cell C VZ G 4 (3'-4')	S	Jun-20-08 14:30	3 - 4 ft	306434-004
Cell C VZ G 5 (3'-4')	S	Jun-20-08 14:40	3 - 4 ft	306434-005



Contact: Camille Reynolds Project Location: Lea County, NM

Project 1d: 2004-00061

### Certificate of Analysis Summary 306434 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Report Date: 27-JUN-08

Date Received in Lab: Mon Jun-23-08 05:57 pm

Brent Barron II Project Manager:

					Project Manager: Brent Barron, II	Srent Barron, 11	
	Lab Id:	306434-001	306434-002	306434-003	306434-004	306434-005	
Amalucic Donnoctod	Field Id:	Cell C VZ G 1 (3'-4')	Cell C VZ G 2 (3'-4')	Cell C VZ G3 (3'-4')	Cell C VZ G 4 (3'-4')	Cell C VZ G 5 (3'-4')	
Alluifysis Archuesieu	Depth:	3-4 ft	34 ft	3.4 ft	3-4 ft	34 ft	
	Matrix:	TIOS	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 14:00	Jun-20-08 14:10	Jun-20-08 14:20	Jun-20-08 14:30	Jun-20-08 14:40	
BTEX by EPA 8021B	Extracted:	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	
	Analyzed:	Jun-26-08 00:50	Jun-26-08 01:14	Jun-26-08 01:38	Jun-26-08 02:02	Jun-26-08 02:25	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzenc		ND 0.0011	ND 0.0012	ND 0.0012	ND 0.0010	ND 0.0011	
Tolucne		ND 0.0022	ND 0.0023	ND 0.0024	ND 0.0021	ND 0.0022	
Ethylbenzene		ND 0.0011	ND 0.0012	ND 0.0012	ND 0.0010	ND 0.0011	
m,p-Xylenes		ND 0.0022	ND 0.0023	ND 0.0024	ND 0.0021	ND 0.0022	
0-Xylene	:	ND 0.0011	ND 0.0012	ND 0.0012	ND 0.0010	ND 0.0011	
Total Xylenes		QN	ND	QN	ND	QN	
Total BTEX		ND	ND	QN	QN	ND	
Inorganic Anions by FPA 300	Extracted:						
	Analyzed:	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 06:26	Jun-26-08 20:28	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg R.L.	•
Chloride		ND 5.41	ND 5.80	ND 5.94	ND 5.19	ND 5.46	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		7.56 1.00	13.8 1.00	15.8 1.00	3.59 1.00	8.41 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:00	Jun-25-08 10:20	
	Analyzed:	Jun-26-08 07:09	Jun-26-08 07:35	Jun-26-08 08:02	Jun-26-08 08:29	Jun-26-08 17:42	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.2	ND 17.4	ND 17.8	ND 15.6	ND 16.4	
C12-C28 Diesel Range Hydrocarbons		ND 16.2	ND 17.4	ND 17.8	9'51 QN	ND 16.4	
C28-C35 Oil Range Hydrocarbons		ND 16.2	ND 17.4	ND 17.8	ND 15.6	ND 16.4	
Total TPH		QN	ND	QN	ND	QN	

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 text loignent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	i none	Iun
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477







Work Order #: 306434

Project ID: 2004-00061

Lab Batch #: 726470

Sample: 306434-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0313	0.0300	104	covery Control Limits %R [D]	
4-Bromofluorobenzene	0.0337	0.0300	112	80-120	

Lab Batch #: 726470

Sample: 306434-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 726470

Sample: 306434-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		, .	[D]		
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0346	0.0300	115	80-120	

Lab Batch #: 726470

Sample: 306434-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			(D)		
1,4-Difluorobenzene	0.0319	0.0300	106	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 726470

Sample: 306434-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0319	0.0300	106	80-120		
4-Bromofluorobenzene	0.0340	0.0300	113	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



Work Order #: 306434

Project ID: 2004-00061

Lab Batch #: 726470

Sample: 306434-005 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0393	0.0300	131	80-120	**

Lab Batch #: 726470

**Sample:** 306434-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0260	0.0300	87	80-120		
4-Bromofluorobenzene	0.0396	0.0300	132	80-120	**	

Lab Batch #: 726470

**Sample:** 511203-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0276	0.0300	92	80-120		
4-Bromofluorobenzene	0.0302	0.0300	101	80-120		

Lab Batch #: 726470

Sample: 511203-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0342	0.0300	114	80-120			
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	·		

Lab Batch #: 726470

Sample: 511203-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0280	0.0300	93	80-120		
4-Bromofluorobenzene	0.0324	0.0300	108	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



Work Order #: 306434

Project ID: 2004-00061

Lab Batch #: 726461

**Sample:** 306432-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Su	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	85.2	100	85	70-135		
o-Terphenyl	40.1	50.0	80	70-135		

Lab Batch #: 726461

Sample: 306432-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	85.7	100	86	70-135		
o-Terphenyl	40.2	50.0	80	70-135		

Lab Batch #: 726461

Sample: 306434-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
I-Chlorooctane	73.4	100	73	70-135		
o-Terphenyl	38.5	50.0	77	70-135		

Lab Batch #: 726461

5461 Sam

Sample: 306434-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	69.2	100	69	70-135	**		
o-Terphenyl	36.6	50.0	73	70-135			

Lab Batch #: 726461

Sample: 306434-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount (B)	Recovery %R	Control Limits %R	Flags	
Analytes	·		[D]			
1-Chlorooctane	70.5	100	71	70-135		
o-Terphenyl	37.5	50.0	75	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306434

Lab Batch #: 726461

Project ID: 2004-00061

Sample: 306434-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	73.9	100	74	70-135		
o-Terphenyl	38.6	50.0	77	70-135		

Lab Batch #: 726461

**Sample:** 511196-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	11	[~]	[D]			
1-Chlorooctane	81.8	100	82	70-135		
o-Terphenyl	38.8	50.0	78	70-135		

Lab Batch #: 726461

**Sample:** 511196-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	79.8	100	80	70-135	
o-Terphenyl	42.4	50.0	85	70-135	

Lab Batch #: 726461

Sample: 511196-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			{D}		
1-Chlorooctane	81.0	100	81	70-135	
o-Terphenyl	38.3	50.0	77	70-135	

Lab Batch #: 726548

Sample: 306434-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.1	100	73	70-135	
o-Terphenyl	38.7	50.0	77	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



Work Order #: 306434

Project ID: 2004-00061

Lab Batch #: 726548

**Sample:** 306435-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		}	[D]		
I-Chlorooctane	84.6	100	85	70-135	
o-Terphenyl	40.5	50.0	81	70-135	

Lab Batch #: 726548

Sample: 306435-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	100	86	70-135	
o-Terphenyl	40.3	50.0	81	70-135	<u> </u>

Lab Batch #: 726548

**Sample:** 511227-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 726548

Sample: 511227-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE F	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	''		[D]		
1-Chlorooctane	73.6	100	74	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 726548

**Sample:** 511227-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306434

Project ID:

2004-00061

Lab Batch #: 726538

**Sample:** 726538-1-BKS

Matrix: Solid

Date Analyzed: 06/26/2008

**Date Prepared:** 06/26/2008

Reporting Units: mg/kg

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK/	BLANK SPI	KE REC	COVERYS	STUDY
Inorganic Anions by EPA 300  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	11.7	117	75-125	

Lab Batch #: 726542

Sample: 726542-1-BKS

Matrix: Solid

Date Analyzed: 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Reporting Unite

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SPI	KE REC	OVERY	STUDY
Inorganic Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	:
Chloride	ND	10.0	11.6	116	75-125	



### BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 306434

Analyst: BRB

Lab Batch ID: 726470

Sample: 511203-1-BKS

Date Prepared: 06/25/2008

Batch #: 1

Project ID: 2004-00061 Date Analyzed: 06/25/2008

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Ollits: ""8"5					2		-		222		
BTEX by EPA 8021B	Blank Sample Result (A)	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		[ <u>B</u>	[ <u>C</u> ]	<u>a</u>	<u> </u>	Result [F]	[6]				
Benzenc	QN	0.1000	0.0941	94	0.1	0.1093	601	15	70-130	35	
Toluene	QN	0.1000	9060.0	16	0.1	0.1058	901	15	70-130	35	
Ethylbenzene	ND	0.1000	0.1002	100	0.1	0.1173	117	91	71-129	35	
m,p-Xylenes	QN	0.2000	0.2034	102	0.2	0.2381	611	16	70-135	35	
o-Xylene	QN	0.1000	0.0985	66	0.1	0.1154	115	16	71-133	35	

Analyst: ASA

Lab Batch ID: 726461

Date Prepared: 06/25/2008

Matrix: Solid

**Date Analyzed:** 06/25/2008

Units: mg/kg

Batch #: 1

Sample: 511196-1-BKS

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	₹	[8]		<b>1</b> 0	<u>a</u>	Dupneate Result [F]	¥ 5		70 K	/oKrD	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	868	06	0001	068	68	_	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	888	68	0001	882	88	1	70-135	35	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306434

Analyst: ASA

Date Prepared: 06/25/2008

**Project ID: 2004-00061** Date Analyzed: 06/26/2008

> Sample: 511227-1-BKS Lab Batch ID: 726548

Batch #: 1

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	f A	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[ <b>A</b> ]		Result	%R		Duplicate	%R	%	%R	%RPD	
Analytes		<u>8</u>	<u>D</u>	<u>[</u>	[ <u>E</u> ]	Result [F]	<u>.</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1030	103	1000	1110	Ξ	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	1120	112	8	70-135	35	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306434

Lab Batch #: 726538

**Project ID:** 2004-00061

Date Analyzed: 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

QC-Sample ID: 306430-001 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	ERY STU	DY
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	101	122	121	75-125	F

Lab Batch #: 726542

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/26/2008

1

Analyst: LATCOR

QC- Sample ID: 306434-005 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
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	109	123	113	75-125	

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



## Form 3 - MS/MSD Recoveries



### Project Name: Lea Station Land Farm

Work Order #: 306434

Lab Batch ID: 726470

Date Analyzed: 06/26/2008 Reporting Units: mg/kg

**QC-Sample ID: 306434-005 S** 

Batch #:

Matrix: Soil

Project ID: 2004-00061

Analyst: Date Prepared: 06/25/2008

Sar Arra Carra Sarra	IAI	AIKIASPIKI	( MAI)	KIA SPIR	MAIRIA SPIRE / MAIRIA SPIRE DUPLICAIE RECOVERY STODY	E KEC	JVERY 3	LODE			
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample S [C] %R A	Spiked Sample %R [D]	pike dded [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1092	0.1041	95	0.1092	0.1081	66	4	70-130	0	
Toluene	ND	0.1092	0.0989	16	0.1092	0.1032	95	4	70-130	0	
Ethylbenzene	ND	0.1092	0.1060	26	0.1092	0.1112	102	5	71-129	0	
m,p-Xylenes	ND	0.2184	0.2156	66	0.2184	0.2264	104	5	70-135	0	
o-Xylene	ND	0.1092	0.1050	96	0.1092	0.1115	102	9	71-133	0	

QC-Sample ID: 306432-001 S Date Prepared: 06/25/2008 **Date Analyzed:** 06/26/2008 Lab Batch ID: 726461

Reporting Units: mg/kg

ASA Batch #: Analyst:

Matrix: Soil

Limits %RPD Control 0 Control Limits %R 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 0 Spiked Dup. %R [G] 94 Duplicate Spiked Sample Result [F] 992 Spike Added 1060  $\Xi$ Spiked Sample %R  $\Xi$ 94 Spiked Sample Result 1000  $\overline{C}$ Spike Added [B] 0901 Parent Sample Result  $\overline{\mathbf{A}}$ S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons Analytes

Flag

70-135

94

1000

1060

95

1010

1060

ND

C12-C28 Diesel Range Hydrocarbons

Reporting Units: mg/kg

Batch #: QC-Sample ID: 306435-001 S Date Prepared: 06/25/2008 Date Analyzed: 06/27/2008 Lab Batch ID: 726548

ASA Analyst:

Matrix: Soil

Flag Control %RPD Limits ~ Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 7 m Spiked Dup. %R [G] 96 6 Spiked Sample Result [F] Duplicate 1100 1110 Spike Added 1150 1150  $\Xi$ Spiked Sample %R <u>a</u> 93 95 Spiked Sample Result 1070 1090  $\Box$ Spike Added 1150 1150 <u>8</u> Parent Sample Result V 2 ND TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes

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

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

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306434

Lab Batch #: 726538

Project ID: 2004-00061

Date Analyzed: 06/26/2008

06/26/2008 Date Prepared:

Analyst: LATCOR

QC-Sample ID: 306430-001 D

**Inorganic Anions by EPA 300** 

Analyte

Batch #:

Matrix: Soil

Reporting Units: mg/kg

SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
ND	ND	20	20	

Lab Batch #: 726542 **Date Analyzed:** 06/26/2008

Date Prepared:

06/26/2008

Analyst: LATCOR

QC- Sample ID: 306434-005 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

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

Lab Batch #: 726290

**Date Analyzed:** 06/25/2008

06/25/2008 **Date Prepared:** 

Analyst: IRO

QC- Sample ID: 306432-001 D

Batch #:

Matrix: Soil

SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Ire Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
	[B]			
5.72	5.68	ı	20	
	ure Parent Sample Result [A]	Parent Sample Sample Result [A] Result [B]	Parent Sample Result [A] Result [B]	Result Duplicate RPD Limits [A] Result %RPD [B]

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

TAT bishnate × × × Z Z Z Z Z Z Z Z Z NPDES 54, 42, 72 hrs 7.0 CHLORIDES EPA 300.1 Project Name: LEA STATION LAND FARM Phone: 432-563-1800 Fax: 432-563-1713 TRRP MACH Sample Containers intact?
VOCs Free of Heartspace?
Lights or obtainings!
Custody seals on container(s)
Custody seals on coder(s) CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST ž iOH BTE ( 620 REIGH & GEORGIE 626) PO #: PAA - C. J. Reynolds Project #: SRS: 2004-00061 Project Loc: Les County, NM Standard Acidie: As Ag Bo Co Cr Po Pig Se 0307/0537646 Report Format: Jo 7180 65-9 SOIL SOIL SOIL SOIL SOIL Date Date cstanley@basinenv.com 12800 West I-20 East Odessa, Texas 79765 нсэ нсэ нсэ нсэ нсэ (505) 396-1429 St. St. **ОИН** Total 4, of Contai Denoth? bto Fax No: e-mail. 1430 1400 1410 1420 1440 beigme2 amiT PAGE 01 OF 6/20/2008 6/20/2008 6/20/2008 6/20/2008 6/20/2008 Received by: convect by: Basin Environmental Service Technologies, LLC belgmeS ateQ 1706 usden Bulpu Beginning Depth Lorington, NM 88250 (595) 441-3124 CELL C VZ G 2 (3' - 4') CELL C VZ G 3 (3' - 4') CELL C VZ G 4 (3' - 4') CELL C VZ G 1 (3' - 4') CELL C VZ G 5 (3' - 4') Company Address: P.O. Box 301 Curt Standey ОRDER#. 306434 FIELD CODE Sampler Signature: Project Manager: Company Name City/State/Zip: Telephone No: B a (Inp age out))

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

<b>0</b> 00 - 4	Plains		-		
Client:					
Date/ Time:	06-23-08 @ 1706				
Lab ID # :	306434				
Initials:	AL				
	Sample Receipt	Charlina			
	Sample Receipt	Checklist		Olian	nt Initials
#1 Tempera	ture of container/ cooler?	(Yes)	No	4.0 °C	it imagis
	container in good condition?	des 5	No		
	Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
	Seals Intact on sample bottles/ container?	(Yes)	No	Not Present	
	Custody present?	(Yes)	No		
#6 Sample	nstructions complete of Chain of Custody?	Yes	No		
	Custody signed when relinquished/ received?	(Yes.)	No	<u> </u>	
	Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
	r label(s) legible and intact?	Yes	No	Not Applicable	<del></del>
	matrix/ properties agree with Chain of Custody?	(es	No		
	ers supplied by ELOT?	(Yes.	No		
	s in proper container/ bottle?	Yes	No	See Below	
	s properly preserved?	Yês )	No	See Below	
	bottles intact?	(Yes)	No	1 .	
	ations documented on Chain of Custody?	(Yes)	No	† · · · · · · · · · · · · · · · · · · ·	
	ers documented on Chain of Custody?	Yes)	No		
	nt sample amount for indicated test(s)?	(Yes)	No	See Below	
	ples received within sufficient hold time?	(Yes)	No	See Below	
) <del></del>	tract of sample(s)?	Yes	No	(Not Applicable)	
	imples have zero headspace?	Yes	No	Not Applicable	
	Varlance Docu	mentation			<del></del>
Contact:	Contacted by:			Date/ Time:	
Regarding:					
regarding.					<del></del>
Corrective A	ction Taken:				
			<del>,,</del>		······································
Check all the	at Apply: See attached e-mail/ fax Client understends and wot Cooling process had begun				

### **Analytical Report 306435**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

27-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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





27-JUN-08

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

Reference: XENCO Report No: 306435
Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306435. 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. 306435 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 306435**



### 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-20-08 14:50	3 - 4 ft	306435-001
Cell D VZ G 2 (3'-4')	S	Jun-20-08 15:00	3 - 4 ft	306435-002
Cell D VZ G 3 (3'-4')	S	Jun-20-08 15:10	3 - 4 ft	306435-003
Cell D VZ G 4 (3'-4')	S	Jun-20-08 15:20	3 - 4 ft	306435-004
Cell D VZ G 5 (3'-4')	S	Jun-20-08 15:30	3 - 4 ft	306435-005



Contact: Camille Reynolds

**Project Id:** 2004-00061

Project Location: Lea County, NM

# Certificate of Analysis Summary 306435 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Mon Jun-23-08 05:57 pm Report Date: 27-JUN-08

Project Manager: Brent Barron. Il

	}				Project Manager: Brent Barron, II	srent Barron, 11	
	Lab Id:	306435-001	306435-002	306435-003	306435-004	306435-005	
Analysis Ponnostod	Field Id:	Cell D VZ G 1 (3'4')	Cell D VZ G 2 (3'4')	Cell D VZ G 3 (3'4')	Cell D VZ G 4 (3'-4')	Cell D VZ G 5 (3'4')	
marcanbay system	Depth:	34 ft	3-4 ft	3-4 ft	3.4 ft	3-4 ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	TIOS	
	Sampled:	Jun-20-08 14:50	Jun-20-08 15:00	Jun-20-08 15:10	Jun-20-08 15:20	Jun-20-08 15:30	
BTEX by EPA 8021B	Extracted:	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	Jun-25-08 16:00	
	Analyzed:	Jun-26-08 02:49	Jun-26-08 03:13	Jun-26-08 03:37	Jun-26-08 04:01	Jun-26-08 04:25	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0011	ND 0.0010	1100.0 UN	ND 0.0011	
Toluene		ND 0.0023	ND 0.0023	ND 0.0021	ND 0.0023	ND 0.0022	
Ethylbenzene		ND 0.0011	ND 0.0011	ND 0.0010	1100.0 QN	ND 0.0011	
m,p-Xylenes		ND 0.0023	ND 0.0023	ND 0.0021	ND 0.0023	ND 0.0022	
o-Xylene		ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011	
Total Xylenes		ND	ND	QN	QN	QN	
Total BTEX		ND	ND	QN	QN	QN	
Inorganic Anions by EPA 300	Extracted:						
0	Analyzed:	Jun-26-08 20:28	Jun-26-08 20:28	Jun-26-08 20:28	Jun-26-08 20:28	Jun-26-08 20:28	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.73	ND 5.68	ND 5.15	ND 5.63	ND 5.58	
Percent Moisture	Extracted:						
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:10	Jun-25-08 08:20	Jun-25-08 08:20	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		12.8 1.00	12.0 1.00	2.89 1.00	11.1	10.4 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:20	Jun-25-08 10:20	Jun-25-08 10:20	Jun-25-08 10:20	Jun-25-08 10:20	
	Analyzed:	Jun-26-08 18:09	Jun-26-08 18:35	Jun-26-08 19:02	Jun-26-08 19:28	Jun-27-08 09:14	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 17.2	ND 17.0	ND 15.4	0.91 ND 16.9	ND 16.7	
C12-C28 Diesel Range Hydrocarbons		ND 17.2	ND 17.0	ND 15.4	6.91 QN	ND 16.7	
C28-C35 Oil Range Hydrocarbons		ND 17.2	ND 17.0	ND 15.4	6'91 QN	191 QN	
Total TPH		ND	ND	ND	ND	ND	

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

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

Odessa Laboratory Director

### 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

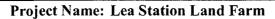
Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	. Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477







Work Order #: 306435

Lab Batch #: 726470

Sample: 306434-005 S / MS

Project ID: 2004-00061

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	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	0.0393	0.0300	131	80-120	**

Lab Batch #: 726470

Sample: 306434-005 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0260	0.0300	87	80-120		
4-Bromofluorobenzene	0.0396	0.0300	132	80-120	**	

Lab Batch #: 726470

Sample: 306435-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0316	0.0300	105	80-120		
4-Bromofluorobenzene	0.0353	0.0300	118	80-120		

Lab Batch #: 726470

Sample: 306435-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	10-7		[D]	,,,,,,		
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	_	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120		

Lab Batch #: 726470

Sample: 306435-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		,	[D]			
1,4-Difluorobenzene	0.0320	0.0300	107	80-120		
4-Bromofluorobenzene	0.0356	0.0300	119	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm



Work Order #: 306435

Project ID: 2004-00061

Lab Batch #: 726470

Sample: 306435-004 / SMP

Matrix: Soil Batch:

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0318	0.0300	106	80-120		
4-Bromofluorobenzene	0.0362	0.0300	121	80-120	**	

Lab Batch #: 726470

Sample: 306435-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0317	0.0300	106	80-120		
4-Bromofluorobenzene	0.0354	0.0300	118	80-120		

Lab Batch #: 726470

Sample: 511203-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0276	0.0300	92	80-120		
4-Bromofluorobenzene	0.0302	0.0300	101	80-120		

Lab Batch #: 726470

Sample: 511203-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0342	0.0300	114	80-120		
4-Bromofluorobenzene	0.0300	0.0300	100	80-120		

Lab Batch #: 726470

**Sample:** 511203-1-BSD / BSD

Batch: 1

Matrix: Solid

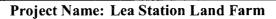
Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0280	0.0300	93	80-120		
4-Bromofluorobenzene	0.0324	0.0300	108	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306435

Project ID: 2004-00061

Lab Batch #: 726548

Sample: 306435-001 / SMP

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	Truc Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		' '	[D]			
1-Chlorooctane	72.7	100	73	70-135		
o-Terphenyl	38.6	50.0	77	70-135		

Lab Batch #: 726548

Sample: 306435-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
I-Chlorooctane	84.6	100	85	70-135		
o-Terphenyl	40.5	50.0	81	70-135		

Lab Batch #: 726548

**Sample:** 306435-001 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	86.1	100	86	70-135		
o-Terphenyl	40,3	50.0	81	70-135		

Lab Batch #: 726548

Sample: 306435-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE F	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found  A	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	72.5	100	73	70-135	
o-Terphenyl	38.9	50.0	78	70-135	

Lab Batch #: 726548

Sample: 306435-003 / SMP

Batch:

Matrix: Soil

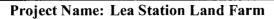
Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	72.4	100	72	70-135	
o-Terphenyl	37.6	50.0	75	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







**Work Order #:** 306435

**Project ID: 2004-00061** 

Lab Batch #: 726548

Sample: 306435-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	1	
1-Chlorooctane	73.9	100	74	70-135	
o-Terphenyl	39.4	50.0	79	70-135	

Lab Batch #: 726548

Sample: 306435-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RE	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	75.3	100	75	70-135	·
o-Terphenyl	39.8	50.0	80	70-135	

Lab Batch #: 726548

Sample: 511227-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1-Chlorooctane	93.4	100	93	70-135	-
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 726548

Sample: 511227-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	11		[D]	, , , ,	
1-Chlorooctane	73.6	100	74	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 726548

Sample: 511227-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	St	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	102	100	102	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

**Work Order #:** 306435

Project ID:

2004-00061

Lab Batch #: 726542

Sample: 726542-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

**Inorganic Anions by EPA 300** 

Analytes

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Reporting Units: mg/kg	
------------------------	--

Chloride

Ba	itch#:	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
	ND	10.0	11.6	116	75-125	



### BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 306435

Lab Batch ID: 726470 Analyst: BRB

Analytes

Ethylbenzene m,p-Xylenes o-Xylene

Toluene Benzene

Date Prepared: 06/25/2008

**Project ID: 2004-00061** 

Date Analyzed: 06/25/2008 Matrix: Solid

> Sample: 511203-1-BKS Units: mg/kg

Batch #: 1

Flag %RPD Limits 35 35 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 70-130 71-129 70-135 71-133 RPD % 15 15 16 91 91 Bik. Spk Dup. |G| 601 901 117 115 119 Błank Spike Duplicate Result [F] 0.1173 0.1154 0.1058 0.1093 0.2381 Spike Added 0.2 0.1  $\overline{\Xi}$ 0.1 0.1 0.1 Blank Spike %R [D] 90 102 94 91 66 0.1002 9060.0 0.2034 0.0985 Blank Spike Result [C] 0.0941 0.1000 Spike Added 0.1000 0.1000 0.2000 0.1000 <u>B</u> Sample Result g S £ S 2 BTEX by EPA 8021B

Analyst: ASA

Date Prepared: 06/25/2008

**Date Analyzed:** 06/26/2008

Lab Batch ID: 726548	Sample: 511227-1-BKS	KS	Batch	Batch #: 1					Matrix: Solid	olid		
Units: mg/kg			BLAN	K/BLANKS	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Υ	
TPH by SW8015 Mod	15 Mod	Blank Sample Result	Spike Added	Blank Snike	Blank	Spike	Blank Snike	BIK. Spk Dun.	l	Control	Control Limits	Flag
		[V]		Result	%R		Duplicate	%R	%	%R	%RPD	0
Analytes			[8]	[C]	<u>a</u>	Ē	Result [F]	[5]				
C6-C12 Gasoline Range Hydrocarbons	carbons	QN	0001	1030	103	1000	1110	111	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	arbons	ND	1000	1030	103	1000	1120	112	8	70-135	35	

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306435

Lab Batch #: 726542 **Date Analyzed:** 06/26/2008

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Matrix: Soil

**QC- Sample ID:** 306434-005 S

Batch #:

Reporting Units: mg/kg	MATE	CIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]	(0)	1~1	, , ,	
Chloride	ND	109	123	113	75-125	

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



## Form 3 - MS / MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306435

Date Analyzed: 06/26/2008 Lab Batch ID: 726470

Reporting Units:

Project ID: 2004-00061

Matrix: Soil

BRB Batch #: Analyst: QC-Sample ID: 306434-005 S Date Prepared: 06/25/2008

sporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	CE DUPLICA	TE REC	VERY S	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R	S A	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	(B)		[a]	[E]		[6]				
Benzene	ND	0.1092	0.1041	95	0.1092	0.1081	66	4	70-130	0	
Toluene	ND	0.1092	0.0989	16	0.1092	0.1032	56	4	70-130	0	
Ethylbenzene	ND	0.1092	0901.0	62	0.1092	0.1112	102	5	71-129	0	
m,p-Xylenes	ND	0.2184	0.2156	66	0.2184	0.2264	104	5	70-135	0	
o-Xylene	ND	0.1092	0.1050	96	0.1092	0.1115	102	9	71-133	0	

Batch #: QC-Sample ID: 306435-001 S Date Analyzed: 06/27/2008 Lab Batch ID: 726548

Analyst: Date Prepared: 06/25/2008

Matrix: Soil

ASA

Flag Limits %RPD Control Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD ~ 7 Spiked Dup. %R [G] 96 97 Duplicate Spiked Sample Result [F] 1110 1100 Spike Added 1150 1150 Ξ Spiked Sample Spiked Result Sample %R <u>D</u> 93 95 1070 1090 Spike Added 1150 1150 <u>B</u> Parent Sample Result [A] S S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306435

Lab Batch #: 726542 Date Analyzed: 06/26/2008

**Project ID:** 2004-00061 Analyst: LATCOR

**Date Prepared:** 06/26/2008

QC- Sample ID: 306434-005 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg	SAMPLE / SAMPLE DUPLICATE RECOVERY					
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag	
Analyte		1221	1			
Chloride	ND	ND	20	20		

Lab Batch #: 726290

**Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC-Sample ID: 306432-001 D

**Percent Moisture** 

Analyte

Batch #:

Reporting Units: %

Percent Moisture

SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
5.72	5.68	1	20	

Lab Batch #: 726310

**Date Analyzed:** 06/25/2008

Date Prepared: 06/25/2008

Analyst: IRO

QC-Sample ID: 306435-004 D

Batch #:

Matrix: Soil

Reporting Units: % SAMPLE / SAMPLE DUPLICATE RECOVERY Percent Moisture Sample Control Parent Sample Result Duplicate RPD Limits Flag Result %RPD [A]Analyte [B] Percent Moisture 11,1 10.9 20

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

TAT brehnst& □ NPDES 4.0 Project Name: LEA STATION LAND FARM O TRRP M.F.O.H CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST ın: PO#: PAA - C. J. Raynolds BTEX 8021URG\$0 of BTEX 826 Project #: SRS: 2004-06061 Project Loc: Les County, NM yamın: ya ya ba ca ca da da ha aş 998 / E35 / CEC Report Format: 23-08 17:06 SOIL SOR SOIL SOIL Sats cstanley@basinenv.com 12600 West I-20 East Odessa, Texas 79765 O'STON HOFN "OS<sup>‡</sup>H (505) 396-1429 юн ONH e-mail: Fax No: 1520 1500 1510 53 1450 PAGE 01 OF 6/20/2008 6/20/2008 6/20/2008 6/20/2008 6/20/2008 Basin Environmental Service Technologies, LLC 12/6/17c ւրժող ճալրա ցծելասյած ըշխգր Lorington, NM 88260 CELL D VZ G 1 (3' - 4') CELL D VZ G 4 (3' - 4') CELL D VZ G 2 (3' - 4') CELL D VZ G 3 (3' - 4') Company Address: P. 0. Box 301 CELL D VZ G 5 (3' - 4') Curt Stanley 306435 Sampler Signature: Project Manager: Company Name City/State/Zip: Telephone No: eloqueshed by: ORDER #: (After our del) a St

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

SP ki	Plains			
Client				
late/ Time:	06-23-08 @ 1706			
ab ID # :	306435			
nitials:	AL			
	Sample Receipt	Checklist		
	,			Client Initials
1 Temper	ature of container/ cooler?	(Yes)	No	4.0 °C
	g container in good condition?	des >	No	
	/ Seats intact on shipping container/ cooler?	Yes	No	(Not Present)
	Seals intact on sample bottles/ container?	(Yes)	No	Not Present
	f Custody present? .	(Yes)	No	
6 Sample	instructions complete of Chain of Custody?	Yes	No	
7 Chain o	of Custody signed when relinquished/ received?	(Yes.)	No	
	of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid
	er label(s) legible and intact?	Yes-	No	Not Applicable
	e matrix/ properties agree with Chain of Custody?	Yes	No	
	ners supplied by ELOT?	(Yes.	No	
	es in proper container/ bottle?	Yes	No	See Below
	es properly preserved?	Yes)	No	See Below
	e bottles intact?	(Yes.)	No	
	vations documented on Chain of Custody?	(Yes)	No	
	ners documented on Chain of Custody?	Yes)	No	
	ent sample amount for indicated test(s)?	(Yes)	No	See Below
	nples received within sufficient hold time?	(Yes)	No	See Below
	intract of sample(s)?	Yes	No	(Not Applicable)
	samples have zero headspace?	Yes	No	Not Applicable
	Variance Docu	mentation		
Contact:	Contacted by:	· · · · · · · · · · · · · · · · · · ·		Date/ Time:
Regarding:		· · · · · · · · · · · · · · · · · · ·		
	Action Taken:			
Conective	POINT LANEIT.			
			,	
Check all th	nat Apply: See attached e-mail/ fax Client understands and wo	uld like to prod	ceed with	n analysis

### **Analytical Report 306436**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

30-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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



30-JUN-08

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

Reference: XENCO Report No: 306436

Lea Station Land Farm

Project Address: Lea County, NM

### Camille Reynolds:

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 306436. 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. 306436 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.

