GW - 351 Landfarm MONITORING **REPORTS** (Analytical Results) 2010

Analytical Report 375947

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

10-JUN-10





12600 West I-20 East Odessa, Texas 79765

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10-JUN-10

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

Reference: XENCO Report No: 375947

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375947. 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. 375947 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375947



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected Sam	ple Depth	Lab Sample Id
TZ Cell A G-1	S	Jun-07-10 08:00		375947-001
TZ Cell A G-2	S	Jun-07-10 08:05		375947-002
TZ Cell A G-3	S	Jun-07-10 08:10		375947-003
TZ Cell A G-4	S	Jun-07-10 08:15		375947-004
TZ Cell A G-5	S	Jun-07-10 08:20		375947-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 10-JUN-10

 Work Order Number:
 375947
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809677 Percent Moisture

None

Batch: LBA-809858 TPH by SW8015 Mod

SW8015MOD NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons RPD was outside QC limits.

Samples affected are: 375947-002, -005, -003, -001, -004

SW8015MOD_NM

Batch 809858, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected;

data not confirmed by re-analysis

Samples affected are: 376021-001 S.

SW8015MOD_NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike. C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 375947-002, -005, -003, -001, -004.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-809945 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 375947 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm

Project Manager: Brent Barron, II Report Date: 10-JUN-10

				•	11 yet Manager. Dient Danon, II	neilt Dalloll, 11	
	Lah Id:	375947-001	375947-002	375947-003	375947-004	375947-005	
Americ Dogwood	Field Id:	TZ Cell A G-1	TZ Cell A G-2	TZ Cell A G-3	TZ Cell A G-4	TZ Cell A G-5	
Analysis Keyuesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 08:00	Jun-07-10 08:05	Jun-07-10 08:10	Jun-07-10 08:15	Jun-07-10 08:20	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		32.3 5.15	47.1 5.17	36.5 5.14	11.4 5.17	21.4 5.15	
Percent Moisture	Extracted:						
	Analyzed:	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		2.85 1.00	3.21 1.00	2.70 1.00	3.35 1.00	2.86 1.00	
TPH by SW8015 Mod	Extracted:	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	
	Analyzed:	Jun-08-10 23:20	Jun-08-10 23:46	Jun-09-10 00:13	Jun-09-10 00:40	Jun-09-10 01:06	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.6	ND 15.4	ND 15.4	ND 15.5	
C12-C28 Diesel Range Hydrocarbons		786 15.4	1200 15.6	901 15.4	124 15.4	428 15.5	
C28-C35 Oil Range Hydrocarbons		146 15.4	174 15.6	147 15.4	35.5 15.4	92.7 15.5	
Total TPH		932 15.4	1374 15.6	1048 15.4	160 15.4	521 15.5	

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria



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

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12600 West I-20 East. Odessa. TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
842 Cantwell Lane, Corpus Christi, TX 78408	(301) 884-03/1	(201) 994-3110



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375947, **Project ID:** 2004-00061

Lab Batch #: 809858 Sample: 565239-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 21:59	SU	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.5	50.2	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:26	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	109	99.5	110	70-135	
o-Terphenyl	51.2	49.8	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:53	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	111	100	111	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 809858 Sample: 375947-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/08/10 23:20	Su	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			1-1		
1-Chlorooctane	116	100	116	70-135	·
o-Terphenyl	56.0	50.0	112	70-135	

Units: mg/kg Date Analyzed: 06/08/10 23:46	SU	RROGATE RE	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	124	101	123	70-135	
o-Terphenyl	59.0	50.3	117	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375947, **Project ID:** 2004-00061

Lab Batch #: 809858 Sample: 375947-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/09/10 00:13	SU	RROGATE RI	ECOVERY S	STUDY	
TPH b	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		121	99.7	121	70-135	
o-Terphenyl		57.8	49.9	116	70-135	

Lab Batch #: 809858 Sample: 375947-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 00:40	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	113	99.5	114	70-135	
o-Terphenyl	54.2	49.8	109	70-135	

Lab Batch #: 809858 Sample: 375947-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 01:06	SU	RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			ן ויטו		
1-Chlorooctane	115	101	114	70-135	
o-Terphenyl	54.8	50.3	109	70-135	

Lab Batch #: 809858 Sample: 376021-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 08:40	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	139	99.7	139	70-135	*
o-Terphenyl	64.1	49.9	128	70-135	

Lab Batch #: 809858 Sample: 376021-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 09:08	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	133	100	133	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375947
Analyst: LATCOR

Lab Batch ID: 809945

Date Prepared: 06/08/2010

Project ID: 2004-00061 **Date Analyzed:** 06/08/2010

Sample: 809945-1-BKS Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANKS	PIKE DUPI	ICATE	RECOVE	ERY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes	<u>:</u>	<u>B</u>	[C]	ها	[E]	Result [F]	<u>5</u>	Ř			
Chloride	ND	10.0	9.18	92	10	9.81	86	7	75-125	20	
Analyst: BEV	Da	ite Prepar	Date Prepared: 06/08/2010	0			Date A	nalyzed: 0	Date Analyzed: 06/08/2010		
CALLET AND CONCERN TO CONCERN THE CONCERN TO THE CO	()	4 T-1-4						Matulian Colid	V.1.4		

Lab Batch ID: 809858 Sample: 565239-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	λ	
TPH by SW8015 Mod		Spike	Blank	Blank	Spike	Blank	Blk. Spk	Ι΄	Control	Control	į
	Sample Result [A]	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R	RPD %	Limits %R	Limits %RPD	7 20 20
Analytes		[B]	[C]	[0]	<u> </u>	Result [F]	[5]				
C6-C12 Gasoline Range Hydrocarbons	QN.	1000	1170	111	965	1170	118	0	70-135	32	
C12-C28 Diesel Range Hydrocarbons	ND	1000	866	100	995	1090	110	6	70-135	35	

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

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Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375947 **Lab Batch #:** 809945

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 375947-001 S **Batch #:** 1

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	32.3	103	145	109	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 375947

Lab Batch ID: 809858

Date Analyzed: 06/09/2010

QC-Sample ID: 376021-001 S **Date Prepared:** 06/08/2010

BEV

Matrix: Soil Batch #: Analyst:

Project ID: 2004-00061

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Spiked Duplicate Sample Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	[C]	D]	Added [E]	Result [F]	% R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1170	1780	152	1170	1630	139	6	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	406	1170	3230	241	1170	1570	66	69	70-135	35	XF

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)

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375947

Lab Batch #: 809945 **Project ID:** 2004-00061

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 375947-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	32.3	31.2	3	20	

Lab Batch #: 809677

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 375808-001 D
 Batch #:
 1
 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	2.99	3.07	3	20	

Environmental Lab of Texas

Basin Environmental Consulting, LLC

Project Manager:

Company Name

Lovington, NM 88260

City/State/Zip:

Company Address: P.O. Box 381

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

☐ NPDES

TRRP

Report Format: X Standard

(505) 396-1429

Fax No:

Project Loc: Lea County, NM

Project #: 2004-00061

PO #: PAA - J. Henry

Phone: 432-563-1800 Fax: 432-563-1713 Project Name: Lea Station Landfarm 12600 West I-20 East Odessa, Texas 79765 Camille Bryant

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XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin	Enu. / Pla	iins				
Date/Time: 6.7.	10 16:15					
Lab ID#:375947						
Initials:	AL					
		Sample Receipt Ch	ecklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container in	n good condition?		Yes	No	None	
3. Custody seals intact	on shipping container	r (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody pre	esent?		Yes	No		
5. Sample instructions	complete on chain of	custody?	Yes	No		
6. Any missing / extra s	samples?		Yes	No		
7. Chain of custody sig	ned when relinguishe	d / received?	Yes	No		
8. Chain of custody ag	rees with sample label	(s)?	Yes	No		
9. Container labels legi	ble and intact?		Yes	No		
10. Sample matrix / pro	perties agree with cha	in of custody?	Yes	<u>N</u> o		
11. Samples in proper	container / bottle?		Yes	No		
12. Samples properly p	reserved?	(Yes)	No	N/A		
13. Sample container in	ntact?	*	(Yes)	No		
14. Sufficient sample a	mount for indicated te	st(s)?	Yes	No		
15. All samples receive	d within sufficient hol	d time?	Yes	<u>N</u> o		
16. Subcontract of sam	ıple(s)?		Yes	No	N/A	
17. VOC sample have z	ero head space?	·	(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No	·	Cooler 5 No.	
lbs 4,1 °	C lbs	°C lbs	°C lbs	°C	lbs	°c
	No	onconformance Docu	mentation			
Contact:	Contacte	d by:		Date/Time:_		
Regarding:		· · · · · · · · · · · · · · · · · · ·				
Corrective Action Take	n:					
		house should be				
	condition acc	s begun shortly after samp eptable by NELAC 5.5.8.3.1 emperature confirm out of	l.a.1.		ature	

☐ Client understands and would like to proceed with analysis

Analytical Report 375948

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

10-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 14 Final Ver. 1.000





10-JUN-10

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

Reference: XENCO Report No: 375948

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375948. 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. 375948 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375948



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell B G-1	S	Jun-07-10 08:45		375948-001
TZ Cell B G-2	S	Jun-07-10 08:50		375948-002
TZ Cell B G-3	S	Jun-07-10 08:55		375948-003
TZ Cell B G-4	S	Jun-07-10 09:00		375948-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 10-JUN-10

 Work Order Number:
 375948
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809677 Percent Moisture

None

Batch: LBA-809858 TPH by SW8015 Mod

SW8015MOD NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons RPD was outside QC limits.

Samples affected are: 375948-002, -001, -004, -003

SW8015MOD NM

Batch 809858, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected;

data not confirmed by re-analysis

Samples affected are: 376021-001 S.

SW8015MOD_NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike. C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 375948-002, -001, -004, -003.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-809945 Inorganic Anions by EPA 300

None

Page 4 of 14 Final Ver. 1.000



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

Certificate of Analysis Summary 375948 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm Report Date: 10-JUN-10

Project Manager: Brent Barron, II

	Lah Id:	375948-001	375948-002	375948-003	375948-004	
Amelic Domoctod	Field Id:	TZ Cell B G-1	TZ Cell B G-2	TZ Cell B G-3	TZ Cell B G-4	
Analysis Requesieu	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 08:45	Jun-07-10 08:50	Jun-07-10 08:55	Jun-07-10 09:00	
Inorganic Anions In Soil by E300	Extracted:					
	Analyzed:	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		8.95 5.17	12.1 5.23	15.5 5.31	17.3 5.12	
Percent Moisture	Extracted:					
	Analyzed:	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		3.21 1.00	4.36 1.00	5.84 1.00	2.26 1.00	
TPH by SW8015 Mod	Extracted:	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	
	Analyzed:	Jun-09-10 01:32	Jun-09-10 01:59	Jun-09-10 02:26	Jun-09-10 02:53	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.6	ND 16.0	ND 15.3	
C12-C28 Diesel Range Hydrocarbons		1430 15.4	837 15.6	230 16.0	202 15.3	
C28-C35 Oil Range Hydrocarbons		199 15.4	123 15.6	41.7 16.0	47.8 15.3	
Total TPH		1629 15.4	960 15.6	272 16.0	250 15.3	

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria



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

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2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St. Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East. Odessa. TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
842 Cantwell Lane, Corpus Christi, TX 78408	(301) 884-03/1	(201) 994-3110



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375948, **Project ID:** 2004-00061

Lab Batch #: 809858 Sample: 565239-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 21:59	SU	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.5	50.2	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:26	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	109	99.5	110	70-135	
o-Terphenyl	51.2	49.8	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:53	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	111	100	111	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 809858 Sample: 375948-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 01:32	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	116	99.6	116	70-135	
o-Terphenyl	56.7	49.8	114	70-135	

Lab Batch #: 809858 Sample: 375948-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 01:59	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	117	99.5	118	70-135	
o-Terphenyl	56.0	49.8	112	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375948, Project ID: 2004-00061

Lab Batch #: 809858 Sample: 375948-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 02:26	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	108	100	108	70-135	
o-Terphenyl	53.6	50.2	107	70-135	

Lab Batch #: 809858 Sample: 375948-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 02:53	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	113	99.8	113	70-135	
o-Terphenyl	54.5	49.9	109	70-135	

Units: mg/kg Date Analyzed: 06/09/10 08:40	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	139	99.7	139	70-135	*
o-Terphenyl	64.1	49.9	128	70-135	

Lab Batch #: 809858 Sample: 376021-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 09:08	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	133	100	133	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375948 Analyst: LATCOR

Units: mg/kg

Date Prepared: 06/08/2010

Project ID: 2004-00061 Date Analyzed: 06/08/2010

Matrix: Solid

Batch #: Sample: 809945-1-BKS Lab Batch ID: 809945

Control BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Flag Limits %RPD 20 Control Limits %R 75-125 RPD % Blk. Spk Рир 5. 1 86 Duplicate Result [F] Blank Spike 8.6 Spike Added 10 Ξ Blank Spike %R [D] 92 Blank Spike Result 9.18 <u>5</u> Spike Added 10.0 <u>B</u> Sample Result Blank B Inorganic Anions In Soil by E300 Analytes Chloride

Batch #: | Sample: 565239-1-BKS Lab Batch ID: 809858

Analyst: BEV

Date Prepared: 06/08/2010

Date Analyzed: 06/08/2010

Matrix: Solid

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 0 S Blk. Spk Рчр. 1G %R 118 110 Duplicate Result [F] Blank Spike 1170 1090 Spike Added 566 995 Ξ Blank Spike %R [D] 117 100 Blank Spike Result 1170 <u></u> 866 Added Spike 1000 1000 <u>B</u> Sample Result Blank V B $\frac{1}{2}$ 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*[(C-F)/(C+F)]

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Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375948 **Lab Batch #:** 809945

Chloride

Project ID: 2004-00061

Date Analyzed: 06/08/2010

Date Prepared: 06/08/2010 Analyst: LATCOR

QC- Sample ID: 375947-001 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / 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
Anglytes	[A]	[B]				

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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Lab Batch ID: 809858

Date Analyzed: 06/09/2010

Work Order #: 375948

Matrix: Soil QC-Sample ID: 376021-001 S

Project ID: 2004-00061

BEVBatch #: Analyst: **Date Prepared:** 06/08/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/ MATI	RIX SPIF	Œ DUPLICA'	TE RECO	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result Sample [C] %R		Spike Added	Spike Spiked Sample Added Result [F]	Spiked Dup. %R	RPD %	Control C Limits I	Control Limits %RPD	Flag
	1	[a]		<u> </u>	<u>a</u>						
C6-C12 Gasoline Range Hydrocarbons	ND	1170	1780	152	1170	1630	139	6	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	406	1170	3230	241	1170	1570	66	69	70-135	35	XF

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

Page 11 of 14



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375948

Lab Batch #: 809945 Project ID: 2004-00061

 Date Analyzed: 06/08/2010
 Date Prepared: 06/08/2010
 Analyst: LATCOR

 QC- Sample ID: 375947-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	32.3	31.2	3	20	

Lab Batch #: 809677

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 375808-001 D
 Batch #:
 1
 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	2.99	3.07	3	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

Standard TAT 4 DAY × × × Lone Star □ NPDES Serior Celtaries Intestification (S. N. VOCs Free of Headspace? (Y. N. Libella of conference) (M. N. Custody seals on container(s) (M. N. Custody seals on container(s) (M. N. Custody seals on container(s) (SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 1.005 ノ × TRRP M.R.O.I 된 Project Name: Lea Station Landfarm Temperature Upon Receipt: by Sampler/Client Rep. ? by Courier? UPS BTEX 80218/5030 or BTEX 8260 Analyze For Sample Hand Delivered Laboratory Comments Labels on contained a) Custody seals on cont Custody feater on cont Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Vetals: As Ag Ba Cd Cr Pb Hg Se 걸 TOTAL: SAR / ESP / CEC Anions (Cl., SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 3001 XT 4X 1005 Hel 5:5 <u>iii</u> æ j≟ (MS108) × × 1.814 :Hau cibryant@basin-consulting.com SOIL SOIL SOL S CLORUGASTEL 2 = 20(1/20) - MO 51.Fg OM ~ Drinking Water St – Sludg Oate E E Date Other (Specify) Preservation & # of Containers enoM _EO_SS_SBN HOBN 'OS^zH (505) 396-1429 HCI [€]ONH 2019201 **6**9 × otal #. of Containers benetilii blei Fax No: e-mail: 0845 0855 0060 0820 Time Sampled 2000 M 6/7/10 6/7/10 6/7/10 Received by: Received by Date Sampled Basin Environmental Consulting, LLC Ending Depth Ē Ē Beginning Depth Date Lovington, NM 88260 Date Camille Bryant (575)605-7210 Company Address: P.O. Box 381 TZ Cell B G-3 TZ Cell B G-4 TZ Cell B G-2 TZ Cell B G-1 FIELD CODE 375448 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by: (lab use only ORDER #: Ŋ 3 ᅿ (vino esu del) # SA.

. 持度條件



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plains				
Date/Time: 6-7:10 16:15				
Lab ID#: 375948				
Initials: AL				
Sample Receipt Check	dist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	NA	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
lbs 4.1 °C lbs °C lbs °C	lbs	აი	lbs	°c
Nonconformance Docume	entation			
Contact:Contacted by:		Date/Time:_		
Regarding:	 			
Corrective Action Taken:				
Check all that apply: Cooling process has begun shortly after sampling condition acceptable by NELAC 5.5.8.3.1.a.1 Initial and Backup Temperature confirm out of ten	nperature con	•	rature	

Analytical Report 375949

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

10-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

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

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

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North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Final Ver. 1.000 Page 1 of 14





10-JUN-10

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

Reference: XENCO Report No: 375949

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375949. 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. 375949 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375949



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell D G-1	S	Jun-07-10 09:25		375949-001
TZ Cell D G-2	S	Jun-07-10 09:30		375949-002
TZ Cell D G-3	S	Jun-07-10 09:35		375949-003
TZ Cell D G-4	S	Jun-07-10 09:40		375949-004
TZ Cell D G-5	S	Jun-07-10 09:45		375949-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 10-JUN-10

 Work Order Number:
 375949
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809677 Percent Moisture

None

Batch: LBA-809858 TPH by SW8015 Mod

SW8015MOD NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons RPD was outside QC limits.

Samples affected are: 375949-002, -005, -004, -001, -003

SW8015MOD_NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike. C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 375949-002, -005, -004, -001, -003.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD NM

Batch 809858, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376021-001 S.

Batch: LBA-809945 Inorganic Anions by EPA 300

None

Page 4 of 14 Final Ver. 1.000



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

Certificate of Analysis Summary 375949 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm

Report Date: 10-JUN-10

					Project Manager: Brent Barron, II	3rent Barron, II	
	Lah Id:	375949-001	375949-002	375949-003	375949-004	375949-005	
Analysis Ponnostod	Field Id:	TZ Cell D G-1	TZ Cell D G-2	TZ Cell D G-3	TZ Cell D G-4	TZ Cell D G-5	
ngicanhair sichmitz	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 09:25	Jun-07-10 09:30	Jun-07-10 09:35	Jun-07-10 09:40	Jun-07-10 09:45	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		35.1 5.11	31.3 5.11	50.2 5.12	20.6 5.10	10.6 5.08	
Percent Moisture	Extracted:						
	Analyzed:	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	Jun-08-10 13:10	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		2.19 1.00	2.23 1.00	2.38 1.00	2.00 1.00	1.54 1.00	
TPH by SW8015 Mod	Extracted:	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	
	Analyzed:	Jun-09-10 03:20	Jun-09-10 04:13	Jun-09-10 04:40	Jun-09-10 05:06	Jun-09-10 05:33	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.4	ND 15.4	ND 15.3	ND 15.2	
C12-C28 Diesel Range Hydrocarbons		707 15.4	685 15.4	1230 15.4	1230 15.3	1260 15.2	
C28-C35 Oil Range Hydrocarbons		112 15.4	99.5 15.4	156 15.4	150 15.3	140 15.2	
Total TPH		819 15.4	785 15.4	1386 15.4	1380 15.3	1400 15.2	

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

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Odessa Laboratory Manager Brehl Barron, II

Page 5 of 14



Flagging Criteria



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

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St. Miami Lakes. FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East. Odessa. TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
842 Cantwell Lane, Corpus Christi, 1X /8408	(301) 664-0371	(301) 864-3110



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375949, **Project ID:** 2004-00061

Lab Batch #: 809858 Sample: 565239-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 21:59	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.5	50.2	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:26	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	109	99.5	110	70-135	
o-Terphenyl	51.2	49.8	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:53	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	111	100	111	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 809858 Sample: 375949-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/09/10 03:20	SU	RROGATE RE	ECOVERY S	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		115	101	114	70-135	
o-Terphenyl		55.2	50.3	110	70-135	

Lab Batch #: 809858 Sample: 375949-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 04:13	SU	RROGATE RE	ECOVERY	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	54.7	50.2	109	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375949, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/09/10 04:40	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	114	100	114	70-135	
o-Terphenyl	55.0	50.2	110	70-135	

Lab Batch #: 809858 Sample: 375949-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 05:06	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	116	99.7	116	70-135	
o-Terphenyl	56.9	49.9	114	70-135	

Units: mg/kg Date Analyzed: 06/09/10 05:33	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	110	99.5	111	70-135	
o-Terphenyl	52.8	49.8	106	70-135	

Lab Batch #: 809858 Sample: 376021-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 08:40	Su	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	139	99.7	139	70-135	*		
o-Terphenyl	64.1	49.9	128	70-135			

Lab Batch #: 809858 Sample: 376021-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 09:08	SU	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	133	100	133	70-135			
o-Terphenyl	60.7	50.0	121	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375949 Analyst: LATCOR

Date Prepared: 06/08/2010 Batch #: |

Project ID: 2004-00061 **Date Analyzed:** 06/08/2010

Sample: 809945-1-BKS

Lab Batch ID: 809945

Matrix: Solid

Flag Control Limits %RPD BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R RPD % Blk. Spk Dup. %R [G] Blank Spike Duplicate Result [F] Spike Added Ξ Blank Spike %R [D] Blank Spike Result <u>5</u> Spike Added 8 Sample Result Blank Inorganic Anions In Soil by E300 Units: mg/kg Analytes

Date Prepared: 06/08/2010 Sample: 565239-1-BKS Lab Batch ID: 809858 Analyst: BEV

Matrix: Solid

Date Analyzed: 06/08/2010

20

75-125

86

9.81

10

92

9.18

10.0

Z

Chloride

Batch #: 1

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE/B	LANKS	PIKE DUPI	ICATE	RECOVE	RY STUD	λı	
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	₹	[B]	[C]	[D]	<u> </u>	Dupnicate Result [F]	10 E	0/	/0K	/0M0/	
C6-C12 Gasoline Range Hydrocarbons	<u>S</u>	1000	1170	117	566	1170	118	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Ð	1000	866	100	566	1090	110	6	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)]

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Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375949 Lab Batch #: 809945

Project ID: 2004-00061

Date Analyzed: 06/08/2010

Date Prepared: 06/08/2010 Analyst: LATCOR

QC- Sample ID: 375947-001 S Batch #:

Matrix: Soil

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

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
hloride	32.3	103	145	109	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 375949

Lab Batch ID: 809858

Date Analyzed: 06/09/2010

QC-Sample ID: 376021-001 S **Date Prepared:** 06/08/2010

Batch #:

BEVAnalyst:

Matrix: Soil

Project ID: 2004-00061

Flag ΧŁ × Control Limits %RPD 35 35 Control Limits %R 70-135 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 6 69 Spiked Dup. | %R | G 139 66 Duplicate Spiked Sample Result [F] 1630 1570 Spike Added 1170 1170 Spiked Sample . B. %E 152 241 Spiked Sample Result [C] 1780 3230 Spike Added 1170 1170 <u>B</u> Parent Sample Result <u>7</u> 406 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 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

Page 11 of 14



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375949

Lab Batch #: 809945 Project ID: 2004-00061

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 375947-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	32.3	31.2	3	20	

Lab Batch #: 809677

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 375808-001 D
 Batch #:
 1
 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	2.99	3.07	3	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East

12600 West I-20 East 742-505-1000 Odessa, Texas 79765 Fax: 432-563-1713

Laboratory Comments:
Survice Contention Inject

VOCs Free of Headspace?

VOCs Free of Headspace?

Custody seeks on container(s)

Custody seeks on Container(s) YAG 4 TAT basbrist FedEx Lone Star ☐ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ Ŧ 20 (2019) × TRRP NO.R.M. 풀 Project Name: Lea Station Landfarm by Sampler/Client Rep. ? by Courier? UPS **Temperature Upon Receipt:** STEX 8021815030 or BTEX 8260 Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: Anions (Cl, SO4, Alkalinity) Report Format: 16.15 9001 XT 2001 XT :HdJ WSLOB 80158 Hai × × cibryant@basin-consulting.com SOIL SOIL SOIL SOIL SOS 6-7.10 Oafe Date Onuer (Specify) BUON EOSSBN Preservation & # of Co HOSN 'OS²H (505) 396-1429 ЮН HNO³ 285162017 93 × otal #. of Containers benetliii blei Fax No: e-mail: 0935 0945 0925 0830 0940 Delqme2 emiT Received by: 6/7/10 6/7/10 6/7/10 6/7/10 6/7/10 Received by Date Sampled Basin Environmental Consulting, LLC Ending Depth Time lme Beginning Depth G-7/0 Date Date Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 TZ Cell D G-5 TZ Cell D G-2 TZ Cell D G-3 TZ Cell D G-4 TZ Cell D G-1 FIELD CODE 375949 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by: Relinquished by (lab use only) ORDER #: ナ ~ (yino esu del) # 8A.



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformanc	e Kepon	i - Sampie	e Log-in		
client: Basin Env. / Plains					
Date/Time: 6.7.10 16:15					
Lab ID#: 375949	_				
Initials: AL					
Sample Recei	- ipt Check	list			
1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?		Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottle	57	Yes	No	N/A	
4. Chain of Custody present?			No		
5. Sample instructions complete on chain of custody?			No		
6. Any missing / extra samples?			No		
7. Chain of custody signed when relinquished / received?			No		
8. Chain of custody agrees with sample label(s)?	Yes	No			
9. Container labels legible and intact?	Yes	No			
10. Sample matrix / properties agree with chain of custody?	Yes	No			
11. Samples in proper container / bottle?		Yes	No		
12. Samples properly preserved?		Yes	No	N/A	
13. Sample container intact?		Yes	No		
14. Sufficient sample amount for indicated test(s)?		Yes	No		
15. All samples received within sufficient hold time?		Yes	No		
16. Subcontract of sample(s)?	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Yes	No	(NA)	
17. VOC sample have zero head space?		(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.		Cooler 4 No	•	Cooler 5 No.	
ibs 4.1 °C lbs °C lbs	s°C	lbs	°C	lbs	°c
Nonconformance	Docume	ntation			
Contact: Contacted by:			Date/Time:_		
Regarding:					
Corrective Action Taken:					
Chack all that anniv: Cooling process has begun shortly after	er samnling	event and or	ut of temper	ature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

 \square Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 375950

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

10-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 14 Final Ver. 1.000





10-JUN-10

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

Reference: XENCO Report No: 375950

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375950. 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. 375950 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375950



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected S	Sample Depth	Lab Sample Id
TZ Cell E G-1	S	Jun-07-10 10:10		375950-001
TZ Cell E G-2	S	Jun-07-10 10:15		375950-002
TZ Cell E G-3	S	Jun-07-10 10:20		375950-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 10-JUN-10

 Work Order Number:
 375950
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809824 Percent Moisture

None

Batch: LBA-809858 TPH by SW8015 Mod

SW8015MOD NM

Batch 809858, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected;

data not confirmed by re-analysis Samples affected are: 376021-001 S.

SW8015MOD NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons recovered above QC limits in the Matrix Spike. C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 375950-003, -001, -002.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD NM

Batch 809858, C12-C28 Diesel Range Hydrocarbons RPD was outside QC limits. Samples affected are: 375950-003, -001, -002

Batch: LBA-809945 Inorganic Anions by EPA 300

None

Page 4 of 14 Final Ver. 1.000



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

Certificate of Analysis Summary 375950 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm

Project Manager: Brent Barron, II Report Date: 10-JUN-10

		•			I I Jee Manager. Dient Banon, 11
	Lah Id:	375950-001	375950-002	375950-003	
Andreis Dogwood	Field Id:	TZ Cell E G-1	TZ Cell E G-2	TZ Cell E G-3	
naisan hay sistinut	Depth:				
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 10:10	Jun-07-10 10:15	Jun-07-10 10:20	
Inorganic Anions In Soil by E300	Extracted:				
	Analyzed:	Jun-08-10 18:05	Jun-08-10 18:05	Jun-08-10 18:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		14.3 5.15	13.3 5.09	8.12 5.09	
Percent Moisture	Extracted:				
	Analyzed:	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	
	Units/RL:	% RL	% RL	% RL	
Percent Moisture		2.95 1.00	1.69 1.00	1.69 1.00	
TPH by SW8015 Mod	Extracted:	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	
	Analyzed:	Jun-09-10 06:53	Jun-09-10 07:20	Jun-09-10 07:47	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 75.9	ND 15.2	
C12-C28 Diesel Range Hydrocarbons		281 15.4	326 75.9	139 15.2	
C28-C35 Oil Range Hydrocarbons		61.0 15.4	ND 75.9	35.4 15.2	
Total TPH		342 15.4	326 75.9	174 15.2	

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

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Odessa Laboratory Manager

Page 5 of 14



Flagging Criteria



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

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St. Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East. Odessa. TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
842 Cantwell Lane, Corpus Christi, TX 78408	(301) 884-03/1	(201) 994-3110



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375950, **Project ID:** 2004-00061

Lab Batch #: 809858 Sample: 565239-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 21:59	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	110	100	110	70-135	
o-Terphenyl	51.5	50.2	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:26	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.2	49.8	103	70-135	

Lab Batch #: 809858 Sample: 565239-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/08/10 22:53	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			1~,		
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

Lab Batch #: 809858 Sample: 375950-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 06:53	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	117	99.5	118	70-135	
o-Terphenyl	56.3	49.8	113	70-135	

Units: mg/kg Date Analyzed: 06/09/10 07:20	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	104	99.5	105	70-135	
o-Terphenyl	54.0	49.8	108	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375950, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/09/10 07:47	l 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	114	99.9	114	70-135	
o-Terphenyl	54.1	50.0	108	70-135	

Lab Batch #: 809858 Sample: 376021-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 08:40	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	139	99.7	139	70-135	*
o-Terphenyl	64.1	49.9	128	70-135	

Lab Batch #: 809858 Sample: 376021-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 09:08	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	133	100	133	70-135	
o-Terphenyl	60.7	50.0	121	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375950 Analyst: LATCOR

Lab Batch ID: 809945

Date Prepared: 06/08/2010

Project ID: 2004-00061 **Date Analyzed:** 06/08/2010

Batch #: | Sample: 809945-1-BKS

Matrix: Solid

Flag Limits %RPD Control 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD % Blk. Spk Dup. |G|| 86 Blank Spike Duplicate Result [F] 8.6 Spike Added Ξ 10 Blank Spike %R [D] 92 Blank Spike Result <u>5</u> 9.18 Spike Added 10.0 8 Sample Result Blank Z Inorganic Anions In Soil by E300 Units: mg/kg Analytes Chloride

Batch #: 1 Sample: 565239-1-BKS Lab Batch ID: 809858

Analyst: BEV

Date Prepared: 06/08/2010

Matrix: Solid

Date Analyzed: 06/08/2010

Units: mg/kg		BLAN	K/BLANK S	PIKE/B	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
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	[A]	<u>8</u>	Result [C]	% R [D]	<u> </u>	Duplicate Result [F]	%R [G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	QZ	1000	1170	117	566	1170	118	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	866	100	566	1090	110	9	70-135	35	

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375950 **Lab Batch #:** 809945

9945 **Project ID:** 2004-00061

Date Analyzed: 06/08/2010 Date Prepared: 06/08/2010 Analyst: LATCOR

QC- Sample ID: 375947-001 S **Batch #:** 1 **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	32.3	103	145	109	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 375950

Lab Batch ID: 809858

Date Analyzed: 06/09/2010

QC-Sample ID: 376021-001 S **Date Prepared:** 06/08/2010

BEV

Project ID: 2004-00061

Matrix: Soil Analyst: Batch #:

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPII	Œ DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod Analytes	Parent Sample Result	Spike Added Ri	Spiked Sample Spiked Result Sample Sp [C] %R Ad	Spiked Sample %R	꽃용문	Duplicate Spiked Sample GRESUR [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
		[4]		2	1		2				
C6-C12 Gasoline Range Hydrocarbons	ND	1170	1780	152	1170	1630	139	6	70-135	35	Х
C12-C28 Diesel Range Hydrocarbons	406	1170	3230	241	1170	1570	66	69	70-135	35	XF

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

Page 11 of 14



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375950

Lab Batch #: 809945 Project ID: 2004-00061

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 375947-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	32.3	31.2	3	20	
emonde	32.3	21.2	-	20	

Lab Batch #: 809824

 Date Analyzed:
 06/09/2010
 Date Prepared:
 06/09/2010
 Analyst:
 JLG

 QC- Sample ID:
 375950-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	2.95	3.02	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

VOCs Free of Headspace?

Unit to varieties (8) N
Custody seals on container(8) N
Sample Hand Delivered N
by Sampler/Client Rep. ? N
by Courier? UPS DML FedEx Lone Star Standard TAT 4 DAY ☐ NPDES FUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပူ ブ C MONIDOS 1.038 × × Fax: 432-563-1713 Phone: 432-563-1800 □ TRRP M.A.O.M Project Name: Lea Station Landfarm 3CI Temperature Upon Receipt: BTEX 8021B/5030 or BTEX 8260 Laboratory Comments Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry SOUBBIO Project #: 2004-00061 X Standard yetals: 48 48 88 Cd Ct 69 Hg Se TCLP: TOTAL: SAR / ESP / CEC mions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 6.15/ 6.15/ 9001 XT Hd. ٤ × MS108 eldstoq-nov = qv cibryant@basin-consulting.com SOIL SOL SOL 6-7-10 oM−Drjukjuð Mater 2r× age Sate Other (Specify) **BUON** Odessa, Texas 79765 12600 West I-20 East _EO_SS_SBN OS2H (505) 396-1429 нсі EONH Balosolass × benetliii blei Fax No: e-mail: 1015 1010 1020 Time Sampled Mohen Received by: 6/7/10 6/7/10 Received by. 6/7/10 Date Sampled 141/51 Basin Environmental Consulting, LLC Ending Depth Time Ē դեզոն ըրյույնոց 6770 Date Date Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 TZ Cell E G-2 TZ Cell E G-3 TZ Cell E G-1 FIELD CODE 375950 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by: (lab use only) ORDER #: 4 (yino esu dei) # 8A.



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin	Enu. / Pl	lair	ΛS					
Date/Time: 6.7.1	0 16:15							
Lab ID#: 37595								
Initials:	AL							
		8	Sample Receipt Ch	eck	list			
1. Samples on ice?				į	Blue	Water	No	
2. Shipping container in	good condition?				Yes	No	None	
3. Custody seals intact of	on shipping contair	er (c	ooler) and bottles?		Yes	No	N/A	
4. Chain of Custody pres	sent?				Yes	No		
5. Sample instructions c	omplete on chain c	of cus	stody?		Yes	No		
6. Any missing / extra sa	imples?				Yes	No		
7. Chain of custody sign	ed when relinquish	red_/	received?		Yes	No		
8. Chain of custody agre	es with sample lab	el(s)	?		(Year)	No		
9. Container labels legib	le and intact?				Yes	No		
10. Sample matrix / prop	erties agree with c	hain	of custody?		Yes	No		
11. Samples in proper co	ontainer / bottle?				Yes	No		
12. Samples properly pro	eserved?				Yes	No	NA	
13. Sample container int	act?				Yes	No		
14. Sufficient sample am	ount for indicated	test(s	s)?		Yes	No		
15. Ali samples received	within sufficient h	old ti	me?		Yes	No		
16. Subcontract of samp	ıle(s)?				Yes	No	(NA)	
17. VOC sample have ze	ro head space?				Yes	No	N/A	
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs 4./ °c	lbs	°C	lbs	°c	lbs	°C	lbs	°c
	r	None	conformance Docu	ımei	ntation			
Contact:	Contact	ted b	y;		[Date/Time:		
						_		
Regarding:						··		
Corrective Action Taken	1		to the state of th					
							the transport of the fire	
• • • • • • • • • • • • • • • • • • • •	condition ac	cept	egun shortly after samp able by NELAC 5.5.8.3. perature confirm out of	1.a.1.		•	rature	

Final Ver. 1.000

☐ Client understands and would like to proceed with analysis

Analytical Report 375952

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

14-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

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North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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14-JUN-10

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

Reference: XENCO Report No: 375952

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375952. 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. 375952 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375952



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell F G-1	S	Jun-07-10 10:45		375952-001
TZ Cell F G-2	S	Jun-07-10 10:50		375952-002
TZ Cell F G-3	S	Jun-07-10 10:55		375952-003
TZ Cell F G-4	S	Jun-07-10 11:00		375952-004
TZ Cell F G-5	S	Jun-07-10 11:05		375952-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



Report Date: 14-JUN-10 Project ID: 2004-00061 Work Order Number: 375952 Date Received: 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809824 Percent Moisture

None

Batch: LBA-809945 Inorganic Anions by EPA 300

None

Batch: LBA-809949 Inorganic Anions by EPA 300

None

Batch: LBA-810371 TPH by SW8015 Mod

SW8015MOD NM

Batch 810371, 1-Chlorooctane recovered below QC limits . Matrix interferences is suspected;

data confirmed by re-analysis

Samples affected are: 375952-001.

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

Certificate of Analysis Summary 375952 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm

Brent Barron, II Report Date: 14-JUN-10 Project Manager:

			•		rroject Manager: Brent Barron, I.	srent Barron, 11	
	Lab Id:	375952-001	375952-002	375952-003	375952-004	375952-005	
Amalacia Dominated	Field Id:	TZ Cell F G-1	TZ Cell F G-2	TZ Cell F G-3	TZ Cell F G-4	TZ Cell F G-5	
Analysis Requesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 10:45	Jun-07-10 10:50	Jun-07-10 10:55	Jun-07-10 11:00	Jun-07-10 11:05	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-08-10 18:05	Jun-08-10 18:05	Jun-09-10 03:32	Jun-09-10 03:32	Jun-09-10 03:32	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		79.8 5.15	71.4 5.13	54.7 5.12	22.9 5.12	20.3 5.11	
Percent Moisture	Extracted:						
	Analyzed:	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		2.84 1.00	2.45 1.00	2.41 1.00	2.35 1.00	2.22 1.00	
TPH by SW8015 Mod	Extracted:	Jun-10-10 10:15	Jun-10-10 10:15	Jun-10-10 10:15	Jun-10-10 10:15	Jun-10-10 10:15	
	Analyzed:	Jun-10-10 19:55	Jun-10-10 20:26	Jun-10-10 20:57	Jun-11-10 08:09	Jun-11-10 08:39	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.3	ND 15.4	123 15.3	ND 15.3	
C12-C28 Diesel Range Hydrocarbons		379 15.4	864 15.3	1020 15.4	933 15.3	605 15.3	
C28-C35 Oil Range Hydrocarbons		40.2 15.4	73.2 15.3	67.4 15.4	204 15.3	64.1 15.3	
Total TPH		419 15.4	937 15.3	1087 15.4	1260 15.3	669 15.3	

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

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Odessa Laboratory Manager Brent Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375952, **Project ID:** 2004-00061

Lab Batch #: 810371 Sample: 565564-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 18:17	Su	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	118	101	117	70-135	
o-Terphenyl	56.7	50.3	113	70-135	

Lab Batch #: 810371 Sample: 565564-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 18:50	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 i i i i i i i i i i i i i i i i i i i					
1-Chlorooctane	118	99.5	119	70-135	
o-Terphenyl	57.0	49.8	114	70-135	

Lab Batch #: 810371 Sample: 565564-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 19:23	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	101	99.9	101	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 810371 Sample: 375952-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/10/10 19:55	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	59.3	100	59	70-135	**
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 810371 **Sample:** 375952-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/10/10 20:26	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	92.8	99.5	93	70-135	
o-Terphenyl	52.0	49.8	104	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 375952, **Project ID:** 2004-00061

Lab Batch #: 810371 Sample: 375952-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/10/10 20:57	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	57.1	50.0	114	70-135	

Lab Batch #: 810371 Sample: 375952-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 08:09	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			,		
1-Chlorooctane	106	99.8	106	70-135	
o-Terphenyl	59.9	49.9	120	70-135	

Units: mg/kg Date Analyzed: 06/11/10 08:39	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	88.7	99.5	89	70-135	
o-Terphenyl	49.5	49.8	99	70-135	

Lab Batch #: 810371 Sample: 376353-005 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:32	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	71.2	99.6	71	70-135	
o-Terphenyl	34.8	49.8	70	70-135	

Units: mg/kg Date Analyzed: 06/11/10 19:05	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	90.6	99.9	91	70-135	
o-Terphenyl	44.5	50.0	89	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375952 Analyst: LATCOR

Lab Batch ID: 809945

Date Prepared: 06/08/2010

Project ID: 2004-00061 **Date Analyzed:** 06/08/2010

Batch #: Sample: 809945-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE/E	SLANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE F	RECOVE	ERY STUD	, l	
Inorganic Anions In Soil by E300	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		[B]		<u>e</u>	9	Result [F]	[6]				
Chloride	ND (I	10.0	9.18	92	10	9.81	86	7	75-125	20	
Analyst: LATCOR	Da	te Prepar	Date Prepared: 06/09/2010	0			Date An	Date Analyzed: 06/09/2010	0/06/2010		

Batch #: 1 Sample: 809949-1-BKS Lab Batch ID: 809949

Matrix: Solid

Units: mg/kg		BLAN	K/BLANK	SPIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	JCATE F	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	<u>¥</u>	İ	Result	%R		Duplicate	%R	%	%R	%RPD	
Analytes		[B]	[c]		[E]	Result [F]	[5]				
Chloride	ND	00.6	8.80	86	6	8.03	68	6	75-125	20	

Date Analyzed: 06/10/2010 Date Prepared: 06/10/2010 Analyst: BEV

Batch #: 1

Sample: 565564-1-BKS

Lab Batch ID: 810371

Units: mg/kg

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Matrix: Solid

PoM \$108WS yd HYT	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		[B]	[C]	[<u>a</u>]	[E]	Result [F]	[6]				
C6-C12 Gasoline Range Hydrocarbons	QN	1010	286	86	566	683	66	0	70-135	32	
C12-C28 Diesel Range Hydrocarbons	ND	1010	807	08	566	824	83	2	70-135	32	

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

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Form 3 - MS Recoveries



Work Order #: 375952

Lab Batch #: 809945 **Date Analyzed:** 06/08/2010

Project Name: Lea Station Landfarm

Date Prepared: 06/08/2010

Project ID: 2004-00061 Analyst: LATCOR

QC- Sample ID: 375947-001 S Batch #: Matrix: Soil MATRIX / MATRIX SPIKE RECOVERY STUDY Reporting Units: mg/kg

Keporting Units: mg/kg	WIATE	UA / MA	I KIA SI IKE	KECO	VEKI SIU	ν ₁
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]	[C]	[שן	70 K	
Chloride	32.3	103	145	109	75-125	

Lab Batch #: 809949

Date Prepared: 06/09/2010 Analyst: LATCOR **Date Analyzed:** 06/09/2010

QC- Sample ID: 375952-003 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	54.7	51.2	116	120	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 375952

Date Analyzed: 06/11/2010 Lab Batch ID: 810371

QC-Sample ID: 376353-005 S **Date Prepared:** 06/10/2010

BEVBatch #: Analyst:

Matrix: Soil

Project ID: 2004-00061

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added B]	[C] %R Ad	%R [D]	Added [E]	Added Result [F] [E]	% R [G]	%		%RPD	
C6-C12 Gasoline Range Hydrocarbons	MD	1420	1070	7.5	1420	1080	92	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN.	1420	1020	72	1420	1030	73	1	70-135	35	

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

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375952

Lab Batch #: 809945 Project ID: 2004-00061

 Date Analyzed:
 06/08/2010
 Date Prepared:
 06/08/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 375947-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E30 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	32.3	31.2	3	20	

Lab Batch #: 809949

 Date Analyzed: 06/09/2010
 Date Prepared: 06/09/2010
 Analyst: LATCOR

 QC- Sample ID: 375952-003 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE.	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Chloride	54.7	52.9	3	20	

Lab Batch #: 809824

 Date Analyzed:
 06/09/2010
 Date Prepared:
 06/09/2010
 Analyst:
 JLG

 QC- Sample ID:
 375950-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag	
Percent Moisture	2.95	3.02	2	20		

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

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Environmental Lab of Texas

大学の一個人の一個人

Camille Bryant

Project Manager:

Phone: 432-563-1800 Fax: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm Odessa, Texas 79765 12600 West I-20 East

YAC 4 TAT basbned × FedEx Lone Star □ NPDES ပ္ RUSH TAT (Pre-Schedule) 24, 48, 72 hrs 7 \cdot 605とゝカシロ × × × × Ví TRRP NO.R.M. by Sampler/Client Rep. ? by Courier? UPS Temperature Upon Receipt: B1EX 8021B/2030 of B1EX 8260 Analyze For Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCL P: TOTAL: SO4, Alkalinity) Report Format: 1X 1006 3001 XT :HdJ 6.区 Time E me 8015M × × × Hat 89109 Specify Oth PIGETOG-NON - PV cibryant@basin-consulting.com SOF SOIL 잃 SOL 6-7-6 Date Date Other (Specify) Preservation & # of Container Mone Na₂S₂O₃ HOPN OS2H (505) 396-1429 HCI [€]ONH 2201921 **80**] × otal #. of Containers benetliii blei Fax No: e-mail: 1045 1055 1105 1100 1050 belgms2 emiT mon 6/7/10 6/7/201 6/7/10 Received by: 6/7/10 6/7/10 Received by Date Sampled Basin Environmental Consulting, LLC thqeQ gnibn3 Time ī Beginning Depth 1 0/2-7 Date: Oate Lovington, NM 88260 (575)605-7210 Company Address: P.O. Box 381 TZ Cell F G-3 TZ Cell F G-4 TZ Cell F G-5 TZ Cell F G-2 TZ Cell F G-1 FIELD CODE 375952 Sampler Signature: Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by: (lab use only) ORDER #: h 3 J (yino esu dei) # 8A.



