GW - 351

Landfarm

REPORTS

YEAR(S):

2011

PLAINS MARKETING, L.P.

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2012 APR -2 P 1:19

March 29, 2012

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

Re: Plains Marketing, L.P. – 2011 Annual Report
Lea Station Landfarm – Discharge Permit #GW-351
Lea County, New Mexico

Dear Mr. ~~Hansen~~ Jones:

Enclosed for your review is a copy of the 2011 Annual Report for the following Plains Marketing, L.P. facility:

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

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

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains Marketing, L.P.

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

Basin Environmental Service Technologies, LLC

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

Effective Solutions

March 2012

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APR 2 2012

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

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

Re: Annual Report – 2011
Plains Marketing, LP (231735)
Lea Station Landfarm – Discharge Permit #GW-351 (Plains Ref. # 2004-00061)
W ½ of the NW ¼ of Section 28, Township 20 South, Range 37 East
Lea County, New Mexico

Dear Mr. Jones:

Basin Environmental Service Technologies, LLC (Basin), at the request of Plains Marketing, LP (Plains), assumed maintenance and reporting responsibilities for the Lea Station Landfarm in October 2007. Basin, on behalf of Plains, is submitting the *2011 Annual Report* for the Lea Station Landfarm. The Lea Station Landfarm is operated and maintained in accordance with New Mexico Oil Conservation Division (NMOCD), Natural Resources and Wildlife, Oil and Gas Surface Waste Management Facilities (Title 19, Chapter 15, Part 36). The Landfarm is operated by Plains as a "centralized" facility for Plains use only. A surveyor's plat of the Lea Station Landfarm is provided as Figure 1.

DISPOSAL VOLUME

Receipt of impacted soil began in January 2004. As of December 31, 2011, a total of approximately 109,705 cubic yards (cy) of hydrocarbon-impacted soil from within the Plains crude oil transportation system have been emplaced in Cell A through Cell H. Approximately 516 cy of impacted soil was transported to the landfarm during the 2011 reporting period.

MAINTENANCE

Within 72-hours of being delivered to the landfarm, soil stockpiles were pushed down and contoured into a treatment lift. Mechanical plowing of the soil contained in the treatment cells occurred every two weeks.

TREATMENT ZONE MONITORING

On June 13, 2011, Basin collected three (3) to five (5) four-point composite soil samples from the treatment zone of Cells A through H, with the exception of Cell C, whose soil had been removed and transported to a staging area for use as backfill material during the 2009 reporting period. The soil samples were submitted to Xenco Laboratories in Odessa, Texas, and analyzed for concentrations of Total Petroleum Hydrocarbons (TPH) and chloride, using EPA methods SW-846 8015M and 300, respectively. Laboratory analytical results indicated TPH concentrations ranged from 205 mg/Kg for soil sample Cell H TZ G-2 to 3,830 mg/Kg for soil sample Cell H TZ G-1. Chloride concentrations ranged from less than the laboratory method detection limit (MDL) for soil samples TZ Cell B G-1, TZ Cell B G-2, TZ Cell B G-4, TZ Cell E G-3, TZ Cell F G-1, TZ Cell F G-2, TZ Cell F G-4, and TZ Cell F G-5 to 94.3 mg/Kg for soil sample TZ Cell F G-3. Please reference Table 1, "Concentrations of TPH & Chloride in the Treatment Zone", for additional information.

On November 10, 2011, Basin collected four (4) to five (5) four-point composite soil samples from the treatment zones of Cells A through H, with the exception of Cell C. The soil samples were submitted to Xenco Laboratories and analyzed for concentrations of TPH and chloride. Laboratory analytical results indicated TPH concentrations ranged from 63.9 mg/Kg for soil sample TZ Cell E G-3 to 3,810 mg/Kg for soil sample TZ Cell H G-2. Chloride concentrations ranged from less than the laboratory MDL for soil samples TZ Cell G G-5 to 84.4 mg/Kg for soil sample TZ Cell H G-2.

The locations of soil samples collected in treatment Cells A through H during the June and November 2011 sampling events are depicted in Figure 2, "Soil Sample Location Map – June and November 2011".

VADOSE ZONE MONITORING

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

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

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

Ten (10) soil samples (North Background @ 6", North Background @ 18", Northeast Background @ 6", Northeast Background @ 18", Northwest Background @ 6", Northwest Background @ 18", South Background @ 6", South Background @ 18", Southwest Background @ 6", and Southwest Background @ 18") were collected on June 13, 2011, from the vadose zone in undisturbed locations outside the perimeter of the Landfarm to establish background concentrations of chloride in the area. The samples were collected at depths of approximately six (6) inches to eighteen (18) inches below ground surface and submitted to the laboratory for analysis of chloride concentrations using EPA Method 300. Laboratory analytical results of the background samples indicated chloride concentrations ranged from less than the

laboratory MDL for soil samples North Background @ 6", North Background @ 18", Northeast Background @ 6", Northeast Background @ 18", Northwest Background @ 6", and Northwest Background @ 18" to 7.38 mg/Kg for soil sample Southwest Background @ 18". Chloride concentrations in the background samples are typical of native, undisturbed soil. Please reference Table 4, "2011 Concentrations of Benzene, BTEX, TPH & Chloride in the Vadose Zone", for additional information.

On June 13, 2011, Basin collected four (4) to five (5) grab soil samples from the vadose zones of Cells A through H at a depth of approximately three (3) to four (4) feet bgs to determine the extent of impact (if any) to the underlying soil. The soil samples were submitted to Xenco Laboratories and analyzed for constituent concentrations of BTEX using EPA Method SW-846 8021b, TPH using EPA Method SW-846 8015M, and chloride using EPA Method 300. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all soil samples submitted. Chloride concentrations ranged from less than the laboratory MDL for soil samples VZ Cell A G-3 through VZ Cell A G-5, VZ Cell B G-2 through VZ Cell B G-5, VZ Cell C G-2, VZ Cell D G-4, VZ Cell E G-1 through VZ Cell E G-4, VZ Cell H G-2, VZ Cell H G-4, and VZ Cell H G-5 and 151 mg/Kg for soil sample Cell G VZ G-4. Please reference Table 4 for more information.

On November 10, 2011, Basin collected four (4) to five (5) grab soil samples from the vadose zones of Cells A through H at a depth of approximately three (3) to four (4) feet bgs. The soil samples were submitted to Xenco Laboratories and analyzed for constituent concentrations of BTEX, TPH, and chloride. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were below the laboratory MDL for all soil samples submitted. Chloride concentrations ranged from less than the laboratory MDL for soil samples VZ Cell A G-3, VZ Cell A G-5, VZ Cell B G-2, VZ Cell B G-3, VZ Cell B G-5, VZ Cell C G-1, VZ Cell C G-3, VZ Cell C G-5, VZ Cell D G-2, VZ Cell E G-1, VZ Cell E G-2, VZ Cell E G-4, VZ Cell F G-2, VZ Cell G G-5, and VZ Cell H G-3 through VZ Cell H G-5 to 34.6 mg/Kg for soil sample VZ Cell F G-3.

The locations of soil samples collected in the vadose zone from treatment cells A through H during the June and November 2011 sampling events are depicted in Figure 2, "Soil Sample Location Map - June & November 2011".

CONCLUSIONS

Laboratory analytical results of vadose zone soil samples indicated soil beneath the Lea Station Landfarm has not been significantly affected above background levels established prior to the construction of the landfarm treatment cells.

Laboratory analytical results indicated hydrocarbon-impacted soil placed in the treatment cells is naturally attenuating within the lifts. Laboratory analytical results from soil samples collected on November 10, 2011, indicated soil samples TZ Cell A G-1, TZ Cell A G-3 through TZ Cell A G-5, TZ Cell B G-3, TZ Cell B G-4, TZ Cell E G-1 through TZ Cell E G-4, and TZ Cell G G-5 contained TPH concentrations below NMOCD remedial goals of 500 mg/Kg. Laboratory analytical results indicated soil represented by soil sample TZ Cell E G-3 contained TPH concentrations less than 100 mg/Kg and is acceptable for reuse at Plains remediation sites in the future.

RECOMMENDATIONS

Based on analytical results of soil samples collected from Cells A and E, Plains requests NMOCD approval to transport the remediated soil from the cell to a staging area located within the landfarm facility. The remediated soil will be used as backfill material at Plains remediation sites in the future.

Bi-monthly plowing of the treatment zones will continue throughout the 2012 reporting period. Soil samples from the vadose and treatment zones will be collected and submitted to the laboratory for determination of constituent concentrations on a biannual schedule. Vadose zone soil samples will be analyzed using EPA methods SW-846 8021b (BTEX), SW-846 8015M (TPH), and 300 (chloride). Treatment zone soil samples will be analyzed using EPA methods SW-846 8015M (TPH) and 300 (chloride). An Annual Report will be submitted in 2013, documenting the results of the 2012 treatment cell and vadose zone sampling events.

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

Respectfully,

Ben J. Arguijo
Basin Environmental Service Technologies, LLC

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

Enclosures:

Figures

Figure 1: Lea Station Landfarm Survey map
Figure 2: Soil Sample Location Map – June & November 2011

Tables

Table 1: 2011 Concentrations of TPH & Chlorides in the Treatment Zone.
Table 2: Historic Concentrations of Hydrocarbons, Chlorides, Sulfates & Alkalinity in the Vadose Zone.
Table 3: Historic Concentrations of Metals in the Vadose Zone
Table 4: 2011 Concentrations of Benzene, BTEX, TPH & Chloride in the Vadose Zone

Photographs

Laboratory Analytical Reports

LIMITATIONS

Basin Environmental Service Technologies, LLC has prepared this 2010 Lea Station Landfarm Annual Report to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

Figures

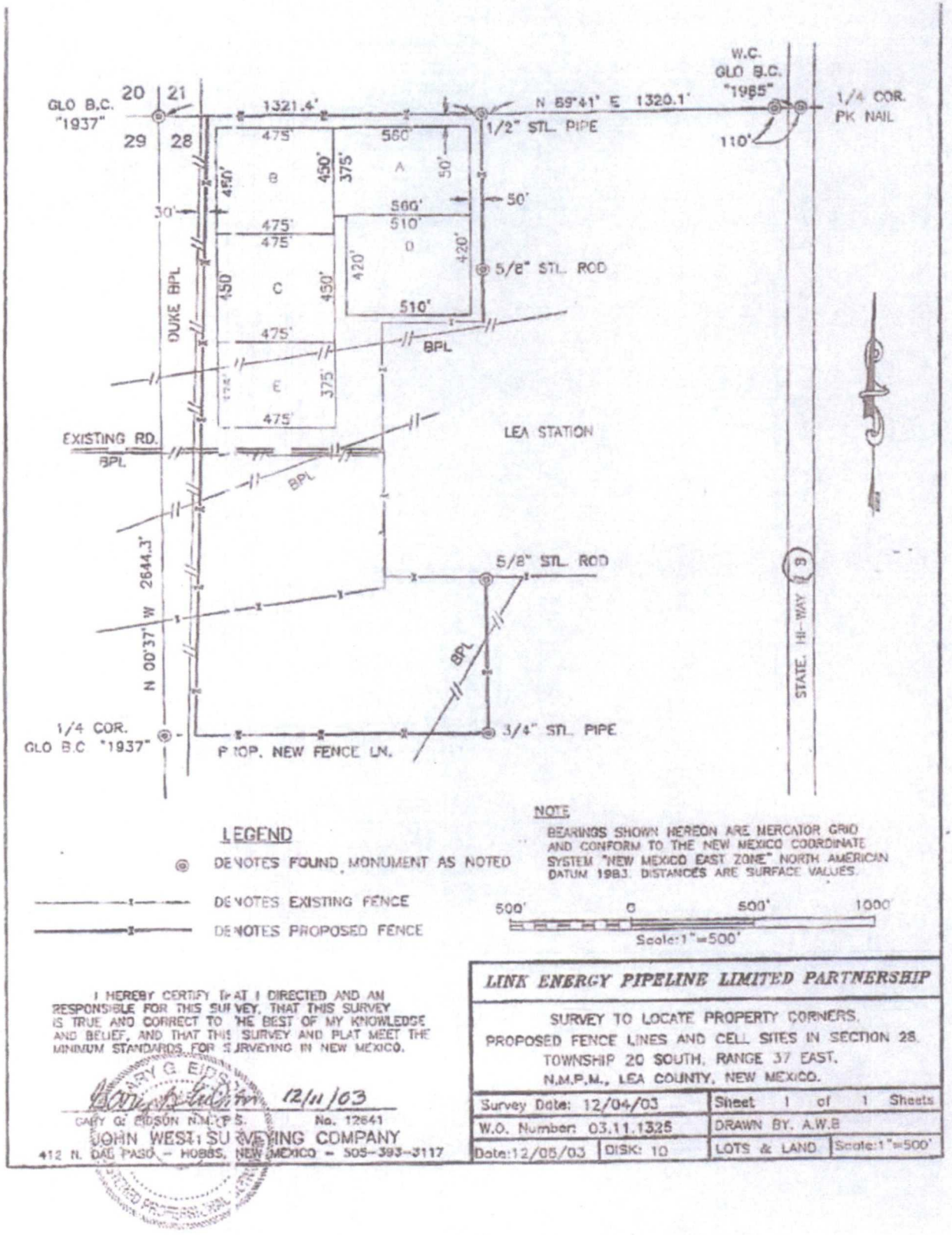
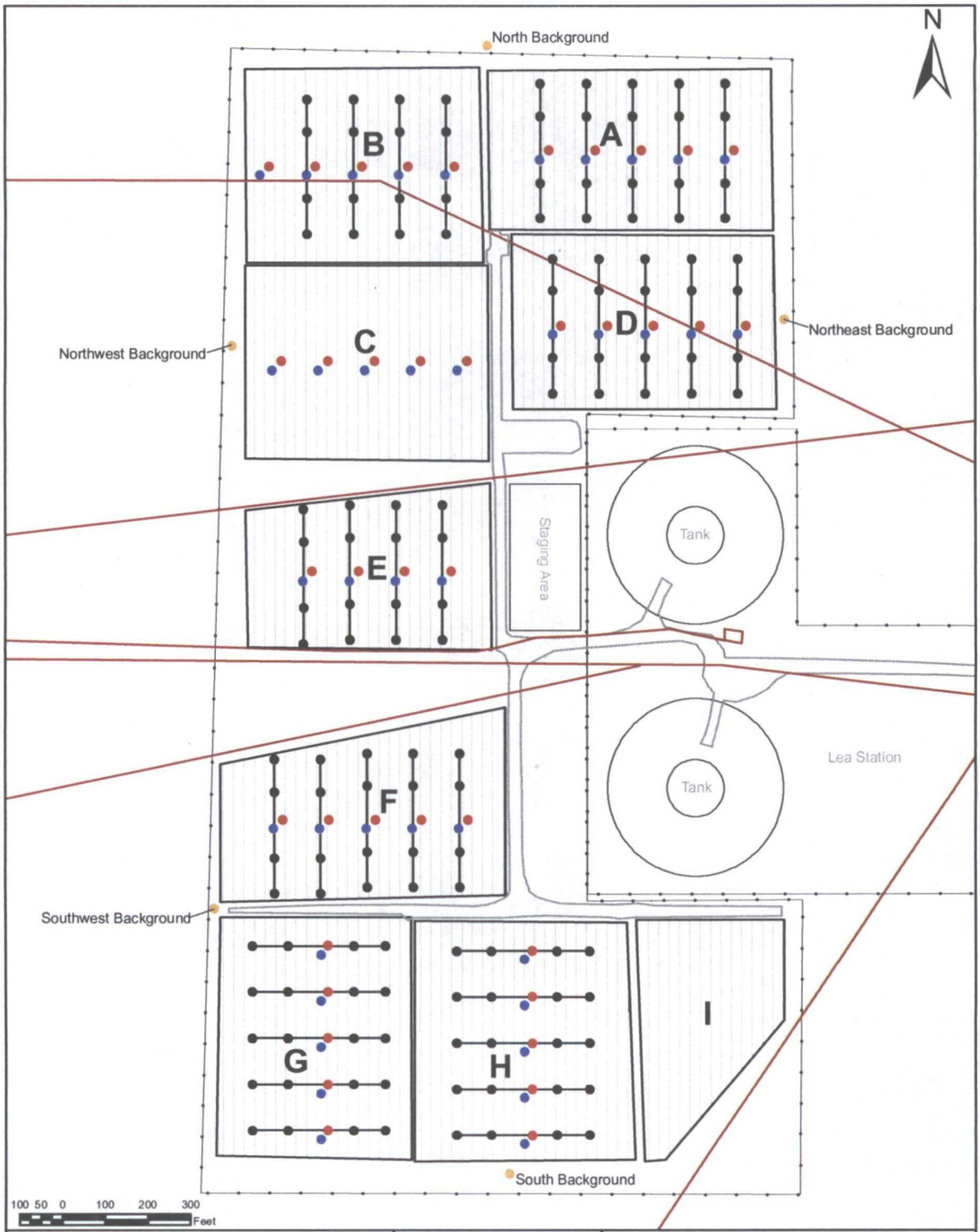


Figure 1: Lea Station Landfarm Survey Map



Legend:

- Road
- Pipeline
- Fence
- Landfarm Cell
- Treatment Zone Composite Sample
- Vadose Zone Sample (June)
- Vadose Zone Sample (November)
- Background Sample

Figure #2
Soil Sample Location Map
June & November 2011
Plains Marketing, LP
Lea Station Landfarm
Lea County, New Mexico
SRS #: 2004-00061
NMOCD #: GW-351

Basin Environmental Service Technologies
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
March 29, 2011	Scale: 1" = 350'

Tables

TABLE 1

2011 CONCENTRATIONS OF TPH & CHLORIDE IN THE TREATMENT ZONE

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

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	EPA 300
			GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		Chloride (mg/kg)
TZ Cell A G-1	8"	6/13/2011	<15.2	906	19.6	926	7.53
TZ Cell A G-2	8"	6/13/2011	<15.2	796	18.8	815	11.3
TZ Cell A G-3	8"	6/13/2011	<15.2	832	29.7	862	9.78
TZ Cell A G-4	8"	6/13/2011	<15.1	587	26.8	614	13.5
TZ Cell A G-5	8"	6/13/2011	<15.1	188	28.7	217	6.15
TZ Cell B G-1	8"	6/13/2011	<15.2	1,260	15.2	1,280	<4.25
TZ Cell B G-2	8"	6/13/2011	<15.1	682	20.7	703	<4.24
TZ Cell B G-3	8"	6/13/2011	<15.1	293	31.3	324	6.23
TZ Cell B G-4	8"	6/13/2011	<15.1	258	23.7	282	<4.22
TZ Cell D G-1	8"	6/13/2011	<15.2	670	21.9	692	13.8
TZ Cell D G-2	8"	6/13/2011	<15.2	898	21.2	919	35.3
TZ Cell D G-3	8"	6/13/2011	<15.1	1,140	<15.1	1,140	33.2
TZ Cell D G-4	8"	6/13/2011	<15.0	1,250	<15.0	1,250	14.9
TZ Cell D G-5	8"	6/13/2011	<15.0	973	<15.0	973	6.55
TZ Cell E G-1	8"	6/13/2011	<15.1	328	21.7	350	6.40
TZ Cell E G-2	8"	6/13/2011	<15.1	312	28.7	341	4.22
TZ Cell E G-3	8"	6/13/2011	<15.1	212	25.5	238	<4.24
TZ Cell F G-1	8"	6/13/2011	<15.1	799	26.1	825	<4.24
TZ Cell F G-2	8"	6/13/2011	<15.1	733	26.4	759	<8.48
TZ Cell F G-3	8"	6/13/2011	<15.1	1,150	23.8	1,170	94.3
TZ Cell F G-4	8"	6/13/2011	<15.0	492	21.8	514	<4.22
TZ Cell F G-5	8"	6/13/2011	<15.1	999	25.7	1,020	<4.24
TZ Cell G G-1	8"	6/13/2011	21.4	2,400	<15.1	2,420	9.15
TZ Cell G G-2	8"	6/13/2011	19.5	2,450	19.8	2,490	11.0
TZ Cell G G-3	8"	6/13/2011	<15.4	349	<15.4	349	31.4
TZ Cell G G-4	8"	6/13/2011	<15.4	307	<15.4	307	10.3
TZ Cell G G-5	8"	6/13/2011	<15.3	1,450	17.3	1,470	7.07
TZ Cell H G-1	8"	6/13/2011	61.6	3,770	<15.2	3,830	89.3
TZ Cell H G-2	8"	6/13/2011	<16.6	205	<16.6	205	78.7
TZ Cell H G-3	8"	6/13/2011	52.3	1,520	22.0	1,590	26.3
TZ Cell H G-4	8"	6/13/2011	55.6	1,770	24.1	1,850	15.7
TZ Cell H G-5	8"	6/13/2011	42.9	1,160	27.5	1,230	10.7
TZ Cell A G-1	8"	11/10/2011	<15.7	272	132	404	6.27
TZ Cell A G-2	8"	11/10/2011	<15.7	411	166	577	6.73
TZ Cell A G-3	8"	11/10/2011	<15.6	219	98.8	318	3.39
TZ Cell A G-4	8"	11/10/2011	<15.8	213	99.4	312	3.12
TZ Cell A G-5	8"	11/10/2011	<15.5	108	67.3	175	2.38