CARCO OF

Respectful

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 306436**

### 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-20-08 15:40	3 - 4 ft	306436-001
Cell E VZ G 2 (3'-4')	S	Jun-20-08 15:50	3 - 4 ft	306436-002
Cell E VZ G 3 (3'-4')	S	Jun-20-08 16:00	3 - 4 ft	306436-003
Cell E VZ G 4 (3'-4')	S	Jun-20-08 16:10	3 - 4 ft	306436-004



# Certificate of Analysis Summary 306436 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Contact: Camille Reynolds

Project 1d: 2004-00061

Project Location: Lea County, NM

Date Received in Lab: Mon Jun-23-08 05:57 pm Report Date: 30-JUN-08

Project Manager: Brent Barron, II

					Project Manager: Brent Barron, II	Brent Barron, 11
	Lap Id:	306436-001	306436-002	306436-003	306436-004	
According Downson	Field Id:	Cell E VZ G I (3'-4')	Cell E VZ G 2 (3'-4')	Cell E VZ G 3 (3'-4')	Cell E VZ G 4 (3'-4')	
Analysis Kequesieu	Depth:	3-4 ft	3-4 ft	3-4 ft	3-4 ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-20-08 15:40	Jun-20-08 15:50	Jun-20-08 16:00	Jun-20-08 16:10	
RTFX hv FPA 8021R	Extracted:	Jun-30-08 09:00	Jun-27-08 10:43	Jun-27-08 10:43	Jun-27-08 10:43	
	Analyzed:	Jun-30-08 15:24	Jun-27-08 18:49	Jun-27-08 19:12	Jun-27-08 19:36	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0010	ND 0.0012	ND 0.0010	
Toluene		ND 0.0022	ND 0.0021	ND 0.0024	ND 0.0021	
Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0012	ND 0.0010	
m,p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0024	ND 0.0021	
o-Xylene		ND 0.0011	ND 0.0010	ND 0.0012	ND 0.0010	
Total Xylenes	-	QV	QN	QN	QN.	
Total BTEX		QN	QN	QN	QN	
Inorganic Anions by EPA 300	Extracted:					
2	Analyzed:	Jun-26-08 20:28	Jun-26-08 20:28	Jun-26-08 20:28	Jun-26-08 20:28	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.45	ND 5.24	ND 5.87	ND 5.24	
Percent Moisture	Extracted:					
	Analyzed:	Jun-25-08 08:20	Jun-25-08 08:20	Jun-25-08 08:20	Jun-25-08 08:20	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		8.30 1.00	4.62 1.00	14.9 1.00	4.56 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:20	Jun-25-08 10:20	Jun-25-08 10:20	Jun-25-08 10:20	
	Analyzed:	Jun-26-08 20:21	Jun-27-08 09:41	Jun-26-08 21:14	Jun-26-08 21:40	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.4	ND 15.7	9.71 QN	ND 15.7	
C12-C28 Diesel Range Hydrocarbons		ND 16.4	ND 15.7	ND 17.6	ND 15.7	
C28-C35 Oil Range Hydrocarbons		ND 16.4	ND 15.7	ND 17.6	ND 15.7	
Total TPH		ND	ND	ND	ND	

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 retreased the best logivent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	riidie	гах
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



Project Name: Lea Station Land Farm

Work Order #: 306436

Lab Batch #: 726683

Sample: 306436-002 / SMP

Project ID: 2004-00061

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0342	0.0300	114	80-120			
4-Bromofluorobenzene	0.0314	0.0300	105	80-120			

Lab Batch #: 726683

Sample: 306436-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	[1-1]	(5)	[D]	,,,,	
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 726683

**Sample:** 306436-004 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 726683

Sample: 511302-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			(D)		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 726683

Sample: 511302-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0341	0.0300	114	80-120		
4-Bromofluorobenzene	0.0293	0.0300	98	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Order #: 306436

Project ID: 2004-00061

Lab Batch #: 726683

**Sample:** 511302-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	' '	, ,	[D]		
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 726752

Sample: 306436-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0335	0.0300	112	80-120			
4-Bromofluorobenzene	0.0306	0.0300	102	80-120			

Lab Batch #: 726752

**Sample:** 511362-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0272	0.0300	91	80-120		
4-Bromofluorobenzene	0.0299	0.0300	100	80-120		

Lab Batch #: 726752

**Sample:** 511362-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0346	0.0300	115	80-120		
4-Bromoflyorobenzene	0.0293	0,0300	98	80-120		

Lab Batch #: 726752

**Sample:** 511362-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0272	0.0300	91	80-120		
4-Bromofluorobenzene	0.0305	0.0300	102	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Order #: 306436

**Project ID:** 2004-00061

Lab Batch #: 726548

**Sample:** 306435-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits % R	Flags	
Analytes			[D]			
1-Chlorooctane	84.6	100	85	70-135		
o-Terphenyl	40.5	50.0	81	70-135		

Lab Batch #: 726548

Sample: 306435-001 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	86.1	100	86	70-135			
o-Terphenyl	40.3	50.0	81	70-135			

Lab Batch #: 726548

Sample: 306436-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
			[D]				
1-Chlorooctane	76.6	100	77	70-135			
o-Terphenyl	40.4	50.0	81	70-135			

Lab Batch #: 726548

Sample: 306436-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits %R	Flags	
Analytes			101			
1-Chlorooctane	73.4	100	73	70-135		
o-Terphenyl	38.4	50,0	77	70-135	· · · · · · · · · · · · · · · · · · ·	

Lab Batch #: 726548

Sample: 306436-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery % R [D]	Control Limits % R	Flags		
1-Chlorooctane	77.0	100	77	70-135			
o-Terphenyl	41.1	50.0	82	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

**Work Order #: 306436** 

Project ID: 2004-00061

Lab Batch #: 726548

Sample: 306436-004 / SMP

Batch:

Matrix: Soil

Units: mg/kg	. SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	75.7	100	76	70-135	
o-Terphenyl	39.9	50.0	80	70-135	

Lab Batch #: 726548

**Sample:** 511227-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits % R	Flags
1-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 726548

**Sample:** 511227-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	St	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits % R	Flags
Analytes			[D]		
I-Chlorooctane	73.6	100	74	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 726548

**Sample:** 511227-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits % R	Flags
Analytes			{D}		
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **Blank Spike Recovery**

Project Name: Lea Station Land Farm

Work Order #: 306436

Project ID:

2004-00061

Lab Batch #: 726542

**Sample:** 726542-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/26/2008

Reporting Units:

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SP.	IKE REC	COVERY	STUDY
Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	1.21	121	[C]	[D]	701	
Chloride	ND	10.0	11.6	116	75-125	

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



## BS / BSD Recoveries

\* 100 mg

\$ 4.0°

# Project Name: Lea Station Land Farm

Work Order #: 306436

Analyst: BRB

Date Prepared: 06/27/2008

**Project ID:** 2004-00061 **Date Analyzed:** 06/27/2008

Sample: 511302-1-BKS

Batch #: 1

Matrix: Solid

Lab Batch ID: 726683

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	[]	<u>[a]</u>	[E]	Result [F]	[6]				
Benzene	ΩN	0.1000	0.1027	103	0.1	0.0858	98	81	70-130	35	
Toluene	ΩN	0.1000	9660'0	100	0.1	0.0812	18	20	70-130	35	
Ethylbenzene	ΩN	0.1000	0.1094	109	0.1	0.0875	88	22	71-129	35	
m,p-Xylenes	ΩN	0.2000	0.2208	110	0.2	0.1785	68	21	70-135	35	
o-Xylene	Q	0.1000	0.1073	107	0.1	0.0889	68	61	71-133	35	

Analyst: BRB

**Date Prepared:** 06/30/2008

Date Analyzed: 06/30/2008 Matrix: Solid

> Sample: 511362-1-BKS Lab Batch ID: 726752 Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

1											
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	Control Limits %RPD	Flag
Benzene	Ð	0.1000	0.1031	103	0.1	9660'0	100	3	70-130	35	
Toluene	QN	0.1000	0.1005	101	0.1	0.0972	-64	3	70-130	35	
Ethylbenzene	QN	0.1000	0.1125	113	0.1	0.1078	801	4	71-129	35	
m,p-Xylenes	Ω	0.2000	0.2273	114	0.2	0.2174	601	4	70-135	35	
o-Xylene	ND	0.1000	0.1107	111	0.1	0.1051	105	5	71-133	35	

Relative Percent Difference RPD = 200\*[(D-F)/(D+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 #: 306436

Analyst: ASA

Lab Batch ID: 726548

Sample: 511227-1-BKS

Date Prepared: 06/25/2008

Batch #: 1

**Project ID:** 2004-00061 **Date Analyzed:** 06/26/2008 Matrix: Solid

Units: mg/kg		BLANK	K/BLANKS	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.		Control Limits	Control Limits
	[ <u>A</u>		Result	%R		Duplicate	%R	%	%R	%RPD
Analytes		[ <u>B</u> ]	[ <u>C</u> ]	ē	<u>a</u>	Result [F]	[9]			
C6-C12 Gasolinc Range Hydrocarbons	QN	1000	1030	103	1000	0111	=	7	70-135	35
C12-C28 Diesel Range Hydrocarbons	QN	0001	1030	103	1000	1120	112	8	70-135	35

Flag



## Form 3 - MS Recoveries

Project Name: Lea Station Land Farm

**Work Order #:** 306436

Lab Batch #: 726542

**Project ID:** 2004-00061

**Date Analyzed:** 06/26/2008

Date Prepared:

Analyst: LATCOR

**QC- Sample ID:** 306434-005 S

Batch #:

06/26/2008

i

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike . Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	11	127				
Chloride	ND	109	123	113	75-125	

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



# Form 3 - MS / MSD Recoveries

## Project Name: Lea Station Land Farm

Work Order # 306436

Lab Batch ID: 726548

Date Analyzed: 06/27/2008

QC-Sample ID: 306435-001 S

Project ID: 2004-00061

Matrix: Soil ASA Batch #: Analyst: Date Prepared: 06/25/2008

porting Units: mg/kg		W/	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MATR	IX SPIK	E DUPLICAT	E RECC	VERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample S	Spiked Sample	pike	77	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[]	[D]	Added [E]	Result [F]	[G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ΩN	1150	0/01	93	1150	1100	96	3	70-135	3	
C12-C28 Diesel Range Hydrocarbons	ND	1150	0601	95	1150	1110	16	2	70-135	2	
					ĺ						

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

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

Page 14 of 17



Chloride

## **Sample Duplicate Recovery**

Project Name: Lea Station Land Farm

Work Order #: 306436

Lab Batch #: 726542

06/26/2008 Date Prepared:

**Project ID:** 2004-00061

Date Analyzed: 06/26/2008

Analyst: LATCOR

QC- Sample ID: 306434-005 D

**Inorganic Anions by EPA 300** 

**Analyte** 

Batch #:

Matrix: Soil

Reporting Units: mg/kg

 SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag

ND

Lab Batch #: 726310

Date Analyzed: 06/25/2008

Date Prepared: 06/25/2008

ND

Analyst: IRO

20

QC-Sample ID: 306435-004 D

Batch #:

Matrix: Soil

NC

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	11.1	10.9	2	20	

					8 5	00 W	CHAIN OF 12600 West I-20 East Odessa, Texas 19765	1A IN 20 Ea 8 787	o ខែ្ដ	กรก	, AQC	JECC JECC	70 A	Ž Ž	Phot Phot	SIS 18	CHAIN OF CUSTODY RECORD AND ANALLYSIS REQUEST 11:20 East 737-653-1800 xas 79765 Fax: 432-563-1715	1800			
Curt Stanley		PAGE 01 OF	5						!	١	۵	rojoct	Name	LEA	STA	NO	AND	Project Name: LEA STATION LAND FARM			ĺ
Company Name Besin Environmental Service Technologies, LLC	vice Techno	rogies, LLC		ł			1			- 1		ď	a page	SRS	8	Project #: SRS: 2004-00061	19				
Company Address: P.O. Box 301		***************************************				1	- 1			1		Proje	Project Loc: Les County, NM	Ees	oruty	N.					
Levington, NM 88260					1			į					PO #	PA A	Ċ.	PO #: PAA - C. J. Raynolds	2				- 1
1212-141 (505)	***************************************		Fax No:	=	(505) 386-1429	14	22			1	Repo	Report Format:	mat:	×	Standard		TRRP	38,6		NPDES	92
Sampler Signature:			e-mail:	OI	stan	leví	cstanlev@basinenv.com	iner	.∨.	ξĮ											1
128/42/												Ш		TOLP	L	Anatyzo Far	يا خالا			T	
120				ŀ	č	Evisk.	Preservation & Ł of Containers	) } } }	ntain	522	Mairte	891	_	-	98		093				_
FIELD CODE	Boginning Depth	Dalqma2 ebsQ	balqrınd2 amiT	beneality bissid	Total M. of Containers Fee	10нн	H <sup>1</sup> 80°	HOpsi cOcasum	Quesi	DM-DUNNUB MICK 25-2INDS Oakel ( Boock)	CW # Croundwater 5-solvsol	108 (अडरपुरे 1.814 अपदा	Centron (Cs. 10) 1605 1X 1008	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg	Sociality Septiment Septim	B1EX (6210/0030 or UTEX 92	M.P.O.H	CHLORIDES EPA 300.1	C (About and LAT H2119)	AS (subsens-eng TAT HRUR TAT probrais
CELL E VZ G 1 (3' - 4')		6/20/2008	1540	-	×					_	SOIL	×	_			_	×	_	×		×
CELL E VZ G 2 (3' - 4')		6/20/2008	1550	-	×		_			-	SOIL	×	-			-	×		×		×
CELL E VZ G 3 (3' - 4')		6/20/2008	1600	-	×	-		-		-	SOIL	×				-	×		×		×
CELL E VZ G 4 (3' - 4')		6/20/2008	1610	H	×					-	SOIL	×				-	×		×		×
				-				-		-											-
													-						$\neg$	1	-
	$\dashv$			$\dashv$	_	-		$\dashv$	$\Box$	$\dashv$		7		$\exists$	7	-	$\dashv$	1	_	+	$\dashv$
				$\dashv$	1	+	7	$\dashv$	7	$\dashv$		$\dashv$	-		1	$\dashv$	$\dashv$	1	1	+	$\dashv$
	+			+	1		_	+		╬		1	-			+		#	_	+	
				-	]	-	7	-	7	1		1	8 2	of the Co	- S. A.	Laborntory Comments: Sample Containers Intact?	۽ ٿا	<u> </u>	] &	<sup>=</sup>	
(C23/2)	170%	Received by:								超		1 pme	1	S 10 5 10 10 10 10 10 10 10 10 10 10 10 10 10	E COURT	VOCs Free of Headspace? Labels on bondaker(s) Custody seals on container(	(S)		<i>3</i> 39.	zzze	
atro /	letre	Received by:		1					<u> </u>	age	1-	E E	Τ	1 % H	and D	Sample Hand Delivered by Sampler Clent Rup. ?	_ i		)z z ' ©0 '	3ZZ	: :1
Date	- Um	Received by ELO	1			1			_	Date	$\dagger$	e e	Τ.	3	0	4029	, K		E .	j. *	် ကို

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

			3		
Client:	Plains				
Date/ Time.	06-23-08 @ 1706				
Lab ID # :	306436				
Initials:	AL				
	Sample Receipt	Checklist		Cijent Initial	is
#1 Tempera	ture of container/ cooler?	(Yes)	No	4.0 °C	ĩ
	container in good condition?	1 8 9 S	No		1
	Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	1
	Seals intact on sample bottles/ container?	CYGS)	No	Not Present	1
	Custody present?	Yes	No	140111636116	1
	nstructions complete of Chain of Custody?	Yes	No		-
	Custody signed when relinquished/ received?	(Yes.)	No		┪
	Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	4
	r label(s) legible and intact?	Ves	No	Not Applicable	┪
	matrix/ properties agree with Chain of Custody?	(es)	No	1401 Applicable	4
	ers supplied by ELOT?	(Yes.	No		-
	s in proper container/ bottle?	vês )	No	See Below	-
	s properly preserved?	(Yes)	No	See Below	-
	bottles intact?	(Ves.)	No	See Below	-
<del></del>	rations documented on Chain of Custody?	(res)	No		-
	ers documented on Chain of Custody?	Yes)	No	<del> </del>	-
	nt sample amount for indicated test(s)?	(res)	No	See Below	-
	ples received within sufficient hold time?	Yes	No	See Below	$\dashv$
	tract of sample(s)?	Yes	No		-
	amples have zero headspace?	Ves	No	Not Applicable	4
#20 VOC 98	imples have zero neadspace r	T tes	NO	Not Applicable	لــ
	Variance Docu	mentation			
Contact:	Contacted by:			Date/ Time:	
Regarding:					
Corrective A	ction Taken:				
Check all tha	at Apply:  See attached e-mail/ fax Cilent understands and wou Cooling process had begun	•		•	

## **Analytical Report 306437**

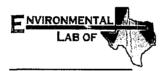
for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Reynolds** 

Lea Station Land Farm 2004-00061

30-JUN-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

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

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

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





30-JUN-08

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

Reference: XENCO Report No: 306437

Lea Station Land Farm

Project Address: Lea County, NM

## Camille Reynolds:

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 306437. 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. 306437 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 306437**



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

Lea Station Land Farm

Sample 1d	Matrix	Date Collected	Sample Depth	Lab Sample Id
Cell F VZ G 1 (3'-4')	S	Jun-20-08 16:20	3 - 4 ft	306437-001
Cell F VZ G 2 (3'-4')	S	Jun-20-08 16:30	3 - 4 ft	306437-002



# Certificate of Analysis Summary 306437 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Contact: Camille Reynolds

Project 1d: 2004-00061

Project Location: Lea County, NM

Date Received in Lab: Mon Jun-23-08 05:57 pm

Project Manager: Brent Barron, II Report Date: 30-JUN-08

	Lap Id:	306437-001	306437-002	
Analysis Daniastod	Field Id:	Cell F VZ G 1 (3'4')	Cell F VZ G 2 (3'-4')	
naisan hay sistiniiv	Depth:	34 ft	3-4 ft	
	Matrix:	SOIL	SOIL	
	Sampled:	Jun-20-08 16:20	Jun-20-08 16:30	
BTEX by FPA 8021B	Extracted:	Jun-27-08 10:43	Jun-27-08 10:43	
	Analyzed:	Jun-27-08 20:48	Jun-27-08 21:12	
	Units/RL:	mg/kg RL	mg/kg RL	
Benzenc	_	ND 0.0010	0100:0 QN	
Toluene		ND 0.0020	ND 0.0020	
Ethylbenzene		0100:0 QN	ND 0.0010	
m,p-Xylenes		ND 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	
Total Xylenes		ND	ND	
Total BTEX		ND	ND	
Inorganic Anions by EPA 300	Extracted:		-	
	Analyzed:	Jun-26-08 20:28	Jun-26-08 20:28	
	Units/RL:	mg/kg RL	mg/kg RL	
Chloride		ND 5.08	ND 5.06	
Percent Moisture	Extracted:			
	Analyzed:	Jun-25-08 08:10	Jun-25-08 08:10	
	Units/RL:	% RL	% RL	
Percent Moisture		1.66 1.00	1.23 1.00	
TPH by SW8015 Mod	Extracted:	Jun-25-08 10:20	Jun-25-08 10:20	
	Analyzed:	Jun-27-08 10:07	Jun-26-08 23:00	
	Units/RL:	mg/kg RL	mg/kg R.L.	
C6-C12 Gasoline Range Hydrocarbons		ND 15.3	ND 15.2	
C12-C28 Diesel Range Hydrocarbons		ND 15.3	ND 15.2	
C28-C35 Oil Range Hydrocarbons		ND 15.3	ND 15.2	
Total TPH		ND	ND	

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

Since 1990

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

Odessa Laboratory 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477







Work Order #: 306437

Project ID: 2004-00061

Lab Batch #: 726683 Units: mg/kg

Sample: 306437-001 / SMP

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 726683

Sample: 306437-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0338	0.0300	113	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 726683

Sample: 511302-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 726683

Sample: 511302-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0341	0.0300	114	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 726683

Sample: 511302-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution







Work Order #: 306437

Project ID: 2004-00061

Lab Batch #: 726548 Unite mo/ko

Sample: 306435-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	l so	KKOGATE KI	COVERT	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	40.5	50.0	81	70-135	****

Lab Batch #: 726548

Sample: 306435-001 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	86.1	100	86	70-135	
o-Terphenyl	40.3	50.0	81	70-135	

Lab Batch #: 726548

Sample: 306437-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes  Chlorooctane	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			{D}		
1-Chlorooctanc	77.5	100	. 78	70-135	
o-Terphenyl	39.9	50.0	80	70-135	

Lab Batch #: 726548

Sample: 306437-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	71.1	100	71	70-135	
o-Terphenyl	37.8	50.0	76	70-135	

Lab Batch #: 726548

Sample: 511227-1-BKS/BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution





Project Name: Lea Station Land Farm

**Work Order #: 306437** 

Project ID: 2004-00061

Lab Batch #: 726548

**Sample:** 511227-1-BLK / BLK

Batch: ! Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.6	100	74	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 726548

**Sample:** 511227-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	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	48.4	50.0	97	70-135	

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306437

Project ID:

2004-00061

Lab Batch #: 726542

Sample: 726542-1-BKS

Matrix: Solid

**Date Analyzed:** 06/26/2008

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Renorting Units: mg/kg

Reporting Units: mg/kg	Batch #:	BLANK/I	BLANK SPI	KE REC	OVERYS	STUDY
Inorganic Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R  D	%R	
Chloride	ND	10.0	11.6	116	75-125	



## BS / BSD Recoveries



# Project Name: Lea Station Land Farm

Work Order #: 306437

Analyst: BRB

Date Prepared: 06/27/2008

Batch #: 1

**Project ID: 2004-00061** Date Analyzed: 06/27/2008

Matrix: Solid

Sample: 511302-1-BKS Lab Batch ID: 726683 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE R	ECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes		<u>B</u>	[C]	[ <u>Q</u> ]	<u> </u>	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.1027	103	0.1	0.0858	98	81	70-130	35	
Toluenc	QN	0.1000	9660'0	100	0.1	0.0812	18	20	70-130	35	
Ethylbenzene	QN	0.1000	0.1094	601	0.1	0.0875	88	22	71-129	35	
m,p-Xylenes	ON	0.2000	0.2208	110	0.2	0.1785	68	21	70-135	35	
o-Xylene	QN	0.1000	0.1073	107	0.1	0.0889	68	61	71-133	35	

Analyst: ASA

Lab Batch ID: 726548

Date Prepared: 06/25/2008

Batch #: 1

Sample: 511227-1-BKS

Matrix: Solid

Date Analyzed: 06/26/2008

Flag Control Limits %RPD 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD ∞ Bik. Spk Dup. %R {G} 112 Ξ Blank Spike Duplicate Result [F] 1110 1120 Spike Added 1000 1000 <u>=</u> Blank Spike %R [D] 103 103 Blank Spike Result [C] 1030 1030 Spike Added 1000 1000 <u>B</u> Sample Result Blank Y g 2 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

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



## Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 306437

Lab Batch #: 726542 Date Analyzed: 06/26/2008

QC- Sample ID: 306434-005 S

**Project ID:** 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Batch #:

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	109	123	113	75-125		

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



# Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 306437

Lab Batch ID: 726548

Date Analyzed: 06/27/2008

QC-Sample ID: 306435-001 S Date Prepared: 06/25/2008

Batch #: 1 Analyst: ASA

Project ID: 2004-00061

Matrix: Soil \_

Reporting Units: mg/kg		M	ATRIX SPIKI	E/MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E RECO	VERY !	STUDY		
TPH by SW8015 Mod	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Spiked Spiked	Spiked Dup.	RPD	Control Limits	Control Control Limits Limits	Flag
Analytes	Result [A]	Added [B]	[C]	(D)	Added [E]	Added Result [F]	%R [G	%	%R	%RPD	•
C6-C12 Gasoline Range Hydrocarbons	QN	1150	0201	93	93 1150	0011	96	3	70-135	3	
C12-C28 Diesel Range Hydrocarbons	QN	1150	0601	95	95 1150	1110	97	2	70-135	2	

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

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

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



## **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 306437

Lab Batch #: 726542 Date Analyzed: 06/26/2008

QC-Sample ID: 306434-005 D

Project ID: 2004-00061

**Date Prepared:** 06/26/2008

Analyst: LATCOR

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)	[		
Chloride	ND	ND	20	20	

Lab Batch #: 726290 **Date Analyzed:** 06/25/2008

**Date Prepared:** 06/25/2008

Analyst: IRO

QC-Sample ID: 306432-001 D

**Percent Moisture** 

Analyte

Batch #:

Matrix: Soil

Reporting Units: %

Percent Moisture

 SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
5.72	5.68	1	20	

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

## **Environmental Lab of Texas**

Phone: 432-563-1800 Fax: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

TAT brabnat2 □ NPDES ANNEL LES , PE ENCORT a-vil) TAT HEUR CHLORIDES EPA 300,1 Project Name: LEA STATION LAND FARM ∏ TRRP MROI PO#: PAA - C. J. Reynolds Project#: SRS: 2004-00061 Project Loc: Les County, NM Roport Formut: X Standard niuns (Cl. SOA, Adusinay) SOIL SOIL Date 250 cstanley@basinenv.com 12609 West I-20 East Odesea, Texas 79765 140614 142504 1401 (505) 396-1429 ONH Total 4. of Containers Fax No: 6-mail: 1630 1620 belignes emiT PAGE 01 OF 01 6/20/2008 6/20/2008 deceived by: Received by: Basin Environmental Service Technologies, LLC ridad gaibn ringa Quinnings S Lovington, NM 88260 (535) 441-2124 CELL F VZ G 1 (3 - 4") CELL F VZ G 2 (3' - 4') Company Address: P. O. Box 301 Project Manager: Curt Stanley FIELD CODE 306437 Sampler Signature: Company Name Telephone No: City/State/Zip: ecial Instructions. (lab use only) ORDER #: 202 (Vino eau dai) a GA ် ရေ

6.23 C 17.W Temperature Upon Receipt.

Cate

Rainquished by:

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

Client:	Plains						
Date/ Time:	06-23-08 @ 1706						
Lab ID #:	306437						
Initials:	AL.						
	Sample Receip	Checklist					
	,			Client Initials			
#1 Tempera	ature of container/ cooler?	(Yes)	No	4.0 °C			
#2 Shipping	container in good condition?	(res)	No				
	Seals intact on shipping container/ cooler?	Yes	No	(Not Present)			
#4 Custody	Seals intact on sample bottles/ container?	(Yes)	No	Not Present			
	Custody present?	(Yes)	No				
	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			
	er label(s) legible and intact?	· Yes	No	Not Applicable			
#10 Sample	matrix/ properties agree with Chain of Custody?	₹es_	No				
	ers supplied by ELOT?	(Yes)	No				
#12 Sample	s in proper container/ bottle?	Yes	No	See Below			
#13 Sample	es properly preserved?	Yes )	No	See Below			
#14 Sample bottles intact?							
#15 Preservations documented on Chain of Custody?							
	ners documented on Chain of Custody?	Yes)	No				
	ent sample amount for indicated test(s)?	Yes)	No	See Below			
#18 All sam	ples received within sufficient hold time?	(Yes)	No	See Below			
	ntract of sample(s)?	Yes	No	(Not Applicable)			
	amples have zero headspace?	Yes	No	Not Applicable			
Contact:	Variance Doci	umentation	•	Date/ Time:			
Regarding:							
Corrective A	Action Taken:						
Check all th	nat Apply:  See attached e-mail/ fax Client understands and wo Cooling process had begu			•			

## **Analytical Report 318065**

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318065

Lea Station Land Farm

Project Address: Lea County, NM

## **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318065. 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. 318065 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 318065**



## 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	Nov-13-08 08:05		318065-001
Cell A TZ G 2	S	Nov-13-08 08:10		318065-002
Cell A TZ G 3	S	Nov-13-08 08:15		318065-003
Cell A TZ G 4	S	Nov-13-08 08:20		318065-004
Cell A TZ G 5	S	Nov-13-08 08:25		318065-005



Project Id: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

## Certificate of Analysis Summary 318065 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm Report Date: 24-NOV-08

Brent Barron, II

Project Manager:

					rroject Manager: Dicin Dallon, II	SICILI DALIUII, 11	
	Lab Id:	318065-001	318065-002	318065-003	318065-004	318065-005	
4	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	
Analysis Kequesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	Nos	SOIL	
	Sampled:	Nov-13-08 08:05	Nov-13-08 08:10	Nov-13-08 08:15	Nov-13-08 08:20	Nov-13-08 08:25	
Inorganic Anions by FPA 300/300.1	Extracted:						
	Analyzed:	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg R.L.	mg/kg RL	mg/kg R.L	
Chloride		36.3 5.21	31.6 5.45	10.9 5.40	ND 5.24	ND 5.40	
Percent Moisture	Extracted:						
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		3.98 1.00	8.29 1.00	7.47 1.00	4.66 1.00	7.49 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 11:00	Nov-21-08 11:00	Nov-21-08 11:00	Nov-21-08 11:00	Nov-21-08 11:00	
	Analyzed:	Nov-22-08 05:44	Nov-22-08 06:07	Nov-22-08 06:30	Nov-22-08 06:54	Nov-22-08 07:17	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.6	ND 16.4	ND 16.2	ND 15.7	ND 16.2	
C12-C28 Diesel Range Hydrocarbons		396 15.6	144 16.4	115 16.2	193 15.7	63.4 16.2	
C28-C35 Oil Range Hydrocarbons		247 15.6	69.5 16.4	66.1 16.2	133 15.7	36.9 16.2	
Total TPH		643 15.6	213.5 16.4	181.1 16.2	326 15.7	100.3 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 no the amount invoiced for this work order unless otherwise agreed to in writing.