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miarni, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plains	•	_					
Date/Time: 6.7.10 10:15							
Lab ID#: 375952							
Initials: AL							
	•• •						
Sample Receipt Check	list						
1. Samples on ice?	Blue	Water	No				
2. Shipping container in good condition?	Yes	No	None				
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A				
4. Chain of Custody present?	Yes	No					
5. Sample instructions complete on chain of custody?	Yes	No					
6. Any missing / extra samples?	Yes	No					
7. Chain of custody signed when relinquished / received?	Yes	No					
8. Chain of custody agrees with sample label(s)?	Yes	No					
9. Container labels legible and intact?	Yes	No					
10. Sample matrix / properties agree with chain of custody?		No					
11. Samples in proper container / bottle?	Yes	No					
12. Samples properly preserved?	Yes	No	N/A				
13. Sample container intact?	Yes	No					
14. Sufficient sample amount for indicated test(s)?	Yes	No					
15. All samples received within sufficient hold time?	Yes	No					
16. Subcontract of sample(s)?	Yes	No	(N/A)				
17. VOC sample have zero head space?	(Yes)	No	N/A				
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	•	Cooler 5 No.				
lbs 4.1 °C lbs °C lbs °C	Ibs	°c	lbs	°C			
Nonconformance Docume	ntation						
Contact: Contacted by:		Date/Time:					
		_		<u>-</u>			
Regarding:							
Corrective Action Taken:							
				<u></u>			
				<u></u>			
Check all that apply: □Cooling process has begun shortly after sampling	event and o	ut of temper	ature				
condition acceptable by NELAC 5.5.8.3.1.a.1.							
☐ Initial and Backup Temperature confirm out of tem ☐ Client understands and would like to proceed with		ditions					

Analytical Report 375953

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

14-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

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

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

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

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

> Final Ver. 1.000 Page 1 of 15





14-JUN-10

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

Reference: XENCO Report No: 375953

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375953. 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. 375953 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375953



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell G G-1	S	Jun-07-10 11:30		375953-001
TZ Cell G G-2	S	Jun-07-10 11:35		375953-002
TZ Cell G G-3	S	Jun-07-10 11:40		375953-003
TZ Cell G G-4	S	Jun-07-10 11:45		375953-004
TZ Cell G G-5	S	Jun-07-10 11:50		375953-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S Project Name: Lea Station Landfarm nelac

 Project ID:
 2004-00061
 Report Date:
 14-JUN-10

 Work Order Number:
 375953
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809824 Percent Moisture

None

Batch: LBA-809949 Inorganic Anions by EPA 300

None

Batch: LBA-810047 TPH by SW8015 Mod

None

Batch: LBA-810371 TPH by SW8015 Mod

None

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

Certificate of Analysis Summary 375953 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm

Report Date: 14-JUN-10

Project Manager: Brent Barron, II

					I I Ujett Manager. Dient Danon, II	neilt Dailon, 11	
	Lah Id:	375953-001	375953-002	375953-003	375953-004	375953-005	
Losson O Strategy	Field Id:	TZ Cell G G-1	TZ Cell G G-2	TZ Cell G G-3	TZ Cell G G-4	TZ Cell G G-5	
Anniyas Requesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 11:30	Jun-07-10 11:35	Jun-07-10 11:40	Jun-07-10 11:45	Jun-07-10 11:50	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-09-10 03:32	Jun-09-10 03:32	Jun-09-10 03:32	Jun-09-10 03:32	Jun-09-10 03:32	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		8.84 5.11	12.0 5.12	8.95 5.10	14.1 5.13	5.17 5.10	
Percent Moisture	Extracted:						
	Analyzed:	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		2.24 1.00	2.27 1.00	1.87 1.00	2.51 1.00	2.00 1.00	
TPH by SW8015 Mod	Extracted:	Jun-10-10 10:15	Jun-10-10 10:15	Jun-10-10 10:15	Jun-10-10 10:15	Jun-08-10 12:45	
	Analyzed:	Jun-11-10 09:10	Jun-11-10 09:41	Jun-11-10 10:12	Jun-11-10 10:44	Jun-09-10 21:14	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		25.8 15.3	43.2 15.3	23.5 15.3	23.5 15.4	30.8 15.2	
C12-C28 Diesel Range Hydrocarbons		923 15.3	2070 15.3	1620 15.3	1700 15.4	715 15.2	
C28-C35 Oil Range Hydrocarbons		82.0 15.3	94.8 15.3	112 15.3	102 15.4	58.7 15.2	
Total TPH		1031 15.3	2208 15.3	1756 15.3	1826 15.4	805 15.2	

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

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Odessa Laboratory Manager Brent Barron, II

Page 5 of 15



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 375953, **Project ID:** 2004-00061

Lab Batch #: 810047 Sample: 565346-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 11:51	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	130	100	130	70-135	
o-Terphenyl	59.4	50.2	118	70-135	

Lab Batch #: 810047 Sample: 565346-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 12:24	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	90.5	99.5	91	70-135	
o-Terphenyl	42.5	49.8	85	70-135	

Lab Batch #: 810047 Sample: 565346-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 12:56	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	84.9	100	85	70-135	
o-Terphenyl	48.0	50.2	96	70-135	

Lab Batch #: 810047 Sample: 375953-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 21:14	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	70.7	99.5	71	70-135	
o-Terphenyl	35.1	49.8	70	70-135	

Lab Batch #: 810371 Sample: 565564-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 18:17	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	118	101	117	70-135	
o-Terphenyl	56.7	50.3	113	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 375953, **Project ID:** 2004-00061

Lab Batch #: 810371 Sample: 565564-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 18:50	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	118	99.5	119	70-135	
o-Terphenyl	57.0	49.8	114	70-135	

Lab Batch #: 810371 Sample: 565564-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/10/10 19:23	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	101	99.9	101	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Units: mg/kg Date Analyzed: 06/11/10 09:10	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	96.1	99.7	96	70-135	
o-Terphenyl	54.1	49.9	108	70-135	

Lab Batch #: 810371 Sample: 375953-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 09:41	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	82.9	99.5	83	70-135	
o-Terphenyl	48.3	49.8	97	70-135	

Lab Batch #: 810371 **Sample:** 375953-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/11/10 10:12	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	70.9	100	71	70-135	
o-Terphenyl	39.9	50.1	80	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 375953, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 06/11/10 10:44	l 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	70.3	99.9	70	70-135	
o-Terphenyl	35.9	50.0	72	70-135	

Lab Batch #: 810371 Sample: 376353-005 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:32	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	71.2	99.6	71	70-135	
o-Terphenyl	34.8	49.8	70	70-135	

Units: mg/kg Date Analyzed: 06/11/10 19:05	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	90.6	99.9	91	70-135	
o-Terphenyl	44.5	50.0	89	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375953 Analyst: LATCOR

Lab Batch ID: 809949

Date Prepared: 06/09/2010

Project ID: 2004-00061 Date Analyzed: 06/09/2010

> Batch #: Sample: 809949-1-BKS

Matrix: Solid

Flag Limits %RPD Control 20 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R Date Analyzed: 06/09/2010 75-125 RPD % Blk. Spk Вщ. |G. R. | 8 Duplicate Result [F] Blank Spike 8.03 Spike Added Ξ 6 Blank Spike %R [D] 86 Date Prepared: 06/08/2010 Blank Spike Result 8.80 Spike Added 9.00 <u>B</u> Sample Result Blank B Inorganic Anions In Soil by E300 Units: mg/kg Analyst: BEV Analytes Chloride

Sample: 565346-1-BKS Lab Batch ID: 810047

Batch #:

Matrix: Solid

Flag Limits %RPD Control 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control 70-135 Limits %R 70-135 RPD % 3 Ξ Blk. Spk Рар. 15. % Р 8 79 Duplicate Result [F] Blank Spike 784 881 Spike Added 566 995 Ξ Blank Spike %R [D] 121 87 Spike Result Blank 1210 <u></u> 873 Added Spike 1000 1000 <u>e</u> Sample Result Blank B B V TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Analyst: BEV

Date Prepared: 06/10/2010

Date Analyzed: 06/10/2010

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

Batch #: 1

Sample: 565564-1-BKS

Lab Batch ID: 810371

TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Poent	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>t</u>	[B]	[C]	1 0	<u>a</u>	Result [F]	<u>[</u>		N ₀ /	A INO	
C6-C12 Gasoline Range Hydrocarbons	ON	1010	286	86	566	683	66	0	261-07	38	
C12-C28 Diesel Range Hydrocarbons	Ð.	1010	807	08	566	824	83	2	70-135	35	

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Work Order #: 375953

Project ID: 2004-00061 Lab Batch #: 809949

Project Name: Lea Station Landfarm

Date Prepared: 06/09/2010 **Date Analyzed:** 06/09/2010 Analyst: LATCOR

QC- Sample ID: 375952-003 S Batch #: 1 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	54.7	51.2	116	120	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm



Work Order #: 375953

Date Analyzed: 06/11/2010 Lab Batch ID: 810371

Reporting Units

Project ID: 2004-00061

Matrix: Soil BEVAnalyst: Batch #: QC-Sample ID: 376353-005 S **Date Prepared:** 06/10/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	AIX SPIF	Œ DUPLICA	TE REC	VERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sumple Spiked Result Sample S	Spiked Sample	pike	ெ	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	[C]	P)	Added [E]	Result [F]	% R [G]	%		%RPD	
C6-C12 Gasoline Range Hydrocarbons	ON	1420	0/01	7.5	1420	1080	92	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ON	1420	1020	72	1420	1030	73	1	70-135	35	

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)

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375953

Lab Batch #: 809949 Project ID: 2004-00061

 Date Analyzed: 06/09/2010
 Date Prepared: 06/09/2010
 Analyst: LATCOR

 QC- Sample ID: 375952-003 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	54.7	52.9	3	20	

Lab Batch #: 809824

 Date Analyzed:
 06/09/2010
 Date Prepared:
 06/09/2010
 Analyst:
 JLG

 QC- Sample ID:
 375950-001 D
 Batch #:
 1
 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	2.95	3.02	2	20	

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

Page 13 of 15 Final Ver. 1.000

Environmental Lab of Texas

Phone: 432-563-1800 Fax: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm Project #: 2004-00061 Odessa, Texas 79765 12600 West I-20 East Basin Environmental Consulting, LLC Camille Bryant

□ NPDES

TRRP

Report Format: X Standard

(505) 396-1429

Fax No:

Lovington, NM 88260

City/State/Zip:

Company Address: P.O. Box 381

Project Manager:

Company Name

(575)605-7210

Telephone No:

Project Loc: Lea County, NM

PO #: PAA - J. Henry

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XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plains	•	. 3		
Lab ID#: 375953				
Initials: AL_				
Sample Receipt Chec	:klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No _		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(NA)	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No) <u>.</u>	Cooler 5 No.	
Ibs 4.1 °C Ibs °C Ibs	°C lbs	°c	lbs	°c
Nonconformance Docum	entation			
Contact: Contacted by:		Date/Time:		
John John John John John John John John		oater i mie		
Regarding:		-		
Corrective Action Taken:				
Check all that analys. □Cooling process has begun checkly after any life	avant a=-	t of to-m	entuan.	
Check all that apply: Cooling process has begun shortly after sampling condition acceptable by NELAC 5.5.8.3.1.a		atortemper	awie	

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 375956

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

10-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 13 Final Ver. 1.000





10-JUN-10

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

Reference: XENCO Report No: 375956

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 375956. 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. 375956 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 375956



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
TZ Cell H G-1	S	Jun-07-10 12:10	375956-001
TZ Cell H G-2	S	Jun-07-10 12:15	375956-002
TZ Cell H G-3	S	Jun-07-10 12:20	375956-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 10-JUN-10

 Work Order Number:
 375956
 Date Received:
 06/07/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-809824 Percent Moisture

None

Batch: LBA-809949 Inorganic Anions by EPA 300

None

Batch: LBA-810047 TPH by SW8015 Mod

None

Page 4 of 13 Final Ver. 1.000



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

Certificate of Analysis Summary 375956 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Mon Jun-07-10 04:15 pm Report Date: 10-JUN-10

Project Manager: Brent Barron, II

					, , , , , , , , , , , , , , , , , , , ,
	Lah Id:	375956-001	375956-002	375956-003	
Andheis Posnostad	Field Id:	TZ Cell H G-1	TZ Cell H G-2	TZ Cell H G-3	
nareanhay sistimut	Depth:				
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Jun-07-10 12:10	Jun-07-10 12:15	Jun-07-10 12:20	
Inorganic Anions In Soil by E300	Extracted:				
	Analyzed:	Jun-09-10 03:32	Jun-09-10 03:32	Jun-09-10 03:32	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		42.5 5.27	14.2 5.44	8.07 5.25	
Percent Moisture	Extracted:				
	Analyzed:	Jun-09-10 08:30	Jun-09-10 08:30	Jun-09-10 08:30	
	Units/RL:	% RL	% RL	% RL	
Percent Moisture		5.15 1.00	8.02 1.00	4.70 1.00	
TPH by SW8015 Mod	Extracted:	Jun-08-10 12:45	Jun-08-10 12:45	Jun-08-10 12:45	
	Analyzed:	Jun-09-10 22:16	Jun-09-10 22:46	Jun-09-10 23:16	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		112 78.8	175 16.2	ND 15.7	
C12-C28 Diesel Range Hydrocarbons		2380 78.8	2870 16.2	299 15.7	
C28-C35 Oil Range Hydrocarbons		282 78.8	180 16.2	53.5 15.7	
Total TPH		2774 78.8	3225 16.2	353 15.7	

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager

Page 5 of 13



Flagging Criteria



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

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St. Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East. Odessa. TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
842 Cantwell Lane, Corpus Christi, TX 78408	(301) 884-03/1	(201) 994-3110



Project Name: Lea Station Landfarm

Work Orders: 375956, **Project ID:** 2004-00061

Lab Batch #: 810047 Sample: 565346-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 11:51	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	130	100	130	70-135	
o-Terphenyl	59.4	50.2	118	70-135	

Lab Batch #: 810047 Sample: 565346-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 12:24	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	90.5	99.5	91	70-135	
o-Terphenyl	42.5	49.8	85	70-135	

Lab Batch #: 810047 Sample: 565346-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/09/10 12:56	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	84.9	100	85	70-135	
o-Terphenyl	48.0	50.2	96	70-135	

Lab Batch #: 810047 Sample: 375956-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 22:16	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	85.2	99.7	85	70-135	
o-Terphenyl	50.0	49.9	100	70-135	

Lab Batch #: 810047 Sample: 375956-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/09/10 22:46	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	93.6	99.5	94	70-135	
o-Terphenyl	52.8	49.8	106	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 375956, Project ID: 2004-00061

Lab Batch #: 810047 **Sample:** 375956-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/09/10 23:16	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	83.2	99.7	83	70-135	
o-Terphenyl	47.0	49.9	94	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375956 Analyst: LATCOR

Date Prepared: 06/09/2010

Project ID: 2004-00061 **Date Analyzed:** 06/09/2010

Matrix: Solid

Batch #: | Sample: 809949-1-BKS Lab Batch ID: 809949

Flag Limits %RPD Control 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD Blk. Spk Dup. %R [G] 8 Blank Spike Duplicate Result [F] 8.03 Spike Added Ξ 6 Blank Spike %R [D] 86 Blank Spike Result <u>5</u> 8.80 Spike Added 9.00 8 Sample Result Blank Z Inorganic Anions In Soil by E300 Units: mg/kg Analytes Chloride

Sample: 565346-1-BKS Lab Batch ID: 810047

Analyst: BEV

Batch #: 1

Date Prepared: 06/08/2010

Matrix: Solid

Date Analyzed: 06/09/2010

Units: mg/kg		BLAN	K/BLANK S	PIKE/B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	λí	
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	[A]	<u>B</u>	Result [C]	%R [D]	<u>a</u>	Duplicate Result [F]	%R [G]		%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	Ñ.	1000	1210	121	566	881	68	31	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	873	87	566	784	62	111	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

Page 9 of 13



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 375956 **Lab Batch #:** 809949

Project ID: 2004-00061

Date Analyzed: 06/09/2010 Date Prepared: 06/09/2010 Analyst: LATCOR

QC- Sample ID: 375952-003 S Batch #: 1 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	54.7	51.2	116	120	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 375956

Lab Batch #: 809949 **Project ID:** 2004-00061

 Date Analyzed: 06/09/2010
 Date Prepared: 06/09/2010
 Analyst: LATCOR

 QC- Sample ID: 375952-003 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	54.7	52.9	3	20	

Lab Batch #: 809824

 Date Analyzed:
 06/09/2010
 Date Prepared:
 06/09/2010
 Analyst:
 JLG

 QC- Sample ID:
 375950-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	2.95	3.02	2	20	

Environmental Lab of Texas

Control of the Contro

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

YAG 4 TAT basbnet2 × × Server Communest (Market No. 1977) (A. N. VOCs Free of Headspace? NPDES FedEx Lone Star SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္စ 200, 13 JOO1 J TRRP M.A.O.M. UPS DHL Project Name: Lea Station Landfarm BCI Temperature Upon Receipt: by Sampler/Client Rep. ? by Courier? UPS BTEX 8021B/5030 or BTEX 8260 Analyze Project Loc: Lea County, NM PO#: PAA - J. Henry X Standard Project #: 2004-00061 Metala: As Ag Ba Cd Cr Pb Hg Se TCLP TOTAL SAR / ESP / CEC Report Format: 9001 XT 9001 XT Нал 6 Time **₽** × M2108 86158 Hal SIGETOG-NON - 4N cibryant@basin-consulting.com SOIL SOIL 67.10 DM – DIJUKJUČI MSIGI. 21 – 2jngči Date Date Ogyet (Specify) Preservation & / of conta SO2S26N *OS*H (505) 396-1429 ЮН [€]ONH 552162017 × × 80 benetliii blei andre dem Fax No: e-mail: 1215 1210 1220 Time Sampled Received by ELOT: 6/7/10 6/7/10 6/7/10 Received by: Received by: Date Sampled Basin Environmental Consulting, LLC Ending Depth シュナ ナイン イン イン イン Time Ē Beginning Depth Date Date Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 TZ Cell H G-3 TZ Cell H G-2 TZ Cell H G-1 FIELD CODE 375956 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special instructions: Relinquished by: Relinquished by Relinquished by (lab use only ORDER #: 3 4 (yino esu dai) # 8A.



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plais	ns _					
Date/Time: 6.7.10 16:15						
- 0 - :						
Initials: AL						
•	Sample Receipt (Check	list			
1. Samples on ice?	**************************************	į	Blue	Water	No	
2. Shipping container in good condition?			Yes	No	None	
3. Custody seals intact on shipping container (c	cooler) and bottles?		Yes	No	N/A	
4. Chain of Custody present?			Yes	No		
5. Sample instructions complete on chain of cus	stody?		Yes	No		
6. Any missing / extra samples?			Yes	No		
7. Chain of custody signed when relinguished /	received?		Yes	No		
8. Chain of custody agrees with sample label(s)	?		Yes	No		
9. Container labels legible and intact?			Yes	No		
10. Sample matrix / properties agree with chain	of custody?		Yes	No		
11. Samples in proper container / bottle?			Yes	No		
12. Samples properly preserved?			Yes	No	N/A	
13. Sample container intact?			(Yes)	No		
14. Sufficient sample amount for indicated test(s)?		Yes	No		
15. All samples received within sufficient hold t	ime?		Yes	No		
16. Subcontract of sample(s)?			Yes	No	N/A	
17. VOC sample have zero head space?			(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No.	Cooler 3 No.		Cooler 4 No).	Cooler 5 No.	
lbs 4.1 °C lbs °C	lbs lbs	°c	lbs	°c	Ibs	°c
Non	conformance Do	cume	ntation			
Contact:Contacted to				Date/Time:		
Oomzeed 2	·y·					
Regarding:						
					2.022	
Corrective Action Taken:						
Check all that apply: □Cooling process has t	enin shorth offer s	ampling	event and o	ut of temps	rature	
	table by NELAC 5.5.8			or resulpe		

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 396364

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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





11-NOV-10

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

Reference: XENCO Report No: 396364

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396364. 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. 396364 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396364



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell A G-1	S	Nov-01-10 08:15		396364-001
TZ Cell A G-2	S	Nov-01-10 08:20		396364-002
TZ Cell A G-3	S	Nov-01-10 08:25		396364-003
TZ Cell A G-4	S	Nov-01-10 08:30		396364-004
TZ Cell A G-5	S	Nov-01-10 08:35		396364-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396364
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



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

Certificate of Analysis Summary 396364 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm

Brent Barron Report Date: 11-NOV-10 Project Manager:

						riolect Manager: Dicin Ballon, 1	DICHE DAHOH, II	
	Lab Id:	396364-001		396364-002	396364-003	396364-004	396364-005	
Laborate Dogwood	Field Id:	TZ Cell A G-1		TZ Cell A G-2	TZ Cell A G-3	TZ Cell A G-4	TZ Cell A G-5	
Analysis Requesieu	Depth:							
	Matrix:	SOIL		SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-01-10 08:15	<u>5</u>	Nov-01-10 08:20	Nov-01-10 08:25	Nov-01-10 08:30	Nov-01-10 08:35	
Anions by E300	Extracted:							
	Analyzed:	Nov-09-10 07:52	22	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	
	Units/RL:	mg/kg	RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		27.4 4	4.33	16.6 4.31	14.4 4.35	9.06 4.30	ND 4.28	
Percent Moisture	Extracted:							
	Analyzed:	Nov-08-10 14:45	15	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	
	Units/RL:	%	RL	% RL	% RL	% RL	% RL	
Percent Moisture		2.93	1.00	2.66 1.00	3.47 1.00	2.31 1.00	1.81 1.00	
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	15	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	
	Analyzed:	Nov-10-10 08:53		Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	
	Units/RL:	mg/kg	RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 1	15.4	ND 15.5	ND 15.6	ND 15.3	ND 15.3	
C12-C28 Diesel Range Hydrocarbons		615 1	15.4	701 15.5	452 15.6	124 15.3	189 15.3	
C28-C35 Oil Range Hydrocarbons		87.3	15.4	98.6 15.5	70.2 15.6	27.4 15.3	36.6 15.3	
Total TPH		702 1	15.4	800 15.5	522 15.6	151 15.3	226 15.3	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. In interprelations and results bepressed throughout this analyteal report represent the best indignant of XENCO Laboratories. XENCO Laboratories assumes no responsibility and nailses no warranty to the end use of the data breety presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brehl Barron, II

Page 5 of 13

Final 1.000



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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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 Landfarm

Work Orders: 396364, **Project ID:** 2004-00061

Lab Batch #: 831285 Sample: 396364-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	50.5	50.0	101	70-135	

Lab Batch #: 831285 Sample: 396364-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	101	101	70-135	
o-Terphenyl	49.4	50.3	98	70-135	

Lab Batch #: 831285 Sample: 396364-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	95.0	100	95	70-135	
o-Terphenyl	45.2	50.1	90	70-135	

Lab Batch #: 831285 Sample: 396364-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	71.5	99.5	72	70-135	
o-Terphenyl	35.8	49.8	72	70-135	

Lab Batch #: 831285 Sample: 396364-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	RROGATE RE	ECOVERY	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	61.1	50.1	122	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396364, **Project ID:** 2004-00061

Lab Batch #: 831285 Sample: 578294-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	64.8	50.1	129	70-135	

Lab Batch #: 831285 Sample: 578294-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SU 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	129	99.7	129	70-135	
o-Terphenyl	63.7	49.9	128	70-135	

Lab Batch #: 831285 Sample: 578294-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	60.5	50.1	121	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396364 Analyst: LATCOR

Lab Batch ID: 831275

Date Prepared: 11/09/2010

Project ID: 2004-00061 **Date Analyzed:** 11/09/2010

Sample: 831275-1-BKS

Batch #: |

Matrix: Solid

Flag Control Limits %RPD 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD Blk. Spk Dup. %R [G] 93 Spike Duplicate Result [F] Blank 9.27 Spike Added Ξ 10 Blank Spike %R [D] 93 Blank Spike Result <u>5</u> 9.34 Spike Added 10.0 8 Sample Result Blank Z Anions by E300 Units: mg/kg Analytes Chloride

Sample: 578294-1-BKS Lab Batch ID: 831285 Analyst: BEV

Batch #: 1

Date Prepared: 11/08/2010

Matrix: Solid

Date Analyzed: 11/10/2010

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE KECOVERY STUDY	ICATE	4ECOVE	CRY STUD	Į.	
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>]	i	Result	%R		Duplicate	% R		%R	%RPD	
Analytes		[B]	[C]	[D]	[E]	Result [F]	[<u>G]</u>				
C6-C12 Gasoline Range Hydrocarbons	ND	1000	841	84	1000	962	08	5	70-135	32	
C12-C28 Diesel Range Hydrocarbons	QN	1000	874	87	1000	814	81	7	20-135	32	

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)]

Page 9 of 13

Final 1.000



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396364 **Lab Batch #:** 831275

Project ID: 2004-00061

Date Analyzed: 11/09/2010 Date Prepared: 11/09/2010 Analyst: LATCOR

QC- Sample ID: 396364-001 S Batch #: 1 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	27.4	103	129	99	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396364

Lab Batch #: 831275 **Project ID:** 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE / SAMPLE DUPLICATE RECOVERY						
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag			
Chloride	27.4	25.5	7	20				

Lab Batch #: 830971

 Date Analyzed: 11/08/2010
 Date Prepared: 11/08/2010
 Analyst: JLG

 QC- Sample ID: 396364-001 D
 Batch #: 1
 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	2.93	2.73	7	20	

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

YAG 4 TAT brabnat2 □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs × × × Chlorides TRRP TO:B'W Project Name: Lea Station Landfarm SCI Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s) Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS 1 Temperature Upon Receipt: VOCs Free of Headspace? Sample Containers Intact? BLEX 8051812030 OF BLEX 8560 Laboratory Comments selitalovimeS Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard yetale: Ya Ya Ba Cd Cr Pb Hg Se TOLP: Anions (Cl. SO4, Alkalinity) Cations (Ca. Mg. Na. K) Report Format: 9001 XT TX 1005 11-5 10 15.15 iтів 80.12B × × × M2108 1814 Нα SOIL SOIL SOL SOIL SOIL Date Date Date Ομιθε (Specify) Preservation & # of Containers pm@basinenv.com ¿Oç2çaN HOEN *OS^čH (575) 396-1429 HCL HMO arenistroO to #listo1 beld Filtered Fax No: e-mail: 0825 0835 0815 0820 0830 belgmaS amiT Received by ELO 11/1/10 Libra 11/1/10 11/1/10 11/1/10 11/1/10 Received by: Received by: Basin Environmental Service Technologies, LLC Date Sampled Ending Depth Time Time Time 55 Beginning Depth Date Lovington, NM 88260 Date Ben J. Arguijo (575)396-2378 Company Address: P.O. Box 301 TZ Cell A G-5 TZ Cell A G-1 TZ Cell A G-2 TZ Cell A G-3 TZ Cell A G-4 FIELD CODE Sampler Signature: Project Manager: ORDER#: 396364 Company Name Telephone No: City/State/Zip: Special Instructions Relinquished by: Relinquished by: Relinquished by (lab use only) LAB # (lab use only)



Attento, Bota Retail Control of Cardas
Industria, Retail Control of Cardas
Progenix, San Antonio, San

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

ಕೇ elogin / Nonconform ಾಡಿ ಗಿತ್ರಾort - Sample Log-In client: Basin Environmental Date/Time: 11:6-10 15.15 1.0h ID : 396364 ittals: XM _ _ ecklist Samole: Blue Water No 1. Samples on ice? Yes / No None 2. Shipping container in good condition? 3. Custody seals intact on shipping container (cool...) and Yes No N/A 4. Orail of Cosmity promisely Yes 5. Sample instructions continued on chain of colored. ? No No C. Any missing of the state Yes (Yes) 7. Chain of custody sign, a wine relinquished: 2.100 Νo Yes 8. Chain of custody agrees with sample label(s) No Yes No 10. Sample matrix / properties egree with chain or classical. Yes No 11. Samples in proper co. tains . some? Yes No 12. Sernilles projection preserve Yes. No N/A Yes No 13. Samula complete final in 14. Scritchest sample and the militaried testing Yes-No 15. All semples required a run and entitled time? Yes No 16. Supcontract of Jampie (S)? No > N/A Yes 17. VOC sample . Tive zero head . ; ace? Yes Nο N/A) 18. Cooler t No. Stable No. Stable No. Cooler 4 No. Cooler 5 No. ___ & d.6 °C °C 5_____ ଂପା °C lbs ibs Montain Long. and entation Contract: Contractor in the co Date/Tine:_____ Regarding: Corrective Action Taken Check all that app. IIIC office compass has beginning to ം 🕾 ലം event and out of temperature Companies de la companie de la compa ale. Gathap Tempored visit peratura conditions in analysis Tid new medands and white the co

Analytical Report 396366

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

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

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

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

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

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





11-NOV-10

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

Reference: XENCO Report No: 396366

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396366. 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. 396366 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396366



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell B G-1	S	Nov-01-10 08:40		396366-001
TZ Cell B G-2	S	Nov-01-10 08:45		396366-002
TZ Cell B G-3	S	Nov-01-10 08:50		396366-003
TZ Cell B G-4	S	Nov-01-10 08:55		396366-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396366
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



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

Certificate of Analysis Summary 396366 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm Report Date: 11-NOV-10

Project Manager: Brent Barron, II

					To local members and a second in	Figure Dancin, 11
	Lah Id:	396366-001	396366-002	396366-003	396366-004	
Analysis Posnostod	Field Id:	TZ Cell B G-1	TZ Cell B G-2	TZ Cell B G-3	TZ Cell B G-4	
Tumpsis well nesten	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-01-10 08:40	Nov-01-10 08:45	Nov-01-10 08:50	Nov-01-10 08:55	
Anions by E300	Extracted:					
	Analyzed:	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		ND 4.41	ND 4.38	5.27 4.36	ND 4.52	
Percent Moisture	Extracted:					
	Analyzed:	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	
	Units/RL:	% RL	% RL	% RL	% RL	
Percent Moisture		4.80 1.00	4.06 1.00	3.71 1.00	7.02 1.00	
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	
	Analyzed:	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.8	ND 15.7	ND 15.6	ND 16.1	
C12-C28 Diesel Range Hydrocarbons		550 15.8	485 15.7	146 15.6	150 16.1	
C28-C35 Oil Range Hydrocarbons		104 15.8	81.6 15.7	25.4 15.6	35.5 16.1	
Total TPH		654 15.8	567 15.7	171 15.6	186 16.1	

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager

Page 5 of 13

Final 1,000



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 396366, **Project ID**: 2004-00061

Lab Batch #: 831285 **Sample:** 396366-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	87.8	100	88	70-135		
o-Terphenyl	40.9	50.0	82	70-135		

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	99.6	100	100	70-135	
o-Terphenyl	47.2	50.2	94	70-135	

Units: mg/kg Date Analyzed: 11/10/10 08:53	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	50.3	50.2	100	70-135	

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	116	99.6	116	70-135		
o-Terphenyl	55.0	49.8	110	70-135		

Lab Batch #: 831285 Sample: 578294-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	130	100	130	70-135	
o-Terphenyl	64.8	50.1	129	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 396366, **Project ID:** 2004-00061

Lab Batch #: 831285 Sample: 578294-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	129	99.7	129	70-135	
o-Terphenyl	63.7	49.9	128	70-135	

Lab Batch #: 831285 Sample: 578294-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	127	100	127	70-135	
o-Terphenyl	60.5	50.1	121	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396366 Analyst: LATCOR

Lab Batch ID: 831275

Date Prepared: 11/09/2010 Sample: 831275-1-BKS

Batch #: |

Project ID: 2004-00061 **Date Analyzed:** 11/09/2010

Matrix: Solid

Flag Limits %RPD Control 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 Date Analyzed: 11/10/2010 RPD % Blk. Spk Dup. |S.R. 93 Spike Duplicate Result [F] Blank 9.27 Spike Added Ξ 10 Blank Spike %R [D] 93 **Date Prepared:** 11/08/2010 Blank Spike Result <u>5</u> 9.34 Spike Added 10.0 8 Sample Result Blank Z ٧ Anions by E300 Units: mg/kg Analyst: BEV Analytes Chloride

Lab Batch ID: 831285

Batch #: 1 Sample: 578294-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
TPH By SW8015 Mod		Spike	Blank	Blank	Spike	Blank	Blk. Spk	42.4	Control	Control	į
	Sample Kesuit [A]	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R	KPD %	Limits %R	Limits %RPD	7 20 20 20
Analytes		[B]	[c]	[0]	E	Result [F]	<u>[5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	841	5 8	0001	962	08	5	70-135	32	
C12-C28 Diesel Range Hydrocarbons	QN.	1000	874	28	1000	814	81	7	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)]

Final 1.000



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396366 **Lab Batch #:** 831275

Project ID: 2004-00061

Date Analyzed: 11/09/2010 Date Prepared: 11/09/2010 Analyst: LATCOR

QC- Sample ID: 396364-001 S **Batch #:** 1 **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	27.4	103	129	99	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396366

Lab Batch #: 831275 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	27.4	25.5	7	20	

Lab Batch #: 830971

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 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	2.93	2.73	7	20	

Final 1.000

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

YAG 4 TAT bashnat2 NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs × × × Chlorides TRRP M.A.O.N 딮 Project Name: Lea Station Landfarm Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s) ВСІ Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS Sample Containers Intact? VOCs Free of Headspace? BIEX 8051B/2030 ONBIEX 8560 Laboratory Comments: səlitaloviməs Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Netals: As Ag Ba Cd Cr Pb Hg Se FCLP Inions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 2001 XT Ime Time × 80158 MS108 1.814 'Hal SOL SOIL SOIL ŝ Date Date Other (Specify) anoN pm@basinenv.com _EO_seseN HOSN ѷОЅ⁵Н (575) 396-1429 HC HNO³ eo) otal #, of Containers benetlii blei Fax No: e-mair 0845 0855 0840 0820 DelgmeS emiT 11/1/10 11/1/10 11/1/10 11/1/10 Received by: Received by Basin Environmental Service Technologies, LLC Date Sampled Ending Depth Time Time Beginning Depth Lovington, NM 88260 Date Date Ben J. Arguijo (575)396-2378 P.O. Box 301 TZ Cell B G-3 TZ Cell B G-1 TZ Cell B G-2 TZ Cell B G-4 FIELD CODE Company Address: Sampler Signature: Project Manager: ORDER #: 396366 Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by (lab use only) FVB # (Isp nse ouly)

Temperature Upon Receipt

1-5 10 15:15

Date

Received by ELOT:

me

Relinquished by

200

15/5



XENCO Laboratories

Atlanta, Boca Raten, Corpus (mulst), Darlas Houston, Miami, Odessa, Physicaliphia Phoenix, San Antonio, Targus Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Kasin Environmental				
Date/Time: 1-6- 0 15:15				
Lab ID : 396366				
itials: XM				
Sample Reneipt Chec	cklist	_		
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and include?	Yes	No	N/A	
4. Chain of Custody press 12?	Yes	No		
5. Sample instructions complet. on chain of custioy?	Yes	No		
6. Any missing / extra sample:	Yes	No		
7. Chain of custody signed water relinquished / https://ex.	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and macri	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No .		
11. Samples in proper container / bottle?	Yes	No	1	
12. Samples protectly preserve.	Yes	No	N/A	
13. Sample container intuiti	Yes	No		
14. Sufficient sample amount of indicated test(s)?	Yes	<u>No</u>		
15. All samples received within a utilicient hold time?	Yes	No	-	
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head apace?	Yes	СИ	N/A)	
18. Cooler 1 No. Cooler 2 No. Cooler 3 nc	Cooler 4 No),	Cooler 5 No.	· · · · · · · · · · · · · · · · · · ·
165 d.6°5 25 °C 26	°C libs	ာိ့	lbs	°C
Noncommenus Godun	nentation			
Contact: Contacted by:		Date/Time:_		
Regarding:				
Togal diag.				····_
Corrective Action Taken:	·			
Conscieve Action (aken)				
	· 			
		·		
Check all that apply. © Cuoling process has begun shortly that samplified acceptable by NELAD 3.6.8.3.1.a	ng event and o	ut of tempera	ature	
Thildes and Backup Temperature coming both of the		iditions		

□ Client anderstands and would like to a meed with analysis

Analytical Report 396367

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

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

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

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

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

Xenco Phoenix (EPA Lab Code: AZ00901):

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

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

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





11-NOV-10

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

Reference: XENCO Report No: 396367

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396367. 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. 396367 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396367



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell D G-1	S	Nov-01-10 09:00		396367-001
TZ Cell D G-2	S	Nov-01-10 09:05		396367-002
TZ Cell D G-3	S	Nov-01-10 09:10		396367-003
TZ Cell D G-4	S	Nov-01-10 09:15		396367-004
TZ Cell D G-5	S	Nov-01-10 09:20		396367-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396367
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



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

Certificate of Analysis Summary 396367 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm

Report Date: 11-NOV-10

Project Manager: Brent Barron, II

					riojectivianager: Dient Banon, ii	ment Danon, 11	
	Lah Id:	396367-001	396367-002	396367-003	396367-004	396367-005	
Assessment Description	Field Id:	TZ Cell D G-1	TZ Cell D G-2	TZ Cell D G-3	TZ Cell D G-4	TZ Cell D G-5	
Analysis Kequesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-01-10 09:00	Nov-01-10 09:05	Nov-01-10 09:10	Nov-01-10 09:15	Nov-01-10 09:20	
Anions by E300	Extracted:						
	Analyzed:	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		20.4 4.28	51.3 4.28	14.7 4.41	ND 4.26	ND 4.26	
Percent Moisture	Extracted:						
	Analyzed:	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		1.78 1.00	1.87	4.71 1.00	1.49 1.00	1.40 1.00	
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	
	Analyzed:	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.3	ND 15.4	ND 15.7	18.1 15.2	ND 15.2	
C12-C28 Diesel Range Hydrocarbons		411 15.3	459 15.4	601 15.7	812 15.2	418 15.2	
C28-C35 Oil Range Hydrocarbons		63.2 15.3	72.9 15.4	86.5 15.7	124 15.2	63.6 15.2	
Total TPH		474 15.3	532 15.4	688 15.7	954 15.2	482 15.2	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the thoughout 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 breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

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Odessa Laboratory Manager

Page 5 of 13

Final 1.000



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 396367, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 831285 **Sample:** 396367-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	106	101	105	70-135	
o-Terphenyl	49.5	50.3	98	70-135	

Lab Batch #: 831285 **Sample:** 396367-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	119	99.7	119	70-135	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 831285 Sample: 396367-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	100	132	70-135	
o-Terphenyl	63.2	50.0	126	70-135	

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	85.5	99.7	86	70-135	
o-Terphenyl	39.5	49.9	79	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders: 396367, **Project ID:** 2004-00061

Lab Batch #: 831285 Sample: 578294-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	64.8	50.1	129	70-135	

Lab Batch #: 831285 Sample: 578294-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	129	99.7	129	70-135	
o-Terphenyl	63.7	49.9	128	70-135	

Lab Batch #: 831285 Sample: 578294-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	60.5	50.1	121	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396367 Analyst: LATCOR Sample: 831275-1-BKS Lab Batch ID: 831275

Date Prepared: 11/09/2010

Project ID: 2004-00061 Date Analyzed: 11/09/2010

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Batch #:

Flag Limits %RPD Control 20 Control Limits %R 75-125 RPD % Blk. Spk Рир 5. 1 93 Duplicate Result [F] Blank Spike 9.27 Spike Added 10 Ξ Blank Spike %R [D] 93 Blank Spike Result 9.34 <u>5</u> Spike Added 10.0 <u>B</u> Sample Result Blank B Anions by E300 Units: mg/kg Analytes Chloride

Date Prepared: 11/08/2010 Sample: 578294-1-BKS Lab Batch ID: 831285 Analyst: BEV

Batch #:

Date Analyzed: 11/10/2010

Matrix: Solid

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 'n Blk. Spk Рчр. 1G %R 8 80Duplicate Result [F] Blank Spike 962 814Spike Added 1000 1000 Ξ Blank Spike %R [D] 84 87 Blank Spike Result <u></u> 841 874 Added Spike 1000 1000 <u>B</u> Sample Result Blank V B $\frac{1}{2}$ 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*[(C-F)/(C+F)]