TABLE 1

2011 CONCENTRATIONS OF TPH & CHLORIDE IN THE TREATMENT ZONE

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

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	EPA 300
			GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		Chloride (mg/kg)
TZ Cell B G-1	8"	11/10/2011	<15.3	575	202	777	2.21
TZ Cell B G-2	8"	11/10/2011	<15.2	429	143	572	1.70
TZ Cell B G-3	8"	11/10/2011	<15.9	260	74.8	335	1.92
TZ Cell B G-4	8"	11/10/2011	<15.8	197	75.0	272	1.44
TZ Cell D G-1	8"	11/10/2011	<15.6	259	126	770	3.11
TZ Cell D G-2	8"	11/10/2011	<15.6	436	177	1,230	12.3
TZ Cell D G-3	8"	11/10/2011	<15.3	521	214	1,470	5.94
TZ Cell D G-4	8"	11/10/2011	<15.5	594	218	1,620	2.12
TZ Cell D G-5	8"	11/10/2011	<15.3	609	216	1,650	2.35
TZ Cell E G-1	8"	11/10/2011	<15.4	198	69.9	268	1.45
TZ Cell E G-2	8"	11/10/2011	<15.6	174	58.9	233	1.41
TZ Cell E G-3	8"	11/10/2011	<15.3	45.2	18.7	63.9	1.42
TZ Cell E G-4	8"	11/10/2011	<15.3	181	75.8	257	1.46
TZ Cell F G-1	8"	11/10/2011	<15.4	561	217	1,560	10.6
TZ Cell F G-2	8"	11/10/2011	<15.3	516	202	1,440	10.8
TZ Cell F G-3	8"	11/10/2011	<15.4	762	255	2,030	19.8
TZ Cell F G-4	8"	11/10/2011	<15.6	537	223	1,520	5.51
TZ Cell F G-5	8"	11/10/2011	<15.7	264	125	778	2.16
TZ Cell G G-1	8"	11/10/2011	17.3	2,510	397	2,920	1.69
TZ Cell G G-2	8"	11/10/2011	<15.9	1,190	277	1,470	2.02
TZ Cell G G-3	8"	11/10/2011	15.8	2,040	370	2,410	3.55
TZ Cell G G-4	8"	11/10/2011	15.8	2,590	510	3,120	2.79
TZ Cell G G-5	8"	11/10/2011	<15.9	370	92.7	463	<1.06
TZ Cell H G-1	8"	11/10/2011	<15.9	1,300	293	3,190	6.46
TZ Cell H G-2	8"	11/10/2011	<15.6	1,540	365	3,810	84.4
TZ Cell H G-3	8"	11/10/2011	<15.5	759	212	1,940	6.01
TZ Cell H G-4	8"	11/10/2011	<15.8	622	193	1,630	5.31
TZ Cell H G-5	8"	11/10/2011	<15.7	359	113	944	3.79

TABLE 2

HISTORIC CONCENTRATIONS OF HYDROCARBONS, CHLORIDES, SULFATES & ALKALINITY IN THE VADOSE ZONE
PLAINS MARKETING, L.P.
LEA STATION LANDFARM
LEA COUNTY, NEW MEXICO
PLAINS SRS #2004-00061
NMOCD #GW-351

Sample ID	Landfarm Cell	Sample Date	PID analyses (ppm)	Sample Depth (feet-bgs)	Benzene (mg/Kg)	Toluene (mg/Kg)	Eythlbenzene (mg/Kg)	m,p-xylene (mg/Kg)	o-xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)	Sulfate (mg/Kg)	Carbonate Alkalinity (mg/Kg)	Bicarbonate Alkalinity (mg/Kg)	Hydroxide Alkalinity (mg/Kg)	Total Alkalinity (mg/Kg)
CESLELSLF11604BGS	Background	16-Jan-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	10.60	<5	<50	<50	--	<50
SPLSLF83104CC-4'	C	31-Aug-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	--	--	--	--	--	--
SPLSLF83104CE-4'	E	31-Aug-04	--	3.5-4.0	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<5.0	<2.5	<5.0	--	--	--	--	--	--
Cell B Treatment Zone	B	28-Oct-05	0.80	3.5-4.0	<0.025	0.0159 [A]	0.0273	0.0896	0.0190 [A]	0.30	<10.0	<10.0	<10.0	9.37	24.4	nr	nr	--	433
Cell C Treatment Zone	C	28-Oct-05	1.20	3.5-4.0	<0.025	<0.025	<0.025	0.0235 [A]	<0.025	<0.025	<10.0	<10.0	<10.0	7.74	23.1	nr	nr	--	433
Cell E Treatment Zone	E	28-Oct-05	0.30	3.5-4.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	20.9	35.2	nr	nr	--	1,580
Cell A Treatment Zone- 3' to 4'	A	26-Jul-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	1.17 [A]	8.35	<0.500	240	<0.500	240
Cell B Treatment Zone- 3' to 4'	B	26-Jul-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	4.76 [A]	9.51	40.0	180	<0.500	220
Cell C Treatment Zone- 3' to 4'	C	26-Jul-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	1.45 [A]	45.8	<0.500	220	<0.500	220
Cell E Treatment Zone- 3' to 4'	E	26-Jul-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	2.95 [A]	44.7	<0.500	225	<0.500	225
Cell A Treatment Zone- 3' to 4'	A	14-Dec-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell B Treatment Zone- 3' to 4'	B	14-Dec-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell C Treatment Zone- 3' to 4'	C	14-Dec-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
Cell E Treatment Zone- 3' to 4'	E	14-Dec-06	--	3.0 -4.0	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	--	--	--	--	--	--
BG South of Cell "G"	G	23-Dec-09	--	--	--	--	--	--	--	--	--	--	--	100.00	--	--	--	--	--
BG West of Cell "G"	G	23-Dec-09	--	--	--	--	--	--	--	--	--	--	--	100.00	--	--	--	--	--

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

TABLE 3

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

Sample ID	Landfarm Cell	Sample Date	Sample Depth (feet-bgs)	SW-846 6010 & 200.7		258.1 & 7670	SW-6010 & 200.7								
				Calcium (mg/Kg)	Magnesium (mg/Kg)	Potassium (mg/Kg)	Sodium (mg/Kg)	Mercury (mg/Kg)	Chromium (mg/Kg)	Arsenic (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Cadmium (mg/Kg)	Barium (mg/Kg)	Lead (mg/Kg)
CESLELSLF11604BGS	Background	16-Jan-04	3.5-4.0	664	1,540	744	30.1	<0.04	4.42	<1	<5.0	<2.5	<2	15.2	<1
SPLSLF83104CC-4'	C	31-Aug-04	3.5-4.0	--	--	--	--	--	--	--	--	--	--	--	--
SPLSLF83104CE-4'	E	31-Aug-04	3.5-4.0	--	--	--	--	--	--	--	--	--	--	--	--
Cell B Treatment Zone	B	28-Oct-05	3.5-4.0	30,400	1,350	235	1,420	0.01230 A	1.43	<0.400	<0.200	<0.250	0.423	35.8	2.30
Cell C Treatment Zone	C	28-Oct-05	3.5-4.0	20,800	902	238	1,700	0.02204 A	3.81	<0.400	<0.200	<0.250	0.973	47.4	<0.550
Cell E Treatment Zone	E	28-Oct-05	3.5-4.0	89,900	3,680	506	2,670	0.01847 A	3.52	1.36	<0.200	<0.250	1.13	111	2.80
Cell A Treatment Zone- 3' to 4'	A	26-Jul-06	3.0 -4.0	47.8	5.82	4.48	2.26	0.009424 A	<2.44	1.65 A	<7.51	1.01	<1.73	17.3	<0.740
Cell B Treatment Zone- 3' to 4'	B	26-Jul-06	3.0 -4.0	27.9	8.16	9.17	3.78	0.03174	<2.44	3.33 A	1.71 A	<1.01	<1.73	147	<0.740
Cell C Treatment Zone- 3' to 4'	C	26-Jul-06	3.0 -4.0	51.5	6.06	3.07	12.1	0.009956 A	<2.44	0.953 A	<7.51	<1.01	<1.73	40.0	<0.740
Cell E Treatment Zone- 3' to 4'	E	26-Jul-06	3.0 -4.0	57.5	10.3	16.0	9.17	0.01564	1.47 A	1.29 A	2.47 A	<1.01	<1.73	50.4	<0.740

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

TABLE 4

2011 CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN THE VADOSE ZONE

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

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	EPA 300.1
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		Chloride (mg/kg)
VZ Cell A G-1	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	7.75
VZ Cell A G-2	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	4.44
VZ Cell A G-3	3' - 4'	6/13/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<4.75
VZ Cell A G-4	3' - 4'	6/13/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.7	<17.7	<17.7	<17.7	<4.98
VZ Cell A G-5	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	<4.35
VZ Cell B G-1	3' - 4'	6/13/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	<15.4	<15.4	<15.4	7.6
VZ Cell B G-2	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.1	<16.1	<16.1	<16.1	<4.53
VZ Cell B G-3	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	<4.41
VZ Cell B G-4	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.7	<15.7	<15.7	<15.7	<4.38
VZ Cell B G-5	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	<4.58
VZ Cell C G-1	3' - 4'	6/13/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	8.19
VZ Cell C G-2	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	<5.32
VZ Cell C G-3	3' - 4'	6/13/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	7.30
VZ Cell C G-4	3' - 4'	6/13/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.2	<17.2	<17.2	<17.2	8.75
VZ Cell C G-5	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	8.56
VZ Cell D G-1	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	36.6
VZ Cell D G-2	3' - 4'	6/13/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	25.0
VZ Cell D G-3	3' - 4'	6/13/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	<15.1	<15.1	<15.1	5.85
VZ Cell D G-4	3' - 4'	6/13/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.5	<15.5	<15.5	<15.5	<5.15
VZ Cell D G-5	3' - 4'	6/13/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.2	<17.2	<17.2	<17.2	5.80
VZ Cell E G-1	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	<5.37
VZ Cell E G-2	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	<5.56
VZ Cell E G-3	3' - 4'	6/13/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	<5.12
VZ Cell E G-4	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	<5.18
VZ Cell F G-1	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	6.75
VZ Cell F G-2	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.5	<15.5	<15.5	<15.5	7.30
VZ Cell F G-3	3' - 4'	6/13/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	6.63
VZ Cell F G-4	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	7.36
VZ Cell F G-5	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	51.2

TABLE 4

2011 CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN THE VADOSE ZONE

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

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	EPA 300.1
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		Chloride (mg/kg)
VZ Cell G G-1	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	76.9
VZ Cell G G-2	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	9.43
VZ Cell G G-3	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	121
VZ Cell G G-4	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	151
VZ Cell G G-5	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	74.6
VZ Cell H G-1	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	11.7
VZ Cell H G-2	3' - 4'	6/13/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<5.66
VZ Cell H G-3	3' - 4'	6/13/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.3	<17.3	<17.3	<17.3	13.3
VZ Cell H G-4	3' - 4'	6/13/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	<5.56
VZ Cell H G-5	3' - 4'	6/13/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.25
VZ Cell A G-1	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	8.73
VZ Cell A G-2	3' - 4'	11/10/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	<15.9	<15.9	<15.9	9.39
VZ Cell A G-3	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<17.0	<17.0	<17.0	<17.0	<5.66
VZ Cell A G-4	3' - 4'	11/10/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.5	<17.5	<17.5	<17.5	9.79
VZ Cell A G-5	3' - 4'	11/10/2011	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.7	<18.7	<18.7	<18.7	<6.24
VZ Cell B G-1	3' - 4'	11/10/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.7	<15.7	<15.7	<15.7	1.77
VZ Cell B G-2	3' - 4'	11/10/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	<1.14
VZ Cell B G-3	3' - 4'	11/10/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15.4	<1.03
VZ Cell B G-4	3' - 4'	11/10/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	1.53
VZ Cell B G-5	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.8	<17.8	<17.8	<17.8	<5.93
VZ Cell C G-1	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.3	<18.3	<18.3	<18.3	<6.10
VZ Cell C G-2	3' - 4'	11/10/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	7.88
VZ Cell C G-3	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.2	<18.2	<18.2	<18.2	<6.05
VZ Cell C G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	7.69
VZ Cell C G-5	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.9	<16.9	<16.9	<16.9	<5.64
VZ Cell D G-1	3' - 4'	11/10/2011	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	5.74
VZ Cell D G-2	3' - 4'	11/10/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	<5.28
VZ Cell D G-3	3' - 4'	11/10/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	9.02
VZ Cell D G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.2	<16.2	<16.2	<16.2	7.42
VZ Cell D G-5	3' - 4'	11/10/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	<15.6	<15.6	<15.6	7.30

TABLE 4

2011 CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN THE VADOSE ZONE

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

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH C_6-C_{35} (mg/Kg)	EPA 300.1
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENES (mg/Kg)	O-XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)		Chloride (mg/kg)
VZ Cell E G-1	3' - 4'	11/10/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15.4	<5.14
VZ Cell E G-2	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	<6.00
VZ Cell E G-3	3' - 4'	11/10/2011	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	6.87
VZ Cell E G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	<16.8	<16.8	<16.8	<5.59
VZ Cell F G-1	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	10.4
VZ Cell F G-2	3' - 4'	11/10/2011	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15.4	<5.16
VZ Cell F G-3	3' - 4'	11/10/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	34.6
VZ Cell F G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	8.37
VZ Cell F G-5	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	8.58
VZ Cell G G-1	3' - 4'	11/10/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	8.65
VZ Cell G G-2	3' - 4'	11/10/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.1	<17.1	<17.1	<17.1	11.0
VZ Cell G G-3	3' - 4'	11/10/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	8.26
VZ Cell G G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.5	<16.5	<16.5	<16.5	6.52
VZ Cell G G-5	3' - 4'	11/10/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	<5.79
VZ Cell H G-1	3' - 4'	11/10/2011	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	10.9
VZ Cell H G-2	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	8.28
VZ Cell H G-3	3' - 4'	11/10/2011	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.6	<17.6	<17.6	<17.6	<5.90
VZ Cell H G-4	3' - 4'	11/10/2011	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	<5.53
VZ Cell H G-5	3' - 4'	11/10/2011	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	<5.63
North Background @ 6"	0.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.10
North Background @ 18"	1.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.14
Northeast Background @ 6"	0.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.09
Northeast Background @ 18"	1.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.18
Northwest Background @ 6"	0.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.10
Northwest Background @ 18"	1.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	<5.11
South Background @ 6"	0.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	5.76
South Background @ 18"	1.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	6.09
Southwest Background @ 6"	0.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	7.38
Southwest Background @ 18"	1.5'	11/10/2011	-	-	-	-	-	-	-	-	-	-	5.17
Background	**3' - 4'**	**1/16/2004**	**<0.02**	**<0.02**	**<0.02**	**<0.04**	**<0.02**	**<0.04**	**<5**	**<2.5**		**<5**	**10.6**

- = *Not analyzed.*

Laboratory Analytical Reports

Analytical Report 420036

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420036**
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 420036. 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. 420036 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

XENCO Laboratories

Sample Cross Reference 420036

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	Jun-13-11 09:30		420036-001
TZ Cell A G-2	S	Jun-13-11 09:35		420036-002
TZ Cell A G-3	S	Jun-13-11 09:40		420036-003
TZ Cell A G-4	S	Jun-13-11 09:45		420036-004
TZ Cell A G-5	S	Jun-13-11 09:50		420036-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420036*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860620 Anions by E300
Batch 860620 RPD outside of QC limits for chlorides between sample and sample duplicate.

Batch: LBA-860621 Anions by E300
E300MI

Batch 860621, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 420036-005, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analy Summary 420036

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	420036-001		420036-002		420036-003		420036-004		420036-005		
	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		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-13-11 09:30		Jun-13-11 09:35		Jun-13-11 09:40		Jun-13-11 09:45		Jun-13-11 09:50		
Anions by E300	*Extracted:*											
	Analyzed:	Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 10:39		Jun-17-11 10:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		7.53	4.23	11.3	4.27	9.78	4.24	13.5	4.23	6.15	4.22	
Percent Moisture	*Extracted:*											
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		ND	1.00	1.63	1.00	ND	1.00	ND	1.00	ND	1.00	
TPH By SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		
	Analyzed:	Jun-19-11 00:55		Jun-19-11 01:26		Jun-19-11 01:55		Jun-19-11 02:23		Jun-19-11 03:23		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.2	ND	15.2	ND	15.2	ND	15.1	ND	15.1	
C12-C28 Diesel Range Hydrocarbons		906	15.2	796	15.2	832	15.2	587	15.1	188	15.1	
C28-C35 Oil Range Hydrocarbons		19.6	15.2	18.8	15.2	29.7	15.2	26.8	15.1	28.7	15.1	
Total TPH		926	15.2	815	15.2	862	15.2	614	15.1	217	15.1	

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420036,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 605508-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 20:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	48.6	50.2	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	52.7	50.2	105	70-135	

Lab Batch #: 860694 **Sample:** 420036-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 00:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	56.8	50.2	113	70-135	

Lab Batch #: 860694 **Sample:** 420036-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 01:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.6	99.6	83	70-135	
o-Terphenyl	43.9	49.8	88	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420036,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 420036-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 01:55

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	55.8	50.2	111	70-135	

Lab Batch #: 860694 **Sample:** 420036-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 02:23

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.6	117	70-135	
o-Terphenyl	63.7	49.8	128	70-135	

Lab Batch #: 860694 **Sample:** 420036-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 03:23

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.4	99.8	83	70-135	
o-Terphenyl	43.8	49.9	88	70-135	

Lab Batch #: 860694 **Sample:** 420033-003 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 08:17

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420036 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860620 **Sample:** 860620-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	8.92	89	10.0	10.1	101	12	75-125	20	

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860621 **Sample:** 860621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	10.4	104	10.0	10.8	108	4	75-125	20	

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860694 **Sample:** 605508-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	835	84	999	848	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	999	852	85	1	70-135	35	

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

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Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420036

Lab Batch #: 860620 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420030-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.60	102	89.6	80	75-125	

Lab Batch #: 860621

Date Analyzed: 06/17/2011 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420036-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	13.5	101	75.5	61	75-125	X

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420036

Lab Batch #: 860620 **Project ID:** 2004-00061
Date Analyzed: 06/17/2011 02:38 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR
QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	7.60	4.93	43	20	F

Lab Batch #: 860621
Date Analyzed: 06/17/2011 10:39 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR
QC- Sample ID: 420036-004 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	13.5	13.4	1	20	

Lab Batch #: 860370
Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU
QC- Sample ID: 420037-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	1.00	NC	20	

Lab Batch #: 860694
Date Analyzed: 06/19/2011 08:17 **Date Prepared:** 06/17/2011 **Analyst:** BEV
QC- Sample ID: 420033-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	212	259	20	35	
C28-C35 Oil Range Hydrocarbons	25.5	22.8	11	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 420036

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell A G-1			6/13/2011	0930		1	X								SOIL	X											X		X
02	TZ Cell A G-2			6/13/2011	0935		1	X								SOIL	X											X		X
03	TZ Cell A G-3			6/13/2011	0940		1	X								SOIL	X											X		X
04	TZ Cell A G-4			6/13/2011	0945		1	X								SOIL	X											X		X
05	TZ Cell A G-5			6/13/2011	0950		1	X								SOIL	X											X		X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	6/15/11	1230	Received by:	6-15-11	1:13
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.0 °C

Final 1.000

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420036
Initials: AH

Sample Receipt Checklist

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

18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420034

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420034**
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 420034. 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. 420034 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

XENCO Laboratories

Sample Cross Reference 420034

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-13-11 09:55		420034-001
TZ Cell B G-2	S	Jun-13-11 10:00		420034-002
TZ Cell B G-3	S	Jun-13-11 10:05		420034-003
TZ Cell B G-4	S	Jun-13-11 10:10		420034-004

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420034*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860620 Anions by E300
Batch 860620 RPD outside of QC limits for chlorides between sample and sample duplicate.