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

Since 1990

Odessa Laboratory Director



## 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

	Phone	rax
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



Project Name: Lea Station Land Farm

Work Orders: 318065,

Project ID: SRS 2004-00061

Lab Batch #: 741108

Sample: 317893-043 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		'-'	[D]		
1-Chlorooctane	126	100	126	70-135	, and the second
o-Terphenyl	63.4	50.0	127	70-135	

Lab Batch #: 741108

Sample: 317893-043 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	63.9	50.0	128	70-135	

Lab Batch #: 741108

Sample: 318065-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY  Amount True Control Found Amount Recovery Limits				
TPH by SW8015 Mod			Recovery %R		Flags
Analytes			[D]		
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	58.4	50.0	117	70-135	

Lab Batch #: 741108

Sample: 318065-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes  1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 741108

Sample: 318065-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	111	100	111	70-135	
o-Terphenyl	58.0	50.0	116	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318065,

**Project ID:** SRS 2004-00061

Lab Batch #: 741108

Sample: 318065-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Amount True Found Amount Recovery Limits   SIRROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Found	Amount	1	Limits	Flags
Analytes			[D]		
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	58.4	50.0	117	70-135	

Lab Batch #: 741108

Sample: 318065-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	[A] [B] %R [D]	RECOVERY	STUDY		
TPH by SW8015 Mod  Analytes	Found	Amount	l l	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	56.9	50.0	114	70-135	

Lab Batch #: 741108

Sample: 519789-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	Found   Amount   Recovery   Lim  A     B    %R   %  D	STUDY			
TPH by SW8015 Mod	Found	Amount	,	Control Limits %R	Flags
Analytes	100			, , , , ,	
I-Chlorooctane	125	100	125	70-135	
o-Terphenyl	64.3	50.0	129	70-135	

Lab Batch #: 741108

Sample: 519789-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctanc	112	100	112	70-135		
o-Terphenyl	56.8	50.0	114	70-135		

Lab Batch #: 741108

Sample: 519789-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318065

Project ID:

SRS 2004-00061

Lab Batch #: 740951

Sample: 740951-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK/B	BLANK SPI	KE REC	COVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	9.99	100	80-120	



## BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318065

Analyst: BHW

Date Prepared: 11/21/2008

Batch #: 1

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/21/2008

Lab Batch ID: 741108

Sample: 519789-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANKSPIKE/BLANKSPIKE DUPLICATE RECOVERYSTUDY	FIKE/B	LANKS	PIKE DUPL	CATE F	ECOVE	KY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes	-	<u>B</u>	[C]	<u>a</u>	<u>a</u>	Result [F]	<u>[</u> 5]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	867	87	1000	874	87	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	903	06	1000	918	92	1	70-135	35	

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



## Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 318065

Lab Batch #: 740951

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

**Project ID:** SRS 2004-00061

Analyst

Analyst: LATCOR

QC- Sample ID: 318065-001 S Batch #:

Matrix: Soil

Reporting Units: mg/kg	MAIN	CIX / MIA	I KIX SPIKE	RECO	VERY SIU	ן אַע
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]	[ ,	[2]	, , , , ,	
Chloride	36.3	104	163	122	80-120	Х

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



# Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318065

Date Analyzed: 11/22/2008 Lab Batch ID: 741108

QC-Sample ID: 317893-043 S Date Prepared: 11/21/2008

\_

Analyst: BHW Batch #:

Matrix: Soil

Project ID: SRS 2004-00061

teporting Units: mg/kg		M	ATRIX SPIKI	3/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	STUDY	l l	
TPH by SW8015 Mod	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spik	Duplicate e Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>.</u>	%R [0]	Adde E	Result [F]		%	% <b>R</b>	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1030	872	85	1030	098	83	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	126	68	1030	906	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 Defected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



## **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318065

Lab Batch #: 740951

Project ID: SRS 2004-00061

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

QC- Sample ID: 318065-001 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	36.3	36.5	ı	20	

Lab Batch #: 740820

Date Analyzed: 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318073-002 D

Batch #:

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	3.64	3,90	7	20	

Lab Batch #: 740824

**Date Analyzed: 11/19/2008** 

**Date Prepared:** 11/19/2008

Analyst: BEV

QC-Sample ID: 318065-003 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[ <b>B</b> ]			
Percent Moisture	7.47	7.32	2	20	

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

### **Environmental Lab of Texas**

CHAIN OF GUSTODY RECORD AND ANALYSIS REQUEST
12600 West 1-20 East
Phone: 42-663-1800
Odosea, Texas 79765
Fax: 432-563-1713

### Pany Name   Basin Environmental Service Technologies .LLC   Pany   Pany Activess: P. O. Box 301   Pany Activess: P. O. Box 301   Pany Activess: P. O. Box 301   Pany Pany Activess: P. O. Box 301   Pany Pany Pany Pany Pany Pany Pany Pany	CST   CST	2
#Size   Zip   Lov Ingrom, NM 89260  #Place   Zip   Lov Ingrom, NM 89260  #Place   Part   1916	81 EX 6025 × 318 × 300 × 318 × 300 × 318 × 310 ×	
No.	Per A Lie (Contament A Contament A Contament Place)  Per A Lie (Contament A Contament A Co	CHICORIDES ENV (80)
S   S C C S   Signature:   Signature:   Signature:   Signature:   S   S C C S   S S S S S S S S S S S S	1016   1016	CHICOKIDES EPA (60.1)  HO R W  SCHMONING  SCHMONING  REA (50.0)  SCHMONING  S
S   S   O   C   C   C   C   C   C   C   C   C	Control   Cont	Metals, As Ag Ba Ca'C: Int 11g Sw  You have be a Ca'C: Int 11g
S   S   O   C   S   S   S   S   S   S   S   S   S	Total & ct Contament Apprehim Part Apprehim	Metals As Ag Bo Cd Cr Pd 10 Sw Votables Servengalshe Serv
FELD CODE  FELD CODE  CELL A TZ G 1  CELL A TZ G 2  CELL A TZ G 2  CELL A TZ G 3  11/13/2008  815  CELL A TZ G 5  11/13/2008  820  CELL A TZ G 5  11/13/2008  820  CELL A TZ G 5  11/13/2008  820  CELL A TZ G 5  11/13/2008  820  CELL A TZ G 5  11/13/2008  820	Total 8 of Contament Apply 1969   196	Mousis As Ag Ba Cd Ci Po Hg Su Somwousishe Bet WEDZI GOOD ON BTEX 4200 HG B M.
CELLATZ G 1 11/13/12/08 805 CELLATZ G 2 11/13/12/08 819 CELLATZ G 3 11/13/12/08 815 CELLATZ G 4 11/13/12/08 820 CELLATZ G 5 11/13/12/08 825		
CELLATZ G 2 11/13/2008 810 CELLATZ G 3 11/13/2008 815 CELLATZ G 4 11/13/2008 820 CELLATZ G 5 11/13/2009 825	1 X SOIL X	×
CELLATZ G 3 11/13/12008 815 CELLATZ G 4 11/13/12008 820 CELLATZ G 5 11/13/12008 825	1 X SOIL X	x
11/13/2008 820	1 × Soll ×	×
CELLATZ G 5 11/1/3/2009 825	1 X SOIL X	×
	1 X SOIL X	×
	A Description of Section 19 (1997)   A Description of the Company	Sample Containers intact?
Time Received by:	Date Tene labels Custody	The Labels on container(s) / (a/k-1/s) N Custady seals on container(s) / (a/k-1/s) N Custady seals on container(s) / (a/k-1/s) N
, DM4 1me		Hand Delivered Y Y American American People of Contract UPS DHL. FedEx Los
Resirequismed by E.O.T. The Received by ELOT.	7++ 1 Time Time Temper	aure Upon Receipt: 3.5

### **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

Client: Plains Basin Environmental				
Date/Time. 11-18:08 @ 1717				
ab ID# 518CG5				
<del>-</del> -				
nitials JM1-				
Sample Receipt 0	Checklist			
	1 1462 1			Client Initials
1 Temperature of container/ cooler?	Yes⊃	No	3,5 °C	-
Shipping container in good condition?	(Yes)	No	- TI I	<del>  </del>
Custody Seals intact on shipping container/ cooler?	Yes	No.	Not Present	<del> </del>
Custody Seals intact on sample bottles/ container? / [a be]	(es)	No	Not Present	
Chain of Custody present?	(TES)	No		<del></del>
Sample instructions complete of Chain of Custody?	Yes	No		<del>                                     </del>
Chain of Custody signed when relinquished/ received?	Yes	No	ļ. <u></u>	
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	4
Container label(s) legible and intact?	Yes	No _	Not Applicable	<del>   </del>
Sample matrix/ properties agree with Chain of Custody?	Yes	No_		<del>                                     </del>
1 Containers supplied by ELOT?	Yes	No		1
2 Samples in proper container/ bottle?	Yes	No_	See Below	<b>-</b>
3 Samples properly preserved?	Yes	No	See Below	
4 Sample bottles intact?	Yes	No		<u> </u>
5 Preservations documented on Chain of Custody?	Yes	No		
6 Containers documented on Chain of Custody?	(Yes)	No		
7 Sufficient sample amount for indicated test(s)?	Yes	No_	See Below	
8 All samples received within sufficient hold time?	Yes')	No	See Below	
9 Subcontract of sample(s)?	Yes	No_	C Not Applicable	
0 VOC samples have zero headspace?	(Yes)	<u>No</u>	Not Applicable	
Variance Docum  contact: Contacted by:  degarding:	nentation		Date/ Time:	
Corrective Action Taken:				
Check all that Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun	•		•	

### **Analytical Report 318066**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318066

Lea Station Land Farm

Project Address: Lea County, NM

### Daniel Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318066. 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. 318066 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 318066**



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

Lea Station Land Farm

Sample 1d	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell B TZ G 1	S	Nov-13-08 08:30		318066-001
Cell B TZ G 2	S	Nov-13-08 08:35		318066-002
Cell B TZ G 3	S	Nov-13-08 08:40		318066-003
Cell B TZ G 4	S	Nov-13-08 08:45		318066-004
Cell B TZ G 5	S	Nov-13-08 08:50		318066-005



Project Id: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Analysis Summary 318066 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

24-NOV-08	Dans Dames 11
Report Date:	Danies Managers Dans Dames 11

					Project Manager: Brent Barron, II	Brent Barron, II	***************************************
	Lab Id:	318066-001	318066-002	318066-003	318066-004	318066-005	
Aunthoric Damented	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	
Analysis nequesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-13-08 08:30	Nov-13-08 08:35	Nov-13-08 08:40	Nov-13-08 08:45	Nov-13-08 08:50	
Inorganic Anions by EPA 300\300.1	Extracted:						
	Analyzed:	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.30	12.0 5.39	ND 5.38	ND 5.37	ND 5.28	
Percent Moisture	Extracted:						
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.62 1.00	7.24 1.00	7.08 1.00	6.97 1.00	5.37 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 11:00	Nov-21-08 11:00	Nov-21-08 11:00	Nov-21-08 12:00	Nov-21-08 12:00	
	Analyzed:	Nov-22-08 07:40	Nov-22-08 08:04	Nov-22-08 08:27	Nov-22-08 18:04	Nov-22-08 18:27	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.9	ND 16.2	ND 16.1	ND 16.1	ND 15.9	
C12-C28 Diesel Range Hydrocarbons		857 15.9	279 16.2	75.6 16.1	110 16.1	63.0 15.9	
C28-C35 Oil Range Hydrocarbons		292 15.9	156 16.2	50.0 16.1	45.6 16.1	35.1 15.9	
Total TPH		1149 15.9	435 16.2	125.6 16.1	1.51. 6.11	98.1 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 present the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Phone	Fax
(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
	(281) 240-4200 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500 (432) 563-1800



Project Name: Lea Station Land Farm

Work Orders: 318066,

Project ID: SRS 2004-00061

Lab Batch #: 741108

Sample: 317893-043 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	63.4	50.0	127	70-135	

Lab Batch #: 741108

**Sample:** 317893-043 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terpheny!	63.9	50.0	128	70-135	

Lab Batch #: 741108

Sample: 318066-001 / SMP

Batch: |

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	58.4	50.0	117	70-135	

Lab Batch #: 741108

Sample: 318066-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 741108

Sample: 318066-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318066,

Project ID: SRS 2004-00061

Lab Batch #: 741108

Sample: 519789-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	64.3	50.0	129	70-135	

Lab Batch #: 741108

Sample: 519789-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	<u> </u>		[D]		
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	56.8	50.0	114	70-135	

Lab Batch #: 741108

Sample: 519789-1-BSD / BSD

Batch: 1

: 1 Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 741114

Sample: 318066-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes  1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	57.5	50.0	115	70-135	

Lab Batch #: 741114

Sample: 318066-005 / SMP

Batch: 1

Matrix: Soil

SU	RROGATE R	ECOVERY	STUDY	
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
110				
	Amount Found	Amount Found Amount [B]	Amount   True   Recovery   [A]   [B]   %R   [D]	Found   Amount   Recovery   Limits   %R

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

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



Project Name: Lea Station Land Farm

Work Orders: 318066,

Project ID: SRS 2004-00061

Lab Batch #: 741114

Sample: 318066-005 S/MS

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	61.1	50.0	122	70-135	

Lab Batch #: 741114

Sample: 318066-005 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	125	100	125	70-135	1
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 741114

Sample: 519794-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	ĺ	<u> </u>	[D]		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	62.4	50.0	125	70-135	

Lab Batch #: 741114

Sample: 519794-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

Lab Batch #: 741114

**Sample:** 519794-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	<u></u>
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.8	50.0	126	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

**Work Order #: 318066** 

Project ID:

SRS 2004-00061

Lab Batch #: 740951

Sample: 740951-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[B]	[C]	[D]	7613	
Chloride	ND	10.0	9.99	100	80-120	



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318066

Analyst: BHW

Date Prepared: 11/21/2008

**Project ID:** SRS 2004-00061 Date Analyzed: 11/21/2008

Matrix: Solid

Batch #: 1 Sample: 519789-1-BKS Lab Batch ID: 741108

Flag Control Limits %RPD 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % Blk. Spk Dup. [G] 87 92 Spike Duplicate Result [F] Blank 915 874 Spike Added 0001 1000 Blank Spike %R [D] 8 83 Blank Spike Result 867 903 Spike Added 0001 1000 [<u>B</u>] Blank Sample Result  $\overline{\underline{\mathsf{Y}}}$ Q S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Date Prepared: 11/21/2008 Analyst: BHW

Date Analyzed: 11/22/2008 Matrix: Solid

> Batch #: 1 Sample: 519794-1-BKS Lab Batch ID: 741114

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	ICATE 1	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	
•	Sample Result	Added	Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits	Flag
	[ <b>Y</b> ]		Result	%R		Duplicate	%R		%R	%RPD	
Analytes		[ <u>B</u>	[2]	<u>a</u>	<u> </u>	Result [F]	<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	0001	877	88	1000	098	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	922	92	1000	106	06	2	70-135	35	

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 318066

Lab Batch #: 740951

Date Analyzed: 11/19/2008

**Date Prepared:** 11/19/2008

Project ID: SRS 2004-00061

QC- Sample ID: 318065-001 S

Batch #:

1

Matrix: Soil

Analyst: LATCOR

Reporting Units: mg/kg		MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by El	PA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Chloride		36.3	104	163	122	80-120	Х

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

NI Results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318066

Lab Batch ID: 741108

Date Analyzed: 11/22/2008

QC-Sample ID: 317893-043 S

Matrix: Soil

Project ID: SRS 2004-00061

Batch #:

Limits %RPD Control 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD ~ Spiked Dup. %R [G] 83 88 Spiked Sample Result [F] Duplicate 906 860 BHW Spike Added 1030 1030 Analyst: 亘 Spiked Sample 85 68 Spiked Sample Result 872  $\overline{\Sigma}$ 921 Date Prepared: 11/21/2008 Spike Added 1030 1030 Parent Sample Result ₹ ₽  $\frac{N}{C}$ TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

Flag

Date Analyzed: 11/22/2008

Lab Batch ID: 741114

QC-Sample ID: 318066-005 S Date Prepared: 11/21/2008

Matrix: Soil BHW Batch #: Analyst:

Flag Limits %RPD Control 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 4 Spiked Dup. %R [G] 84 84 Duplicate Spiked Sample Result [F] 856 893 Spike Added 0901 0901 Ξ Spiked Sample Spiked Result Sample 85 87 902 886 Spike Added [B] 1060 1060 Parent Sample Result 63.0 ₹ ΩN TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318066

Lab Batch #: 740951

Project ID: SRS 2004-00061

11/19/2008 Date Prepared:

Batch #:

Analyst: LATCOR

Date Analyzed: 11/19/2008 QC- Sample ID: 318065-001 D

Matrix: Soil

Reporting Units: mg/kg	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	36.3	36.5	1	20	

Lab Batch #: 740820 Date Analyzed: 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC-Sample ID: 318073-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[13]			
Percent Moisture	3.64	3.90	7	20	

## Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Located Continues that A continues that TAT bisbrist2 ع کر پر عرب NPDES CHLORIDES EPA 500.1 Project Name: LEA STATION LAND FARM Phone: 432-563-1800 Fax: 432-563-1713 TRRP WHON Temperature Upon Receipt: Project #: SRS: 2004-00061 PO#: PAA · D.M. Bryant Project Loc: Les County, NM Report Format: X Standard 90 \* New 1878 of por C. Stanky 11118 at SOIL SOIL SOIL SOIL SOIL 1178 OF cstanley@basinenv.com 12600 West I-20 East Odessa, Texas 79765 O'S'UN HOEN (575) 396-1429 leto i intered Fax No: e-mail: 835 33 830 840 850 PAGE 01 OF 01 Received by ELOT 11/13/2008 11/13/2008 11/13/2008 11/13/2008 11/13/2008 Basin Environmental Service Technologies, LLC սգյսձ ըջեւբ eginning Depth Lovington, NM 88260 9360 (575) 441-2244 Company Address: P.O. Box 301 Curt Stanley CELL B 72 G 2 CELL BTZ G 4 CELL B TZ G 5 CELL B TZ G 1 CELL B TZ G 3 FIELD CODE ORDER#: 318066 Sampler Signature: Project Manager: Company Name City/State/Zip: Tetephone No: ecial Instructions: (kpp nse only) Reinquished by: 3 33

### Environmental Lab of Texas

Variance/ Corrective Action Rep	ort- Sample	e Log-In		
lient: Plains Basin Environmental				
ate/ Time: 11-18-08 @ 1717				
ab ID#: 3180.474				
illials: JMF				
Sample Receipt 0	Checklist			Client Initials
1 Temperature of container/ cooler?	Yés⊃	No	3,5 °(	
2 Shipping container in good condition?	(Yes>	No		<del></del>
3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
4 Custody Seals intact on sample bottles/ container? / 14 kg	₹es⊃	No	Not Present	1
5 Chain of Custody present?	(Yes)	No		1
6 Sample instructions complete of Chain of Custody?	Yes	No		1
7 Chain of Custody signed when relinquished/ received?	Yes	No		1
8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Li	,
9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	1
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	+
114 Sample bottles intact?	(Yes)	No	Ode Bolow	
15 Preservations documented on Chain of Custody?	Yes	No		<del></del>
16 Containers documented on Chain of Custody?	Yes	No		+
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	<del></del>
All samples received within sufficient hold time?	Yes	No	See Below	+
r19 Subcontract of sample(s)?	Yes	No	Not Applicable	<del>                                     </del>
#20 VOC samples have zero headspace?	res	No	Not Applicable	<del></del>
Variance Docum				_}
Contact: Contacted by:			Date/ Time:	-
Regarding:				
Corrective Action Taken:				
Check all that Apply:  See attached e-mail/ fax Client understands and woul			•	

### **Analytical Report 318067**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318067

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318067. 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. 318067 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 318067**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell C TZ G 1	S	Nov-13-08 09:00		318067-001
Cell C TZ G 2	S	Nov-13-08 09:05		318067-002
Cell C TZ G 3	S	Nov-13-08 09:10		318067-003
Cell C TZ G 4	S	Nov-13-08 09:15		318067-004
Cell C TZ G 5	S	Nov-13-08 09:20		318067-005



**Project Id:** SRS 2004-00061

Contact: Daniel Bryant Project Location: Lea County, NM

# Certificate of Analysis Summary 318067 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm Report Date: 24-NOV-08

Project Manager: Brent Barron, II

					I IUJECI Maliagei. Dicili Dalioli, II	JICH Danon, II	
	Lab Id:	318067-001	318067-002	318067-003	318067-004	318067-005	
Australe Danisted	Field 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	
Huniyaa Menesieu	Depth:						
	Matrix:	SOIL	SOIL	SOL	SOIL	SOIL	
	Sampled:	Nov-13-08 09:00	Nov-13-08 09:05	Nov-13-08 09:10	Nov-13-08 09:15	Nov-13-08 09:20	
Inorganic Anions by FPA 300\300.1	Extracted:						
	Analyzed:	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	Nov-19-08 14:38	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		24.3 5.39	ND 10.7	ND 5.42	ND 5.31	ND 5.43	
Percent Moisture	Extracted:						
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% . RL	% RL	% RL	% RL	
Percent Moisture		7.30 1.00	6.72 1.00	7.72 1.00	5.77 1.00	8.00 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 12:00	Nov-21-08 12:00	Nov-21-08 12:00	Nov-21-08 12:00	Nov-21-08 12:00	
	Analyzed:	Nov-22-08 18:50	Nov-22-08 19:13	Nov-22-08 19:37	Nov-22-08 20:00	Nov-22-08 20:24	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg R.L.	mg/kg R.L.	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.2	ND 16.1	ND 16.3	ND 15.9	ND 16.3	
C12-C28 Diesel Range Hydrocarbons		36.1 16.2	52.6 16.1	46.8 16.3	50.7 15.9	53.8 16.3	
C28-C35 Oil Range Hydrocarbons		ND 16.2	1.91 16.1	22.4 16.3	16.9 15.9	27.7 16.3	
Total TPH		36.1 16.2	71.6 16.1	69.2 16.3	67.6 15.9	81.5 16.3	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and restate expressed throughour this analytical report represent the best judgment of XEX/CO Laboratories. XEX/CO Laboratories assumes no responsibility and nakes no warranty on the end use of the data hereby presented. Our fiability 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318067,

Project ID: SRS 2004-00061

Lab Batch #: 741114

Sample: 318066-005 S / MS

Batch: ! Matrix: Soil

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	127	100	127	70-135	
o-Terphenyl	61.1	50.0	122	70-135	-

Lab Batch #: 741114

Sample: 318066-005 SD / MSD

Batch: | Matrix: Soil

Units: mg/kg	RROGATE R	GATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	125	100	125	70-135		
o-Terphenyl	60.9	50.0	122	70-135		

Lab Batch #: 741114

Sample: 318067-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	59.3	50.0	119	70-135	

Lab Batch #: 741114

Sample: 318067-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	mg/kg SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	113	100	113 .	70-135	
o-Terphenyl	58.1	50.0	116	70-135	

Lab Batch #: 741114

Sample: 318067-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	58.9	50.0	118	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318067,

**Project ID:** SRS 2004-00061

Lab Batch #: 741114

Sample: 318067-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 741114

Sample: 318067-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	59.0	50.0	118	70-135	

Lab Batch #: 741114

Sample: 519794-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			191		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	62.4	50.0	125	70-135	

Lab Batch #: 741114

Sample: 519794-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			<b>[D]</b>		
I-Chlorooctane	112	100	112	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

Lab Batch #: 741114

**Sample:** 519794-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.8	50,0	126	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318067

Project ID:

SRS 2004-00061

Lab Batch #: 740951

Sample: 740951-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[10]	[C]	[D]	7013	
Chloride	ND	10.0	9.99	100	80-120	

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







## Project Name: Lea Station Land Farm

Work Order #: 318067

**Date Prepared:** 11/21/2008

Batch #: 1

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/22/2008

Analyst: BHW Lab Batch ID: 741114

Units: mg/kg

Sample: 519794-1-BKS

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes	[	<u>8</u>	[0]	<u>[</u>	E	Result [F]	<u>©</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	877	88	1000	098	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	922	92	1000	106	06	2	70-135	35	

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





Project Name: Lea Station Land Farm



Work Order #: 318067

Lab Batch #: 740951

Project ID: SRS 2004-00061

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

**QC- Sample ID:** 318065-001 S Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECOV	ERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	36.3	104	163	122	80-120	X

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

il Results are based on MDL and Validated for QC Purposes



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318067

Lab Batch ID: 741114

Date Analyzed: 11/22/2008

QC-Sample ID: 318066-005 S **Date Prepared:** 11/21/2008

1 Matrix: Soil

**Project ID: SRS 2004-00061** 

Analyst: BHW Batch #:

Keporting Units: mg/kg		M	ATRIX SPIKE	:/MATI	IIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	TUDY		
PoM 2100/MS /44 mdu.	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
noin cluoms your	Sample		Result Sample S	Sample	pike	Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result		[]	%R	dded	Result [F]	%R	%	%R	%RPD	
Analytes	<u>₹</u>	B		<u>a</u>	E		[6]				
C6-C12 Gasoline Range Hydrocarbons	QN	0901	902	85	1060	893	84	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	63.0	1060	886	87	1060	958	84	4	70-135	35	

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318067

Lab Batch #: 740951 **Date Analyzed:** 11/19/2008

Batch #:

Project ID: SRS 2004-00061

**Date Prepared:** 11/19/2008

Analyst: LATCOR

QC- Sample 1D: 318065-001 D

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/kg

Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	36.3	36.5	1	20	

Lab Batch #: 740809

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318049-001 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC.	ATE REC	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.79	1.64	9	20	

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

ironme	Environmental Lab of Texas	of Te	×a	s				1260	CHAIN OI 12600 West I-20 East	CHA!	N OF	cust	007.1	ECOR	D ANE	ANAC	LYS/S	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-553-1800	EST .			
								ode.	Odessa, Texas 79765	7 88X	9765					_	i K	Fax: 432-563-1713	1713			
Project Manager.	er. Curt Stanley				PAGE 01 OF		1				-		۵	oject N	빌	EA S	ATIO	Project Name: LEA STATION LAND FARM	FAR			1
Company Name	ne Basin Environmental Service Technologies, LLC	ental Sen	vice Te	chriolo	gies, LLC		-			İ	-			Proje	S)	RS: 2	Project #: SRS: 2004-00061	1961	Ì			1
Company Address:	ress P.O. Box 301		Ì				- 1	-	Ì					Project Lec: Lea County, NM	) 2)	24 Cou	Tty. No					- 1
City/State/Zip:	Lovington, NM 88260	59260					ł							_	اء ق	¥.	PO #: PAA - D. M. Bryant	ant	1			
Telephone No:						Fax No:	(5)	5) 396	575) 396-1429		.	l	Repo	Report Format:		X Standard	Jard		Птяяр		NPDES	w
Sampler Signature:	ature: O		لا	-		e-mail.	뗾	tanle	cstanley@basinenv.com	asin	en.	EO	-	L			Analyse For		1		H	_
_	C. 70 81 5	_	,	)			22					Ì		Щ		TOTAL		F			34422	
ORDER #: .> 1	1 90	-					T		Preservation & r of	18.0	Containers	iners	2	9510			ac E	0921		_	81 T	
	FIELD CODE		diga Depth	ndeo Geniba	Dele Sampled	baldmaS amiT	indo Fillered	234	HCI HMO <sup>3</sup>	HOWN HOSE	£0,2,eV	Other (Specify)	OM - Orlondovaker SSolics CM - Croundovaker SSolics NP-Non-Polable SSiuc		Cations (Ca. Mg, Na. K) Antons (Cl. SOA, Alternay)	SAMILESPICEC	Volumber As Ag Ba Cd Cr Partie	Sernivolatios 8 TEX 602181930 ox 8TEX	RCI N.O.R.M.	СИГОКІВЕЗ ЕРА ВОВ.	(Auberos-en4) TAT HRUR	TAT brebnet2
	CELL C TZ G 1				11/13/2008	900	-	×		-			SOIL	×						×	Н	×
	CELL C TZ G 2				11/13/2008	506	٠,	×					SOIL	×						×	-	×
	CELL C TZ G 3				11/13/2008	910	_	×	_				SOIL	×				_		×	-	×
	CELL C TZ G 4				11/13/2008	915	1	×					SOIL	×				_		×	-	×
	CELL C TZ G 5				11/13/2008	920	1	X					SOIL	×				_		×	_	×
				П			Н			-				$\exists$		1				$\dashv$	$\dashv$	$\Box$
				7				_	_	-+	$\exists$	_		1	1	1	7	+	#	_	+	I
							+	$\pm$	#	+	$\pm$			1	1	†	1	‡	1	Ŧ	+	$\perp$
				1			+-	$\pm$	1	+	+	ļ			$\pm$	1	1	‡	1	‡-	╁	T
Special Instructions:					† 		-	*	1.5	<u>ئر</u> ئ <u>ر</u>	;	No STEK CAPT COMMENTER	بزان	ĭ	P C	atory (	Laboratory Comments:	its:		8	Z	Γ
( )		) med	٤	illie Illie	Received by.		1				-	S. S.		e E	S S S	Fredo	Heads	VOCs Free of Headspace?		66	zz	
	3	(A)	717	7	i								_		Custo State	dy seal	90100	itainer(s der(s)	راما/ ا	ã≻	<b>z</b> (}	
nquished by	9	Dale	Ē	_	Received by:							Cate		Ē	Samp Ye ye		Sample Hand Delivered by Samplan Delivered by Country UPS	Rep.?	, <u>₹</u>	FedEx Lone Sta	Lone S	
Reincushed by:		Date	=	e e	Received by ELOT:	777	٠.(					Oate 11 - 1/3 0/3		Time (7.2)	Ten	erature	Temperature Upon Receipt:	aceipt:		r, r,	ب ا۔	
			ľ	1		1	1		l	l	1						Ì					1

### Environmental Lab of Texas

Variance/ Corrective Action Rep	ort- Sample	e Log-Ir	1	
lient: Plains Basin Environmental				
ate/ Time: 11 - 18 - 08 @ 1717				
ab ID#1 3/8C W1				
itials. JMF				
Sample Receipt (	Checklist			
T	V65 - 1	NI-	3.5 .0	Client Initials
Temperature of container/ cooler? Shipping container in good condition?	Yes >	No No	3,5 °(	
Shipping container in good condition?  Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
Custody Seals intact on sample bottles/ container?//s be	₹es⊃	No	Not Present	
Chain of Custody present?	<u>7€\$</u> 2	No	Notriesent	+
Sample instructions complete of Chain of Custody?	Yes	No		<del> </del>
7 Chain of Custody signed when relinquished/ received?	Yes	No	<del>                                     </del>	-
B Chain of Custody agrees with sample label(s)?	Yes	No	(D written on Cont./ Lie	.
9 Container label(s) legible and intact?	Tes	No	Not Applicable	<u>'</u>
10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No	HOLApplicable	+
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	<del>                                     </del>
14 Sample bottles intact?	Yes	No	See Beigw	+
15 Preservations documented on Chain of Custody?	Yes	No	<del>                                     </del>	
16 Containers documented on Chain of Custody?	Yes	No		
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	<del></del>
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?	TES	No	Not Applicable	
Variance Docun			, seas applicable	<u> </u>
Contact: Contacted by:			Date/ Time:	
Regarding:			······································	
Corrective Action Taken:				
CONTROLLIVE PICTURE TAXABLE				
Check all that Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun			•	