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Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396367 **Lab Batch #:** 831275

Project ID: 2004-00061

Date Analyzed: 11/09/2010 Date Prepared: 11/09/2010 Analyst: LATCOR

QC- Sample ID: 396364-001 S **Batch #:** 1 **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	27.4	103	129	99	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396367

Lab Batch #: 831275 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE.	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		101			
Chloride	27.4	25.5	7	20	

Lab Batch #: 830971

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 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	2.93	2.73	7	20	

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

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and		_[لسسا	Ì	Analyze For:	H		Semivolables	┞╌┤		_	\vdash			-+	\dashv	+	-	Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace?	Labels on container(s) Custody seals on container Custody seals on cooler(s)	npte Hand Delivered by Sampler/Client Rep.	Temperature Upon Receipt:	
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Ben J. Arguijo	Basin Envir	P.O. Box 30	Lovington, NM 88260	(575)396-2378	All Indiana		1		FIELD CODE	TZ Cell D G-1	TZ Cell D G-2	TZ Cell D G-3	TZ Cell D G-4	TZ Cell D G-5										
Project Manager:	Company Name	Company Address: P.O. Box 301	City/State/Zip:	Telephone No:	Sampler Signature:	(Aluc	1. 201. 2/2.	- {	<u> </u>	TZC	7 Z T	TZ C	1Z C	TZ C						Special Instructions:	ed by:	ned by:	bed by,	
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XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Baitas Houston, Miami, Odessa, Poliediphia Phoenix, San Antonio, Tango Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Preiogin / Nonconformance Report - Sample Log-In

client: Rasin Environmental	
Date/Time: 1-6-10 15:15	·
Lab ID :: 3916367	
Littals: XM	
Sample Red	sipt Checklist
1. Samples on ice?	Slue Water No
2. Shipping container in good condition?	Yes No None
3. Custody seals intact on shipping container (cooler) and	No N/A
4. Chain of Custody present?	Yes No
5. Sample instructions complete on chain of custody?	Yes No
6. Any missing / extra sample:	Yes No
7. Chain of custody signed water relinquished / abben st ?	(Yes) No
8. Chain of custody agrees with sample label(s)?	Yes No
9. Container labers legible and intact?	Yes No
10. Sample matrix / properties agree with chain of custody?	Yes No
11. Samples in proper container / portie?	Yes No
12. Samples proceedy preserve.	Yes No N/A
13. Sample container int. :t?	Yes No
14. Sufficient sample amount of indicated test(s)?	Yes No
15. All samples recaived പത്ത് ം ന്റ്cient hold time?	Yes No
16. Subcontract of sample(s)?	Yes No N/A
17. VOC sample have zero head space?	Yes No N/A
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No. Cooler 5 No.
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Contacted by:	Date/Time:
Regarding:	
Corrective Action Yaken:	
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Check all mat apply. ☐ Cooling process has begun shortly condition acceptable by NELA	িও ভ্রমাণ্ডানির event and out of temperature
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☐ Client professionds and would like to succeed with analysis

Analytical Report 396369

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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

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

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

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

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

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





11-NOV-10

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

Reference: XENCO Report No: 396369

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396369. 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. 396369 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

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Sample Cross Reference 396369



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell E G-1	S	Nov-01-10 09:25		396369-001
TZ Cell E G-2	S	Nov-01-10 09:30		396369-002
TZ Cell E G-3	S	Nov-01-10 09:35		396369-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396369
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Page 4 of 13 Final 1.000



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

Certificate of Analysis Summary 396369 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm Report Date: 11-NOV-10

Project Manager: Brent Barron, II

					 4	
	Lah Id:	396369-001	396369-002	396369-003		
Analysis Positod	Field Id:	TZ Cell F G-J	TZ Cell E G-2	TZ Cell E G-3	 	_
Zinarysis Mequesieu	Depth:					
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Nov-01-10 09:25	Nov-01-10 09:30	Nov-01-10 09:35		
Anions by E300	Extracted:					
	Analyzed:	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		ND 4.30	ND 4.26	ND 4.28		
Percent Moisture	Extracted:					
	Analyzed:	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45		
	Units/RL:	% RL	% RL	% RL		
Percent Moisture		2.38 1.00	1.33 1.00	1.93 1.00		
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45		
	Analyzed:	Nov-10-10 08:53	Nov-10-10 08:53	Nov-10-10 08:53		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.1	ND 15.4		
C12-C28 Diesel Range Hydrocarbons		159 15.4	200 15.1	129 15.4		
C28-C35 Oil Range Hydrocarbons		27.2 15.4	32.3 15.1	25.7 15.4		
Total TPH		186 15.4	232 15.1	155 15.4		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. In interprelations and results bepressed throughout this analyteal report represent the best indignant of XENCO Laboratories. XENCO Laboratories assumes no responsibility and nailses no warranty to the end use of the data breety presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brehl Barron, II



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Lea Station Landfarm

Work Orders: 396369, **Project ID**: 2004-00061

Lab Batch #: 831285 **Sample:** 396369-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	Su	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	97.2	100	97	70-135	
o-Terphenyl	46.4	50.2	92	70-135	

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	120	99.5	121	70-135	
o-Terphenyl	56.9	49.8	114	70-135	

Lab Batch #: 831285 Sample: 396369-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	104	100	104	70-135	
o-Terphenyl	48.8	50.2	97	70-135	

Lab Batch #: 831285 Sample: 578294-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	130	100	130	70-135	
o-Terphenyl	64.8	50.1	129	70-135	

Lab Batch #: 831285 Sample: 578294-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	129	99.7	129	70-135	
o-Terphenyl	63.7	49.9	128	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396369, **Project ID:** 2004-00061

Lab Batch #: 831285 Sample: 578294-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	127	100	127	70-135	
o-Terphenyl	60.5	50.1	121	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396369 Analyst: LATCOR

Lab Batch ID: 831275

Date Prepared: 11/09/2010

Project ID: 2004-00061 Date Analyzed: 11/09/2010

> Batch #: Sample: 831275-1-BKS

Matrix: Solid

Flag Limits %RPD Control 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD % Blk. Spk Рир 5. 1 93 Duplicate Result [F] Blank Spike 9.27 Spike Added 10 Ξ Blank Spike %R [D] 93 Blank Spike Result 9.34 <u>5</u> Spike Added 10.0 <u>B</u> Sample Result Blank B Anions by E300 Units: mg/kg Analytes Chloride

Sample: 578294-1-BKS Lab Batch ID: 831285 Analyst: BEV

Date Prepared: 11/08/2010

Batch #: |

Date Analyzed: 11/10/2010

Matrix: Solid

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 'n Blk. Spk Рчр. 1G %R 8 80Duplicate Result [F] Blank Spike 962 814Spike Added 1000 1000 Ξ Blank Spike %R [D] 84 87 Blank Spike Result <u></u> 841 874 Added Spike 1000 1000 <u>B</u> Sample Result Blank V B $\frac{1}{2}$ 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*[(C-F)/(C+F)]

Final 1.000



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396369 **Lab Batch #:** 831275

Project ID: 2004-00061

Date Analyzed: 11/09/2010 **Date Prepared:** 11/09/2010

Analyst: LATCOR

QC- Sample ID: 396364-001 S **Batch #:** 1 **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	27.4	103	129	99	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396369

Lab Batch #: 831275 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	27.4	25.5	7	20	

Lab Batch #: 830971

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC.	ATE REC	OVERY
	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	2.93	2.73	7	20	

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

12600 West I-20 East Odessa, Texas 79765

YAG 4 TAT bashast2 □ NPDES ပ္ RUSH TAT (Pre-Schedule) 24, 48, 72 hrs × Chlorides □ TRRP 1.O.R.M. Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS DHL. Project Name: Lea Station Landfarm Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s) Temperature Upon Receipt: VOCs Free of Headspace? Sample Containers Intact? BTEX 8021B/5030 or BTEX 8260 Laboratory Comments: Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Netala: As Ag Ba Cd Cr Pb Hg Se TCLP: Inions (Cl. SO4, Alkalinity) Cations (Ca. Mg. Na. K) Report Format: 15.15 9001 XT 1005 XT Hd. Time × × 89108 M2108 1.814 Наз SOIL SOIL SOIL 15-10 Date Date Ομνει (Σδεαιλ) Anon pm@basinenv.com cOcSseN HOSN °OS^cH (575) 396-1429 ЮН [€]ONH otal #. of Containers benettii∃ blei Fax No: e-mail: 0860 0925 0935 Time Sampled Received by ELOT 11/1/10 11/1/10 11/1/10 Received by: Received by: Basin Environmental Service Technologies, LLC Date Sampled Ending Depth 15/2 Time Time geðjuning Depth Date Lovington, NM 88260 Date Ben J. Arguijo (575)396-2378 Company Address: P.O. Box 301 **TZ Cell E G-2** TZ Cell E G-3 TZ Cell E G-1 FIELD CODE ORDER#: 396369 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Relinquished by: Relinquished by (lab use only (kļuo esu dsi) # 8AJ



XENCO Laboratories

Atlanta, Boda Raten, Corpus Chilist, Calles Houston, Miami, Odessa, Pri Posichia Prioenix, San Antonio, Tanius Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Environmental				
Date/Time: 11-5-10 15.15				
Lab 10: 396369				
icitials: LM				
Sample ನಿವಿ ಚಾರ್ನ Chec	cklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and a class?	(Yes)	No	N/A	
4. Chain of Custody presinf?	(Yes)	No		
5. Sample instructions complet, on chain of custicy?	Yes	No		
6. Any missing / extra sa notes	Yes	(No)		
7. Chain of custody signed wase, relinquished / rapaker.?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and imacr?	Yes	No		
10. Sample matrix / properties agree with chain or custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples progeny preserve.	Yes	No	N/A	
13. Sample container insert?	Yes	No		
14. Sufficient sample amount in indicated test(s)?	Yes	No		
15. All samples received office a strictent hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 3 No. Cooler 3 No.	Cooler 4 No	<u> </u>	Cooler 5 No.	
ibs 2.6°C is °C is	°C lbs	° <u>c</u>	lbs	°c
Noncombinarios Godun	entation			
Contacted by:		Date/Time:		
The state of the s		Dater: hite		
Regarding:				
	······			
Corrective Action Taken:				
The second secon				
	<u></u>			
Check all that apply: Diccoling process has begun shortay the sample	na avant and a	rt of toward	-tura	
condition acceptable by NELACTRESS.	.1.		amit	
Cinidal and Backup Temperature confirm built of 2	em peratu re con	ditions		

EliGlant understands and would like to granted with analysis

Analytical Report 396371

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



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Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

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

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

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

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Xenco Phoenix (EPA Lab Code: AZ00901):

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

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

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





11-NOV-10

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

Reference: XENCO Report No: 396371

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396371. 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. 396371 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396371



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell F G-1	S	Nov-01-10 09:40		396371-001
TZ Cell F G-2	S	Nov-01-10 09:45		396371-002
TZ Cell F G-3	S	Nov-01-10 09:50		396371-003
TZ Cell F G-4	S	Nov-01-10 09:55		396371-004
TZ Cell F G-5	S	Nov-01-10 10:00		396371-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396371
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



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

Certificate of Analysis Summary 396371 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm

Project Manager: Brent Barron, II

Report Date: 11-NOV-10

					righter manager. Diene Danon, in	Stelle Edition, 11	
	Lah Id:	396371-001	396371-002	396371-003	396371-004	396371-005	
Analysis Dogwood	Field Id:	TZ Cell F G-1	TZ Cell F G-2	TZ Cell F G-3	TZ Cell F G-4	TZ Cell F G-5	
Hanyss Meques	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-01-10 09:40	Nov-01-10 09:45	Nov-01-10 09:50	Nov-01-10 09:55	Nov-01-10 10:00	
Anions by E300	Extracted:						
	Analyzed:	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 07:52	Nov-09-10 13:23	Nov-09-10 13:23	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		48.7 4.28	132 4.31	30.4 4.33	43.1 4.41	ND 4.37	
Percent Moisture	Extracted:						
	Analyzed:	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	Nov-08-10 14:45	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		1.95 1.00	2.53 1.00	2.91 1.00	4.67 1.00	3.89 1.00	
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	
	Analyzed:	Nov-10-10 08:53	Nov-10-10 08:53	Nov-09-10 14:24	Nov-09-10 14:45	Nov-09-10 15:05	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.3	ND 15.4	ND 15.4	ND 15.8	24.0 15.7	
C12-C28 Diesel Range Hydrocarbons		349 15.3	563 15.4	507 15.4	373 15.8	194 15.7	
C28-C35 Oil Range Hydrocarbons		52.4 15.3	66.3 15.4	40.9 15.4	23.0 15.8	ND 15.7	
Total TPH		401 15.3	629 15.4	548 15.4	396 15.8	218 15.7	

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

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Odessa Laboratory Manager Brehl Barron, II

Page 5 of 15



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

Page 6 of 15 Final 1.000



Project Name: Lea Station Landfarm

Work Orders: 396371, **Project ID:** 2004-00061

Lab Batch #: 831198 Sample: 578252-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:07	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	56.9	50.1	114	70-135	

Lab Batch #: 831198 Sample: 578252-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:26	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	98.4	100	98	70-135	
o-Terphenyl	63.5	50.1	127	70-135	

Lab Batch #: 831198 Sample: 578252-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:46	0 12:46 SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	99.1	99.7	99	70-135	
o-Terphenyl	53.4	49.9	107	70-135	

Lab Batch #: 831198 Sample: 396371-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/09/10 14:24	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	97.3	99.5	98	70-135	
o-Terphenyl	58.9	49.8	118	70-135	

Lab Batch #: 831198 Sample: 396371-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/09/10 14:45	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	58.3	50.2	116	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396371, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 11/09/10 15:05	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.4	50.2	114	70-135	

Lab Batch #: 831285 Sample: 396371-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 08:53	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	86.7	100	87	70-135	
o-Terphenyl	40.6	50.0	81	70-135	

Units: mg/kg Date Analyzed: 11/10/10 08:53	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	54.3	50.0	109	70-135	

Lab Batch #: 831285 Sample: 578294-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SURROGATE RECOVERY 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	64.8	50.1	129	70-135	

Lab Batch #: 831285 Sample: 578294-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	129	99.7	129	70-135	
o-Terphenyl	63.7	49.9	128	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396371, Project ID: 2004-00061

Lab Batch #: 831285 Sample: 578294-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/10/10 08:53	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.5	50.1	121	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396371 Analyst: LATCOR

Date Prepared: 11/09/2010

Sample: 831275-1-BKS Lab Batch ID: 831275

Batch #:

Project ID: 2004-00061 Date Analyzed: 11/09/2010

Matrix: Solid

Flag Limits %RPD Control 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R **Date Analyzed:** 11/09/2010 75-125 RPD % Blk. Spk Dup. [G] 93 Duplicate Result [F] Blank Spike 9.27 Spike Added 10 Ξ Blank Spike %R [D] 93 **Date Prepared:** 11/09/2010 Blank Spike Result 9.34 Spike Added 10.0 <u>B</u> Sample Result Blank B ٨ Anions by E300 Analyst: LATCOR Units: mg/kg Analytes Chloride

Sample: 831277-1-BKS Lab Batch ID: 831277

Batch #:

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Flag Control Limits %RPD 20 Control Limits %R 75-125 RPD % Blk. Spk Рир. 15. % Р 107 Duplicate Result [F] Blank Spike 10.7 Spike Added 10 Ξ Blank Spike %R [D] 104 Spike Result Blank 10.4 <u></u> Added Spike 10.0 8 Sample Result Blank V B Anions by E300 Units: mg/kg Analytes Chloride

Date Prepared: 11/08/2010

Date Analyzed: 11/09/2010

Matrix: Solid

Batch #: 1 Sample: 578252-1-BKS

Lab Batch ID: 831198

Analyst: BEV

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

,											
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		<u>E</u>	<u>_</u>	<u>a</u>	<u> </u>	Result [F]	<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	<u>Q</u>	1000	923	92	1000	941	94	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	919	92	1000	915	92	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

Final 1.000



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396371 Analyst: BEV

Date Prepared: 11/08/2010

Batch #: 1

Project ID: 2004-00061 **Date Analyzed:** 11/10/2010

Sample: 578294-1-BKS Lab Batch ID: 831285

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE/B	LANKS	PIKE DUPL	ICATE	KECOVE	KY STUD	Y	
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	[A]	[B]	Kesult [C]	%K [D]	[E]	Duplicate Result [F]	%k G]		%K	%KPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	841	84	1000	962	08	5	70-135	32	
C12-C28 Diesel Range Hydrocarbons	QN	1000	874	28	1000	814	81	7	70-135	32	

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

Final 1.000



Form 3 - MS Recoveries





Project Name: Lea Station Landfarm

Work Order #: 396371

Project ID: 2004-00061 **Lab Batch #:** 831275

Date Analyzed: 11/09/2010 **Date Prepared:** 11/09/2010 Analyst: LATCOR

QC- Sample ID: 396364-001 S Batch #: Matrix: Soil atian IIaita

Reporting Units: mg/kg	MATE	CIX / MIA	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	27.4	103	129	99	75-125	

Lab Batch #: 831277

Date Prepared: 11/09/2010 Analyst: LATCOR **Date Analyzed:** 11/09/2010

QC- Sample ID: 396371-004 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	43.1	105	156	108	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396371

Lab Batch #: 831275 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396364-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	27.4	25.5	7	20	

Lab Batch #: 831277

 Date Analyzed: 11/09/2010
 Date Prepared: 11/09/2010
 Analyst: LATCOR

 QC- Sample ID: 396371-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
,					
Chloride	43.1	41.7	3	20	

Lab Batch #: 830971

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396364-001 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	2.93	2.73	7	20	

Lab Batch #: 830973

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396371-004 D
 Batch #:
 1
 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	4.67	4.28	9	20	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

YAG 4 TAT brebnet2 ☐ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Chlorides Fax: 432-563-1713 Phone: 432-563-1800 TRRP M A.O.P Project Name: Lea Station Landfarm Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s) VOCs Free of Headspace? Sample Containers Intact? BIEX 8034B/2030 or BIEX 8560 Laboratory Comments Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Netala. As Ag Ba Cd Ct Pb Hg Se TCLP Anions (Cl. SO4. Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 9001 XT × × × 8012B M2108 1814 нат Spearly Other aldstog-noN≈ql SOIL SOIL SOIL SOIL SOIL W=Drinking Water Date Other (Specify) auoN Odessa, Texas 79765 pm@basineny.com 12600 West I-20 East ^EO²S²EN HOEN ¹OS^ōH (575) 396-1429 HCI CONH etal # of Containers ield Filtered e-mail: Fax No: 0945 0955 0920 1000 0940 Тіте Sampled 11/1/10 11/1/10 11/1/10 11/1/10 Received by 11/1/10 Basin Environmental Service Technologies, LLC Date Sampled Ending Depth me Beginning Depth Date Lovington, NM 88260 Ben J. Arguijo (575)396-2378 Company Address: P.O. Box 301 TZ Cell F G-3 TZ Cell F G-5 TZ Cell F G-2 TZ Cell F G-4 TZ Cell F G-1 FIELD CODE Sampler Signature: Project Manager: Company Name ORDER #: 39637 Telephone No: City/State/Zip: Special Instructions Relinquished by: (lab use only) (Vinc eau dai) # 🖽 🗛

ပ္

Temperature Upon Receipt:

15:15

01-5-10

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Date

Received by EL

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Received by:

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Date

Relinquished by

Refinguished by

Date

님

Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS L



XENCO Laboratories

Atlanta, Boca Reton. Corpus Christi, Calles Houston, Miemi, Odessa, Philipusiphia Phoenix, San Antonic, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Preiogin / Nonconformance Report - Sample Log-In

client Rasin Environmental				
Date/Time: 11-6-10 15:15				
Lab ID 6: 396371				
1.ittals: XM				
Sample Receipt Che	ecklist			
1. Samples on ice?	Slue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and homes?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complet, on chain of custody?	Yes	No		
6. Any missing / extra semple:	Yes	(No)		
7. Chain of custody signed wase relinguished / ripasser?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No -		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserve.	(Yes)	No	N/A	
13. Sample container intuit?	Yes	No		
14. Sufficient sample amount : Indicated test(s)?	Yes	No		
15. All samples received within a micient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head agace?	Yes	No	(NA)	
18. Cooler 1 No. Cooler 3 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No.	
ibs 2.6°C _s °C	°C lbs	°C	ibs	°C
		 - -		
Noncommanda Godu				
Contacted by:		Date/Time:_		
Regarding:				
	<u>_</u> _			
Described to the second				
Corrective Action Taken:				
The second secon				·
Check all that apply. Cooling process has begun shortly at the same	iling event and o	ut of temper	rature	•
condition acceptable by NELAC N.S.8.3.	lai.	ditions		

□ Cliant invierstands and would like to sittlesd with analysis.

Analytical Report 396373

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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





11-NOV-10

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

Reference: XENCO Report No: 396373

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396373. 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. 396373 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396373



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell G G-1	S	Nov-01-10 10:05		396373-001
TZ Cell G G-2	S	Nov-01-10 10:10		396373-002
TZ Cell G G-3	S	Nov-01-10 10:15		396373-003
TZ Cell G G-4	S	Nov-01-10 10:20		396373-004
TZ Cell G G-5	S	Nov-01-10 10:25		396373-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396373
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



Project Location: Lea County, NM

Contact: Jason Henry **Project Id:** 2004-00061

Certificate of Analysis Summary 396373 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm

Brent Barron, II Report Date: 11-NOV-10 Project Manager:

1.00 4.24 \mathbb{Z} Ξ \mathbb{Z} 15.1 15.1 15.1 15.1 Nov-10-10 09:19 Nov-01-10 10:25 Nov-09-10 08:15 Nov-08-10 10:45 Nov-09-10 13:23 TZ Cell G G-5 396373-005 mg/kg 24.5 23.2 B 988 934 mg/kg 15.2 15.2 4.27 1.00 Ξ 15.2 \mathbb{Z} \mathbb{Z} 15.2 Nov-09-10 13:23 Nov-08-10 10:45 Nov-09-10 08:15 Nov-10-10 09:19 Nov-01-10 10:20 rz Cell G G-4 396373-004 SOIL 17.8 1.67 2270 63.4 2333 B mg/kg mg/kg % 4.28 1.00 15.3 15.3 \mathbb{Z} 15.3 15.3 \mathbb{Z} Ξ Nov-01-10 10:15 Nov-09-10 13:23 Nov-09-10 08:15 Nov-08-10 10:45 Nov-09-10 16:04 TZ Cell G G-3 396373-003 mg/kg 19.2 2660 71.6 3 2751 mg/kg % 1.00 15.2 4.28 Ξ 15.2 15.2 15.2 \mathbb{Z} Z Nov-01-10 10:10 Nov-09-10 15:44 Nov-08-10 14:45 Nov-08-10 10:45 Nov-09-10 13:23 TZ Cell G G-2 396373-002 SOIL mg/kg ND 3370 6.53 1.87 98.1 3468 mg/kg 1.00 15.2 4.25 $\mathbb{R}^{\mathbb{Z}}$ \mathbb{R}^{L} 15.2 15.2 15.2 \mathbb{R} Nov-01-10 10:05 Nov-09-10 13:23 Nov-08-10 14:45 Nov-08-10 10:45 Nov-09-10 15:24 rz Cell G G-1 396373-001 SOIL 24.0 33.6 B 1.19 1039 981 mg/kg mg/kg % Field Id: Depth: Sampled: Analyzed: Lab Id: Matrix: Analyzed: Extracted: Extracted: Analyzed: Extracted: Units/RL: Units/RL: Units/RL TPH By SW8015 Mod C6-C12 Gasoline Range Hydrocarbons Percent Moisture C12-C28 Diesel Range Hydrocarbons Analysis Requested Anions by E300 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. In interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and mades no warranty to the end use of the data breeby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brefit Barron, II

Page 5 of 13



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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



Project Name: Lea Station Landfarm

Work Orders: 396373, **Project ID:** 2004-00061

Lab Batch #: 831198 Sample: 578252-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:07	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	96.1	100	96	70-135	
o-Terphenyl	56.9	50.1	114	70-135	

Lab Batch #: 831198 Sample: 578252-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:26	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	98.4	100	98	70-135					
o-Terphenyl	63.5	50.1	127	70-135					

Lab Batch #: 831198 Sample: 578252-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:46	SURROGATE RECOVERY STUDY									
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
1-Chlorooctane	99.1	99.7	99	70-135						
o-Terphenyl	53.4	49.9	107	70-135						

Lab Batch #: 831198 Sample: 396373-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/09/10 15:24	SURROGATE RECOVERY 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	61.6	50.2	123	70-135					

Units: mg/kg Date Analyzed: 11/09/10 15:44	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	101	99.7	101	70-135					
o-Terphenyl	52.4	49.9	105	70-135					

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396373, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 11/09/10 16:04	SURROGATE RECOVERY STUDY									
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
1-Chlorooctane	98.3	100	98	70-135						
o-Terphenyl	55.4	50.0	111	70-135						

Lab Batch #: 831198 Sample: 396373-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 09:19	SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes			[D]						
1-Chlorooctane	87.6	99.8	88	70-135					
o-Terphenyl	47.6	49.9	95	70-135					

Units: mg/kg Date Analyzed: 11/10/10 09:19	SURROGATE RECOVERY STUDY									
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes			[D]							
1-Chlorooctane	99.7	99.7	100	70-135						
o-Terphenyl	52.6	49.9	105	70-135						

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396373 Analyst: LATCOR

Date Prepared: 11/09/2010 Batch #:

Project ID: 2004-00061 Date Analyzed: 11/09/2010

Sample: 831277-1-BKS

Lab Batch ID: 831277

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

Flag Limits %RPD Control 20 Control Limits %R 75-125 RPD % Blk. Spk Очр. [G] 107 Duplicate Result [F] Blank Spike 10.7 Spike Added 10 Ξ Blank Spike %R [D] 104 Blank Spike Result 10.4 <u>5</u> Spike Added 10.0 <u>B</u> Sample Result Blank B Anions by E300 Analytes Chloride

Sample: 578252-1-BKS Lab Batch ID: 831198

Analyst: BEV

Date Prepared: 11/08/2010

Batch #: |

Matrix: Solid

Date Analyzed: 11/09/2010

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % d 0 Blk. Spk Рир. 15. % Р 92 4 Duplicate Result [F] Blank Spike 915 941 Spike Added 1000 1000 Ξ Blank Spike %R [D] 92 92 Blank Spike Result 919 <u></u> 923 Added Spike 1000 1000 <u>B</u> Sample Result Blank V B $\frac{1}{2}$ 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

Final 1.000



Form 3 - MS Recoveries



75-125

Project Name: Lea Station Landfarm

Work Order #: 396373 **Lab Batch #:** 831277

Chloride

Project ID: 2004-00061

156

Date Analyzed: 11/09/2010

Date Prepared: 11/09/2010 **Analyst:** LATCOR

QC- Sample ID: 396371-004 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY								
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag			
Analytes	[A]	[B]							

43.1

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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396373

Lab Batch #: 831277 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396371-004 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE A	SAMPLE / SAMPLE DUPLICATE RECOVERY								
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag					
Analyte		(D)								
Chloride	43.1	41.7	3	20						

Lab Batch #: 830973

 Date Analyzed:
 11/08/2010
 Date Prepared:
 11/08/2010
 Analyst:
 JLG

 QC- Sample ID:
 396371-004 D
 Batch #:
 1
 Matrix:
 Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: % **Percent Moisture** Sample Control Parent Sample RPD Duplicate Limits Result Flag Result %RPD [A] **[B**] Analyte Percent Moisture 4.67 4.28 20

Lab Batch #: 831044

 Date Analyzed: 11/09/2010
 Date Prepared: 11/09/2010
 Analyst: JLG

 QC- Sample ID: 396373-003 D
 Batch #: 1
 Matrix: Soil

Reporting Units: %	SAMPLE /	SAMPLE / SAMPLE DUPLICATE RECOVERY									
	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag						
Analyte		[B]									
Percent Moisture	1.82	1.99	9	20							

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

Page 11 of 13 Final 1.000

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

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틽	190	Project Loc: Lea County, NM	PO#: PAA - J. Henry	ard		Analyze For	\dashv		Metals: As Ag Ba Cd Cr Pb Hg	-			-		_	\dashv	+	-	Laboratory Comments	aire Te	son son son	Sample Hand Delivered by Sampler/Client Rel by Courier? UPS	- 8	
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Ben J. Arguijo	Basin Envi	P.O. Box 301	Lovington,	(575)396-2378	A		ſ	~	FIELD CODE	TZ Cell G G-1	TZ Cell G G-2	TZ Cell G G-3	TZ Cell G G-4	TZ Cell G G-5										
Project Manager:	Company Name	Company Address:	City/State/Zip:	Telephone No:	Sampler Signature:	(Alux)		# 2765 13	<u>u</u>	1Z C	TZ C	TZC	TZC	72 C					Special instructions:		ed by:	ed by:	ed by:	
						(lab use only)	:	ORDER #:	(Alno esu del) # 8A.	1									Special Ir		Relinquished by:	Relinquished by:	Relinquished by	



XENCO Laboratories

Atlanta, Boca Raton, Corpus (1978). Dalas Houston, Miami, Cdessa, Philippenia Phoenix, San Antonio, Tangg Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Environmental				
Date/Time: 11-6-10 15.15				
Lab ID 1: 3963 13				
holitials:				
Sample Repelpt Che	ecklist			
1. Samples on ice?	Slue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals infact on shipping container (cooler) and https://	Yes	No	N/A	
4. Chain, of Custody precunit	Yes	No		
5. Sample instructions complet on chain of custicy?	Yes	No		
6 Any missing / more or a size /	Yes	(No)		
7. Chain of custody signed wash relinquished / roceases?	(Yes)	No		_
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and invact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No -		
11. Samples in proper comainer / boxtle?	Yes	No		
12. Samples proceedy preserve"	Yes	No	N/A	
13. Sample container interte	Yes	No		
14. Sufficient sample amount in indicated test(s)?	Yes	No		
15. All samples received which a ufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample nave zero heed apace?	Yes	Nο	(N/A)	
18. Cooler i No. Cooler 3 No. Cooler 3 No.	Cooler 4 No	o	Cooler 5 No.	
165 2.6°C °C	°C lbs	°C	lbs	°C
Noncomormanos Godu	mentation			
Contacted by:		Date/Time:		
		Dettie		
Regarding:	<u></u> -			
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Corrective Action Taken:				
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Check all that apply. Gooding process has begon shortly to be earnpi	in a overtand o	ert of tomos	esture.	
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Final 1.000

□ Client converstands and would like to convex d with analysis

Analytical Report 396375

for PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

11-NOV-10



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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

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

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

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

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

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

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





11-NOV-10

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

Reference: XENCO Report No: 396375

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 396375. 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. 396375 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 396375



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TZ Cell H G-1	S	Nov-01-10 10:30		396375-001
TZ Cell H G-2	S	Nov-01-10 10:35		396375-002
TZ Cell H G-3	S	Nov-01-10 10:40		396375-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 11-NOV-10

 Work Order Number:
 396375
 Date Received:
 11/05/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None



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

Certificate of Analysis Summary 396375 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Fri Nov-05-10 03:15 pm

Project Manager: Brent Barron, II

Report Date: 11-NOV-10

	Lah Id:	396375-001	396375-002	396375-003	
Andlysis Rognostod	Field Id:	TZ Cell H G-1	TZ Cell H G-2	TZ Cell H G-3	
nascanhau ciclimus	Depth:				
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Nov-01-10 10:30	Nov-01-10 10:35	Nov-01-10 10:40	
Anions by E300	Extracted:				
	Analyzed:	Nov-09-10 13:23	Nov-09-10 13:23	Nov-09-10 13:23	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		116 4.32	160 4.29	166 4.31	
Percent Moisture	Extracted:				
	Analyzed:	Nov-09-10 08:15	Nov-09-10 08:15	Nov-09-10 08:15	
	Units/RL:	% RL	% RL	% RL	
Percent Moisture		2.84 1.00	2.10 1.00	2.49 1.00	
TPH By SW8015 Mod	Extracted:	Nov-08-10 10:45	Nov-08-10 10:45	Nov-08-10 10:45	
	Analyzed:	Nov-10-10 09:19	Nov-10-10 09:19	Nov-10-10 09:19	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 76.8	20.3 15.3	ND 15.5	
C12-C28 Diesel Range Hydrocarbons		3560 76.8	2740 15.3	695 15.5	
C28-C35 Oil Range Hydrocarbons		92.6 76.8	71.1 15.3	28.7 15.5	
Total TPH		3653 76.8	2831 15.3	724 15.5	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the thoughout 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 breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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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 Landfarm

Work Orders: 396375, **Project ID:** 2004-00061

Lab Batch #: 831198 Sample: 578252-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:07	Su	RROGATE RI	COVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	56.9	50.1	114	70-135	

Lab Batch #: 831198 Sample: 578252-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:26	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	98.4	100	98	70-135	
o-Terphenyl	63.5	50.1	127	70-135	

Lab Batch #: 831198 Sample: 578252-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 11/09/10 12:46	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	99.1	99.7	99	70-135	
o-Terphenyl	53.4	49.9	107	70-135	

Lab Batch #: 831198 Sample: 396375-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/10/10 09:19	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	104	99.5	105	70-135	
o-Terphenyl	57.0	49.8	114	70-135	

Lab Batch #: 831198 **Sample:** 396375-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 11/10/10 09:19	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	100	99.7	100	70-135	
o-Terphenyl	54.3	49.9	109	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 396375, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 11/10/10 09:19	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	103	101	102	70-135	
o-Terphenyl	53.0	50.3	105	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396375 Analyst: LATCOR

Date Prepared: 11/09/2010

Project ID: 2004-00061 **Date Analyzed:** 11/09/2010

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Batch #: | Sample: 831277-1-BKS Lab Batch ID: 831277 Units: mg/kg

Flag Limits %RPD Control 20 Control Limits %R 75-125 RPD % Blk. Spk Dup. %R [G] 107 Spike Duplicate Result [F] Blank 10.7 Spike Added Ξ 10 Blank Spike %R [D] 104 Blank Spike Result <u>5</u> 10.4 Spike Added 10.0 8 Sample Result Blank Z ٧ Anions by E300 Analytes Chloride

Date Prepared: 11/08/2010 Batch #: 1 Sample: 578252-1-BKS Lab Batch ID: 831198 Analyst: BEV

BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

Date Analyzed: 11/09/2010

Matrix: Solid

Cincia o o											
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		[<u>B</u>]	[C]	[0]	Œ	Result [F]	<u>[G</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	923	92	1000	941	56	2	70-135	32	
C12-C28 Diesel Range Hydrocarbons	ND ND	1000	919	92	1000	915	92	0	70-135	35	

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

Final 1.000



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 396375 **Lab Batch #:** 831277

Project ID: 2004-00061

Date Analyzed: 11/09/2010 **Date Prepared:** 11/09/2010

Analyst: LATCOR

QC- Sample ID: 396371-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
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	43.1	105	156	108	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

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 396375

Lab Batch #: 831277 Project ID: 2004-00061

 Date Analyzed:
 11/09/2010
 Date Prepared:
 11/09/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 396371-004 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: mg/kg	SAMPLE.	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		• •			
Chloride	43.1	41.7	3	20	

Lab Batch #: 831044

 Date Analyzed: 11/09/2010
 Date Prepared: 11/09/2010
 Analyst: JLG

 QC- Sample ID: 396373-003 D
 Batch #: 1
 Matrix: Soil

Reporting Units: %	SAMPLE	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag				
Percent Moisture	1.82	1.99	9	20					

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

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

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Project Name: Lea Station Landfarm				TRRP			×	098	BTEX 8021B/5030 or BTEX 82	\vdash			\dashv		十	+	+	-	ر درج	Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)		莨
ä						Analyze For:		1 33	Semivolatiles			\dashv	-+			\dashv	+		Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace?	Labels on container(s) Custody seals on container Custody seals on cooler(s)	Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS	Temperature Upon Receipt:
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ţġ	ŏ	unty	PO #: PAA - J. Henry	X Standard		An	Ī	₽S	Metals: As Ag Ba Cd Cr Pb Hg										Laboratory Comments: Sample Containers Intac VOCs Free of Headspac	onta als o als o	nd D Slar/C ier?	e Of
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аше	t;	Loc	* 0	#				<u> </u>	Cations (Ca, Mg, Na, K)			\dashv	\dashv	_	\dashv	\dashv	+	_	L S X	<u> </u>	rg T	
ž	Project #: 2004-00061	Project Loc: Lea County, NM		Report Format:				991	08 M2108 1.814 HQT 4001 XT 2001 XT HQT	×	×	×	_	\dashv	\dashv	\dashv	+		-	ime	Time	Time 7
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oji	Basin Environmental Service Technologies, LLC	_	NM 88260	78	The second											-				Date	Date	Date (1)
Ben J. Arguijo	Basin Envir	P.O. Box 301	Lovington, NM 88260	(575)396-2378					FIELD CODE	TZ Cell H G-1	TZ Cell H G-2	TZ Cell H G-3										
Project Manager:	Company Name	Company Address:	City/State/Zip:	Telephone No:	Sampler Signature:	lulu)	(A)	ORDER #: 396375	년	12.0	TZ C	TZ C							Special instructions:	hed by:	hed by.	inhed by:
						(alab usa only)) DSI (191)	ORDER	(Yino seu dai) # 8A.										Special	Relinquished by	Relinquished by	Relinquished by



XENCO Laboratories

Atlanta, Boca Raten, Corpus 1 Misti. Darlas Houston, Miami, Odessa, Philippaphia Phoenix, San Antonio, Tanipp Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Environmental				
Date/Time: 11-6-10 15:15				
Lab ID :: 396375				
Initials: MM				
Sample Repeipt Che	cklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	_
3. Custody seals intact on shipping container (cooler) and in Cas?	Yes	No	N/A	
4. Chain of Custody pres.াং?	(Yes)	No		
5. Sample instructions complet, on chain of custooy?	Yes	No		
6. Any massing / extra samples	Yes	(No	i	
7. Chain of custody signed with relinguished / robal, as 3	(Yes)	No	· ·	
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		· · · · · · · · · · · · · · · · · · ·
11. Samples in proper container / bottle?	Yes	No		
12. Samples protenty preserve"	Yes	No	N/A	
13. Sample container intenti	Yes	No		 .
14. Sufficient sample amelia to indicated test(s)?	Yes	No		
15. All samples received പതിര ാണ്ഠിലൻ hold ദ്നേട?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No.	N/A)	
18. Cooler 1 No. Cooler 3 Av	Cooler 4 No).	Cooler 5 No.	
ibs 2.6°C is 7°C is	°C lbs	°C	lbs	°C
Noncordormanos Joou	mentation			
		Data Cina		
Contacted by:		Date/Time:_		
Regarding:				
Corrective Action Taken:				
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Coloret understands and would like to conteed with analysis

Analytical Report 376694

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Final Ver. 1.000 Page 1 of 22





16-JUN-10

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

Reference: XENCO Report No: 376694

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376694. 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. 376694 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 376694



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected S	Sample Depth	Lab Sample Id
VZ Cell A G-1	S	Jun-09-10 08:00		376694-001
VZ Cell A G-2	S	Jun-09-10 08:20		376694-002
VZ Cell A G-3	S	Jun-09-10 08:40		376694-003
VZ Cell A G-4	S	Jun-09-10 09:00		376694-004
VZ Cell A G-5	S	Jun-09-10 09:20		376694-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376694
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 376694-001,376694-005,376694-004,376694-003.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 376694-001, -005, -003, -004. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-810595 TPH by SW8015 Mod

None

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CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376694
 Date Received:
 06/10/2010

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376694-002.

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

SW8021BM

Batch 810601, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376694-002.