Certificate of Analy Summary 420034

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	420034-001		420034-002		420034-003		420034-004					
	Field Id:	TZ Cell B G-1		TZ Cell B G-2		TZ Cell B G-3		TZ Cell B G-4					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jun-13-11 09:55		Jun-13-11 10:00		Jun-13-11 10:05		Jun-13-11 10:10					
Anions by E300	*Extracted:*												
	Analyzed:	Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		ND	4.25	ND	4.24	6.23	4.24	ND	4.22				
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		1.17	1.00	ND	1.00	ND	1.00	ND	1.00				
TPH By SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00					
	Analyzed:	Jun-19-11 03:51		Jun-19-11 04:22		Jun-19-11 04:51		Jun-19-11 05:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.2	ND	15.1	ND	15.1	ND	15.1				
C12-C28 Diesel Range Hydrocarbons		1260	15.2	682	15.1	293	15.1	258	15.1				
C28-C35 Oil Range Hydrocarbons		15.2	15.2	20.7	15.1	31.3	15.1	23.7	15.1				
Total TPH		1280	15.2	703	15.1	324	15.1	282	15.1				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420034, **Project ID:** 2004-00061

Lab Batch #: 860694 **Sample:** 605508-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 20:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	48.6	50.2	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	52.7	50.2	105	70-135	

Lab Batch #: 860694 **Sample:** 420034-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 03:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	63.3	50.0	127	70-135	

Lab Batch #: 860694 **Sample:** 420034-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 04:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	54.2	50.0	108	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420034,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 420034-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 04:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.1	100	87	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 860694 **Sample:** 420034-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 05:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.5	99.9	87	70-135	
o-Terphenyl	45.8	50.0	92	70-135	

Lab Batch #: 860694 **Sample:** 420033-003 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 08:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420034 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860620 **Sample:** 860620-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	8.92	89	10.0	10.1	101	12	75-125	20	

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860694 **Sample:** 605508-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	835	84	999	848	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	999	852	85	1	70-135	35	

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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420034
Lab Batch #: 860620
Project ID: 2004-00061
Date Analyzed: 06/17/2011
Date Prepared: 06/17/2011
Analyst: LATCOR
QC- Sample ID: 420030-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.60	102	89.6	80	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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420034

Lab Batch #: 860620 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 02:38 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	7.60	4.93	43	20	F

Lab Batch #: 860370

Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU

QC- Sample ID: 420037-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	1.00	NC	20	

Lab Batch #: 860694

Date Analyzed: 06/19/2011 08:17 **Date Prepared:** 06/17/2011 **Analyst:** BEV

QC- Sample ID: 420033-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	212	259	20	35	
C28-C35 Oil Range Hydrocarbons	25.5	22.8	11	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420034

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell B G-1			6/13/2011	0955		1	X								SOIL	X								X			X		X
02	TZ Cell B G-2			6/13/2011	1000		1	X								SOIL	X								X			X		X
03	TZ Cell B G-3			6/13/2011	1005		1	X								SOIL	X								X			X		X
04	TZ Cell B G-4			6/13/2011	1010		1	X								SOIL	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1230		6-15-11	1:14
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	5-15-11	5:03		5/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	N
VOCs Free of Headspace?	N
Labels on container(s)	N
Custody seals on container(s)	N
Custody seals on cooler(s)	N
Sample Hand Delivered	N
by Sampler/Client Rep. ?	N
by Courier? UPS DHL FedEx Lone Star	
Temperature Upon Receipt: 4.0 2 9. .1 °C	

Final 1.000

XENCO Laboratories

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420034
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420040

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

XENCO Laboratories

21-JUN-11

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

Reference: XENCO Report No: **420040**
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 420040. 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. 420040 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

XENCO Laboratories

Sample Cross Reference 420040

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-13-11 10:15		420040-001
TZ Cell D G-2	S	Jun-13-11 10:20		420040-002
TZ Cell D G-3	S	Jun-13-11 10:25		420040-003
TZ Cell D G-4	S	Jun-13-11 10:30		420040-004
TZ Cell D G-5	S	Jun-13-11 10:35		420040-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420040*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860621 Anions by E300
E300MI

Batch 860621, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 420040-003, -001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analysis Summary 420040

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420040-001		420040-002		420040-003		420040-004		420040-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 10:15		Jun-13-11 10:20		Jun-13-11 10:25		Jun-13-11 10:30		Jun-13-11 10:35	
Anions by E300	*Extracted:*										
	Analyzed:	Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 14:47		Jun-17-11 14:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		13.8	4.24	35.3	4.27	33.2	4.23	14.9	4.23	6.55	4.22
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	1.53	1.00	ND	1.00	ND	1.00	ND	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00	
	Analyzed:	Jun-18-11 07:44		Jun-18-11 08:14		Jun-18-11 08:43		Jun-18-11 09:12		Jun-18-11 09:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.2	ND	15.2	ND	15.1	ND	15.0	ND	15.0
C12-C28 Diesel Range Hydrocarbons		670	15.2	898	15.2	1140	15.1	1250	15.0	973	15.0
C28-C35 Oil Range Hydrocarbons		21.9	15.2	21.2	15.2	ND	15.1	ND	15.0	ND	15.0
Total TPH		692	15.2	919	15.2	1140	15.1	1250	15.0	973	15.0

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

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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 affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420040,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 605529-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 05:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	47.7	50.1	95	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	43.1	50.2	86	70-135	

Lab Batch #: 860741 **Sample:** 420040-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 07:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	55.0	50.1	110	70-135	

Lab Batch #: 860741 **Sample:** 420040-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 08:14

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	56.0	49.9	112	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420040,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 420040-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 08:43

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.7	112	70-135	
o-Terphenyl	58.3	49.9	117	70-135	

Lab Batch #: 860741 **Sample:** 420040-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 09:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.5	114	70-135	
o-Terphenyl	60.0	49.8	120	70-135	

Lab Batch #: 860741 **Sample:** 420040-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 09:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	54.4	49.9	109	70-135	

Lab Batch #: 860741 **Sample:** 420038-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.5	118	70-135	
o-Terphenyl	66.4	49.8	133	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420040 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860621 **Sample:** 860621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	10.4	104	10.0	10.8	108	4	75-125	20	

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860622 **Sample:** 860622-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	9.72	97	10.0	10.8	108	11	75-125	20	

Analyst: BEV **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860741 **Sample:** 605529-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	788	79	999	786	79	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	801	80	999	793	79	1	70-135	35	

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

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Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420040

Lab Batch #: 860621 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420036-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	13.5	101	75.5	61	75-125	X

Lab Batch #: 860622

Date Analyzed: 06/17/2011 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420040-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	14.9	101	136	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

Final 1.000

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420040

Lab Batch #: 860621 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 10:39 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420036-004 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	13.5	13.4	1	20	

Lab Batch #: 860622

Date Analyzed: 06/17/2011 14:47 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420040-004 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	14.9	14.9	0	20	

Lab Batch #: 860369

Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU

QC- Sample ID: 420023-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.69	8.33	8	20	

Lab Batch #: 860741

Date Analyzed: 06/18/2011 17:35 **Date Prepared:** 06/16/2011 **Analyst:** BEV

QC- Sample ID: 420038-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	<15.3	0	35	
C12-C28 Diesel Range Hydrocarbons	1450	1540	6	35	
C28-C35 Oil Range Hydrocarbons	17.3	20.8	18	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420040

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260 X	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell D G-1			6/13/2011	1015		1	X								SOIL	X											X		X
02	TZ Cell D G-2			6/13/2011	1020		1	X								SOIL	X											X		X
03	TZ Cell D G-3			6/13/2011	1025		1	X								SOIL	X											X		X
04	TZ Cell D G-4			6/13/2011	1030		1	X								SOIL	X											X		X
05	TZ Cell D G-5			6/13/2011	1035		1	X								SOIL	X											X		X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	6/15/11	1230	Received by:	6-15-11	1:14
Relinquished by:			Received by:		
Relinquished by:	6-15-11	5:03	Received by ELOT:	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?		N
Labels on container(s)		N
Custody seals on container(s)		N
Custody seals on cooler(s)		N
Sample Hand Delivered		N
by Sampler/Client Rep. ?		N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 4.0 °C

Final 1.000

XENCO Laboratories

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420040
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420033

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

XENCO Laboratories

21-JUN-11

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

Reference: XENCO Report No: **420033**
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 420033. 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. 420033 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

Sample Cross Reference 420033

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	Jun-13-11 10:40		420033-001
TZ Cell E G-2	S	Jun-13-11 10:45		420033-002
TZ Cell E G-3	S	Jun-13-11 10:50		420033-003

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420033*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860620 Anions by E300
Batch 860620 RPD outside of QC limits for chlorides between sample and sample duplicate.

Certificate of Analy Summary 420033

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	420033-001		420033-002		420033-003					
	Field Id:	TZ Cell E G-1		TZ Cell E G-2		TZ Cell E G-3					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-13-11 10:40		Jun-13-11 10:45		Jun-13-11 10:50					
Anions by E300	*Extracted:*										
	Analyzed:	Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		6.40	4.24	4.22	4.22	ND	4.24				
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		ND	1.00	ND	1.00	ND	1.00				
TPH By SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00					
	Analyzed:	Jun-19-11 05:50		Jun-19-11 06:19		Jun-19-11 06:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.1	ND	15.1	ND	15.1				
C12-C28 Diesel Range Hydrocarbons		328	15.1	312	15.1	212	15.1				
C28-C35 Oil Range Hydrocarbons		21.7	15.1	28.7	15.1	25.5	15.1				
Total TPH		350	15.1	341	15.1	238	15.1				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420033,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 605508-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 20:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	48.6	50.2	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	52.7	50.2	105	70-135	

Lab Batch #: 860694 **Sample:** 420033-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 05:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.7	100	85	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 860694 **Sample:** 420033-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 06:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.4	100	84	70-135	
o-Terphenyl	43.9	50.0	88	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420033,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 420033-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 06:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.4	99.7	86	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 860694 **Sample:** 420033-003 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 08:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420033 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860620 **Sample:** 860620-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	8.92	89	10.0	10.1	101	12	75-125	20	

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860694 **Sample:** 605508-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	835	84	999	848	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	999	852	85	1	70-135	35	

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

Final 1.000

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420033
Lab Batch #: 860620
Project ID: 2004-00061
Date Analyzed: 06/17/2011
Date Prepared: 06/17/2011
Analyst: LATCOR
QC- Sample ID: 420030-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.60	102	89.6	80	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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420033

Lab Batch #: 860620 **Project ID:** 2004-00061
Date Analyzed: 06/17/2011 02:38 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR
QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	7.60	4.93	43	20	F

Lab Batch #: 860370
Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU
QC- Sample ID: 420037-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	1.00	NC	20	

Lab Batch #: 860694
Date Analyzed: 06/19/2011 08:17 **Date Prepared:** 06/17/2011 **Analyst:** BEV
QC- Sample ID: 420033-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	212	259	20	35	
C28-C35 Oil Range Hydrocarbons	25.5	22.8	11	35	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 420033

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water GW=Groundwater NP=Non-Potable SL=Sludge S=Soil/Solid Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell E G-1			6/13/2011	1040		1	X								SOIL	X													X				X
02	TZ Cell E G-2			6/13/2011	1045		1	X								SOIL	X													X				X
03	TZ Cell E G-3			6/13/2011	1050		1	X								SOIL	X													X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1030	Bill Blackwell	6-15-11	1:14
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Bill Blackwell	6/15/11	5:03	A. Henard	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y N
VOCs Free of Headspace?	Y N
Labels on container(s)	Y N
Custody seals on container(s)	Y N
Custody seals on cooler(s)	Y N
Sample Hand Delivered	Y N
by Sampler/Client Rep. ?	
by Courier? UPS DHL FedEx Lone Star	
4020.0	
Temperature Upon Receipt: -1 °C	

XENCO Laboratories

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420033
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420037

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420037**
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 420037. 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. 420037 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

XENCO Laboratories

Sample Cross Reference 420037

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-13-11 10:55		420037-001
TZ Cell F G-2	S	Jun-13-11 11:00		420037-002
TZ Cell F G-3	S	Jun-13-11 11:05		420037-003
TZ Cell F G-4	S	Jun-13-11 11:10		420037-004
TZ Cell F G-5	S	Jun-13-11 11:15		420037-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420037*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860621 Anions by E300
E300MI

Batch 860621, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 420037-001, -004, -002, -003, -005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analys ummary 420037

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	420037-001		420037-002		420037-003		420037-004		420037-005		
	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		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-13-11 10:55		Jun-13-11 11:00		Jun-13-11 11:05		Jun-13-11 11:10		Jun-13-11 11:15		
Anions by E300	*Extracted:*											
	Analyzed:	Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		37.9	4.24	68.5	8.48	94.3	8.44	20.6	4.22	30.8	4.24	
Percent Moisture	*Extracted:*											
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		ND	1.00	1.00	1.00	ND	1.00	ND	1.00	1.03	1.00	
TPH By SW8015 Mod	*Extracted:*	Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-17-11 12:00		
	Analyzed:	Jun-18-11 15:36		Jun-18-11 16:06		Jun-18-11 16:36		Jun-18-11 17:05		Jun-19-11 00:27		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.1	ND	15.1	ND	15.1	ND	15.0	ND	15.1	
C12-C28 Diesel Range Hydrocarbons		799	15.1	733	15.1	1150	15.1	492	15.0	999	15.1	
C28-C35 Oil Range Hydrocarbons		26.1	15.1	26.4	15.1	23.8	15.1	21.8	15.0	25.7	15.1	
Total TPH		825	15.1	759	15.1	1170	15.1	514	15.0	1020	15.1	

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420037, **Project ID:** 2004-00061

Lab Batch #: 860694 **Sample:** 605508-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 20:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	48.6	50.2	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	52.7	50.2	105	70-135	

Lab Batch #: 860694 **Sample:** 420037-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 00:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.5	106	70-135	
o-Terphenyl	56.4	49.8	113	70-135	

Lab Batch #: 860694 **Sample:** 420033-003 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 08:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420037,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 605529-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 05:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	47.7	50.1	95	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	43.1	50.2	86	70-135	

Lab Batch #: 860741 **Sample:** 420037-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 15:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	59.3	49.8	119	70-135	

Lab Batch #: 860741 **Sample:** 420037-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 16:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	99.7	88	70-135	
o-Terphenyl	47.0	49.9	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420037, **Project ID:** 2004-00061

Lab Batch #: 860741 **Sample:** 420037-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 16:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	59.5	50.2	119	70-135	

Lab Batch #: 860741 **Sample:** 420037-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 17:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.2	99.9	83	70-135	
o-Terphenyl	43.7	50.0	87	70-135	

Lab Batch #: 860741 **Sample:** 420038-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.5	118	70-135	
o-Terphenyl	66.4	49.8	133	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420037 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860621 **Sample:** 860621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	10.4	104	10.0	10.8	108	4	75-125	20	

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860694 **Sample:** 605508-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	835	84	999	848	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	999	852	85	1	70-135	35	

Analyst: BEV **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860741 **Sample:** 605529-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	788	79	999	786	79	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	801	80	999	793	79	1	70-135	35	

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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420037
Lab Batch #: 860621
Date Analyzed: 06/17/2011
QC- Sample ID: 420036-004 S
Reporting Units: mg/kg

Project ID: 2004-00061
Date Prepared: 06/17/2011
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	13.5	101	75.5	61	75-125	X

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

- Below Reporting Limit

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420037

Lab Batch #: 860621 **Project ID:** 2004-00061
Date Analyzed: 06/17/2011 10:39 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR
QC- Sample ID: 420036-004 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	13.5	13.4	1	20	

Lab Batch #: 860369
Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU
QC- Sample ID: 420023-009 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.69	8.33	8	20	

Lab Batch #: 860370
Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU
QC- Sample ID: 420037-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	1.00	NC	20	

Lab Batch #: 860694
Date Analyzed: 06/19/2011 08:17 **Date Prepared:** 06/17/2011 **Analyst:** BEV
QC- Sample ID: 420033-003 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	212	259	20	35	
C28-C35 Oil Range Hydrocarbons	25.5	22.8	11	35	

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420037

Lab Batch #: 860741 **Project ID:** 2004-00061

Date Analyzed: 06/18/2011 17:35 **Date Prepared:** 06/16/2011 **Analyst:** BEV

QC- Sample ID: 420038-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	<15.3	0	35	
C12-C28 Diesel Range Hydrocarbons	1450	1540	6	35	
C28-C35 Oil Range Hydrocarbons	17.3	20.8	18	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420037

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260 X	RCI	N.O.R.M.	Chlorides X	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell F G-1			6/13/2011	1055		1	X								SOIL	X											X		X
02	TZ Cell F G-2			6/13/2011	1100		1	X								SOIL	X											X		X
03	TZ Cell F G-3			6/13/2011	1105		1	X								SOIL	X											X		X
04	TZ Cell F G-4			6/13/2011	1110		1	X								SOIL	X											X		X
05	TZ Cell F G-5			6/13/2011	1115		1	X								SOIL	X											X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1230		6/15/11	1:14
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	6-15-11	5:03		6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?		
by Courier? UPS DHL FedEx Lone Star		

402 CG

Temperature Upon Receipt: 1 °C

Final 1.000

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420037
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420038

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

XENCO Laboratories

21-JUN-11

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

Reference: XENCO Report No: **420038**
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 420038. 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. 420038 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

XENCO Laboratories

Sample Cross Reference 420038

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-13-11 11:20		420038-001
TZ Cell G G-2	S	Jun-13-11 11:25		420038-002
TZ Cell G G-3	S	Jun-13-11 11:30		420038-003
TZ Cell G G-4	S	Jun-13-11 11:35		420038-004
TZ Cell G G-5	S	Jun-13-11 11:40		420038-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420038*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860621 Anions by E300
E300MI

Batch 860621, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 420038-002, -004, -001, -005, -003.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analysis Summary 420038

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	420038-001		420038-002		420038-003		420038-004		420038-005		
	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		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-13-11 11:20		Jun-13-11 11:25		Jun-13-11 11:30		Jun-13-11 11:35		Jun-13-11 11:40		
Anions by E300	*Extracted:*											
	Analyzed:	Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		9.15	4.21	11.0	4.24	31.4	4.33	10.3	4.32	7.07	4.29	
Percent Moisture	*Extracted:*											
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		ND	1.00	ND	1.00	2.92	1.00	2.81	1.00	2.20	1.00	
TPH By SW8015 Mod	*Extracted:*	Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		
	Analyzed:	Jun-18-11 13:08		Jun-18-11 13:37		Jun-18-11 14:07		Jun-18-11 14:37		Jun-18-11 15:07		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		21.4	15.1	19.5	15.1	ND	15.4	ND	15.4	ND	15.3	
C12-C28 Diesel Range Hydrocarbons		2400	15.1	2450	15.1	349	15.4	307	15.4	1450	15.3	
C28-C35 Oil Range Hydrocarbons		ND	15.1	19.8	15.1	ND	15.4	ND	15.4	17.3	15.3	
Total TPH		2420	15.1	2490	15.1	349	15.4	307	15.4	1470	15.3	

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

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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 affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420038,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 605529-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 05:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	47.7	50.1	95	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	43.1	50.2	86	70-135	

Lab Batch #: 860741 **Sample:** 420038-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 13:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	60.9	50.1	122	70-135	

Lab Batch #: 860741 **Sample:** 420038-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 13:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	58.8	49.9	118	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420038,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 420038-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 14:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.7	84	70-135	
o-Terphenyl	47.7	49.9	96	70-135	

Lab Batch #: 860741 **Sample:** 420038-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 14:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

Lab Batch #: 860741 **Sample:** 420038-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 15:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.5	113	70-135	
o-Terphenyl	60.9	49.8	122	70-135	

Lab Batch #: 860741 **Sample:** 420038-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.5	118	70-135	
o-Terphenyl	66.4	49.8	133	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Final 1.000

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420038 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860621 **Sample:** 860621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	10.4	104	10.0	10.8	108	4	75-125	20	

Analyst: BEV **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860741 **Sample:** 605529-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	788	79	999	786	79	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	801	80	999	793	79	1	70-135	35	

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

Final 1.000

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420038
Lab Batch #: 860621
Project ID: 2004-00061
Date Analyzed: 06/17/2011
Date Prepared: 06/17/2011
Analyst: LATCOR
QC- Sample ID: 420036-004 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	13.5	101	75.5	61	75-125	X

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 1.000

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420038

Lab Batch #: 860621 **Project ID:** 2004-00061
Date Analyzed: 06/17/2011 10:39 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR
QC- Sample ID: 420036-004 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	13.5	13.4	1	20	

Lab Batch #: 860369
Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU
QC- Sample ID: 420023-009 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.69	8.33	8	20	

Lab Batch #: 860741
Date Analyzed: 06/18/2011 17:35 **Date Prepared:** 06/16/2011 **Analyst:** BEV
QC- Sample ID: 420038-005 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

TPH By SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	<15.3	0	35	
C12-C28 Diesel Range Hydrocarbons	1450	1540	6	35	
C28-C35 Oil Range Hydrocarbons	17.3	20.8	18	35	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420039

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell G G-1			6/13/2011	1120		1	X								SOIL	X											X				X
02	TZ Cell G G-2			6/13/2011	1125		1	X								SOIL	X											X				X
03	TZ Cell G G-3			6/13/2011	1130		1	X								SOIL	X											X				X
04	TZ Cell G G-4			6/13/2011	1135		1	X								SOIL	X											X				X
05	TZ Cell G G-5			6/13/2011	1140		1	X								SOIL	X											X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/14/11	1230		6-15-11	1:10
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	6-15-11	5:03		6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

4022 C S

Temperature Upon Receipt: .1 °C

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420038
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
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	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420039

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420039**
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 420039. 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. 420039 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

XENCO Laboratories

Sample Cross Reference 420039

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-13-11 11:45		420039-001
TZ Cell H G-2	S	Jun-13-11 11:50		420039-002
TZ Cell H G-3	S	Jun-13-11 11:55		420039-003
TZ Cell H G-4	S	Jun-13-11 12:00		420039-004
TZ Cell H G-5	S	Jun-13-11 12:05		420039-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420039*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860621 Anions by E300
E300MI