### **Analytical Report 318068**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318068

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318068. 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. 318068 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 318068**



### 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 I	S	Nov-13-08 09:25		318068-001
Cell D TZ G 2	S	Nov-13-08 09:30		318068-002
Cell D TZ G 3	S	Nov-13-08 09:35		318068-003
Cell D TZ G 4	S	Nov-13-08 09:40		318068-004
Cell D TZ G 5	S	Nov-13-08 09:45		318068-005



Project Id: SRS 2004-00061

Contact: Daniel Bryant

Project Location: Lea County, NM

### Certificate of Analysis Summary 318068 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 24-NOV-08

Brent Barron, II Project Manager:

15.9 0. 15.9 15.9 15.9 R 5.31 꿈 Nov-13-08 09:45 Nov-19-08 14:38 Nov-19-08 17:00 Nov-21-08 13:00 Nov-23-08 02:16 Cell D TZ G 5 318068-005 mg/kg ND 1510 S 378 5.83 1888 mg/kg % 15.9 15.9 15.9 15.9 90.1 Z 5.29 귚 귛 Nov-13-08 09:40 Nov-19-08 14:38 Nov-19-08 17:00 Nov-21-08 13:00 Nov-23-08 01:53 Cell D TZ G 4 318068-004 mg/kg ND 515 506 721 9.85 mg/kg % 16.2 16.2 Z 5.39 ₹ 8. Z 16.2 16.2 Nov-21-08 13:00 Nov-23-08 01:29 Nov-19-08 14:38 Nov-19-08 17:00 Nov-13-08 09:35 Cell D TZ G 3 318068-003 SOIL mg/kg ND 56.4 557 509 99/ mg/kg % 16.0 16.0 16.0 16.0 꿃 5.32 귛 8 귛 Nov-13-08 09:30 Nov-19-08 14:38 Nov-19-08 17:00 Nov-21-08 13:00 Nov-23-08 01:06 Cell D TZ G 2 318068-002 mg/kg ND SOIL 6.07 373 134 20.3 507 mg/kg % 15.9 Z 5.29 ¥ 8. 굺 15.9 15.9 15.9 Nov-19-08 17:00 Nov-21-08 13:00 Nov-19-08 14:38 Nov-23-08 00:42 Nov-13-08 09:25 Cell D TZ G 1 318068-001 SOIL mg/kg ND mg/kg 16.8 5.56 467 158 625 % Field Id: Depth: Matrix: Sampled: Analyzed: Units/RL: Analyzed: Units/RL: Extracted: Analyzed: Extracted Units/RL: Inorganic Anions by EPA 300/300.1 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons Percent Moisture C12-C28 Diesel Range Hydrocarbons Analysis Requested C28-C35 Oil Range Hydrocarbons Percent Moisture Total TPH Chloride

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

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

Odessa Laboratory Director



### **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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders: 318068,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318068-001 / SMP

Batch: Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	. 115	100	115	70-135	
o-Terphenyl	60.4	50.0	121	70-135	

Lab Batch #: 741117

Sample: 318068-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE F	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			{D}	}	
I-Chlorooctane	113	100	113	70-135	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 741117

Sample: 318068-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctanc	115	100	115	70-135	
o-Terphenyl	61.6	50.0	123	70-135	

Lab Batch #: 741117

Sample: 318068-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	!	
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	63.0	50.0	126	70-135	

Lab Batch #: 741117

Sample: 318068-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	64.8	50.0	130	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

**Work Orders**: 318068,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318071-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

Lab Batch #: 741117

Sample: 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

Lab Batch #: 741117

Sample: 519795-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	63.1	50.0	126	70-135	

Lab Batch #: 741117

**Sample:** 519795-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctanc	117	100	117	70-135	
o-Terphenyl	59.0	50.0	118	70-135	

Lab Batch #: 741117

Sample: 519795-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	127	100	127	70-135	
o-Terphenyi	59.8	50.0	120	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318068

Project ID:

SRS 2004-00061

Lab Batch #: 740951

Sample: 740951-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SP	IKE REC	COVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		101	[C]	[D]	/01	
Chloride	ND	10.0	9.99	100	80-120	

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



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318068

Lab Batch ID: 741117 Analyst: BHW

Sample: 519795-1-BKS

Date Prepared: 11/21/2008

Batch #: 1

Project ID: SRS 2004-00061 Date Analyzed: 11/22/2008

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Ϋ́	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[ <u>v</u> ]		Result	%R		Duplicate	%R		%R	%RPD	
Analytes		<u>B</u>	<u> C</u>	<u>[a</u>	亘	Result [F]	<u>.</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	0001	901	06	1000	898	87	4	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	ND	1000	942	94	0001	617	92	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





Project Name: Lea Station Land Farm



Work Order #: 318068

Lab Batch #: 740951

QC- Sample ID: 318065-001 S

Date Analyzed: 11/19/2008

**Date Prepared:** 11/19/2008

Project ID: SRS 2004-00061

Batch #:

Analyst: LATCOR

atch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	ERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	36.3	104	163	122	80-120	Х

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



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318068

Lab Batch ID: 741117

QC-Sample ID: 318071-001 S

Matrix: Soil

Project ID: SRS 2004-00061

Batch #:

Limits %RPD Control 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % Spiked Dup. %R [G] 98 92 Duplicate Spiked Sample Result [F] 946 884 BHWSpike Added 1030 1030 Analyst: Spiked Sample Spiked Result Sample %**R** ⊡ 87 93 968 196 Date Prepared: 11/21/2008 Spike Added [B] 1030 1030 Parent Sample Result  $\overline{\mathbf{A}}$ S Ð TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Date Analyzed: 11/23/2008 Reporting Units: mg/kg

Flag

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318068

Lab Batch #: 740951 Date Analyzed: 11/19/2008

QC-Sample ID: 318065-001 D

Project ID: SRS 2004-00061

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte			ļ		
Chloride	36.3	36.5	1	20	

Lab Batch #: 740815

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC-Sample ID: 318075-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)			
Percent Moisture	2.01	2.49	21	20	F

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

### **Environmental Lab of Texas**

							og o	12600 West F.20 Easl Odessa, Texas 79765	12600 West F.20 Easl Odessa, Texas 79765	) Easi 79765						£ü	Phone: 432-563-1806 Fax: 432-563-1713	432-5	Phone: 432-563-1806 Fax: 432-563-1713	<b>9</b> ₽		
Project Manager:	Curt Stanley		-	PAGE 01 OF	5					- [	1		rojeci	E S	쁴	Project Name: LEA STATION LAND FARM	PA OF	3	S S	E E		
Company Name	Basin Environmental Service Technologies, LLC	ice Tect	Fralo Solo	ales, LLC		i	1					1	à	oject	S.	Project #: SRS: 2004-00061	Š	9061				
Company Address:	P. O. Box 301										- ]	,	Proj	ē,	3	Project Loc: Lea County, NM	ty. NA		-			
City/State/Zip:	Lovington, NM 88260					ļ								õ	<u>.:</u>	PO#: PAA - D.M. Bryant	8.	ŧ				1
Telephone No:	(575) 441-2244				Fax No.	9	75) 39	(575) 396-1429				Rept	Report Format:	Ë	×	X Standard	P.	ш	TRRP	,	□ NPDES	PDE
Sampler Signature:	15 TO				e-mail:		stan	600	cstanley@basinenv.com	nenv	8	_	ı					·			.	
(ab use only)	2 × 90	/				۲۰.	إ					Ļ			F 5	TCLP	Analyze For	<u> </u>	<b>_</b>		$\vdash$	T
İ						1-			A Servation & 7 or containers	60 60		6 4054105-5 6 6 2015-75	1	9001 %)		Cr Pb Hg Se		09Z8 X318		(300.)		
	PIELD CODE	MqsQ gainnigə6	didaG Bribri	Date Sampled	belgms2 emiT	ekt Fillered olal #. of Cristainers	63/ 63/	нсі	HOPN TOS'H	,O.(2,4M	Mone (Specify)	CW - Croundwarer	2002309-00M⊸9P	2001 XT :H41	Polons (C3, Mg, Ma,	Metale: As Ag Ba Cd	k-aldables	SEEX (OSTB) 030 v	(:)}	CHLORIDES EP		TAT HRUS
CELL	CELL D TZ G 1	-		11/13/2008	925	-	×	H			├-	ios.	×	-				-		×	╁	Ή—
CELL	CELL D TZ G 2	Н	H	11/13/2008	930	_	×	-			-	SOIL	X			H		_		×	Н	Н
CELL	CELL D TZ G 3	+	$\dashv$	11/13/2008	935	-	×					SOIL	×					$\dashv$		×	$\dashv$	$\dashv$
CELL	CELL D TZ G 4	$\dashv$	+	11/13/2008	940	귀	×	4		7		SOL	×	+	4	+		-		×	-	-+
CELL	CELL D TZ G 5	$\dashv$	+	11/13/2008	945	귀	×	$\dashv$		7		SOIL	×	$\dashv$	耳	$\dashv$	#	$\dashv$		×	$\dashv$	$\rightarrow$
		+				+		4	$\perp$	#	-		7	$\pm$	丰	-	$\perp$	+	$\pm$	$\mp$	+	+
		-	$\dagger$			+	上	╀	L	T	╁		$\perp$	+	1	╁	1	╀		I	╁	+-
		H	H								Н		$\Box$	H		Н		$\left  \cdot \right $	H	П	Н	1
			$\vdash$			_			L		<u> </u>			l		_		-				_
Special Instructions:								.2	, 63 TE	وعلكة دعاج	7.	Brankanuka d	F III		borsi impie	Laboratory Comments: Sample Containers Intect?	omme iners li	nte: ntect?			Δ	2 2
d palsinbd	Jane J	Tage (		Recaived by:								Date	Ē		sted stody	Labels on container(s) Cushedy seals on container(s)	zaineri zaineri	stainer tainer	74 /s}.	ર્યું છેલ્ડ	SOS.	2 Z Z 6
Reimquished by:	3 13 1	1	\ <u>\</u>	Received by:							ľ	Date	Time		a pe	Sample Hand Delivered by Sample Hand Delivered by Samplemoners		a.	ā	9≥ z -0 - (	ا م	gzz"
Reinquished by:	Date	Tine	T	Received by ELOT	,					T	ľ	Date	1 E		o sand	State I	, 10 c		<b>.</b>		e N	ر ۾

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

Nient:	Plains Basin Environmental				
Date/ Time:	11-18.08 @ 1712				
ab ID#:	318066				
nitials.	JMF				
	Sample Receipt (	Checklist		Cile	nt Initials
1 Temperati	ure of container/ cooler?	Yes ⊃	No	3.5 °C	
2 Shipping o	container in good condition?	(Yes>	No		
3 Custody 5	Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
4 Custody S	Seals intact on sample bottles/ container? / [q bel	Øes⊃	No	Not Present	
5 Chain of C	Custody present?	<b>YES</b> ⊋	No		
	structions complete of Chain of Custody?	(Yes.)	No		
7 Chain of C	Custody signed when relinquished/ received?	(Yes	No		
8 Chain of C	Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
	label(s) legible and intact?	(Yes)	No	Not Applicable	
10 Sample r	natrix/ properties agree with Chain of Custody?	(Yes)	No		
	rs supplied by ELOT?	(Yes)	Nο		
12 Samples	in proper container/ bottle?	(Yes)	_No_	See Below	
13 Samples	properly preserved?	(Yes?)	No	See Below	
114 Sample t	bottles intact?	Yes	No		
	stions documented on Chain of Custody?	(Yes)	No		
#16 Containe	ers documented on Chain of Custody?	Yes	No		
17 Sufficien	t sample amount for indicated test(s)?	Yes	No	See Below	
18 All samp	les received within sufficient hold time?	Yes'	No	See Below	
#19 Subconti	ract of sample(s)?	Yes	No	Not Applicable	
#20 VOC sar	nples have zero headspace?	Yes	No	Not Applicable	
Contact: Regarding:	Variance Docum	nentation		Date/ Time:	
Corrective Act	tion Taken:				
Check all that	t Apply: See attached e-mail/ fax Client understands and woul Cooling process had begun:				

### **Analytical Report 318070**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318070

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318070. 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. 318070 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 318070



### 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	Nov-13-08 09:50		318070-001
Cell E TZ G 2	S	Nov-13-08 09:55		318070-002
Cell E TZ G 3	S	Nov-13-08 10:00		318070-003
Cell E TZ G 4	S	Nov-13-08 10:05		318070-004



Project 1d: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Analysis Summary 318070 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 24-NOV-08

Project Manager: Brent Barron, II

					Troject Manager. Dieni Danon, 11	
	Lab Id:	318070-001	318070-002	318070-003	318070-004	
Assolution Descripted	Field Id:	Cell E TZ G I	Cell E TZ G 2	Cell E TZ G 3	Cell E TZ G 4	
naicanhay sistinut	Depth:					
	Matrix:	SOIL	TIOS	SOIL	SOIL	
	Sampled:	Nov-13-08 09:50	Nov-13-08 09:55	Nov-13-08 10:00	Nov-13-08 10:05	
Inorganic Anions by FPA 300/300.1	Extracted:					
	Analyzed:	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.27	ND 5.25	ND 5.28	ND 5.38	
Percent Moisture	Extracted:					
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		5.06 1.00	4.79 1.00	5.33 1.00	7.04 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	
	Analyzed:	Nov-23-08 05:01	Nov-23-08 05:24	Nov-23-08 05:47	Nov-23-08 06:11	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.8	ND 15.8	ND 15.8	ND 16.1	
C12-C28 Diesel Range Hydrocarbons		109 15.8	167 15.8	79.0 15.8	20.4 16.1	
C28-C35 Oil Range Hydrocarbons		76.2 15.8	101 15.8	44.8 15.8	17.4 16.1	
Total TPH		185.2 15.8	268 15.8	123.8 15.8	37.8 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 the analytical report present the text, slughent of XRNCO Laboratories. XENCO Laboratories assumes no responsibility and makes no varianty to the end use of the data kereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Phone Fax (281) 240-4200 (281) 240-4280 4143 Greenbriar Dr. Stafford, Tx 77477 (214) 351-9139 (214) 902 0300 9701 Harry Hines Blvd, Dallas, TX 75220 (210) 509-3334 (210) 509-3335 5332 Blackberry Drive, San Antonio TX 78238 (813) 620-2000 (813) 620-2033 2505 North Falkenburg Rd, Tampa, FL 33619 (305) 823-8500 (305) 823-8555 5757 NW 158th St, Miami Lakes, FL 33014 (432) 563-1800 (432) 563-1713 12600 West I-20 East, Odessa, TX 79765 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: 318070,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318070-001 / SMP

Batch: ! Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes I-Chlorooctane	118	100	118	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 741117

Sample: 318070-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	56.8	50.0	114	70-135	

Lab Batch #: 741117

Sample: 318070-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	55.2	50.0	110	70-135	

Lab Batch #: 741117

Sample: 318070-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	58.1	50.0	116	70-135	

Lab Batch #: 741117

**Sample:** 318071-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders: 318070,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

Lab Batch #: 741117

**Sample:** 519795-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			(5)		
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	63.1	50.0	126	70-135	

Lab Batch #: 741117

**Sample:** 519795-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY :	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	59.0	50.0	118	70-135	

Lab Batch #: 741117

Sample: 519795-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			{D		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	59.8	50.0	120	70-135	

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

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318070

Project ID:

SRS 2004-00061

Lab Batch #: 740954

Sample: 740954-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK/	BLANK SPI	KE REC	COVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[B]	[C]	76 K  D]	70 K	
Chloride	ND	10.0	9.09	91	80-120	

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



### BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 318070

Analyst: BHW

Lab Batch ID: 741117

Sample: 519795-1-BKS

Date Prepared: 11/21/2008

Batch #: 1

**Project ID: SRS 2004-00061** Date Analyzed: 11/22/2008

Matrix: Solid

Flag Control Limits %RPD 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 RPD 4 Blk. Spk Dup. %R [G] 87 Blank Spike Duplicate Result [F] 898 Spike Added 1000 豆 Blank Spike %R [D] 90 Blank Spike Result  $\overline{\mathbb{Q}}$ 901 Spike Added 1000 <u>B</u> Blank Sample Result 9 9 ₹ TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons Units: mg/kg Analytes

35

70-135

92

917

1000

94

942

1000

C12-C28 Diesel Range Hydrocarbons

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 318070

Lab Batch #: 740954

QC- Sample ID: 318069-001 S

**Date Prepared:** 11/19/2008 **Date Analyzed:** 11/19/2008

Project ID: SRS 2004-00061

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting U	nits: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
	Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride		166	223	410	109	80-120	

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

Il Results are based on MDL and Validated for QC Purposes



## Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318070

Lab Batch ID: 741117

**Project ID: SRS 2004-00061** Matrix: Soil \_

BHW Analyst: Batch #: QC-Sample ID: 318071-001 S Date Prepared: 11/21/2008

Flag Limits %RPD Control 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD Spiked Dup. %R [G] 98 92 Duplicate Spiked Sample Result [F] 884 946 Spike Added 1030 1030 Ξ Spiked Sample . D %R 87 93 Spiked Sample Result <u>5</u> 968 961 Spike Added [B] 1030 1030 Parent Sample Result [A] ND S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Date Analyzed: 11/23/2008 Reporting Units: mg/kg

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

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

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318070

Lab Batch #: 740954

Project ID: SRS 2004-00061

**Date Prepared:** 11/19/2008

Analyst: LATCOR

**Date Analyzed:** 11/19/2008 QC- Sample ID: 318069-001 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg

orting Units: mg/kg	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)	Ì		
de	166	168		20	

Lab Batch #: 740820

**Date Analyzed: 11/19/2008** 

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318073-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.64	3.90	7	20	

		ĺ			NPDES		T.,	Cz '0	} 'p'	C (#lubario8-a-rg) TAT H. TAT bigb		×	×	×							z	22	z ( <del>)</del>	Feder ≺ <	ပ္	
					Ó		L	_	_					-	_			╡			(3)	£	Custody seals on container(s) / (Lh.:5)	د ۾ <(<	ا ا ا	
F 2 m	Project Name: LEA STATION LAND FARM						┝			.009 A 43 23019O.	-	×	×	×	_		$\vdash$			_			ξ	· e		l
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-983-1880 Rax: 432-563-1713	=			ľ	TRRP		⊦				N O E	├	$\vdash$	$\vdash$			-	$\dashv$	$\dashv$	_			7	. ¥		l
5 8 8	¥	-			<u> </u>		باي	kΤ	0948	802487,030 ≪ BTEX E		H	-				Н	$\dashv$	$\dashv$	-	÷	<b>6</b>	5 e (s	٠.٠	5	
S R2 432	귈	8	5	듩			ᆲ	1		Sajurnos	-	1						T	7		ints:	peds :	i i i	P. S. S.	ge Ge	
, XS	읟	Project #: SRS: 2004-00061	Project Loc: Lea County, NM	PO #: PAA - D.M. Bryant	9		Analyze For			SHI	JE IOV							7	ヿ		Syret comments: Semple Containers interesting Containers interes	pe )	88	Sample Hand Delivered by Sample Polient Rep. ? by Courier? UPS	Temperature Upon Receipt	
Pho Fa	Ϋ́	Ř	ğ	N.	anda				9S B	a. As Ag Ba Cd Cr Pb H										_	の量	, T	SK SK		i)	
A.	Æ	83	Ö	¥	X Standard		10.19	FOTAL		1ESP / CFC		<b> </b>						_			£ 8	Fre	2 3 3 3 4 5 3 5 3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6 3 6		of Bridge	
ANI	늴	e.	ا <u>ت</u> ن	انه غذ			1	╠		ns (Ca, Mg, Ma, K) ns (Cl. SO4. Alkalinny)		╂─				-	$\dashv$	$\dashv$		_	2 E	ğ į	is s	£ 2 3	E	
80	Ę	e ct	2	2	ž		1	l ⊦			HqT	1-	-	<u> </u>		-		$\dashv$	$\dashv$		<u>نځ</u> ۳ ت	7	100	ισ.	I	ł
္ထ	ţ	g.	9		Report Format:			lk	8910		ngt ×	×	×	×	_			$\dashv$	$\dashv$		يُد	Ę	1	em i	17.77	l
32	5		ā		ĕ			٦,	<u>.</u> lu	10 Mideas aldelog non		7	_	1				┪			11.				$\Box$	
á					å			1	E 100	Croundwater 5- Solie	*> S	SOL	SOL	SOIL				- 1			ź	ı			x	l
, S <sub>7</sub>	1	i	ı	1	1	۶		ļ.,	, 6	Chinking Water St - Sinc	- Ma	⊢	-	Н	_	Н	-	-	-		5	å		Date	986 47	
្ត	1	ļ				cstanley@basinenv.com			ž  -	· · · · · · · · · · · · · · · · · · ·	UDN	╁	-			Н		$\dashv$		_	1			Γ	11-18 CF	
25 M	1			- 1	ı	2		į	1	·0·s		一									ś	F			<del>-</del>	ı
CHAIN OF 12600 West I-20 East Odessa, Texas 79765	- 1			į	- 1	Ë		18	ě		OBN							┪	$\neg$		50	1				
ઈ ‡ું ફુ	- 1			- 1	ا۔	pa		to a goldendario			S'H								$\Box$		ź	1				
* g	- 1				<b>₹</b>	6		į	Ž –		юн	-	L								4	1				
2600 des:		İ		l	(57.5) 396-1429	믬			Ž,	"(	HINC		L.				_	4	_						ĺ	
₽0				- 1	5	sta		225		# of Containers 402	801 X	×	×	×	_	Н	$\vdash$	-	4			1			i	
		ŀ			끡	OI		-,.	Ŧ	Filtered Services		F	H	Ξ.	_		Н	-1	-							
	10				Fax No:	e-mail:				belgme2 er	miT   8	988	1000	1005											# 4+ \$	
	PAGE 01 OF	ogies, LLC								baldmað a	11/13/2008	11/13/2008	11/13/2008	11/13/2008								Octobro de la constante de la	. Acron ph.	Received by:	Received by ELOT	
		- Pu			ļ	i				րց Օգրւի	Endi											ſ	N			1
xas		vice Tech					J		L	dsq≎Ω ⊵nioni	1548			_									17/	Time	Times	
ab of Te	anley	Basin Environmental Service Technologies, LLC	ox 301	Lovington, NM 88260	11-2244	1.81						7	3	4								ej:-C		Date	Oate	
Environmental Lab of Texas	Project Manager: Curt Stanley		Company Address: P. O. Box 301	Ì	8 No: (575) 441-2244	Sampler Signature:		5180 10	,		FIELD CODE	CELL ETZ G 2	CELLETZ G 3	CELL E TZ G 4									ting	2		
Environ	Project M	Company Name	Company	City/State/Zip:	Telephone No:	Sampler	(tab use only)	•	1	(Spuc een qe)	841										Special Instructions			Relinquished by	Relinquished by:	

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

Slient: .	Plains Basin Environmental				
Date/ Time.					
.ab ID # :	318010				
nitials.	JME				
	Sample Receipt (	Checklist			Cilore Imiera
#1 Tempera	ature of container/ cooler?	YES	No	3,5 °C	Client Initials
	container in good condition?	(Yes)	No		
	Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
	Seals intact on sample bottles/ container? / [a he]	₹es⊃	No	Not Present	-
	Custody present?	(YES)	No	Not resent	+
	instructions complete of Chain of Custody?	Yes	No		<del>                                     </del>
	Custody signed when relinquished/ received?	Yes	No		<del> </del>
	f Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	<del> </del>
	er label(s) legible and intact?	Yes	No	Not Applicable	<del> </del>
	matrix/ properties agree with Chain of Custody?	(Yes)	No	1101 Applicable	<del> </del>
	ners supplied by ELOT?	(Yes)	No		<del>                                     </del>
	es in proper container/ bottle?	(Yes)	No	See Below	<del> </del>
-	es properly preserved?	Yes	No	See Below	<del>                                     </del>
	e bottles intact?	TYES	No	See Below	<del>                                     </del>
	vations documented on Chain of Custody?	Yes	No		<del>                                     </del>
	ners documented on Chain of Custody?	Yes	No		
	ent sample amount for indicated test(s)?	Yes	No	C O	<del>                                     </del>
			No	See Below	
· · · · · · · · · · · · · · · · · · ·	ples received within sufficient hold time?	₹ <b>6</b> 5	No	See Below	
	ntract of sample(s)?	Yes		Not Applicable	<del> </del>
#20 VOC s	amples have zero headspace?	Yes	No_	Not Applicable	
	Variance Docum	nentation			
Contact;	Contacted by:			Date/ Time:	
Regarding:					
garonig,					
Corrective A	Action Taken;				
Check all th	hat Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun			•	
	Cooling process had beguin	anorny anter	sauchuri	event	

### **Analytical Report 318069**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

24-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318069
Lea Station Land Farm

Project Address: Lea County, NM

### Daniel Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318069. 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. 318069 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 318069**



### 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	Nov-13-08 10:10		318069-001
Cell F TZ G 2	S	Nov-13-08 10:15		318069-002
Cell F TZ G 3	S	Nov-13-08 10:20		318069-003
Cell F TZ G 4	S	Nov-13-08 10:25		318069-004
Cell F TZ G 5	S	Nov-13-08 10:30		318069-005



Project 1d: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Analysis Summary 318069 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 24-NOV-08

Project Manager: Brent Barron, II

					0	,	
	Lab Id:	318069-001	318069-002	318069-003	318069-004	318069-005	
	Field Id:	Cell F TZ G 1	Cell F TZ G 2	Cell F TZ G 3	Cell F TZ G 4	Cell F TZ G 5	
Anatysis kequestea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	NOS	SOIL	
	Sampled:	Nov-13-08 10:10	Nov-13-08 10:15	Nov-13-08 10:20	Nov-13-08 10:25	Nov-13-08 10:30	
Inorganic Anions by FPA 300/300.1	Extracted:						
	Analyzed:	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		166 11.2	193 5.47	131 11.1	140 5.38	30.7 5.29	
Percent Moisture	Extracted:					<del></del>	
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	-
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		10.39 1.00	8.52 1.00	10.24 1.00	7.10 1.00	5.53 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	
2011 (1001) (1011)	Analyzed:	Nov-23-08 02:40	Nov-23-08 03:03	Nov-23-08 03:27	Nov-23-08 03:50	Nov-23-08 04:14	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.7	ND 16.4	L'91 QN	ND 16.1	ND 15.9	
C12-C28 Diesel Range Hydrocarbons		214 16.7	189 16.4	415 16.7	431 16.1	139 15.9	
C28-C35 Oil Range Hydrocarbons		109 16.7	74.7 16.4	291 996	1.91 7.86	60.0 15.9	
Total TPH		323 16.7	263.7 16.4	511.6 16.7	529.7 16.1	6'51 661	

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

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

Odessa Laboratory 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders: 318069,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318069-001 / SMP

Matrix: Soil Batch:

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	117	100	117	70-135		
o-Terphenyl	60.2	50.0	120	70-135		

Lab Batch #: 741117

Sample: 318069-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane	115	100	115	70-135			
o-Terphenyl	59.5	50.0	119	70-135			

Lab Batch #: 741117

Sample: 318069-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	118	100	118	70-135			
o-Tcrphenyl	61.9	50.0	124	70-135			

Lab Batch #: 741117

Sample: 318069-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	117	100	117	70-135			
o-Terphenyl	62,3	50.0	125	70-135			

Lab Batch #: 741117

Sample: 318069-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	116	100	116	70-135			
o-Terphenyl	59.2	50.0	118	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### Form 2 - Surrogate Recoveries

Project Name: Lea Station Land Farm

Work Orders: 318069,

Project ID: SRS 2004-00061

Lab Batch #: 741117

**Sample:** 318071-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	129	100	129	70-135			
o-Terphenyl	61.5	50.0	123	70-135			

Lab Batch #: 741117

**Sample:** 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane	127	100	127	70-135			
o-Terphenyl	60.7	50.0	121	70-135			

Lab Batch #: 741117

Sample: 519795-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes			(6)				
1-Chlorooctane	124	100	124	70-135			
o-Terphenyl	63.1	50.0	126	70-135			

Lab Batch #: 741117

Sample: 519795-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	117	100	117	70-135			
o-Terphenyl	59.0	50.0	118	70-135			

Lab Batch #: 741117

**Sample:** 519795-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	127	100	127	70-135	
o-Terphenyl	59.8	50.0	120	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318069

Project ID:

SRS 2004-00061

Lab Batch #: 740954

Sample: 740954-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg

1 RIANK /RIANK SPIKE RECOVERY STUDY

Reporting Onics. ing/kg Batch #:		BLANK /BLANK SPIKE RECOVERY STUDY				HUDI
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	9.09	91	80-120	

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



### BS / BSD Recoveries

29 ( )



Project Name: Lea Station Land Farm

Work Order #: 318069

Analyst: BHW

Date F

Date Prepared: 11/21/2008

Batch #: 1

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/22/2008

Date Analyzed: 11/22/2008 Matrix: Solid

Lab Batch ID: 741117 Sample: 519795-1-BKS

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % Blk. Spk Dup. %R [G] 92 87 Blank Spike Duplicate Result [F] 898 917 Spike Added 1000 1000 豆 Blank Spike %R [D] 8 8 Blank Spike Result [C] 942 901 Spike Added 1000 1000 <u>B</u> Blank Sample Result Ā ND S TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg 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 #: 318069

Lab Batch #: 740954

Project ID: SRS 2004-00061

**Date Analyzed:** 11/19/2008 **QC- Sample ID:** 318069-001 S

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY  Parent   Spiked Sample   Control								
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added {B}	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag			
Chloride	166	223	410	109	80-120				

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



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318069

Lab Batch ID: 741117

Reporting Units: mg/kg

Date Analyzed: 11/23/2008

**Project ID: SRS 2004-00061** 

Matrix: Soil Batch #:

BHW Analyst: QC-Sample ID: 318071-001 S Date Prepared: 11/21/2008

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	RIX SPII	KE DUPLICA	TE RECO	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Spi	Spiked Sample	ike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Control Limits Limits	Flag
Analytes	Result [A]	Added [B]	<u>[]</u>	% <u>D</u>	Added [E]	Result [F]	S. 2	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QN	1030	968	87	1030	884	98	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	196	93	1030	946	92	-	70-135	35	

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

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

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



Chloride

### Sample Duplicate Recovery



Project Name: Lea Station Land Farm

Work Order #: 318069

Lab Batch #: 740954

QC- Sample ID: 318069-001 D

Date Analyzed: 11/19/2008

**Project ID:** SRS 2004-00061

**Date Prepared:** 11/19/2008 Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg

orting Units: mg/kg	SAMPLE /	SAMPLE / SAMPLE DUPLICATE RECOVE							
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag				
de	166	. 168	1	20					

Lab Batch #: 740820

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318073-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag			
creent Moisture	3.64	3.90	7	20				