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Page 5 of 22 Final Ver. 1.000



Project Location: Lea County, NM

Contact: Jason Henry **Project Id:** 2004-00061

Certificate of Analysis Summary 376694 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Brent Barron, II Report Date: 16-JUN-10 Project Manager:

	Lab Id:	376694-001	376694-002	376694-003	376694-004	376694-005	
Amelianie Donnaroch	Field Id:	VZ Cell A G-1	VZ Cell A G-2	VZ Cell A G-3	VZ Cell A G-4	VZ Cell A G-5	
Analysis Requesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-09-10 08:00	Jun-09-10 08:20	Jun-09-10 08:40	Jun-09-10 09:00	Jun-09-10 09:20	
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-14-10 08:00	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	
	Analyzed:	Jun-11-10 16:41	Jun-14-10 15:17	Jun-11-10 17:26	Jun-11-10 17:48	Jun-11-10 18:11	
	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 0.0010	ND 0.0010	ND 0.0012	
Toluene		ND 0.0024	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0023	
Ethylbenzene		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
m.p-Xylenes		ND 0.0024	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0023	
o-Xylene		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Xylenes. Total		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Total BTEX		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		8.53 5.97	9.82 5.25	7.81 5.12	ND 5.21	7.60 5.76	
Percent Moisture	Extracted:						
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		16.3 1.00	4.76 1.00	2.30 1.00	4.12 1.00	13.2 1.00	
TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	
	Analyzed:	Jun-12-10 10:06	Jun-12-10 10:34	Jun-14-10 18:48	Jun-12-10 11:29	Jun-12-10 11:57	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	

This analytical report, and the critics data package it represents, has been made for your exclusive and confidential use. In interpretations and results bepressed throughout this analytical proport represent the best independ to XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brefit Barron, II

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

C28-C35 Oil Range Hydrocarbons

Total TPH

Page 6 of 22



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	l su	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0293	0.0300	98	80-120			
4-Bromofluorobenzene	0.0288	0.0300	96	80-120			

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0293	0.0300	98	80-120				
4-Bromofluorobenzene	0.0287	0.0300	96	80-120				

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SU	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1,4-Difluorobenzene	0.0241	0.0300	80	80-120				
4-Bromofluorobenzene	0.0302	0.0300	101	80-120				

Lab Batch #: 810414 Sample: 376694-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 16:41	Su	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	*		
4-Bromofluorobenzene	0.0281	0.0300	94	80-120			

Lab Batch #: 810414 **Sample:** 376694-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/11/10 17:26	SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*		
4-Bromofluorobenzene	0.0288	0.0300	96	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/11/10 17:48	Su	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*		
4-Bromofluorobenzene	0.0302	0.0300	101	80-120			

Units: mg/kg Date Analyzed: 06/11/10 18:11	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Units: mg/kg Date Analyzed: 06/12/10 20:38	2/10 20:38 SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810601 Sample: 376694-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:17	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120		

Lab Batch #: 810601 Sample: 376694-002 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376694-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 10:06	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	99.5	103	70-135	
o-Terphenyl	49.9	49.8	100	70-135	

Lab Batch #: 810595 Sample: 376694-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 10:34	SU	RROGATE RE	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 376694-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 11:29	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	94.6	100	95	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 810595 Sample: 376694-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 11:57	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	95.8	99.9	96	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 810595 **Sample:** 376701-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810595 **Sample:** 376694-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 18:48	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	125	100	125	70-135	
o-Terphenyl	57.2	50.1	114	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694

Analyst: ASA

Date Prepared: 06/11/2010 Sample: 565602-1-BKS

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Batch #: 1

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Lab Batch ID: 810414 Units: mg/kg

BTEX by EPA 8021	Blank Sample Result	Spike Added	Blank Spike Poent	Blank Spike	Spike Added	Blank Spike Durlicate	BIK. Spk Dup. %To	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	<u>B</u>		 [<u>a</u>	<u>a</u>	Result [F]	<u>[5]</u>	₹	1 0/		
Benzene	ON.	0.1000	9860.0	66	0.1	0.1002	100	2	70-130	35	
Toluene	ON	0.1000	0.0974	26	0.1	0.0987	66	1	70-130	32	
Ethylbenzene	QN	0.1000	0.0988	66	0.1	0.1000	100	1	71-129	38	
m.p-Xylenes	ON	0.2000	0.1984	66	0.2	0.2003	100	1	70-135	38	
o-Xylene	QN	0.1000	0.0974	26	0.1	0.0987	66	1	71-133	38	

Analyst: ASA

Sample: 565716-1-BKS

Lab Batch ID: 810601

Date Prepared: 06/14/2010 Batch #: 1

Matrix: Solid

Date Analyzed: 06/14/2010

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	TANK S	PIKE DUPI	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021	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>	国	Result [F]	[6]				
Benzene	Ð.	0.1000	0.1076	108	0.1	0.1053	105	2	70-130	35	
Toluene	Œ.	0.1000	0.1063	106	0.1	0.1033	103	3	70-130	35	
Ethylbenzene	QN.	0.1000	0.1085	109	0.1	0.1046	105	4	71-129	32	
m.p-Xylenes	Q.	0.2000	0.2185	109	0.2	0.2102	105	4	70-135	35	
o-Xylene	QN	0.1000	0.1075	108	0.1	0.1032	103	4	71-133	35	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Sample: 810781-1-BKS

Lab Batch ID: 810781

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	<u>B</u>	Result [C]	%R [D]	<u> </u>	Duplicate Result [F]	% R [G]	%	%R	%RPD	
Chloride	ND	10.0	66.6	100	10	8.68	28	14	75-125	20	

Analyst: BEV
Lab Batch ID: 810595 Sample: 565721-1-BKS

Date Prepared: 06/11/2010
S Batch #: 1

Matrix: Solid

Date Analyzed: 06/11/2010

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/ BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	CATE	RECOVE	RYSTUD	,	
Pow \$108WS yd HPT	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
	[<u>A</u>]	i	Result	%R		Duplicate	%R		%R	%RPD	
Analytes		[B]	[C]	[a]	[E]	Result [F]	<u> </u>				
C6-C12 Gasoline Range Hydrocarbons	ND	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	866	861	98	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694 **Lab Batch #:** 810781

Project ID: 2004-00061

Analyst: LATCOR

QC- Sample ID: 376313-001 S **Batch #:** 1 **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	272	209	474	97	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order #: 376694

Matrix: Soil Batch #: QC-Sample ID: 376694-001 S **Date Analyzed:** 06/12/2010 Lab Batch ID: 810414

VSVAnalyst: **Date Prepared:** 06/11/2010

Flag × × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 71-129 71-133 70-130 70-130 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 22 22 50 7 5 Spiked Dup. | %R |G| 5 20 20 22 5 Duplicate Spiked Sample Result [F] 0.0610 0.0595 0.0611 0.0594 0.1239 Spike Added 0.1200 0.12000.12000.1200 0.2399 Ŧ Spiked Sample 2 % E 63 62 62 63 63 Spiked Sample Result 0.0758 0.1515 0.0750 0.0744 0.0741 0.1197 Spike Added 0.1197 0.1197 0.23940.1197 Parent Sample Result B E 2 2 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Toluene Benzene

Matrix: Soil Analyst: Batch #: QC-Sample ID: 376694-002 S **Date Prepared:** 06/14/2010 **Date Analyzed:** 06/14/2010 Lab Batch ID: 810601

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT]	RIX SPIF	Œ DUPLICA'	TE RECO	VERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result Sample [C] %R [D]	Spiked Sample %R D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Вепzепе	<u>N</u>	0.1048	0.0678	99	0.1050	0.0720	69	9	70-130	35	×
Toluene	<u>R</u>	0.1048	0.0670	49	0.1050	0.0713	89	9	70-130	35	×
Ethylbenzene	Ð	0.1048	0.0683	99	0.1050	0.0725	69	9	71-129	35	×
m.p-Xylenes	- N	0.2096	0.1378	99	0.2100	0.1458	69	9	70-135	35	×
o-Xylene	<u>ON</u>	0.1048	0.0662	63	0.1050	0.0708	29	7	71-133	35	X

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

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

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

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Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694

Lab Batch ID: 810595

Date Analyzed: 06/14/2010

QC-Sample ID: 376701-003 S

Batch #:

Project ID: 2004-00061

Matrix: Soil

BEVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	SIX SPII	KE DUPLICA	TE RECO	VERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Spi	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control C Limits I	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>C</u>	D %	Added [E]	Added Result [F] [E]	% R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	866	1040	104	866	623	56	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	

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

Page 17 of 22



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376694

Lab Batch #: 810781 Project ID: 2004-00061

Date Analyzed:06/14/2010Date Prepared:06/14/2010Analyst: LATCORQC- Sample ID:376313-001 DBatch #: 1Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 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	16.3	16.7	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

2 Z 2 2 **6** Z Z YAG 4 TAT brebnet2 □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ × × × × ☐ TRRP Project Name: Lea Station Landfarm 3CI 7 o 29 ld SS Température Upon Receipt: BTEX 8021B/3059 or BTEX 8260 VOCs Free of Headspace? × × × × × Analyze For Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Netals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC Anions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 1320 9001 XT 2001 XT 2.0 E E MS+08 8015B Specify Oth cibryant@basin-consulting.com SOIL SOIL SOIL SOIL SOIL 01.01.0 Other (Specify) Preservation & # of Containers [€]O^ZS^Z€N HOGN OS^zH (505) 396-1429 HCI ^EONH 924 otal #. of Containers benettiii bleii Fax No: e-mail: 0060 0920 0800 0820 0840 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sambled Basin Environmental Consulting, LLC Euglug Depth (325) Beginning Depth Lovington, NM 88260 ولالالكمية Camille Bryant 575)605-7210 Company Address: P.O. Box 381 376094 VZ Cell A G-5 VZ Cell A G-2 VZ Cell A G-3 VZ Cell A G-4 VZ Cell A G-1 FIELD CODE Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions elinquished by (lab use only ORDER #: 9 7 2 (Vinc eau dai) # 8A. ō



Basin Env. / Plains

XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Prelogin / Nonconformance Report - Sample Log-In

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

Page 1 of 1

Date/Time: (p ·)	0.10 10.1	0				
Lab ID#:	<u>376694</u>					
Initials:	AL					
		Sample Receipt Che	ecklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container	in good condition?		(Yes	No	None	
3. Custody seals intac	t on shipping contain	er (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody pr	esent?		(Yés)	No		
5. Sample instructions	complete on chain o	of custody?	(Yes)	No		
6. Any missing / extra	samples?		Yes	(No)		
7. Chain of custody si	gned when relinquish	ned / received?	Yes	No		
8. Chain of custody ag	rees with sample lab	el(s)?	(Pes)	No		
9. Container labels leg	ible and intact?		(Yes)	No		
10. Sample matrix / pr	operties agree with c	hain of custody?	(Yes)	No		
11. Samples in proper	container / bottle?		(Yes)	No		
12. Samples properly	preserved?		(Yes)	No	N/A	
13. Sample container i	ntact?		(Yes)	No		
14. Sufficient sample a	amount for indicated	test(s)?	(Yes)	No		
15. All samples receiv	ed within sufficient h	old time?	Yes	No		
16. Subcontract of sar	nple(s)?		Yes	No	NVA	
17. VOC sample have	zero head`space?		(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
lbs [. L	°C lbs	°C lbs	°C lbs	°(°c
	•	Nonconformance Docu	mentation			
Contact:		ted by:		Date/Time:		
Contact	Comac	ted by		Dater i iiile.	···	
Regarding:						
_						
Corrective Action Tak	en.					
· CONTECTIVE ACTION 18W						
			··			
Check all that apply:		has begun shortly after sample eceptable by NELAC 5.5.8.3.1		ut or tempe	rature	
	☐ Initial and Backup	Temperature confirm out of is and would like to proceed v	temperature cos	nditions		

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
West i-20 East Phone: 432-563-1800

12600 West I-20 East Odessa, Texas 79765

Friorie: 432-563-1713

YAG 4 TAT basbnet2 × □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ TRRP 붐 Project Name: Lea Station Landfarm 4629195 Température Upon Receipt: 0058 X318 10 QEOCHETSUS X318 × × Sance Comments had a Analyze For Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 letels: As Ag Ba Cd Cr Pb Hg Se YB / ESB / CEC Anions (Cl. SO4, Alkalinity) Report Format: 9001 XT 0.0 10 Ē MS108 × sbecity orn cibryant@basin-consulting.com SOIL SOIL SOIL SOIL SOIL 01.01.0 Other (Specify) Na₂S₂O₃ HOBM *****05*H (505) 396-1429 HCI EONH 90| otal #. of Containers benetiiii blei Fax No: e-mail: 080 0820 0840 0060 0920 Time Sampled Received by ELOT 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth **8** Beginning Depth Lovington, NM 88260 Somille Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell A G-5 VZ Cell A G-2 VZ Cell A G-3 VZ Cell A G-4 VZ Cell A G-1 FIELD CODE Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: elinquished by (tab use only ORDER #: S 5 2 ō (Vino eau dal) # 8A_

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XENCO Laboratories

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

Document Titie: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin /	Nonconformance	Report -	Sample	Log-In

Prelogin / Nonconformance Repo	ort - Sample	e Log-in		
client: Pasin Env. / Plains				
Date/Time: (0.10.10 10.10				
Lab ID#: 376694				
Initials: AL				
Sample Receipt Che	cklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Ves)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Pes	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	<u>.</u>	Cooler 5 No.	
ibs /.4 °C ibs °C ibs	°C lbs	°c	lbs	°c
Nonconformance Docum		Data /Times		
Contact: Contacted by:		Date/Time:_		
Regarding:	· · · · · · · · · · · · · · · · · · ·			
Corrective Action Taken:				

Final Ver. 1.000

Check all that apply:

☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

☐ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376699

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376699

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376699. 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. 376699 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376699



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell B G-1	S	Jun-09-10 09:40		376699-001
VZ Cell B G-2	S	Jun-09-10 10:00		376699-002
VZ Cell B G-3	S	Jun-09-10 10:15		376699-003
VZ Cell B G-4	S	Jun-09-10 10:30		376699-004
VZ Cell B G-5	S	Jun-09-10 10:45		376699-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376699
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376699-001,376699-005,376699-002.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376699-005, -001, -002.

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

Batch: LBA-810595 TPH by SW8015 Mod SW8015MOD NM

Batch 810595, 1-Chlorooctane, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 376699-005.

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CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376699
 Date Received:
 06/10/2010

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 376699-003.

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376699-004, -003.

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

within laboratory Control Limits

Batch: LBA-810693 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Page 5 of 24 Final Ver. 1.000



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

Certificate of Analysis Summary 376699 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Project Manager: Brent Barron, II Report Date: 16-JUN-10

	Lab Id:	376699-001	376699-002	376699-003	376699-004	376699-005	
America Dogwood	Field Id:	VZ Cell B G-1	VZ Cell B G-2	VZ Cell B G-3	VZ Cell B G-4	VZ Cell B G-5	
Analysis wey aesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-09-10 09:40	Jun-09-10 10:00	Jun-09-10 10:15	Jun-09-10 10:30	Jun-09-10 10:45	
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-14-10 08:00	Jun-14-10 08:00	Jun-11-10 10:30	
	Analyzed:	Jun-11-10 18:33	Jun-11-10 18:55	Jun-14-10 17:32	Jun-14-10 17:09	Jun-12-10 15:45	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Toluene		ND 0.0021	ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
m.p-Xylenes		ND 0.0021	ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Xylenes. Total		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		14.9 5.18	6.29 5.19	6.39 5.30	6.42 5.15	5.64 5.12	
Percent Moisture	Extracted:						
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		3.39 1.00	3.69 1.00	5.65 1.00	2.92 1.00	2.32 1.00	
TPH by SW8015 Mod	Extracted:	Jun-11-1014:30	Jun-11-10 14:30	Jun-15-10 08:30	Jun-11-10 14:30	Jun-15-10 08:30	
	Analyzed:	Jun-12-10 12:25	Jun-12-10 12:53	Jun-15-10 15:57	Jun-14-10 11:02	Jun-15-10 13:13	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	
C12-C28 Diesel Range Hydrocarbons		ND 15.4	ND 15.5	0.51 UN	ND 15.4	ND 15.3	
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	
Total TPH		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	

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

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Odessa Laboratory Manager Brehl Barron, II

Page 6 of 24



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376699-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:33	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 376699-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:55	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 376699-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 15:45	Su	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 810414 **Sample:** 376694-001 S/MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 810601 Sample: 565716-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

Final Ver. 1.000

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^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810601 Sample: 376694-002 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376699-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 17:09	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 810601 Sample: 376699-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 17:32	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376699-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 12:25	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	76.0	99.5	76	70-135	
o-Terphenyl	37.8	49.8	76	70-135	

Lab Batch #: 810595 **Sample:** 376699-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/12/10 12:53	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	70.4	99.8	71	70-135	
o-Terphenyl	35.0	49.9	70	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810595 **Sample:** 376699-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 11:02	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	87.4	99.8	88	70-135	
o-Terphenyl	42.3	49.9	85	70-135	

Lab Batch #: 810595 Sample: 376701-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810693 Sample: 565772-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/15/10 10:03	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	123	100	123	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 810693 Sample: 565772-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/15/10 10:30	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	111	100	111	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, Project ID: 2004-00061

Lab Batch #: 810693 **Sample:** 377064-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 11:51	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	128	99.5	129	70-135	
o-Terphenyl	50.6	49.8	102	70-135	

Lab Batch #: 810693 Sample: 377064-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 12:18	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	130	99.9	130	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 810693 **Sample:** 376699-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 13:13	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	120	99.6	120	70-135	
o-Terphenyl	55.1	49.8	111	70-135	

Lab Batch #: 810693 Sample: 376699-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 15:57	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	124	100	124	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 376699 Project ID: 2004-00061

 Lab Batch #: 810693
 Sample: 565772-1-BKS
 Matrix: Solid

 Date Analyzed: 06/15/2010
 Date Prepared: 06/15/2010
 Analyst: ASA

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

Reporting Omes. mg/kg	Satch #: 1	DLANK/D	DLAINK SEI	NE KEU	OVERT	STUDI
TPH by SW8015 Mod	Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[B]	[C]	70 K D]	70 K	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1170	117	70-135	
C12-C28 Diesel Range Hydrocarbons	ND	1000	818	82	70-135	

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BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Date Prepared: 06/11/2010 Batch #: Sample: 565602-1-BKS Lab Batch ID: 810414 Analyst: ASA

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE/B	LANKS	PIKE DUPI	ICATE I	SECOVE	CRY STUD	١,	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	<u>-</u>	<u>B</u>	[C]	[a]	Ξ	Result [F]	5	·	<u> </u>	,	
Benzene	Ð	0.1000	0.0986	66	0.1	0.1002	100	2	70-130	35	
Toluene	Ð	0.1000	0.0974	64	0.1	0.0987	66	-	70-130	35	
Ethylbenzene	Ð	0.1000	0.0988	66	0.1	0.1000	100	1	71-129	35	
m.p-Xylenes	<u>S</u>	0.2000	0.1984	66	0.2	0.2003	100	1	70-135	35	
o-Xylene	Ð	0.1000	0.0974	26	0.1	0.0987	66	1	71-133	35	

Analyst: ASA

Lab Batch ID: 810601

Date Prepared: 06/14/2010

Batch #:

Sample: 565716-1-BKS

Date Analyzed: 06/14/2010 Matrix: Solid

Flag Control Limits %RPD 35 35 35 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 71-129 71-133 70-130 70-135 RPD % N m 4 4 4 Blk. Spk ₽ | % | <u>G</u> 105 103 105 105 103 Spike Duplicate Result [F] 0.1046 0.2102 Blank 0.1053 0.10330.1032 Spike Added 0.1 0.1 0.1 0.2 0.1 Ξ Blank Spike %R [D] 108 109 106 109 108 Blank Spike Result 0.10760.10630.10850.2185 0.1075 0.10000.10000.10000.2000 Spike Added 0.1000<u>8</u> Blank
Sample Result
[A] £ \exists E $\frac{1}{2}$ g BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Batch #: 1 Sample: 810781-1-BKS Lab Batch ID: 810781

Matrix: Solid

Units: mg/kg		BLAN	K/BLANK S	PIKE/E	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dun.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	Result [C]	%R [D]	(E)	Duplicate Result [F]	%R [G]	%	%R	%RPD	D
Chloride	ND	10.0	66.6	100	10	8.68	87	14	75-125	20	
Analyst: BEV	Da	te Prepare	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/11/2010	6/11/2010		

Lab Batch ID: 810595

Batch #: 1

Sample: 565721-1-BKS

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	λ	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Reent	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	B		ē	<u>a</u>	Result [F]	<u>5</u>	9/	1 0/	2 No.	
C6-C12 Gasoline Range Hydrocarbons	R	866	1170	117	1000	1130	113	33	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND ND	866	861	86	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699 **Lab Batch #:** 810781

Project ID: 2004-00061

Date Analyzed: 06/14/2010 Date Prepared: 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376313-001 S **Batch #:** 1 **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	272	209	474	97	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

QC-Sample ID: 376694-001 S **Date Analyzed:** 06/12/2010 Lab Batch ID: 810414

Date Prepared: 06/11/2010

Project ID: 2004-00061

Matrix: Soil VSVBatch #: Analyst:

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MATI	RIX SPIF	Œ DUPLICAT	TE RECO	VERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Вепzепе	Ð	0.1197	0.0744	62	0.1200	0.0595	50	22	70-130	35	×
Toluene	ON.	0.1197	0.0741	62	0.1200	0.0594	50	22	70-130	35	×
Ethylbenzene	ON	0.1197	0.0758	63	0.1200	0.0611	51	21	71-129	35	×
m.p-Xylenes	ON	0.2394	0.1515	63	0.2399	0.1239	52	20	70-135	35	×
o-Xylene	ND	0.1197	0.0750	63	0.1200	0.0610	51	21	71-133	35	X

Matrix: Soil Batch #: QC-Sample ID: 376694-002 S Date Analyzed: 06/14/2010

Lab Batch ID: 810601

Analyst: ASA **Date Prepared:** 06/14/2010

× × × × Control Limits %RPD 35 35 35 35 35 Control Limits 70-130 71-129 70-130 70-135 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 9 9 9 9 Spiked Dup. |SR |G| 69 69 69 67 89 Duplicate Spiked Sample Result [F] 0.0713 0.0725 0.14580.0720 0.0708 Spike Added 0.10500.2100 0.10500.10500.1050 Ξ Spiked Sample %R ≘ 9 4 65 99 63 Spiked Sample Result 8790.0 0.0670 0.06830.1378 0.0662 <u>[</u> 0.1048Added 0.10480.10480.2096 0.1048<u>B</u> Parent Sample Result 2 $\overline{\underline{\langle}}$ \exists \exists 2 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Toluene Benzene

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

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



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

Project ID: 2004-00061

Matrix: Soil Batch #: QC-Sample ID: 376701-003 S

BEVAnalyst: **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 Lab Batch ID: 810595

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	SIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Snike	Spiked Sample Spiked Result Sumple	Spiked	Snike	Duplicate Sniked Sample	Spiked	uda	Control Control	Control Limits	[H
Analytes	Result [A]	Added B]	[2]	2 % B	Added [E]	Added Result [F]		%	%R	%RPD	<u>.</u>
C6-C12 Gasoline Range Hydrocarbons	Ð	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	
Lab Batch ID: 810693	QC-Sample ID: 377064-002 S	377064	.002 S	Bat	Batch #:	1 Matrix: Soil	: Soil				

Matrix: Soil VSVAnalyst: Batch #: QC-Sample ID: 377064-002 S **Date Prepared:** 06/15/2010

Date Analyzed: 06/15/2010

ceporting Units: mg/kg		M	ATRIX SPIK	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Spi	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]		[C]		Added [E]	Result [F]	%R [G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	N ON	1070	1230	115	1070	1290	121	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1070	678	79	1070	881	82	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

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376699

Lab Batch #: 810781 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376313-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	16.3	16.7	2	20	

Environmental Lab of Texas

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

Odessa, Texas 79765

× YAG 4 TAT bashned? ☐ NPDES FedEx Lone Star ပ္ SUSH TAT (Pre-Schedule) 24, 48, 72 hrs 7. 40 TRRP 됨 Project Name: Lea Station Landfarm RCI Temperature Upon Receipt: 81EX 8021B/5030 O BIEX 8260 × × Analyze For Project Loc: Lea County, NM Time Court of the Court of Cou PO #: PAA - J. Henry Project #: 2004-00061 X Standard yetala: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC Injury) Alkalinity) Cations (Ca. Mg, Na. K) Report Format: 9001 XT 3001 XT <u>ه</u> او MS LOS Specify Oth aldetoq-noN = qV cjbryant@basin-consulting.com SOIL SOIL SOIL SOIL 01.910 249 M-Dulyud Matel 21-2ing Other (Specify) 9uoM _EO_SS_SBN HOBM OS^zH (505) 396-1429 HCI ONH × 90| otal #, of Containers benetliii bleli Fax No: e-mail: 1000 1015 1045 0940 1030 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth کا مقل سری <u>2</u>0 Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell B G-5 VZ Cell B G-2 VZ Cell B G-3 VZ Cell B G-4 VZ Cell B G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: inquished by (kab use onty) ORDER #: (yino seu dei) # &A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Phoenix, San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
Prelogin / Nonconformance Repo	rt - Sampl	e Loa-In		
Proceed Front / Oloine	•	· ·		
Lab ID #: 376699 Initials: AL				
	klint			
Sample Receipt Chec	KliSt			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	ł.
3. Custody seals intact on shipping container (cooler) and botties?	(VeS)	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Pes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	o.	Cooler 5 No	·
Ibs /. 4 °C ibs °C ibs °	C Ibs	<u></u> °c	lbs	•
Nonconformance Docume	entation			
Contact: Contacted by:		Date/Time:		
				
Regarding:				
				
Corrective Action Taken:				

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Initial and Backup Temperature confirm out of temperature conditions

□ Client understands and would like to proceed with analysis

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

Standard TAT & DAY ☐ NPDES FedEx Lone Star FUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7. × 1 TRRP Project Name: Lea Station Landfarm 3CI Temperature Upon Receipt: VOCs Free of Headspace? BTEX 8021B/5030 or BTEX 8260 Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: Jujous (CI, SO4, Alkalinity) (Ca, Mg, Na, K) Report Format: %·09·% 9001 XT 2001 XT <u>ه</u> Ē × **EFOO** × × 80198 :Нал Specify Oth SOIL cibryant@basin-consulting.com SOIL SOIL SOIL 01.010 om ~ Dyukiud Masel ar – aingð 949 Other (Specify) enoM OSSSEN Preservation & # of HOBM *OS^zH (505) 396-1429 HCI ^EONH × × otal #. of Containers Majora dam Fax No: e-mail: 1015 1000 1045 0940 1030 DekymeS amiT Recymped by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth جا عالاسمكر <u>2</u> Lovington, NM 88260 **Camille Bryant** (575)605-7210 Company Address: P.O. Box 381 VZ Cell B G-5 VZ Cell B G-2 VZ Cell B G-3 VZ Cell B G-4 VZ Cell B G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: nquished by (lab use only) ORDER #: (vino esu dal) * BA.



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

~	. 7 a.	ioncomornance Ne	port - Sample	EOg-III		
Client: Basin		ins				
Date/Time: (0 · 10		<u>0</u>				
Lab ID#: 3	76699					
Initials:	AL	 				
		Sample Receipt Cl	necklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container in	good condition?		Yes	No	None	
		er (cooler) and bottles	(Yes)	No	N/A	
4. Chain of Custody pres	sent?		Yes	No		_
5. Sample instructions of	omplete on chain o	f custody?	Yes	No		
6. Any missing / extra sa	imples?		Yes	_(No)_		
7. Chain of custody sign	ed when relinquish	ed / received?	Yes	No		
8. Chain of custody agre	es with sample lab	el(s)?	(Pes)	No		
9. Container labels legib	le and intact?		(Yes)	No		
10. Sample matrix / prop	erties agree with cl	nain of custody?	(Yes)	No		
11. Samples in proper co	ontainer / bottle?		Yes	No		
12. Samples properly pr	eserved?		Yes	No	N/A	
13. Sample container int	act?		(Yes)	No		
14. Sufficient sample ап	nount for indicated t	test(s)?	(Yes)	No		
15. All samples received	l within sufficient he	old time?	<u>(Pes</u>	No		
16. Subcontract of samp	ole(s)?		Yes	No	(N/A)	
17. VOC sample have ze	ro head space?		(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No	١.	Cooler 5 No.	
lbs /.4 °C	ibs	°C lbs	°C [bs	°	lbs	°C
	1	ionconformance Doc	umentation			
Contact:	Contact	ted by:		Date/Time:		
Regarding:					-	
Corrective Action Taker	1:					
						,
Check all that apply:	Cooling process h	nas begun shortly after saп	nnling event and o	ut of temps	erature	
oneck an macappiy.		ceptable by NELAC 5.5.8.3		o. wiiibe		

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 376700

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

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

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Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376700

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376700. 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. 376700 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376700



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell C G-1	S	Jun-09-10 11:00		376700-001
VZ Cell C G-2	S	Jun-09-10 11:15		376700-002
VZ Cell C G-3	S	Jun-09-10 11:30		376700-003
VZ Cell C G-4	S	Jun-09-10 11:45		376700-004
VZ Cell C G-5	S	Jun-09-10 12:00		376700-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376700
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376700-004, -002, -003, -005, -001.

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

within laboratory Control Limits

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376700-001,376700-005,376700-003,376700-002.

Batch: LBA-810595 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376700 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

decided Field Id. S 6 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1 1. 1.1.	100 000	000 00070	200 00070	700 000717	200,000,10
Heid Hz		ran in:	100-00/6/6	2/0/-00/5	5/0/-00/02	5/0/-00/c	5,00-00/0/5
Marker Doptic Marker SOIL SOIL SOIL	Amakaia Dogwastad	Field Id:	VZ Cell C G-1	VZ Cell C G-2	VZ Cell C G-3	VZ Cell C G-4	VZ Cell C G-5
Name	Tumpsis weywest	Depth:					
O21 Exeraced: Initial Dy E300 Initial Dy		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
December Extracreed; Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-12-10 17:37 Jun-12-10 18:00 Jun		Sampled:	Jun-09-10 11:00	Jun-09-10 11:15	Jun-09-10 11:30	Jun-09-10 11:45	Jun-09-10 12:00
	BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30
		Analyzed:	Jun-12-10 16:52	Jun-12-10 17:15	Jun-12-10 17:37	Jun-12-10 18:00	Jun-12-10 18:22
Name Name		Units/RL:					mg/kg RL
ND 0.0021 ND 0.0021 ND 0.0021 ND 0.0024 ND 0.0020 ND 0.0010 ND 0	Benzene					ND 0.0010	ND 0.0010
Interest No 0.0011 No 0.0011 No 0.0012 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0010 No 0.0011 No 0.0011 No 0.0011 No 0.0011 No 0.0011 No 0.0011 No 0.0011 No 0.0011 No 0.0010 No 0.	Toluene			ND 0.0021	ND 0.0024	ND 0.0020	ND 0.0020
ND 0.0021 ND 0.0021 ND 0.0024 ND 0.0020 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0012 ND 0.0010 ND 0	Ethylbenzene						ND 0.0010
ND 0.0011 ND 0.0011 ND 0.0012 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0010 ND 0	m.p-Xylenes			ND 0.0021	ND 0.0024	ND 0.0020	ND 0.0020
In py E300	o-Xylene			ND 0.0011		ND 0.0010	ND 0.0010
II by E300	Xylenes. Total						ND 0.0010
Dy E300 Extracted:	Total BTEX						ND 0.0010
Time	Inorganic Anions In Soil by E300	Extracted:					
		Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21
Extracted:		Units/RL:					mg/kg RL
Factorized: Analyzed: Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:30 Iu	Chloride						8.71 5.11
Mod Extracted: Inn-11-10 14:28 Jun-11-10 14:30	Percent Moisture	Extracted:					
Mod Extracted; Fig. % RL Im-11-10 14:30 Im-11-10 1		Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
Mod Extracted: Jun-11-10 14:30		Units/RL:					% RL
Mod Extracted: Inn-11-10 14:30	Percent Moisture						2.06 1.00
Analyzed: Inn-14-10 18:21 Inn-14-10 13:22 Inn-14-10 13:49 Inn-14-10 14:16 Inn-14-10 14:10 Inn-14-10 14:10<	TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
Onits/RL: mg/kg RL mg/kg ND 15.3 ND ons ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND		Analyzed:	Jun-14-10 18:21	Jun-14-10 13:22	Jun-14-10 13:49	Jun-14-10 14:16	Jun-14-10 14:43
ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.8 nns ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.5 nn 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.5		Units/RL:					mg/kg RL
ons ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND	C6-C12 Gasoline Range Hydrocarbons						ND 15.4
N 159 NN 177 NN 158 ND 158	C12-C28 Diesel Range Hydrocarbons						ND 15.4
	C28-C35 Oil Range Hydrocarbons		ND 15.9	ND 15.8	7.71 QN	ND 15.5	ND 15.4
Total TPH ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 1	Total TPH						ND 15.4

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	SU	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difhiorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376700-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 16:52	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 810414 Sample: 376700-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 17:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

Final Ver. 1.000

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^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/12/10 17:37	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376700-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 18:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Units: mg/kg Date Analyzed: 06/12/10 18:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 810414 Sample: 376694-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	112	99.8	112	70-135		
o-Terphenyl	51.0	49.9	102	70-135		

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	109	99.5	110	70-135		
o-Terphenyl	51.1	49.8	103	70-135		

Lab Batch #: 810595 Sample: 376700-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 13:22	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	96.0	99.7	96	70-135	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 810595 Sample: 376700-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 13:49	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	103	100	103	70-135	
o-Terphenyl	50.3	50.1	100	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 376700-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 14:16	SU	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	101	111	70-135	
o-Terphenyl	53.6	50.3	107	70-135	

Lab Batch #: 810595 Sample: 376700-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 14:43	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 x mary tes					
1-Chlorooctane	98.7	101	98	70-135	
o-Terphenyl	47.9	50.3	95	70-135	

Lab Batch #: 810595 **Sample:** 376701-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810595 **Sample:** 376700-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 18:21	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	106	100	106	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700

Lab Batch ID: 810414

Analyst: ASA

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Batch #: 1 Sample: 565602-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	-	[B]	[c]		3	Result [F]	<u>[5</u>	·			
Benzene	Q.	0.1000	9860.0	66	0.1	0.1002	100	2	70-130	35	
Toluene	Æ	0.1000	0.0974	26	0.1	0.0987	66	_	70-130	35	
Ethylbenzene	Ð	0.1000	0.0988	66	0.1	0.1000	100	-	71-129	35	
m-p-Xylenes	QN.	0.2000	0.1984	66	0.2	0.2003	100	-	70-135	35	
0-Xylene	£	0.1000	0.0974	- 6	0.1	0.0987	66	-	71-133	35	

Analyst: LATCOR

Date Prepared: 06/14/2010

Batch #: 1

Date Analyzed: 06/14/2010

Sample: 810781-1-BKS Lab Batch ID: 810781

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result [A]	Spike Added	Blank Spike Resulf	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[.	[B]	[C]	[a]	[E]	Result [F]	[6]	/ E			
Chloride	- E	10.0	66'6	100	10	89.8	87	14	75-125	20	

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

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BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700 Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Lab Batch ID: 810595 Sample: 565721-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>.</u>	B	[C]	<u>a</u>	E	Result [F]	<u>[</u>]				
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Ð	866	861	98	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700 **Lab Batch #:** 810781

Project ID: 2004-00061

Date Analyzed: 06/14/2010 **QC- Sample ID:** 376313-001 S

Date Prepared: 06/14/2010 **Analyst:** LATCOR

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg MATRIX SPIKE

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	272	209	474	97	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

BRL - Below Reporting Limit



Work Order #: 376700

Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Project ID: 2004-00061

Batch #: QC-Sample ID: 376694-001 S Date Analyzed: 06/12/2010 Lab Batch ID: 810414

Matrix: Soil

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	RIX SPIF	Œ DUPLICA'	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample C %R	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[<u>B</u>]		ē	Ξ	•	[5]				
Вепzепе	ND	0.1197	0.0744	62	0.1200	0.0595	50	22	70-130	35	X
Toluene	ND	0.1197	0.0741	62	0.1200	0.0594	50	22	70-130	35	X
Ethylbenzene	ND	0.1197	0.0758	63	0.1200	0.0611	51	21	71-129	35	X
m.p-Xylenes	ND	0.2394	0.1515	63	0.2399	0.1239	52	20	70-135	35	X
o-Xylene	ND	0.1197	0.0750	63	0.1200	0.0610	51	21	71-133	32	X

Matrix: Soil BEVAnalyst: Batch #: QC-Sample ID: 376701-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 **Lab Batch ID:** 810595

Reporting Units: mg/kg		M	ATRIX SPIKI	[/MAT]	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY 8	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	10	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[</u>	<u>B</u> %	Added [E]	Result [F]	% R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	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

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376700

Lab Batch #: 810781 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376313-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	/ SAMPLE	DUPLIC	ATE REC	OVERY	
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	16.3	16.7	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

YAG 4 TAT brabnat8 Lone Star □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ ٦, M.A.O.M. TRRP Project Name: Lea Station Landfarm しならなる。 J 07.9 (4.5.5 Temperature Upon Receipt: VOCs Free of Headspace? BTEX 8021E/5639 or BTEX 8260 × Analyze Library on companies of Custody seals on con Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 jetaja: ya ya ga ca cu up Ha se TCLP TOTAL SAR LESP LCEC mions (Cl. SO4, Alkalinity) Report Format: <u>ව</u> 9001 XT 9001 XI :Hd. m. × METOB cibryant@basin-consulting.com SOL SOIL SOIL SOIL SO 0.00 M-Drinking Water 9 Other (Specify) Preservation & # of Containers OS^zH (505) 396-1429 HCI [€]ONH × CG × otal #. of Containers benetii'i ble e-mail: Fax No: 1115 1130 1145 1200 1100 Time Sampled Received by ELOT 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth <u>88</u> Beginning Depth <u>₹</u> Lovington, NM 88260 Complete Camille Bryant 575)605-7210 Company Address: P.O. Box 381 VZ Cell C G-5 VZ Cell C G-3 VZ Cell C G-2 VZ Cell C G-4 VZ Cell C G-1 FIELD CODE 376700 Sampler Signature\ Project Manager: Company Name Telephone No: City/State/Zip: Special instructions: ta peusine (lab use only) ORDER #: (vinc eau del) # 8A



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas
Houston, Miami, Odessa, Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

11

_				
Prelogin / Nonconformance Repor	t - Sample	Log-In		
client: Basin Env. / Plains				
Date/Time: (0.10.10 / (0.10)				
Lab ID#: 376700				
Initials: AL				
Sample Receipt Check	list			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	Noпe	
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	_
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(AVA)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	•	Cooler 5 No.	
ibs 1.4 °C lbs °C lbs °C	1	°C	Ibs	°C
Nonconformance Docume	ntation		·	
Contact: Contacted by:		Date/Time:_		
Regarding:				
		•	- , ,, ,	
Corrective Action Taken:				

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Environmental Lab of Texas

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

Odessa, Texas 79765

YAO 4 TAT bashned2 × □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7 (XQS 51 TRRP M.R.O. Project Name: Lea Station Landfarm by Courier UPS 1 1 02 9 1455 Temperature Upon Receipt: BTEX 8021E/5030 of BTEX 8260 × × × × VOCs Free of Headspace? Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard wetals: As Ag Ba Cd Cr Pb Hg Se TCLP: SAR / ESP / CEC mions (Cl. SO4, Alkalinity) Setions (Ca., Mg, Na, K) Report Format: <u>|0</u>:9 9001 XT 4001 XT :HdJ 1300 2 Time 86108 METOB × Specify Oth cibryant@basin-consulting.com Matrix SOIL SOIL SOIL SOIL 잃 0.01.0 9 Other (Specify) Preservation & # of Containers HON HOSN OSz+ (505) 396-1429 нсі HNO × × × × **9**0| otal #, of Containers benetiiii blei e-mail: Fax No: 1100 1115 1130 1145 1200 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth <u>8</u> E E Beginning Depth 30 34 Lovington, NM 88260 Consulter **Camille Bryant** (5/5)605-7210 Company Address: P.O. Box 381 VZ Cell C G-2 VZ Cell C G-3 VZ Cell C G-4 VZ Cell C G-5 VZ Cell C G-1 FIELD CODE 376700 Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: ed behsinbe (lab use only) ORDER #: (yinc seu dai) # 8A.



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

		Prel	ogin / Nonconformance Report - Sample Log-In
πt:	Pasin	Env.	/ Plains

Clien 6.10.10 16:10 Date/Time: 374700

Lab ID#:

Initials:

Sample Receipt Checklist

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

Nonconformance Documentation

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

- Check all that apply:

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

Analytical Report 376701

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376701

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376701. 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. 376701 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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

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Sample Cross Reference 376701



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell D G-1	S	Jun-09-10 12:20		376701-001
VZ Cell D G-2	S	Jun-09-10 12:40		376701-002
VZ Cell D G-3	S	Jun-09-10 13:00		376701-003
VZ Cell D G-4	S	Jun-09-10 13:20		376701-004
VZ Cell D G-5	S	Jun-09-10 13:40		376701-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376701
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 376701-001,376701-005,376701-003,376701-002.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376701-001, -005, -003, -002, -004.