Batch 860621, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 420039-005, -003, -004, -002, -001.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analys ummary 420039
PLAINS ALL AMERICAN EH&S, Midland, TX
Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested												
	Lab Id:	420039-001		420039-002		420039-003		420039-004		420039-005		
	Field Id:	TZ Cell H G-1		TZ Cell H G-2		TZ Cell H G-3		TZ Cell H G-4		TZ Cell H G-5		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-13-11 11:45		Jun-13-11 11:50		Jun-13-11 11:55		Jun-13-11 12:00		Jun-13-11 12:05		
Anions by E300	*Extracted:*											
	Analyzed:	Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		Jun-17-11 10:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		89.3	8.50	78.7	4.66	26.3	4.25	15.7	4.23	10.7	4.25	
Percent Moisture	*Extracted:*											
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		1.13	1.00	9.91	1.00	1.27	1.00	ND	1.00	1.12	1.00	
TPH By SW8015 Mod	*Extracted:*	Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		Jun-16-11 15:00		
	Analyzed:	Jun-18-11 10:11		Jun-18-11 10:40		Jun-18-11 11:10		Jun-18-11 11:40		Jun-18-11 12:39		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		61.6	15.2	ND	16.6	52.3	15.2	55.6	15.1	42.9	15.1	
C12-C28 Diesel Range Hydrocarbons		3770	15.2	205	16.6	1520	15.2	1770	15.1	1160	15.1	
C28-C35 Oil Range Hydrocarbons		ND	15.2	ND	16.6	22.0	15.2	24.1	15.1	27.5	15.1	
Total TPH		3830	15.2	205	16.6	1590	15.2	1850	15.1	1230	15.1	

Brent Barron, II
Odessa Laboratory Manager

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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 affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420039, **Project ID:** 2004-00061

Lab Batch #: 860741 **Sample:** 605529-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 05:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	47.7	50.1	95	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 860741 **Sample:** 605529-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 06:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.2	100	76	70-135	
o-Terphenyl	43.1	50.2	86	70-135	

Lab Batch #: 860741 **Sample:** 420039-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 10:11

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	57.1	50.0	114	70-135	

Lab Batch #: 860741 **Sample:** 420039-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 10:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.6	114	70-135	
o-Terphenyl	65.4	49.8	131	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420039,

Project ID: 2004-00061

Lab Batch #: 860741 **Sample:** 420039-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 11:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	57.2	50.1	114	70-135	

Lab Batch #: 860741 **Sample:** 420039-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 11:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	59.9	49.9	120	70-135	

Lab Batch #: 860741 **Sample:** 420039-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 12:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.7	90	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

Lab Batch #: 860741 **Sample:** 420038-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 17:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.5	118	70-135	
o-Terphenyl	66.4	49.8	133	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420039 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860621 **Sample:** 860621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Anions by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.420	10.0	10.4	104	10.0	10.8	108	4	75-125	20	

Analyst: BEV **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860741 **Sample:** 605529-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	788	79	999	786	79	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	801	80	999	793	79	1	70-135	35	

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

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Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420039
Lab Batch #: 860621
Project ID: 2004-00061
Date Analyzed: 06/17/2011
Date Prepared: 06/17/2011
Analyst: LATCOR
QC- Sample ID: 420036-004 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	13.5	101	75.5	61	75-125	X

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420039

Lab Batch #: 860621 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 10:39 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420036-004 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	13.5	13.4	1	20	

Lab Batch #: 860369

Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU

QC- Sample ID: 420023-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.69	8.33	8	20	

Lab Batch #: 860741

Date Analyzed: 06/18/2011 17:35 **Date Prepared:** 06/16/2011 **Analyst:** BEV

QC- Sample ID: 420038-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	<15.3	0	35	
C12-C28 Diesel Range Hydrocarbons	1450	1540	6	35	
C28-C35 Oil Range Hydrocarbons	17.3	20.8	18	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420037

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	TZ Cell H G-1			6/13/2011	1145		1	X								SOIL	X											X		X
02	TZ Cell H G-2			6/13/2011	1150		1	X								SOIL	X											X		X
03	TZ Cell H G-3			6/13/2011	1155		1	X								SOIL	X											X		X
04	TZ Cell H G-4			6/13/2011	1200		1	X								SOIL	X											X		X
05	TZ Cell H G-5			6/13/2011	1205		1	X								SOIL	X											X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1230		6-15-11	1:15
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	6-15-11	5:03		6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star
402
Temperature Upon Receipt: 0.1 °C

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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: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420059
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420031

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420031**
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 420031. 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. 420031 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

XENCO Laboratories

Sample Cross Reference 420031

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea Station Landfarm

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell A G-1	S	Jun-13-11 12:30		420031-001
VZ Cell A G-2	S	Jun-13-11 12:40		420031-002
VZ Cell A G-3	S	Jun-13-11 12:50		420031-003
VZ Cell A G-4	S	Jun-13-11 13:00		420031-004
VZ Cell A G-5	S	Jun-13-11 13:10		420031-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420031*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860620 Inorganic Anions In Soil by E300
Batch 860620 RPD outside of QC limits for chlorides between sample and sample duplicate.

Batch: LBA-860711 BTEX by EPA 8021
SW8021BM

Batch 860711, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420031-001, -004, -003, -002, -005.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analy. Summary 420031

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420031-001		420031-002		420031-003		420031-004		420031-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 12:30		Jun-13-11 12:40		Jun-13-11 12:50		Jun-13-11 13:00		Jun-13-11 13:10	
BTEX by EPA 8021	*Extracted:*	Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45	
	Analyzed:	Jun-18-11 06:17		Jun-18-11 06:39		Jun-18-11 07:02		Jun-18-11 07:25		Jun-18-11 07:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0012	ND	0.0010
Toluene		ND	0.0022	ND	0.0021	ND	0.0023	ND	0.0024	ND	0.0021
Ethylbenzene		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0012	ND	0.0010
m_p-Xylenes		ND	0.0022	ND	0.0021	ND	0.0023	ND	0.0024	ND	0.0021
o-Xylene		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0012	ND	0.0010
Xylenes, Total		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0012	ND	0.0010
Total BTEX		ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0012	ND	0.0010
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7.75	4.66	4.44	4.36	ND	4.75	ND	4.98	ND	4.35
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.93	1.00	3.56	1.00	11.6	1.00	15.6	1.00	3.43	1.00
TPH by SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00	
	Analyzed:	Jun-19-11 07:17		Jun-19-11 07:48		Jun-20-11 12:08		Jun-20-11 12:38		Jun-20-11 13:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.6	ND	15.5	ND	16.9	ND	17.7	ND	15.5
C12-C28 Diesel Range Hydrocarbons		ND	16.6	ND	15.5	ND	16.9	ND	17.7	ND	15.5
C28-C35 Oil Range Hydrocarbons		ND	16.6	ND	15.5	ND	16.9	ND	17.7	ND	15.5
Total TPH		ND	16.6	ND	15.5	ND	16.9	ND	17.7	ND	15.5

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420031, **Project ID:** 2004-00061

Lab Batch #: 860711 **Sample:** 605512-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:33

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 00:41

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 04:47

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 05:10

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420031,

Project ID: 2004-00061

Lab Batch #: 860711 **Sample:** 420031-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 06:17

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 860711 **Sample:** 420031-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 06:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 860711 **Sample:** 420031-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 07:02

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 860711 **Sample:** 420031-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 07:25

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 860711 **Sample:** 420031-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 07:47

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420031, **Project ID:** 2004-00061

Lab Batch #: 860694 **Sample:** 605508-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 20:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	48.6	50.2	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 860694 **Sample:** 605508-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 21:32

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	52.7	50.2	105	70-135	

Lab Batch #: 860694 **Sample:** 420031-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 07:17

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.4	99.9	89	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 860694 **Sample:** 420031-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 07:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	99.6	79	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420031,

Project ID: 2004-00061

Lab Batch #: 860694 **Sample:** 420033-003 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/19/11 08:17

TPH by SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 10:38

TPH by SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:09

TPH by SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:38

TPH by SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	100	92	70-135	
o-Terphenyl	50.2	50.2	100	70-135	

Lab Batch #: 860793 **Sample:** 420031-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 12:08

TPH by SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.8	99.8	96	70-135	
o-Terphenyl	52.1	49.9	104	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420031,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 420031-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 12:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.5	90	70-135	
o-Terphenyl	47.5	49.8	95	70-135	

Lab Batch #: 860793 **Sample:** 420031-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 13:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	99.8	86	70-135	
o-Terphenyl	46.9	49.9	94	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	58.6	49.9	117	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 23:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420031 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860711 **Sample:** 605512-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.102	102	0.100	0.0880	88	15	70-130	35	
Toluene	<0.00200	0.100	0.0933	93	0.100	0.0803	80	15	70-130	35	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.0874	87	15	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.197	99	0.200	0.169	85	15	70-135	35	
o-Xylene	<0.00100	0.100	0.0971	97	0.100	0.0841	84	14	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860620 **Sample:** 860620-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	8.92	89	10.0	10.1	101	12	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 #: 420031 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/18/2011

Lab Batch ID: 860694 **Sample:** 605508-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	835	84	999	848	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	999	852	85	1	70-135	35	

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860793 **Sample:** 605554-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	836	84	999	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	849	85	999	864	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420031
Lab Batch #: 860620
Project ID: 2004-00061
Date Analyzed: 06/17/2011
Date Prepared: 06/17/2011
Analyst: LATCOR
QC- Sample ID: 420030-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.60	102	89.6	80	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 - M MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420031 **Project ID:** 2004-00061

Lab Batch ID: 860711 **QC- Sample ID:** 420029-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/18/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00114	0.114	0.0531	47	0.115	0.0600	52	12	70-130	35	X
Toluene	<0.00229	0.114	0.0505	44	0.115	0.0553	48	9	70-130	35	X
Ethylbenzene	<0.00114	0.114	0.0559	49	0.115	0.0610	53	9	71-129	35	X
m_p-Xylenes	<0.00229	0.229	0.106	46	0.230	0.114	50	7	70-135	35	X
o-Xylene	<0.00114	0.114	0.0503	44	0.115	0.0568	49	12	71-133	35	X

Lab Batch ID: 860793 **QC- Sample ID:** 420027-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1030	1050	102	1030	963	93	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1030	1050	102	1030	995	97	5	70-135	35	

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

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

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

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420031

Lab Batch #: 860620 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 02:38 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	7.60	<5.12	NC	20	

Lab Batch #: 860370

Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU

QC- Sample ID: 420037-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	1.00	NC	20	

Lab Batch #: 860694

Date Analyzed: 06/19/2011 08:17 **Date Prepared:** 06/17/2011 **Analyst:** BEV

QC- Sample ID: 420033-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	212	259	20	35	
C28-C35 Oil Range Hydrocarbons	25.5	22.8	11	35	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 420031

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water GW=Groundwater NP=Non-Potable St=Sludge S=Soil/Solid Specify Other	Analyze For: TPH: 418.1	8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TCLP:	TOTAL:	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell A G-1			6/13/2011	1230		1	X								SOIL	X											X				X		X
002	VZ Cell A G-2			6/13/2011	1240		1	X								SOIL	X											X				X		X
003	VZ Cell A G-3			6/13/2011	1250		1	X								SOIL	X											X				X		X
004	VZ Cell A G-4			6/13/2011	1300		1	X								SOIL	X											X				X		X
005	VZ Cell A G-5			6/13/2011	1310		1	X								SOIL	X											X				X		X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	6/15/11	1530	Received by:	6-15-11	1:27
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	6/15/11	5:05	Received by ELOT:	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?		N
Labels on container(s)	Y	N
Custody seals on container(s)		N
Custody seals on cooler(s)		N
Sample Hand Delivered		N
by Sampler/Client Rep. ?		N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.0 °C

Final 1.000

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420031
Initials: AH

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420030

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420030**
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 420030. 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. 420030 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

XENCO Laboratories

Sample Cross Reference 420030

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-13-11 13:25		420030-001
VZ Cell B G-2	S	Jun-13-11 13:35		420030-002
VZ Cell B G-3	S	Jun-13-11 13:45		420030-003
VZ Cell B G-4	S	Jun-13-11 13:55		420030-004
VZ Cell B G-5	S	Jun-13-11 14:05		420030-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420030*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860620 Inorganic Anions In Soil by E300
Batch 860620 RPD outside of QC limits for chlorides between sample and sample duplicate.

Batch: LBA-860711 BTEX by EPA 8021
SW8021BM

Batch 860711, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420030-003, -005, -002, -001, -004.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analy Summary 420030

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested															
	Lab Id:	420030-001		420030-002		420030-003		420030-004		420030-005					
	Field Id:	VZ Cell B G-1		VZ Cell B G-2		VZ Cell B G-3		VZ Cell B G-4		VZ Cell B G-5					
	Depth:														
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jun-13-11 13:25		Jun-13-11 13:35		Jun-13-11 13:45		Jun-13-11 13:55		Jun-13-11 14:05					
BTEX by EPA 8021	***Extracted:***	Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45					
	Analyzed:	Jun-18-11 02:56		Jun-18-11 03:18		Jun-18-11 03:41		Jun-18-11 04:03		Jun-18-11 04:25					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011				
Toluene		ND	0.0020	ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0022				
Ethylbenzene		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011				
m_p-Xylenes		ND	0.0020	ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0022				
o-Xylene		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011				
Xylenes, Total		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011				
Total BTEX		ND	0.0010	ND	0.0011	ND	0.0010	ND	0.0011	ND	0.0011				
Inorganic Anions In Soil by E300	***Extracted:***														
	Analyzed:	Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38		Jun-17-11 02:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		7.60	4.30	ND	4.53	ND	4.41	ND	4.38	ND	4.58				
Percent Moisture	***Extracted:***														
	Analyzed:	Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-16-11 17:00		Jun-20-11 10:42					
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		2.39	1.00	7.36	1.00	4.82	1.00	4.00	1.00	8.38	1.00				
TPH by SW8015 Mod	***Extracted:***	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00					
	Analyzed:	Jun-20-11 13:37		Jun-20-11 14:08		Jun-20-11 14:38		Jun-20-11 15:07		Jun-20-11 15:37					
	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	16.1	ND	15.7	ND	15.7	ND	16.3				
C12-C28 Diesel Range Hydrocarbons		ND	15.4	ND	16.1	ND	15.7	ND	15.7	ND	16.3				
C28-C35 Oil Range Hydrocarbons		ND	15.4	ND	16.1	ND	15.7	ND	15.7	ND	16.3				
Total TPH		ND	15.4	ND	16.1	ND	15.7	ND	15.7	ND	16.3				

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420030,

Project ID: 2004-00061

Lab Batch #: 860711 **Sample:** 605512-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:33

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 00:41

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 860711 **Sample:** 420030-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 02:56

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 860711 **Sample:** 420030-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 03:18

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420030,

Project ID: 2004-00061

Lab Batch #: 860711 **Sample:** 420030-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 03:41

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 860711 **Sample:** 420030-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 04:03

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 860711 **Sample:** 420030-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 04:25

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 04:47

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 05:10

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420030,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 605554-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 10:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	100	92	70-135	
o-Terphenyl	50.2	50.2	100	70-135	

Lab Batch #: 860793 **Sample:** 420030-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 13:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	61.1	50.1	122	70-135	

Lab Batch #: 860793 **Sample:** 420030-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 14:08

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.6	99.5	77	70-135	
o-Terphenyl	40.0	49.8	80	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420030,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 420030-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 14:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.5	99.6	87	70-135	
o-Terphenyl	47.4	49.8	95	70-135	

Lab Batch #: 860793 **Sample:** 420030-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	62.3	50.2	124	70-135	

Lab Batch #: 860793 **Sample:** 420030-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	99.6	89	70-135	
o-Terphenyl	49.1	49.8	99	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	58.6	49.9	117	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 23:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420030 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860711 **Sample:** 605512-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.102	102	0.100	0.0880	88	15	70-130	35	
Toluene	<0.00200	0.100	0.0933	93	0.100	0.0803	80	15	70-130	35	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.0874	87	15	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.197	99	0.200	0.169	85	15	70-135	35	
o-Xylene	<0.00100	0.100	0.0971	97	0.100	0.0841	84	14	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860620 **Sample:** 860620-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	8.92	89	10.0	10.1	101	12	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

Final 1.000

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BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420030 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860793 **Sample:** 605554-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	836	84	999	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	849	85	999	864	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420030
Lab Batch #: 860620
Date Analyzed: 06/17/2011
QC- Sample ID: 420030-001 S
Reporting Units: mg/kg

Project ID: 2004-00061
Date Prepared: 06/17/2011
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.60	102	89.6	80	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420030 **Project ID:** 2004-00061

Lab Batch ID: 860711 **QC- Sample ID:** 420029-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/18/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00114	0.114	0.0531	47	0.115	0.0600	52	12	70-130	35	X
Toluene	<0.00229	0.114	0.0505	44	0.115	0.0553	48	9	70-130	35	X
Ethylbenzene	<0.00114	0.114	0.0559	49	0.115	0.0610	53	9	71-129	35	X
m_p-Xylenes	<0.00229	0.229	0.106	46	0.230	0.114	50	7	70-135	35	X
o-Xylene	<0.00114	0.114	0.0503	44	0.115	0.0568	49	12	71-133	35	X

Lab Batch ID: 860793 **QC- Sample ID:** 420027-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1030	1050	102	1030	963	93	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1030	1050	102	1030	995	97	5	70-135	35	

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

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

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

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Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420030

Lab Batch #: 860620 **Project ID:** 2004-00061

Date Analyzed: 06/17/2011 02:38 **Date Prepared:** 06/17/2011 **Analyst:** LATCOR

QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	7.60	<5.12	NC	20	

Lab Batch #: 860371

Date Analyzed: 06/16/2011 17:00 **Date Prepared:** 06/16/2011 **Analyst:** WRU

QC- Sample ID: 420030-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.39	2.78	15	20	

Lab Batch #: 860642

Date Analyzed: 06/20/2011 10:42 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420030-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.38	9.84	16	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

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 420050

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell B G-1			6/13/2011	1325		1	X								SOIL	X							X			X		X
002	VZ Cell B G-2			6/13/2011	1335		1	X								SOIL	X							X			X		X
003	VZ Cell B G-3			6/13/2011	1345		1	X								SOIL	X							X			X		X
004	VZ Cell B G-4			6/13/2011	1355		1	X								SOIL	X							X			X		X
005	VZ Cell B G-5			6/13/2011	1405		1	X								SOIL	X							X			X		X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	6/15/11	1630	Received by:	6/15-11	1:27
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	6-15-11	5:03	Received by ELOT:	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?		
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 4.0 °C

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420050
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420029

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

21-JUN-11

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

Reference: XENCO Report No: **420029**
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 420029. 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. 420029 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

XENCO Laboratories

Sample Cross Reference 420029

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-13-11 14:20		420029-001
VZ Cell C G-2	S	Jun-13-11 14:30		420029-002
VZ Cell C G-3	S	Jun-13-11 14:40		420029-003
VZ Cell C G-4	S	Jun-13-11 14:50		420029-004
VZ Cell C G-5	S	Jun-13-11 15:00		420029-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-JUN-11*
Work Order Number:	*420029*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860711 BTEX by EPA 8021
SW8021BM

Batch 860711, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420029-001, -003, -004, -005, -002.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analy Summary 420029

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 21-JUN-11
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	420029-001		420029-002		420029-003		420029-004		420029-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 14:20		Jun-13-11 14:30		Jun-13-11 14:40		Jun-13-11 14:50		Jun-13-11 15:00	
BTEX by EPA 8021	*Extracted:*	Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45		Jun-17-11 11:45	
	Analyzed:	Jun-18-11 01:03		Jun-18-11 01:26		Jun-18-11 01:48		Jun-18-11 02:10		Jun-18-11 02:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0012	ND	0.0011	ND	0.0012	ND	0.0012	ND	0.0011
Toluene		ND	0.0023	ND	0.0021	ND	0.0024	ND	0.0023	ND	0.0021
Ethylbenzene		ND	0.0012	ND	0.0011	ND	0.0012	ND	0.0012	ND	0.0011
m_p-Xylenes		ND	0.0023	ND	0.0021	ND	0.0024	ND	0.0023	ND	0.0021
o-Xylene		ND	0.0012	ND	0.0011	ND	0.0012	ND	0.0012	ND	0.0011
Xylenes, Total		ND	0.0012	ND	0.0011	ND	0.0012	ND	0.0012	ND	0.0011
Total BTEX		ND	0.0012	ND	0.0011	ND	0.0012	ND	0.0012	ND	0.0011
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.19	5.77	ND	5.32	7.30	6.00	8.75	5.74	8.56	5.29
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		13.3	1.00	5.93	1.00	16.6	1.00	12.9	1.00	5.45	1.00
TPH by SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00	
	Analyzed:	Jun-20-11 16:07		Jun-20-11 16:37		Jun-20-11 17:36		Jun-20-11 18:06		Jun-20-11 18:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.4	ND	15.9	ND	18.0	ND	17.2	ND	15.8
C12-C28 Diesel Range Hydrocarbons		ND	17.4	ND	15.9	ND	18.0	ND	17.2	ND	15.8
C28-C35 Oil Range Hydrocarbons		ND	17.4	ND	15.9	ND	18.0	ND	17.2	ND	15.8
Total TPH		ND	17.4	ND	15.9	ND	18.0	ND	17.2	ND	15.8

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420029,

Project ID: 2004-00061

Lab Batch #: 860711 **Sample:** 605512-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 23:33

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 860711 **Sample:** 605512-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/18/11 00:41

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 01:03

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 860711 **Sample:** 420029-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 01:26