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

Large I and State Date Detection of the State Date Detection of the State Detection of the	Lase Hocewea by:  Lase Inne Sample Tall Demonstra	Line Facebred by Carlo C
		The second secon
Date Time Received by FLOT	Date Time Received by ELOT.	Date Time Received by ELO3.
Date Time Received by ELOT	Time Received by ELOT.	Date Time Received by ELOT.
		Date Time Naconven of ELOS.
		Company of the Compan
		Company of the Compan
		Date Time Naconven of ELOS.
Case Recoved by F. Co.	Date   Ime   Recoived by ELUT.	Date   Ime   Recoived by ELUT.
Date Description Date   Date	Date Description Date   Date	The December 10 and 10
2	STO STORE OF THE S	מא כמחופי כרים
퓜	by Commers the Commers only	HO Seln Seln Seln Seln Seln Seln Seln Seln
Commission with the second control of the se	Administration of the control of the	THO SHOT CAMPACA (4
V-SampelStell Rep. 7 PV-SampelStell Rep. 3	by Carrier? UPS OPL	by Caracty Rep. ?  by Caracty UPS DPL
by Camber Den Rep. ?	by Committee Dent Rep. ?	Dy Carrier Open Rep. ?
Date Time Stample Hand Delivered by Volume Stample Hand Delivered by Volume Stample Hand Delivered by Connect UPS OPL	Date Time Sample Belowed by.  Date Time Sample Belowed  Dy.Coming Date HPB: 3  Dy.Coming Determined  Dy.Coming	Date Time Sample Land Received by: by-Sample Land Poletered by by-Sample Land Poletered by Dy-Sample Land Land Land Land Land Land Land Land
Use   Time   Received by:   Date   Time   Sample Land Delivered   Perceived by:   Date   Time   Sample Land Delivered   Perceived by:   Date	Lift of the Receved by Date Time Carrier Sample between the Carrier Ca	Date Time Sample Land Delivered by Sample Land Delivered by Sample Land Delivered by Sample Land Delivered by Cardiner Rep. ?
Custody seals on coder(s)  Care Time Sample Hand Delivered  Care Time Sample Hand Delivered  Care Time Sample Hand Delivered  Care Time Sample Hand Delivered	Custody seals on coder(s)  Carlody seals on coder(s)  Carlody seals on coder(s)  Carlody seals on coder(s)  Carlody seals on coder(s)  Carlody seals on coder(s)  Carlody seals on coder(s)	Custody seals on coder(s)  Castody seals on coder(s)
Lose Ima Sample (Jacob Code)  Outside Seals on constraint stylical Code Ima Sample (Jacob Code Code Code Code Code Code Code Code	Custous seals on consents of the Carlot Seals on consents of the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents) on the Carlot Seals on consents of the Carlot Seals on conse	Date Time Sample and Obster Time Sample and O
Custody seals on container(s)/Lich  Custody seals on container(s)/Lich  Custody seals on container(s)/Lich  Custody seals on container(s)/Lich  Sample Land Delivered  Poccered by:  Custody seals on container(s)/Lich  Sample Land Delivered  Date  Imm Sample Land Delivered  Date  Imm Sample Land Delivered  Date  Out of the Container of the Contai	Custody seals on convented (s)/Lch  Custody seals on convented (s)	Custody seals on constant (s) //Links Received by Castedy seals on constant (s) //Links Sample Hand Delivered by Vision Seals on constant (s) //Links Sample Hand Delivered by Vision Seals on Constant (s) //Links Sample Hand Delivered by Vision Seal
Carlo Fine Received by Carlo Fine Section Container(s) [Land Container(s)] [Land Carlo Carlo Fine Seath of Carlo Fine Seath of Carlo Fine Seath of Carlo Fine Seath of Carlo Fine Seath of Carlo Fine Seath of Carlo Fine Sea	Date Time Baceword by.    March   Marc	Date from Custody seals on container(s) fuch.    Date   Time   Custody seals on container(s) fuch.   Date   Time   Custody
Coale Time Labels on container(s) Customy scale container(s) Customy scale container(s) (Lich Customy scale container(s) (Lich Customy scale container(s)) (Lich Customy scale c	Coule Time Received by Course Time Course Service (s) Course Service (	Cale Time Cace on container(s) Case Time Cace on container(s) Cace Time Cace on container(s)
Coate Time Nacewed by Coate Time Accessed by Coate Time Nacewed by	Courte Received by Courte Received by Courte Courte Sanche Labels on constant (s) //L/2 / 1/2 /	Course Received by Course Inne Course Same of Course Course Same of Course Course Same of Course Course Same of Course Course Same of Course Course Same of Course Course Same of Course Course Same of Course Cours
Oos Free of Headspace?   Oos Free of Headspace?   Oos Free of Headspace?   Oos Free of Headspace?   Ousloy sale on constituent(s)   Ousloy sale on constituent(s)   Ousloy sale on constituent(s)   Oos	VOCs Free of Headspace?    John   Time   Receved by   Laboration content	Obsite Time Received by Obsite Time About Time About Time Custody seals on constitution (s) Custody seals on
Sample Containers Intaid?    Colin   Time   Received by.   Colin   Time   Labels on container(s)   Colin   Col		Sample Containers Intact?  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Headstpace.  VOCS free of Head
A No. 3 LEFF (2) Year Containers Intract?  Chaire Time Received by:  Chaire Time Received by:  Chaire Time Containers (3) (Leff (3) Leff (	Coars Time Received by Coars Time Accessed by Coarse Coars Time Labels on constrained?	Color Time Received by Colored Time Colored Service of the Colored Service Colored Service Colored Service Colored Service Colored Service Colored Service Colored Service Ser
A No. 5 TE / Action 1-11 1-12 1-12 1-12 1-12 1-12 1-12 1-1	A No. 5 TE / Annual 1142 . Sample containers that ?  Out 5 Read Out 5 Annual 1142 . Sample containers that ?  Out 5 Read Out 5 Annual 1142 . Sample containers that ?  Out 5 Read Out 5 Annual 1142 . Sample containers that ?  Out 6 Annual 1142 . Sample 1142 . Sample 1142 . Sample 1142 . Sample 1142 . Sample 1142 . Sample 1142 . Sample 1142 . Sample 1143 . Sample 114	A No. 5 TE 4 40/40 1148 . Sample Containers Interest Sample Construents Interest Sample Construents Interest Sample Construents Interest Sample Construents Interest Sample Construents Interest Interest Sample Construents Interest Interes
nstructions:  ** No. 5 (Extension of the contract of the contr	A No. 5 (Extended on the control of	A No. 5 (Extensions:  A No. 5 (Extensions: Control of the decision of the deci
A N. E. S. (E. y. d. v. (v. ) C. At. A. (v. )	A Nic 5 (E) 4 C/C+C (C) 4 C/C+C (E) 4 C/C+	A Nic 5 (Extract yill the Naceword by Same Containers I thank Same Containers I thank Same Containers I thank Same Containers I thank Same Containers I thank Same Containers I thank Same Same Same Same Same Same Same Same
A N. S. [Ext. A. C. A. C. L. A	A No. 5 (E + 4. C. C. A. C. C. A. C. C. A. C. C. A. C. C. A. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	A N. S. (E. s. a., p., C. A., a.) 11 P. Sample Containers triand?  Obere Time Received by:  Date Time Sample Land Deliver Container(s) / Land Containers (s. a.) 12 P. Sample Containers (s. a
A N. S. IT st. A. A. A. A. A. A. A. A. A. A. A. A. A.	A Ni S (E 4 4 Kr) (C. Str. OL) (1.14 to 1.25 (E 5 4 Kr) (C. Str. OL) (	A No. 5 (Ext. April 2) 1144 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
A N. S. E. A. C. A	A Nic 5 (F) 4 Chrolidy 114 to Same Continents:  A Nic 5 (F) 4 Chrolidy 114 to Same Continents Interference of the Same Continents Interference of the Same Continents Interference of the Same Continents of t	A Nig Si Textus (Comments: Sample Continents: Nog Si Textus (Comments: Sample Continents: Nog Si Textus (Comments: Nog Si
A N. S. (E. s. a. v. (c. C. Ar. A. v. p. 114 v. Sample Containers Hinds?  (VOS free of velocities of the designed of the desig	A Nic 5 (E 4 a.c. (r. C. Ar. Ar.) 114 k. Sample Containers Intact?  Chair Time Received by:  Chair Time Labels on container(s) (l.c.)  Chair Sample Container(s) (l.c.)  Chair Sample Chair Sample Chaire Sample (Journal Sample Label Delivered by:  Chair Sample Label Delivered	A N. E. S. (E. 4 a. N. V. C. At. A. M. M. S. Sample Containers littled?  Oblige Time Received by:  Date Time Labels on constraint(s) (L. M. M. M. M. M. M. M. M. M. M. M. M. M.
A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 TE s 4 No. 1 Te v. Lebostroy Comments:  A No. 5 Te v. Lebostroy Comments:  A No.	A N. E. E. F. A. C. A. C. L. A	A N. S. TE + 4. C. A. C. L. A.
A N. S. IT st. C. St. C	A No. 5 (Ext. Levy Contractor)  A No. 5 (Ext. Levy Contractor)	A No. 5 TE A CANALA 1148 . Sample Containers Interest Ricewed by Comments . Sample Containers Interest . Sample Containers Interest . Sample Containers Interest . Sample Containers Interest . Sample Containers Interest . Sample Containers Interest . Sample Containers . Sample Containers . Sample Containers . Sample Containers . Sample Librar Deliverent . Sample Librar D
A N. S. T. S. T. S. T. S. T. S. S. S. S. S. S. S. S. S. S. S. S. S.	A N. E. S. T. E. A. C. C. A. C. L. A. C. S. T. E. BEDOLEON Comments:  A N. E. S. T. E. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	Date Ime Received by:  Date Ime Received by:  Date Ime Sample Container(s)  Outside sales on container(s)  Outside sales on
A N. E. (T. S. C. M. C. N. C. N. C. N. C. M. C.	Carlo Time Received by Carlo C	A N. E. S. E. S. A. C. C. C. C. C. C. C. C. C. C. C. C. C.
A N. E. F. F. A. A. A. A. A. A. A. A. A. A. A. A. A.	A N. S. (E. s. a. g. c. C. A. a. a. g. c. C. A. a. a. g. c. C. A. a. a. g. c. C. A. a. a. g. c. c. d. a. a. g. c. c. d. a. a. g. c. c. d. a. a. g. c. c. d. a. a. g. c. c. d. a. a. g. c. c. d. a. g. c. c. d. a. g. c. c. d. a. g. c. c. d. a. g. c. c. d. a. g. c. c. c. d. a. g. c. d. a. g. c. c. d. a. g. d. a. g. c. d. a. g. d. a. g. c. d. a.	A N. S. T. S. T. S. T. S. T. S. T. S. T. S. T. S. S. T. S. S. T. S. S. T. S. S. S. S. S. S. S. S. S. S. S. S. S.
A N. S. IT & A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	A No. 5 TE / 4 No. 1 Te leaboratory Commenter:  A No. 5 TE / 4 No. 1 Te leaboratory Commenter:  A No. 5 TE / 4 No. 1 Te leaboratory Commenter:  A No. 5 TE / 4 No. 1 Te leaboratory Commenter:  A No. 5 Te leaboratory Commenter:	A Nic 5 TE 4 4 (Ar. C. Ar. C. L. C. Ar. C. C. Ar. C. C. Ar. C. C. Ar. C. C. Ar. C. C. Ar. C. C. C. Ar. C. C. C. Ar. C. C. C. C. C. C. C. C. C. C. C. C. C.
A N. S. T. V. C. C. C. C. C. C. C. C. C. C. C. C. C.	A N. E. S. T. E. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	A Nig Si Text. Community Communities (Machine) Communities (Machin
A N. S. T. E. A. C. C. A. C. L. C. C. C. C. C. C. C. C. C. C. C. C. C.	Carlo Time Received by Carlo C	A N. E. S. E. A. C. C. C. C. C. C. C. C. C. C. C. C. C.
A N. S. T. F. A. A. A. A. A. A. A. A. A. A. A. A. A.	Calle Time Received by:  Called Time Received by:  Called Sample Containers (1)/(Lx)  Called Sample Containers (1)/(Lx)  Called Sample Containers (1)/(Lx)  Called Sample Called Sample (1)/(Lx)  Call	A N. S. TE s a.v. (** C. *Ac.n
A No. 5 TE / 4 Control of Time Received by:    A	A No. 5 TE 4 d. (no. 1) 11-12 (1) 11	Colling Time Received by Contract the Contract of Cont
A N. E. S. T. C. At. A. L. A. L. C. Sample Comments:  A N. E. S. T. C. At. A. L. A. L. C. Sample Comments:  A N. E. S. T. C. At. A. L. A. L. C. Sample Continuents:  A Date Time Accounted by:  A Date Time Accoun	A No. 5 (E & C. C. C. C. C. C. C. C. C. C. C. C. C.	A Nic Sife Activity 1148. Abbotatory Comments:  A Nic Sife Activity 1148. Sample Containents Illustry  On Free Activity 1148. Sample Containents Illustry  On Free Activity 1148. Sample Containents Illustry  On Free Activity 1148. Sample Containents Illustry  On Free Activity 1148. Sample Library Containents 1149. Containents and an order activity 1149. On the Containents Illustry  On Free Activity 1148. Sample Library Containents 1149. On the
A N. S. TE & A. C. C. A. C. L. A. C. L. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	Carlo Time Received by Carlo C	A N. E. S. E. S. A. C. C. C. C. C. C. C. C. C. C. C. C. C.
A N. S. T. F. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	Chaire Time Received by:  Chaire Time Received by:  Chaire Time Chaire Time Chaire Time Chaire Time Chaire Time Chaire Time Chaire Sea on container(s) (Let Chaire) Chaire Time Chaire Tim	A N. S. TE s and your Comments:  A N. S. TE s and you considered that the constant of the cons
A No. 5 (E 1 4. No. 1. C. Annul 1.14 v. Sample Containers Intaid?  VOS Free of Headspace?  VOS Free of	A No. 5 TE 4 d. (2007) 1142. Sample Containments:  A No. 5 TE 4 d. (2007) 1142. Sample Containments:  OS Free of Free Containments Interv.  Oster of Anna Processed by:  Date Interv. Sample Load Selection  Catalogy saals on containments)  Catalogy saals on containments  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Selection  Oster of Load Sample Load Sample Load Selection  Oster of Load Sample Load Sample Load Selection  Oster of Load Sample Load Sample Load Selection  Oster of Load Sample Load Samp	Control of the Contro
A N. E. S. T. E. A. C. C. A. C. L. A. C. S. T. C. S. C. C. C. C. C. C. C. C. C. C. C. C. C.	A Ni S (E 4 4 Nov. C. Chr. Litz.) 114 to Comments:  A Ni S (E 4 4 Nov. C. Chr. Litz.) 114 to Comments:  A Ni S (E 4 4 Nov. C. Chr. Litz.) 114 to Comments:  A No S Free of Headsback?  A Constant Season container(s) (Litz.)	A No. 5 TE A Comment Comments:  A No. 5 TE A Comment Comments:  A No. 5 TE A Comment Comments:  A No. 5 TE A Comment Comments:  A No. 5 TE A Comment Comments:  A No. 5 TE A Comment Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A Comments:  A No. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENT COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:  A NO. 5 TE A COMMENTS:
11/13/2008   1030   11 X	11   12   13   14   15   15   15   15   15   15   15	11/13/2008   1030   11 X
11/13/2008	11/13/2008	11/13/2008
11/13/2008   1030   1   X	11/13/2006   1030   1   X	11/13/2006   1030   1   X
Note   11   11   11   11   11   11   11	Not   Not	Note
11/13/2008   1030   1	11/13/2008   1030   1   X	11/13/2008   1030   1   X
CELL FIZ G S	CELL FIZ G S	11/13/2006
CELL FIZ G 4	CELLFTZ G 4	CELL FTZ G 4
CELL FTZ G 4	CELL F TZ G 4	CELL FTZ G
CELL FTZ G	CELL FTZ G	CELL FTZ G
CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X X SOIL X X X SOIL X X X SOIL X X SOIL X X X SOIL X X X SOIL X X X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 14/13/2008 1030 11 X SOIL X X X X X X X X X X X X X X X X X X X	CELL FTZ G
CELL F TZ G S	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G
CELL F TZ G S	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G
CELLFTZ G 4	CELLFTZ G 4	CELLFTZ G 4
CELLFTZ G 4	CELLFTZ G 4	CELLFTZ G 4
CELL F TZ G S	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G
CELL F TZ G S	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G
CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X SOIL X X CELLFTZ G 5 11/13/2008 1039 1 X X SOIL X X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X SOIL X X X CELLFTZ G 5 11/13/2008 1030 1 X X SOIL X X SOIL X X X X X X X X X X X X X X X X X X X
CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X SOIL X X CELLFTZ G 5 11/13/2008 1039 1 X X SOIL X X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 11/13/2008 1030 1 X SOIL X X SOIL X X X CELLFTZ G 5 11/13/2008 1030 1 X X SOIL X X SOIL X X X X X X X X X X X X X X X X X X X
CELLFTZ G 4 11/13/2008 1039 1 X SOIL X X X SOIL X X X SOIL X X X SOIL X X SOIL X X X SOIL X X X SOIL X X X SOIL X X X X X X X X X X X X X X X X X X X	CELLFTZ G 4 14/13/2008 1030 11 X SOIL X X X X X X X X X X X X X X X X X X X	CELL FTZ G
CELL FTZ G	CELL FTZ G	CELL FTZ G
CELL FTZ G	CELL FTZ G	CELL FTZ G
CELL FTZ G	CELL FTZ G	CELL FTZ G
CELL FTZ G	CELL FTZ G	CELL FTZ G S
CELL FTZ G 4	CELL FTZ G	CELL FTZ G
CELL FTZ G 4	CELL F TZ G 4	CELL FTZ G
CELLFTZ G 4	CELL FTZ G 4	CELLFTZ G 4
CELL FIZ G 4	CELL FIZ G	CELL FIZ G
CELL FIZ G	CELLFIZ G	CELLFIZ G
CELL FIZ G S	CELL FIZ G S	11/13/2006
11/13/2008   1030   1	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	Note   Note
Note	Not   1   1   1   1   1   1   1   1   1	Note   1   Note   1
Note   1   Note   1	Not   Not	Note   Note
Note   1   Note   1	11/13/2008   1030   1   X	1113/2008   1030   1 X
11/13/2008   1030   1   X	11/13/2006   1030   1   X	11/13/2006   1030   1   X
11/13/2008   1030   1   X	11/13/2006   1030   1   X	11/13/2006   1030   1   X
11/13/2008   1030   1   X	A No. 2   E   4 4 11 11 2	CELLFIZGS
Note   Note	11/13/2008	No.   No.
CFLL FIZ G S 11/13/2006 10:30 11 X SOIL X SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X CHANGE SOIL X X X X X X X X X X X X X X X X X X X	100	CELL F TZ G S
A N. S. T. C. A. C. L. L. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	11/13/2008	CELL FTZ G S
A N. S. T. L. L. L. L. L. L. L. L. L. L. L. L. L.	11/13/2008	CELL F TZ G S
A N. S. T. C. A. C. L. L. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	11/13/2008	CELL FTZ G S
A N. S. T. C. A. C. L. L. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	11/13/2008	CELL FTZ G S
A N. S. T. C. A. C. L. L. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	11/13/2008	CELL FTZ G S
A N. S. T. C. A. C. L. L. C. C. A. C. C. A. C. C. A. C. C. C. C. C. C. C. C. C. C. C. C. C.	11/13/2008	CELL FTZ G S
CELL FIZ G S	100	CELL F TZ G S
Note   Note	11/13/2008	No.   No.
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
SOIL FTZ G S	11/13/2008	CELL FTZ G S
SOIL FTZ G S	11/13/2008	CELL FTZ G S
SOIL FTZ G S	11/13/2008	CELL FTZ G S
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
11/13/2008	11/13/2008	11/13/2008   1030   1   X     SOIL   X     SOIL   X   X     X
SOIL FTZ G S	11/13/2008	CELL FTZ G S
SOIL FTZ G S	11/13/2008	CELL FTZ G S
11/13/2006	A No. 2   E   4 4 11 11 2	CELLFIZGS
11/13/2006   1030   1   X	A No. 2 (E. 1 4 4 111 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11/13/2008
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	Note   Note
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	
11/13/2008   1030   1   X	11/13/2008	
11/13/2008   1030   1   X	11/13/2008	
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X
11/13/2008   1030   1   X	11/13/2008   1030   1   X	11/13/2008   1030   1   X

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

lient: Pla	ins Basin Environmental				
	-18 OB @ 1717				
ab ID # :	318067				
itials:	JMF				
	Sample Receipt	Checklist		<b>.</b>	
		l veca l	Nia	Client In	itials
Temperature of c		Yes >	No	3,5 °C	_
	er in good condition? tect on shipping container/ cooler?	Yes	No No	(TI-10-17)	—
	lact on sample bottles/ container? / [4]	√es >	No	Not Present	$\rightarrow$
		(Yes)	No	Not Present	
Chain of Custody	ns complete of Chain of Custody?	Yes	No		$\dashv$
	signed when relinquished/ received?	Ves	No	<del></del>	
	agrees with sample label(s)?	(Yes)	No	ID written on Cont / Lid	
	) legible and intact?	(Yes)	No		
	properties agree with Chain of Custody?	Yes	No	Not Applicable	
Containers supp		Ves 1	No	<del></del>	$\dashv$
	er container/ bottle?	(Yes)	No	See Below	
3 Samples proper		Yes	No	See Below	
4 Sample bottles i	<del></del>	Yes	No	See Below	$\dashv$
	ocumented on Chain of Custody?	(Yes)	No	<del> </del>	-
	mented on Chain of Custody?	Yes	No	<del> </del>	
	e amount for indicated test(s)?	res	No	See Below	-
	eived within sufficient hold time?	Yes	No	See Below	
9 Subcontract of s	- <del> </del>	Yes	No	Not Applicable	$\dashv$
	ave zero headspace?	res	No	Not Applicable	
ontact:	Variance Docus  Contacted by:	mentation		Date/ Time:	
Regarding:	ken:				
Check all that Apply:	See attached e-mail/ fax Client understands and wou Cooling process had begun			•	

### **Analytical Report 318071**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

25-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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







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

Reference: XENCO Report No: 318071 Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318071. 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. 318071 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 318071**



### 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	Nov-14-08 08:00	318071-001
Cell A VZ G 2 (3'-4')	S	Nov-14-08 08:15	318071-002
Cell A VZ G 3 (3'-4')	S	Nov-14-08 08:30	318071-003
Cell A VZ G 4 (3'-4')	S	Nov-14-08 08:45	318071-004
Cell A VZ G 5 (3'-4')	S	Nov-14-08 09:00	318071-005



Project 1d: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Affalysis Summary 318071 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 25-NOV-08

Project Manager: Brent Barron, II

					rioject Manager. Dichi Danon, in	DICHE DALIOH, 11	
	Lab Id:	318071-001	318071-002	318071-003	318071-004	318071-005	
St. 1	Field Id:	Cell A VZ G I (3'-4')	Cell A VZ G 2 (3'-4')	Cell A VZ G 3 (3'4')	Cell A VZ G 4 (3'-4')	Cell A VZ G 5 (3'-4')	
Analysis Kequesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-14-08 08:00	Nov-14-08 08:15	Nov-14-08 08:30	Nov-14-08 08:45	Nov-14-08 09:00	
RTFX by FPA 8021B	Extracted:	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	
	Analyzed:	Nov-20-08 13:14	Nov-20-08 13:35	Nov-20-08 13:57	Nov-20-08 14:20	Nov-20-08 14:42	
	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 0.0012	ND 0.0011	ND 0.0012	
Toluene		ND 0.0021	ND 0.0021	ND 0.0023	ND 0.0023	ND 0.0024	,
Ethylbenzene		ND 0.0010	ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	
m,p-Xylenes		ND 0.0021	ND 0.0021	ND 0.0023	ND 0.0023	ND 0.0024	
o-Xylene		ND 0.0010	ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0012	
Total Xylenes		ND 0.0031	ND 0.0032	ND 0.0035	ND 0.0034	ND 0.0036	
Total BTEX		ND 0.0072	ND 0.0075	ND 0.0082	ND 0.0079	ND 0.0084	
Inorganic Anions by FPA 300/300.1	Extracted:						
	Analyzed:	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	Nov-19-08 22:50	
	Units/RL:	mg/kg RL	mg/kg RL		mg/kg RL	mg/kg RL	
Chloride		ND 5.17	ND 5.34	ND 5.76	ND 5.71	ND 6.10	
Percent Moisture	Extracted:			i .			
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		3.38 1.00	6.32 1.00	13.16 1.00	12.46 1.00	17.97	
TPH by SW8015 Mod	Extracted:	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	Nov-21-08 13:00	
	Analyzed:	Nov-23-08 06:34	Nov-23-08 06:58	Nov-23-08 07:21	Nov-23-08 07:45	Nov-23-08 08:08	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.5	ND 16.0	ND 17.3	ND 17.1	ND 18.3	
C12-C28 Diesel Range Hydrocarbons		ND 15.5	ND 16.0	ND 17.3	ND 17.1	ND 18.3	
C28-C35 Oil Range Hydrocarbons		ND 15.5	ND 16.0	ND 17.3	ND 17.1	ND 18.3	
Total TPH		ND 15.5	0.91 UN	ND 17.3	ND 17.1	ND 18.3	

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 present the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318071,

Lab Batch #: 740971

Sample: 318071-001 / SMP

Project ID: SRS 2004-00061 Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 740971

Sample: 318071-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE F	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 740971

Sample: 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 740971

Sample: 318071-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	, , ,		[D]		
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 740971

Sample: 318071-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0329	0.0300	110	80-120		
4-Bromofluorobenzene	0.0265	0.0300	88	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318071,

**Project ID: SRS 2004-00061** 

Lab Batch #: 740971

Sample: 318071-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes 1.4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobenzene	0.0279	0.0300	93	80-120		

Lab Batch #: 740971

Sample: 318071-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	(**)	(2)	[D]			
1,4-Difluorobenzene	0.0323	0.0300	108	80-120		
4-Bromofluorobenzene	0.0272	0.0300	91	80-120		

Lab Batch #: 740971

Sample: 519683-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 740971

Sample: 519683-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY		
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobenzene	0.0255	0.0300	85	80-120		

Lab Batch #: 740971

Sample: 519683-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0280	0.0300	93	80-120				
4-Bromofluorobenzene	0.0292	0.0300	97	80-120				

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318071,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 318071-001 / SMP

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	112	100	112	70-135			
o-Terphenyl	56.7	50.0	113	70-135			

Lab Batch #: 741117

Sample: 318071-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Analytes								
I-Chlorooctane	129	100	129	70-135				
o-Terphenyl	61.5	50.0	123	70-135				

Lab Batch #: 741117

Sample: 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctanc	127	100	127	70-135			
o-Terphenyl	60.7	50.0	121	70-135			

Lab Batch #: 741117

Sample: 318071-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctanc	114	100	114	70-135			
o-Terphenyl	57.0	50.0	114	70-135			

Lab Batch #: 741117

Sample: 318071-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	117	100	117	70-135			
o-Terphenyl	58.6	50.0	117	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318071,

**Project ID:** SRS 2004-00061

Lab Batch #: 741117

Sample: 318071-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	Ì		[D]				
1-Chlorooctane	119	100	119	70-135			
o-Terphenyl	59.2	50.0	118	70-135			

Lab Batch #: 741117

Sample: 318071-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	117	100	117	70-135			
o-Terphenyl	59.0	50.0	118	70-135			

Lab Batch #: 741117

**Sample:** 519795-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chlorooctane	124	100	124	70-135				
o-Terphenyl	63.1	50.0	126	70-135				

Lab Batch #: 741117

Sample: 519795-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	117	100	117	70-135			
o-Terphenyl	59.0	50.0	118	70-135			

Lab Batch #: 741117

Sample: 519795-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctanc	127	100	127	70-135			
o-Terphenyl	59.8	50.0	120	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

**Work Order #:** 318071

Project ID:

SRS 2004-00061

Lab Batch #: 740954

Sample: 740954-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg Batch #: 1		#: 1 BLANK /BLANK SPIKE RECOVERY				STUDY
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[B]	[C]	76R [D]	70 K	
Chloride	ND	10.0	9.09	91	80-120	



### BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 318071

Analyst: ASA

**Date Prepared:** 11/20/2008

Project ID: SRS 2004-00061 Date Analyzed: 11/20/2008

Matrix: Solid

Lab Batch ID: 740971

Batch #: 1 Sample: 519683-1-BKS

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	λı	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	•	[ <u>B</u>	[C]	[D]	(E)	Result [F]	<u>5</u>				
Benzene	QN	0.1000	0.0913	16	0.1	0.0932	93	2	70-130	35	
Toluenc	QN	0.1000	0.0890	68	0.1	6060'0	16	2	70-130	35	
Ethylbenzene	QN	0.1000	0.0950	96	0.1	9960'0	26	2	71-129	35	
m,p-Xylenes	QN	0.2000	0.1932	26	0.2	0.1960	86	-	70-135	35	
o-Xylene	QN	0.1000	0.0921	65	0.1	0.0935	94	2	71-133	35	:

Analyst: BHW

Lab Batch ID: 741117

**Date Prepared:** 11/21/2008

Date Analyzed: 11/22/2008

Batch #: 1 Sample: 519795-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	λí	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Desemb	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes	<u>¥</u>	[ <b>B</b> ]	(C)	laj	( <u>E</u> )	Result [F]	[5]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	106	06	1000	898	87	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	942	94	1000	917	92	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 #: 318071

Lab Batch #: 740954 **Date Analyzed:** 11/19/2008

QC-Sample ID: 318069-001 S

**Date Prepared:** 11/19/2008

**Project ID:** SRS 2004-00061 Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	166	223	410	109	80-120	

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



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Project ID: SRS 2004-00061

Batch #: QC-Sample ID: 318071-001 S

Date Analyzed: 11/20/2008

Work Order #: 318071 Lab Batch ID: 740971

Matrix: Soil ASA Analyst: **Date Prepared:** 11/20/2008

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPII	KE DUPLICA	TE RECO	OVERY !	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result			Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[]		Added [E]	Result [F]	. % [G	%	%R	%RPD	)
Benzene	QN ON	0.1035	8690'0	19	0.1035	0.0710	69	3	70-130	35	×
Toluene	QN	0.1035	0.0674	99	0.1035	0.0684	99	2	70-130	35	X
Ethylbenzene	ND	0.1035	0.0701	89	0.1035	0.0710	69	1	71-129	35	X
m,p-Xylenes	ND	0.2070	0.1425	69	0.2070	0.1439	70	1	70-135	35	Х
o-Xylene	ND	0.1035	0.0672	65	0.1035	0.0678	99	2	71-133	35	Х

Matrix: Soil BHW Analyst: Batch #: QC-Sample ID: 318071-001 S **Date Prepared:** 11/21/2008 Date Analyzed: 11/23/2008 Lab Batch ID: 741117

Reporting Units: mg/kg		X	ATRIX SPIK	J/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Result	Added	[2]	%R		Added Result [F]	%R	%	%R	%RPD	
Analytes	[ <b>v</b> ]	<u>B</u>		[ <u>Q</u> ]	(E)		[G]				
C6-C12 Gasoline Range Hydrocarbons	QN	1030	968	87	1030	884	98	1	70-135	3.5	
C12-C28 Diesel Range Hydrocarbons	ND	1030	196	93	1030	946	92	1	70-135	38	