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

Batch: LBA-810595 TPH by SW8015 Mod

None

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376701 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Project Manager: Brent Barron, II Report Date: 16-JUN-10

					5	, , , , , , , , , , , , , , , , , , , ,
	Lah Id:	376701-001	376701-002	376701-003	376701-004	376701-005
Assertante Dones and	Field Id:	VZ Cell D G-1	VZ Cell D G-2	VZ Cell D G-3	VZ Cell D G-4	VZ Cell D G-5
Anatysis Requesien	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	TIOS
	Sampled:	Jun-09-10 12:20	Jun-09-10 12:40	Jun-09-10 13:00	Jun-09-10 13:20	Jun-09-10 13:40
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30
	Analyzed:	Jun-12-10 18:45	Jun-12-10 19:08	Jun-12-10 19:30	Jun-12-10 19:53	Jun-12-10 20:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Toluene		ND 0.0021	ND 0.0020	ND 0.0020	ND 0.0021	ND 0.0021
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0:0010	ND 0.0010
m.p-Xylenes		ND 0.0021	ND 0.0020	ND 0.0020	ND 0.0021	ND 0.0021
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Xylenes. Total		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Inorganic Anions In Soil by E300	Extracted:					
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 19:11	Jun-14-10 19:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 5.21	13.1 5.09	ND 5.01	5.94 5.21	22.7 5.10
Percent Moisture	Extracted:					
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
	Units/RL:	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.10 1.00	1.80 1.00	ND 1.00	4.08 1.00	1.92 1.00
Poin \$108WS yd HTT	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
	Analyzed:	Jun-14-10 15:10	Jun-14-10 15:38	Jun-14-10 16:05	Jun-14-10 22:49	Jun-14-10 23:16
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
Total TPH		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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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

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Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376701-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 18:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810414 Sample: 376701-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:08	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810414 Sample: 376701-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:30	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 376701-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:53	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Units: mg/kg Date Analyzed: 06/12/10 20:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 810414 Sample: 376694-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

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Surrogate Recovery [D] -100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376701-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:10	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	50.3	50.2	100	70-135	

Lab Batch #: 810595 **Sample:** 376701-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 15:38	SURROGATE RECOVERY 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	48.2	50.1	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, **Project ID:** 2004-00061

Lab Batch #: 810595 **Sample:** 376701-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:05	Su	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.0	99.5	96	70-135	
o-Terphenyl	45.3	49.8	91	70-135	

Lab Batch #: 810595 Sample: 376701-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	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	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	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	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376701-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 22:49	SU	RROGATE RE	ECOVERY S	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			l loi		
1-Chlorooctane	99.7	99.8	100	70-135	
o-Terphenyl	47.4	49.9	95	70-135	

Lab Batch #: 810644 **Sample:** 376701-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 23:16	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	98.1	99.6	98	70-135	
o-Terphenyl	46.1	49.8	93	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	Su	RROGATE RE	ECOVERY	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	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376701

Analyst: ASA

Lab Batch ID: 810414

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Matrix: Solid

Batch #: Sample: 565602-1-BKS

Flag Control Limits %RPD 35 35 35 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 71-129 70-130 70-135 71-133 RPD % N Blk. Spk Вир. |G| 100 100 100 66 66 Spike Duplicate Result [F] Blank 0.10020.0987 0.10000.2003 0.0987 Spike Added Ξ 0.1 0.7 0.1 0.7 0.1 Blank Spike %R [D] 66 67 66 66 67 Blank Spike Result 0.09860.0974 0.0988 0.19840.0974 <u>5</u> Spike Added 0.1000 0.1000 0.1000 0.1000 0.2000 8 Sample Result Blank B £ $\frac{1}{2}$ \exists B BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Analyst: LATCOR

Date Prepared: 06/14/2010

Date Analyzed: 06/14/2010

Matrix: Solid Batch #: 1 Sample: 810781-1-BKS Lab Batch ID: 810781

Units: mg/kg		BLAN	3LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUD)	PIKE / B	LANKS	PIKE DUPL	CATE I	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[V]	B	[C]	[D]	E	Dupneaue Result [F]	[6]		70K	70KFD	
Chloride	ON	10.0	66'6	100	10	89.8	L8	14	75-125	20	

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376701 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 Date Analyzed: 06/14/2010

> Batch #: Sample: 810796-1-BKS Lab Batch ID: 810796

Matrix: Solid

Units: mg/kg		BLAIN	V/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE	KECOVE	KY STUD	Y	
Inorganic Anions In Soil by E300	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>e</u>	[<u>C</u>]	<u> </u>	E	Result [F]	<u>5</u>				
Chloride	QN	10.0	8.62	98	10	9.52	56	10	75-125	20	
Analyst: BEV	Da	te Prepare	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/14/2010	6/14/2010		

Batch #: 1 Sample: 565718-1-BKS Lab Batch ID: 810644

Matrix: Solid

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % Blk. Spk Рир 15. % Р 116 88 Duplicate Result [F] Blank Spike 1160 878 Spike Added Ξ 266 266 Blank Spike %R [D] 115 89Blank Spike Result 1150 <u>5</u> 893 Spike Added 866 866 <u>B</u> Sample Result Blank V Z B TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Sample: 565721-1-BKS Lab Batch ID: 810595

Analyst: BEV

Batch #: |

Date Prepared: 06/11/2010

Date Analyzed: 06/11/2010

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

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	<u>t</u>	[B]	[C]	1 [a]	<u> </u>	Dupneare Result [F]	1 6	0/	1 0/	/okr	
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	2	866	861	98	1000	1010	101	16	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





Work Order #: 376701

Lab Batch #: 810781

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Date Analyzed: 06/14/2010 **Date Prepared:** 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376313-001 S Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATF	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	272	209	474	97	75-125	

Lab Batch #: 810796

Date Prepared: 06/14/2010 Analyst: LATCOR **Date Analyzed:** 06/14/2010

QC- Sample ID: 376701-004 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	5.94	104	113	103	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

BRL - Below Reporting Limit

Final Ver. 1.000

Page 14 of 20



Form 3 - MS / MSD Recoveries



Project ID: 2004-00061

Matrix: Soil

Project Name: Lea Station Landfarm

Batch #: QC-Sample ID: 376694-001 S Date Analyzed: 06/12/2010

Lab Batch ID: 810414

Work Order #: 376701

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPII	Œ DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added IB1	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R	Spike Added IE1	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	FI ag
Benzene	<u> </u>	0.1197	0.0744	62	0.1200	0.0595	50	22	70-130	35	×
Toluene	<u>S</u>	0.1197	0.0741		0.1200		50	22	70-130	35	×
Ethylbenzene	<u>N</u>	0.1197	0.0758	63	0.1200	0.0611	51	21	71-129	35	×
m.p-Xylenes	<u>N</u>	0.2394	0.1515	63	0.2399	0.1239	52	20	70-135	35	×
o-Xylene	ON.	0.1197	0.0750	63	0.1200	0.0610	51	21	71-133	35	×

Matrix: Soil BEV Analyst: Batch #: QC-Sample ID: 376701-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 **Lab Batch ID:** 810595

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	RIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	O O		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[C]</u>	3 E	Added [E]	Result [F]	% [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	<u>R</u>	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	
Lab Batch ID: 810644 Date Analyzed: 06/15/2010	QC-Sample ID: 376705-003 S Date Prepared: 06/11/2010	376705. 06/11/20	-003 S 010	Bat Anz	Batch #: Analyst:	l Matrib BEV	Matrix: Soil				
Reporting Units: mg/kg		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	IIX SPII	Œ DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	9	1060	688	84	1060	894	84	-	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376701

Lab Batch #: 810781 Project ID: 2004-00061

Date Analyzed:06/14/2010Date Prepared:06/14/2010Analyst: LATCORQC- Sample ID:376313-001 DBatch #: 1Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810796

 Date Analyzed:
 06/14/2010
 Date Prepared:
 06/14/2010
 Analyst:
 LATCOR

 QC- Sample ID:
 376701-004 D
 Batch #:
 1
 Matrix:
 Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/kg **Inorganic Anions In Soil by E300** Sample Control Parent Sample RPD Duplicate Limits Result Flag Result %RPD [A] [B] Analyte 5.94 ND NC 20 Chloride

Lab Batch #: 810301

 Date Analyzed: 06/11/2010
 Date Prepared: 06/11/2010
 Analyst: JLG

 QC- Sample ID: 376694-001 D
 Batch #: 1
 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	16.3	16.7	2	20	

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

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Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Odessa, Texas 79765 12600 West I-20 East

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

YAG 4 TAT brebnet2 Lone Star □ NPDES EUSH TAT (Pre-Schedule) 24, 48, 72 hrs. ပ္ ट्योगिस × × × ∏ TRRP M.R.O.P Project Name: Lea Station Landfarm 10E by Courier UPS 1 COT9 (45% I ELEX 8021B/5030 or BTEX 8260 × × Analyze For VOCs Free of Headspa Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard yetals: ys yd ga Cq Ct bp Hd Se TOTAL TCLP SAR / ESP / CEC Report Format: 9001 XT 4X 1005 :HdJ Ē METOR :HdJ × × × × Specify Oth cibryant@basin-consulting.com SOL SOIL SOL SOIL 25 Other (Specify) Preservation & # of Container enoM COSSEN HOBM OS^zH (505) 396-1429 HCI [©]ONH × 90 otal #. of Containers Jam benetili∃ blei Fax No: e-mail: 1240 1300 1340 1220 1320 Time Sampled 1/a/ver Received by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle 10 Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell D G-3 VZ Cell D G-4 VZ Cell D G-5 VZ Cell D G-2 VZ Cell D G-1 FIELD CODE 376701 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Refinduished by (lab use only) ORDER #: (yino esu dai) # 8A



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

	Phoenix,	San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
F	Prelogin / N	lonconformance Re	port - Sampl	e Log-In		
client: Basin En	1. / Pla	ins				
(5 : 6						
	101					
Initials:	71					
		Sample Receipt Ch	necklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container in good	condition?		(Ye)	No	None	
3. Custody seals intact on sh	ipping contain	er (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?			(Yes)	No		
5. Sample instructions compl	ete on chain o	f custody?	(Yes)	No		
6. Any missing / extra sample	s?		Yes	(No)		
7. Chain of custody signed w	hen relinquish	ed / received?	Yes	No		
8. Chain of custody agrees w	ith sample lab	el(s)?	(Fis)	No		
9. Container labels legible an	d intact?		(Yes)	No		
10. Sample matrix / properties	s agree with cl	nain of custody?	(Yes)	No		
11. Samples in proper contain	ner / bottle?		Yes	No		
12. Samples properly preserv	ed?		Yes	No	N/A	
13. Sample container intact?			(Yes)	No		
14. Sufficient sample amount	for indicated	test(s)?	Yes	No		
15. All samples received with	in sufficient h	old time?	(Yès)	No		
16. Subcontract of sample(s)	?		Yes	No	(N/A)	
17. VOC sample have zero he	ad space?		(Yes)	No	N/A	_
18. Cooler 1 No. Coo	ler 2 No.	Cooler 3 No.	Cooler 4 No).	Cooler 5 No	•
lbs . 4 °C	lbs	°C lbs	°C ibs	°C	lbs	°c
	,	Nonconformance Doc	umentation			
Contact	Contact	ted by:		Date/Time:		
Jonate				5 466711116		
Regarding:						
	<u>,</u>					
Corrective Action Taken:						
-	·····					
	···					

□ Initial and Backup Temperature confirm out of temperature conditions

Check all that apply:

☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

Environmental Lab of Texas

× × YAG 4 TAT basbnet2 Lone Stay □ NPDES ပ္ RUSH TAT (Pre-Schedule) 24, 48, T2 hrs 2 TRRP M.P.O.I Project Name: Lea Station Landfarm Temperature Upon Receipt: × × ELEX 8021B/5040 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Heads PO #: PAA - J. Henry X Standard Project #: 2004-00061 tals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL Anions (Cl, SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 2001 XT 2% <u>3</u> MS108 × 80158 1.814 :HdJ cibryant@basin-consulting.com SOIL SOIL SOF 잃 M-Dyuklud Mater 25-2ingd Other (Specify) BUON _EO_SS_SBN HOSN 'OS^zH (505) 396-1429 HCI HOO Fotal #. of Containers benetilii blei Fax No: e-mail: 1220 1240 1300 1320 1340 Time Sampled 1 Natura Received by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell D G-5 VZ Cell D G-2 VZ Cell D G-3 VZ Cell D G-4 VZ Cell D G-1 FIELD CODE 376701 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: inquished by (lab use only) ORDER #: (yino eeu dai) # &A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin /	Nonconformance	Report	- Sample	Log-In
------------	----------------	--------	----------	--------

client: Basin Env. / Plains				
Date/Time: (0.10.10 /(0.10				
Lab ID#: 376701				
Initials: AL				
Sample Receipt Che	ecklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		· ····
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	(Yès	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No.	
lbs /.4 °C ibs °C ibs	°C lbs	°C	lbs	°C
Nonconformance Docu	imentation	Date/Time:_	·	<u></u>
Regarding:				
Corrective Action Taken:				
Check all that apply: Cooling process has begun shortly after same condition acceptable by NELAC 5.5.8.3.	1.a.1.		rature	

☐ Client understands and would like to proceed with analysis

Analytical Report 376702

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

Aciico-Odessa (EFA Lao code, 1 A00136). Texas (1104/04400-1A

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376702

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376702. 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. 376702 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 376702



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell E G-1	S	Jun-09-10 14:00		376702-001
VZ Cell E G-2	S	Jun-09-10 14:20		376702-002
VZ Cell E G-3	S	Jun-09-10 14:40		376702-003
VZ Cell E G-4	S	Jun-09-10 15:00		376702-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376702
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376702-003, -001, -002, -004

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376702-003.

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376702-003, -001, -002, -004.

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

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376702 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

	Lah Id:	376702-001	376702-002	376702-003	376702-004
Ameliante Dame and	Field Id:	VZ Cell E G-1	VZ Cell E G-2	VZ Cell E G-3	VZ Cell E G-4
Analysis Kequesiea	Depth:				
	Matrix:	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-09-10 14:00	Jun-09-10 14:20	Jun-09-10 14:40	Jun-09-10 15:00
BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45
	Analyzed:	Jun-12-10 23:37	Jun-13-10 01:06	Jun-13-10 01:28	Jun-13-10 01:51
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Toluene		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0020
Ethylbenzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
m.p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0020
o-Xylene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Xylenes. Total		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Total BTEX		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Inorganic Anions In Soil by E300	Extracted:				
	Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 5.50	ND 5.26	6.87 5.50	5.38 5.08
Percent Moisture	Extracted:				
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
	Units/RL:	% RL	% RL	% RL	% RL
Percent Moisture		9.12 1.00	4.92 1.00	9.06 1.00	1.64 1.00
TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
	Analyzed:	Jun-14-10 23:43	Jun-15-10 00:09	Jun-15-10 00:36	Jun-15-10 01:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
C12-C28 Diesel Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
C28-C35 Oil Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
Total TPH		ND 16.6	ND 15.7	ND 16.5	ND 15.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the thoughout 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 breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

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Odessa Laboratory Manager

Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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

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Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45 SURROGATE RECOVERY STU				STUDY	
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	Date Analyzed: 06/12/10 23:15 SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 23:37	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 810421 Sample: 376702-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 376702-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

Lab Batch #: 810421 Sample: 376702-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 01:06	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

 Lab Batch #: 810421
 Sample: 376702-003 / SMP
 Batch: 1
 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 01:28	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 376702-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 01:51	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376702-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 23:43	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	99.9	100	100	70-135	
o-Terphenyl	48.0	50.2	96	70-135	

Lab Batch #: 810644 Sample: 376702-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 00:09	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	99.0	99.5	99	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376702-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 00:36	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	112	100	112	70-135	
o-Terphenyl	54.3	50.0	109	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 06/15/10 01:02	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	100	100	100	70-135	
o-Terphenyl	47.4	50.1	95	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	125	100	125	70-135	
o-Terphenyl	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	124	100	124	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Analyst: ASA

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Sample: 565604-1-BKS Lab Batch ID: 810421

Batch #: 1

Date Prepared: 06/11/2010

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	JCATE F	RECOVE	ERY STUD	Į,	
BTEX by EPA 8021	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>e</u>	<u>[C]</u>	ē	<u> </u>	Result [F]	<u>5</u>				
Benzene	ON	0.1000	0.0946	56	0.1	8660:0	100	S	70-130	35	
Toluene	QN	0.1000	0.0915	92	0.1	0960:0	96	S	70-130	35	
Ethylbenzene	QN	0.1000	0.0908	16	1.0	2560:0	96	S	71-129	35	
m.p-Xylenes	ON.	0.2000	0.1791	06	0.2	0.1895	56	9	70-135	35	
o-Xylene	QN.	0.1000	0.0905	91	0.1	8560.0	96	9	71-133	35	

Analyst: LATCOR

Date Prepared: 06/14/2010

Date Analyzed: 06/14/2010

Lab Batch ID: 810796

Batch #: 1 Sample: 810796-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	TANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	ERY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[]	[B]	[C]	[a]	[E]	Result [F]	[6]	/ (
Chloride	<u> </u>	10.0	8.62	98	10	9.52	56	10	75-125	20	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Project ID: 2004-00061

Analyst: BEV		Da	te Prepar	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/14/2010	6/14/2010		
Lab Batch ID: 810644	Sample: 565718-1-BKS	KS	Batch #:	1 #: 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	,	
TPH by SW8015 Mod	5 Mod	Blank Sample Result	Spilke Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>₹</u>	B	Kesult [C]	¥ [_	<u> </u>	Duplicate Result [F]	<u> </u>	°,	%K		
C6-C12 Gasoline Range Hydrocarbons	suoc	ND	866	1150	511	266	1160	911	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	suc	<u>ON</u>	866	893	68	266	828	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702 **Lab Batch #:** 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010 **Analyst:** LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Lab Batch ID: 810421

Date Analyzed: 06/13/2010

QC-Sample ID: 376702-001 S

Matrix: Soil Batch #:

Project ID: 2004-00061

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPIF	Œ DUPLICA'	TE RECO	OVERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Вепгепе	QN.	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	×
Toluene	QN	0.1089	0.0596	55	0.1096	0.0549	50	×	70-130	35	×
Ethylbenzene	Ð	0.1089	9990:0	61	0.1096	0.0618	95	7	71-129	35	×
m.p-Xylenes	<u>Q</u>	0.2179	0.0639	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	Ð	0.1089	0.0642	59	0.1096	0.0598	55	7	71-133	35	×

Matrix: Soil BEVBatch #: QC-Sample ID: 376705-003 S Date Analyzed: 06/15/2010 Lab Batch ID: 810644

Analyst: **Date Prepared:** 06/11/2010

eporting Units: mg/kg		Σ	ATRIX SPIK	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	\oldsymbol{\sigma}_{-}	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]		B. & B.	Added [E]	%R Added Result [F] [D] [E]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	Ð	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	£	1060	688	84	1060	894	25	_	70-135	35	

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

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376702

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		1-1			
Percent Moisture	9.12	8.67	5	20	

Environmental Lab of Texas

YAG 4 TAT basbost2 X □ NPDES PUSH TAT (Pre-Schedule) 24, 48, 72 hrs Phone: 432-563-1800 Fax: 432-563-1713 TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm BCI TEX 8021875930 or BTEX 8260 Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 Aetals: As Ag Ba Cd Cr Pb Hg Se TOTAL: SAR / ESP / CEC Inions (Cl. SO4, Alkalinity) Report Format: 9001 XT BOISM × PIGETOG-NON = 4N cibryant@basin-consulting.com SOIL SOIL SOIL Preservation & # of Container: **BHON** Odessa, Texas 79765 12600 West I-20 East _EO_SS_SBN 'OS^zH (505) 396-1429 HCI [₽]ОNН × ЮB otal #. of Containers Fax No: e-mail: 1420 544 1500 1400 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth emalle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376702 VZ Cell E G-3 VZ Cell E G-4 VZ Cell E G-2 VZ Cell E G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special instructions:

Final	Ver.	1.000	

Relinquished by:

Lone Star

by Courier? UPS 1 U 01.91155 Temperature Upon Receipt:

16:10

0.00.00

Maria Received by ELOT:

<u>e</u>

0-10

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(vino esu dai) # &A

(lab use only) ORDER #:



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plains				
Date/Time: (0:10:10 /(0:.10				
Lab ID#: 374702				
Initials: AL				
Sample Receipt Che	cklist			
	······································		· · · · · · · · · · · · · · · · · · ·	
1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	Yes	No	None	1
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pés)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No.	
ibs /. C ibs °C ibs	°C lbs	°C		°C
Nonconformance Docur	mentation			
	nentation	D.4.77		
Contact:Contacted by:		Date/Time:_		
Regarding:				
		· · · · · · · · · · · · · · · · · · ·		
Corrective Action Taken:				
	· • • • • • • • • • • • • • • • • • • •			
Check all that apply: Cooling process has begun shortly after sample	ling event and c	out of tempe	rature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

□ NPDES USH TAT (Pre-Schedule) 24, 48, 72 hrs (१०८) <u>ONTINO</u> × × Phone: 432-563-1800 Fax: 432-563-1713 TRRP M.R.O.N CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm SCI ETEX 80218/3030 or BTEX 8260 × × VOCs Free of Headspace? Analyze For Project Loc: Lea County, NM PO#: PAA - J. Henry Custody seals on co selüslo\ Project #: 2004-00061 X Standard Netals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC mions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 4001 XT :Hd. 8015M 8015B × На. PIGEJOG-HON - 4N cibryant@basin-consulting.com Matrix SOIL SOIL SOIL 잃 Preservation & # of Containers Hone Odessa, Texas 79765 12600 West I-20 East _EO_SS_SBN HORN OS2H (505) 396-1429 HCI HNO × **BOI** otal # of Containers benetliii blei Fax No: e-mail: 1420 1 54 5 1500 1400 Delqms2 emiT 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth annull. Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376702 VZ Cell E G-3 VZ Cell E G-2 VZ Cell E G-4 VZ Cell E G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions:

YAG & TAT bashnese

×

Lone Star

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Temperature Upon Receipt:

16.10

0.00

Received by ELOT:

0-10

(yino esu del) # 8A.

(lab use only ORDER #:



XENCO Laboratories

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Prelogin / Nonconformance Report - Sample Log-In

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

client: Basin Env. / Plains				
Date/Time: (0-10-10 /(0-10				
Lab ID#: 37470Z				
Initials: AL				
Sample Receipt Check	list			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Pes)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact? Yes No				
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(res	No		
16. Subcontract of sample(s)?	Yes	No	NIA	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	·	Cooler 5 No.	
lbs /.4 °c lbs °c lbs °c	ibs	°င	lbs	°c
Nonconformance Docume Contact:Contacted by:		Date/Time:_		
Regarding:				
Corrective Action Taken:				
Check all that apply: Cooling process has begun shortly after sampling	g event and o	ut of temper	ature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376703

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376703

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376703. 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. 376703 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376703



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell F G-1	S	Jun-10-10 08:00		376703-001
VZ Cell F G-2	S	Jun-10-10 08:20		376703-002
VZ Cell F G-3	S	Jun-10-10 08:40		376703-003
VZ Cell F G-4	S	Jun-10-10 09:00		376703-004
VZ Cell F G-5	S	Jun-10-10 09:20		376703-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376703
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376703-005, -001, -003, -004.

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

within laboratory Control Limits

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376703-001,376703-005,376703-003.

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376703-005, -001, -003, -004

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376703-002.

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

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CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376703
 Date Received:
 06/10/2010

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376703 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

Marrier Paral He 370/13-401 370/13-401 370/13-402 370/13-4			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Part black Field this Field this SOIL SOI		Lab Id:	376703-001	376703-002	376703-003	376703-004	376703-005	
BTEX by EPA 8021 Depth: SOIL	Ameliante Dominated	Field Id:	VZ Cell F G-1	VZ Cell F G-2	VZ Cell F G-3	VZ Cell F G-4	VZ Cell F G-5	
SOIL SOIL	Analysis wequesieu	Depth:						
BTEX by EPA 8021 Sampled: Expanced: Inn-10-10 0455 Inn-10-10 10455 Inn-11-10 10 105 Inn-11-10 1		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
BTEX by EPA 8021 Extracted: Int-1-10 10-45 Int-1-1-10 10-45 Int-1-1-10 10-		Sampled:	Jun-10-10 08:00	Jun-10-10 08:20	Jun-10-10 08:40	Jun-10-10 09:00	Jun-10-10 09:20	
December Continue	BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-14-10 08:00	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	
Control Cont		Analyzed:	Jun-13-10 02:14	Jun-14-10 16:47	Jun-13-10 02:58	Jun-13-10 03:21	Jun-13-10 03:43	
Percent Moisture Extracted: International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shope International Fly		Units/RL:						
No. 0,0020 No. 0,0020 No. 0,0021 No. 0,0020 No.	Benzene		l	ND 0.0011				
Percent Anions In Soil by E300 Extracted: ND 0.0010 ND 0.0011 ND 0.00100 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.00100 ND 0.00100 ND 0.00100 ND 0.00100 N	Toluene		ı	ND 0.0023	ND 0.0021	ND 0.0020	ND 0.0021	
es ND 0.0020 ND 0.0023 ND 0.0021 ND 0.0021 ND 0.0020 ND 0.0010 ND 0.	Ethylbenzene				ND 0.0010		ND 0.0011	
ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0010 ND 0	m.p-Xylenes							
Samic Anions In Soil by E300 Extracted; ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0010 ND 0.	o-Xylene			ND 0.0011				
X ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0	Xylenes. Total				ND 0.0010		ND 0.0011	
ganic Anions In Soil by E300 Extracted: Inn-14-10 9:11 Jun-14-10 9:11 Ju	Total BTEX						ND 0.0011	
Percent Moisture Extracted: Trial 10 19:11 Inn-14-10 19:12 Inn-14-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:30 ""><th>Inorganic Anions In Soil by E300</th><th>Extracted:</th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Inorganic Anions In Soil by E300	Extracted:						
Percent Moisture Extracted: ND 5.01 RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL ND 5.09 S.09 S.08 RL mg/kg RL ND S.09 S.09 S.08 RL mg/kg RL ND S.09 S.09 S.08 RL MD S.09 RL ND S.09 RL ND S.09 RL ND		Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	
Percent Moisture Extracted: ND 5.01 ND 5.69 ND 5.22 7.90 5.08 18.2 Percent Moisture Analyzed: Inn-11-10 14:28 Inn-11-10 14:30		Units/RL:						
Percent Moisture Extracted: Inn-11-10 14:28 Jun-11-10 14:30 Jun-11-10 14:3	Chloride							
TPH by SW8015 Mod Extracted: Inn-11-10 14:28 Inn-11-10 14:30 Inn-11-10 14:	Percent Moisture	Extracted:						
visiture RL % RL Mm-11-10 14:30 Jun-11-10 14:30 <th></th> <th>Analyzed:</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th></th>		Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:		Units/RL:						
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:	Percent Moisture							
Analyzed: Jun-15-10 01:29 Jun-15-10 01:56 Jun-15-10 02:23 Jun-15-10 02:50 Jun-15-10 02:50 Jun-15-10 03:50 asoline Range Hydrocarbons Cnits/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	
asoline Range Hydrocarbons This/RI mg/kg RL mg/kg RD 15.3 ND 15.3 ND ND 15.3 ND 15.3 ND ND 15.3 ND 15.3 ND ND 15.3 ND ND 15.3 ND ND 15.3 ND ND ND 15.3 ND ND ND 15.3 ND ND ND ND ND 15.3 ND > <th>Analyzed:</th> <th>Jun-15-10 01:29</th> <th>Jun-15-10 01:56</th> <th>Jun-15-10 02:23</th> <th>Jun-15-10 02:50</th> <th>Jun-15-10 03:43</th> <th></th>		Analyzed:	Jun-15-10 01:29	Jun-15-10 01:56	Jun-15-10 02:23	Jun-15-10 02:50	Jun-15-10 03:43	
asoline Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND		Units/RL:						
Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	C6-C12 Gasoline Range Hydrocarbons							
ND il Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	C12-C28 Diesel Range Hydrocarbons							
	C28-C35 Oil Range Hydrocarbons				ľ			
Total TPH ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND 15.9	Total TPH							

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:	00 St	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes		1-1	[D]			
1,4-Difluorobenzene	0.0287	0.0300	96	80-120		
4-Bromofluorobenzene	0.0295	0.0300	98	80-120		

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/13/10 02:14	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 376703-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 02:58	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 810421 Sample: 376703-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 03:21	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0239	0.0300	80	80-120		
4-Bromofluorobenzene	0.0298	0.0300	99	80-120		

Lab Batch #: 810421 Sample: 376703-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 03:43	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376703-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:47	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
· ·					
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376703-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 01:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	103	99.5	104	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376703-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 01:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	97.8	99.5	98	70-135	
o-Terphenyl	48.0	49.8	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 376703-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 02:23	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	95.0	99.9	95	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

 Lab Batch #: 810644
 Sample: 376703-004 / SMP
 Batch: 1
 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 02:50	SU	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	96.5	101	96	70-135		
o-Terphenyl	46.7	50.3	93	70-135		

Lab Batch #: 810644 Sample: 376703-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 03:43	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.6	99.5	97	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 Analyst: ASA

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Date Prepared: 06/11/2010 Batch #: 1 Sample: 565604-1-BKS Lab Batch ID: 810421

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	Y	
BTEX by EPA 8021	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>	[C]	[0]	<u> </u>	Result [F]	<u>[5</u>				
Вепгепе	QN	0.1000	0.0946	56	0.1	8660.0	100	5	70-130	35	
Toluene	QN	0.1000	0.0915	65	0.1	0960.0	96	S	70-130	35	
Ethylbenzene	QN	0.1000	8060:0	16	0.1	0.0957	96	S	71-129	35	
m.p-Xylenes	ON.	0.2000	0.1791	06	0.2	0.1895	56	9	70-135	35	
o-Xylene	Ð.	0.1000	0.0905	91	0.1	0.0958	96	9	71-133	35	

Sample: 565716-1-BKS Lab Batch ID: 810601 Analyst: ASA

Date Prepared: 06/14/2010 Batch #: 1

Date Analyzed: 06/14/2010 Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021	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		B	JC]	IDI	[E]	Kesuit [F]	C				
Вепzепе	ND	0.1000	0.1076	108	0.1	0.1053	105	2	70-130	35	
Tolnene	ON	0.1000	0.1063	106	0.1	0.1033	103	3	70-130	35	
Ethylbenzene	ON	0.1000	0.1085	109	0.1	0.1046	105	4	71-129	35	
m.p-Xylenes	ND	0.2000	0.2185	109	0.2	0.2102	105	4	70-135	35	
o-Xylene	QN.	0.1000	0.1075	108	0.1	0.1032	103	4	71-133	35	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 Analyst: LATCOR

Lab Batch ID: 810796

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Batch #: 1 Sample: 810796-1-BKS

Matrix: Solid

Units: mg/kg			BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>[¥</u>	<u>8</u>	Result [C]	%R [D]	<u> </u>	Duplicate Result [F]	%R [G]	%	%R	%RPD	
Chloride		ND	10.0	8.62	98	10	9.52	95	10	75-125	20	
Analyst: BEV		Da	ite Prepar	Date Prepared: 06/11/2010	0			Date A	nalyzed: 0	Date Analyzed: 06/14/2010		
Lab Batch ID: 810644	Sample: 565718-1-BKS	KS	Batch #:	1 #: 1					Matrix: Solid	olid		

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	ICATE I	RECOVE	RECOVERY STUDY	,	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup.	RPD	Control Limits	Control Limits %RPD	
Analytes		<u>B</u>	[C]	[a]	E	Result [F]	<u>5</u>		,		
C6-C12 Gasoline Range Hydrocarbons	Ð	866	1150	115	266	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN.	866	893	68	266	878	88	2	70-135	35	

Flag

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 **Lab Batch #:** 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATI	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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703

Date Analyzed: 06/13/2010

Batch #: QC-Sample ID: 376702-001 S Lab Batch ID: 810421

Matrix: Soil VSVAnalyst: **Date Prepared:** 06/11/2010

Project ID: 2004-00061

Reporting Units: mg/kg		'W	ATRIX SPIKI	I / MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	VERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added Bl	Spiked Sample Spiked Result Sample ICI %R	Spiked Sample %R	Spike S Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	•	<u>-</u>		<u>-</u>	<u> </u>		<u>-</u>				
Benzene	ON.	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	×
Toluene	MD	0.1089	9650:0	55	0.1096	0.0549	50	×	70-130	35	×
Ethylbenzene	ND	0.1089	9990.0	61	0.1096	0.0618	56	7	71-129	35	×
m.p-Xylenes	MD	0.2179	0.0639	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	ND	0.1089	0.0642	65	0.1096	0.0598	22	7	71-133	35	X

Matrix: Soil Batch #: QC-Sample ID: 376694-002 S Date Analyzed: 06/14/2010 Lab Batch ID: 810601

Analyst: **Date Prepared:** 06/14/2010

Keporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	. / MATI	SIX SPIK	Œ DUPLICA'	TE REC	VERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R D]	Spike ; Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<u>Q</u>	0.1048	8/90.0	65	0.1050	0.0720	69	9	70-130	35	×
Toluene	Q.	0.1048	0.0670	64	0.1050	0.0713	89	9	70-130	35	×
Ethylbenzene	ND ON	0.1048	0.0683	99	0.1050	0.0725	69	9	71-129	35	X
m.p-Xylenes	QN.	0.2096	0.1378	99	0.2100	0.1458	69	9	70-135	35	×
o-Xylene	QN.	0.1048	0.0662	63	0.1050	0.0708	29	7	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

Page 16 of 22



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703

QC-Sample ID: 376705-003 S Date Analyzed: 06/15/2010 Lab Batch ID: 810644

Analyst: **Date Prepared:** 06/11/2010

Matrix: Soil Batch #:

BEV

Project ID: 2004-00061

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MATI	XIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Samnle	Smileo	Spiked Sample Spiked Beenle Sample Sa	Spiked Sumple) jko	Duplicate Sumple	(J)	uaa		Control	E G
	Result	Added		%R	lded	Result [F]	%R	%	%R	%RPD	<u>a</u>
Analytes	<u>[4]</u>	<u>B</u>		<u> </u>	Ξ						
C6-C12 Gasoline Range Hydrocarbons	ND ON	1060	1140	108	1060	1140	108	0	70-135	35	

35

70-135

\$

894

1060

84

889

1060

B

C12-C28 Diesel Range Hydrocarbons

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

Page 17 of 22



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376703

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

Camille Bryant

Project Manager:

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East

Phone: 432-563-1800 Fax: 432-563-1713 Odessa, Texas 79765

Project Name: Lea Station Landfarm

Project #: 2004-00061

YACI 4 TAT basbrist Feditiv Lone Star ☐ NPDES ပ္ SUSH TAT (Pre-Schedule) 24, 48, 72 hrs 7. ☐ TRRP M.A.O.I Temperature Upon Receipt: × × VOCs Free of Headspace? × BTEX 8021B/5030 or BTEX 8260 Analyze For Project Loc: Lea County, NM PO#: PAA - J. Henry X Standard Hetals: As Ag Ba Cd Cr Pb Hg Se TCLP Anions (Cl, SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: N B 9001 XT :Hd. 01.01.01.01.0 **₽** × × × × 8012M) 1.814 cibryant@basin-consulting.com SOIL SOIL 잃 SOIL Soi CHU-Y Hone Na₂S₂O₃ HOBN OSZH (505) 396-1429 нсі EONH × × CB otal #. of Containers benetiiii blei Fax No: e-mail: 0840 0060 0920 0820 080 DelgmeS emiT MANDE Regained by ELOT 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth geđinning Depth Complete. Lovington, NM 88260 (575)605-7210 Company Address: P.O. Box 381 376703 VZ Cell F G-5 VZ Cell F G-3 VZ Cell F G-4 **VZ Cell F G-2** VZ Cell F G-1 FIELD CODE Sampler Signature: Company Name Telephone No: City/State/Zip: Special Instructions: MYN 000 Relinguished.by (lab use only) ORDER #: (yinc eau dai) # SA.



XENCO Laboratories

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

Prelogin / Nonconformance Report - Sample Log-In

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 F

Page 1 of 1

client: Basin Env. / Plains				
Date/Time: (0·10·10 / (0·.10		•		
Lab ID#: 374703				
Initials: AL				
Sample Receipt Chec	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	Noпe	
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
lbs /.4 °C lbs °C lbs °	C Ibs	°င	lbs	°C
Nonconformance Docume	entation		-	
Contact: Contacted by:	!	Date/Time:_		
Regarding:				
Corrective Action Taken:				
Check all that apply: □Cooling process has begun shortly after sampling	ig event and o	ut of temper	ature	
condition acceptable by NELAC 5.5.8.3.1.a. □ Initial and Backup Temperature confirm out of te		ditions		
☐ Client understands and would like to proceed with				

Environmental Lab of Texas

□ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs Fax: 432-563-1713 Phone: 432-563-1800 TRRP м о о и CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm BÇI 87€X 8021B/50307n BTEX 8260 × × × × Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard vetsis: ya ya ga ca cu bp Ha se 10LP: TOTAL SAR / ESP / CEC Anions (Cl. SO4. Alkalinity) Report Format: 9001 XT 8001 XT MS108 греску осп cibryant@basin-consulting.com SOIL SOIL SOIL Soil SOF Other (Specify) Preservation & # of Containers Odessa, Texas 79765 12600 West I-20 East COSSEN HOSN 'OS²H (505) 396-1429 HCI EONH × 90 otal #. of Containers benetliii ble e-mail: Fax No: 0820 0920 080 0840 0060 Delgms2 emiT 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Received Basin Environmental Consulting, LLC Friding Depth R Ē Beginning Depth C. Marchelle 2 Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 276703 VZ Cell F G-5 VZ Cell F G-2 VZ Cell F G-3 VZ Cell F G-4 VZ Cell F G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: (lab use only) ORDER #:

YAG 4 TAT basbrist

×

(yino esu dai) # SA

remperature Upon R

16:10 Ē

0.10.10

Received by ELOT



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Repo	rt - Sample	Log-In		
client: Basin Env. / Plains				
Date/Time: (0·10·10 /(0·10				
Lab ID#: 374703				
A 3				
Sample Receipt Chec	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		,
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No	i	
16. Subcontract of sample(s)?	Yes	No	NIA	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
ibs /. 4 °C ibs °C ibs	C lbs	°C	lbs	°c
Nonconformance Docum	entation			
Contact: Contacted by:		Date/Time:_	· · · · · · · · · · · · · · · · · · ·	
Regarding:				
				,
Company & Alice Talana				
Corrective Action Taken:				
			 	

Final Ver. 1.000

Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376704

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376704

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376704. 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. 376704 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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



Sample Cross Reference 376704



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell G G-1	S	Jun-10-10 09:40		376704-001
VZ Cell G G-2	S	Jun-10-10 10:00		376704-002
VZ Cell G G-3	S	Jun-10-10 10:20		376704-003
VZ Cell G G-4	S	Jun-10-10 10:40		376704-004
VZ Cell G G-5	S	Jun-10-10 11:00		376704-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376704
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 376704-001,376704-005,376704-004,376704-003.

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376704-002, -001, -005, -003, -004.

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

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376704-002, -001, -005, -003, -004

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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Project Location: Lea County, NM

Contact: Jason Henry **Project Id:** 2004-00061

Certificate of Analysis Summary 376704 PLAINS ALL AMERICAN EH&S, Midland, TX

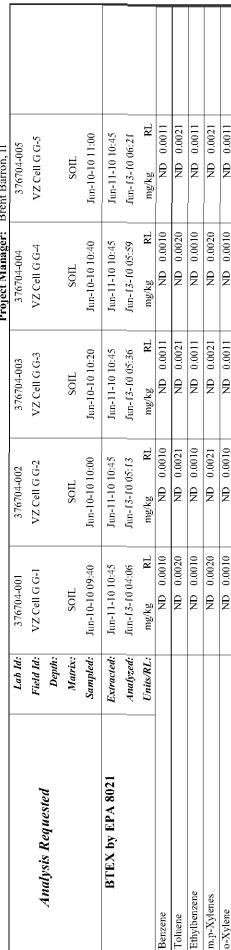
Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

16-JUN-10

Report Date:

Brent Barron, II Project Manager:



This analytical report, and the critics data package it represents, has been nade for your exclusive and confidential use. In interpretations and results bepressed in the integration of analytical represent the best, independent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the ord use of the data breety presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brefit Barron, II

16.0 16.0 16.0 16.0

B B E B

15.0 15.0 15.0

2

15.9 15.9

2 E E 2

2 B B 2

15.2

P R £

15.2

mg/kg

 \mathbb{Z}

mg/kg

Units/RL

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

C28-C35 Oil Range Hydrocarbons

Total TPH

15.6 15.6

15.6 15.6

15.2 15.2

Ð

mg/kg

Ę

E B

15.9

15.0

15.9

mg/kg

Σ

mg/kg

Fun-15-10 05:57

Jun-11-10 14:30

Jun-11-10 14:30

Jun-11-10 14:30 Jun-15-10 05:03

Jun-11-10 14:30 Jun-15-10 04:37

Jun-11-10 14:30 Jun-15-10 04:10

Extracted: Analyzed:

TPH by SW8015 Mod

Percent Moisture

B

1.00

5.90

1.00

Jun-15-10 05:31

5.33 \mathbb{Z}

5.02

6.58

mg/kg

₹

mg/kg

₹ 5.31

mg/kg

⋥

mg/kg

 $\mathbb{K}^{\mathbb{L}}$

mg/kg

Units/RL:

5.21

10.9

5.06

8.87

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Analyzed:

Extracted:

Inorganic Anions In Soil by E300

Xylenes. Total

Total BTEX

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Analyzed:

Extracted:

Percent Moisture

Chloride

조

%

조

%

₹

 $\mathbb{R}^{\mathbb{Z}}$ 1.00

%

Units/RL

ND 0.0011

ND 0.0010

ND 0.0011

ND 0.0010 ND 0.0010

ND 0.0010 ND 0.0010

0.0011

ND 0.0010

ND 0.0011

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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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

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Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0240	0.0300	80	80-120		
4-Bromofluorobenzene	0.0289	0.0300	96	80-120		

Lab Batch #: 810421 Sample: 376702-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 **Sample:** 376702-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 06/13/10 04:06	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 810421 Sample: 376704-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376704-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:36	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 810421 Sample: 376704-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:59	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 376704-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 06:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376704-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 04:10	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	95.8	100	96	70-135	
o-Terphenyl	45.7	50.1	91	70-135	

Lab Batch #: 810644 Sample: 376704-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 04:37	l 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	98.7	99.9	99	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 376704-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 06/15/10 05:03	SU	RROGATE RI	ECOVERY S	STUDY	
TPH	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		98.5	99.8	99	70-135	
o-Terphenyl		48.5	49.9	97	70-135	

Lab Batch #: 810644 Sample: 376704-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 05:31	SU	RROGATE RI	ECOVERY S	STUDY	
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			• '		
1-Chlorooctane	90.5	99.8	91	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 810644 Sample: 376704-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 05:57	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	103	100	103	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	Su	RROGATE RE	ECOVERY	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	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Date Frepared:

Work Order #: 376704

Analyst: ASA

Date Prepared: 06/11/2010

Batch #: 1

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Matrix: Solid

Sample: 565604-1-BKS Lab Batch ID: 810421

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 71-129 71-133 RPD % S 'n vo 9 9 Blk. Spk Вчр. |G 100 95 96 96 96 Duplicate Result [F] Blank Spike 0.0998 0.0960 0.0957 0.1895 0.0958 Spike Added 0.1 0.1 0.1 0.2 0.1 Ξ Blank Spike %R [D] 95 92 9 90 9 Blank Spike Result 0.0946 0.0915 0.09080.1791 0.0905 <u>5</u> 0.1000 Spike Added 0.10000.10000.1000 0.2000<u>B</u> Sample Result Blank B B \exists £ B BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Analyst: LATCOR

Sample: 810796-1-BKS

Lab Batch ID: 810796

Date Prepared: 06/14/2010
Batch #: 1

Matrix: Solid

Date Analyzed: 06/14/2010

Flag Control Limits %RPD 20 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD % 10 Blk. Spk Ощр. |G %R 95 Duplicate Result [F] Blank Spike 9.52 Spike Added 10 Ξ Blank Spike %R [D] 98 Blank Spike Result 8.62 <u>[</u> Spike Added 10.0 <u>B</u> Blank Sample Result £ ⋖ Inorganic Anions In Soil by E300 Units: mg/kg Analytes Chloride

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704 Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Sample: 565718-1-BKS

Lab Batch ID: 810644

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE/B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	١,	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Posult	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>{</u>	[B]		<u>[</u>	<u> </u>	Result [F]	<u>5</u>	?	11 0/		
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1150	115	266	1160	116	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Ð	866	893	68	266	878	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704 **Lab Batch #:** 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010

Analyst: LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704

Date Analyzed: 06/13/2010

Batch #: QC-Sample ID: 376702-001 S Lab Batch ID: 810421

VSVAnalyst: **Date Prepared:** 06/11/2010

Project ID: 2004-00061

Matrix: Soil

Flag ΧE × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 70-130 71-129 71-133 70-130 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 47 m œ Spiked Dup. | %R |G| <u>«</u> 9 20 99 55 Duplicate Spiked Sample Result [F] 0.0662 0.0618 0.0598 0.0549 0.0394 Spike Added 0.1096 0.10960.2192 0.10960.1096 Ŧ Spiked Sample 2 % E 59 62 55 9 59 Spiked Sample Result 9990.0 0.0639 0.0642 0.0679 0.0596 0.1089 Spike Added 0.10890.1089 0.2179 0.1089Parent Sample Result B E B B 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Matrix: Soil BEVAnalyst: Batch #: 376705-003 S **Date Prepared:** 06/11/2010 QC-Sample ID: Date Analyzed: 06/15/2010 Lab Batch ID: 810644

MATRIX SPIKE / MATRIX SPIKE DITRI ICATE PECOVEDV STITIV

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT]	RIX SPII	KE DUPLICA'	TE RECO	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample		Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>C</u>	7% E	Added [E]	Result [F]	% R [G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ON	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1060	688	84	1060	894	84	1	70-135	35	

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

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

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

Page 14 of 19



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376704

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

Phone: 432-563-1800 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

YAG 4 TAT basbrist □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ J Fax: 432-563-1713 TRRP Project Name: Lea Station Landfarm by Courier UPS 1 4 07.9 (9.55)
Temperature Upon Receipt: BTEX 8021B/5630 or BTEX 8260 × Analyze For Project Loc: Lea County, NM Sent & Carlanda VOCs Free of Head PO #: PAA - J. Henry Project #: 2004-00061 X Standard letals: As Ag Ba Cd Cr Pb Hg Se TOTAL: Cations (Ca, Mg, Na, K) Report Format: 0.0 K K 9001 XT 3001 XT :HdJ Ē 80128 × × × × 1.814 cibryant@basin-consulting.com Soi SOIL SOL S SO 0.10.10 29 Other (Specify) enoM Odessa, Texas 79765 eOs2saN HOSN OS2H (505) 396-1429 ЮН EONH × otal #. of Containers benetiiii biei Fax No: e-mail: 0940 1000 1020 5 1100 Time Sampled 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC finding Depth Beginning Depth Lower Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell G G-2 VZ Cell G G-3 VZ Cell G G-4 VZ Cell G G-5 VZ Cell G G-1 376704 FIELD CODE Sampler Signature. Project Manager: Company Name Telephone No: City/State/Zip: Special instructions: quished by: (lab use only) ORDER #: (kino esu dai) * EAL



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconform	ance Report	- Sample	Log-In
-----------------------	-------------	----------	--------

Prelogin / Nonconformance Repol	rt - Sample	e Log-in		
client: Basin Env. / Plains				
Date/Time: (0·10·10 /(0'.10				
Lab ID#: 374704				
Initials: AL				
Sample Receipt Check	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	_
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No_	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	•	Cooler 5 No.	
lbs 1.4 °C lbs °C lbs °C	C lbs	ာင	lbs	°C
Nonconformance Docume	entation			
Contact: Contacted by:		Date/Time:		
oonizace by.		Date: I line		
Regarding:				
Corrective Action Taken:				
				
				
Check all that apply: Cooling process has begun shortly after sampling	g event and o	ut of temper	ature	

Final Ver. 1.000

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

Phone: 432-563-1800

]] NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs Fax: 432-563-1713 TRRP IORW Project Name: Lea Station Landfarm BTEX 8021BIS030 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Heads PO #: PAA - J. Henry Project #: 2004-00061 X Standard vetals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: Anions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 2001 XT × × 86158 (ME108 1.814 HdJ cibryant@basin-consulting.com SOIL SOIL SOIL SOIL Soi DAA – Drinkling Water SL – Sludg Other (Specify) Preservation & # of Container enoM Odessa, Texas 79765 _EO_SS_SBN HÖBN OS^zH (505) 396-1429 HCI EONH Fotal #, of Containers Fax No: e-mail: 100 1020 6 1100 0940 Time Sampled 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth Constable Lovington, NM 88260 Camille Bryant (575)605-7210 P.O. Box 381 VZ Cell G G-3 VZ Cell G G-2 VZ Cell G G-4 VZ Cell G G-5 VZ Cell G G-1 376704 FIELD CODE Company Address: Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: tuished by lab use only ORDER #:

YAG 4 TAT basbned8

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J

7 07 9 (555) Temperature Upon Receipt:

16:10

0.10.10

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3

(Vino seu dat) # 8A



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin	/ Noncor	formance	Report	- Sample	n-po f
i reiogiii	7 14011001	HOIMANCE	izehoir.	- Dample	-09-:::

relogii i Noncomomance R	eport - Sample	e Log-in		
client: Basin Env. / Plains				
Date/Time: (0·10·10 /(0·.10				
Lab ID#: 376704				
Initials: AL				
Sample Receipt C	hecklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	(Ye)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Pes)	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	<u>(Pes)</u>	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	ĺ
13. Sample container intact?	Yes	No	at and an even	
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	NVA	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No.	<u> </u>	Cooler 5 No.	
lbs /. 4 °C lbs °C lbs	°C lbs	°C	lbs	°c
Nonconformance Doc		Date/Time:		
				
Regarding:		·		
Corrective Action Taken:				
				

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

☐ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376705

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376705

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376705. 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. 376705 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376705



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected Sa	ample Depth	Lab Sample Id
VZ Cell H G-1	S	Jun-10-10 11:20		376705-001
VZ Cell H G-2	S	Jun-10-10 11:40		376705-002
VZ Cell H G-3	S	Jun-10-10 12:00		376705-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376705
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376705-002, -003, -001.