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420029,

Project ID: 2004-00061

Lab Batch #: 860711 **Sample:** 420029-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 01:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 860711 **Sample:** 420029-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 02:10

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 860711 **Sample:** 420029-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 02:33

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 04:47

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 860711 **Sample:** 420029-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/18/11 05:10

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420029, **Project ID:** 2004-00061

Lab Batch #: 860793 **Sample:** 605554-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 10:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	100	92	70-135	
o-Terphenyl	50.2	50.2	100	70-135	

Lab Batch #: 860793 **Sample:** 420029-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	49.3	50.2	98	70-135	

Lab Batch #: 860793 **Sample:** 420029-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	99.6	92	70-135	
o-Terphenyl	51.0	49.8	102	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420029,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 420029-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 17:36

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.3	100	91	70-135	
o-Terphenyl	51.5	50.0	103	70-135	

Lab Batch #: 860793 **Sample:** 420029-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 18:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.1	99.9	89	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 860793 **Sample:** 420029-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 18:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.8	99.9	77	70-135	
o-Terphenyl	40.7	50.0	81	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	58.6	49.9	117	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 23:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420029 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860711 **Sample:** 605512-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.102	102	0.100	0.0880	88	15	70-130	35	
Toluene	<0.00200	0.100	0.0933	93	0.100	0.0803	80	15	70-130	35	
Ethylbenzene	<0.00100	0.100	0.102	102	0.100	0.0874	87	15	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.197	99	0.200	0.169	85	15	70-135	35	
o-Xylene	<0.00100	0.100	0.0971	97	0.100	0.0841	84	14	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860614 **Sample:** 860614-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	8.81	88	10.0	8.82	88	0	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420029 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860793 **Sample:** 605554-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	836	84	999	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	849	85	999	864	86	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

Final 1.000

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420029
Lab Batch #: 860614
Project ID: 2004-00061
Date Analyzed: 06/16/2011
Date Prepared: 06/16/2011
Analyst: LATCOR
QC- Sample ID: 420026-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	76.9	220	277	91	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420029 **Project ID:** 2004-00061

Lab Batch ID: 860711 **QC- Sample ID:** 420029-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/18/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00114	0.114	0.0531	47	0.115	0.0600	52	12	70-130	35	X
Toluene	<0.00229	0.114	0.0505	44	0.115	0.0553	48	9	70-130	35	X
Ethylbenzene	<0.00114	0.114	0.0559	49	0.115	0.0610	53	9	71-129	35	X
m_p-Xylenes	<0.00229	0.229	0.106	46	0.230	0.114	50	7	70-135	35	X
o-Xylene	<0.00114	0.114	0.0503	44	0.115	0.0568	49	12	71-133	35	X

Lab Batch ID: 860793 **QC- Sample ID:** 420027-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1030	1050	102	1030	963	93	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1030	1050	102	1030	995	97	5	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420029

Lab Batch #: 860614 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 20:59 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420026-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	76.9	79.1	3	20	

Lab Batch #: 860642

Date Analyzed: 06/20/2011 10:42 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420030-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.38	9.84	16	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

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420029

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell C G-1			6/13/2011	1420		1	X								SOIL	X							X			X				X
002	VZ Cell C G-2			6/13/2011	1430		1	X								SOIL	X							X			X				X
003	VZ Cell C G-3			6/13/2011	1440		1	X								SOIL	X							X			X				X
004	VZ Cell C G-4			6/13/2011	1450		1	X								SOIL	X							X			X				X
005	VZ Cell C G-5			6/13/2011	1500		1	X								SOIL	X							X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1530		6.15.11	1:30
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	6-15-11	5:03		6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	(Y) N
VOCs Free of Headspace?	(Y) N
Labels on container(s)	(Y) N
Custody seals on container(s)	(Y) N
Custody seals on cooler(s)	(Y) N
Sample Hand Delivered	(Y) N
by Sampler/Client Rep. ?	(Y) N
by Courier? UPS DHL FedEx Lone Star	
Temperature Upon Receipt: 4.0 °C CF	0.1 °C

Final 1.000

XENCO Laboratories

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420029
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420028

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

22-JUN-11

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

Reference: XENCO Report No: **420028**
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 420028. 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. 420028 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

XENCO Laboratories

Sample Cross Reference 420028

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-13-11 15:15		420028-001
VZ Cell D G-2	S	Jun-13-11 15:25		420028-002
VZ Cell D G-3	S	Jun-13-11 15:35		420028-003
VZ Cell D G-4	S	Jun-13-11 15:45		420028-004
VZ Cell D G-5	S	Jun-13-11 15:55		420028-005

CASE NARRATIVE

XENCO Laboratories

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420028*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860857 BTEX by EPA 8021
SW8021BM

Batch 860857, Ethylbenzene, m_p-Xylenes RPD was outside QC limits.
Samples affected are: 420028-002, -003, -001, -004, -005

SW8021BM

Batch 860857, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420025-001 S,420025-001 SD.

SW8021BM

Batch 860857, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420028-002, -003, -001, -004, -005.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analys ummary 420028

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 22-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420028-001		420028-002		420028-003		420028-004		420028-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 15:15		Jun-13-11 15:25		Jun-13-11 15:35		Jun-13-11 15:45		Jun-13-11 15:55	
BTEX by EPA 8021	*Extracted:*	Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15	
	Analyzed:	Jun-21-11 10:07		Jun-21-11 10:30		Jun-21-11 10:53		Jun-21-11 11:16		Jun-21-11 11:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0012
Toluene		ND	0.0022	ND	0.0023	ND	0.0020	ND	0.0020	ND	0.0023
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0012
m_p-Xylenes		ND	0.0022	ND	0.0023	ND	0.0020	ND	0.0020	ND	0.0023
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0012
Xylenes, Total		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0012
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0012
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		36.6	5.57	25.0	5.68	5.85	5.06	ND	5.15	5.80	5.75
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		10.2	1.00	12.0	1.00	1.19	1.00	2.88	1.00	13.0	1.00
TPH by SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00		Jun-17-11 12:00	
	Analyzed:	Jun-20-11 19:09		Jun-20-11 19:41		Jun-20-11 20:11		Jun-20-11 20:41		Jun-20-11 21:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.8	ND	17.0	ND	15.1	ND	15.5	ND	17.2
C12-C28 Diesel Range Hydrocarbons		ND	16.8	ND	17.0	ND	15.1	ND	15.5	ND	17.2
C28-C35 Oil Range Hydrocarbons		ND	16.8	ND	17.0	ND	15.1	ND	15.5	ND	17.2
Total TPH		ND	16.8	ND	17.0	ND	15.1	ND	15.5	ND	17.2

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420028,

Project ID: 2004-00061

Lab Batch #: 860857 **Sample:** 605595-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:37

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:59

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 09:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

Lab Batch #: 860857 **Sample:** 420025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:44

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0373	0.0300	124	80-120	*

Lab Batch #: 860857 **Sample:** 420025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:06

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420028,

Project ID: 2004-00061

Lab Batch #: 860857 **Sample:** 420028-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 10:07

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 860857 **Sample:** 420028-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 10:30

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0358	0.0300	119	80-120	

Lab Batch #: 860857 **Sample:** 420028-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 10:53

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 860857 **Sample:** 420028-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 11:16

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

Lab Batch #: 860857 **Sample:** 420028-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 11:44

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420028,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 605554-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 10:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	100	92	70-135	
o-Terphenyl	50.2	50.2	100	70-135	

Lab Batch #: 860793 **Sample:** 420028-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 19:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.8	100	83	70-135	
o-Terphenyl	44.8	50.2	89	70-135	

Lab Batch #: 860793 **Sample:** 420028-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 19:41

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	100	88	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420028,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 420028-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 20:11

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.4	99.5	76	70-135	
o-Terphenyl	38.0	49.8	76	70-135	

Lab Batch #: 860793 **Sample:** 420028-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 20:41

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	59.6	50.2	119	70-135	

Lab Batch #: 860793 **Sample:** 420028-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 21:11

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.5	93	70-135	
o-Terphenyl	51.4	49.8	103	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	58.6	49.9	117	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 23:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420028 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860857 **Sample:** 605595-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0806	81	0.100	0.0963	96	18	70-130	35	
Toluene	<0.00200	0.100	0.0808	81	0.100	0.0962	96	17	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0821	82	0.100	0.0980	98	18	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.173	87	0.200	0.206	103	17	70-135	35	
o-Xylene	<0.00100	0.100	0.0798	80	0.100	0.0979	98	20	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860614 **Sample:** 860614-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	8.81	88	10.0	8.82	88	0	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420028 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860793 **Sample:** 605554-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	836	84	999	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	849	85	999	864	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420028
Lab Batch #: 860614
Project ID: 2004-00061
Date Analyzed: 06/16/2011
Date Prepared: 06/16/2011
Analyst: LATCOR
QC- Sample ID: 420026-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	76.9	220	277	91	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420028 **Project ID:** 2004-00061

Lab Batch ID: 860857 **QC- Sample ID:** 420025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00111	0.111	0.0428	39	0.111	0.0359	32	18	70-130	35	X
Toluene	<0.00221	0.111	0.0430	39	0.111	0.0317	29	30	70-130	35	X
Ethylbenzene	<0.00111	0.111	0.0245	22	0.111	0.00774	7	104	71-129	35	XF
m_p-Xylenes	<0.00221	0.221	0.0938	42	0.222	0.0561	25	50	70-135	35	XF
o-Xylene	<0.00111	0.111	0.0478	43	0.111	0.0409	37	16	71-133	35	X

Lab Batch ID: 860793 **QC- Sample ID:** 420027-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1030	1050	102	1030	963	93	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1030	1050	102	1030	995	97	5	70-135	35	

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

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

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

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Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420028

Lab Batch #: 860614 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 20:59 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420026-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	76.9	79.1	3	20	

Lab Batch #: 860642

Date Analyzed: 06/20/2011 10:42 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420030-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.38	9.84	16	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

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420028

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 / BTEX 8260	RCI	N.O.R.M.	Chlorides		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
																	TCLP:														
																	TOTAL:								X						
001	VZ Cell D G-1			6/13/2011	1515		1	X								SOIL	X								X			X			X
002	VZ Cell D G-2			6/13/2011	1525		1	X								SOIL	X								X			X			X
003	VZ Cell D G-3			6/13/2011	1535		1	X								SOIL	X								X			X			X
004	VZ Cell D G-4			6/13/2011	1545		1	X								SOIL	X								X			X			X
005	VZ Cell D G-5			6/13/2011	1555		1	X								SOIL	X								X			X			X

Special Instructions:

	Relinquished by:	Date	Time	Received by:	Date	Time
1		6/15/11	1530		6/15/11	1:20
2		Date	Time	Received by:	Date	Time
3		6-15-11	5:03	Received by ELOT:	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?		
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 4.0 °C 0.1 °C

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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: Plains
Date/Time: 6/15/11 5:03
Lab ID # : 420028
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420024

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

XENCO Laboratories

22-JUN-11

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

Reference: XENCO Report No: **420024**
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 420024. 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. 420024 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

XENCO Laboratories

Sample Cross Reference 420024

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-13-11 16:10		420024-001
VZ Cell E G-2	S	Jun-13-11 16:20		420024-002
VZ Cell E G-3	S	Jun-13-11 16:30		420024-003
VZ Cell E G-4	S	Jun-13-11 16:40		420024-004

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420024*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860513 BTEX by EPA 8021
SW8021BM

Batch 860513, Benzene recovered below QC limits in the Matrix Spike. Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420024-001, -004, -002, -003.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analy Summary 420024

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 22-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420024-001		420024-002		420024-003		420024-004			
	Field Id:	VZ Cell E G-1		VZ Cell E G-2		VZ Cell E G-3		VZ Cell E G-4			
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jun-13-11 16:10		Jun-13-11 16:20		Jun-13-11 16:30		Jun-13-11 16:40			
BTEX by EPA 8021	*Extracted:*	Jun-16-11 16:15		Jun-16-11 16:15		Jun-16-11 16:15		Jun-16-11 16:15			
	Analyzed:	Jun-17-11 13:03		Jun-17-11 16:27		Jun-17-11 16:49		Jun-17-11 17:12			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010		
Toluene		ND	0.0021	ND	0.0022	ND	0.0020	ND	0.0021		
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010		
m_p-Xylenes		ND	0.0021	ND	0.0022	ND	0.0020	ND	0.0021		
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010		
Xylenes, Total		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010		
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0010	ND	0.0010		
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-16-11 15:17		Jun-16-11 15:17		Jun-16-11 15:17		Jun-16-11 15:17			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		ND	5.37	ND	5.56	ND	5.12	ND	5.18		
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-20-11 10:55		Jun-20-11 10:55		Jun-20-11 10:55		Jun-20-11 10:55			
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		6.82	1.00	10.1	1.00	2.25	1.00	3.44	1.00		
TPH by SW8015 Mod	*Extracted:*	Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30			
	Analyzed:	Jun-21-11 16:10		Jun-21-11 16:42		Jun-21-11 17:13		Jun-21-11 17:44			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	16.1	ND	16.7	ND	15.3	ND	15.6		
C12-C28 Diesel Range Hydrocarbons		ND	16.1	ND	16.7	ND	15.3	ND	15.6		
C28-C35 Oil Range Hydrocarbons		ND	16.1	ND	16.7	ND	15.3	ND	15.6		
Total TPH		ND	16.1	ND	16.7	ND	15.3	ND	15.6		

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420024,

Project ID: 2004-00061

Lab Batch #: 860513 **Sample:** 605406-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 11:10

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 860513 **Sample:** 605406-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 11:32

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 860513 **Sample:** 605406-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 12:40

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120	

Lab Batch #: 860513 **Sample:** 420024-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 13:03

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 860513 **Sample:** 420024-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 14:56

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420024,

Project ID: 2004-00061

Lab Batch #: 860513 **Sample:** 420024-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 15:19

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 860513 **Sample:** 420024-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 16:27

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 860513 **Sample:** 420024-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 16:49

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 860513 **Sample:** 420024-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/17/11 17:12

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 860904 **Sample:** 605621-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 07:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	60.8	50.1	121	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420024,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 605621-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	59.7	50.2	119	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 860904 **Sample:** 420024-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 16:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	100	91	70-135	
o-Terphenyl	50.4	50.2	100	70-135	

Lab Batch #: 860904 **Sample:** 420024-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 16:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.7	100	93	70-135	
o-Terphenyl	51.6	50.1	103	70-135	

Lab Batch #: 860904 **Sample:** 420024-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 17:13

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.5	99.5	80	70-135	
o-Terphenyl	40.8	49.8	82	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Final 1.000

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420024,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 420024-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 17:44

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.0	100	90	70-135	
o-Terphenyl	48.2	50.2	96	70-135	

Lab Batch #: 860904 **Sample:** 420251-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.9	86	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420024 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860513 **Sample:** 605406-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.105	105	0.100	0.101	101	4	70-130	35	
Toluene	<0.00200	0.100	0.0952	95	0.100	0.0929	93	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.105	105	0.100	0.105	105	0	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.198	99	1	70-135	35	
o-Xylene	<0.00100	0.100	0.100	100	0.100	0.0951	95	5	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860612 **Sample:** 860612-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	9.18	92	10.0	9.10	91	1	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420024 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/20/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 860904 **Sample:** 605621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	941	94	1000	950	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	969	97	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420024
Lab Batch #: 860612
Date Analyzed: 06/16/2011
QC- Sample ID: 420017-001 S
Reporting Units: mg/kg

Project ID: 2004-00061
Date Prepared: 06/16/2011
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2550	2030	4720	107	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420024 **Project ID:** 2004-00061

Lab Batch ID: 860513 **QC- Sample ID:** 420024-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/17/2011 **Date Prepared:** 06/16/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00108	0.108	0.0639	59	0.106	0.0745	70	15	70-130	35	X
Toluene	<0.00215	0.108	0.0575	53	0.106	0.0668	63	15	70-130	35	X
Ethylbenzene	<0.00108	0.108	0.0632	59	0.106	0.0731	69	15	71-129	35	X
m_p-Xylenes	<0.00215	0.215	0.120	56	0.213	0.139	65	15	70-135	35	X
o-Xylene	<0.00108	0.108	0.0555	51	0.106	0.0657	62	17	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

Final 1.000

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Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420024

Lab Batch #: 860612 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 15:17 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420017-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2550	2530	1	20	

Lab Batch #: 860648

Date Analyzed: 06/20/2011 10:55 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420026-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	10.3	10.1	2	20	

Lab Batch #: 860904

Date Analyzed: 06/21/2011 19:48 **Date Prepared:** 06/20/2011 **Analyst:** BEV

QC- Sample ID: 420251-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	2210	2310	4	35	
C28-C35 Oil Range Hydrocarbons	<15.1	<15.1	0	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 420024

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 / BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
-001	VZ Cell E G-1			6/13/2011	1610		1	X								SOIL	X							X			X		X
-002	VZ Cell E G-2			6/13/2011	1620		1	X								SOIL	X							X			X		X
-003	VZ Cell E G-3			6/13/2011	1630		1	X								SOIL	X							X			X		X
-004	VZ Cell E G-4			6/13/2011	1640		1	X								SOIL	X							X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1530		6-15-11	1:29
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	6-15-11	5:03	Received by ELOT:	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y N
VOCs Free of Headspace?	Y N
Labels on container(s)	Y N
Custody seals on container(s)	Y N
Custody seals on cooler(s)	Y N
Sample Hand Delivered	Y N
by Sampler/Client Rep. ?	Y N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.0 2.1 °C

Final 1.000

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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: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420024
Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
Sample container intact?	(Yes)	No		
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 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420027

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

22-JUN-11

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

Reference: XENCO Report No: **420027**
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 420027. 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. 420027 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

XENCO Laboratories

Sample Cross Reference 420027

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-13-11 16:55		420027-001
VZ Cell F G-2	S	Jun-13-11 17:05		420027-002
VZ Cell F G-3	S	Jun-13-11 17:15		420027-003
VZ Cell F G-4	S	Jun-13-11 17:25		420027-004
VZ Cell F G-5	S	Jun-13-11 17:35		420027-005

CASE NARRATIVE

XENCO Laboratories

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420027*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860857 BTEX by EPA 8021
SW8021BM

Batch 860857, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420025-001 S,420025-001 SD,420027-002,420027-003.

SW8021BM

Batch 860857, Ethylbenzene, m_p-Xylenes RPD was outside QC limits.
Samples affected are: 420027-002, -004, -005, -001, -003

SW8021BM

Batch 860857, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420027-002, -004, -005, -001, -003.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Batch: LBA-860904 TPH by SW8015 Mod
SW8015MOD_NM

Batch 860904, 1-Chlorooctane recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420027-005.
o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420027-005,420027-003.