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318071

Lab Batch #: 740954

Date Analyzed: 11/19/2008

QC-Sample ID: 318069-001 D

Project ID: SRS 2004-00061

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units: mg/kg

orting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	' '	(B)			
de	166	168	1	20	

1

Lab Batch #: 740815

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC-Sample ID: 318075-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE A	SAMPLE I	DUPLIC	ATE REC	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.01	2.49	21	20	F

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

### CHLORIDES EP (300.1) Project Name: LEA STATION LAND FARM Phone: 432-563-1800 Fax: 432-563-1713 TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Ju 9.U. 충 Laboratory Comments: Sample Containers Intact? VOS Feed of Headspace? Labolas on confainer(s) Custody asses on confainer(s) Custody sass on confainer(s) Sample Band Delivered Symple Band Delivered by Sample Pland Delivered by Courter? UPS ON UPS ON Project #: SRS: 2004-00061 PO#: PAA - D.M. Bryant Project Loc: Les County, NM X Standard AR IESPICEC Report Format: 1me SOIL SOIL SOIL SOL SOIL Oate uß ) iertO cstanley@basinenv.com 12600 West I-20 East Odessa, Texas 79755 HOBN ,O,E,sH ,O24H (575) 396-1429 ЮН H/40° Total # of Containers Lyon benetili blered e-mail: Fax No: 815 830 848 869 PAGE 01 OF 01 Received by ELOT 11/14/2008 11/14/2008 11/14/2008 11/14/2008 Received by: Basin Environmental Service Technologies, LLC գյած ըթելը **Environmental Lab of Texas** diga Depth Pale Lovington, NM 68260 K (575) 441-2244 CELL A VZ G 2 (3'- 4') CELL A VZ G 3 (3' - 4') CELL A VZ G 1 (3'- 4') CELL A VZ G 4 (3'-4') CELL A VZ G 5 (3'-4') Company Address: P.O. Box 301 Curt Stanley 31807 Project Manager: Sampler Signature Company Name City/State/Zip: Telephone No: (lab use only) ORDER #:

TAT bishosile) 24, 48, 12ths.
TAT bishosile

3,5

Temperature Upon Receipt:

11-18 (7) (71.1

NPDES

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

	- /	·	•		
lient:	Plains Basin Environmental				
ate/ Time:	11-18.08 @ 1717				
ab ID#:	318011				
nitials:	JMF				
	Sample Receipt (	Checklist		Cli	ent Initials
1 Tempera	ture of container/ cooler?	Yes⊃	No	3,5 °C	
2 Shipping	container in good condition?	(Yes)	Nο		
3 Custody	Seals intact on shipping container/ cooler?	Yes	No	Not Present	
4 Custody	Seals Intact on sample bottles/ container? / (q bel	(es)	No	Not Present	
	Custody present?	CYESQ	No		
	nstructions complete of Chain of Custody?	(Yes.)	No		
	Custody signed when relinguished/ received?	(Yes	No		
	Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
	r label(s) legible and intact?	(Yes)	No	Not Applicable	
	matrix/ properties agree with Chain of Custody?	Yes	No		
	ers supplied by ELOT?	Yes	No	L	
	s in proper container/ bottle?	(Yes)	No_	See Below	
	s properly preserved?	Yes	No	See Below	
	bottles intact?	Yes	No		
115 Preserv	ations documented on Chain of Custody?	(Yes)	No		
~	ers documented on Chain of Custody?	(Yes)	No	<u></u>	
17 Sufficie	nt sample amount for indicated test(s)?	Yes	No	See Below	
18 All sam	ples received within sufficient hold time?	Yes'	No	See Below	
	tract of sample(s)?	Yes	No	Not Applicable	
20 VOC se	mples have zero headspace?	res	No	Not Applicable	
Contact:	Variance Docum	nentation		Date/ Time:	
Regarding:			• 		
Corrective A	ction Taken:				
Check all tha	at Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun	•		*	

### **Analytical Report 318072**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lea Station Land Farm SRS 2004-00061

25-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





25-NOV-08

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

Reference: XENCO Report No: 318072

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318072. 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. 318072 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 318072**



### 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	Nov-14-08 09:15		318072-001
Cell B VZ G 2 (3'-4')	S	Nov-14-08 09:30		318072-002
Cell B VZ G 3 (3'-4')	S	Nov-14-08 09:45		318072-003
Cell B VZ G 4 (3'-4')	S	Nov-14-08 10:00		318072-004
Cell B VZ G 5 (3'-4')	S	Nov-14-08 10:15		318072-005



Project Id: SRS 2004-00061

Contact: Daniel Bryant

Project Location: Lea County, NM

### Certificate of Aralysis Summary 375072 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm 25-NOV-08 Report Date:

Brent Barron, II Project Manager:

mg/kg RL ND 0.0011 16.5 ND 0.0011 RL 5.50 8 꿃 16.5 16.5 16.5 Z ND 0.0011 ND 0.0033 ND 0.0022 ND 0.0022 ND 0.0077 Cell B VZ G 5 (3'-4') Nov-21-08 14:00 Nov-14-08 10:15 Nov-20-08 08:00 Nov-20-08 18:05 Nov-19-08 22:50 Nov-19-08 17:00 Nov-23-08 13:58 318072-005 mg/kg ND SOIL mg/kg ND 9.02 S 2 S % mg/kg RL ND 0.0010 15.3 1.00 15.3 15.3 15.3 ND 0.0020 ND 0.0010 ND 0.0010 ND 0.0030  $\mathbb{Z}$ Z ND 0.0020 ND 0.0070 5.11 Z Cell B VZ G 4 (3'4') Nov-20-08 08:00 Nov-20-08 16:13 Nov-19-08 22:50 Nov-19-08 17:00 Nov-21-08 14:00 Nov-23-08 13:35 Nov-14-08 10:00 318072-004 g mg/kg ND 2.24 S S S ΩN mg/kg % 15.8 15.8 5.26 1.00 15.8 15.8 ND 0.0011 ND 0.0032 ND 0.0075 귈 Z 겊 ᠴ ND 0.0011 ND 0.0021 ND 0.0011 Cell B VZ G 3 (3'4') ND 0.0021 Nov-19-08 17:00 Nov-21-08 14:00 Nov-14-08 09:45 Nov-20-08 08:00 Nov-19-08 22:50 Nov-23-08 13:12 Nov-20-08 15:51 318072-003 S ΩN 4.94 S 2 8 mg/kg mg/kg mg/kg % 16.7 1.00 16.7 16.7 16.7 5.55 Z ND 0.0011 ND 0.0011 ND 0.0022 ND 0.0011 ND 0.0033  $\mathbb{Z}$ Z ND 0.0022 ND 0.0077 Cell B VZ G 2 (3'4') Nov-14-08 09:30 Nov-20-08 08:00 Nov-19-08 22:50 Nov-19-08 17:00 Nov-21-08 14:00 Nov-23-08 12:49 Nov-20-08 15:27 318072-002 SOIL S. 9.95 ΩN S. S a mg/kg mg/kg mg/kg % 16.8 5.61 1.00 Z 16.8 16.8 16.8 Ъ ND 0.0022 ND 0.0033 코 ND 0.0011 ND 0.0022 ND 0.0011 ND 0.0011 ND 0.0077 Cell B VZ G 1 (3'-4') Nov-19-08 22:50 Nov-21-08 13:00 Nov-23-08 08:32 Nov-19-08 17:00 Nov-20-08 08:00 Nov-20-08 15:05 Nov-14-08 09:15 318072-001 mg/kg ND 10.90 S N N ΝD ND mg/kg mg/kg Field Id: Extracted: Lab Id: Matrix: Analyzed: Analyzed: Depth: Sampled: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL: Extracted: Units/RL: Units/RL: Inorganic Anions by EPA 300/300.1 TPH by SW8015 Mod BTEX by EPA 8021B Percent Moisture C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analysis Requested C28-C35 Oil Range Hydrocarbons Percent Moisture Total Xylenes Ethylbenzene m,p-Xylenes Total BTEX Total TPH o-Xylene Benzene Toluene Chloride

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

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

Odessa Laboratory Director



### **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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318072,

**Project ID:** SRS 2004-00061

Lab Batch #: 740971

Sample: 318071-001 S / MS

Matrix: Soil Batch:

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 740971

Sample: 318071-001 SD / MSD

Matrix: Soil Batch:

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 740971

Sample: 318072-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
			[D]			
1,4-Difluorobenzene	0.0320	0.0300	107	80-120		
4-Bromofluorobenzene	0.0273	0.0300	91	80-120		

Lab Batch #: 740971

Sample: 318072-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0237	0.0300	79	80-120	**

Lab Batch #: 740971

Sample: 318072-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318072,

Project ID: SRS 2004-00061

Lab Batch #: 740971

Sample: 318072-004 / SMP

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY
--------------	--------------------------

SURROGATE RECOVERT			OI OD I		
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	''		[D]		
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 740971

Sample: 318072-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
			[D]			
1,4-Difluorobenzene	0.0346	0.0300	115	80-120		
4-Bromofluorobenzene	0.0279	0.0300	93	80-120		

Lab Batch #: 740971

Sample: 519683-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0283	0.0300	94	80-120		
4-Bromofluorobenzene	0.0294	0.0300	98	80-120		

Lab Batch #: 740971

Sample: 519683-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
			[D]		
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0255	0.0300	85	80-120	

Lab Batch #: 740971

Sample: 519683-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	_
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318072,

**Project ID: SRS 2004-00061** 

Lab Batch #: 741117

Sample: 318071-001 S / MS

Matrix: Soil Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

Lab Batch #: 741117

Sample: 318071-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
I-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

Lab Batch #: 741117

Sample: 318072-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	114	100	114	70-135		
o-Terphenyl	58.4	50.0	117	70-135		

Lab Batch #: 741117

**Sample:** 519795-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			(D)			
1-Chlorooctane	124	100	124	70-135		
o-Terphenyl	63.1	50.0	126	70-135		

Lab Batch #: 741117

Sample: 519795-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			ושו			
I-Chlorooctane	117	100	117	70-135		
o-Terphenyl	59.0	50.0	118	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318072,

Project ID: SRS 2004-00061

Lab Batch #: 741117

Sample: 519795-1-BSD / BSD

Matrix: Solid Batch:

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	59.8	50.0	120	70-135	

Lab Batch #: 741130

Sample: 318072-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	114	100	114	70-135		
o-Terphenyl	57.7	50.0	115	70-135		

Lab Batch #: 741130

Sample: 318072-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	120	100	120	70-135		
o-Terphenyl	58.7	50.0	117	70-135		

Lab Batch #: 741130

Sample: 318072-004 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	116	100	116	70-135		
o-Terphenyl	56.5	50.0	113	70-135		

Lab Batch #: 741130

Sample: 318072-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	115	100	115	70-135			
o-Terphenyl	57.4	50.0	115	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318072,

Project ID: SRS 2004-00061

Lab Batch #: 741130

Sample: 318074-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	125	100	125	70-135		
o-Terphenyl	61.3	50.0	123	70-135		

Lab Batch #: 741130

Sample: 318074-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	128	100	128	70-135		
o-Terphenyl	61.2	50.0	122	70-135		

Lab Batch #: 741130

Sample: 519805-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	126	100	126	70-135		
o-Terphenyl	62.7	50.0	125	70-135		

Lab Batch #: 741130

Sample: 519805-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	118	100	118	70-135			
o-Terphenyl	59.3	50.0	119	70-135			

Lab Batch #: 741130

**Sample:** 519805-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctane	130	100	130	70-135		
o-Terphenyl	61.6	50.0	123	70-135		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318072

Project ID:

SRS 2004-00061

Lab Batch #: 740954

Sample: 740954-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #: 1	BLANK/I	BLANK SPI	KE REC	COVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		, ,	[C]	[D]		
Chloride	ND	10.0	9.09	91	80-120	



### BS / BSD Recoveries



## Project Name: Lea Station Land Farm

Work Order #: 318072

Analyst: ASA

Sample: 519683-1-BKS

**Date Prepared:** 11/20/2008

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/20/2008

Lab Batch ID: 740971

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	ICATE I	RECOVE	RYSTUD	Į.	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u>B</u>	[C]	[ <u>0</u> ]	<u>a</u>	Result [F]	5				
Benzene	QN	0.1000	0.0913	16	0.1	0.0932	93	2	70-130	35	
Toluene	S	0.1000	0680'0	68	0.1	6060'0	91	2	70-130	35	
Ethylbenzene	QN	0.1000	0.0950	95	0.1	9960'0	26	2	671-12	35	
m,p-Xylenes	QN	0.2000	0.1932	26	0.2	0.1960	86	1	70-135	38	
o-Xylene	QN	0.1000	0.0921	92	0.1	0.0935	64	2	71-133	38	

Analyst: BHW

Lab Batch ID: 741117

Date Prepared: 11/21/2008

Batch #: 1

Date Analyzed: 11/22/2008

Sample: 519795-1-BKS

Matrix: Solid

Units: mg/kg		BLANI	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	λ	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>₹</u>	<u>B</u>	[C]	¥ ( <u>a</u> )	<u>(E)</u>	Dupincare Result [F]	(G)	•	<b>V</b> 0/	/one	
C6-C12 Gasoline Range Hydrocarbons	QN	1000	901	06	. 0001	898	87	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	942	94	1000	917	92	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]
AlJ results are based on MDL and Validated for QC Purposes



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318072

Analyst: BHW

Lab Batch ID: 741130

Sample: 519805-1-BKS

**Date Prepared:** 11/21/2008

Batch #: 1

Project ID: SRS 2004-00061 Date Analyzed: 11/23/2008

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	<u>¥</u>		Result	%R		Duplicate	%R		% <b>R</b>	%RPD	
Analytes		[B]	[C]	[D]	[E]	Result [F]	<u>[</u> ]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	910	16	1000	893	68	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	938	94	1000	935	94	0	70-135	35	



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



**Work Order #:** 318072

Lab Batch #: 740954

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Project ID: SRS 2004-00061 Analyst: LATCOR

1 Batch #:

	QC- Sample ID: 318069-001 S Reporting Units: mg/kg	Batch #: MATF	l RIX / MA	TRIX SPIKE	Matrix:	Soil ERY STU	DY
I	Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	Analytes	[A]	[B]				
	Chloride	166	223	410	109	80-120	

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



## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318072

Lab Batch ID: 740971

Date Analyzed: 11/20/2008

**Project ID: SRS 2004-00061** 

Batch #:

QC-Sample ID: 318071-001 S

Date Prepared: 11/20/2008

Matrix: Soil ASA Analyst:

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA'	re reco	OVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	ľ	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	· · · · · · · · · · · · · · · · · · ·
Benzene	ND	0.1035	0.0698	29	0.1035	0.0710	69	3	0£1-0/	35	×
Toluene	ND	0.1035	0.0674	99	0.1035	0.0684	99	2	70-130	35	×
Ethylbenzene	ND	0.1035	0.0701	89	0.1035	0.0710	69	1	71-129	35	×
m,p-Xylenes	ND	0.2070	0.1425	69	0.2070	0.1439	70	1	70-135	35	x
o-Xylene	ND	0.1035	0.0672	65	0.1035	0.0678	99	2	71-133	35	×

Lab Batch ID: 741117

QC-Sample ID: 318071-001 S

Matrix: Soil Batch #:

Date Analyzed: 11/23/2008

**Date Prepared:** 11/21/2008

BHW Analyst:

Reporting Units: mg/kg		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	7 MAT	SIX SPII	KE DUPLICAT	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Spiked Result Sample Spike	Spiked Sample	Spike	ced Duplicate Sp ple Spike Spiked Sample D R Added Recult IEI 9	Spiked Dup.	RPD	Control Limits	Control Control Limits Limits %R %RPD	Flag
Analytes	[V]	[8]	Σ	<u> </u>	(E)		[5]	•			
C6-C12 Gasoline Range Hydrocarbons	QN	1030	968	87	1030	884	98	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	196	93	1030	946	92	1	70-135	35	
Lab Batch ID: 741130	QC- Sample ID: 318074-005 S	318074	-005 S	Ba	Batch #:	1 Matrix: Soil	: Soil				

Date Analyzed: 11/23/2008 Lab Batch ID: 741130

Analyst: BHW Batch #: QC-Sample ID: 318074-005 S Date Prepared: 11/21/2008

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TDU PA CW/0015 MA	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
notal crooks for it it	Sample	Spike	Result	Sample	Spike	Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result	Added	[]	%R	Added	Result [F]	%R	%	%R	%RPD	ı
Analytes	[ <u>V</u> ]	<u>B</u>		<u>a</u>	亘		<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1120	963	98	1120	964	98	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1120	1010	06	1120	1030	92	2	70-135	35	

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318072

Lab Batch #: 740954 **Date Analyzed:** 11/19/2008

11/19/2008

**Project ID:** SRS 2004-00061

Date Prepared:

Analyst: LATCOR

QC-Sample ID: 318069-001 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	166	168	ı	20	

Lab Batch #: 740815

**Date Analyzed:** 11/19/2008

11/19/2008 Date Prepared:

Analyst: BEV

QC-Sample ID: 318075-002 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.01	2.49	21	20	F

xas
ͺΨ
-
0
_
7
Ġ
_
=
50
~
ā
č
⊑
$\subseteq$
0
.⊑
.2
ш

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12800 Wess 1-20 East Phone: 432-583-1809

Odessa, Texns 79765 Fax: 432-563-1713	PAGE 01 OF 01 PAGE 01 OF 01	Basin Environmental Service Technologies, LLC	Project Loc: Las Courty, NW	NM 98280	Eax No: 1575) 396-1429 Report Format: K Standard	S. c. c. e-mail: cstanley@basinenv.com	Analyze For	TOTAL		S IO	900109 (109 (109 (109 (109 (109 (109 (10	(X) (X) (X) (X) (X) (X) (X) (X) (X) (X)	bed bed bed bed bed bed bed bed bed bed	eloo by (Apos	G ge general state of the state	Engline Costs of Manager of Manag		4) 11/14/2008 930 11 X SOIL X	4') 11/14/2008 945 1 X SOIL X	4) 11/14/2008 1000 1 X SOIL X				Laboratory Comments Sample Containers Inta		Balle Time Received by Date Time Leaders on constitutional by Constitution of the Cons	_	
	Project Manager: Curt Startey	Company Name Basin Env	Company Address: P. D. Box 301	City/State/Zip: Lovington, NM 88260	Telephone No: (535) 441-2244	Sampler Signature:	)	(ab use only)	ORDER# 518510	- 1						FIELD CODE	CELL B VZ G 1 (3'-4')	CELL B VZ G 2 (3' - 4')	CELL B VZ G 3 (3'- 4')	CELL B VZ G 4 (3' - 4')	CELL B VZ G 5 (3' - 4')			Special instructions:	(	/ / X Appliance	とよう	The second secon

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent:	Plains Basin Environmental				
te/ Time.	11-18-08 @ 1712				
b ID#:	318072				
	JMF				
lials.	314/1-				
	Sample Receipt (	Checklist			
	•				Client Initials
Tempera	ture of container/ cooler?	Yes	No	3,5 °(	
Shipping container in good condition?		(Yes)	No		
3 Custody Seals intact on shipping container/ cooler?		Yes	No	Not Present	
Custody Seals intact on sample bottles/ container? / [4]			No	Not Present	
5 Chain of Custody present?			No		
Sample instructions complete of Chain of Custody?			No		
7 Chain of Custody signed when relinguished/ received?			No		
B Chain of Custody agrees with sample label(s)?			No	ID written on Cont./ Lie	1
9 Container label(s) legible and intact?			No	Not Applicable	
	matrix/ properties agree with Chain of Custody?	(Yes)	No		
	ers supplied by ELOT?	(Yes)	No_		
12 Samples in proper container/ bottle?		Yes	No	See Below	
13 Samples properly preserved?  14 Sample bottles intact?		Yes	No	See Below	
		Yes	No.	ļ	
	ations documented on Chain of Custody?	Yes	<u>No</u>		
	ers documented on Chain of Custody?	(Yes)	No_	<del> </del>	
7 Sufficient sample amount for indicated test(s)? 8 All samples received within sufficient hold time?		Yes >	No No	See Below	<del></del>
9 Subcon	Yes Yes	No No	See Below	<del></del> -	
	Tes	No	Not Applicable	+	
U VOC SA	mples have zero headspace?	1 (168)	NO	Not Applicable	
	Variance Docum	nentation			
ontact.	Contacted by:			Date/ Time:	
egarding:					
orrective A	ction Taken:				
				·	
Check all tha	at Apply: See attached e-mail/ fax Client understands and woul	d like to pro	ceed with	n analysis	

### **Analytical Report 318073**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lea Station Land Farm SRS 2004-00061

24-NOV-08





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

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

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

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

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

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





24-NOV-08

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

Reference: XENCO Report No: 318073

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318073. 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. 318073 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 318073**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell C VZ G 1 (3'-4')	S	Nov-14-08 10:30		318073-001
Cell C VZ G 2 (3'-4')	S	Nov-14-08 10:45		318073-002
Cell C VZ G 3 (3'-4')	S	Nov-14-08 11:00		318073-003
Cell C VZ G 4 (3'-4')	S	Nov-14-08 11:15		318073-004
Cell C VZ G 5 (3'-4')	S	Nov-14-08 11:30		318073-005



Project 1d: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Analysis Summary 318073 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 24-NOV-08

Project Manager: Brent Barron, II

					110 CU Manager. Diem Danien, in	Mell Durant, at	
	Lab Id:	318073-001	318073-002	318073-003	318073-004	318073-005	
6	Field Id:	Cell C VZ G 1 (3'4')	Cell C VZ G 2 (3'-4')	Cell C VZ G 3 (3'-4')	Cell C VZ G 4 (3'-4')	Cell C VZ G 5 (3'4')	
Analysis Kequested	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-14-08 10:30	Nov-14-08 10:45	Nov-14-08 11:00	Nov-14-08 11:15	Nov-14-08 11:30	
RTEX by FPA 8021R	Extracted:	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	
	Analyzed:	Nov-20-08 18:27	Nov-20-08 18:49	Nov-20-08 19:11	Nov-20-08 19:33	Nov-20-08 19:56	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0012	ND 0.0010	ND 0.0012	ND 0.0011	ND 0.0011	
Toluene		ND 0.0024	ND 0.0021	ND 0.0024	ND 0.0023	ND 0.0022	
Ethylbenzene		ND 0.0012	ND 0.0010	ND 0.0012	ND 0.0011	ND 0.0011	
m,p-Xylenes		ND 0.0024	ND 0.0021	ND 0.0024	ND 0.0023	ND 0.0022	
o-Xylene		ND 0.0012	ND 0.0010	ND 0.0012	ND 0.0011	ND 0.0011	
Total Xylenes		ND 0.0036	ND 0.0031	ND 0.0036	ND 0.0034	ND 0.0033	
Total BTEX		ND 0.0084	ND 0.0072	ND 0.0084	ND 0.0079	ND 0.0077	
Increanic Anions by FPA 300/300 1	Extracted:						
morganic famous by the a colonical	Analyzed:	Nov-19-08 22:50	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 6.09	ND 5.19	ND 6.12	ND 5.74	ND 5.60	
Percent Moisture	Extracted:						
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		17.96 1.00	3.64 1.00	18.33 1.00	12.89 1.00	10.75 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	
100 to 10	Analyzed:	Nov-23-08 14:22	Nov-23-08 14:47	Nov-23-08 15:11	Nov-23-08 15:35	Nov-23-08 15:59	•
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 18.3	ND 15.6	ND 18.4	ND 17.2		
C12-C28 Diesel Range Hydrocarbons		ND 18.3	ND 15.6	ND 18.4	ND 17.2		
C28-C35 Oil Range Hydrocarbons		ND 18.3	ND 15.6	ND 18.4	ND 17.2	ND 16.8	
Total TPH		ND 18.3	ND 15.6	ND 18.4	ND 17.2	ND 16.8	

This analytical report, and the entire data puckage it represents, has been made for your exclusive and confidential use. The interpretations and restitute 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 fereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director



### **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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318073,

Project ID: SRS 2004-00061

Lab Batch #: 740971

Sample: 318071-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY  Amount True Control Found Amount Recovery Limits  [A] [B] %R %R  {D}	STUDY			
BTEX by EPA 8021B	Found	Amount	1		Flags
Analytes	,,	'-'	{ <b>D</b> }		
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 740971

Sample: 318071-001 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 740971

Sample: 318073-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		1	[D]		
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 740971

Sample: 318073-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0332	0.0300	111	80-120			
4-Bromofluorobenzene	0.0269	0.0300	90	80-120			

Lab Batch #: 740971

Sample: 318073-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY STUDY  Control		
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	İ	
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0223	0.0300	74	80-120	**

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318073,

Project ID: SRS 2004-00061

Lab Batch #: 740971

Sample: 318073-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Diffuorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 740971

Sample: 318073-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 740971

**Sample:** 519683-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 740971

Sample: 519683-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0327	0.0300	109	80-120			
4-Bromofluorobenzene	0.0255	0.0300	85	80-120			

Lab Batch #: 740971

**Sample:** 519683-1-BSD / BSD

Batch: |

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0280	0.0300	93	80-120			
4-Bromofluorobenzene	0.0292	0.0300	97	80-120			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318073,

Project ID: SRS 2004-00061

Lab Batch #: 741130

Sample: 318073-001 / SMP

Batch: Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	114	100	114	70-135			
o-Terphenyl	58.0	50.0	116	70-135			

Lab Batch #: 741130

Sample: 318073-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
			[D]				
I-Chlorooctane	114	100	114	70-135			
o-Terphenyl	57.4	50.0	115	70-135			

Lab Batch #: 741130

Sample: 318073-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctanc	118	100	118	70-135			
o-Terphenyl	59.3	50.0	119	70-135			

Lab Batch #: 741130

Sample: 318073-004 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	-	ļ	[D]		]		
I-Chlorooctane	113	100	113	70-135			
o-Terphenyl	57.5	50.0	115	70-135			

Lab Batch #: 741130

Sample: 318073-005 / SMP

Batch: |

Matrix: Soil

Units: mg/kg	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	59.1.	50.0	118	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318073,

Project ID: SRS 2004-00061

Lab Batch #: 741130

Sample: 318074-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	125	100	125	70-135			
o-Terphenyl	61.3	50.0	123	70-135			

Lab Batch #: 741130

Sample: 318074-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	128	100	128	70-135			
o-Terphenyl	61.2	50.0	122	70-135			

Lab Batch #: 741130

Sample: 519805-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	10-1	(6)	[D]	/•••			
1-Chlorooctane	126	100	126	70-135	1		
o-Terphonyl	62.7	50.0	125	70-135			

Lab Batch #: 741130

Sample: 519805-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	118	100	118	70-135			
o-Terphenyl	59.3	50.0	119	70-135			

Lab Batch #: 741130

Sample: 519805-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	130	100	130	70-135			
o-Terphonyl	61.6	50.0	123	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318073

Project ID:

SRS 2004-00061

Lab Batch #: 740954

Sample: 740954-1-BKS

Matrix: Solid

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: LATCOR

Reporting Units: mg/kg Batch #: 1 BLANK/BLANK SPIKE RECOVER			COVERY S	STUDY		
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	{B}	Result [C]	70 K  D	70 K	
Chloride	ND	10.0	9.09	91	80-120	

Lab Batch #: 740955

Sample: 740955-1-BKS

Matrix: Solid

**Date Analyzed:** 11/20/2008

Date Prepared: 11/20/2008

Analyst: LATCOR

Batch #:	BLANK/	BLANK SPI	KE REC	OVERY	STUDY
Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
IAI	101	[C]	[D]	70K	
ND	10.0	10.1	101	80-120	
	Blank Result [A]	Blank Spike Result Added [A] [B]	Blank Spike Blank Result Added Spike [A] [B] Result [C]	Blank Spike Blank Spike Spike Spike [A] [B] Result %R [C] [D]	Blank Spike Blank Spike Spike Limits [A] [B] Result %R %R [C]



### BS / BSD Recoveries

The state of the s



## Project Name: Lea Station Land Farm

Work Order #: 318073

Analyst: ASA

Lab Batch ID: 740971

Date Prej Sample: 519683-1-BKS Ba

**Date Prepared:** 11/20/2008

Batch #: 1

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/20/2008

Matrix: Solid

Flag Limits %RPD Control 35 35 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 70-130 70-135 71-133 71-129 RPD % 7 N Blk. Spk Dup. %R [G] 93 5 97 86 94 Blank Spike Duplicate Result [F] 0.0932 0.0909 9960.0 0.1960 0.0935 Spike Added 0.2  $\Xi$ 0.1 0.1 0.1 --Blank Spike %R [D] 16 68 95 6 92 0.0890 0.0950 0.1932 Blank Spike Result 0.0913 0.0921 <u>5</u> 0.1000 0.2000 0.1000 0.1000 0.1000 Spike Added <u>B</u> Sample Result QN £ 8 ₽ Z S BTEX by EPA 8021B Units: mg/kg Analytes Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluene

Analyst: BHW Date Prepared: 11/21/2008

Sample: 519805-1-BKS

Lab Batch ID: 741130

Batch #: 1

Date Analyzed: 11/23/2008 Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE F	RECOVE	RY STUD	۲	
TPH by SW8015 Mod	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	
	Sample Result	Added	Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits	Flag
	₹		Result	% <b>R</b>		Duplicate	%R	%	%R	%RPD	
Analytes		[ <u>B</u> ]	[C]	<u>a</u>	(E)	Result [F]	[5]				
C6-C12 Gasoline Range Hydrocarbons	QZ	1000	016	16	1000	893	68	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	938	94	1000	935	94	0	70-135	35	

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



**Work Order #:** 318073

Lab Batch #: 740954

1

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Project ID: SRS 2004-00061

Analyst: LATCOR

QC- Sample ID: 318069-001 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	166	223	410	109	80-120	

Lab Batch #: 740955

Date Analyzed: 11/20/2008

**Date Prepared:** 11/20/2008

Analyst: LATCOR

QC-Sample ID: 318073-002 S

Batch #:

Matrix: Soil

Report	ting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
	Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chlorid	le	ND	104	95.4	92	80-120	

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



Î

## Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318073

Date Analyzed: 11/20/2008 Lab Batch ID: 740971

Reporting Units: mg/kg

Project ID: SRS 2004-00061

Batch #: QC-Sample ID: 318071-001 S

Matrix: Soil ASA Analyst:

Date Prepared: 11/20/2008

Reporting Units: mg/kg		M	ATRIX SPIKI	3 / <b>MA</b> T	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY	TUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample		S	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]		%R [D]	Added [E]	Result [F]	% <b>R</b> [G]	%	%R	%RPD	
Benzene	ND N	0.1035	8690.0	19	0.1035	0.0710	69	3	70-130	35	×
Toluenc	QV	0.1035	0.0674	65	0.1035	0.0684	99	2	70-130	35	×
Ethylbenzene	QN	0.1035	0.0701	89	0.1035	0.0710	69	-	71-129	35	×
m,p-Xylenes	ND	0.2070	0.1425	69	0.2070	0.1439	70	1	70-135	35	×
o-Xylene	ND	0.1035	0.0672	65	0.1035	0.0678	99	2	71-133	35	×
					İ						

Date Analyzed: 11/23/2008 Lab Batch ID: 741130

Batch #: QC-Sample ID: 318074-005 S

Matrix: Soil

BHW

Analyst: Date Prepared: 11/21/2008

Flag %RPD Limits 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 0 Dup. [G] 98 92 Spiked Sample Result [F] Duplicate 1030 964 Spike Added 1120 1120 Spiked Sample Spiked Result Sample %R 98 9 Result [C] 1010 963 Spike Added 1120 1120 Parent Sample Result ₹ S 2 TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Analytes Reporting Units: mg/kg

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

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

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



### **Sample Duplicate Recovery**

Project Name: Lea Station Land Farm

Work Order #: 318073

Lab Batch #: 740954

Project ID: SRS 2004-00061

**Date Analyzed:** 11/19/2008

Date Prepared: 11/19/2008 Analyst: LATCOR

QC-Sample ID: 318069-001 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	166	168	ı	20	

Lab Batch #: 740955

Date Analyzed: 11/20/2008

Date Prepared:

11/20/2008

Analyst: LATCOR

QC- Sample ID: 318073-002 D

Batch #:

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	

Lab Batch #: 740815

Date Analyzed: 11/19/2008

**Date Prepared:** 

11/19/2008

Analyst: BEV

OC- Sample ID: 318075-002 D Reporting Units: %

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[6]			
Percent Moisture	2.01	2.49	21	20	F

Lab Batch #: 740820

QC- Sample ID: 318073-002 D

Date Analyzed: 11/19/2008

Date Prepared:

11/19/2008

Analyst: BEV

Batch #:

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Sample Control Duplicate RPD Limits Result Flag

**Percent Moisture** Result %RPD [A] [B] Analyte Percent Moisture 3.64 3.90 20

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

Texas
ð
Lab
nta
me
iron
Env

Laborationy Comments:

Sample Consisters integral

VCGS Free of Headspace

Custody seets on container(s) //(ar is green by the property of the □ NPDES EM ST (Pre-Schedule) 24, 48 LT HZUS CHTORIDES EN 2001) Project Name: LEA STATION LAND FARM Phane: 432-563-1800 Fax: 432-563-1713 TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project #: SRS: 2004-00061 PO#: PAA · D.M. Bryant
Report Format: X Standard Project Loc: Lea County, NM SARIESPICEC SOIL SOIL SOIL SOIL SOIL cstanley@basinenv.com Omert Specify) 12600 West 1-20 East Odessa, Texas 79765 HOWN \*05°H (575) 396-1429 нсі Mali w of Containers 462 e-mail: Fax No: 1100 1115 1030 1130 Time Sampled PAGE 01 OF 11/14/2008 11/14/2008 11/14/2008 11/14/2008 11/14/2008 Basin Environmental Service Technologies, LLC rhqəO Qniba Lovington, NM 88260 CELL C VZ G 2 (3' - 4") CELL C VZ G 4 (3' - 4') CELL C VZ G 5 (3' - 4') CELL C VZ G 1 (3' - 4') CELL C VZ G 3 (3' - 4') Company Address: P. O. Box 301 **Curt Stanley** FIELD CODE (lab use only) 3 18 0 7 3 Project Manager: Company Name Sampler Signature Telephone No. City/State/Zlp: Special Instructions:

(vino seu dai) # EA.