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

within laboratory Control Limits

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits.

Samples affected are: 376705-002, -003, -001

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is

suspected; data not confirmed by re-analysis

Samples affected are: 376705-002.

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376705 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm



Date Received in Lab: Thu Jun-10-10 04:10 pm

Project Manager: Brent Barron, II

•		
	01-NDI-91	
	-	
	Report Date	

Field ii: 376765-001 376705-002 376705						
Marrix: SOIL SOIL SOIL SOIL		Lah Id:	376705-001	376705-002	376705-003	
BTEX by EPA 8021 Extracted: Inn-10-10 11:20 Inn-10-10 11:40 Inn-10-10 10 12	Amelica Dogwood	Field Id:	VZ Cell H G-1	VZ Cell H G-2	VZ Cell H G-3	
STEX by EPA 8021 Sampled: Jun-10-10 11:20 Jun-10-10 11:40 Jun-10-10 10:45 Jun-11-10 10:45	Analysis Requesieu	Depth:				
BTEX by EPA 8021 Sampled: Jun-10-10 10:45 Jun-11-10 10:45		Matrix:	SOIL	SOIL	SOIL	
BTEX by EPA 8021 Extracted: Jun-11-10 10-45 Jun-11-10 10-4		Sampled:	Jun-10-10 11:20	Jun-10-10 11:40	Jun-10-10 12:00	
Maily and Bayes Maily and	BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	
District		Analyzed:	Jun-13-10 06:43	Jun-13-10 07:06	Jun-13-10 07:28	
ND 0.0011 ND 0.0010 ND 0.0010		Units/RL:				
ND 0.0022 ND 0.0021 ND 0.0010 ND 0	Benzene			ND 0.0010	ND 0.0011	
Percent Moisture ND 0.0011 ND 0.0010 ND 0.0010	Toluene			ND 0.0021	ND 0.0021	
ND 0.0022 ND 0.0011 ND 0.0010 ND 0.0010 X	Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0011	
ND 0.0011 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0010 ND 0	m.p-Xylenes			ND 0.0021	ND 0.0021	
ND 0.0011 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 Sanic Anions In Soil by E300 Extracted:	o-Xylene			ND 0.0010	ND 0.0011	
Sanic Anions In Soil by E300 Extracted: Inn-14-10 19:11 Jun-14-10 es. Total			ND 0.0010	ND 0.0011		
ganic Anions In Soil by E300 Extracted: Inn-14-10 19:11 Inn-11-10 14:28 Inn-11-10 14:30 In	Total BTEX			ND 0.0010		
Percent Moisture Linis/RL: Inn-14-10 19:11 Inn-11-10 14:28	Inorganic Anions In Soil by E300	Extracted:				
Percent Moisture Extracted: mg/kg RL mg/kg RL mg/kg Percent Moisture Extracted: Inn-11-10 14:28 Inn-11-10 14:20 Inn-11-10 14:28 Inn-11-10 14:20		Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	
Percent Moisture Extracted: Inn-11-10 14:28 Inn-11-10 14:30 Inn-11-10 14:3		Units/RL:				
Percent Moisture Extracted: Jun-11-10 14:28 Jun-11-10 14:28 Jun-11-10 14:28 Jun-11-10 14:18 Jun-11-10 14:10 Jun-11-10 14:1	Chloride					
Sisture Analyzed: Jun-11-10 14:28 Jun-11-10 14:28 Jun-11-10 14:28 Jun-11-10 14:10 TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-1	Percent Moisture	Extracted:				
Intervented Intervented		Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:		Units/RL:				
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:	Percent Moisture					
Analyzed: Jun-15-10 06:25 Jun-15-10 06:51 Jun-15-10 07: Bisoline Range Hydrocarbons Units/RL: mg/kg RL mg/kg RL mg/kg Nil Range Hydrocarbons ND 16.3 ND 15.6 ND Nil Range Hydrocarbons ND 16.3 ND 15.6 ND Nil Range Hydrocarbons ND 16.3 ND 15.6 ND	TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	
Lonits/RL: mg/kg RL mg/kg RL mg/kg isoline Range Hydrocarbons ND 16.3 ND 15.6 ND Dil Range Hydrocarbons ND 16.3 ND 15.6 ND NIR NIR 16.3 ND 15.6 ND NIR 16.3 ND 15.6 ND NIR 16.3 ND 15.6 ND		Analyzed:	Jun-15-10 06:25	Jun-15-10 06:51	Jun-15-10 07:18	
Isoline Range Hydrocarbons ND 16.3 ND 15.6 ND Diesel Range Hydrocarbons ND 16.3 ND 15.6 ND Dil Range Hydrocarbons ND 16.3 ND 15.6 ND Dil Range Hydrocarbons ND 16.3 ND 15.6 ND		Units/RL:				
Niesel Range Hydrocarbons ND 16.3 ND 15.6 ND Nil Range Hydrocarbons ND 16.3 ND 15.6 ND NII Range Hydrocarbons NII 16.3 NII 15.6 NII	C6-C12 Gasoline Range Hydrocarbons					
Nil Range Hydrocarbons ND 16.3 ND 15.6 ND	C12-C28 Diesel Range Hydrocarbons					
m 163 m 156	C28-C35 Oil Range Hydrocarbons					
	Total TPH		ND 16.3	ND 15.6	ND 15.8	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the floraighout 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 breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

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Odessa Laboratory Manager Brefit Barron, II



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	Su	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 **Sample:** 376702-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/13/10 06:43	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Units: mg/kg Date Analyzed: 06/13/10 07:06	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

 Lab Batch #: 810421
 Sample: 376705-003 / SMP
 Batch: 1
 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 07:28	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376705-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 06:25	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.5	100	97	70-135	
o-Terphenyl	47.5	50.1	95	70-135	

Lab Batch #: 810644 **Sample:** 376705-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 06:51	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	103	99.5	104	70-135	
o-Terphenyl	50.0	49.8	100	70-135	

Lab Batch #: 810644 Sample: 376705-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 07:18	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	97.6	99.8	98	70-135	
o-Terphenyl	47.3	49.9	95	70-135	

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	49.3	50.2	98	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, Project ID: 2004-00061

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705

Analyst: ASA

Lab Batch ID: 810421

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Sample: 565604-1-BKS

Batch #:

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

BTEX by EPA 8021	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	,	B	[C]	<u>a</u>	[E]	Result [F]	<u>5</u>				
Benzene	Ð	0.1000	0.0946	56	0.1	8660:0	100	5	70-130	35	
Toluene	QN.	0.1000	5160'0	92	0.1	0960:0	96	5	70-130	35	
Ethylbenzene	QN	0.1000	8060'0	91	0.1	0.0957	96	5	11-129	35	
m.p-Xylenes	ON.	0.2000	0.1791	06	2:0	0.1895	56	9	70-135	35	
o-Xylene	ON.	0.1000	5060'0	91	0.1	0.0958	96	9	71-133	35	

Analyst: LATCOR

Date Prepared: 06/14/2010

Date Analyzed: 06/14/2010 Matrix: Solid

Lab Batch ID: 810796 Sample: 810 Units: mg/kg Inorganic Anions In Soil by E300 Analytes	Sample: 810796-1-BKS oil by E300 San	iKS Blank Sample Result [A]	Batch#: BLANK/I Spike Added [B]	Batch #: 1 Matrix: Solid BLANK SPIKE DUPLICATE RECOVERY STUDY splike Blank Splike Blank Blank Blank Control splike Splike Splike Duplicate Splike Limits Result %R Ph Limits Result %R %R %R Pill Result Result %R %R	Blank Spike %R	Spike Added	Blank Spike Duplicate Result [F]	BIK. Spk Dup. %R	Matrix: Solid RECOVERY Con RPD Li	Control Limits	Control Limits %RPD	R B S
Chloride		QZ	10.0	8.62	98	10	9.52	95	10	75-125	20	

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(E)/[E]All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705

Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Lab Batch ID: 810644	Sample: 565718-1-BKS	ЗКS	Batch #:	1 #: 1					Matrix: Solid	olid		
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	15 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>:</u>	<u>B</u>	[C]		<u>a</u>	Result [F]	<u>[</u>]	?	!		
C6-C12 Gasoline Range Hydrocarbons	arbons	R	866	1150	115	266	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	rbons	Ð	866	893	68	266	878	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705

Lab Batch #: 810796 Project ID: 2004-00061

Date Analyzed: 06/14/2010 Date Prepared: 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376701-004 S **Batch #:** 1 **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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Project ID: 2004-00061

Work Order #: 376705

Date Analyzed: 06/13/2010

Lab Batch ID: 810421

Matrix: Soil Batch #: QC-Sample ID: 376702-001 S

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MATI	RIX SPIF	Œ DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[2]	7% E0	Added [E]	Result [F]	%R [G]	%	%R	%RPD	1
Вепzепе	Ð	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	X
Toluene	Ð	0.1089	9650:0	55	0.1096	0.0549	50	∞	70-130	35	X
Ethylbenzene	Ð	0.1089	9990:0	19	0.1096	0.0618	56	7	71-129	35	X
m.p-Xylenes	R	0.2179	0.0639	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	ON.	0.1089	0.0642	65	0.1096	0.0598	55	7	71-133	32	X

Matrix: Soil Analyst: BEV Batch #: QC-Sample ID: 376705-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/15/2010 Lab Batch ID: 810644

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Reporting Units: mg/kg

TPH by CW8015 Mod	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
DOIN STOOMS TO IT	Sample	Spike	Result	Sample		Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result	Added	<u></u>	%R	_	Result [F]	%R	%	%R	%RPD	
Analytes	[<u>A</u>]	<u>B</u>	[D] [E]	ē	Э		<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN.	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1060	688	84	1060	894	84	1	70-135	35	

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

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

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

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Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376705

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800

Odessa, Texas 79765

Fax: 432-563-1713

s)

Solve Sar Lone Sar YAG 4 TAT basbnet8 □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 1.4 **005** TRRP M.S.O.V Project Name: Lea Station Landfarm ID5 7 o 2 o 14 S S Temperature Upon Receipt: STEX 8021B/5030 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Head PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP TOTAL OBO / ASB / NA Anions (Cl. SO4, Alkalinity) Cations (Ca. Mg. Na. K) Report Format: 1300) 16.18 9001 XT Ē <u>l</u>me WS108) 1.814 × × cibryant@basin-consulting.com SOL SOIL SOIL 0.10.10 DM - Dyukjud Mater 21 - Singt 640 Other (Specify) _EO_SS_SBN Preservation & # of HOBM OSZH (505) 396-1429 HÇI [€]ONH × Fotal #. of Containers benetiii blad Fax No: e-mail: 1200 1120 5 Time Sampled Sudden Sudden Received by ELOT: 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle Lovington, NM 88260 1,20 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376705 VZ Cell H G-2 VZ Cell H G-3 VZ Cell H G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions Smille (Alinquished by (lab use only ORDER #: (Vinc eau del) \$ 84



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report	- Sample	Log-In		
client: Pasin Env. / Plains				
Date/Time: (0·10·10 /(0·10				
Lab ID#: 374705				
Initials: AL				
Sample Receipt Check	ist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(PES)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(AVA)	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	•	Cooler 5 No.	
lbs /. 4 °C lbs °C lbs °C	ibs	°C	lbs	°C
Nonconformance Docume	ntation			
Contact: Contacted by:	·	Date/Time:_		
Regarding:		_		
Corrective Action Taken:				

Final Ver. 1.000

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

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

Odessa, Texas 79765

YACI 4 TAT bashnet2 □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7. CALICUS TRRP M.A.O.M. Project Name: Lea Station Landfarm 4 o 2 9 (4 5 S Temperature Upon Receipt: ETEX 8021B/5039 or BTEX 8260 × VOCs Free of Headspace? Project Loc: Lea County, NM PO#: PAA - J. Henry Project #: 2004-00061 X Standard vetals: As Ag Ba Cd Cr Pb Hg Se TCLP unions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 30 9001 XT 3001 XT :Hai 16.10 E E WS108 × × cibryant@basin-consulting.com Matrix SOIL SOIL SOIL 0-10-16 64 OM - DHUKIUB MSIGL 2F-2ing Other (Specify) Preservation & # of Containers EOSSEN HOPN 'OS'H (505) 396-1429 HCI HNO PO9 otal # of Containers benetiii biei Fax No: e-mail: 1200 1146 1120 Time Sampled 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth gediuujud Debth amulle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376705 VZ Cell H G-3 VZ Cell H G-2 VZ Cell H G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: MILLO inquished by (Aup ase ouly) ORDER# (vino esu dei) # 8A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Phoenix, San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
Prelogin / Nonconformance Report	t - Sampl	e Log-In		
client: Basin Env. / Plains				
Date/Time: (0-10-10 /0-10				
Lab ID#: 374705				
Initials: AL				
Sample Receipt Check	list			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	NA	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Ŷes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Pes	No		
16. Subcontract of sample(s)?	Yes	No	NIA	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No).
lbs /. 4 °C lbs °C lbs °C	lbs	°C	lbs	0(
Nonconformance Docume	ntation			
Contact:Contacted by:		Date/Time:_		
Regarding:				
Corrective Action Taken:				

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature

condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 376694

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Final Ver. 1.000 Page 1 of 22





16-JUN-10

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

Reference: XENCO Report No: 376694

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376694. 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. 376694 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376694



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected S	Sample Depth	Lab Sample Id
VZ Cell A G-1	S	Jun-09-10 08:00		376694-001
VZ Cell A G-2	S	Jun-09-10 08:20		376694-002
VZ Cell A G-3	S	Jun-09-10 08:40		376694-003
VZ Cell A G-4	S	Jun-09-10 09:00		376694-004
VZ Cell A G-5	S	Jun-09-10 09:20		376694-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376694
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 376694-001,376694-005,376694-004,376694-003.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 376694-001, -005, -003, -004. The Laboratory Control Sample for Toluene, m,p-Xylenes, Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-810595 TPH by SW8015 Mod

None

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CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376694
 Date Received:
 06/10/2010

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376694-002.

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

SW8021BM

Batch 810601, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376694-002.

Batch: LBA-810781 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376694 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Report Date: 16-JUN-10

Project Manager: Brent Barron, II

	Lah Id:	376694-001	376694-002	376694-003	376694-004	376694-005	
Ameliania Dominated	Field Id:	VZ Cell A G-1	VZ Cell A G-2	VZ Cell A G-3	VZ Cell A G-4	VZ Cell A G-5	
Analysis Requesieu	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-09-10 08:00	Jun-09-10 08:20	Jun-09-10 08:40	Jun-09-10 09:00	Jun-09-10 09:20	
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-14-10 08:00	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	
	Analyzed:	Jun-11-10 16:41	Jun-14-10 15:17	Jun-11-10 17:26	Jun-11-10 17:48	Jun-11-10 18:11	
	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 0.0010	ND 0.0010	ND 0.0012	
Toluene		ND 0.0024	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0023	
Ethylbenzene		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
m.p-Xylenes		ND 0.0024	ND 0.0021	ND 0.0020	ND 0.0021	ND 0.0023	
o-Xylene		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Xylenes. Total		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Total BTEX		ND 0.0012	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0012	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		8.53 5.97	9.82 5.25	7.81 5.12	ND 5.21	7.60 5.76	
Percent Moisture	Extracted:						
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		16.3 1.00	4.76 1.00	2.30 1.00	4.12 1.00	13.2 1.00	
TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	
	Analyzed:	Jun-12-10 10:06	Jun-12-10 10:34	Jun-14-10 18:48	Jun-12-10 11:29	Jun-12-10 11:57	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 17.8	ND 15.7	ND 15.4	ND 15.6	ND 17.3	
C12-C28 Diesel Range Hydrocarbons		ND 17.8	ND 15.7	ND 15.4	ND 15.6	ND 17.3	
C28-C35 Oil Range Hydrocarbons		ND 17.8	ND 15.7	ND 15.4	ND 15.6	ND 17.3	
Total TPH		ND 17.8	ND 15.7	ND 15.4	ND 15.6	ND 17.3	

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376694-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 16:41	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 810414 Sample: 376694-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 17:26	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/11/10 17:48	Su	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Units: mg/kg Date Analyzed: 06/11/10 18:11	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Units: mg/kg Date Analyzed: 06/12/10 20:38	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810601 Sample: 376694-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:17	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810601 Sample: 376694-002 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	109	99.5	110	70-135		
o-Terphenyl	51.1	49.8	103	70-135		

Lab Batch #: 810595 Sample: 376694-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 10:06	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	102	99.5	103	70-135	
o-Terphenyl	49.9	49.8	100	70-135	

Lab Batch #: 810595 Sample: 376694-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 10:34	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376694, Project ID: 2004-00061

Lab Batch #: 810595 **Sample:** 376694-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/12/10 11:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	94.6	100	95	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 810595 Sample: 376694-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 11:57	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	95.8	99.9	96	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 810595 **Sample:** 376701-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810595 **Sample:** 376694-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 18:48	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	125	100	125	70-135	
o-Terphenyl	57.2	50.1	114	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694

Analyst: ASA

Date Prepared: 06/11/2010 Sample: 565602-1-BKS

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Batch #: 1

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Lab Batch ID: 810414 Units: mg/kg

BTEX by EPA 8021	Blank Sample Result	Spike Added	Blank Spike Posult	Blank Spike	Spike Added	Blank Spike Durlicate	BIK. Spk Dup. %To	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	<u>B</u>		 [<u>a</u>	<u>a</u>	Result [F]	<u>[5]</u>	₹	1 0/		
Benzene	ON.	0.1000	9860.0	66	0.1	0.1002	100	2	70-130	35	
Toluene	ON	0.1000	0.0974	26	0.1	0.0987	66	1	70-130	32	
Ethylbenzene	QN	0.1000	0.0988	66	0.1	0.1000	100	1	71-129	38	
m.p-Xylenes	ON	0.2000	0.1984	66	0.2	0.2003	100	1	70-135	38	
o-Xylene	QN	0.1000	0.0974	26	0.1	0.0987	66	1	71-133	38	

Analyst: ASA

Sample: 565716-1-BKS

Lab Batch ID: 810601

Date Prepared: 06/14/2010 Batch #: 1

Matrix: Solid

Date Analyzed: 06/14/2010

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	TANK S	PIKE DUPI	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021	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>	国	Result [F]	[6]				
Benzene	Ð.	0.1000	0.1076	108	0.1	0.1053	105	7	70-130	35	
Toluene	Œ.	0.1000	0.1063	106	0.1	0.1033	103	3	70-130	35	
Ethylbenzene	QN.	0.1000	0.1085	109	0.1	0.1046	105	4	71-129	32	
m.p-Xylenes	Q.	0.2000	0.2185	109	0.2	0.2102	105	4	70-135	35	
o-Xylene	QN	0.1000	0.1075	108	0.1	0.1032	103	4	71-133	35	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Lab Batch ID: 810781 Sample: 810781-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / E	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE F	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>[A]</u>	[8]	Result [C]	%R [D]	[E]	Duplicate Result [F]	%R [G]	%	%R	%RPD	ı
Chloride	ND	10.0	66'6	100	10	8.68	87	14	75-125	20	
Analyst: BEV	Da	ite Prepar	Date Prepared: 06/11/2010	0			Date Ar	nalyzed: 0	Date Analyzed: 06/11/2010		

Lab Batch ID: 810595 Sample: 565721-1-BKS

Date Prepared: 06/11/2010

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE/B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	 	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag
Analytes	<u>.</u>	<u>B</u>	[C]	<u>a</u>	<u>a</u>	Result [F]	<u>5</u>		<u> </u>	2	
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN.	866	861	98	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694 **Lab Batch #:** 810781

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010 **Analyst:** LATCOR

QC- Sample ID: 376313-001 S **Batch #:** 1 **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	272	209	474	97	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694

Batch #: QC-Sample ID: 376694-001 S **Date Analyzed:** 06/12/2010 Lab Batch ID: 810414

Date Prepared: 06/11/2010

Project ID: 2004-00061

Matrix: Soil VSVAnalyst:

Flag × × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 71-129 70-130 71-133 70-130 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 22 22 50 21 5 Spiked Dup. | %R |G| 20 20 22 5 5 Duplicate Spiked Sample Result [F] 0.0610 0.0595 0.0611 0.0594 0.1239 Spike Added 0.1200 0.12000.1200 0.2399 0.1200Ŧ Spiked Sample 2 % E 63 62 62 63 63 Spiked Sample Result 0.0758 0.1515 0.0750 0.0744 0.0741 0.1197 Spike Added 0.1197 0.1197 0.2394 0.1197 Parent Sample Result B E B B 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Toluene Benzene

Matrix: Soil Batch #: 376694-002 S Date Prepared: 06/14/2010 QC-Sample ID: **Date Analyzed:** 06/14/2010 Lab Batch ID: 810601

Analyst:

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPIF	Œ DUPLICA'	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added B]	[כ]		Added [E]	Result [F]	/% [G]	%	%R	%RPD)
Вепzепе	QN	0.1048	0.0678	65	0.1050	0.0720	69	9	70-130	35	×
Toluene	QN	0.1048	0.0670	64	0.1050	0.0713	89	9	70-130	35	×
Ethylbenzene	an	0.1048	0.0683	99	0.1050	0.0725	69	9	71-129	35	X
m.p-Xylenes	ND	0.2096	0.1378	99	0.2100	0.1458	69	9	70-135	35	×
o-Xylene	an	0.1048	0.0662	63	0.1050	80/00	67	7	71-133	35	X

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

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

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

Page 16 of 22



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376694

Lab Batch ID: 810595

Date Analyzed: 06/14/2010

QC-Sample ID: 376701-003 S

Batch #:

Project ID: 2004-00061

Matrix: Soil

BEVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/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	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control C Limits I	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Added Result [F] [E]	% R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	968	1040	104	968	953	56	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	

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

Page 17 of 22



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376694

Lab Batch #: 810781 Project ID: 2004-00061

Date Analyzed:06/14/2010Date Prepared:06/14/2010Analyst: LATCORQC- Sample ID:376313-001 DBatch #: 1Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 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	16.3	16.7	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

2 Z 2 2 **6** Z Z YAG 4 TAT brebnet2 □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ × × × × ☐ TRRP Project Name: Lea Station Landfarm 3CI 7 o 29 ld SS Température Upon Receipt: BTEX 8021B/5059 or BTEX 8260 VOCs Free of Headspace? × × × × × Analyze For Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Netals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC Anions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 1320 9001 XT 2001 XT 2.0 E E MS+08 8015B Specify Oth cibryant@basin-consulting.com SOIL SOIL SOIL SOIL SOIL 01.01.0 Other (Specify) Preservation & # of Containers [€]O^ZS^Z€N HOGN OS^zH (505) 396-1429 HCI ^EONH 924 otal #. of Containers benettii 7 bleii Fax No: e-mail: 0060 0920 0800 0820 0840 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sambled Basin Environmental Consulting, LLC Euglug Depth (325) Beginning Depth Lovington, NM 88260 ولالالكمية Camille Bryant 575)605-7210 Company Address: P.O. Box 381 376094 VZ Cell A G-5 VZ Cell A G-2 VZ Cell A G-3 VZ Cell A G-4 VZ Cell A G-1 FIELD CODE Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions elinquished by (lab use only ORDER #: 9 7 2 (Vinc eau dai) # 8A. ō



Basin Env. / Plains

XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Prelogin / Nonconformance Report - Sample Log-In

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010

Page 1 of 1

Date/Time: (p ·)	0.10 10.1	0				
Lab ID#:	<u>376694</u>					
Initials:	AL					
		Sample Receipt Che	ecklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container	in good condition?		(Yes	No	None	
3. Custody seals intac	t on shipping contain	er (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody pr	esent?		(Yés)	No		
5. Sample instructions	complete on chain o	of custody?	(Yes)	No		
6. Any missing / extra	samples?		Yes	(No)		
7. Chain of custody si	gned when relinquish	ned / received?	Yes	No		
8. Chain of custody ag	rees with sample lab	el(s)?	(Pes)	No		
9. Container labels leg	ible and intact?		(Yes)	No		
10. Sample matrix / pr	operties agree with c	hain of custody?	(Yes)	No		
11. Samples in proper	container / bottle?		(Yes)	No		
12. Samples properly	preserved?		(Yes)	No	N/A	
13. Sample container i	ntact?		(Yes)	No		
14. Sufficient sample a	amount for indicated	test(s)?	(Yes)	No		
15. All samples receiv	ed within sufficient h	old time?	Yes	No		
16. Subcontract of sar	nple(s)?		Yes	No	NA	
17. VOC sample have	zero head`space?		(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
lbs [. L	°C lbs	°C lbs	°C lbs	°(1	°c
	.	Nonconformance Docu	mentation			
Contact:		ted by:		Date/Time:		
Contact	Contac	ted by		Dater i iiile.	·	
Regarding:						
<u> </u>						
Corrective Action Tak	en.					
· CONTECTIVE ACTION 18W					·	
			··			
Check all that apply:		has begun shortly after sample eceptable by NELAC 5.5.8.3.1		ut or tempe	rature	
	☐ Initial and Backup	Temperature confirm out of is and would like to proceed v	temperature cos	nditions		

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
West i-20 East Phone: 432-563-1800

12600 West I-20 East Odessa, Texas 79765

Friorie: 432-563-1713

YAG 4 TAT basbnet2 × □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ TRRP 붐 Project Name: Lea Station Landfarm 4629195 Température Upon Receipt: 0058 X318 10 0000 BTEX 8260 × × Sance Comments had a Analyze For Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 letels: As Ag Ba Cd Cr Pb Hg Se YB / ESB / CEC Anions (Cl. SO4, Alkalinity) Report Format: 9001 XT 0.0 10 Ē MS108 sbecity orn cibryant@basin-consulting.com SOIL SOIL SOIL SOIL SOIL 01010 Other (Specify) Na₂S₂O₃ HOBM *****05*H (505) 396-1429 HCI EONH 90| otal #. of Containers benetiiii blei Fax No: e-mail: 080 0820 0840 0060 0920 Time Sampled Received by ELOT 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth **8** Beginning Depth Lovington, NM 88260 Somille Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell A G-5 VZ Cell A G-2 VZ Cell A G-3 VZ Cell A G-4 VZ Cell A G-1 FIELD CODE Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: elinquished by (tab use only ORDER #: S 5 2 ō (Vino eau dal) # 8A_

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XENCO Laboratories

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

Document Titie: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin /	Nonconformance	Report -	Sample	Log-In

Prelogin / Nonconformance Repo	ort - Sample	e Log-in		
client: Basin Env. / Plains				
Date/Time: (0.10.10 10.10				
Lab ID#: 376694				
Initials: AL				
Sample Receipt Che	cklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	ŶPes .	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	•	Cooler 5 No.	
ibs /.4 °C ibs °C ibs	°C ibs	°c		°c
Nonconformance Docum	nentation	·		
Contact: Contacted by:		Date/Time:_		
Regarding:				
Corrective Action Taken:				
				
				

Final Ver. 1.000

Check all that apply:

☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

☐ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376699

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 24 Final Ver. 1.000





16-JUN-10

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

Reference: XENCO Report No: 376699

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376699. 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. 376699 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 376699



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell B G-1	S	Jun-09-10 09:40		376699-001
VZ Cell B G-2	S	Jun-09-10 10:00		376699-002
VZ Cell B G-3	S	Jun-09-10 10:15		376699-003
VZ Cell B G-4	S	Jun-09-10 10:30		376699-004
VZ Cell B G-5	S	Jun-09-10 10:45		376699-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376699
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376699-001,376699-005,376699-002.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376699-005, -001, -002.

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

Batch: LBA-810595 TPH by SW8015 Mod SW8015MOD NM

Batch 810595, 1-Chlorooctane, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 376699-005.

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CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376699
 Date Received:
 06/10/2010

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 376699-003.

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376699-004, -003.

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

within laboratory Control Limits

Batch: LBA-810693 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Page 5 of 24 Final Ver. 1.000



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

Certificate of Analysis Summary 376699 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Project Manager: Brent Barron, II Report Date: 16-JUN-10

	Lab Id:	376699-001	376699-002	376699-003	376699-004	376699-005	
America Dogwood	Field Id:	VZ Cell B G-1	VZ Cell B G-2	VZ Cell B G-3	VZ Cell B G-4	VZ Cell B G-5	
Analysis wey aesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jun-09-10 09:40	Jun-09-10 10:00	Jun-09-10 10:15	Jun-09-10 10:30	Jun-09-10 10:45	
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-14-10 08:00	Jun-14-10 08:00	Jun-11-10 10:30	
	Analyzed:	Jun-11-10 18:33	Jun-11-10 18:55	Jun-14-10 17:32	Jun-14-10 17:09	Jun-12-10 15:45	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Toluene		ND 0.0021	ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0020	
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
m.p-Xylenes		ND 0.0021	ND 0.0021	ND 0.0022	ND 0.0020	ND 0.0020	
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Xylenes. Total		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0011	ND 0.0010	ND 0.0010	
Inorganic Anions In Soil by E300	Extracted:						
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		14.9 5.18	6.29 5.19	6.39 5.30	6.42 5.15	5.64 5.12	
Percent Moisture	Extracted:						
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		3.39 1.00	3.69 1.00	5.65 1.00	2.92 1.00	2.32 1.00	
TPH by SW8015 Mod	Extracted:	Jun-11-1014:30	Jun-11-10 14:30	Jun-15-10 08:30	Jun-11-10 14:30	Jun-15-10 08:30	
	Analyzed:	Jun-12-10 12:25	Jun-12-10 12:53	Jun-15-10 15:57	Jun-14-10 11:02	Jun-15-10 13:13	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	
C12-C28 Diesel Range Hydrocarbons		ND 15.4	ND 15.5	0.51 UN	ND 15.4	ND 15.3	
C28-C35 Oil Range Hydrocarbons		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	
Total TPH		ND 15.4	ND 15.5	ND 15.9	ND 15.4	ND 15.3	

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

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Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0241	0.0300	80	80-120		
4-Bromofluorobenzene	0.0302	0.0300	101	80-120		

Lab Batch #: 810414 Sample: 376699-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:33	Su	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120		

Lab Batch #: 810414 Sample: 376699-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/11/10 18:55	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 376699-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 15:45	Su	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120		

Lab Batch #: 810414 **Sample:** 376694-001 S/MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 810601 Sample: 565716-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

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^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376699-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 17:09	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0240	0.0300	80	80-120		
4-Bromofluorobenzene	0.0313	0.0300	104	80-120		

Lab Batch #: 810601 Sample: 376699-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 17:32	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376699-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 12:25	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	76.0	99.5	76	70-135	
o-Terphenyl	37.8	49.8	76	70-135	

Lab Batch #: 810595 **Sample:** 376699-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/12/10 12:53	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	70.4	99.8	71	70-135	
o-Terphenyl	35.0	49.9	70	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID:** 2004-00061

Lab Batch #: 810595 **Sample:** 376699-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 06/14/10 11:02	SURROGATE RECOVERY STUDY					
ТРН в	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1-Chlorooctane		87.4	99.8	88	70-135		
o-Terphenyl		42.3	49.9	85	70-135		

Lab Batch #: 810595 Sample: 376701-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
Analytes			1~1			
1-Chlorooctane	117	99.5	118	70-135		
o-Terphenyl	44.0	49.8	88	70-135		

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59 SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810693 Sample: 565772-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/15/10 10:03	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	123	100	123	70-135		
o-Terphenyl	52.0	50.0	104	70-135		

Lab Batch #: 810693 Sample: 565772-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/15/10 10:30	SURROGATE 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	54.2	50.0	108	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376699, **Project ID**: 2004-00061

Lab Batch #: 810693 **Sample:** 377064-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 11:51	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	128	99.5	129	70-135		
o-Terphenyl	50.6	49.8	102	70-135		

Lab Batch #: 810693 Sample: 377064-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 12:18	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	130	99.9	130	70-135		
o-Terphenyl	51.9	50.0	104	70-135		

Lab Batch #: 810693 **Sample:** 376699-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 13:13	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	120	99.6	120	70-135		
o-Terphenyl	55.1	49.8	111	70-135		

Lab Batch #: 810693 Sample: 376699-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 15:57	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	57.7	50.0	115	70-135		

Surrogate Recovery [D] – 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Blank Spike Recovery



Project Name: Lea Station Landfarm

Work Order #: 376699 Project ID: 2004-00061

 Lab Batch #: 810693
 Sample: 565772-1-BKS
 Matrix: Solid

 Date Analyzed: 06/15/2010
 Date Prepared: 06/15/2010
 Analyst: ASA

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

Reporting Units. hig/kg Batch #: 1		DLANK/DLANKSPIKE RECOVERY STUDY				
TPH by SW8015 Mod	Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	[B]	[C]	70 K D]	70 K	
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1170	117	70-135	
C12-C28 Diesel Range Hydrocarbons	ND	1000	818	82	70-135	

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BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Date Prepared: 06/11/2010 Batch #: Sample: 565602-1-BKS Lab Batch ID: 810414 Analyst: ASA

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	SPIKE / B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	SECOVE	CRY STUD	<u>,</u>	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	<u> </u>	<u>B</u>	[C]	[0]	E	Result [F]	<u>[5]</u>	}	}	 	
Benzene	Q.	0.1000	9860:0	66	0.1	0.1002	100	2	70-130	35	
Tolnene	Ð	0.1000	0.0974	6	0.1	0.0987	66	-	70-130	35	
Ethylbenzene	Q.	0.1000	0.0988	66	0.1	0.1000	100	1	71-129	35	
m.p-Xylenes	QV.	0.2000	0.1984	66	0.2	0.2003	100	1	70-135	35	
o-Xylene	Ð	0.1000	0.0974	26	0.1	0.0987	66	1	71-133	35	
o-Xylene	2	0.1000	0.0974	64	0.1	0.0987		66	99 1	_	1 71-133

Analyst: ASA

Lab Batch ID: 810601

Date Prepared: 06/14/2010

Batch #:

Sample: 565716-1-BKS

Date Analyzed: 06/14/2010 Matrix: Solid

Flag Control Limits %RPD 35 35 35 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 71-129 71-133 70-130 70-135 RPD % N m 4 4 4 Blk. Spk ₽ | % | <u>G</u> 105 103 105 105 103 Spike Duplicate Result [F] 0.1046 0.2102 Blank 0.1053 0.10330.1032 Spike Added 0.1 0.1 0.1 0.2 0.1 Ξ Blank Spike %R [D] 108 109 106 109 108 Blank Spike Result 0.10760.10630.10850.2185 0.1075 0.10000.10000.10000.2000 Spike Added 0.1000<u>8</u> Blank
Sample Result
[A] B \exists E $\frac{1}{2}$ g BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Batch #: 1 Sample: 810781-1-BKS Lab Batch ID: 810781

Matrix: Solid

Units: mg/kg		BLAN	K/BLANK S	PIKE/E	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dun.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	Result [C]	%R [D]	(E)	Duplicate Result [F]	%R [G]	%	%R	%RPD	D
Chloride	ND	10.0	66.6	100	10	8.68	87	14	75-125	20	
Analyst: BEV	Da	te Prepare	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/11/2010	6/11/2010		

Lab Batch ID: 810595

Batch #: 1

Sample: 565721-1-BKS

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	λ	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Recult	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	<u>B</u>		<u> </u>	<u> </u>	Result [F]	<u>5</u>	9/	1 0/	2 No.	
C6-C12 Gasoline Range Hydrocarbons	R	866	1170	117	1000	1130	113	33	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND ND	866	861	86	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699 **Lab Batch #:** 810781

Project ID: 2004-00061

Date Analyzed: 06/14/2010 Date Prepared: 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376313-001 S **Batch #:** 1 **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	272	209	474	97	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

Date Analyzed: 06/12/2010

Batch #: QC-Sample ID: 376694-001 S Lab Batch ID: 810414

VSVAnalyst: **Date Prepared:** 06/11/2010

Matrix: Soil

Project ID: 2004-00061

Flag × × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 71-129 70-130 71-133 70-130 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 22 22 50 21 5 Spiked Dup. | %R |G| 20 20 22 5 5 Duplicate Spiked Sample Result [F] 0.0610 0.0595 0.0611 0.0594 0.1239 Spike Added 0.1200 0.12000.12000.1200 0.2399 Ŧ Spiked Sample 2 % E 63 62 62 63 63 Spiked Sample Result 0.0758 0.1515 0.0750 0.0744 0.0741 0.1197 Spike Added 0.1197 0.1197 0.2394 0.1197 Parent Sample Result B E B B 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Toluene Benzene

Matrix: Soil Analyst: Batch #: 376694-002 S Date Prepared: 06/14/2010 QC-Sample ID: **Date Analyzed:** 06/14/2010 Lab Batch ID: 810601

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT]	RIX SPIF	Œ DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Auueu [B]	<u> </u>	¥ē	Auueu [E]	Les au l'e	<u>[]</u>	0/	Nº/	79KLD	
Вепzепе	ND	0.1048	0.0678	65	0.1050	0.0720	69	6	70-130	35	Х
Toluene	ND	0.1048	0.0670	64	0.1050	0.0713	89	9	70-130	35	X
Ethylbenzene	ND	0.1048	0.0683	99	0.1050	0.0725	69	6	71-129	35	X
m.p-Xylenes	ND	0.2096	0.1378	99	0.2100	0.1458	69	6	70-135	35	X
o-Xylene	QN	0.1048	0.0662	63	0.1050	0.0708	29	7	71-133	35	X

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 Linit, B Present in Blank, NR Not Requested, I Interference, NA Not ApplicableN See Narrative, EQL Estimated Quantitation Linit

Page 18 of 24

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



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376699

Project ID: 2004-00061

Matrix: Soil Batch #: QC-Sample ID: 376701-003 S

BEVAnalyst: **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 Lab Batch ID: 810595

Reporting Units: mg/kg		M	ATRIX SPIKI	E / MATI	SIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Snike	Spiked Sample Spiked Result	Spiked	Snike	Duplicate Sniked Sample	Spiked	uda	Control Control	Control Limits	[H
Analytes	Result [A]	Added B]	[2]	2 % B	Added [E]	Added Result [F]		%	%R	%RPD	<u>.</u>
C6-C12 Gasoline Range Hydrocarbons	Ð	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	
Lab Batch ID: 810693	QC-Sample ID: 377064-002 S	377064	.002 S	Bat	Batch #:	1 Matrix: Soil	: Soil				

Matrix: Soil VSVAnalyst: Batch #: QC-Sample ID: 377064-002 S **Date Prepared:** 06/15/2010

Date Analyzed: 06/15/2010

ceporting Units: mg/kg		M	ATRIX SPIK	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample Spi	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]		[C]		Added [E]	Result [F]	%R [G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	N ON	1070	1230	115	1070	1290	121	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1070	678	79	1070	881	82	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

Page 19 of 24



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376699

Lab Batch #: 810781 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376313-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	16.3	16.7	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

☐ NPDES Phone: 432-563-1800 Fax: 432-563-1713 TRRP Project Name: Lea Station Landfarm Project Loc: Lea County, NM PO#: PAA - J. Henry Project #: 2004-00061 X Standard Report Format: cjbryant@basin-consulting.com Odessa, Texas 79765 12600 West I-20 East (505) 396-1429 e-mail: Fax No: Basin Environmental Consulting, LLC Lemise B Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip:

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П	×	09	81EX 80218/5030 or BTEX 82	×	\overline{x}	\overline{x}	×	×	_			\dashv		. 6	ě	
			SelitatiovimeS			┪		一	┪					Laboratory Comments:	stody seals on contain	Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS U 0.2 de 5.5 Temperature Upon Recelpt.
			zeitikoV			_		1	一					a spec	Custody seals on corr	Sample Hand Delivered by Sampler/Client Re by Courier / UPS U OL GG G
	-	98	Metals: As Ag Ba Cd Cr Pb Hg :						┪					5 E X	ody seals on	5 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
TCLP:	AL:		SAR / ESP / CEC				寸		┪					5 8 8	28	
٤	TOTAL:		Anions (Cl. SO4, Alkalinity)						1			T		T S E	ĝ	2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
			Cations (Ca, Mg, Na, K)				\neg		1					2 2 2	Š	Sam
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			Date Sampled	6/9/10	6/9/10	6/9/10	6/9/10	6/9/10							Received by:	Regeived by: Received by ELO
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	\ - \r\	J-60-1	FIELD CODE	VZ Cell B G-1	VZ Cell B G-2	VZ Cell B G-3	VZ Cell B G-4	VZ Cell B G-5						ctions:	730 50	
(lab use only)		ER #:			_					_	-			Special Instructions:	Reinquished by:	Relinquished by
sin qej/		ORDER #:	(vino esu dei) # &A.											Speci	E S	Reling /



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa. Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Phoenix, San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
Prelogin / Nonconformance Repo	rt - Sampl	e Log-In		
client: Basin Env. / Plains				
() () () () () () () () () ()				
771100				
Lab ID#: 5 10699				
Sample Receipt Chec	klist			
	· · · · · · · · · · · · · · · · · · ·			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	·-··-
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	· <u></u>
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yès)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	o.	Cooler 5 No.	- "
Ibs /. C ibs °C ibs °	C lbs	°c	lbs	°C
Nonconformance Docum	entation			
Contact: Contacted by:		Date/Time:_		
Regarding:				
Corrective Action Taken:				······································

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1. ☐ Initial and Backup Temperature confirm out of temperature conditions

□ Client understands and would like to proceed with analysis

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

Standard TAT & DAY ☐ NPDES FedEx Lone Star FUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7. × 1 TRRP Project Name: Lea Station Landfarm 3CI Temperature Upon Receipt: VOCs Free of Headspace? BTEX 8021B/5030 or BTEX 8260 Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: Jujous (CI, SO4, Alkalinity) (Ca, Mg, Na, K) Report Format: %·09·% 9001 XT 2001 XT <u>ه</u> Ē × **EFOO** × × 80198 :Нал Specify Oth SOIL cibryant@basin-consulting.com SOIL SOIL SOIL 01.010 om ~ Dyukiud Masel ar – aingð 949 Other (Specify) enoM OSSSEN Preservation & # of HOBM *OS^zH (505) 396-1429 HCI ^EONH × × otal #. of Containers Majora dam Fax No: e-mail: 1015 1000 1045 0940 1030 DekymeS amiT Recymped by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth جا عالالمكار <u>2</u> Lovington, NM 88260 **Camille Bryant** (575)605-7210 Company Address: P.O. Box 381 VZ Cell B G-5 VZ Cell B G-2 VZ Cell B G-3 VZ Cell B G-4 VZ Cell B G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: nquished by (lab use only) ORDER #: (vino esu dal) * BA.