Certificate of Analys ummary 420027

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 22-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420027-001		420027-002		420027-003		420027-004		420027-005	
	Field Id:	VZ Cell F G-1		VZ Cell F G-2		VZ Cell F G-3		VZ Cell F G-4		VZ Cell F G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 16:55		Jun-13-11 17:05		Jun-13-11 17:15		Jun-13-11 17:25		Jun-13-11 17:35	
BTEX by EPA 8021	*Extracted:*	Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15	
	Analyzed:	Jun-20-11 17:24		Jun-20-11 17:47		Jun-21-11 08:59		Jun-21-11 09:21		Jun-21-11 09:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0011
Toluene		ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0022
Ethylbenzene		ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0011
m_p-Xylenes		ND	0.0022	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0022
o-Xylene		ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0011
Xylenes, Total		ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0011
Total BTEX		ND	0.0011	ND	0.0010	ND	0.0010	ND	0.0011	ND	0.0011
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6.75	5.50	7.30	5.18	6.63	5.17	7.36	5.23	51.2	5.54
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.04	1.00	3.44	1.00	3.29	1.00	4.43	1.00	9.71	1.00
TPH by SW8015 Mod	*Extracted:*	Jun-17-11 12:00		Jun-17-11 12:00		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30	
	Analyzed:	Jun-20-11 21:40		Jun-20-11 22:08		Jun-21-11 09:03		Jun-21-11 19:18		Jun-21-11 10:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.5	ND	15.5	ND	15.6	ND	15.8	ND	16.5
C12-C28 Diesel Range Hydrocarbons		ND	16.5	ND	15.5	ND	15.6	ND	15.8	ND	16.5
C28-C35 Oil Range Hydrocarbons		ND	16.5	ND	15.5	ND	15.6	ND	15.8	ND	16.5
Total TPH		ND	16.5	ND	15.5	ND	15.6	ND	15.8	ND	16.5

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420027, **Project ID:** 2004-00061

Lab Batch #: 860857 **Sample:** 605595-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:37

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:59

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 09:11

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

Lab Batch #: 860857 **Sample:** 420025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:44

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0373	0.0300	124	80-120	*

Lab Batch #: 860857 **Sample:** 420025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:06

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420027, **Project ID:** 2004-00061

Lab Batch #: 860857 **Sample:** 420027-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 17:24

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0329	0.0300	110	80-120	

Lab Batch #: 860857 **Sample:** 420027-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 17:47

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

Lab Batch #: 860857 **Sample:** 420027-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 08:59

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0388	0.0300	129	80-120	*

Lab Batch #: 860857 **Sample:** 420027-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 09:21

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 860857 **Sample:** 420027-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 09:44

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420027,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 605554-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 10:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.5	50.2	97	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 860793 **Sample:** 605554-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 11:38

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	100	92	70-135	
o-Terphenyl	50.2	50.2	100	70-135	

Lab Batch #: 860793 **Sample:** 420027-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 21:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.4	100	95	70-135	
o-Terphenyl	51.2	50.1	102	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:08

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	52.7	50.1	105	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420027,

Project ID: 2004-00061

Lab Batch #: 860793 **Sample:** 420027-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 22:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	58.6	49.9	117	70-135	

Lab Batch #: 860793 **Sample:** 420027-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 23:10

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 07:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	60.8	50.1	121	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	59.7	50.2	119	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420027,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 420027-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 09:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	135	101	134	70-135	
o-Terphenyl	76.0	50.3	151	70-135	*

Lab Batch #: 860904 **Sample:** 420027-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 10:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	138	99.5	139	70-135	*
o-Terphenyl	76.9	49.8	154	70-135	*

Lab Batch #: 860904 **Sample:** 420027-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	101	91	70-135	
o-Terphenyl	50.6	50.3	101	70-135	

Lab Batch #: 860904 **Sample:** 420251-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.9	86	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420027 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860857 **Sample:** 605595-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0806	81	0.100	0.0963	96	18	70-130	35	
Toluene	<0.00200	0.100	0.0808	81	0.100	0.0962	96	17	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0821	82	0.100	0.0980	98	18	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.173	87	0.200	0.206	103	17	70-135	35	
o-Xylene	<0.00100	0.100	0.0798	80	0.100	0.0979	98	20	71-133	35	

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860614 **Sample:** 860614-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	8.81	88	10.0	8.82	88	0	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 #: 420027 **Project ID:** 2004-00061

Analyst: BEV **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860793 **Sample:** 605554-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	836	84	999	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	849	85	999	864	86	2	70-135	35	

Analyst: BEV **Date Prepared:** 06/20/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 860904 **Sample:** 605621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	941	94	1000	950	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	969	97	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

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Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420027
Lab Batch #: 860614
Project ID: 2004-00061
Date Analyzed: 06/16/2011
Date Prepared: 06/16/2011
Analyst: LATCOR
QC- Sample ID: 420026-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	76.9	220	277	91	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 # : 420027 **Project ID:** 2004-00061

Lab Batch ID: 860857 **QC- Sample ID:** 420025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00111	0.111	0.0428	39	0.111	0.0359	32	18	70-130	35	X
Toluene	<0.00221	0.111	0.0430	39	0.111	0.0317	29	30	70-130	35	X
Ethylbenzene	<0.00111	0.111	0.0245	22	0.111	0.00774	7	104	71-129	35	XF
m_p-Xylenes	<0.00221	0.221	0.0938	42	0.222	0.0561	25	50	70-135	35	XF
o-Xylene	<0.00111	0.111	0.0478	43	0.111	0.0409	37	16	71-133	35	X

Lab Batch ID: 860793 **QC- Sample ID:** 420027-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** BEV

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1030	1050	102	1030	963	93	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1030	1050	102	1030	995	97	5	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420027

Lab Batch #: 860614 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 20:59 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420026-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	76.9	79.1	3	20	

Lab Batch #: 860642

Date Analyzed: 06/20/2011 10:42 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420030-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.38	9.84	16	20	

Lab Batch #: 860904

Date Analyzed: 06/21/2011 19:48 **Date Prepared:** 06/20/2011 **Analyst:** BEV

QC- Sample ID: 420251-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	2210	2310	4	35	
C28-C35 Oil Range Hydrocarbons	<15.1	<15.1	0	35	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUES.

12600 West I-20 East
Odessa, Texas 79765

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

Original

Project Manager:	Ben J. Arguijo	Project Name:	Lea Station Landfarm
Company Name	Basin Environmental Service Technologies, LLC	Project #:	2004-00061
Company Address:	P.O. Box 301	Project Loc:	Lea County, NM
City/State/Zip:	Lovington, NM 88260	PO #:	PAA - J. Henry
Telephone No:	(575)396-2378	Fax No:	(575) 396-1429
Sampler Signature:		e-mail:	pm@basinenv.com

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420027

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell F G-1			6/13/2011	1655		1	X								SOIL	X								X			X		X
002	VZ Cell F G-2			6/13/2011	1705		1	X								SOIL	X								X			X		X
003	VZ Cell F G-3			6/13/2011	1715		1	X								SOIL	X								X			X		X
004	VZ Cell F G-4			6/13/2011	1725		1	X								SOIL	X								X			X		X
005	VZ Cell F G-5			6/13/2011	1735		1	X								Soil	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1630	Bill Blackwell	6-15-11	1:29
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Bill Blackwell	6/15/11	5:03	A. Hernandez	6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star	407269	
Temperature Upon Receipt:	1 °C	

Final 1.000

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Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID # : 420027
Initials: AH

Sample Receipt Checklist

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

18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 0.1 °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 420026

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

XENCO Laboratories

22-JUN-11

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

Reference: XENCO Report No: **420026**
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 420026. 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. 420026 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

XENCO Laboratories

Sample Cross Reference 420026

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-13-11 17:50		420026-001
VZ Cell G G-2	S	Jun-13-11 18:00		420026-002
VZ Cell G G-3	S	Jun-13-11 18:10		420026-003
VZ Cell G G-4	S	Jun-13-11 18:20		420026-004
VZ Cell G G-5	S	Jun-13-11 18:30		420026-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420026*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860857 BTEX by EPA 8021
SW8021BM

Batch 860857, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420026-003, -004, -005.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 860857, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420025-001 S,420025-001 SD,420026-004.

SW8021BM

Batch 860857, Ethylbenzene, m_p-Xylenes RPD was outside QC limits.
Samples affected are: 420026-003, -004, -005

Batch: LBA-860904 TPH by SW8015 Mod
SW8015MOD_NM

Batch 860904, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420026-002.

CASE NARRATIVE

XENCO Laboratories

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420026*	*Date Received:*	*06/15/2011*

Batch: LBA-861013 BTEX by EPA 8021
SW8021BM

Batch 861013, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 420026-001, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analysis Summary 420026

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 22-JUN-11
Project Manager: Brent Barron, II

Analysis Requested															
	Lab Id:	420026-001		420026-002		420026-003		420026-004		420026-005					
	Field Id:	VZ Cell G G-1		VZ Cell G G-2		VZ Cell G G-3		VZ Cell G G-4		VZ Cell G G-5					
	Depth:														
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jun-13-11 17:50		Jun-13-11 18:00		Jun-13-11 18:10		Jun-13-11 18:20		Jun-13-11 18:30					
BTEX by EPA 8021	***Extracted:***	Jun-21-11 09:02		Jun-21-11 09:02		Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15					
	Analyzed:	Jun-21-11 19:09		Jun-21-11 19:32		Jun-20-11 13:18		Jun-20-11 14:57		Jun-20-11 15:21					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011				
Toluene		ND	0.0022	ND	0.0022	ND	0.0022	ND	0.0022	ND	0.0022				
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011				
m_p-Xylenes		ND	0.0022	ND	0.0022	ND	0.0022	ND	0.0022	ND	0.0022				
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011				
Xylenes, Total		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011				
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011				
Inorganic Anions In Soil by E300	***Extracted:***														
	Analyzed:	Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59		Jun-16-11 20:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		76.9	11.0	9.43	5.49	121	22.2	151	10.9	74.6	11.1				
Percent Moisture	***Extracted:***														
	Analyzed:	Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:42		Jun-20-11 10:55					
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		9.15	1.00	8.97	1.00	10.1	1.00	8.64	1.00	10.3	1.00				
TPH by SW8015 Mod	***Extracted:***	Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30					
	Analyzed:	Jun-21-11 10:33		Jun-21-11 11:03		Jun-21-11 11:33		Jun-21-11 12:03		Jun-21-11 12:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.5	ND	16.5	ND	16.8	ND	16.3	ND	16.7				
C12-C28 Diesel Range Hydrocarbons		ND	16.5	ND	16.5	ND	16.8	ND	16.3	ND	16.7				
C28-C35 Oil Range Hydrocarbons		ND	16.5	ND	16.5	ND	16.8	ND	16.3	ND	16.7				
Total TPH		ND	16.5	ND	16.5	ND	16.8	ND	16.3	ND	16.7				

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420026,

Project ID: 2004-00061

Lab Batch #: 860857 **Sample:** 605595-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:37

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:59

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 09:11

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

Lab Batch #: 860857 **Sample:** 420026-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 13:18

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

Lab Batch #: 860857 **Sample:** 420026-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 14:57

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0383	0.0300	128	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420026,

Project ID: 2004-00061

Lab Batch #: 860857 **Sample:** 420026-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:21

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 860857 **Sample:** 420025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:44

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0373	0.0300	124	80-120	*

Lab Batch #: 860857 **Sample:** 420025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:06

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

Lab Batch #: 861013 **Sample:** 605682-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 09:37

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 861013 **Sample:** 605682-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 09:59

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420026,

Project ID: 2004-00061

Lab Batch #: 861013 **Sample:** 605682-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 11:06

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 861013 **Sample:** 420538-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 17:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 861013 **Sample:** 420538-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 18:01

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 861013 **Sample:** 420026-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:09

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 861013 **Sample:** 420026-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420026,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 605621-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 07:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	60.8	50.1	121	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	59.7	50.2	119	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 860904 **Sample:** 420026-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 10:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	54.4	50.0	109	70-135	

Lab Batch #: 860904 **Sample:** 420026-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 11:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	72.4	50.0	145	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420026, **Project ID:** 2004-00061

Lab Batch #: 860904 **Sample:** 420026-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 11:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	55.2	50.2	110	70-135	

Lab Batch #: 860904 **Sample:** 420026-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 12:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	55.9	49.8	112	70-135	

Lab Batch #: 860904 **Sample:** 420026-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 12:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.8	103	70-135	
o-Terphenyl	53.4	49.9	107	70-135	

Lab Batch #: 860904 **Sample:** 420251-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.9	86	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420026 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860857 **Sample:** 605595-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0806	81	0.100	0.0963	96	18	70-130	35	
Toluene	<0.00200	0.100	0.0808	81	0.100	0.0962	96	17	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0821	82	0.100	0.0980	98	18	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.173	87	0.200	0.206	103	17	70-135	35	
o-Xylene	<0.00100	0.100	0.0798	80	0.100	0.0979	98	20	71-133	35	

Analyst: ASA **Date Prepared:** 06/21/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 861013 **Sample:** 605682-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.102	102	0.100	0.106	106	4	70-130	35	
Toluene	<0.00200	0.100	0.0966	97	0.100	0.0975	98	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.105	105	0.100	0.108	108	3	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.206	103	0.200	0.210	105	2	70-135	35	
o-Xylene	<0.00100	0.100	0.102	102	0.100	0.105	105	3	71-133	35	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420026 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860614 **Sample:** 860614-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<0.500	10.0	8.81	88	10.0	8.82	88	0	75-125	20	

Analyst: BEV **Date Prepared:** 06/20/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 860904 **Sample:** 605621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	941	94	1000	950	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	969	97	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420026
Lab Batch #: 860614
Date Analyzed: 06/16/2011
QC- Sample ID: 420026-001 S
Reporting Units: mg/kg

Project ID: 2004-00061
Date Prepared: 06/16/2011
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	76.9	220	277	91	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420026 **Project ID:** 2004-00061

Lab Batch ID: 860857 **QC- Sample ID:** 420025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00111	0.111	0.0428	39	0.111	0.0359	32	18	70-130	35	X
Toluene	<0.00221	0.111	0.0430	39	0.111	0.0317	29	30	70-130	35	X
Ethylbenzene	<0.00111	0.111	0.0245	22	0.111	0.00774	7	104	71-129	35	XF
m_p-Xylenes	<0.00221	0.221	0.0938	42	0.222	0.0561	25	50	70-135	35	XF
o-Xylene	<0.00111	0.111	0.0478	43	0.111	0.0409	37	16	71-133	35	X

Lab Batch ID: 861013 **QC- Sample ID:** 420538-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/21/2011 **Date Prepared:** 06/21/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.101	0.0900	89	0.101	0.0704	70	24	70-130	35	
Toluene	<0.00202	0.101	0.0812	80	0.101	0.0634	63	25	70-130	35	X
Ethylbenzene	<0.00101	0.101	0.0864	86	0.101	0.0675	67	25	71-129	35	X
m_p-Xylenes	<0.00202	0.202	0.169	84	0.202	0.130	64	26	70-135	35	X
o-Xylene	0.00102	0.101	0.0805	79	0.101	0.0639	62	23	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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420026

Lab Batch #: 860614 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 20:59 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420026-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	76.9	79.1	3	20	

Lab Batch #: 860642

Date Analyzed: 06/20/2011 10:42 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420030-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.38	9.84	16	20	

Lab Batch #: 860648

Date Analyzed: 06/20/2011 10:55 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420026-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	10.3	10.1	2	20	

Lab Batch #: 860904

Date Analyzed: 06/21/2011 19:48 **Date Prepared:** 06/20/2011 **Analyst:** BEV

QC- Sample ID: 420251-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	2210	2310	4	35	
C28-C35 Oil Range Hydrocarbons	<15.1	<15.1	0	35	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES
e-mail: pm@basinenv.com

(lab use only)
ORDER #: 420026

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M	8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell G G-1			6/13/2011	1750		1	X								SOIL			X										X			X		X
002	VZ Cell G G-2			6/13/2011	1800		1	X								SOIL			X										X			X		X
003	VZ Cell G G-3			6/13/2011	1810		1	X								SOIL			X										X			X		X
004	VZ Cell G G-4			6/13/2011	1820		1	X								SOIL			X										X			X		X
005	VZ Cell G G-5			6/13/2011	1830		1	X								SOIL			X										X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1530	Bill Bullard	6/15/11	1:78
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by: Billy Bullard	6-15-11	5:03	Received by ELOT:	6/15/11	5:05

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star
402 C9
Temperature Upon Receipt: 1 °C

XENCO Laboratories

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

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

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains
Date/Time: 6/15/11 5:03
Lab ID #: 420026
Initials: AH

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 420025

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

22-JUN-11

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

Reference: XENCO Report No: **420025**
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 420025. 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. 420025 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

XENCO Laboratories

Sample Cross Reference 420025

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-13-11 18:45		420025-001
VZ Cell H G-2	S	Jun-13-11 18:55		420025-002
VZ Cell H G-3	S	Jun-13-11 19:05		420025-003
VZ Cell H G-4	S	Jun-13-11 19:15		420025-004
VZ Cell H G-5	S	Jun-13-11 19:25		420025-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420025*	*Date Received:*	*06/15/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-860794 BTEX by EPA 8021
SW8021BM

Batch 860794, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.
Samples affected are: 420025-005, -004.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Batch: LBA-860857 BTEX by EPA 8021
SW8021BM

Batch 860857, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420025-001 S,420025-001 SD,420025-002.

SW8021BM

Batch 860857, Ethylbenzene, m_p-Xylenes RPD was outside QC limits.
Samples affected are: 420025-001, -003, -002

SW8021BM

Batch 860857, Benzene, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420025-001, -003, -002.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID:	*2004-00061*	*Report Date:*	*22-JUN-11*
Work Order Number:	*420025*	*Date Received:*	*06/15/2011*

Batch: LBA-860904 TPH by SW8015 Mod
SW8015MOD_NM

Batch 860904, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420025-002.

Certificate of Analysis Summary 420025

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Wed Jun-15-11 05:03 pm
Report Date: 22-JUN-11
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420025-001		420025-002		420025-003		420025-004		420025-005	
	Field Id:	VZ Cell H G-1		VZ Cell H G-2		VZ Cell H G-3		VZ Cell H G-4		VZ Cell H G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-11 18:45		Jun-13-11 18:55		Jun-13-11 19:05		Jun-13-11 19:15		Jun-13-11 19:25	
BTEX by EPA 8021	*Extracted:*	Jun-17-11 11:15		Jun-17-11 11:15		Jun-17-11 11:15		Jun-20-11 13:05		Jun-20-11 13:05	
	Analyzed:	Jun-20-11 09:33		Jun-20-11 09:56		Jun-20-11 10:19		Jun-20-11 18:55		Jun-20-11 19:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011
Toluene		ND	0.0022	ND	0.0023	ND	0.0023	ND	0.0022	ND	0.0021
Ethylbenzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011
m_p-Xylenes		ND	0.0022	ND	0.0023	ND	0.0023	ND	0.0022	ND	0.0021
o-Xylene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011
Xylenes, Total		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011
Total BTEX		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0011
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Jun-16-11 15:17		Jun-16-11 15:17		Jun-16-11 15:17		Jun-16-11 15:17		Jun-16-11 15:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		11.7	5.53	ND	5.66	13.3	5.76	ND	5.56	ND	5.25
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-20-11 10:55		Jun-20-11 10:55		Jun-20-11 10:55		Jun-20-11 10:55		Jun-20-11 10:55	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.58	1.00	11.6	1.00	13.2	1.00	10.1	1.00	4.85	1.00
TPH by SW8015 Mod	*Extracted:*	Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30		Jun-20-11 15:30	
	Analyzed:	Jun-21-11 13:03		Jun-21-11 13:34		Jun-21-11 14:36		Jun-21-11 15:07		Jun-21-11 15:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.7	ND	16.9	ND	17.3	ND	16.7	ND	15.8
C12-C28 Diesel Range Hydrocarbons		ND	16.7	ND	16.9	ND	17.3	ND	16.7	ND	15.8
C28-C35 Oil Range Hydrocarbons		ND	16.7	ND	16.9	ND	17.3	ND	16.7	ND	15.8
Total TPH		ND	16.7	ND	16.9	ND	17.3	ND	16.7	ND	15.8

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

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420025,

Project ID: 2004-00061

Lab Batch #: 860794 **Sample:** 605555-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 16:53

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 860794 **Sample:** 605555-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 17:15

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 860794 **Sample:** 605555-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 18:33

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

Lab Batch #: 860794 **Sample:** 420025-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 18:55

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 860794 **Sample:** 420025-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 19:18

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420025, **Project ID:** 2004-00061

Lab Batch #: 860794 **Sample:** 420025-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 20:48

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 860794 **Sample:** 420025-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 21:10

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

Lab Batch #: 860857 **Sample:** 605595-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:37

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/17/11 16:59

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 860857 **Sample:** 605595-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/20/11 09:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420025,

Project ID: 2004-00061

Lab Batch #: 860857 **Sample:** 420025-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 09:33

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 860857 **Sample:** 420025-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 09:56

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0362	0.0300	121	80-120	*

Lab Batch #: 860857 **Sample:** 420025-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 10:19

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 860857 **Sample:** 420025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 15:44

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0373	0.0300	124	80-120	*

Lab Batch #: 860857 **Sample:** 420025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/20/11 16:06

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0364	0.0300	121	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420025,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 605621-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 07:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	60.8	50.1	121	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	59.7	50.2	119	70-135	

Lab Batch #: 860904 **Sample:** 605621-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/21/11 08:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 860904 **Sample:** 420025-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 13:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	54.7	50.2	109	70-135	

Lab Batch #: 860904 **Sample:** 420025-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 13:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	131	99.5	132	70-135	
o-Terphenyl	69.3	49.8	139	70-135	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 420025,

Project ID: 2004-00061

Lab Batch #: 860904 **Sample:** 420025-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 14:36

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	54.1	50.0	108	70-135	

Lab Batch #: 860904 **Sample:** 420025-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 15:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	67.6	50.1	135	70-135	

Lab Batch #: 860904 **Sample:** 420025-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 15:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	100	88	70-135	
o-Terphenyl	45.5	50.1	91	70-135	

Lab Batch #: 860904 **Sample:** 420251-005 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/21/11 19:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.9	86	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420025 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 06/20/2011 **Date Analyzed:** 06/20/2011

Lab Batch ID: 860794 **Sample:** 605555-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.106	106	3	70-130	35	
Toluene	<0.00200	0.100	0.0965	97	0.100	0.0987	99	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.104	104	0.100	0.109	109	5	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.203	102	0.200	0.213	107	5	70-135	35	
o-Xylene	<0.00100	0.100	0.0994	99	0.100	0.104	104	5	71-133	35	

Analyst: ASA **Date Prepared:** 06/17/2011 **Date Analyzed:** 06/17/2011

Lab Batch ID: 860857 **Sample:** 605595-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0806	81	0.100	0.0963	96	18	70-130	35	
Toluene	<0.00200	0.100	0.0808	81	0.100	0.0962	96	17	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0821	82	0.100	0.0980	98	18	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.173	87	0.200	0.206	103	17	70-135	35	
o-Xylene	<0.00100	0.100	0.0798	80	0.100	0.0979	98	20	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 #: 420025 **Project ID:** 2004-00061

Analyst: LATCOR **Date Prepared:** 06/16/2011 **Date Analyzed:** 06/16/2011

Lab Batch ID: 860612 **Sample:** 860612-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<0.500	10.0	9.18	92	10.0	9.10	91	1	75-125	20	

Analyst: BEV **Date Prepared:** 06/20/2011 **Date Analyzed:** 06/21/2011

Lab Batch ID: 860904 **Sample:** 605621-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	941	94	1000	950	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	973	97	1000	969	97	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 420025
Lab Batch #: 860612
Project ID: 2004-00061
Date Analyzed: 06/16/2011
Date Prepared: 06/16/2011
Analyst: LATCOR
QC- Sample ID: 420017-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2550	2030	4720	107	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

- Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 420025 **Project ID:** 2004-00061

Lab Batch ID: 860794 **QC- Sample ID:** 420025-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/20/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00111	0.111	0.0669	60	0.110	0.0892	81	29	70-130	35	X
Toluene	<0.00223	0.111	0.0626	56	0.110	0.0851	77	30	70-130	35	X
Ethylbenzene	<0.00111	0.111	0.0698	63	0.110	0.0921	84	28	71-129	35	X
m_p-Xylenes	<0.00223	0.223	0.135	61	0.221	0.176	80	26	70-135	35	X
o-Xylene	<0.00111	0.111	0.0664	60	0.110	0.0840	76	23	71-133	35	X

Lab Batch ID: 860857 **QC- Sample ID:** 420025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/20/2011 **Date Prepared:** 06/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00111	0.111	0.0428	39	0.111	0.0359	32	18	70-130	35	X
Toluene	<0.00221	0.111	0.0430	39	0.111	0.0317	29	30	70-130	35	X
Ethylbenzene	<0.00111	0.111	0.0245	22	0.111	0.00774	7	104	71-129	35	XF
m_p-Xylenes	<0.00221	0.221	0.0938	42	0.222	0.0561	25	50	70-135	35	XF
o-Xylene	<0.00111	0.111	0.0478	43	0.111	0.0409	37	16	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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 420025

Lab Batch #: 860612 **Project ID:** 2004-00061

Date Analyzed: 06/16/2011 15:17 **Date Prepared:** 06/16/2011 **Analyst:** LATCOR

QC- Sample ID: 420017-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2550	2530	1	20	

Lab Batch #: 860648

Date Analyzed: 06/20/2011 10:55 **Date Prepared:** 06/20/2011 **Analyst:** WRU

QC- Sample ID: 420026-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	10.3	10.1	2	20	

Lab Batch #: 860904

Date Analyzed: 06/21/2011 19:48 **Date Prepared:** 06/20/2011 **Analyst:** BEV

QC- Sample ID: 420251-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	<15.1	0	35	
C12-C28 Diesel Range Hydrocarbons	2210	2310	4	35	
C28-C35 Oil Range Hydrocarbons	<15.1	<15.1	0	35	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: pm@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 420025

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell H G-1			6/13/2011	1845		1	X								SOIL	X								X			X		X
002	VZ Cell H G-2			6/13/2011	1855		1	X								SOIL	X								X			X		X
003	VZ Cell H G-3			6/13/2011	1905		1	X								SOIL	X								X			X		X
004	VZ Cell H G-4			6/13/2011	1915		1	X								SOIL	X								X			X		X
005	VZ Cell H G-5			6/13/2011	1925		1	X								SOIL	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	6/15/11	1530		6-15-11	1:28
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	6-15-11	5103		6/15/11	5:03

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

407 CG

Temperature Upon Receipt: 1 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Plains

Date/Time: 6/15/11 5:03

Lab ID #: 420025

Initials: AH

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
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	0.1 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431409

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431409**
Lea County, NM
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 431409. 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. 431409 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

XENCO Laboratories

Sample Cross Reference 431409

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell A G-1	S	11-10-11 09:30		431409-001
VZ Cell A G-2	S	11-10-11 09:35		431409-002
VZ Cell A G-3	S	11-10-11 09:40		431409-003
VZ Cell A G-4	S	11-10-11 09:45		431409-004
VZ Cell A G-5	S	11-10-11 09:50		431409-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431409*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875290 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875290, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431409-001.

Certificate of Analys ummary 431409

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431409-001		431409-002		431409-003		431409-004		431409-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 09:30		Nov-10-11 09:35		Nov-10-11 09:40		Nov-10-11 09:45		Nov-10-11 09:50	
BTEX by EPA 8021	***Extracted:***	Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00	
	Analyzed:	Nov-19-11 09:42		Nov-19-11 10:05		Nov-19-11 10:28		Nov-20-11 18:34		Nov-20-11 18:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00109	ND	0.00106	ND	0.00113	ND	0.00117	ND	0.00124
Toluene		ND	0.00218	ND	0.00212	ND	0.00226	ND	0.00234	ND	0.00248
Ethylbenzene		ND	0.00109	ND	0.00106	ND	0.00113	ND	0.00117	ND	0.00124
m_p-Xylenes		ND	0.00218	ND	0.00212	ND	0.00226	ND	0.00234	ND	0.00248
o-Xylene		ND	0.00109	ND	0.00106	ND	0.00113	ND	0.00117	ND	0.00124
Xylenes, Total		ND	0.00109	ND	0.00106	ND	0.00113	ND	0.00117	ND	0.00124
Total BTEX		ND	0.00109	ND	0.00106	ND	0.00113	ND	0.00117	ND	0.00124
Inorganic Anions In Soil by E300	***Extracted:***										
	Analyzed:	Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.73	5.45	9.39	5.33	ND	5.66	9.79	5.86	ND	6.24
Percent Moisture	***Extracted:***										
	Analyzed:	Nov-15-11 11:35		Nov-15-11 12:20		Nov-15-11 12:20		Nov-15-11 12:20		Nov-15-11 12:20	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		8.34	1.00	6.18	1.00	11.7	1.00	14.7	1.00	19.9	1.00
TPH by SW8015 Mod	***Extracted:***	Nov-17-11 15:15		Nov-17-11 15:15		Nov-17-11 15:15		Nov-17-11 15:15		Nov-17-11 15:15	
	Analyzed:	Nov-18-11 23:30		Nov-19-11 00:05		Nov-19-11 00:42		Nov-19-11 01:20		Nov-19-11 01:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.3	ND	15.9	ND	17.0	ND	17.5	ND	18.7
C12-C28 Diesel Range Hydrocarbons		ND	16.3	ND	15.9	ND	17.0	ND	17.5	ND	18.7
C28-C35 Oil Range Hydrocarbons		ND	16.3	ND	15.9	ND	17.0	ND	17.5	ND	18.7
Total TPH		ND	16.3	ND	15.9	ND	17.0	ND	17.5	ND	18.7

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431409,

Project ID: 2004-00061

Lab Batch #: 875290 **Sample:** 431409-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 23:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.6	99.9	74	70-135	
o-Terphenyl	32.5	50.0	65	70-135	*

Lab Batch #: 875290 **Sample:** 431409-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 00:05

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.5	99.6	84	70-135	
o-Terphenyl	37.1	49.8	74	70-135	

Lab Batch #: 875290 **Sample:** 431409-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 00:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	50.7	50.1	101	70-135	

Lab Batch #: 875290 **Sample:** 431409-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 01:20

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.6	100	70-135	
o-Terphenyl	46.3	49.8	93	70-135	

Lab Batch #: 875290 **Sample:** 431409-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 01:56

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.1	100	87	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431409,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 431409-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 09:42

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 875269 **Sample:** 431409-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 10:05

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 875269 **Sample:** 431409-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 10:28

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 875269 **Sample:** 431409-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/20/11 18:34

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

Lab Batch #: 875269 **Sample:** 431409-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/20/11 18:57

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431409, **Project ID:** 2004-00061

Lab Batch #: 875290 **Sample:** 614398-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 21:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 02:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 875290 **Sample:** 614398-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 20:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:00

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 875290 **Sample:** 614398-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 20:57

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431409,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 614385-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:23

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 875269 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 07:04

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 875290 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 08:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.5	119	70-135	
o-Terphenyl	51.6	49.8	104	70-135	

Lab Batch #: 875290 **Sample:** 431409-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 09:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431409 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/19/2011

Lab Batch ID: 875269 **Sample:** 614385-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Benzene	<0.00100	0.100	0.106	106	0.100	0.101	101	5	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.100	0.105	105	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.110	110	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.108	108	2	71-133	35	

Analyst: BRB **Date Prepared:** 11/16/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875224 **Sample:** 875224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<1.00	20.0	19.7	99	20.0	20.7	104	5	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431409 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/17/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875290 **Sample:** 614398-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod. **Analytes**	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	726	73	1000	775	78	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	842	84	1000	861	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431409

Lab Batch #: 875269 **Project ID:** 2004-00061

Date Analyzed: 11/19/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

QC- Sample ID: 431409-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00106	0.106	0.0848	80	70-130	
Toluene	<0.00211	0.106	0.0858	81	70-130	
Ethylbenzene	<0.00106	0.106	0.0897	85	71-129	
m_p-Xylenes	<0.00211	0.211	0.175	83	70-135	
o-Xylene	<0.00106	0.106	0.0862	81	71-133	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431403-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	10.9	116	127	100	75-125	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1.77	21.1	23.4	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

- Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea County, NM

Work Order # : 431409 **Project ID:** 2004-00061

Lab Batch ID: 875290 **QC- Sample ID:** 431409-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.9	1060	864	82	1060	832	78	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.9	1060	1010	95	1060	961	91	5	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431409

Lab Batch #: 875224 **Project ID:** 2004-00061

Date Analyzed: 11/16/2011 11:26 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	1.77	2.33	27	20	F

Lab Batch #: 874859

Date Analyzed: 11/15/2011 11:35 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431406-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.22	5.20	0	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431409

LAB # (lab use only)	FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TOTAL: TPH: 8015B TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAYS
001	VZ Cell A G-1	X			11/10/2011	0930		1	X								SOIL	X								X			X		X
002	VZ Cell A G-2	X			11/10/2011	0935		1	X								SOIL	X								X			X		X
003	VZ Cell A G-3	X			11/10/2011	0940		1	X								SOIL	X								X			X		X
004	VZ Cell A G-4	X			11/10/2011	0945		1	X								SOIL	X								X			X		X
005	VZ Cell A G-5				11/10/2011	0950		1	X								SOIL	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	0700	Shannon Brown	11-11-11	0700
Relinquished by: Shannon Brown	11/11/11	1:15	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?		N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)		N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains
Date/Time: 11.11.11 13:15
Lab ID #: 431409
Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431408

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

XENCO Laboratories

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431408**
Lea County, NM
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 431408. 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. 431408 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

Sample Cross Reference 431408

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell B G-1	S	11-10-11 10:30		431408-001
VZ Cell B G-2	S	11-10-11 10:35		431408-002
VZ Cell B G-3	S	11-10-11 10:40		431408-003
VZ Cell B G-4	S	11-10-11 10:45		431408-004
VZ Cell B G-5	S	11-10-11 10:50		431408-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431408*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analy. Summary 431408

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431408-001		431408-002		431408-003		431408-004		431408-005	
	Field Id:	VZ Cell B G-1		VZ Cell B G-2		VZ Cell B G-3		VZ Cell B G-4		VZ Cell B G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 10:30		Nov-10-11 10:35		Nov-10-11 10:40		Nov-10-11 10:45		Nov-10-11 10:50	
BTEX by EPA 8021	*Extracted:*	Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00	
	Analyzed:	Nov-19-11 06:19		Nov-19-11 08:12		Nov-19-11 08:34		Nov-19-11 08:57		Nov-19-11 09:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00105	ND	0.00113	ND	0.00103	ND	0.00107	ND	0.00118
Toluene		ND	0.00210	ND	0.00226	ND	0.00205	ND	0.00214	ND	0.00235
Ethylbenzene		ND	0.00105	ND	0.00113	ND	0.00103	ND	0.00107	ND	0.00118
m_p-Xylenes		ND	0.00210	ND	0.00226	ND	0.00205	ND	0.00214	ND	0.00235
o-Xylene		ND	0.00105	ND	0.00113	ND	0.00103	ND	0.00107	ND	0.00118
Xylenes, Total		ND	0.00105	ND	0.00113	ND	0.00103	ND	0.00107	ND	0.00118
Total BTEX		ND	0.00105	ND	0.00113	ND	0.00103	ND	0.00107	ND	0.00118
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26		Nov-16-11 11:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1.77	1.05	ND	1.14	ND	1.03	1.53	1.08	ND	5.93
Percent Moisture	*Extracted:*										
	Analyzed:	Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.09	1.00	12.0	1.00	2.85	1.00	6.99	1.00	15.7	1.00
TPH by SW8015 Mod	*Extracted:*	Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 15:15		Nov-17-11 15:15	
	Analyzed:	Nov-18-11 09:14		Nov-18-11 09:45		Nov-18-11 10:21		Nov-21-11 11:45		Nov-18-11 22:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.7	ND	17.0	ND	15.4	ND	16.1	ND	17.8
C12-C28 Diesel Range Hydrocarbons		ND	15.7	ND	17.0	ND	15.4	ND	16.1	ND	17.8
C28-C35 Oil Range Hydrocarbons		ND	15.7	ND	17.0	ND	15.4	ND	16.1	ND	17.8
Total TPH		ND	15.7	ND	17.0	ND	15.4	ND	16.1	ND	17.8

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431408,

Project ID: 2004-00061

Lab Batch #: 875284 **Sample:** 431408-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 09:14

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	99.5	95	70-135	
o-Terphenyl	42.9	49.8	86	70-135	

Lab Batch #: 875284 **Sample:** 431408-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 09:45

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	99.8	99	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 875284 **Sample:** 431408-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:21

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	43.4	50.0	87	70-135	

Lab Batch #: 875290 **Sample:** 431408-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 22:51

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.0	100	84	70-135	
o-Terphenyl	37.8	50.0	76	70-135	

Lab Batch #: 875269 **Sample:** 431408-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 06:19

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431408,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 431408-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 08:12

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 875269 **Sample:** 431408-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 08:34

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 875269 **Sample:** 431408-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 08:57

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 875269 **Sample:** 431408-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 09:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 875290 **Sample:** 431408-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/21/11 11:45

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431408,

Project ID: 2004-00061

Lab Batch #: 875284 **Sample:** 614392-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 20:20

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	100	92	70-135	
o-Terphenyl	41.9	50.0	84	70-135	

Lab Batch #: 875290 **Sample:** 614398-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 21:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	100	96	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 02:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 875284 **Sample:** 614392-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

Lab Batch #: 875290 **Sample:** 614398-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 20:19

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431408,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 614385-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:00

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 875284 **Sample:** 614392-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.7	50.0	83	70-135	

Lab Batch #: 875290 **Sample:** 614398-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 20:57

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:23

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 875284 **Sample:** 431713-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:53

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	43.0	49.8	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431408,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 07:04

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 875290 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 08:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.5	119	70-135	
o-Terphenyl	51.6	49.8	104	70-135	

Lab Batch #: 875284 **Sample:** 431713-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 11:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	48.3	50.2	96	70-135	

Lab Batch #: 875290 **Sample:** 431409-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 09:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431408 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/19/2011

Lab Batch ID: 875269 **Sample:** 614385-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.106	106	0.100	0.101	101	5	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.100	0.105	105	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.110	110	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.108	108	2	71-133	35	

Analyst: BRB **Date Prepared:** 11/16/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875224 **Sample:** 875224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	19.7	99	20.0	20.7	104	5	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 County, NM

Work Order #: 431408 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/17/2011 **Date Analyzed:** 11/17/2011

Lab Batch ID: 875284 **Sample:** 614392-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	763	76	1000	762	76	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	842	84	1000	862	86	2	70-135	35	

Analyst: ASA **Date Prepared:** 11/17/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875290 **Sample:** 614398-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	726	73	1000	775	78	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	842	84	1000	861	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431408

Lab Batch #: 875269 **Project ID:** 2004-00061

Date Analyzed: 11/19/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

QC- Sample ID: 431409-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00106	0.106	0.0848	80	70-130	
Toluene	<0.00211	0.106	0.0858	81	70-130	
Ethylbenzene	<0.00106	0.106	0.0897	85	71-129	
m_p-Xylenes	<0.00211	0.211	0.175	83	70-135	
o-Xylene	<0.00106	0.106	0.0862	81	71-133	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431403-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	10.9	116	127	100	75-125	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1.77	21.1	23.4	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 County, NM

Work Order #: 431408 **Project ID:** 2004-00061

Lab Batch ID: 875284 **QC- Sample ID:** 431713-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	820	77	1070	898	84	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	931	88	1070	1040	97	11	70-135	35	

Lab Batch ID: 875290 **QC- Sample ID:** 431409-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.9	1060	864	82	1060	832	78	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.9	1060	1010	95	1060	961	91	5	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431408

Lab Batch #: 875224 **Project ID:** 2004-00061

Date Analyzed: 11/16/2011 11:26 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	1.77	2.33	27	20	F

Lab Batch #: 874859

Date Analyzed: 11/15/2011 11:35 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431406-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.22	5.20	0	20	

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

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

Project Manager: Ben J. Arguijo
Project Name: Lea Station Landfarm
Company Name: Basin Environmental Service Technologies, LLC
Project #: 2004-00061
Company Address: P.O. Box 301
Project Loc: Lea County, NM
City/State/Zip: Lovington, NM 88260
PO #: PAA - J. Henry
Telephone No: (575)396-2378
Fax No: (575) 396-1429
Report Format: [X] Standard [ ] TRRP [ ] NPDES
Sampler Signature:
e-mail: bjarguijo@basinenv.com

(lab use only)
ORDER #: 431408

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: 80158	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell B G-1			11/10/2011	1030		1	X								SOIL	X									X			X		X
002	VZ Cell B G-2			11/10/2011	1035		1	X								SOIL	X									X			X		X
003	VZ Cell B G-3			11/10/2011	1040		1	X								SOIL	X									X			X		X
004	VZ Cell B G-4			11/10/2011	1045		1	X								SOIL	X									X			X		X
005	VZ Cell B G-5			11/10/2011	1050		1	X								SOIL	X									X			X		X

Special Instructions:

Laboratory Comments:

		Y	N
Sample Containers Intact?		Y	N
VOCs Free of Headspace?		Y	N
Labels on container(s)		Y	N
Custody seals on container(s)		Y	N
Custody seals on cooler(s)		Y	N
Sample Hand Delivered		Y	N
by Sampler/Client Rep. ?			
by Courier?	UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 5.5 °C

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	0700	Shannon Brown	11/11/11	0700
Relinquished by: Shannon Brown	11/11/11	1:15	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11-11-11	13:15

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
XENCO Laboratories	Document No.: SYS-SRC
Atlanta, Boca Raton, Corpus Christi, Dallas	Revision/Date: No. 01, 5/27/2010
Houston, Miami, Odessa, Philadelphia	Effective Date: 6/1/2010 Page 1 of 1
Phoenix, San Antonio, Tampa	

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11·11·11 13:15

Lab ID #: 431408

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431407

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431407**
Lea County, NM
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 431407. 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. 431407 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

XENCO Laboratories

Sample Cross Reference 431407

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell C G-1	S	11-10-11 12:10		431407-001
VZ Cell C G-2	S	11-10-11 12:15		431407-002
VZ Cell C G-3	S	11-10-11 12:20		431407-003
VZ Cell C G-4	S	11-10-11 12:25		431407-004
VZ Cell C G-5	S	11-10-11 12:30		431407-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431407*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 431407

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested		431407-001		431407-002		431407-003		431407-004		431407-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 12:10		Nov-10-11 12:15		Nov-10-11 12:20		Nov-10-11 12:25		Nov-10-11 12:30	
BTEX by EPA 8021	Extracted:	Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00	
	Analyzed:	Nov-19-11 04:25		Nov-19-11 04:48		Nov-19-11 05:11		Nov-19-11 05:33		Nov-19-11 05:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00121	ND	0.00112	ND	0.00120	ND	0.00109	ND	0.00112
Toluene		ND	0.00243	ND	0.00225	ND	0.00240	ND	0.00217	ND	0.00223
Ethylbenzene		ND	0.00121	ND	0.00112	ND	0.00120	ND	0.00109	ND	0.00112
m_p-Xylenes		ND	0.00243	ND	0.00225	ND	0.00240	ND	0.00217	ND	0.00223
o-Xylene		ND	0.00121	ND	0.00112	ND	0.00120	ND	0.00109	ND	0.00112
Xylenes, Total		ND	0.00121	ND	0.00112	ND	0.00120	ND	0.00109	ND	0.00112
Total BTEX		ND	0.00121	ND	0.00112	ND	0.00120	ND	0.00109	ND	0.00112
Inorganic Anions In Soil by E300	Extracted:										
	Analyzed:	Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	6.10	7.88	5.64	ND	6.05	7.69	5.45	ND	5.64
Percent Moisture	Extracted:										
	Analyzed:	Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		18.0	1.00	11.3	1.00	17.4	1.00	8.27	1.00	11.3	1.00
TPH by SW8015 Mod	Extracted:	Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30	
	Analyzed:	Nov-18-11 06:09		Nov-18-11 06:48		Nov-18-11 07:29		Nov-18-11 16:49		Nov-18-11 08:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.3	ND	16.9	ND	18.2	ND	16.3	ND	16.9
C12-C28 Diesel Range Hydrocarbons		ND	18.3	ND	16.9	ND	18.2	ND	16.3	ND	16.9
C28-C35 Oil Range Hydrocarbons		ND	18.3	ND	16.9	ND	18.2	ND	16.3	ND	16.9
Total TPH		ND	18.3	ND	16.9	ND	18.2	ND	16.3	ND	16.9

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431407,

Project ID: 2004-00061

Lab Batch #: 875284 **Sample:** 431407-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 06:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	37.8	50.1	75	70-135	

Lab Batch #: 875284 **Sample:** 431407-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 06:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	99.7	94	70-135	
o-Terphenyl	43.3	49.9	87	70-135	