7112 Temperature Upon Raceipt

11-18-07

Received by ELOT:

Reincurshed by:

Date

Received by: eceived by:

Environmental Lab of Texas

Variance/ Corrective Action Rep	ort- Sample	Log-in		
ent: Plains Basin Environmental				
ite/ Time. 11-18-08 @ 1717				
10 ID#: 318073				
itials JMF				
Sample Receipt 0	Checklist			
				Cllent Initials
1 Temperature of container/ cooler?	Yes	No	3,5	° C
Shipping container in good condition?	(Yes)	No		
3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Presend	
Custody Seals intact on sample bottles/ container? / (a bel	₹es⊃	No	Not Present	
5 Chain of Custody present?	CYES	No		
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./	
9 Container label(s) legible and intact?	(Yes)	_No	Not Applicable	<del></del>
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	Sce Below	
13 Samples properly preserved?	Yes	No	See Below	
14 Sample bottles intact?	Yes	No		
15 Preservations documented on Chain of Custody?	(Yes)	Nο		
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?	(es)	_ No	See Below	
19 Subcontract of sample(s)?	Yes	No	Not Applicable	
20 VOC samples have zero headspace?	(YES)	No	Not Applicable	<u>,                                     </u>
Variance Docur	mentation			
Contact: Contacted by:			Date/ Time:	
Regarding:				
0				
Corrective Action Taken;				
Check all that Apply: See attached e-mail/ fax		-		
Client understands and wou Cooling process had begun				

### **Analytical Report 318074**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

25-NOV-08





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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





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

Reference: XENCO Report No: 318074

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318074. 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. 318074 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 318074**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell D VZ G 1 (3'-4')	S	Nov-14-08 11:45		318074-001
Cell D VZ G 2 (3'-4')	S	Nov-14-08 12:00		318074-002
Cell D VZ G 3 (3'-4')	S	Nov-14-08 12:15		318074-003
Cell D VZ G 4 (3'-4')	S	Nov-14-08 12:30		318074-004
Cell D VZ G 5 (3'-4')	S	Nov-14-08 12:45		318074-005



Project Location: Lea County, NM

Project Id: SRS 2004-00061 Contact: Daniel Bryant

# Certificate of Analysis Summary 318074 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Report Date: 25-NOV-08
Project Manager: Brent Barron, II

			-		The state of the s		
	Lab Id:	318074-001	318074-002	318074-003	318074-004	318074-005	
A so of soils Donne or he	Field Id:	Cell D VZ G 1 (3'-4')	Cell D VZ G 2 (3'4')	Cell D VZ G 3 (3'-4')	Cell D VZ G 4 (3'-4')	Cell D VZ G 5 (3'4')	
naisan hay sistinu V	Depth:				·		
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-14-08 11:45	Nov-14-08 12:00	Nov-14-08 12:15	Nov-14-08 12:30	Nov-14-08 12:45	
BTEX by FPA 8021B	Extracted:	Nov-21-08 08:00	Nov-21-08 08:00	Nov-21-08 08:00	Nov-21-08 08:00	Nov-21-08 08:00	
	Analyzed:	Nov-21-08 14:21	Nov-21-08 14:44	Nov-21-08 16:16	Nov-21-08 16:39	Nov-21-08 17:01	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg R.L.	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	
Toluene		ND 0.0022	ND 0.0022	ND 0.0022	ND 0.0023	ND 0.0022	
Ethylbenzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	
m,p-Xylenes		ND 0.0022	ND 0.0022	ND 0.0022	ND 0.0023	ND 0.0022	
o-Xylenc		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	
Total Xylenes		ND 0.0022	ND 0.0022	ND 0.0022	ND 0.0023	ND 0.0022	
Total BTEX		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	
Inorganic Anions by EPA 300/300.1	Extracted:						
6	Analyzed:	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.53	ND 5.41	ND 5.53	ND 5.73	ND 5.61	
Percent Moisture	Extracted:						·
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		9.63 1.00	7.62 1.00	9.63 1.00	12.77 1.00	10.85 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	
	Analyzed:	Nov-23-08 16:23	Nov-23-08 17:11	Nov-24-08 15:42	Nov-23-08 17:58	Nov-23-08 18:22	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		9.91 QN	ND 16.2	ND 16.6	ND 17.2	ND 16.8	
C12-C28 Diesel Range Hydrocarbons		9.91 UN	ND 16.2	ND 16.6	ND 17.2	ND 16.8	
C28-C35 Oil Range Hydrocarbons		9:91 QN	ND 16.2	9:91 QN	ND 17.2	ND 16.8	
Total TPH		ND 16.6	ND 16.2	ND 16.6	ND 17.2	ND 16.8	

This analytical report, and the entite data package it represents, has been made for your exclusive and confidential use. The interpresent in the surjuginent of XEYCO Laboratories. The interpresent in the surjuginent of XEYCO Laboratories. XEXCO Laboratories assumes no responsibility and makes no warmany to the end use of the data hereby presented. Our flability 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318074,

**Project ID:** SRS 2004-00061

Lab Batch #: 741216

Sample: 318074-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 741216

**Sample:** 318074-001 S / MS

Batch: |

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			{D}			
1,4-Difluorobenzene	0.0277	0.0300	92	80-120		
4-Bromofluorobenzene	0.0309	0.0300	103	80-120		

Lab Batch #: 741216

Sample: 318074-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	1-1	'-'	[D]				
1,4-Difluorobenzene	0.0276	0,0300	92	80-120			
4-Bromofluorobenzene	0.0286	0.0300	95	80-120			

Lab Batch #: 741216

Sample: 318074-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes	1	(-)	[D]				
1,4-Difluorobenzene	0.0330	0.0300	110	80-120			
4-Bromofluorobenzene	0.0276	0.0300	92	80-120			

Lab Batch #: 741216

Sample: 318074-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0328	0.0300	109	80-120			
4-Bromofluorobenzene	0.0271	0.0300	90	80-120			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318074,

Project ID: SRS 2004-00061

Lab Batch #: 741216

Sample: 318074-004 / SMP

Matrix: Soil Batch: 1

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0325	0.0300	108	80-120		
4-Bromofluorobenzene	0.0282	0.0300	94	80-120		

Lab Batch #: 741216

Sample: 318074-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobenzene	0.0272	0.0300	91	80-120		

Lab Batch #: 741216

**Sample:** 519846-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0278	0.0300	93	80-120		
4-Bromofluorobenzene	0.0280	0.0300	93	80-120		

Lab Batch #: 741216

**Sample:** 519846-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 741216

Sample: 519846-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]	1		
1,4-Difluorobenzene	0.0278	0.0300	93	80-120		
4-Bromofluorobenzene	0.0265	0.0300	88	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318074,

Project ID: SRS 2004-00061

Lab Batch #: 741130

Sample: 318074-001 / SMP

Matrix: Soil Batch:

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	121	100	121	70-135			
o-Terphenyl	60.3	50.0	121	70-135			

Lab Batch #: 741130

Sample: 318074-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctanc	118	100	118	70-135		
o-Terphenyl	58.7	50.0	117	70-135		

Lab Batch #: 741130

Sample: 318074-003 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	[1-2]	[ ",	[D]		
1-Chlorooctanc	120	100	120	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 741130

Sample: 318074-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	61.1	50.0	122	70-135	

Lab Batch #: 741130

Sample: 318074-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	60.3	50.0	121	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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



Project Name: Lea Station Land Farm

Work Orders: 318074,

**Project ID: SRS 2004-00061** 

Lab Batch #: 741130

Sample: 318074-005 S / MS

Matrix: Soil Batch: 1

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	ļ	
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	61.3	50.0	123	70-135	

Lab Batch #: 741130

Sample: 318074-005 SD / MSD

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		'-'	[D]		
I-Chlorooctane	128	100	128	70-135	
o-Terphenyl	61.2	50.0	122	70-135	

Lab Batch #: 741130

**Sample:** 519805-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	62.7	50.0	125	70-135	

Lab Batch #: 741130

**Sample:** 519805-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctanc	118	100	118	70-135	
o-Terphenyl	59.3	50.0	119	70-135	

Lab Batch #: 741130

Sample: 519805-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		İ	[D]		
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	61.6	50.0	123	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318074

Project ID:

SRS 2004-00061

Lab Batch #: 740955

Sample: 740955-1-BKS

Matrix: Solid

**Date Analyzed:** 11/20/2008

**Date Prepared:** 11/20/2008

Analyst: LATCOR

Reporting Units: mg/kg

Batch #:

1 RLANK/BLANK SPIKE RECOVERY STUDY

Reporting Outes. Hig/kg	Daten #: 1	DLANK /	DLANK SPI	KE KEC	OVERI	ן ישטיי
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	10.1	101	80-120	



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318074

Lab Batch ID: 741216 Analyst: ASA

Sample: 519846-1-BKS

**Date Prepared:** 11/21/2008

**Project ID:** SRS 2004-00061 Date Analyzed: 11/21/2008

Matrix: Solid

Batch #: 1

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPI	JCATE F	RECOVE	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[0]	<u> </u>	Result [F]	<u>5</u>				
Вепгепе	QN	0.1000	0.1041	104	0.1	0.1041	104	. 0	70-130	35	
Toluene	QN	0.1000	0.0976	86	0.1	92600	86	0	70-130	35	
Ethylbenzene	QN	0.1000	0.0968	- 64	0.1	0.0968	26	0	71-129	35	
m,p-Xylenes	QN	0.2000	0.1949	76	0.2	0.1949	62	0	70-135	35	
o-Xylene	QN	0.1000	0.0918	92	0.1	0.0918	92	0	71-133	35	

Analyst: BHW

**Date Prepared:** 11/21/2008

Date Analyzed: 11/23/2008 Matrix: Solid

Batch #: 1 Sample: 519805-1-BKS Lab Batch ID: 741130

Units: mg/kg		BLAN	K /BLANK S	SPIKE / B	STANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE F	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Samnle Result	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	200
	(A)	nannu.	Result	%R	nanny	Duplicate	%R	3%	%R	%RPD	7 2 20
Analytes		<u>B</u>	<u></u>	ē	E	Result [F]	<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	910	16	1000	893	68	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	938	94	1000	935	94	0	70-135	35	

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 313074

Lab Batch #: 740955 Date Analyzed: 11.20/2008

Project ID: SRS 2004-00061

**Date Prepared:** 11/20/2008

Analyst: LATCOR

QC-Sample ID: 313073-002 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	ERY STU	DY
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	104	95.4	92	80-120	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B clative Percent Differer.ce [E] = 200\*(C-A)/(C+B)

II Results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318074

Lab Batch ID: 741216

Date Analyzed: 11/22/2008

Batch #:

QC-Sample ID: 318074-001 S Date Prepared: 11/21/2008

Matrix: Soil Analyst: ASA

Project ID: SRS 2004-00061

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MATI	SIX SPIF	KE DUPLICA	TE RECO	VERY!	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
Benzenc	ND	0.1107	0.1067	96	0.1107	0.1110	001	4	70-130	35	
Toluene	QN	0.1107	9860'0	68	0.1107	0.1030	93	4	70-130	35	
Ethylbenzene	QN	0.1107	0.0942	85	0.1107	0.1016	92	8	71-129	35	
m,p-Xylenes	QN	0.2213	0.1907	98	0.2213	0.2056	93	80	70-135	35	
o-Xylene	QN	0.1107	0.0931	84	0.1107	0.0982	68	9	71-133	35	

Date Analyzed: 11/23/2008 **Lab Batch ID: 741130** 

QC-Sample ID: 318074-005 S **Date Prepared:** 11/21/2008

Matrix: Soil Batch #:

BHW Analyst:

Reporting Units: mg/kg		M	ATRIX SPIKI	[/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	VERY !	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Spike Spike	Spiked Sample	Spike	Duplicate Spike Spiked Sample	S	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[2]	% <u>R</u> 	Added [E]	Result [F]	%R [G]	%	%R		
C6-C12 Gasoline Range Hydrocarbons	Q.	1120	6963	98	1120	964	98	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1120	0101	8	1120	1030	92	2	70-135	35	

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

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

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318074

Lab Eatch #: 740955

Date Analyzed: 11/20/2008

n . n .

Project ID: SRS 2004-00061

**Date Prepared:** 11/20/2008

Analyst: LATCOR

**OC- Sample ID:** 318073-002 D **Batch #:** 

Inorganic Anions by EPA 300\300.1

Analyte

Matrix: Soil

Reporting; Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Parent Sample Result Duplicate RPD Limits Flag

[A] Result | WRPD | Flag

ND

Lab Eatch #: 740809

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

ND

Analyst: BEV

20

QC- Sample ID: 318049-001 D

Batch #:

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

NC

Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.79	1.64	9	20	

### Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12609 West-20 East Phone: 432-563-1800
Odessa, Texas 19165
Fax: 432-563-1713

State   Page					1	DES		15 847	81	AS (ماسة محمة: محم) TAT HZUR TAT brishne) ك	×	×	×	×	×					2 2	z z (2	) z z 👸	<u>.</u>
Stanley   PAGE   01 OF   01				ı	ŀ	Ž			_						1	$\pm$				9€	(OO)	O > Ñ	ν (γ
Stanley   PAGE   01 OF   01	m	¥.		1				-	_		×	×	×	×	×	_	┝	$\vdash$	4		cheit	n,	,,,
Stanley   PAGE   01 OF   01	7.	7				TRR		H				$\dashv$	$\dashv$	_	+	+	┢	H	1		Š	, <del>2</del>	
Stanley   PAGE   01 OF   01	5.58	₹	<u> </u>	1	F		Ę	E	06		×	×	×	×	×				□,	C S	1 1 1	mple Hand Delivered by Sample (Elient Rep. ? by Courier UPS	Temperature Upon Receipt
Stanley   PAGE   01 OF   01	4	Š	힑	Σ	2		ģ	1	-			_			$\dashv$		├-	Н	-	ns lift	(S)	Pare P	- &
Stanley   PAGE   01 OF   01	Fax:	IAT	Š	Ę	S	dard	Δ.	<b>:</b>	95		Н	-	-	-	-	$\dashv$	╁	$\vdash$	<b>⊣</b> Į	daine He	also ch	4 8/2 0 8/2	5
Stanley   PAGE   01 OF   01		AS	ŝ	S	4	Star	- 1	TAR.	L											ខ្លុំ	5 2		ă
Stanley   PAGE   01 OF   01		==	is l	<b>9</b>	8			۲	L		Н	_	_	_			╁_			i d	age of	e a s	. Ę
Name   Basin Environmental Service Technologies, LLC   Address: P. O. Box 201   Address: P. O.		NS.	Ject	2	õ	mat:	l	Ш	H		Н	-	_			+	╁╴	$\vdash$	╅	. w >	1.	T.	
Name   Basin Environmental Service Technologies, LLC   Address: P. O. Box 201   Address: P. O.		D de	ž	Ş		For	L	Ш	89		×	×	×	×	×			П			E.	Ě	Time
Name   Basin Environmental Service Technologies   LLC		ď				abou	- 1		ž		뉡	爿	爿	≓	爿	1	1	П	ł			├	
S C C C   C C C C C C C C C C C C C C						×.			Ĭ	OW - Drinking Water St - Suda	š	Š	Š	ŏ	ŭ		L	Ш	╛		9	e G	Date
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O.		-	-	1			ğ		Pers								L	П	_		ď	Ö	8 -
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O.	165						). V		ontai		H	$\vdash$	$\dashv$		-	+	╁	$\vdash \vdash$	$\dashv$			-	+-
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O.	s 797	١					ije.		, of C		-	Н	-	-		$\neg$	t	Н	┪		1		
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O.	ě	- 1				۵	bas		S no									П					
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O. Pox 391     This   Address: P. O.	Ę	- 1				-142	S S		Brvatí		-	-	_	_	$\dashv$	<del></del>	⊬	Н	-				1
Name   Basin Environmental Service Technologies, LLC     Address: P.O. Box 301     Chr.   Lovington, NN 88250     CELL D VZ G 1 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008   1245     CELL D VZ G 5 (3 · 4)   11/14/2008     CELL D VZ G 5 (3	Sabo	-				386	anle		Pres.		×	×	×	×	×		╁	H	$\dashv$				
Name   Basin Environmental Service Technologies, LLC     Address: P. O. Box 301     Page   Page   Page     Address: P. O. Box 301     Page   Page     Page	•	- 1		-		228	SS	55 7	16	10tal # of Containers 4 62	Ŧ	+	+	-	-	$\dashv$	╆	1-1	┪				١.
Name Basin Environmental Service Technologies, LLC Address: P. O. Box 301  Zip: Lovington NN 88260  Sho: (\$75] 411.224  FIELD CODE Basin Environmental Service Technologies, LLC  Address: P. O. Box 301  Zip: Lovington NN 88260  Space Basin Environmental Service Technologies, LLC  Address: P. O. Box 301  Zip: Lovington NN 88260  Sell D VZ G 1(3'-4')  Sell D VZ G 1(3'-4')  Sell D VZ G 3(3'-4')  Sell D VZ G 4(3'-4')  Sell D VZ G 5(3'-4')										bereitii bieii								П				1	] ]
Name   Basin Environmental Service Technologies   DAGE		- 1				Fax No	e-mail:			Time Sampled	1145	1200	1215	1230	1245								7
Address: P. O. Box 301  Top: Lovington, NM 88260  Sho: (373) 441.224  Ignature: CELL D VZ G 1 (37.47)  CELL D VZ G 2 (37.47)  CELL D VZ G 4 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)  CELL D VZ G 5 (37.47)		PAGE 01 OF	gles, LLC							balqma8 atsQ	11/14/2008	11/14/2008	11/14/2008	11/14/2008	11/14/2008						Received by:	Received by:	Received by ELOT:
Address:  Zip: Signature: Signatu		- 1	plone		ŀ		-11			արժեղ ճայքա	_					1			ヿ		A		
Address:  Zip: ignature: i			Tech			ļ	4									$\dashv$	╁	Н	$\dashv$		in C	e e	Time
Address:  Zip: ignature: i			Service				3				Н	Н	_		$\dashv$	+-	╁╴	$\vdash$	$\dashv$		1-6	<del> </del>	$\vdash$
Address:  Zip: Signature: Signatu			mental	ļ	88260		7														Sale (		Oate
Address:  Zip: ignature: i		즐	Į,	ž	Ž	2	<b>√</b> 9.				.47	- 47)	4	-4)	4	ļ					-	1-	┼─
Address:  Zip: ignature: i		Ę.	Ē	ă	뮕	2	1	-	7	<u> </u>	1 (3.	2 (3.	3.3	4 (3.	2 (3.		1	{				1	
Address:  Zip: Signature: Signatu		딍	Basi	0	Lovi	5.5	۲)	1 6	-	00 0	2 G	ZG	2 6	ZG	5 Z		1	]			2	A	
Name of the original of the original of the original of the original of the original				38S:	•	·	me:	1	)	<u>.                                    </u>	2		2	'n	2						"	[]	
- 호 는 등 및 # # # # # # # # # # # # # # # # # #		эде	łamę	ddre	g	ĕ	gnati	0	O		교	빏	김	급	급				-		1		-
		Ψ	Š	a,	ate/2	one	Š.	10	$\overline{\gamma}$		٥	ان	O	٥	ပ							X)	
and the party of t		oject	Ę	mpa	y/St	ep.	μğ	_												ğ (	N.	) š	à
		ď	ვ	ပိ	õ	Ë	Sa	only	# C		_	-		<u> </u>	Ш	+	1	$\vdash$	4		155	Shed	shed
Project Me Company Company City/State Telephone Sampler S Sampler S Special Instructions Special Instructions								es q	8	(Auo sen del) & BAL				Ì					- [	ecia	( <u>#</u> -	Relinguished by:	Relinquished by:

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

		variation convente reason res	or camp.	- Log-III		
Slient:	Plains	Basin Environmental				
Jate/ Time.	11-18	68 @ 1712				
.ab ID # :	3	<u>19079</u>				
nitials:		JMF				
	-					
		Sample Receipt	Checklist			<b>A</b> II
#4 <b>X</b>		- J	Yes ⊃	No		° C
	ture of contain	ood condition?	(ves)	No	3,5	
			Yes	No	(Nat Decay)	
		shipping container/ cooler?	Ves >	No	Not Present	
		sample bottles/ container? / G bel			Not Present	
	Custody prese		SEE S	No		
		nplete of Chain of Custody?	Yes	No		
		d when relinquished/ received?	Yes	No		
		es with sample tabel(s)?	(Yes)	No	iD written on Cont	
	er label(s) legit		(Yes)	No	Not Applicab	le
		ties agree with Chain of Custody?	(Yes)	No		
	ers supplied by		Yes	No		
		tainer/ bottle?	(Yes)	No	See Below	
#13_Sample	s properly pres	erved?	Yes	No	See Below	
#14 Sample	bottles intact?		(Yes)	No		
#15 Preserv	vations docume	nted on Chain of Custody?	(Yes)	No		
#16 Contain	ners document	ed on Chain of Custody?	Yes	No		
#17 Sufficie	nt sample amo	unt for indicated test(s)?	Yes	No	See Below	
#18 Ali sam	ples received	vithin sufficient hold time?	Yes')	No	See Below	
#19 Subcon	tract of sample	e(s)?	Yes	No	Not Applicat	
#20 VOC sa	amples have ze	ero headspace?	(YES)	No	Not Applicab	ole
		Variance Docu	nentation			
Contact:		Contacted by:			Date/ Time:	
Regarding:						
			<del></del>			
Corrective A	ction Taken:					
Check all tha	at Apply:	See attached e-mail/ fax Client understands and wou Cooling process had begun			•	

### **Analytical Report 318076**

for

### PLAINS ALL AMERICAN EH&S

**Project Manager: Daniel Bryant** 

Lea Station Land Farm SRS 2004-00061

25-NOV-08





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

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

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

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

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

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





25-NOV-08

Project Manager: Daniel Bryant
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150

Midland, TX 79706

Reference: XENCO Report No: 318076

Lea Station Land Farm

Project Address: Lea County, NM

### **Daniel Bryant:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318076. 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. 318076 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

Cdessa 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 318076**



### 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	Nov-14-08 13:00	318076-001
Cell E VZ G 2. (3'-4')	S	Nov-14-08 13:15	318076-002
Cell E VZ G 3 (3'-4')	S	Nov-14-08 13:30	318076-003
Cell E VZ G 4 (3'-4')	S	Nov-14-08 13:45	318076-004



Project Id: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

# Certificate of Analysis Summary 318076 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm Report Date: 25-NOV-08

Project Manager: Brent Barron, II

	-	-	-			-
	Lab Id:	318076-001	318076-002	318076-003	318076-004	
, , , , , , , , , , , , , , , , , , ,	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')	
Anatysis Requested	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-14-08 13:00	Nov-14-08 13:15	Nov-14-08 13:30	Nov-14-08 13:45	
RTEX by FPA 8021B	Extracted:	Nov-20-08 08:00	Nov-20-08 08:00	Nov-20-08 08:00	Nov-21-08 17:45	
	Analyzed:	Nov-20-08 20:18	Nov-20-08 20:40	Nov-20-08 21:02	Nov-24-08 00:07	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011	
Toluene		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0022	
Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011	
m,p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0022	
o-Xylene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011	
Total Xylenes		ND 0.0033	ND 0.0031	ND 0.0033	ND 0.0022	
Total BTEX		ND 0.0077	ND 0.0072	ND 0.0077	ND 0.0011	
Inorganic Anions by FPA 300/300.1	Extracted:					
	Analyzed:	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	Nov-20-08 07:02	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.44	ND 5.21	32.1 5.56	ND 5.40	
Percent Moisture	Extracted:					
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		8.14 1.00	4.02 1.00	10.04 1.00	7.43 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 14:00	Nov-21-08 15:00	Nov-21-08 15:00	Nov-21-08 15:00	
	Analyzed:	Nov-23-08 20:47	Nov-24-08 04:30	Nov-24-08 04:53	Nov-24-08 05:16	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.3	9'51 QN	ND 16.7	ND 16.2	
C12-C28 Diesel Range Hydrocarbons		ND 16.3	ND 15.6	ND 16.7	ND 16.2	
C28-C35 Oil Range Hydrocarbons		ND 16.3	ND 15.6	ND 16.7	ND 16.2	
Total TPH		ND 16.3	ND 15.6	VD 16.7	ND 16.2	

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

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

Odessa Laboratory 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 saraple(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.