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

~	. 7 a.	ioncomornance Ne	port - Sample	EOg-III		
Client: Basin		ins				
Date/Time: (0 · 10		<u>0</u>				
Lab ID#: 3	76699					
Initials:	AL	 				
		Sample Receipt Cl	necklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container in	good condition?		Yes	No	None	
		er (cooler) and bottles	(Yes)	No	N/A	
4. Chain of Custody pres	sent?		Yes	No		_
5. Sample instructions of	omplete on chain o	f custody?	Yes	No		
6. Any missing / extra sa	imples?		Yes	_(No)_		
7. Chain of custody sign	ed when relinquish	ed / received?	Yes	No		
8. Chain of custody agre	es with sample lab	el(s)?	(Pes)	No		
9. Container labels legib	le and intact?		(Yes)	No		
10. Sample matrix / prop	erties agree with cl	nain of custody?	(Yes)	No		
11. Samples in proper co	ontainer / bottle?		Yes	No		
12. Samples properly pr	eserved?		Yes	No	N/A	
13. Sample container int	act?		(Yes)	No		
14. Sufficient sample ап	nount for indicated t	test(s)?	(Yes)	No		
15. All samples received	l within sufficient he	old time?	<u>(Pes</u>	No		
16. Subcontract of samp	ole(s)?		Yes	No	(N/A)	
17. VOC sample have ze	ro head space?		(Yes)	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No	١.	Cooler 5 No.	
lbs /.4 °C	ibs	°C lbs	°C [bs	°	lbs	°C
	1	ionconformance Doc	umentation			
Contact:	Contact	ted by:		Date/Time:		
Regarding:					-	
Corrective Action Taker	1:					
						,
Check all that apply:	Cooling process h	nas begun shortly after saп	nnling event and o	ut of temps	erature	
oneck an macappiy.		ceptable by NELAC 5.5.8.3		o. wiiibe		

□ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 376700

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 19 Final Ver. 1.000





16-JUN-10

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

Reference: XENCO Report No: 376700

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376700. 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. 376700 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 376700



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell C G-1	S	Jun-09-10 11:00		376700-001
VZ Cell C G-2	S	Jun-09-10 11:15		376700-002
VZ Cell C G-3	S	Jun-09-10 11:30		376700-003
VZ Cell C G-4	S	Jun-09-10 11:45		376700-004
VZ Cell C G-5	S	Jun-09-10 12:00		376700-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376700
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376700-004, -002, -003, -005, -001.

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

within laboratory Control Limits

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376700-001,376700-005,376700-003,376700-002.

Batch: LBA-810595 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Page 4 of 19 Final Ver. 1.000



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

Certificate of Analysis Summary 376700 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

decided Field Id. S 6 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1 1. 1.1.	100 000	000 00070	200 00070	700 000717	200,000,10
Heid Hz		ran in:	100-00/6/6	2/0/-00/5	5/0/-00/02	5/0/-00/c	5,00-00/0/5
Marker Doptic Marker SOIL SOIL SOIL	Amakaia Dogwootod	Field Id:	VZ Cell C G-1	VZ Cell C G-2	VZ Cell C G-3	VZ Cell C G-4	VZ Cell C G-5
Name	Tumpsis weywest	Depth:					
O21 Exeraced: Initial Dy E300 Initial Dy		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
December Extracreed; Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-11-10 10:30 Jun-12-10 17:37 Jun-12-10 18:00 Jun		Sampled:	Jun-09-10 11:00	Jun-09-10 11:15	Jun-09-10 11:30	Jun-09-10 11:45	Jun-09-10 12:00
	BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30
		Analyzed:	Jun-12-10 16:52	Jun-12-10 17:15	Jun-12-10 17:37	Jun-12-10 18:00	Jun-12-10 18:22
Name Name		Units/RL:					mg/kg RL
ND 0.0021 ND 0.0021 ND 0.0021 ND 0.0024 ND 0.0020 ND 0.0010 ND 0	Benzene					ND 0.0010	ND 0.0010
Interest No 0.0011 No 0.0011 No 0.0012 No 0.0010 No 0.	Toluene			ND 0.0021	ND 0.0024	ND 0.0020	ND 0.0020
ND 0.0021 ND 0.0021 ND 0.0024 ND 0.0020 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0012 ND 0.0010 ND 0	Ethylbenzene						ND 0.0010
ND 0.0011 ND 0.0011 ND 0.0012 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0010 ND 0	m.p-Xylenes			ND 0.0021	ND 0.0024	ND 0.0020	ND 0.0020
In py E300	o-Xylene			ND 0.0011		ND 0.0010	ND 0.0010
II by E300	Xylenes. Total						ND 0.0010
Dy E300 Extracted:	Total BTEX						ND 0.0010
Time	Inorganic Anions In Soil by E300	Extracted:					
		Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21
Extracted:		Units/RL:					mg/kg RL
Factorized: Analyzed: Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:28 Iun-11-10 14:30 Iu	Chloride						8.71 5.11
Mod Extracted: Inn-11-10 14:28 Jun-11-10 14:30	Percent Moisture	Extracted:					
Mod Extracted; Fig. % RL Im-11-10 14:30 Im-11-10 1		Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
Mod Extracted: Jun-11-10 14:30		Units/RL:					% RL
Mod Extracted: Inn-11-10 14:30	Percent Moisture						2.06 1.00
Analyzed: Inn-14-10 18:21 Inn-14-10 13:22 Inn-14-10 13:49 Inn-14-10 14:16 Inn-14-10 14:10 Inn-14-10 14:10<	TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
Onits/RL: mg/kg RL mg/kg ND 15.3 ND ons ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND		Analyzed:	Jun-14-10 18:21	Jun-14-10 13:22	Jun-14-10 13:49	Jun-14-10 14:16	Jun-14-10 14:43
ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.8 nns ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.5 nn 15.9 ND 15.8 ND 17.7 ND 15.5 ND 15.5		Units/RL:					mg/kg RL
ons ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND	C6-C12 Gasoline Range Hydrocarbons						ND 15.4
N 159 NN 177 NN 158 ND 158	C12-C28 Diesel Range Hydrocarbons						ND 15.4
	C28-C35 Oil Range Hydrocarbons		ND 15.9	ND 15.8	7.71 QN	ND 15.5	ND 15.4
Total TPH ND 15.9 ND 15.8 ND 17.7 ND 15.5 ND 1	Total TPH						ND 15.4

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	SU	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difhiorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376700-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 16:52	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 810414 Sample: 376700-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 17:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

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^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810414 Sample: 376700-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 17:37	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376700-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 18:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Units: mg/kg Date Analyzed: 06/12/10 18:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 810414 Sample: 376694-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376700-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 13:22	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.0	99.7	96	70-135	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 810595 Sample: 376700-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 13:49	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	103	100	103	70-135	
o-Terphenyl	50.3	50.1	100	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376700, **Project ID:** 2004-00061

Lab Batch #: 810595 Sample: 376700-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 14:16	SU	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	101	111	70-135	
o-Terphenyl	53.6	50.3	107	70-135	

Lab Batch #: 810595 Sample: 376700-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 14:43	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 x mary tes					
1-Chlorooctane	98.7	101	98	70-135	
o-Terphenyl	47.9	50.3	95	70-135	

Lab Batch #: 810595 **Sample:** 376701-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	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	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	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	108	99.5	109	70-135	
o-Terphenyl	41.6	49.8	84	70-135	

Lab Batch #: 810595 **Sample:** 376700-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 18:21	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	106	100	106	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700

Lab Batch ID: 810414

Analyst: ASA

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Batch #: 1 Sample: 565602-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	-	[B]	[c]		3	Result [F]	<u>[5</u>	·			
Benzene	Q.	0.1000	9860.0	66	0.1	0.1002	100	2	70-130	35	
Toluene	Æ	0.1000	0.0974	26	0.1	0.0987	66	_	70-130	35	
Ethylbenzene	Ð	0.1000	0.0988	66	0.1	0.1000	100	-	71-129	35	
m-p-Xylenes	QN.	0.2000	0.1984	66	0.2	0.2003	100	-	70-135	35	
0-Xylene	£	0.1000	0.0974	- 6	0.1	0.0987	66	-	71-133	35	

Analyst: LATCOR

Date Prepared: 06/14/2010

Batch #: 1

Date Analyzed: 06/14/2010

Sample: 810781-1-BKS Lab Batch ID: 810781

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result [A]	Spike Added	Blank Spike Resulf	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[.	[B]	[C]	[a]	[E]	Result [F]	[6]	/ E			
Chloride	- E	10.0	66'6	100	10	89.8	87	14	75-125	20	

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

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BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700 Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Lab Batch ID: 810595 Sample: 565721-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	Y	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>.</u>	B	[C]	<u>a</u>	E	Result [F]	<u>[</u>]				
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Ð.	866	861	98	1000	1010	101	16	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376700 **Lab Batch #:** 810781

Project ID: 2004-00061

Date Analyzed: 06/14/2010 **QC- Sample ID:** 376313-001 S

Date Prepared: 06/14/2010 **Analyst:** LATCOR

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg MATRIX SPIKE

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	272	209	474	97	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

BRL - Below Reporting Limit



Work Order #: 376700

Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Project ID: 2004-00061

Batch #: QC-Sample ID: 376694-001 S Date Analyzed: 06/12/2010 Lab Batch ID: 810414

Matrix: Soil

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	RIX SPIF	Œ DUPLICA'	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	Parent Sample Result	Spike Added	Spiked Sample Spiked Result Sample C %R	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[<u>B</u>]		ē	Ξ	•	[5]				
Вепzепе	ND	0.1197	0.0744	62	0.1200	0.0595	50	22	70-130	35	X
Toluene	ND	0.1197	0.0741	62	0.1200	0.0594	50	22	70-130	35	X
Ethylbenzene	ND	0.1197	0.0758	63	0.1200	0.0611	51	21	71-129	35	X
m.p-Xylenes	ND	0.2394	0.1515	63	0.2399	0.1239	52	20	70-135	35	X
o-Xylene	ND	0.1197	0.0750	63	0.1200	0.0610	51	21	71-133	32	X

Matrix: Soil BEVAnalyst: Batch #: QC-Sample ID: 376701-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 **Lab Batch ID:** 810595

Reporting Units: mg/kg		M	ATRIX SPIKI	[/MAT]	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY 8	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	10	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[</u>	<u>B</u> %	Added [E]	Result [F]	% R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	

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

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

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

Page 14 of 19



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376700

Lab Batch #: 810781 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376313-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 Matrix:
 Soil

Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	16.3	16.7	2	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

YAG 4 TAT brabnat8 Lone Star □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ ٦, M.A.O.M. TRRP Project Name: Lea Station Landfarm しならなる。 J 07.9 (4.5.5 Temperature Upon Receipt: VOCs Free of Headspace? BTEX 8021E/5639 or BTEX 8260 × Analyze Library on companies of Custody seals on con Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 jetaja: ya ya ga ca cu up Ha se TCLP TOTAL SAR LESP LCEC mions (Cl. SO4, Alkalinity) Report Format: <u>ව</u> 9001 XT 9001 XI :Hd. m. × METOB cibryant@basin-consulting.com SOL SOIL SOIL SOIL SO 0.00 M-Drinking Water 9 Other (Specify) Preservation & # of Containers OS^zH (505) 396-1429 HCI [€]ONH × CG × otal #. of Containers benetii'i ble e-mail: Fax No: 1115 1130 1145 1200 1100 Time Sampled Received by ELOT 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth <u>88</u> Beginning Depth <u>₹</u> Lovington, NM 88260 Complete Camille Bryant 575)605-7210 Company Address: P.O. Box 381 VZ Cell C G-5 VZ Cell C G-3 VZ Cell C G-2 VZ Cell C G-4 VZ Cell C G-1 FIELD CODE 376700 Sampler Signature\ Project Manager: Company Name Telephone No: City/State/Zip: Special instructions: ta peusine (lab use only) ORDER #: (vinc eau del) # 8A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

* .

Prelogin / Nonconformance	Report -	- Sample	Log-In
---------------------------	----------	----------	--------

client: Basin Env. / Plains				
Date/Time: (0·10·10 /(0·.10				
Lab ID#: 37,4700				
Initials: AL				
Sample Receipt Che	ecklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?	(Yes)	No	1	
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No	٠.	Cooler 5 No.	
ibs /. 4 °C lbs °C lbs	°C ibs	°c	ibs	°c
Nonconformance Docu	mentation			
Contact: Contacted by:		Date/Time:		
confacted by.		Dates time.		
Regarding:		·	·	<u></u>
Corrective Action Taken:				
			······································	
Check all that apply: Cooling process has begun shortly after samp condition acceptable by NELAC 5.5.8.3.		ut of tempe	rature	

□ Initial and Backup Temperature confirm out of temperature conditions

 $\hfill\square$ Client understands and would like to proceed with analysis

Environmental Lab of Texas

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

Odessa, Texas 79765

YAO 4 TAT bashned2 × □ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7 (XQS 51 TRRP M.R.O. Project Name: Lea Station Landfarm by Courier, UPS 1 40.9145× Temperature Upon Receipt: BTEX 8021E/5030 of BTEX 8260 × × × × VOCs Free of Headspace? Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard wetals: As Ag Ba Cd Cr Pb Hg Se TCLP: SAR / ESP / CEC mions (Cl. SO4, Alkalinity) Setions (Ca., Mg, Na, K) Report Format: <u>|0</u>:9 9001 XT 2001 XT :HdJ 1300 2 Time 86108 METOB × Specify Oth cibryant@basin-consulting.com Matrix SOIL SOIL SOIL SOIL 잃 0.01.0 9 Other (Specify) Preservation & # of Containers HON HOSN OSz+ (505) 396-1429 нсі HNO × × × × **9**0| otal # of Containers benetiiii blei e-mail: Fax No: 1100 1115 1130 1145 1200 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth <u>8</u> E E Beginning Depth 30 34 Lovington, NM 88260 Consulter **Camille Bryant** (5/5)605-7210 Company Address: P.O. Box 381 VZ Cell C G-2 VZ Cell C G-3 VZ Cell C G-4 VZ Cell C G-5 VZ Cell C G-1 FIELD CODE 376700 Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: ed behsinbe (lab use only) ORDER #: (yinc seu dai) # 8A.



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

		Prel	ogin / Nonconformance Report - Sample Log-In
πt:	Pasin	Env.	/ Plains

Clien 6.10.10 16:10 Date/Time: 374700

Lab ID#:

Initials:

Sample Receipt Checklist

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

Nonconformance Documentation

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

- Check all that apply:

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

Analytical Report 376701

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

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

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

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Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376701

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376701. 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. 376701 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376701



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell D G-1	S	Jun-09-10 12:20		376701-001
VZ Cell D G-2	S	Jun-09-10 12:40		376701-002
VZ Cell D G-3	S	Jun-09-10 13:00		376701-003
VZ Cell D G-4	S	Jun-09-10 13:20		376701-004
VZ Cell D G-5	S	Jun-09-10 13:40		376701-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376701
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810301 Percent Moisture

None

Batch: LBA-810414 BTEX by EPA 8021

SW8021BM

Batch 810414, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376701-001,376701-005,376701-003,376701-002.

SW8021BM

Batch 810414, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376701-001, -005, -003, -002, -004.

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

Batch: LBA-810595 TPH by SW8015 Mod

None

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810781 Inorganic Anions by EPA 300

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376701 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

Project Manager: Brent Barron, II Report Date: 16-JUN-10

					5	, , , , , , , , , , , , , , , , , , , ,
	Lah Id:	376701-001	376701-002	376701-003	376701-004	376701-005
Assertante Dones and	Field Id:	VZ Cell D G-1	VZ Cell D G-2	VZ Cell D G-3	VZ Cell D G-4	VZ Cell D G-5
Anatysis Requesien	Depth:					
	Matrix:	SOIL	SOIL	SOIL	SOIL	TIOS
	Sampled:	Jun-09-10 12:20	Jun-09-10 12:40	Jun-09-10 13:00	Jun-09-10 13:20	Jun-09-10 13:40
BTEX by EPA 8021	Extracted:	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30	Jun-11-10 10:30
	Analyzed:	Jun-12-10 18:45	Jun-12-10 19:08	Jun-12-10 19:30	Jun-12-10 19:53	Jun-12-10 20:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Toluene		ND 0.0021	ND 0.0020	ND 0.0020	ND 0.0021	ND 0.0021
Ethylbenzene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0:0010	ND 0.0010
m.p-Xylenes		ND 0.0021	ND 0.0020	ND 0.0020	ND 0.0021	ND 0.0021
o-Xylene		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Xylenes. Total		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Total BTEX		ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0010
Inorganic Anions In Soil by E300	Extracted:					
	Analyzed:	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 09:21	Jun-14-10 19:11	Jun-14-10 19:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 5.21	13.1 5.09	ND 5.01	5.94 5.21	22.7 5.10
Percent Moisture	Extracted:					
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
	Units/RL:	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.10 1.00	1.80 1.00	ND 1.00	4.08 1.00	1.92 1.00
Poin \$108WS yd HTT	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
	Analyzed:	Jun-14-10 15:10	Jun-14-10 15:38	Jun-14-10 16:05	Jun-14-10 22:49	Jun-14-10 23:16
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2
Total TPH		ND 15.7	ND 15.3	ND 15.0	ND 15.6	ND 15.2

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

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Odessa Laboratory Manager Brehl Barron, II

Page 5 of 20



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810414 Sample: 565602-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 14:48	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 15:10	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 565602-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 16:18	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810414 Sample: 376701-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 18:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 810414 Sample: 376701-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:08	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810414 Sample: 376701-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:30	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810414 Sample: 376701-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 19:53	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Units: mg/kg Date Analyzed: 06/12/10 20:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 810414 Sample: 376694-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 20:38	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 810414 Sample: 376694-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 21:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

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Surrogate Recovery [D] -100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810595 Sample: 565721-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 17:46	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810595 Sample: 565721-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:13	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 810595 Sample: 565721-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/11/10 18:41	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 810595 Sample: 376701-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 15:10	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	50.3	50.2	100	70-135	

Lab Batch #: 810595 **Sample:** 376701-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 15:38	SURROGATE RECOVERY 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	48.2	50.1	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, **Project ID:** 2004-00061

Lab Batch #: 810595 **Sample:** 376701-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 16:05	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	96.0	99.5	96	70-135	
o-Terphenyl	45.3	49.8	91	70-135	

Lab Batch #: 810595 Sample: 376701-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:32	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	117	99.5	118	70-135	
o-Terphenyl	44.0	49.8	88	70-135	

Lab Batch #: 810595 Sample: 376701-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:59	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	108	99.5	109	70-135		
o-Terphenyl	41.6	49.8	84	70-135		

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376701, Project ID: 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	108	99.5	109	70-135		
o-Terphenyl	51.9	49.8	104	70-135		

Lab Batch #: 810644 Sample: 376701-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 22:49	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			l lp]		
1-Chlorooctane	99.7	99.8	100	70-135	
o-Terphenyl	47.4	49.9	95	70-135	

Lab Batch #: 810644 **Sample:** 376701-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/14/10 23:16	nits: mg/kg Date Analyzed: 06/14/10 23:16 SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	98.1	99.6	98	70-135		
o-Terphenyl	46.1	49.8	93	70-135		

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376701

Analyst: ASA

Lab Batch ID: 810414

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/11/2010

Matrix: Solid

Batch #: Sample: 565602-1-BKS

Flag Control Limits %RPD 35 35 35 35 35 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 71-129 70-130 70-135 71-133 RPD % N Blk. Spk Вир. |G| 100 100 100 66 66 Spike Duplicate Result [F] Blank 0.10020.0987 0.10000.2003 0.0987 Spike Added Ξ 0.1 0.7 0.1 0.7 0.1 Blank Spike %R [D] 66 67 66 66 67 Blank Spike Result 0.09860.0974 0.0988 0.19840.0974 <u>5</u> Spike Added 0.1000 0.1000 0.1000 0.1000 0.2000 8 Sample Result Blank B £ $\frac{1}{2}$ \exists B BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Analyst: LATCOR

Date Prepared: 06/14/2010

Date Analyzed: 06/14/2010

Matrix: Solid Batch #: 1 Sample: 810781-1-BKS Lab Batch ID: 810781

Units: mg/kg		BLAN	3LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUD)	PIKE / B	LANKS	PIKE DUPL	CATE I	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[V]	B	[C]	[D]	E	Dupneaue Result [F]	[6]		70K	70KFD	
Chloride	ON	10.0	66'6	100	10	89.8	L8	14	75-125	20	

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

Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376701 Analyst: LATCOR

Date Prepared: 06/14/2010

Project ID: 2004-00061 Date Analyzed: 06/14/2010

> Batch #: Sample: 810796-1-BKS Lab Batch ID: 810796

Matrix: Solid

Units: mg/kg		BLAIN	V/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	CATE	KECOVE	KY STUD	Y	
Inorganic Anions In Soil by E300	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>e</u>	[<u>C</u>]	<u>a</u>	E	Result [F]	<u>5</u>				
Chloride	QN	10.0	8.62	98	10	9.52	56	10	75-125	20	
Analyst: BEV	Da	te Prepare	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/14/2010	6/14/2010		

Batch #: 1 Sample: 565718-1-BKS Lab Batch ID: 810644

Matrix: Solid

Flag Control Limits %RPD 35 35 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % Blk. Spk Рар. 15. % Р 116 88 Duplicate Result [F] Blank Spike 1160 878 Spike Added Ξ 266 266 Blank Spike %R [D] 115 89Blank Spike Result 1150 <u>5</u> 893 Spike Added 866 866 <u>B</u> Sample Result Blank V Z B TPH by SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Sample: 565721-1-BKS Lab Batch ID: 810595

Analyst: BEV

Batch #: |

Date Prepared: 06/11/2010

Date Analyzed: 06/11/2010

Matrix: Solid

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Units: mg/kg

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	<u>t</u>	[B]	[C]	1 [a]	<u> </u>	Dupneare Result [F]	1 6	0/	1 0/	/okr	
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1170	117	1000	1130	113	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	2	866	861	98	1000	1010	101	16	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





Work Order #: 376701

Lab Batch #: 810781

Project Name: Lea Station Landfarm

Project ID: 2004-00061

Date Analyzed: 06/14/2010 **Date Prepared:** 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376313-001 S Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATF	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	272	209	474	97	75-125	

Lab Batch #: 810796

Date Prepared: 06/14/2010 Analyst: LATCOR **Date Analyzed:** 06/14/2010

QC- Sample ID: 376701-004 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	5.94	104	113	103	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

BRL - Below Reporting Limit

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Form 3 - MS / MSD Recoveries



Project ID: 2004-00061

Matrix: Soil

Project Name: Lea Station Landfarm

Batch #: QC-Sample ID: 376694-001 S Date Analyzed: 06/12/2010

Lab Batch ID: 810414

Work Order #: 376701

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPII	Œ DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added IB1	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R	Spike Added IE1	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	FI ag
Benzene	<u> </u>	0.1197	0.0744	62	0.1200	0.0595	50	22	70-130	35	×
Toluene	<u>S</u>	0.1197	0.0741		0.1200		50	22	70-130	35	×
Ethylbenzene	<u>N</u>	0.1197	0.0758	63	0.1200	0.0611	51	21	71-129	35	×
m.p-Xylenes	<u>N</u>	0.2394	0.1515	63	0.2399	0.1239	52	20	70-135	35	×
o-Xylene	ON.	0.1197	0.0750	63	0.1200	0.0610	51	21	71-133	35	×

Matrix: Soil BEV Analyst: Batch #: QC-Sample ID: 376701-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/14/2010 **Lab Batch ID:** 810595

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	RIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	O O		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[C]</u>	3 E	Added [E]	Result [F]	% [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	<u>R</u>	866	1040	104	866	953	95	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	866	1020	102	866	835	84	20	70-135	35	
Lab Batch ID: 810644 Date Analyzed: 06/15/2010	QC-Sample ID: 376705-003 S Date Prepared: 06/11/2010	376705. 06/11/20	-003 S 010	Bat Anz	Batch #: Analyst:	l Matrib BEV	Matrix: Soil				
Reporting Units: mg/kg		Σ	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATI	IIX SPII	Œ DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	9	1060	688	84	1060	894	84	-	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376701

Lab Batch #: 810781 Project ID: 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376313-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	272	255	6	20	

Lab Batch #: 810796

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810301

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376694-001 D
 Batch #:
 1
 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	16.3	16.7	2	20	

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

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Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Odessa, Texas 79765 12600 West I-20 East

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

YAG 4 TAT brebnet2 Lone Star □ NPDES EUSH TAT (Pre-Schedule) 24, 48, 72 hrs. ပ္ ट्योगिस × × × ∏ TRRP M.R.O.P Project Name: Lea Station Landfarm 10E by Courier UPS 1 COT9 (45% I ELEX 8021B/5030 or BTEX 8260 × × Analyze For VOCs Free of Headspa Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard yetals: ys yd ga Cq Ct bp Hd Se TOTAL TCLP SAR / ESP / CEC Report Format: 9001 XT 4X 1005 :HdJ Ē METOR :HdJ × × × × Specify Oth cibryant@basin-consulting.com SOL SOIL SOL SOIL 25 Other (Specify) Preservation & # of Container enoM COSSEN HOBM OS^zH (505) 396-1429 HCI [©]ONH × 90 otal #. of Containers Jam benetili∃ blei Fax No: e-mail: 1240 1300 1340 1220 1320 Time Sampled 1/a/ver Received by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle 10 Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell D G-3 VZ Cell D G-4 VZ Cell D G-5 VZ Cell D G-2 VZ Cell D G-1 FIELD CODE 376701 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: Refinduished by (lab use only) ORDER #: (yino esu dai) # 8A



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

	Phoenix,	San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
F	Prelogin / N	lonconformance Re	port - Sampl	e Log-In		
client: Basin En	1. / Pla	ins				
(5 : 6						
	101					
Initials:	71					
		Sample Receipt Ch	necklist			
1. Samples on ice?			Blue	Water	No	
2. Shipping container in good	condition?		(Ye)	No	None	
3. Custody seals intact on sh	ipping contain	er (cooler) and(bottles?	(Ves)	No	N/A	
4. Chain of Custody present?			(Yes)	No		
5. Sample instructions compl	ete on chain o	f custody?	(Yes)	No		
6. Any missing / extra sample	s?		Yes	(No)		
7. Chain of custody signed w	hen relinquish	ed / received?	Yes	No		
8. Chain of custody agrees w	ith sample lab	el(s)?	(Fis)	No		
9. Container labels legible an	d intact?		(Yes)	No		
10. Sample matrix / properties	s agree with cl	nain of custody?	(Yes)	No		
11. Samples in proper contain	ner / bottle?		Yes	No		
12. Samples properly preserved? Yes No N/A						
13. Sample container intact?			(Yes)	No		
14. Sufficient sample amount	for indicated	test(s)?	Yes	No		
15. All samples received with	in sufficient h	old time?	(Yès)	No		
16. Subcontract of sample(s)	?		Yes	No	(N/A)	
17. VOC sample have zero he	ad space?		(Yes)	No	N/A	_
18. Cooler 1 No. Coo	ler 2 No.	Cooler 3 No.	Cooler 4 No).	Cooler 5 No	•
lbs . 4 °C	lbs	°C lbs	°C ibs	°C	lbs	°c
	,	Nonconformance Doc	umentation			
Contact	Contact	ted by:		Date/Time:		
Jonate				5 466711116		
Regarding:						
	<u>,</u>					
Corrective Action Taken:						
-	·····					
	···					

□ Initial and Backup Temperature confirm out of temperature conditions

Check all that apply:

☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

Environmental Lab of Texas

× × YAG 4 TAT basbnet2 Lone Stay □ NPDES ပ္ RUSH TAT (Pre-Schedule) 24, 48, T2 hrs 2 TRRP M.P.O.I Project Name: Lea Station Landfarm Temperature Upon Receipt: × × ELEX 8021B/5040 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Heads PO #: PAA - J. Henry X Standard Project #: 2004-00061 tals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL Anions (Cl, SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 2001 XT 2% <u>3</u> MS108 × 80158 1.814 :HdJ cibryant@basin-consulting.com SOIL SOIL SOF 잃 M-Dyuklud Mater 25-210dd Other (Specify) BUON _EO_SS_SBN HOSN OS^zH (505) 396-1429 HCI HOO Fotal #. of Containers benetilii blei Fax No: e-mail: 1220 1240 1300 1320 1340 Time Sampled 1 Natura Received by ELOT: 6/9/10 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell D G-5 VZ Cell D G-2 VZ Cell D G-3 VZ Cell D G-4 VZ Cell D G-1 FIELD CODE 376701 Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: inquished by (lab use only) ORDER #: (yino eeu dai) # &A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin /	Nonconformance	Report	- Sample	Log-In
------------	----------------	--------	----------	--------

client: Basin Env. / Plains				
Date/Time: (0.10.10 /(0.10				
Lab ID#: 376701				
Initials: AL				
Sample Receipt Che	ecklist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		· ····
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	(Yès	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A)	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No.	
lbs /.4 °C ibs °C ibs	°C lbs	°c	lbs	°C
Nonconformance Docu	imentation	Date/Time:_	·	<u></u>
Regarding:				
Corrective Action Taken:				
Check all that apply: Cooling process has begun shortly after same condition acceptable by NELAC 5.5.8.3.	1.a.1.		rature	

☐ Client understands and would like to proceed with analysis

Analytical Report 376702

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

Aciico-Odessa (EFA Lao code, 1 A00136). Texas (1104/04400-1A

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376702

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376702. 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. 376702 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376702



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell E G-1	S	Jun-09-10 14:00		376702-001
VZ Cell E G-2	S	Jun-09-10 14:20		376702-002
VZ Cell E G-3	S	Jun-09-10 14:40		376702-003
VZ Cell E G-4	S	Jun-09-10 15:00		376702-004



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376702
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376702-003, -001, -002, -004

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376702-003.

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376702-003, -001, -002, -004.

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

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376702 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

	Lah Id:	376702-001	376702-002	376702-003	376702-004
Ameliante Dame and	Field Id:	VZ Cell E G-1	VZ Cell E G-2	VZ Cell E G-3	VZ Cell E G-4
Analysis Kequesiea	Depth:				
	Matrix:	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-09-10 14:00	Jun-09-10 14:20	Jun-09-10 14:40	Jun-09-10 15:00
BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45
	Analyzed:	Jun-12-10 23:37	Jun-13-10 01:06	Jun-13-10 01:28	Jun-13-10 01:51
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Toluene		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0020
Ethylbenzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
m.p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0020
o-Xylene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Xylenes. Total		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Total BTEX		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010
Inorganic Anions In Soil by E300	Extracted:				
	Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		ND 5.50	ND 5.26	6.87 5.50	5.38 5.08
Percent Moisture	Extracted:				
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28
	Units/RL:	% RL	% RL	% RL	% RL
Percent Moisture		9.12 1.00	4.92 1.00	9.06 1.00	1.64 1.00
TPH by SW8015 Mod	Extracted:	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30
	Analyzed:	Jun-14-10 23:43	Jun-15-10 00:09	Jun-15-10 00:36	Jun-15-10 01:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
C12-C28 Diesel Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
C28-C35 Oil Range Hydrocarbons		ND 16.6	ND 15.7	ND 16.5	ND 15.3
Total TPH		ND 16.6	ND 15.7	ND 16.5	ND 15.3

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the thoughout 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 breety presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

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Odessa Laboratory Manager

Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0298	0.0300	99	80-120		
4-Bromofluorobenzene	0.0295	0.0300	98	80-120		

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/12/10 23:37	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 810421 Sample: 376702-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 376702-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

Lab Batch #: 810421 Sample: 376702-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 01:06	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0239	0.0300	80	80-120		
4-Bromofluorobenzene	0.0303	0.0300	101	80-120		

Units: mg/kg Date Analyzed: 06/13/10 01:28	SU	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120		

Lab Batch #: 810421 Sample: 376702-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 01:51	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	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	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	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	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376702-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 23:43	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	99.9	100	100	70-135	
o-Terphenyl	48.0	50.2	96	70-135	

Lab Batch #: 810644 Sample: 376702-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 00:09	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	99.0	99.5	99	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376702-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 00:36	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	112	100	112	70-135	
o-Terphenyl	54.3	50.0	109	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] - 100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376702, Project ID: 2004-00061

Units: mg/kg Date Analyzed: 06/15/10 01:02	l 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	100	100	100	70-135	
o-Terphenyl	47.4	50.1	95	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	125	100	125	70-135	
o-Terphenyl	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	124	100	124	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Analyst: ASA

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Sample: 565604-1-BKS Lab Batch ID: 810421

Batch #: 1

Date Prepared: 06/11/2010

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	JCATE F	RECOVE	ERY STUD	λ	
BTEX by EPA 8021	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>e</u>	<u>[C]</u>	ē	<u> </u>	Result [F]	<u>5</u>				
Benzene	QN.	0.1000	0.0946	56	0.1	8660:0	100	5	70-130	32	
Toluene	QN.	0.1000	0.0915	92	0.1	0960:0	96	S	70-130	35	
Ethylbenzene	QN	0.1000	0.0908	16	1.0	2560:0	96	5	71-129	32	
m.p-Xylenes	ON	0.2000	0.1791	06	0.2	0.1895	56	9	70-135	32	
o-Xylene	QN	0.1000	0.0905	91	0.1	8560.0	96	9	71-133	32	

Analyst: LATCOR

Date Prepared: 06/14/2010

Date Analyzed: 06/14/2010

Lab Batch ID: 810796

Batch #: 1 Sample: 810796-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	K/BLANKS	PIKE / B	TANK S	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	ERY STUD	Y	
Inorganic Anions In Soil by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[]	[B]	[C]	[a]	[E]	Result [F]	[6]	/ (
Chloride	<u> </u>	10.0	8.62	98	10	9.52	56	10	75-125	20	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Project ID: 2004-00061

Analyst: BEV		Da	te Prepar	Date Prepared: 06/11/2010	0			Date A	Date Analyzed: 06/14/2010	6/14/2010		
Lab Batch ID: 810644	Sample: 565718-1-BKS	KS	Batch #:	1 #: 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	,	
TPH by SW8015 Mod	5 Mod	Blank Sample Result	Spilke Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>₹</u>	B	Kesult [C]	¥ [_	<u> </u>	Duplicate Result [F]	<u> </u>	°,	%K		
C6-C12 Gasoline Range Hydrocarbons	suoc	ND	866	1150	511	266	1160	911	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	suc	<u>ON</u>	866	893	68	266	828	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702 Lab Batch #: 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010 **Date Prepared:** 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SP
reporting emissions	

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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376702

Lab Batch ID: 810421

Date Analyzed: 06/13/2010

QC-Sample ID: 376702-001 S

Matrix: Soil Batch #:

Project ID: 2004-00061

VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPIF	Œ DUPLICA'	TE RECO	OVERY S	STUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Вепгепе	QN.	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	×
Toluene	QN	0.1089	0.0596	55	0.1096	0.0549	50	×	70-130	35	×
Ethylbenzene	Ð	0.1089	9990:0	61	0.1096	0.0618	95	7	71-129	35	×
m.p-Xylenes	<u>Q</u>	0.2179	0.0639	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	Ð	0.1089	0.0642	59	0.1096	0.0598	55	7	71-133	35	×

Matrix: Soil BEVBatch #: QC-Sample ID: 376705-003 S Date Analyzed: 06/15/2010 Lab Batch ID: 810644

Analyst: **Date Prepared:** 06/11/2010

eporting Units: mg/kg		Σ	ATRIX SPIK	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	VERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	\oldsymbol{\sigma}_{-}	RPD	Control Control Limits Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]		B. & B.	Added [E]	%R Added Result [F] [D] [E]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	Ð	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	£	1060	688	84	1060	894	25	_	70-135	35	

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

Page 14 of 19



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376702

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

YAG 4 TAT basbost2 X □ NPDES PUSH TAT (Pre-Schedule) 24, 48, 72 hrs Phone: 432-563-1800 Fax: 432-563-1713 TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm BCI TEX 8021875930 or BTEX 8260 Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry X Standard Project #: 2004-00061 Aetals: As Ag Ba Cd Cr Pb Hg Se TOTAL: SAR / ESP / CEC Inions (Cl. SO4, Alkalinity) Report Format: 9001 XT BOISM × PIGETOG-NON = 4N cibryant@basin-consulting.com SOIL SOIL SOIL Preservation & # of Container: **BHON** Odessa, Texas 79765 12600 West I-20 East _EO_SS_SBN 'OS^zH (505) 396-1429 HCI [₽]ОNН × ЮG otal #. of Containers Fax No: e-mail: 1420 544 1500 1400 Time Sampled 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth eron Ulle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376702 VZ Cell E G-3 VZ Cell E G-4 VZ Cell E G-2 VZ Cell E G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special instructions:

Final	Ver.	1.000	

Relinquished by:

Lone Star

by Courier? UPS 1 U 01.91155 Temperature Upon Receipt:

16:10

0.00.00

Maria Received by ELOT:

<u>e</u>

0-10

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(vino esu dai) # &A

(lab use only) ORDER #:



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client: Basin Env. / Plains				
Date/Time: (0:10:10 /(0:.10				
Lab ID#: 374702				
Initials: AL				
Sample Receipt Che	cklist			
	······································		· · · · · · · · · · · · · · · · · · ·	
1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	Yes	No	None	1
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yés)	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pés)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No.	
ibs /. C ibs °C ibs	°C lbs	°C		°C
Nonconformance Docur	mentation			
	nentation	D.4.77		
Contact:Contacted by:		Date/Time:_		
Regarding:				
		· · · · · · · · · · · · · · · · · · ·		
Corrective Action Taken:				
	· • • • • • • • • • • • • • • • • • • •			
Check all that apply: Cooling process has begun shortly after sample	ling event and c	out of tempe	rature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

☐ NPDES USH TAT (Pre-Schedule) 24, 48, 72 hrs (१०८) <u>ONTINO</u> × × Phone: 432-563-1800 Fax: 432-563-1713 TRRP M.R.O.N CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm 3CI ETEX 80218/3030 or BTEX 8260 × × VOCs Free of Headspace? Analyze For Project Loc: Lea County, NM PO#: PAA - J. Henry Custody seals on co selüslo\ Project #: 2004-00061 X Standard Netals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC mions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 4001 XT :Hd. 8015M 8015B × На. PIGEJOG-HON - 4N cibryant@basin-consulting.com Matrix SOIL SOIL SOIL 잃 Preservation & # of Containers Hone Odessa, Texas 79765 12600 West I-20 East _EO_SS_SBN HORN OS2H (505) 396-1429 HCI HNO × **BOI** otal # of Containers benetliii blei Fax No: e-mail: 1420 1 54 5 1500 1400 Delqms2 emiT 6/9/10 6/9/10 6/9/10 6/9/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth annull. Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376702 VZ Cell E G-3 VZ Cell E G-2 VZ Cell E G-4 VZ Cell E G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions:

YAG & TAT bashnese

×

Lone Star

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Temperature Upon Receipt:

16.10

0.00

Received by ELOT:

0-10

(yino esu del) # 8A.

(lab use only ORDER #:



XENCO Laboratories

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

Prelogin / Nonconformance Report - Sample Log-In

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

client: Basin Env. / Plains				
Date/Time: (0-10-10 / (0-10				
Lab ID#: 374707				
Initials: AL				
Sample Receipt Chec	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	. No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	NIA	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No		Cooler 5 No.	
Ibs 1.4 °C ibs °C ibs	C lbs	°င	lbs	°c
Nonconformance Docum	entation			
Contact: Contacted by:		Date/Time:		
Oontacted by		oate time		—
Regarding:				
Corrective Action Taken:		-		
				
Check all that apply: Cooling process has begun shortly after sampling	ng event and o	ut of temper	ature	

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376703

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

Page 1 of 22 Final Ver. 1.000





16-JUN-10

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

Reference: XENCO Report No: 376703

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376703. 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. 376703 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 376703



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell F G-1	S	Jun-10-10 08:00		376703-001
VZ Cell F G-2	S	Jun-10-10 08:20		376703-002
VZ Cell F G-3	S	Jun-10-10 08:40		376703-003
VZ Cell F G-4	S	Jun-10-10 09:00		376703-004
VZ Cell F G-5	S	Jun-10-10 09:20		376703-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376703
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376703-005, -001, -003, -004.

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

within laboratory Control Limits

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis Samples affected are: 376703-001,376703-005,376703-003.

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376703-005, -001, -003, -004

Batch: LBA-810601 BTEX by EPA 8021

SW8021BM

Batch 810601, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376703-002.