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 OUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318076,

**Project ID:** SRS 2004-00061

Lab Batch #: 740971

**Sample:** 318071-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		ļ	[D]				
1,4-Difluorobenzene	0.0291	0.0300	97	80-120			
4-Bromofluorobe nzene	0.0314	0.0300	105	80-120			

Lab Batch #: 740971

Sample: 318071-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	()	[]	[D]	/***		
1,4-Difluorobenzene	0.0289	0.0300	96	80-120		
4-Bromofluorobonzene	0.0312	0.0300	104	80-120		

Lab Batch #: 740971

Sample: 318076-001 / SMP

Batch: 1

1 Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0324	0.0300	108	80-120		
4-Bromofluorobenzene	0.0286	0.0300	95	80-120		

Lab Batch #: 740971

Sample: 318076-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Diffuorobenzene	0.0319	0.0300	106	80-120		
4-Bromofluorobenzene	0.0182	0.0300	61	80-120	**	

Lab Batch #: 740971

10971

Sample: 318076-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	11	100	[D]	, , , ,		
1,4-Difluorobenz ene	0.0322	0.0300	107	80-120		
4-Bromofluorobenzene	0.0265	0.0300	88	80-120		

<sup>\*\*</sup> Surrogates outsice limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318076,

**Project ID:** SRS 2004-00061

Lab Batch #: 740971

Sample: 519683-1-BKS / BKS

Batch:

Matrix: Solid

Unit: mg/kg	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	_
4-Bromofluorobonzene	0.0294	0.0300	98	80-120	_

Lab Batch #: 740971

**Sample:** 519683-1-BLK / BLK

Batch: 1

Matrix: Solid

Unit: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobenzene	0.0255	0.0300	85	80-120		

Lab Batch #:: 740971

Sample: 519683-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]	l i		
1,4-Difluorobenzene	0.0280	0.0300	93	80-120		
4-Bromofluorobenzene	0.0292	0.0300	97	80-120		

Lab Batch #: 741149

Sample: 318076-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	, , , ,	[2]	[D]	/***		
1,4-Difluorobenzene	0.0319	0.0300	106	80-120		
4-Bromofluorobenzene	0.0258	0.0300	86	80-120		

Lab Batch #: 741149

**Sample:** 318423-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0288	0.0300	96	80-120		
4-Bromofluorobenzene	0.0293	0.0300	98	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318076,

**Project ID:** SRS 2004-00061

Lab Batch #: 741149

Sample: 318423-001 SD / MSD

Batch:

Matrix: Soil

Unite: mg/kg	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Diffuorobenzene	0.0313	0.0300	104	80-120			
4-Bromofluorobenzene	0.0292	0.0300	97	80-120			

Lab Batch #: 741149

Sample: 519811-1-BKS / BKS

Batch: 1

Matrix: Solid

Unita: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		'	[D]			
1,4-Difluorobenzene	0.0272	0.0300	91	80-120		
4-Bromofluorobonzene	0.0253	0.0300	84	80-120		

Lab Batch #: 741149

Sample: 519811-1-BLK / BLK

Batch:

Matrix: Solid

Unite: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0322	0.0300	107	80-120		
4-Bromofluorobenzene	0.0243	0.0300	81	80-120		

Lab Batch #: 741149

Sample: 519811-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	17	(2)	[D]			
1,4-Difluorobenz ene	0.0270	0.0300	90	80-120		
4-Bromofluorobenzene	0.0266	0.0300	89	80-120		

Lab Batch #: 741130

Sample: 318074-005 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	61.3	50.0	123	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318076,

**Project ID:** SRS 2004-00061

Lab Batch #: 741130

Sample: 318074-005 SD / MSD

Batch:

Matrix: Soil

Unit: mg/kg SURROGATE RECOVERY STU				STUDY	
TPH by SW8015 Mo	d Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	61.2	50.0	122	70-135	

Lab Batch #: 741130

Sample: 318076-001 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	116	100	116	70-135			
o-Terphenyl	58.3	50.0	117	70-135			

Lab Batch #: 741130

Sample: 519805-1-BKS / BKS

Batch:

Matrix: Solid

Unite: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes	1-7	'-'	[ <b>D</b> ]			
1-Chlorooctane	126	100	126	70-135		
o-Terphenyl	62.7	50.0	125	70-135		

Lab Batch #: 741130

Sample: 519805-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	, SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
I-Chlorooctane	118	100	118	70-135			
o-Terphenyl	59.3	50.0	119	70-135			

Lab Batch #:: 741130

11130 Sampl

**Sample:** 519805-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH bý SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	130	100	130	70-135			
o-Terphenyl	61.6	50.0	123	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318076,

**Project ID:** SRS 2004-00061

Lab Batch #: 741354

Sample: 318076-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	114	100	114	70-135		
o-Terphenyl	57.5	50.0	115	70-135		

Lab Batch #: 741354

Sample: 318076-003 / SMP

Batch: 1

Matrix: Soil

Unito: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			101			
1-Chlorooctane	] 114	100	114	70-135		
o-Terphenyl	58.6	50.0	117	70-135	·	

Lab Batch #: 741354

Sample: 318076-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg SURROGATE RECOVERY STUD				STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 741354

Sample: 318268-001 S / MS

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I-Chlorooctane	161	100	161	70-135	**	
o-Terphenyl	76.8	50.0	154	70-135	**	

Lab Batch #: 741354

-1354 S

Sample: 318268-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	177	100	177	70-135	**
o-Terphenył	77.5	50.0	155	70-135	**

<sup>\*\*</sup> Surrogates outsice limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318076,

Project ID: SRS 2004-00061

Lab Batch #: 741354

**Sample:** 519924-1-BKS / BKS

Batch: 1 Matrix: Solid

Units	: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
	TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		178	100	178	70-135	**
o-Terphenyl		83.5	50.0	167	70-135	**

Lab Batch #: 741354

Sample: 519924-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	SU	RROGATE RE	COVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	146	100	146	70-135	**
o-Terphenyl	72.5	50.0	145	70-135	**

Lab Batch #: 741354

**Sample:** 519924-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	161	100	161	70-135	**
o-Terphenyl	76.6	50.0	153	70-135	**

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

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318076

Project ID:

SRS 2004-00061

Lab Batch #: 740955

Sample: 740955-1-BKS

Matrix: Solid

Date Analyzed: 11/20/2008

Date Prepared: 11/20/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /B	SLANK SPI	KE KEC	OVERYS	HUDY
Inorganic Anions by EPA 300\300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	10.1	101	80-120	

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



### BS / BSD Recoveries



# Project Name: Lea Station Land Farm

work Oruer #: 318076

Analyst: ASA

Lab Batch ID: 740971

Sample: 519683-1-BKS

Date Prepared: 11/20/2008

Batch #: 1

**Project 1D: SRS 2004-00061** Date Analyzed: 11/20/2008

Matrix: Solid

Flag

Units: mg/kg

Limits %RPD Control 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 71-129 70-130 70-130 RPD 7 7 Blk. Spk Dup. |G| 93 6 91 Duplicate Result [F] 0.0932 9960.0 Spike 0.0909 Blank Spike Added  $\Xi$ 0.1 0.1 0.1 Blank Spike %R [D] 89 95 16 0.0890 0.0950 Blank Spike Result 0.0913 <u>5</u> 0.1000 0.1000 0.1000 Spike Added B Sample Result Blank  $\overline{\mathbf{A}}$ Ω ND Ð BTEX by EPA 8021B Analytes

Analyst: ASA

Ethylbenzene m,p-Xylenes o-Xylene

Benzene Toluenc Date Prepared: 11/21/2008

**Date Analyzed:** 11/23/2008 Matrix: Solid

35 35

70-135

86 94

0961.0 0.0935

0.2

6 92

0.1932

0.2000 0.1000

Ð 呈

0.0921

0.1

71-133

Lab Batch ID: 741149

Units: mg/kg

Sample: 519811-1-BKS

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

											Ī
BTEX by EPA 8021B	Blank Sample Result /	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		<u> </u>	[]	<u>a</u>	[E]	Result [F]	<u>5</u>				
Benzenc	QN	0.1000	0.0971	46	0.1	0.0984	86	1	70-130	35	
Toluene	ND	0.1000	0.0901	06	1'0	0.0912	16	1	70-130	35	
Ethylbenzene	QN	0.1000	0.0870	87	0.1	0.0892	68	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1746	87	0.2	0.1796	06	3	70-135	35	
o-Xylene	QN	0.1000	0.0846	85	0.1	0.0873	48	3	71-133	35	

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



### BS / BSD Recoveries



# Project Name: Lea Station Land Farm

Work Order #: 318076

Analyst: BHW

Lab Batch ID: 741130

Date Prepared: 11/21/2008

**Project ID:** SRS 2004-00061 **Date Analyzed:** 11/23/2008

ac canalyzed: 11/23/2000

17° m 17° m

Sample: 519805-1-BKS Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Bik. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	€	[B]	Kesuit [C]	[0]	[E]	Duplicate Result [F]	¥ 5		X %	%KPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	910	16	1000	893	68	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ΩN	0001	938	94	1000	935	94	0	70-135	35	

Analyst: BHW

Lab Batch ID: 741354

Sample: 519924-1-BKS

Date Prepared: 11/21/2008

Batch #: 1

Matrix: Solid

Date Analyzed: 11/24/2008

Flag Control Limits %RPD 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD ∞ 4 Blk. Spk Dup. %R [G] 117 Ξ Blank Spike Duplicate Result [F] 1110 1170 Spike Added 1000 1000  $\Xi$ Blank Spike %R [D] 120 112 Blank Spike Result 1120 1200 <u>5</u> Spike Added 1000 1000 <u>B</u> Blank Sample Result Q. ₹ Ð TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg 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 #: 318076

Lab Batch #: ''40955

**Project ID:** SRS 2004-00061

**Date Analyzed:** 1/20/2008 QC- Sample ID: 318073-002 S

11/20/2008 Date Prepared:

Analyst: LATCOR

Batch #:

Matrix: Soil

Reporting Units:	ıng/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
In	organic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride		ND	104	95.4	92	80-120	

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



# Form 3 - MS / MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318076

Lab Batch ID: 740971

Date Analyzed: 11/20/2008 Reporting Units: mg/kg

Matrix: Soil

Project ID: SRS 2004-00061

Batch #: Analyst:

QC-Sample ID: 318071-001 S Date Prepared: 11/20/2008

Flag × × × × Control Limits %RPD 35 35 35 35 35 Control Limits 70-130 70-130 71-129 70-135 71-133 %R MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD ~ 7 ~ Dup. 69 99 69 70 99 Duplicate Spiked Sample Result [F] 0.0678 0.0710 0.0684 0.0710 0.1439 Spike Added 0.1035 0.2070 0.1035 0.1035 0.1035  $\overline{\Xi}$ Spiked Sample %**R** ≘ 65 65 67 89 69 Spiked Sample 0.1425 0.0672 Result 0.0698 0.0674 0.0701  $\Box$ 0.1035 0.2070 0.1035 Spike Added 0.1035 0.1035 Parent Sample Result 2 ₹ 2 S Ω 2 BTEX by EPA 8021B Analytes Ethylbenzene m,p-Xylenes o-Xylene Toluenc Benzene

Date Analyzed: 11/24/2008 Lab Batch ID: 741149

QC- Sample ID: 318423-001 S Date Prepared: 11/21/2008

Matrix: Soil Analyst: Batch #:

Flag × × × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 70-130 70-130 71-129 70-135 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 7 m 4 d Dup. **6**3 62 28 59 55 Spiked Sample Result [F] Duplicate 0.0789 0.0734 0.1383 0.0643 0.0685 Added 0.1178 0.1178 0.2355 0.1178 Spike 0.1178  $\Xi$ Spiked Sample %R 9 57 99 57 53 Spiked Sample 6990.0 0.1348 0.0620 Result 0.0776 0.0707  $\overline{\mathbb{Q}}$ 0.1178 0.1178 0.1178 Spike Added 0.2355 0.1178 [B] Parent Sample Result [A] ₽ QN S N 2 2 BTEX by EPA 8021B Analytes Reporting Units: mg/kg Ethylbenzene m,p-Xylenes o-Xylene Benzene Tolucne

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

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

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



# Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318076

Lab Batch ID: 741130

Date Analyzed: 11/23/2008

QC- Sample ID: 318074-005 S

BHW Batch #:

Matrix: Soil \_

Project ID: SRS 2004-00061

Analyst: Date Prepared: 11/21/2008

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	7 MAT	IIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample		Spiked Sample Spiked Bup Result Sample Spike Spiked	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[</u>	D	Added [E]	Result [F]		%	%R		
C6-C12 Gasoline Range Hydrocarbons	QN	1120	963	98	1120	964	98	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1120	1010	06	1120	1030	92	2	70-135	35	

Batch #: QC-Sample ID: 318268-001 S Date Prepared: 11/21/2008 Date Analyzed: 11/24/2008 Lab Batch ID: 741354

BHW Analyst:

Matrix: Soil

Reporting Units: mg/kg		N.	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	./ MAT	RIX SPII	KE DUPLICA	TE RECO	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spik	Duplicate e Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[C</u>	%R [0]	Adde [E]	Result [F]		%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QN	1130	1270	112	112 1130	1340	119	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	30.5	1130	1330	115	115 1130	1280	1111	4	70-135	35	

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

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

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



Chloride

### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318076

Lab Eatch #: 740955 Date Analyzed: 11/20/2008

Project ID: SRS 2004-00061

**Date Prepared:** 11/20/2008

Analyst: LATCOR

QC-Sample ID: 318073-002 D

Inorganic Anions by EPA 300\300.1

**Analyte** 

Batch #:

Matrix: Soil

Reporting Units: mg/kg

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

Lab Eatch #: 740809

Date Analyzed: 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC-Sample ID: 318049-001 D

Batch #:

Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE	DUPLIC.	ATE RECO	OVERY
Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	1.79	1.64	9	20	

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

### **Environmental Lab of Texas**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 17800 West I-20 East Odessa, Taxas 19765 Fax: 432-563-1713

TAT brabnas2 NPDES ae.ang TAT HRU≶ ပ္ CHLORIDES EPA 300.1 Project Name: LEA STATION LAND FARM NEON TRRP BTEX 5021 B/5038 or UTLX 6260 Temperature Upon Receipt: Project #: SRS: 2004-00061 PO #: PAA - D.M. Bryant Project Loc: Lea County, NM Report Format: X Standard SESPICEC 11 13.CF 1712 SOIL SOIL SOIL SOIL gale cstanley@basinenv.com Other ( Specify) 40°S'en HOEN \*0s'H (575) 396-1429 HNO<sup>2</sup> baratii'i bla なな Fax No: e-mail: 1315 1330 1345 1300 Received by ELOT: PAGE 01 OF 11/14/2008 11/14/2008 11/14/2008 Received by: Received by: Basin Environmental Service Technologies, LLC ւգdəg ճայրւ Time Time գրգերը ընդակե The state of the s osie e Lovington, NM 88260 (575) 441-2124 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') Company Address: P. 0. Box 301 Curt Stanley 318076 Sampler Signature: ( Project Manager: Company Name Telephone No: City/State/Zip: secial Instructions (lab use only) ORDER #:

### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Stient.	Plains Basin Environmental				
Date/ Time	, _				
.ab iD#:	318016				
nitiats.	JMF				
	Sample Receipt 0	Checklist		Clles	nt Initials
¥1 Temp	erature of container/ cooler?	Yes	No	3,5 °C	T Initials
	ing container in good condition?	(Yes)	No		
	dy Seals intact on shipping container/ cooler?	Yes	No	Not Present	
	dy Seals intact on sample bottles/ container? / [ a bel	(es)	No	Not Present	
	of Custody present?	<ye\$⊋< td=""><td>No</td><td></td><td></td></ye\$⊋<>	No		
	le instructions complete of Chain of Custody?	Yes	No		
	of Custody signed when relinquished/ received?	Yes	No		
	of Custody agrees with sample label(s)?	(Yeş)	No	ID written on Cont./ Lid	
	niner label(s) legible and intact?	(Yes)	No	Not Applicable	
	ple matrix/ properties agree with Chain of Custody?	(Yes)	No	. sot repriodore	
	ainers supplied by ELOT?	Yes	No	<del></del>	
	ples in proper container/ bottle?	(Yes)	No	See Below	
		Yes	No		
	ples properly preserved?	(Ves)		See Below	<del></del>
	ple bottles intact?		No.	<del> </del>	
	ervations documented on Chain of Custody?	Yes	No_		
	ainers documented on Chain of Custody?	(Yes)	No	-	
	cient sample amount for indicated test(s)?	(res	No	See Below	
	amples received within sufficient hold time?	(res)	No	See Below	
#19 Subo	contract of sample(s)?	Yes	No	Not Applicable	
#20 VOC	samples have zero headspace?	(Yes)	No	Not Applicable	
	Variance Docum	nentation			
Contact:	Contacted by:			Date/ Time:	
Regarding	j:				
Carractive	e Action Taken:				
CORECIIVE	S AMMERICAN STREET				
			1,		
Check all	that Apply: See attached e-mail/ fax Client understands and woul	d like to pro	ceed with	n Analysis	
	Cooling process had begun:	-			

### **Analytical Report 318075**

for

### PLAINS ALL AMERICAN EH&S

Project Manager: Daniel Bryant

Lea Station Land Farm SRS 2004-00061

25-NOV-08





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

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

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

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

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

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







Project Manager: **Daniel Bryant PLAINS ALL AMERICAN EH&S**1301 S. COUNTY ROAD 1150
Midland. TX 79706

Reference: XENCO Report No: 318075

Lea Station Land Farm

Project Address: Lea County, NM

### Daniel Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 318075. 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. 318075 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 318075**



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

Lea Station Land Farm

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Cell F VZ G 1 (3'-4')	S	Nov-14-08 14:15		318075-001
Cell F VZ G 2 (3'-4')	S	Nov-14-08 14:30		318075-002
Cell F VZ G 3 (3'-4')	S	Nov-14-08 14:45		318075-003
Cell F VZ G 4 (3'-4')	S	Nov-14-08 15:00		318075-004
Cell F VZ G 5 (3'-4')	S	Nov-14-08 15:15		318075-005



# Certificate of Analysis Summary 318075 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Land Farm

Date Received in Lab: Tue Nov-18-08 05:12 pm

Project Id: SRS 2004-00061

Project Location: Lea County, NM Contact: Daniel Bryant

Report Date: 25-NOV-08

Project Manager: Brent Barron, Il

					I I UJCCI Manager. Dien Darion, in	DICHI Danion, 11	
	Lab Id:	318075-001	318075-002	318075-003	318075-004	318075-005	
K	Field Id:	Cell F VZ G I (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')	
Analysis Requestea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-14-08 14:15	Nov-14-08 14:30	Nov-14-08 14:45	Nov-14-08 15:00	Nov-14-08 15:15	
RTEX by FPA 8021B	Extracted:	Nov-21-08 08:00	Nov-21-08 08:00	Nov-21-08 08:00	Nov-24-08 08:15	Nov-21-08 08:00	
	Analyzed:	Nov-21-08 17:23	Nov-22-08 13:33	Nov-22-08 13:55	Nov-24-08 13:21	Nov-22-08 15:25	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Toluene		ND 0.0021	ND 0.0020	ND 0.0022	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
m,p-Xylenes		ND 0.0021	ND 0.0020	ND 0.0022	ND 0.0020	ND 0.0020	
o-Xylene		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Total Xylenes		ND 0.0021	ND 0.0020	ND 0.0022	ND 0.0020	ND 0.0020	
Total BTEX		ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Inorganic Anions by EPA 300\300.1	Extracted:						
	Analyzed:	08 07:0	08 07:0	08 07:0	08 07:0	03 07:0	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 5.29	ND 5.10	ND 5.52	ND 5.04	ND 5.02	
Percent Moisture	Extracted:						
	Analyzed:	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	Nov-19-08 17:00	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.51 1.00	2.01 1.00	9.43 1.00	ND 1.00	ND 1.00	
TPH by SW8015 Mod	Extracted:	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	Nov-21-08 14:00	
	Analyzed:	Nov-23-08 18:46	Nov-23-08 19:10	Nov-23-08 19:34	Nov-23-08 19:58	Nov-23-08 20:23	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.9	ND 15.3	9.91 QN	ND 15.1	ND 15.1	
C12-C28 Diesel Range Hydrocarbons		ND 15.9	ND 15.3	ND 16.6	ND 15.1	ND 15.1	
C28-C35 Oil Range Hydrocarbons		ND 15.9	ND 15.3	ND 16.6	ND 15.1	ND 15.1	
Total TPH		ND 15.9	ND 15.3	ND 16.6	ND 15.1	ND 15.1	

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

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

Odessa Laboratory 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.

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

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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



Project Name: Lea Station Land Farm

Work Orders: 318075,

Project ID: SRS 2004-00061

Lab Batch #: 741216

Sample: 318074-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobe izene	0.0309	0.0300	103	80-120	

Lab Batch #: 741216

Sample: 318074-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120				
4-Bromofluorobenzene	0.0286	0.0300	95	80-120				

Lab Batch #: 741216

Sample: 318075-001 / SMP

Batch: 1

Matrix: Soil

Units mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzone	0.0325	0.0300	108	80-120			
4-Bromofluorobenzene	0.0275	0.0300	92	80-120			

Lab Batch #: 741216

Sample: 318075-002 / SMP

Batch: 1

Matrix: Soil

Units mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	(1-1)	121	[D]	/ ***	
1,4-Difluorobenzone	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 741216

Sample: 318075-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318075,

Project ID: SRS 2004-00061

Lab Batch #: 741216

Sample: 318075-005 / SMP

Batch:

Matrix: Soil

Units mg/kg	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzone	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 741216

Sample: 519846-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobe izene	0.0280	0.0300	93	80-120	

Lab Batch #: 741216

**Sample:** 519846-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
Analytes			121				
1,4-Difluorobenzene	0.0330	0.0300	110	80-120			
4-Bromofluorobe izene	0.0280	0.0300	93	80-120			

Lab Batch #: 741216

Sample: 519846-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	RECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 741347

Sample: 318075-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			. ,			
1,4-Difluorobenzene	0.0327	0.0300	109	80-120		
4-Bromofluorobe izene	0.0265	0.0300	88	80-120		

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318075,

Project ID: SRS 2004-00061

Lab Batch #: 741347

Sample: 318075-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg		SURROGATE RECOVERY STUDY					
•	BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1,4-Difluorobenze	ne	0.0324	0.0300	108	80-120		
4-Bromofluorobe	zene	0.0294	0.0300	98	80-120		

Lab Batch #: 741347

Sample: 318075-004 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	(	[~]	[D]	,,,,,	
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobe izene	0.0289	0.0300	96	80-120	

Lab Batch #: 741347

Sample: 519915-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0292	0.0300	97	80-120		
4-Bromofluorobenzene	0.0271	0.0300	90	80-120		

Lab Batch #: 741347

Sample: 519915-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		'*'	[D]		
1,4-Diffuorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 741347

Sample: 519915-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
A	analytes			[D]		
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	·	0.0315	0.0300	105	80-120	

<sup>\*\*</sup> Surrogates outsid: limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318075,

Project ID: SRS 2004-00061

Lab atch #: 741130

Sample: 318074-005 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg		SU	RROGATE R	ECOVERY	STUDY	
TPH by SW801:	5 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes				[D]		
1-Chlorooctane		125	100	125	70-135	
o-Terpheny!		61.3	50.0	123	70-135	

Lab Batch #: 741130

Sample: 318074-005 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I-Chlorooctane	128	100	128	70-135			
o-Terphenyl	61.2	50.0	122	70-135			

Lab Batch #: 741130

Sample: 318075-001 / SMP

Batch:

Matrix: Soil

Units mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	119	100	119	70-135			
o-Terphenyl	59.5	50.0	119	70-135			

Lab Batch #: 741130

Sample: 318075-002 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	[2]	101	[D]	/ok	
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 741130

Sample: 318075-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes		1-1	[D]				
I-Chlorooctane	118	100	118	70-135			
o-Terphenyl	59.2	50.0	118	70-135			

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: Lea Station Land Farm

Work Orders: 318075,

Project ID: SRS 2004-00061

Lab Batch #: 741130

Sample: 318075-004 / SMP

Batch:

Matrix: Soil

Units: mg/kg		SURROGATE RECOVERY STUDY				
	TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
I-Chlorooctane		116	100	116	70-135	
o-Terphenyl		56.4	50.0	113	70-135	

Lab Batch #: 741130

Sample: 318075-005 / SMP

Batch: 1

Matrix: Soil

Units	mg/kg	SU	RROGATE RI	ECOVERY :	STUDY	
	TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount {B}	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		118	100	118	70-135	
o-Terphenyl		58.8	50.0	118	70-135	

Lab Batch #: 741130

Sample: 519805-1-BKS / BKS

Batch: 1

Matrix: Solid

Units	mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
	TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
I-Chlorooctane		126	100	126	70-135	
o-Terphenyl		62.7	50.0	125	70-135	

Lab Batch #: 741130

Sample: 519805-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		•
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	59.3	50.0	119	70-135	

Lab Batch #: 741130

Sample: 519805-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg	SU	RROGATE R	ECOVERY :	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			(D)		
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	61.6	50.0	123	70-135	

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

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

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **Blank Spike Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318075

Project ID:

SRS 2004-00061

Lab Batch #: 740955

Sample: 740955-1-BKS

Matrix: Solid

**Date Analyzed:** 11/20/2008

**Date Prepared:** 11/20/2008

Analyst: LATCOR

Reporting Units: mg/kg	Batch #:	BLANK /	BLANK SPI	KE REC	OVERYS	STUDY
Inorganic Anions by EPA 300\300.1	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	11	(0)	[C]	[D]	/•••	
Chloride	ND	10.0	10.1	101	80-120	

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



### BS / BSD Recoveries



# Project Name: Lea Station Land Farm

Work Order #: 318075

Analyst: ASA

Sample: 519846-1-BKS

Date Prepared: 11/21/2008

Batch #: 1

Frojeci ID: 5KS 2004-00061 Date Analyzed: 11/21/2008

Matrix: Solid

Flag

Lab Batch ID: 741216

Limits %RPD Control 35 35 35 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 71-129 70-135 70-130 70-130 71-133 RPD 0 0 0 0 Blk. Spk Dup. [G] 104 6 86 97 92 Duplicate Result [F] Blank Spike 0.0976 8960.0 0.1949 0,0918 0.1041 Spike Added 0.2  $\overline{\Xi}$ 0 0.1 0.1 0.1 Blank Spike %R [D] 104 86 62 6 92 92600 0.0968 0.1949 0.0918 Blank Spike Result 0.1041  $\overline{\mathbf{c}}$ 0.1000 0.1000 0.1000 0.2000 Spike Added 0.1000 8 Sample Result S ₽ Ę ΩN 貝 <u>Z</u> BTEX by EPA 8021B Units: mg/kg Analytes Ethylbenzene m,p-Xylenes Toluene o-Xylene Benzene

Analyst: ASA

Lab Batch ID: 741347

Date Prepared: 11/24/2008 Sample: 519915-1-BKS

Batch #: 1

Matrix: Solid

**Date Analyzed:** 11/24/2008

Flag Limits %RPD Control 35 35 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-130 71-129 71-133 70-130 RPD 0 9 9 7 2 Dup. [G] 901 104 107 109 103 Duplicate Result [F] 0.1040 0.1066 0.1025 Spike 0.1062 0.2181 Blank Spike Added 0.1 0.2 0.1 0.1 0.1  $\Xi$ Blank Spike %R [D] 102 3 106 Ī≣ 26 0.1019 Blank Spike Result [C] 0.1011 0.2056 0.1064 0.0969 0.1000 0.1000 0.1000 0.2000 Spike Added 0.1000 <u>B</u> Sample Result Ð Ω 9 S ₹ S BTEX by EPA 8021B Units: mg/kg Analytes Ethylbenzene m,p-Xylenes o-Xylenc Toluene Benzenc

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



### BS / BSD Recoveries



Project Name: Lea Station Land Farm

Wark Order #: 318075

Analyst: BHW

Lab Batch ID: 741130

Sample: 519805-1-BKS

**Date Prepared:** 11/21/2008

Batch #: 1

Frujeci ID: 5KS 2004-00061 Date Analyzed: 11/23/2008

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk	· '	Control	Control	
	Sample Result		Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits	Flag
	<u>₹</u>		Result	%R	-	Duplicate	%R	,	%R	%RPD	
Analytes		[ <b>B</b> ]	<u>(c</u>	[ <u>a</u> ]	<u> </u>	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	910	16	1000	893	68	2	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	QN	1000	938	94	0001	935	94	0	70-135	35	

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



### Form 3 - MS Recoveries

Project Name: Lea Station Land Farm



Work Order #: 318075

Lab Batch #: 740955

**Date Analyzed:** 11/20/2008

Project ID: SRS 2004-00061

**Date Prepared:** 11/20/2008 Analyst: LATCOR

QC-Sample ID: 318073-002 S Batch #: 1 Matrix: Soil

Reporting Units: nig/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
Chloride	ND	104	95.4	92	80-120	

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

II Results are based on MDL and Validated for QC Purposes



# Form 3 - MS/ MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318075

Date Analyzed: 11/22/2008 Lab Batch ID: 741216

Reporting Units: mg/kg

Batch #: QC-Sample ID: 318074-001 S Date Prepared: 11/21/2008

ASA Analyst:

**Project ID: SRS 2004-00061** 

Matrix: Soil

Flag Limits %RPD Control 35 35 35 35 35 Control Limits 70-130 70-130 70-135 71-129 71-133 %R MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 4 4 ∞ 9 ∞ Spiked Dup. %R [G] 001 93 92 93 89 Duplicate Spiked Sample Result [F] 0.1110 0.1016 0.2056 0.1030 0.0982 Spike Added 0.1107 0.2213 0.1107 0.1107 0.1107 Ξ Spiked Sample %R <u>a</u> 84 85 96 89 98 Spiked Sample Result 0.0942 0.0986 0.1907 0.1067 0.0931 Spike Added 0.2213 0.1107 0.1107 0.1107 0.1107 Parent Sample Result 2 ¥ N<sub>O</sub> N<sub>O</sub> ΔÑ ND BTEX by EPA 8021B Analytes Ethylbenzene m,p-Xylenes o-Xylene Tolucne Benzene

Date Analyzed: 11/24/2008 Lab Batch ID: 741347

QC-Sample ID: 318075-004 S Date Prepared: 11/24/2008

Matrix: Soil ASA -Analyst: Batch #:

Reporting Units: mg/kg		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	XIX SPIR	KE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	<u> </u>	8% <u>D</u>	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	Q.	0.1008	0980'0	85	0.1008	6060.0	06	9	70-130	35	
Toluene	QN	0.1008	6080.0	80	0.1008	0.0854	85	9	70-130	35	
Ethylbenzene	ND	0.1008	0.0768	9/	0.1008	0.0847	84	01	71-129	35	
m,p-Xylenes	ND	0.2017	0.1606	80	0.2017	0.1728	98	7	70-135	35	
o-Xylene	ND	0.1008	0.0770	9/	0.1008	0.0823	82	×	71-133	35	

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

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

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



# Form 3 - MS/MSD Recoveries



Project Name: Lea Station Land Farm

Work Order #: 318075

Lab Batch ID: 741130

Date Analyzed: 11/23/2008

Reporting Units: mg/

QC-Sample ID: 318074-005 S

1 Matrix: Soil

Project ID: SRS 2004-00061

Batch #: 1
Analyst: BHW

ıg/kg		M.	IATRIX SPIKE / 1		AATRIX SPIKE DUPLICATE RECOVEI	TE RECO	VERY STU	DY		1 1
H by CW/9016 Mod	Parent		Spiked Sample	Spiked	Duplicate	Spiked	) 	ontrol	Control	

Date Prepared: 11/21/2008

who ting outs. ag as		M	AIRIA SPIKE	/ MAII	CLA SPIR	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E KEC	JVEKY 2	TODE		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C] %R Add	(D)	Added [E]	Added Result [F]		%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	Ω	1120	6963	98	1120	964	98	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1120	0101	06	1120	1030	92	2	70-135	35	

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

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

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



### **Sample Duplicate Recovery**



Project Name: Lea Station Land Farm

Work Order #: 318075

Lab Batch #: 740955

**Date Prepared:** 11/20/2008

**Project ID:** SRS 2004-00061

**Date Analyzed:** 11/20/2008 **QC- Sample ID:** 318073-002 D

Analyst: LATCOR

Batch #:

1

Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300\300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	ND	ND	NC	20	

Lab Batch #: 740809

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318049-001 D

Batch #:

1

Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	1.79	1.64	9	20	

Lab Batch #: 740815

**Date Analyzed:** 11/19/2008

**Date Prepared:** 11/19/2008

Analyst: BEV

QC- Sample ID: 318075-002 D

Batch #:

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	2.01	2.49	21	20	F	

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

## **Environmental Lab of Texas**

TAT bushnesi2 NPDES Voice free of teatings of the state of the s ŝ ×× Project Name: LEA STATION LAND FARM TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 1880 West-120 East Octases 1 Teas 19785 Phone: 432-563-1800 Fax: 432-563-1713 Temperature Upon Receipt: Project#: SRS: 2004-00061 PO#: PAA - D.M. Bryant Project Loc: Lee County, MM Report Format: X Standard 100 (CI, 804, A SOIL SOIL SOIL SOL SQL 11-10 X Date 200 Safe cstanlev@basinenv.com enous Orsich onon ,02.н (575) 396-1429 ЮH Fax No: e-mail: 1500 1415 1430 1515 PAGE 01 OF 01 11/14/2008 Received by ELOT 11/14/2008 11/14/2008 11/14/2008 Received by: Basin Environmental Service Technologies, LLC 777 E. Lovington, NM 88260 Sake O CELL F VZ G 1 (3' - 4')
CELL F VZ G 2 (3' - 4') Company Address: P. O. Box 301 CELL F VZ G 3 (3' - 4') CELL F VZ G 4 (3' - 4') CELL F VZ G 5 (3' - 4') Curt Starley FIELD CODE (lab use only) 3 (807 S Project Manager Sampler Signature Company Name City/State/Zip: Telephone No:

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

lient: Plains Basin Environmental				
iate/Time: 11-18 08 @ 1712				
ab 10 #: 3\8015				
nitials: JMF				
Sample Receipt (	Checklist		Client I	nitials
1 Temperature of container/ cooler?	Y€ŝ⊃	No	3,5 °C	
2 Shipping container in good condition?	(ves>	No		
3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
4 Custody Seals intact on sample bottles/ container? / [4 bel	(es)	No	Not Present	
5 Chain of Custody present?		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)?	(Yeş)	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		
115 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	
Contact: Contacted by:  Regarding:	mentation		Date/ Time:	
Corrective Action Taken:				
Check all that Apply:  See attached e-mail/ fax Client understands and woul Cooling process had begun	•		•	



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