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

Page 4 of 22 Final Ver. 1.000



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376703
 Date Received:
 06/10/2010

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

Page 5 of 22 Final Ver. 1.000



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

Certificate of Analysis Summary 376703 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

Marrier Paral He 370/13-401 370/13-401 370/13-402 370/13-4			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Part black Field this Field this SOIL SOI		Lab Id:	376703-001	376703-002	376703-003	376703-004	376703-005	
BTEX by EPA 8021 Depth: SOIL	Ameliante Dominated	Field Id:	VZ Cell F G-1	VZ Cell F G-2	VZ Cell F G-3	VZ Cell F G-4	VZ Cell F G-5	
SOIL SOIL	Analysis wequesieu	Depth:						
BTEX by EPA 8021 Sampled: Expanced: Inn-10-10 0455 Inn-10-10 10455 Inn-11-10 10 105 Inn-11-10 1		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
BTEX by EPA 8021 Extracted: Int-1-10 10-45 Int-1-1-10 10-45 Int-1-1-10 10-		Sampled:	Jun-10-10 08:00	Jun-10-10 08:20	Jun-10-10 08:40	Jun-10-10 09:00	Jun-10-10 09:20	
December Continue	BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-14-10 08:00	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	
Control Cont		Analyzed:	Jun-13-10 02:14	Jun-14-10 16:47	Jun-13-10 02:58	Jun-13-10 03:21	Jun-13-10 03:43	
Percent Moisture Extracted: International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shocarbons International Fly of the Bright Shope International Fly		Units/RL:						
No. 0,0020 No. 0,0020 No. 0,0021 No. 0,0020 No.	Benzene		l	ND 0.0011				
Percent Anions In Soil by E300 Extracted: ND 0.0010 ND 0.0011 ND 0.00100 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.	Toluene		ı	ND 0.0023	ND 0.0021	ND 0.0020	ND 0.0021	
es ND 0.0020 ND 0.0023 ND 0.0021 ND 0.0021 ND 0.0020 ND 0.0010 ND 0.	Ethylbenzene				ND 0.0010		ND 0.0011	
ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0010 ND 0	m.p-Xylenes							
Samic Anions In Soil by E300 Extracted; ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0010 ND 0.	o-Xylene			ND 0.0011				
X ND 0.0010 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0011 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0010 ND 0.0011 ND 0.0	Xylenes. Total				ND 0.0010		ND 0.0011	
ganic Anions In Soil by E300 Extracted: Inn-14-10 9:11 Jun-14-10 9:11 Ju	Total BTEX						ND 0.0011	
Percent Moisture Extracted: Trial 10 19:11 Inn-14-10 19:12 Inn-14-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:28 Inn-11-10 14:30 ""><th>Inorganic Anions In Soil by E300</th><th>Extracted:</th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Inorganic Anions In Soil by E300	Extracted:						
Percent Moisture Extracted: ND 5.01 RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL ND 5.09 S.09 S.08 RL mg/kg RL ND S.09 S.09 S.08 RL mg/kg RL ND S.09 S.09 S.08 RL MD S.09 RL ND S.09 RL ND S.09 RL ND		Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	
Percent Moisture Extracted: ND 5.01 ND 5.69 ND 5.22 7.90 5.08 18.2 Percent Moisture Analyzed: Inn-11-10 14:28 Inn-11-10 14:30		Units/RL:						
Percent Moisture Extracted: Inn-11-10 14:28 Jun-11-10 14:30 Jun-11-10 14:3	Chloride							
TPH by SW8015 Mod Extracted: Inn-11-10 14:28 Inn-11-10 14:30 Inn-11-10 14:	Percent Moisture	Extracted:						
visiture RL % RL Mm-11-10 14:30 Jun-11-10 14:30 <th></th> <th>Analyzed:</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th>Jun-11-10 14:28</th> <th></th>		Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:		Units/RL:						
TPH by SW8015 Mod Extracted: Jun-11-10 14:30 Jun-11-10 14:	Percent Moisture							
Analyzed: Jun-15-10 01:29 Jun-15-10 01:56 Jun-15-10 02:23 Jun-15-10 02:50 Jun-15-10 02:50 Jun-15-10 03:50 asoline Range Hydrocarbons Cnits/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg RL mg/kg Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	TPH by SW8015 Mod	Extracted:	Jun-11-1014:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	Jun-11-10 14:30	
asoline Range Hydrocarbons This/RI mg/kg RL mg/kg RD 15.3 ND 15.3 ND ND 15.3 ND 15.3 ND ND 15.3 ND 15.3 ND ND 15.3 ND ND 15.3 ND ND 15.3 ND ND ND 15.3 ND ND ND 15.3 ND ND ND ND ND 15.3 ND > <th>Analyzed:</th> <th>Jun-15-10 01:29</th> <th>Jun-15-10 01:56</th> <th>Jun-15-10 02:23</th> <th>Jun-15-10 02:50</th> <th>Jun-15-10 03:43</th> <th></th>		Analyzed:	Jun-15-10 01:29	Jun-15-10 01:56	Jun-15-10 02:23	Jun-15-10 02:50	Jun-15-10 03:43	
asoline Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND		Units/RL:						
Diesel Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND Dil Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	C6-C12 Gasoline Range Hydrocarbons							
ND il Range Hydrocarbons ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND	C12-C28 Diesel Range Hydrocarbons							
	C28-C35 Oil Range Hydrocarbons				ľ			
Total TPH ND 14.9 ND 17.0 ND 15.7 ND 15.3 ND 15.9	Total TPH							

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

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Odessa Laboratory Manager Brehl Barron, II

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Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15 SURROGATE RECOVER				STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 376702-001 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/13/10 02:14	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 376703-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 02:58	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Units: mg/kg Date Analyzed: 06/13/10 03:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 810421 Sample: 376703-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 03:43	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 810601 Sample: 565716-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 08:50	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810601 Sample: 565716-1-BSD/BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 09:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0311	0.0300	104	80-120	

Lab Batch #: 810601 Sample: 565716-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 10:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Units: mg/kg Date Analyzed: 06/14/10 15:40	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376694-002 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:02	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 810601 Sample: 376703-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/14/10 16:47	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
· ·					
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376703-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 01:29	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	103	99.5	104	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376703-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 01:56	l 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	97.8	99.5	98	70-135	
o-Terphenyl	48.0	49.8	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376703, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 376703-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 02:23	Su	RROGATE RI	COVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	95.0	99.9	95	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 810644 **Sample:** 376703-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 02:50	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	96.5	101	96	70-135	
o-Terphenyl	46.7	50.3	93	70-135	

Lab Batch #: 810644 Sample: 376703-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 03:43	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	96.6	99.5	97	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	125	100	125	70-135	
o-Terphenyl	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 Analyst: ASA

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Date Prepared: 06/11/2010 Batch #: 1 Sample: 565604-1-BKS Lab Batch ID: 810421

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	Y	
BTEX by EPA 8021	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>	[C]	[0]	<u> </u>	Result [F]	<u>[5</u>				
Вепгепе	QN	0.1000	0.0946	56	0.1	8660.0	100	5	70-130	35	
Toluene	QN	0.1000	0.0915	65	0.1	0960.0	96	S	70-130	35	
Ethylbenzene	QN	0.1000	8060:0	16	0.1	0.0957	96	S	71-129	35	
m.p-Xylenes	ON.	0.2000	0.1791	06	0.2	0.1895	56	9	70-135	35	
o-Xylene	Ð.	0.1000	0.0905	91	0.1	0.0958	96	9	71-133	35	

Sample: 565716-1-BKS Lab Batch ID: 810601 Analyst: ASA

Date Prepared: 06/14/2010 Batch #: 1

Date Analyzed: 06/14/2010 Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021	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		[B]	JC]	IDI	[E]	Kesuit [F]	C				
Вепzепе	ND	0.1000	0.1076	108	0.1	0.1053	105	2	70-130	35	
Tolnene	ON	0.1000	0.1063	106	0.1	0.1033	103	3	70-130	35	
Ethylbenzene	ON	0.1000	0.1085	109	0.1	0.1046	105	4	71-129	35	
m.p-Xylenes	ND	0.2000	0.2185	109	0.2	0.2102	105	4	70-135	35	
o-Xylene	QN.	0.1000	0.1075	108	0.1	0.1032	103	4	71-133	35	

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 Analyst: LATCOR

Lab Batch ID: 810796

Date Prepared: 06/14/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Batch #: 1 Sample: 810796-1-BKS

Matrix: Solid

Units: mg/kg			BLAN	K/BLANKS	PIKE / B	LANKS	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
Inorganic Anions In Soil by E300	Soil by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>[¥</u>	<u>8</u>	Result [C]	%R [D]	<u> </u>	Duplicate Result [F]	%R [G]	%	%R	%RPD	
Chloride		ND	10.0	8.62	98	10	9.52	95	10	75-125	20	
Analyst: BEV		Da	ite Prepar	Date Prepared: 06/11/2010	0			Date A	nalyzed: 0	Date Analyzed: 06/14/2010		
Lab Batch ID: 810644	Sample: 565718-1-BKS	KS	Batch #:	1 #: 1					Matrix: Solid	olid		

Units: mg/kg		BLAN	K/BLANKS	PIKE/B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	ICATE I	RECOVE	RECOVERY STUDY	,	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	Bik. Spk Dup.	RPD	Control Limits	Control Limits %RPD	
Analytes		<u>B</u>	[C]	[a]	E	Result [F]	<u>5</u>		,		
C6-C12 Gasoline Range Hydrocarbons	Ð	866	1150	115	266	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN.	866	893	68	266	878	88	2	70-135	35	

Flag

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703 **Lab Batch #:** 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010 Analyst: LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	MATI	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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703

Batch #: QC-Sample ID: 376702-001 S Lab Batch ID: 810421

Matrix: Soil VSVAnalyst: **Date Prepared:** 06/11/2010 Date Analyzed: 06/13/2010

Project ID: 2004-00061

Reporting Units: mg/kg		M	ATRIX SPIKI	[/MATI	XIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<u>ON</u>	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	×
Toluene	R	0.1089	0.0596	55	0.1096	0.0549	50	∞	70-130	35	×
Ethylbenzene	QN.	0.1089	9990'0	61	0.1096	0.0618	95	7	71-129	35	×
m.p-Xylenes	ON	0.2179	6590'0	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	ND	0.1089	0.0642	65	0.1096	0.0598	55	7	71-133	35	X

Matrix: Soil Analyst: ASA Batch #: QC-Sample ID: 376694-002 S **Date Prepared:** 06/14/2010 Date Analyzed: 06/14/2010 Lab Batch ID: 810601

MATRIX SPIKE / MATRIX SPIKE DIPLICATE RECOVERY STIMY Reporting Units: mg/kg

9, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9,		IAI	MATKIA SFINE / MATKIA SFINE DUFLICATE KECUVEKT STUDT	L/IVIAL	XIA SFIF	LE DUFLICA	IE KECL	VEKT	IODY		
BTEX by EPA 8021 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Вепzепе	ND ND	0.1048	8/90.0	65	0.1050	0.0720	69	9	70-130	35	×
Toluene	ND	0.1048	0.0670	64	0.1050	0.0713	89	9	70-130	35	×
Ethylbenzene	ND	0.1048	0.0683	99	0.1050	0.0725	69	9	71-129	35	X
m.p-Xylenes	ND	9607:0	0.1378	99	0.2100	0.1458	69	9	70-135	35	×
o-Xylene	ND	0.1048	0.0662	63	0.1050	0.0708	29	7	71-133	35	X

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

Page 16 of 22

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



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376703

QC-Sample ID: 376705-003 S Date Analyzed: 06/15/2010 Lab Batch ID: 810644

Analyst: **Date Prepared:** 06/11/2010

Matrix: Soil Batch #:

BEV

Project ID: 2004-00061

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MATI	XIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Samnle	Smileo	Spiked Sample Spiked Bount Sample Sam	Spiked Sumple) jko	Duplicate Sumple	(J)	uaa		Control	E G
	Result	Added		%R	lded	Result [F]	%R	3%	%R	%RPD	<u>a</u>
Analytes	<u>[4]</u>	<u>B</u>		<u> </u>	Ξ						
C6-C12 Gasoline Range Hydrocarbons	ND ON	1060	1140	108	1060	1140	108	0	70-135	35	

35

70-135

\$

894

1060

84

889

1060

B

C12-C28 Diesel Range Hydrocarbons

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

Page 17 of 22



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376703

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

Camille Bryant

Project Manager:

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East

Phone: 432-563-1800 Fax: 432-563-1713 Odessa, Texas 79765

Project Name: Lea Station Landfarm

Project #: 2004-00061

YACI 4 TAT basbrist Feditiv Lone Star ☐ NPDES ပ္ SUSH TAT (Pre-Schedule) 24, 48, 72 hrs 7. ☐ TRRP M.A.O.I Temperature Upon Receipt: × × VOCs Free of Headspace? × BTEX 8021B/5030 or BTEX 8260 Analyze For Project Loc: Lea County, NM PO#: PAA - J. Henry X Standard Hetals: As Ag Ba Cd Cr Pb Hg Se TCLP Anions (Cl, SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: N N 9001 XT :Hd. 01.01.01.01.0 **₽** × × × × 8012M) 1.814 cibryant@basin-consulting.com SOIL SOIL 잃 SOIL Soi CHU-Y Hone Na₂S₂O₃ HOBN OSZH (505) 396-1429 нсі EONH × × CB otal #. of Containers benetiiii blei Fax No: e-mail: 0840 0060 0920 0820 080 DelgmeS emiT MANDE Regained by ELOT 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth geđinning Depth Complete. Lovington, NM 88260 (575)605-7210 Company Address: P.O. Box 381 376703 VZ Cell F G-5 VZ Cell F G-3 VZ Cell F G-4 **VZ Cell F G-2** VZ Cell F G-1 FIELD CODE Sampler Signature: Company Name Telephone No: City/State/Zip: Special Instructions: MYN 000 Relinguished.by (lab use only) ORDER #: (yinc eau dai) # SA.



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 F

Page 1 of 1

Prelogin / Nonconforma	ince Report	- Sample	Log-In		
client: Basin Env. / Plains					
Date/Time: (0:10:10 1(0:10			•		
Lab ID#: 374703					
Initials: AL					
Sample Re	ceipt Checkl	list			
1. Samples on ice?		Blue	Water	No	
2. Shipping container in good condition?	1	Yes	No	Noпе	
3. Custody seals intact on shipping container (cooler) and be	otties?	(PS)	No	N/A	:
4. Chain of Custody present?		(Yés)	No		
5. Sample instructions complete on chain of custody?		Yes	No		
6. Any missing / extra samples?		Yes	(No)		
7. Chain of custody signed when relinquished / received?		Yes	No.		
8. Chain of custody agrees with sample label(s)?		(Pes)	No		
9. Container labels legible and intact?		(Ŷes)	No		
10. Sample matrix / properties agree with chain of custody?		(Yes)	No		
11. Samples in proper container / bottle?		(Yes)	No		
12. Samples properly preserved?	,	Yes	No	N/A	
13. Sample container intact?		(Yes)	No		
14. Sufficient sample amount for indicated test(s)?		Yes	No		
15. All samples received within sufficient hold time?		(Yes)	No		
16. Subcontract of sample(s)?		Yes	No	(N/A)	
17. VOC sample have zero head space?		(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.)	Cooler 4 No	·	Cooler 5 No.	
lbs /.4 °C lbs °C	ibs °C	lbs	°c	lbs	°C
Nonconformati	nce Docume	ntation		-	
Contact: Contacted by:			Date/Time:_		
Regarding:	 				
Corrective Action Taken:			-		
<u> </u>		of the same section			
			•		
Check all that apply: □ Cooling process has begun shortly	rafter sampling	event and o	ut of temper	rature	*****
condition acceptable by NEL	AC 5.5.8.3.1.a.1.	-			

☐ Client understands and would like to proceed with analysis

Environmental Lab of Texas

□ NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs Fax: 432-563-1713 Phone: 432-563-1800 TRRP м о о и CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Lea Station Landfarm BÇI 87€X 8021B/50307n BTEX 8260 × × × × Analyze Project Loc: Lea County, NM PO #: PAA - J. Henry Project #: 2004-00061 X Standard vetsis: ya ya ga ca cu bp Ha se 10LP: TOTAL SAR / ESP / CEC Anions (Cl. SO4. Alkalinity) Report Format: 9001 XT 8001 XT MS108 греску осп cibryant@basin-consulting.com SOIL SOIL SOIL Soil SOF Other (Specify) Preservation & # of Containers Odessa, Texas 79765 12600 West I-20 East COSSEN HOSN 'OS²H (505) 396-1429 HCI EONH × 90 otal #. of Containers benetliii ble e-mail: Fax No: 0820 0920 080 0840 0060 Delgms2 emiT 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Received Basin Environmental Consulting, LLC Friding Depth R Ē Beginning Depth C. Marchelle 2 Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 276703 VZ Cell F G-5 VZ Cell F G-2 VZ Cell F G-3 VZ Cell F G-4 VZ Cell F G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: (lab use only) ORDER #:

YAG 4 TAT basbrist

×

(yino esu dai) # SA

remperature Upon R

16:10 <u>=</u>

0.10.10

Received by ELOT



XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Repo	rt - Sample	Log-In		
client: Basin Env. / Plains				
Date/Time: (0:10:10 /(0:10				
Lab ID#: 374703				
A 3				
Sample Receipt Chec	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	(Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(VeS)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		,
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No	i	
16. Subcontract of sample(s)?	Yes	No	NIA	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No.		Cooler 5 No.	
ibs /. 4 °C lbs °C lbs °	C lbs	°C	lbs	°c
Nonconformance Docume	entation			
Contact: Contacted by:		Date/Time:_	· · · · · · · · · · · · · · · · · · ·	
Regarding:				

O many at the Talana			<u></u>	
Corrective Action Taken:				
			· · · · · · · · · · · · · · · · · · ·	

Final Ver. 1.000

Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376704

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

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

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

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

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376704

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376704. 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. 376704 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376704



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell G G-1	S	Jun-10-10 09:40		376704-001
VZ Cell G G-2	S	Jun-10-10 10:00		376704-002
VZ Cell G G-3	S	Jun-10-10 10:20		376704-003
VZ Cell G G-4	S	Jun-10-10 10:40		376704-004
VZ Cell G G-5	S	Jun-10-10 11:00		376704-005



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376704
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 376704-001,376704-005,376704-004,376704-003.

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376704-002, -001, -005, -003, -004.

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

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits. Samples affected are: 376704-002, -001, -005, -003, -004

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

Page 4 of 19 Final Ver. 1.000



Project Location: Lea County, NM

Contact: Jason Henry **Project Id:** 2004-00061

Certificate of Analysis Summary 376704 PLAINS ALL AMERICAN EH&S, Midland, TX

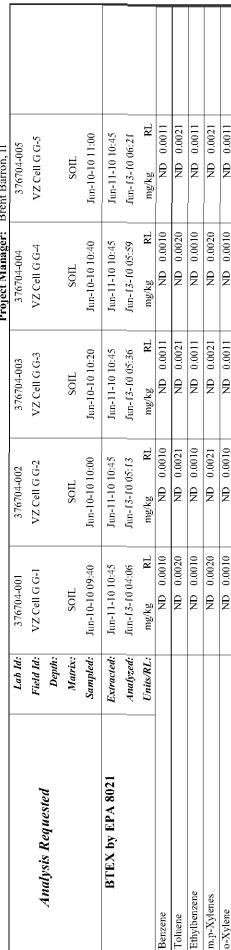
Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm

16-JUN-10

Report Date:

Brent Barron, II Project Manager:



This analytical report, and the critics data package it represents, has been nade for your exclusive and confidential use. In interpretations and results bepressed in the integration of analytical represent the best independent of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the ord use of the data breety presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brefit Barron, II

16.0 16.0 16.0 16.0

B B E B

15.0 15.0 15.0

2

15.9 15.9

2 E E 2

2 B B 2

15.2

P R £

15.2

mg/kg

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mg/kg

Units/RL

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

C28-C35 Oil Range Hydrocarbons

Total TPH

15.6 15.6

15.6 15.6

15.2 15.2

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mg/kg

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E B

15.9

15.0

15.9

mg/kg

Σ

mg/kg

Fun-15-10 05:57

Jun-11-10 14:30

Jun-11-10 14:30

Jun-11-10 14:30 Jun-15-10 05:03

Jun-11-10 14:30 Jun-15-10 04:37

Jun-11-10 14:30 Jun-15-10 04:10

Extracted: Analyzed:

TPH by SW8015 Mod

Percent Moisture

B

1.00

5.90

1.00

Jun-15-10 05:31

5.33 \mathbb{Z}

5.02

6.58

mg/kg

₹

mg/kg

₹ 5.31

mg/kg

⋥

mg/kg

 $\mathbb{K}^{\mathbb{L}}$

mg/kg

Units/RL:

5.21

10.9

5.06

8.87

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Jun-14-10 19:11

Analyzed:

Extracted:

Inorganic Anions In Soil by E300

Xylenes. Total

Total BTEX

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Jun-11-10 14:28

Analyzed:

Extracted:

Percent Moisture

Chloride

조

%

조

%

₹

 $\mathbb{R}^{\mathbb{Z}}$ 1.00

%

Units/RL

ND 0.0011

ND 0.0010

ND 0.0011

ND 0.0010 ND 0.0010

ND 0.0010 ND 0.0010

0.0011

ND 0.0010

ND 0.0011

Page 5 of 19



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

Page 6 of 19 Final Ver. 1.000



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 **Sample:** 376702-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 376704-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 04:06	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 810421 Sample: 376704-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:13	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[שו		
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376704-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:36	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 810421 Sample: 376704-004 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 05:59	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 376704-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 06:21	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376704-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 04:10	SU	SURROGATE RECOVERY STUDY				
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	95.8	100	96	70-135		
o-Terphenyl	45.7	50.1	91	70-135		

Lab Batch #: 810644 Sample: 376704-002 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 04:37	l 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	98.7	99.9	99	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376704, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 376704-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 05:03		RROGATE RI	ECOVERY	STUDY	
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	98.5	99.8	99	70-135	
o-Terphenyl	48.5	49.9	97	70-135	

Lab Batch #: 810644 **Sample:** 376704-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/15/10 05:31	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	90.5	99.8	91	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 810644 Sample: 376704-005 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 05:57	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	103	100	103	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	Su	RROGATE RE	ECOVERY	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	49.3	50.2	98	70-135	

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	124	100	124	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Date Frepared:

Work Order #: 376704

Analyst: ASA

Date Prepared: 06/11/2010

Batch #: 1

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Matrix: Solid

Sample: 565604-1-BKS Lab Batch ID: 810421

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 71-129 71-133 RPD % S 'n vo 9 9 Blk. Spk Вчр. |G 100 95 96 96 96 Duplicate Result [F] Blank Spike 0.0998 0.0960 0.0957 0.1895 0.0958 Spike Added 0.1 0.1 0.1 0.2 0.1 Ξ Blank Spike %R [D] 95 92 9 90 9 Blank Spike Result 0.0946 0.0915 0.09080.1791 0.0905 <u>5</u> 0.1000 Spike Added 0.10000.10000.1000 0.2000<u>B</u> Sample Result Blank B B \exists £ B BTEX by EPA 8021 Units: mg/kg Analytes Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Analyst: LATCOR

Sample: 810796-1-BKS

Lab Batch ID: 810796

Date Prepared: 06/14/2010 Batch #: 1

Matrix: Solid

Date Analyzed: 06/14/2010

Flag Control Limits %RPD 20 BLANK/BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD % 10 Blk. Spk Ощр. |G %R 95 Duplicate Result [F] Blank Spike 9.52 Spike Added 10 Ξ Blank Spike %R [D] 98 Blank Spike Result 8.62 <u>[</u> Spike Added 10.0 <u>B</u> Blank Sample Result £ ⋖ Inorganic Anions In Soil by E300 Units: mg/kg Analytes Chloride

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



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704 Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Sample: 565718-1-BKS

Lab Batch ID: 810644

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE/B	LANKS	PIKE DUPL	ICATE	RECOVE	RY STUD	١,	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Posult	Blank Spike	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>{</u>	[B]		<u>[</u>	<u> </u>	Result [F]	<u>5</u>	?	11 0/	A Na	
C6-C12 Gasoline Range Hydrocarbons	QN.	866	1150	115	266	1160	116	-	70-135	35	
C12-C28 Diesel Range Hydrocarbons	Ð	866	893	68	266	878	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704 **Lab Batch #:** 810796

Project ID: 2004-00061

Date Analyzed: 06/14/2010

Date Prepared: 06/14/2010

Analyst: LATCOR

QC- Sample ID: 376701-004 S

Batch #: 1 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	5.94	104	113	103	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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376704

Date Analyzed: 06/13/2010

Batch #: QC-Sample ID: 376702-001 S Lab Batch ID: 810421

VSVAnalyst: **Date Prepared:** 06/11/2010

Project ID: 2004-00061

Matrix: Soil

Flag ΧE × × × Control Limits %RPD 35 35 35 35 35 Control Limits %R 70-130 71-129 71-133 70-130 70-135 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD 47 m œ Spiked Dup. | %R |G| <u>«</u> 9 20 99 55 Duplicate Spiked Sample Result [F] 0.0662 0.0618 0.0598 0.0549 0.0394 Spike Added 0.1096 0.10960.2192 0.10960.1096 Ŧ Spiked Sample 2 % E 59 62 55 9 59 Spiked Sample Result 9990.0 0.0639 0.0642 0.0679 0.0596 0.1089 Spike Added 0.10890.1089 0.2179 0.1089Parent Sample Result B E B B 2 BTEX by EPA 8021 Analytes Reporting Units: mg/kg Ethylbenzene m.p-Xylenes o-Xylene Benzene Toluene

Matrix: Soil BEVAnalyst: Batch #: 376705-003 S **Date Prepared:** 06/11/2010 QC-Sample ID: Date Analyzed: 06/15/2010 Lab Batch ID: 810644

MATRIX SPIKE / MATRIX SPIKE DITRI ICATE PECOVEDV STITIV

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT]	RIX SPII	KE DUPLICA'	TE RECO	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample		Spike	Duplicate Spike Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>C</u>	7% E	Added [E]	Result [F]	% R [G]	%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ON	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1060	688	84	1060	894	84	1	70-135	35	

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

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

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

Page 14 of 19



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376704

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed:
 06/11/2010
 Date Prepared:
 06/11/2010
 Analyst:
 JLG

 QC- Sample ID:
 376702-001 D
 Batch #:
 1
 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	9.12	8.67	5	20	

Environmental Lab of Texas

Phone: 432-563-1800 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

Fax: 432-563-1713

YAG 4 TAT basbrist □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ J TRRP Project Name: Lea Station Landfarm by Courier UPS 1 4 07.9 (9.55)
Temperature Upon Receipt: BTEX 8021B/5630 or BTEX 8260 × Analyze For Project Loc: Lea County, NM Sent & Carlanda VOCs Free of Head PO #: PAA - J. Henry Project #: 2004-00061 X Standard letals: As Ag Ba Cd Cr Pb Hg Se TOTAL: Cations (Ca, Mg, Na, K) Report Format: 0.0 B B 9001 XT 3001 XT :HdJ Ē 80128 × × × × 1.814 cibryant@basin-consulting.com Soi SOIL SOL S SO 0.10.10 29 Other (Specify) enoM Odessa, Texas 79765 eOs2saN HOSN OS2H (505) 396-1429 ЮН EONH × otal #. of Containers benetiiii biei Fax No: e-mail: 0940 1000 1020 5 1100 Time Sampled 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC finding Depth Beginning Depth Lower Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 VZ Cell G G-2 VZ Cell G G-3 VZ Cell G G-4 VZ Cell G G-5 VZ Cell G G-1 376704 FIELD CODE Sampler Signature. Project Manager: Company Name Telephone No: City/State/Zip: Special instructions: quished by: (lab use only) ORDER #: (kino esu dai) * EAL



XENCO Laboratories

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

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconform	ance Report	- Sample	Log-In
-----------------------	-------------	----------	--------

Prelogin / Nonconformance Repo	rt - Sample	e Log-in		
client: Basin Env. / Plains				
Date/Time: (0·10·10 / (0'.10				
Lab ID#: 374704				
Initials: AL				
Sample Receipt Check	klist			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	_
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No_	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No. Cooler 5 No.		Cooler 5 No.	
lbs 1.4 °C lbs °C lbs °	C lbs	ာင	lbs	°C
Nonconformance Docume	entation			
Contact: Contacted by:		Date/Time:		
				
Regarding:				
Corrective Action Taken:				
Check all that apply: Cooling process has begun shortly after sampling	g event and o	ut of tempera	ature	

Final Ver. 1.000

condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

Phone: 432-563-1800

]] NPDES SUSH TAT (Pre-Schedule) 24, 48, 72 hrs Fax: 432-563-1713 TRRP IO.R.M. Project Name: Lea Station Landfarm BTEX 8021BIS030 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Heads PO #: PAA - J. Henry Project #: 2004-00061 X Standard vetals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: Anions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 9001 XT 2001 XT × × 86158 (ME108 1.814 HdJ cibryant@basin-consulting.com SOIL SOIL SOIL SOIL Soi DAA – Drinkling Water SL – Sludg Other (Specify) Preservation & # of Container enoM Odessa, Texas 79765 _EO_SS_SBN HÖBN OS^zH (505) 396-1429 HCI EONH cotal #. of Containers Fax No: e-mail: 100 1020 6 1100 0940 Time Sampled 6/10/10 6/10/10 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth Constable Lovington, NM 88260 Camille Bryant (575)605-7210 P.O. Box 381 VZ Cell G G-3 VZ Cell G G-2 VZ Cell G G-4 VZ Cell G G-5 VZ Cell G G-1 376704 FIELD CODE Company Address: Sampler Signature Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: tuished by lab use only ORDER #:

YAG 4 TAT basbned8

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J

7 07 9 (555) Temperature Upon Receipt:

16:10

0.10.10

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(Vino seu dat) # 8A



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin	/ Noncor	formance	Report	- Sample	l og-ln
i reioâiii	7 14011001	HOIMANCE	report.	- Dample	-og-:::

	ncomormance Rep	ort - Sample	Log-in		
client: Basin Env. / Plai					
Date/Time: (0.10.10 /(0.10	<u> </u>				
Lab ID#: 376704					
Initials: AL					
	Sample Receipt Che	cklist			
1. Samples on ice?	Blue	Water	No		
2. Shipping container in good condition?	Yes	No	None		
3. Custody seals intact on shipping container	(cooler) and bottles	Yes	No	N/A	
4. Chain of Custody present?		YES	No		
5. Sample instructions complete on chain of o	sustody?	Yes	No		
6. Any missing / extra samples?		Yes	No)		
7. Chain of custody signed when relinquished	d / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?			No		
9. Container labels legible and intact?		Yes	No		
10. Sample matrix / properties agree with chain of custody?			No		
11. Samples in proper container / bottle?		Yes	No		
12. Samples properly preserved?			No	N/A	
13. Sample container intact?			No		-
14. Sufficient sample amount for indicated te	(Yes)	No			
15. All samples received within sufficient hold time?			No		
16. Subcontract of sample(s)?			No	NA	
17. VOC sample have zero head space?	(Yes)	No	N/A		
18. Cooler 1 No. Cooler 2 No.	Cooler 3 No.	Cooler 4 No. Cooler 5		Cooler 5 No.	
lbs /.4 °C ibs	°C lbs	°C Ibs	°c	lbs	°C
No Contact: Contacted	onconformance Docum		Date/Time:		
Jonate Tolland	- UJ		/a.c. : iiiie		
Regarding:					
Corrective Action Taken:					
			- "		

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

☐ Initial and Backup Temperature confirm out of temperature conditions

Analytical Report 376705

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm 2004-00061

16-JUN-10





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

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

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

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

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

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

Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)

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16-JUN-10

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

Reference: XENCO Report No: 376705

Lea Station Landfarm

Project Address: Lea County, NM

Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 376705. 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. 376705 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II

Odessa Laboratory Manager

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Sample Cross Reference 376705



PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
VZ Cell H G-1	S	Jun-10-10 11:20	376705-001
VZ Cell H G-2	S	Jun-10-10 11:40	376705-002
VZ Cell H G-3	S	Jun-10-10 12:00	376705-003



CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm



 Project ID:
 2004-00061
 Report Date:
 16-JUN-10

 Work Order Number:
 376705
 Date Received:
 06/10/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-810308 Percent Moisture

None

Batch: LBA-810421 BTEX by EPA 8021

SW8021BM

Batch 810421, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 376705-002, -003, -001.

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

within laboratory Control Limits

SW8021BM

Batch 810421, m,p-Xylenes RPD was outside QC limits.

Samples affected are: 376705-002, -003, -001

SW8021BM

Batch 810421, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is

suspected; data not confirmed by re-analysis

Samples affected are: 376705-002.

Batch: LBA-810644 TPH by SW8015 Mod

None

Batch: LBA-810796 Inorganic Anions by EPA 300

None

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

Certificate of Analysis Summary 376705 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

Date Received in Lab: Thu Jun-10-10 04:10 pm Report Date: 16-JUN-10

Project Manager: Brent Barron, II

	ran ta:	2/0/07-001	200-00/0/0	con-covove	
Analysis Dogwood	Field Id:	VZ Cell H G-1	VZ Cell H G-2	VZ Cell H G-3	
naisanhay sistinut	Depth:				
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Jun-10-10 11:20	Jun-10-10 11:40	Jun-10-10 12:00	
BTEX by EPA 8021	Extracted:	Jun-11-10 10:45	Jun-11-10 10:45	Jun-11-10 10:45	
	Analyzed:	Jun-13-10 06:43	Jun-13-10 07:06	Jun-13-10 07:28	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		ND 0.0011	ND 0.0010	ND 0.0011	
Toluene		ND 0.0022	ND 0.0021	ND 0.0021	
Ethylbenzene		ND 0.0011	ND 0.0010	ND 0.0011	
m.p-Xylenes		ND 0.0022	ND 0.0021	ND 0.0021	
o-Xylene		ND 0.0011	ND 0.0010	ND 0.0011	
Xylenes. Total		ND 0.0011	ND 0.0010	ND 0.0011	
Total BTEX		ND 0.0011	ND 0.0010	ND 0.0011	
Inorganic Anions In Soil by E300	Extracted:				
	Analyzed:	Jun-14-10 19:11	Jun-14-10 19:11	Jun-14-10 19:11	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		11.4 5.42	ND 5.24	ND 5.26	
Percent Moisture	Extracted:				
	Analyzed:	Jun-11-10 14:28	Jun-11-10 14:28	Jun-11-10 14:28	
	Units/RL:	% RL	% RL	% RL	
Percent Moisture		7.74 1.00	4.49 1.00	5.03 1.00	
TPH by SW8015 Mod	Extracted:	Jun-11-1014:30	Jun-11-10 14:30	Jun-11-10 14:30	
	Analyzed:	Jun-15-10 06:25	Jun-15-10 06:51	Jun-15-10 07:18	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 16.3	ND 15.6	ND 15.8	
C12-C28 Diesel Range Hydrocarbons		ND 16.3	ND 15.6	ND 15.8	
C28-C35 Oil Range Hydrocarbons		ND 16.3	ND 15.6	ND 15.8	
Total TPH		ND 16.3	ND 15.6	ND 15.8	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results bepressed the floraighout 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 breeby presented. Our liability is limited to the amount invoiced for this work order unloss otherwise agreed to in writing.

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Odessa Laboratory Manager Brehl Barron, II



Flagging Criteria

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

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

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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

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Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Lab Batch #: 810421 Sample: 565604-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 21:45	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	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	0.0290	0.0300	97	80-120	

Lab Batch #: 810421 Sample: 565604-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 22:07	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 Sample: 565604-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/12/10 23:15	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 810421 Sample: 376702-001 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 00:00	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 810421 **Sample:** 376702-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg Date Analyzed: 06/13/10 00:22	Su	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	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	0.0306	0.0300	102	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

Final Ver. 1.000

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^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Units: mg/kg Date Analyzed: 06/13/10 06:43	Su	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Units: mg/kg Date Analyzed: 06/13/10 07:06	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 810421 Sample: 376705-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/13/10 07:28	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 810644 Sample: 565718-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:29	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	132	99.8	132	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 810644 Sample: 565718-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 21:56	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	128	99.7	128	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, **Project ID:** 2004-00061

Lab Batch #: 810644 Sample: 565718-1-BLK / BLK Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 06/14/10 22:23	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	108	99.5	109	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 810644 Sample: 376705-001 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 06:25	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	96.5	100	97	70-135	
o-Terphenyl	47.5	50.1	95	70-135	

Units: mg/kg Date Analyzed: 06/15/10 06:51	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	103	99.5	104	70-135	
o-Terphenyl	50.0	49.8	100	70-135	

Lab Batch #: 810644 Sample: 376705-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 07:18	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	97.6	99.8	98	70-135	
o-Terphenyl	47.3	49.9	95	70-135	

Lab Batch #: 810644 Sample: 376705-003 S/MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:12	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	125	100	125	70-135	
o-Terphenyl	49.3	50.2	98	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] -100 * A / B

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

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Lea Station Landfarm

Work Orders: 376705, Project ID: 2004-00061

Lab Batch #: 810644 Sample: 376705-003 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 06/15/10 08:41	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	48.5	50.2	97	70-135	

Surrogate Recovery [D] – 100 * A / B

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

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705

Lab Batch ID: 810421

Analyst: ASA

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/12/2010

Batch #: Sample: 565604-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANK S	PIKE DUPI	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021	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>C</u>]	<u>a</u>	[3]	Result [F]	[6]				
Benzene	Ð	0.1000	0.0946	95	0.1	8660.0	100	S	70-130	35	
Toluene	Ð	0.1000	0.0915	92	0.1	0960.0	96	S	70-130	35	
Ethylbenzene	Ð	0.1000	8060.0	91	0.1	0.0957	96	S	71-129	35	
m.p-Xylenes	QN.	0.2000	0.1791	06	0.2	0.1895	95	9	70-135	35	
o-Xylene	R	0.1000	0.0905	91	0.1	0.0958	96	9	71-133	35	

Analyst: LATCOR

Lab Batch ID: 810796

Date Prepared: 06/14/2010

Batch #:

Sample: 810796-1-BKS

Date Analyzed: 06/14/2010 Matrix: Solid

Flag Control Limits %RPD 20 BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 75-125 RPD % 10 Blk. Spk Dup. [G] 95 Blank Spike Duplicate Result [F] 9.52 Spike Added Ξ 10 Blank Spike %R [D] 98 Blank Spike Result 8.62 Spike Added 10.0 <u>8</u> Blank
Sample Result
[A] Z Inorganic Anions In Soil by E300 Units: mg/kg Analytes Chloride

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)]

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BS / BSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705

Analyst: BEV

Date Prepared: 06/11/2010

Project ID: 2004-00061 **Date Analyzed:** 06/14/2010

Lab Batch ID: 810644	Sample: 565718-1-BKS	ЗКS	Batch #:	1 #: 1					Matrix: Solid	olid		
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	15 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		<u>:</u>	<u>B</u>	[C]		<u>a</u>	Result [F]	<u>[</u>]	?	!		
C6-C12 Gasoline Range Hydrocarbons	arbons	R	866	1150	115	266	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	rbons	Ð	866	893	68	266	878	88	2	70-135	35	

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



Form 3 - MS Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705 **Lab Batch #:** 810796

Chloride

Project ID: 2004-00061

 Analyst: LATCOR

75-125

QC- Sample ID: 376701-004 S

Batch #: 1 Matrix: Soil

113

Reporting Units: mg/kg	MATE	RIX / 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]				

5.94

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

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Lea Station Landfarm

Work Order #: 376705 Lab Batch ID: 810421

Date Analyzed: 06/13/2010

Batch #: QC-Sample ID: 376702-001 S

Project ID: 2004-00061

Matrix: Soil VSVAnalyst: **Date Prepared:** 06/11/2010

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	:/MAT	AIX SPIF	KE DUPLICA	TE REC	OVERY S	STUDY		
BTEX by EPA 8021	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>5</u>	¥	Added [E]	Result [F]	[G]	%	%R	%RPD	
Benzene	QN.	0.1089	0.0679	62	0.1096	0.0662	09	3	70-130	35	×
Toluene	Ð	0.1089	9650:0	55	0.1096	0.0549	50	8	70-130	35	X
Ethylbenzene	Ð	0.1089	9990:0	61	0.1096	0.0618	99	7	71-129	35	X
m.p-Xylenes	R	0.2179	0.0639	29	0.2192	0.0394	18	47	70-135	35	XF
o-Xylene	Ð	0.1089	0.0642	59	0.1096	0.0598	55	7	71-133	35	×

Matrix: Soil Analyst: Batch #: QC-Sample ID: 376705-003 S **Date Prepared:** 06/11/2010 Date Analyzed: 06/15/2010 **Lab Batch ID:** 810644

MATRIX SPIKE / MATRIX SPIKE DITRI ICATE PECOVERY STITE

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT]	XIX SPII	Œ DUPLICA'	TE RECO	OVERY S	STUDY		
TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample		Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Control Limits Limits	Control Limits	Пяд
Analytes	Result [A]	Added [B]	<u>[</u>	<u>B</u> %	Added [E]	Added Result [F]		%	% R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	ND	1060	1140	108	1060	1140	108	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1060	688	84	1060	894	84	1	70-135	35	

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

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

Page 14 of 19

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



Sample Duplicate Recovery



Project Name: Lea Station Landfarm

Work Order #: 376705

Lab Batch #: 810796 **Project ID:** 2004-00061

 Date Analyzed: 06/14/2010
 Date Prepared: 06/14/2010
 Analyst: LATCOR

 QC- Sample ID: 376701-004 D
 Batch #: 1
 Matrix: Soil

Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions In Soil by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5.94	ND	NC	20	

Lab Batch #: 810308

 Date Analyzed: 06/11/2010
 Date Prepared: 06/11/2010
 Analyst: JLG

 QC- Sample ID: 376702-001 D
 Batch #: 1
 Matrix: Soil

Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.12	8.67	5	20	

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800

Odessa, Texas 79765

Fax: 432-563-1713

s)

Solve Sar Lone Sar YAG 4 TAT basbned8 □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 1.4 **005** TRRP M.S.O.V Project Name: Lea Station Landfarm ID5 7 o 2 o 14 S S Temperature Upon Receipt: STEX 8021B/5030 or BTEX 8260 Analyze For Project Loc: Lea County, NM VOCs Free of Head PO #: PAA - J. Henry Project #: 2004-00061 X Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP TOTAL SAR / ESP / CEC Anions (Cl. SO4, Alkalinity) Cations (Ca. Mg. Na. K) Report Format: 1300) 16.18 9001 XT Ē me WS108) 1.814 × × cibryant@basin-consulting.com SOL SOIL SOIL 0.10.10 DM - Dyukjud Mater ar - singt 640 Other (Specify) _EO_SS_SBN Preservation & # of HOBM OSZH (505) 396-1429 HÇI [€]ONH × Fotal #. of Containers benetiii blad Fax No: e-mail: 1200 1120 5 Time Sampled Sudden. Received by ELOT: 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth Beginning Depth amulle Lovington, NM 88260 1,20 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376705 VZ Cell H G-2 VZ Cell H G-3 VZ Cell H G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions Smille (Alinquished by (lab use only ORDER #: (Vinc eau del) \$ 84



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi. Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Repor	t - Sample	e Log-In		
client: Pasin Env. / Plains				
Date/Time: (0:10:10 /(0:10				
Lab ID#: 374705				
Initials: AL				
Sample Receipt Check	list			
1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Ves)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	(Pes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	(Fes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No.		Cooler 5 No.	
lbs /. 4 °C ibs °C ibs °C	ibs	°C	lbs	°C
Nonconformance Docume	ntation			
Contact:Contacted by:	····	Date/Time:_		
Regarding:		-		
Corrective Action Taken:				
			-	

Final Ver. 1.000

Check all that apply:

Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Client understands and would like to proceed with analysis

□ Initial and Backup Temperature confirm out of temperature conditions

Environmental Lab of Texas

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

Odessa, Texas 79765

YACI 4 TAT brisbrist □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ 7. CALICUS TRRP M.A.O.M. Project Name: Lea Station Landfarm 4 o 2 9 [455] Temperature Upon Receipt: EXEX 8021B/5039 or BTEX 8260 × VOCs Free of Headspace? Project Loc: Lea County, NM PO#: PAA - J. Henry Project #: 2004-00061 X Standard vetals: As Ag Ba Cd Cr Pb Hg Se TCLP unions (Cl. SO4, Alkalinity) Cations (Ca, Mg, Na, K) Report Format: 30 9001 XT 3001 XT :Hai 16.10 E E WS108 × × cibryant@basin-consulting.com Matrix SOIL SOIL SOIL 0-10-16 64 OM - DHUKIUB MSIGL 2F-2ing Other (Specify) Preservation & # of Containers EOSSEN HOPN 'OS'H (505) 396-1429 HCI HNO PO9 otal # of Containers benetiii biei Fax No: e-mail: 1200 1146 1120 Time Sampled 6/10/10 6/10/10 6/10/10 Date Sampled Basin Environmental Consulting, LLC Ending Depth gediuujud Debth amulle Lovington, NM 88260 Camille Bryant (575)605-7210 Company Address: P.O. Box 381 376705 VZ Cell H G-3 VZ Cell H G-2 VZ Cell H G-1 FIELD CODE Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: MILLO inquished by (Aup ase ouly) ORDER# (vino esu dei) # 8A.



XENCO Laboratories

Atlanta, Boca Raton. Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Phoenix, San Antonio, Tampa		Effective Date:	6/1/2010	Page 1 of 1
Prelogin / Nonconformance Repo	rt - Sampl	e Log-In		
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9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
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12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No	-	
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 No).	Cooler 5 No	·.
lbs /.4 °C lbs °C lbs °	C Ibs	°င	lbs	°(
Nonconformance Docum	entation			
Contact: Contacted by:		Date/Time:		
oonacc sy.		Date: I line		
Regarding:				
Corrective Action Taken:				
				· · · · · ·

Check all that apply:

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