Lab Batch #: 875284 **Sample:** 431407-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 07:29

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.3	100	84	70-135	
o-Terphenyl	37.3	50.0	75	70-135	

Lab Batch #: 875284 **Sample:** 431407-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 08:41

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	99.8	96	70-135	
o-Terphenyl	45.1	49.9	90	70-135	

Lab Batch #: 875284 **Sample:** 431407-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 16:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	99.8	97	70-135	
o-Terphenyl	42.7	49.9	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431407,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 431407-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 04:25

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875269 **Sample:** 431407-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 04:48

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0248	0.0300	83	80-120	

Lab Batch #: 875269 **Sample:** 431407-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 05:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 875269 **Sample:** 431407-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 05:33

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 875269 **Sample:** 431407-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 05:56

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431407, **Project ID:** 2004-00061

Lab Batch #: 875284 **Sample:** 614392-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 20:20

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	100	92	70-135	
o-Terphenyl	41.9	50.0	84	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 02:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 875284 **Sample:** 614392-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

Lab Batch #: 875269 **Sample:** 614385-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:00

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 875284 **Sample:** 614392-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.7	50.0	83	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431407, **Project ID:** 2004-00061

Lab Batch #: 875269 **Sample:** 614385-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:23

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 875284 **Sample:** 431713-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:53

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	43.0	49.8	86	70-135	

Lab Batch #: 875269 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 07:04

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 875284 **Sample:** 431713-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 11:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	48.3	50.2	96	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431407 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/19/2011

Lab Batch ID: 875269 **Sample:** 614385-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Benzene	<0.00100	0.100	0.106	106	0.100	0.101	101	5	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.100	0.105	105	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.110	110	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.108	108	2	71-133	35	

Analyst: BRB **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/15/2011

Lab Batch ID: 874867 **Sample:** 874867-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<1.00	20.0	20.9	105	20.0	21.1	106	1	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431407 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/17/2011 **Date Analyzed:** 11/17/2011

Lab Batch ID: 875284 **Sample:** 614392-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	763	76	1000	762	76	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	842	84	1000	862	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431407

Lab Batch #: 875269 **Project ID:** 2004-00061

Date Analyzed: 11/19/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

QC- Sample ID: 431409-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00106	0.106	0.0848	80	70-130	
Toluene	<0.00211	0.106	0.0858	81	70-130	
Ethylbenzene	<0.00106	0.106	0.0897	85	71-129	
m_p-Xylenes	<0.00211	0.211	0.175	83	70-135	
o-Xylene	<0.00106	0.106	0.0862	81	71-133	

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.14	103	101	98	75-125	

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431404-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	11.0	114	126	101	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

- Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea County, NM

Work Order # : 431407 **Project ID:** 2004-00061

Lab Batch ID: 875284 **QC- Sample ID:** 431713-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	820	77	1070	898	84	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	931	88	1070	1040	97	11	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431407

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 20:10 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.14	<5.14	0	20	U

Lab Batch #: 874859

Date Analyzed: 11/15/2011 11:35 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431406-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.22	5.20	0	20	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431407

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell C G-1			11/10/2011	1210		1	X								SOIL	X								X			X		X
002	VZ Cell C G-2			11/10/2011	1215		1	X								SOIL	X								X			X		X
003	VZ Cell C G-3			11/10/2011	1220		1	X								SOIL	X								X			X		X
004	VZ Cell C G-4			11/10/2011	1225		1	X								SOIL	X								X			X		X
005	VZ Cell C G-5			11/10/2011	1230		1	X								SOIL	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	0700	Shannon Brown	11/11/11	0700
Shannon Brown	11/11/11	1:15			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Glass	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	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: 11·11·11 13:15

Lab ID # : 431407

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431406

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431406**
Lea County, NM
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 431406. 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. 431406 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

XENCO Laboratories

Sample Cross Reference 431406

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell D G-1	S	11-10-11 11:15		431406-001
VZ Cell D G-2	S	11-10-11 11:20		431406-002
VZ Cell D G-3	S	11-10-11 11:25		431406-003
VZ Cell D G-4	S	11-10-11 11:30		431406-004
VZ Cell D G-5	S	11-10-11 11:35		431406-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431406*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-874790 Inorganic Anions In Soil by E300
E300MI

Batch 874790, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 431406-002, -001, -003.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-875023 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875023, C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431406-001.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-875269 BTEX by EPA 8021
SW8021BM

Batch 875269, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431406-004.

Batch: LBA-875284 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875284, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431406-004.

Certificate of Analysis Summary 431406

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested	*Lab Id:*	431406-001		431406-002		431406-003		431406-004		431406-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 11:15		Nov-10-11 11:20		Nov-10-11 11:25		Nov-10-11 11:30		Nov-10-11 11:35	
BTEX by EPA 8021	*Extracted:*	Nov-18-11 09:41		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00		Nov-18-11 16:00	
	Analyzed:	Nov-19-11 00:15		Nov-19-11 02:55		Nov-19-11 03:18		Nov-19-11 03:40		Nov-19-11 04:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00102	ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00104
Toluene		ND	0.00203	ND	0.00210	ND	0.00208	ND	0.00215	ND	0.00207
Ethylbenzene		ND	0.00102	ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00104
m_p-Xylenes		ND	0.00203	ND	0.00210	ND	0.00208	ND	0.00215	ND	0.00207
o-Xylene		ND	0.00102	ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00104
Xylenes, Total		ND	0.00102	ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00104
Total BTEX		ND	0.00102	ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00104
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Nov-14-11 21:31		Nov-14-11 21:31		Nov-14-11 21:31		Nov-15-11 20:10		Nov-15-11 20:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		5.74	5.14	ND	5.28	9.02	5.18	7.42	5.41	7.30	5.21
Percent Moisture	*Extracted:*										
	Analyzed:	Nov-15-11 11:33		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35		Nov-15-11 11:35	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.64	1.00	5.22	1.00	3.42	1.00	7.55	1.00	3.96	1.00
TPH by SW8015 Mod	*Extracted:*	Nov-15-11 13:20		Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30		Nov-17-11 13:30	
	Analyzed:	Nov-16-11 20:30		Nov-18-11 15:16		Nov-18-11 15:47		Nov-18-11 04:48		Nov-18-11 16:18	
	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	15.8	ND	15.6	ND	16.2	ND	15.6
C12-C28 Diesel Range Hydrocarbons		ND	15.3	ND	15.8	ND	15.6	ND	16.2	ND	15.6
C28-C35 Oil Range Hydrocarbons		ND	15.3	ND	15.8	ND	15.6	ND	16.2	ND	15.6
Total TPH		ND	15.3	ND	15.8	ND	15.6	ND	16.2	ND	15.6

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 431406-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 20:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	99.5	89	70-135	
o-Terphenyl	39.5	49.8	79	70-135	

Lab Batch #: 875284 **Sample:** 431406-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.0	99.6	71	70-135	
o-Terphenyl	32.7	49.8	66	70-135	*

Lab Batch #: 875284 **Sample:** 431406-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 15:16

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.6	91	70-135	
o-Terphenyl	40.1	49.8	81	70-135	

Lab Batch #: 875284 **Sample:** 431406-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 15:47

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	100	98	70-135	
o-Terphenyl	43.1	50.1	86	70-135	

Lab Batch #: 875284 **Sample:** 431406-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 16:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431406-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 00:15

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 875269 **Sample:** 431406-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 02:55

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 875269 **Sample:** 431406-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 03:18

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

Lab Batch #: 875269 **Sample:** 431406-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 03:40

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0358	0.0300	119	80-120	
4-Bromofluorobenzene	0.0166	0.0300	55	80-120	*

Lab Batch #: 875269 **Sample:** 431406-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 04:03

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 614247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 01:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 875284 **Sample:** 614392-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 20:20

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	100	92	70-135	
o-Terphenyl	41.9	50.0	84	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 11:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 875269 **Sample:** 614385-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 02:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:17

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

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406, **Project ID:** 2004-00061

Lab Batch #: 875284 **Sample:** 614392-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:02

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875269 **Sample:** 614385-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:00

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 875284 **Sample:** 614392-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 19:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.7	50.0	83	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406, **Project ID:** 2004-00061

Lab Batch #: 875265 **Sample:** 614382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875269 **Sample:** 614385-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/19/11 01:23

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 875023 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 21:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.3	50.1	72	70-135	

Lab Batch #: 875284 **Sample:** 431713-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:53

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	43.0	49.8	86	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431406,

Project ID: 2004-00061

Lab Batch #: 875269 **Sample:** 431409-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/19/11 07:04

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 875284 **Sample:** 431713-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 11:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	48.3	50.2	96	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:43

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431406 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875265 **Sample:** 614382-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	71-133	35	

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/19/2011

Lab Batch ID: 875269 **Sample:** 614385-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.106	106	0.100	0.101	101	5	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.100	0.105	105	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.110	110	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.219	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.108	108	2	71-133	35	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431406 **Project ID:** 2004-00061

Analyst: BRB **Date Prepared:** 11/14/2011 **Date Analyzed:** 11/14/2011

Lab Batch ID: 874790 **Sample:** 874790-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	21.5	108	20.0	21.5	108	0	75-125	20	

Analyst: BRB **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/15/2011

Lab Batch ID: 874867 **Sample:** 874867-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	20.9	105	20.0	21.1	106	1	75-125	20	

Analyst: ASA **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875023 **Sample:** 614247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	824	82	1000	773	77	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	923	92	1000	868	87	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

Xenco Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431406 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/17/2011 **Date Analyzed:** 11/17/2011

Lab Batch ID: 875284 **Sample:** 614392-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	763	76	1000	762	76	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	842	84	1000	862	86	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431406

Lab Batch #: 875269 **Project ID:** 2004-00061

Date Analyzed: 11/19/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

QC- Sample ID: 431409-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.00106	0.106	0.0848	80	70-130	
Toluene	<0.00211	0.106	0.0858	81	70-130	
Ethylbenzene	<0.00106	0.106	0.0897	85	71-129	
m_p-Xylenes	<0.00211	0.211	0.175	83	70-135	
o-Xylene	<0.00106	0.106	0.0862	81	71-133	

Lab Batch #: 874790

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431397-010 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.18	104	96.6	93	75-125	

Lab Batch #: 874790

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.00	100	69.6	70	75-125	X

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.14	103	101	98	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431406

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431404-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	11.0	114	126	101	75-125	

Lab Batch #: 875023

Date Analyzed: 11/16/2011 **Date Prepared:** 11/15/2011 **Analyst:** ASA

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	703	68	70-135	X
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	773	75	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea County, NM

Work Order # : 431406 **Project ID:** 2004-00061

Lab Batch ID: 875265 **QC- Sample ID:** 431398-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00102	0.102	0.0925	91	0.102	0.0960	94	4	70-130	35	
Toluene	<0.00205	0.102	0.0946	93	0.102	0.0977	96	3	70-130	35	
Ethylbenzene	<0.00102	0.102	0.0989	97	0.102	0.102	100	3	71-129	35	
m_p-Xylenes	<0.00205	0.205	0.195	95	0.203	0.202	100	4	70-135	35	
o-Xylene	<0.00102	0.102	0.0976	96	0.102	0.101	99	3	71-133	35	

Lab Batch ID: 875284 **QC- Sample ID:** 431713-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/17/2011 **Analyst:** ASA

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	820	77	1070	898	84	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	931	88	1070	1040	97	11	70-135	35	

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

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

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

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

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431406

Lab Batch #: 874790 **Project ID:** 2004-00061

Date Analyzed: 11/14/2011 21:31 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.00	<5.00	0	20	U

Lab Batch #: 874867

Date Analyzed: 11/15/2011 20:10 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.14	<5.14	0	20	U

Lab Batch #: 874859

Date Analyzed: 11/15/2011 11:35 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431406-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.22	5.20	0	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431406

LAB # (lab use only)	FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1	TPH: 8015M	TPH: TX 1005	TPH: TX1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell D G-1	X			11/10/2011	1115		1	X								SOIL	X										X			X				X
002	VZ Cell D G-2	X			11/10/2011	1120		1	X								SOIL	X										X			X				X
003	VZ Cell D G-3	X			11/10/2011	1125		1	X								SOIL	X										X			X				X
004	VZ Cell D G-4	X			11/10/2011	1130		1	X								SOIL	X										X			X				X
005	VZ Cell D G-5	X			11/10/2011	1135		1	X								SOIL	X										X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	0700	Shannon Brown	11/11/11	0700
Shannon Brown	11/11/11	1:15			
			Received by ELOT: Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact? (Y) N

VOCs Free of Headspace? (Y) N

Labels on container(s) (Y) N

Custody seals on container(s) (Y) N

Custody seals on cooler(s) Y (N)

Sample Hand Delivered (Y) N

by Sampler/Client Rep. ? (Y) N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11.11.11 13:15

Lab ID #: 431406

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431398

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431398**
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 431398. 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. 431398 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

XENCO Laboratories

Sample Cross Reference 431398

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	11-10-11 12:55		431398-001
VZ Cell E G-1	S	11-10-11 13:00		431398-002
VZ Cell E G-1	S	11-10-11 13:05		431398-003
VZ Cell E G-1	S	11-10-11 13:10		431398-004

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431398*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875023 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875023, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431398-001.

SW8015MOD_NM

Batch 875023, C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431398-001, -002, -003, -004.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-875265 BTEX by EPA 8021
SW8021BM

Batch 875265, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431398-001.

Certificate of Analysis Summary 431398

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested													
	Lab Id:	431398-001		431398-002		431398-003		431398-004					
	Field Id:	VZ Cell E G-1		VZ Cell E G-1		VZ Cell E G-1		VZ Cell E G-1					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Nov-10-11 12:55		Nov-10-11 13:00		Nov-10-11 13:05		Nov-10-11 13:10					
BTEX by EPA 8021	*Extracted:*	Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41					
	Analyzed:	Nov-18-11 15:32		Nov-18-11 15:55		Nov-18-11 16:18		Nov-18-11 16:40					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00102	ND	0.00119	ND	0.00107	ND	0.00111				
Toluene		ND	0.00205	ND	0.00239	ND	0.00214	ND	0.00221				
Ethylbenzene		ND	0.00102	ND	0.00119	ND	0.00107	ND	0.00111				
m_p-Xylenes		ND	0.00205	ND	0.00239	ND	0.00214	ND	0.00221				
o-Xylene		ND	0.00102	ND	0.00119	ND	0.00107	ND	0.00111				
Xylenes, Total		ND	0.00102	ND	0.00119	ND	0.00107	ND	0.00111				
Total BTEX		ND	0.00102	ND	0.00119	ND	0.00107	ND	0.00111				
Inorganic Anions In Soil by E300	*Extracted:*												
	Analyzed:	Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		ND	5.14	ND	6.00	6.87	5.38	ND	5.59				
Percent Moisture	*Extracted:*												
	Analyzed:	Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		2.63	1.00	16.7	1.00	7.09	1.00	10.6	1.00				
TPH by SW8015 Mod	*Extracted:*	Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20					
	Analyzed:	Nov-16-11 01:58		Nov-16-11 02:32		Nov-16-11 03:07		Nov-16-11 03:42					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.4	ND	18.0	ND	16.1	ND	16.8				
C12-C28 Diesel Range Hydrocarbons		ND	15.4	ND	18.0	ND	16.1	ND	16.8				
C28-C35 Oil Range Hydrocarbons		ND	15.4	ND	18.0	ND	16.1	ND	16.8				
Total TPH		ND	15.4	ND	18.0	ND	16.1	ND	16.8				

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431398,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 431398-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 01:58

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.9	99.8	80	70-135	
o-Terphenyl	34.3	49.9	69	70-135	*

Lab Batch #: 875023 **Sample:** 431398-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 02:32

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.9	98	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 875023 **Sample:** 431398-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 03:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	99.7	95	70-135	
o-Terphenyl	44.5	49.9	89	70-135	

Lab Batch #: 875023 **Sample:** 431398-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 03:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.2	99.9	91	70-135	
o-Terphenyl	43.9	50.0	88	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 15:32

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0237	0.0300	79	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431398,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431398-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 15:55

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 875265 **Sample:** 431398-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 16:18

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 875265 **Sample:** 431398-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 16:40

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 01:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 11:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431398,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 614247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:17

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

Lab Batch #: 875265 **Sample:** 614382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875023 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 21:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.3	50.1	72	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431398,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875265 **Sample:** 431398-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:43

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea Station Landfarm

Work Order #: 431398 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875265 **Sample:** 614382-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Benzene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	71-133	35	

Analyst: BRB **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/15/2011

Lab Batch ID: 874867 **Sample:** 874867-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<1.00	20.0	20.9	105	20.0	21.1	106	1	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 #: 431398 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875023 **Sample:** 614247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	824	82	1000	773	77	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	923	92	1000	868	87	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea Station Landfarm

Work Order #: 431398

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.14	103	101	98	75-125	

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431404-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	11.0	114	126	101	75-125	

Lab Batch #: 875023

Date Analyzed: 11/16/2011 **Date Prepared:** 11/15/2011 **Analyst:** ASA

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	703	68	70-135	X
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	773	75	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431398 **Project ID:** 2004-00061

Lab Batch ID: 875265 **QC- Sample ID:** 431398-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00102	0.102	0.0925	91	0.102	0.0960	94	4	70-130	35	
Toluene	<0.00205	0.102	0.0946	93	0.102	0.0977	96	3	70-130	35	
Ethylbenzene	<0.00102	0.102	0.0989	97	0.102	0.102	100	3	71-129	35	
m_p-Xylenes	<0.00205	0.205	0.195	95	0.203	0.202	100	4	70-135	35	
o-Xylene	<0.00102	0.102	0.0976	96	0.102	0.101	99	3	71-133	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431398

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 20:10 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.14	<5.14	0	20	U

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

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature:
e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431398

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP:	TOTAL:	TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 80218/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell E G-1			11/10/2011	1255		1	X								SOIL		X	X							X			X		X
002	VZ Cell E G-2			11/10/2011	1300		1	X								SOIL		X	X							X			X		X
003	VZ Cell E G-3			11/10/2011	1305		1	X								SOIL		X	X							X			X		X
004	VZ Cell E G-4			11/10/2011	1310		1	X								SOIL		X	X							X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	0700	Shannon Bron	11/11/11	0700
Relinquished by: Shannon Bron	11/11/11	1:15	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11-11-11	13:15

Laboratory Comments:

Sample Containers Intact?		N
VOCs Free of Headspace?		N
Labels on container(s)		N
Custody seals on container(s)		N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered		N
by Sampler/Client Rep. ?		N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	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: 11.11.11 13:15

Lab ID # : 431398

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431405

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431405**
Lea County, NM
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 431405. 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. 431405 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

XENCO Laboratories

Sample Cross Reference 431405

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell F G-1	S	11-10-11 14:00		431405-001
VZ Cell F G-2	S	11-10-11 14:10		431405-002
VZ Cell F G-3	S	11-10-11 14:20		431405-003
VZ Cell F G-4	S	11-10-11 14:30		431405-004
VZ Cell F G-5	S	11-10-11 14:40		431405-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431405*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-874790 Inorganic Anions In Soil by E300
E300MI

Batch 874790, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 431405-003, -001, -004, -002, -005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-875023 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875023, C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431405-003, -001, -004, -002, -005.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Certificate of Analysis Summary 431405

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested		431405-001		431405-002		431405-003		431405-004		431405-005	
	Field Id:	VZ Cell F G-1		VZ Cell F G-2		VZ Cell F G-3		VZ Cell F G-4		VZ Cell F G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 14:00		Nov-10-11 14:10		Nov-10-11 14:20		Nov-10-11 14:30		Nov-10-11 14:40	
BTEX by EPA 8021	Extracted:	Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41	
	Analyzed:	Nov-18-11 22:22		Nov-18-11 22:45		Nov-18-11 23:07		Nov-18-11 23:30		Nov-18-11 23:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00111	ND	0.00103	ND	0.00116	ND	0.00109	ND	0.00110
Toluene		ND	0.00222	ND	0.00206	ND	0.00232	ND	0.00218	ND	0.00219
Ethylbenzene		ND	0.00111	ND	0.00103	ND	0.00116	ND	0.00109	ND	0.00110
m_p-Xylenes		ND	0.00222	ND	0.00206	ND	0.00232	ND	0.00218	ND	0.00219
o-Xylene		ND	0.00111	ND	0.00103	ND	0.00116	ND	0.00109	ND	0.00110
Xylenes, Total		ND	0.00111	ND	0.00103	ND	0.00116	ND	0.00109	ND	0.00110
Total BTEX		ND	0.00111	ND	0.00103	ND	0.00116	ND	0.00109	ND	0.00110
Inorganic Anions In Soil by E300	Extracted:										
	Analyzed:	Nov-14-11 21:31		Nov-14-11 21:31		Nov-14-11 21:31		Nov-14-11 21:31		Nov-14-11 21:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.4	5.56	ND	5.16	34.6	5.77	9.34	5.46	40.7	5.47
Percent Moisture	Extracted:										
	Analyzed:	Nov-15-11 11:00		Nov-15-11 11:33		Nov-15-11 11:33		Nov-15-11 11:33		Nov-15-11 11:33	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		10.1	1.00	3.09	1.00	13.4	1.00	8.37	1.00	8.58	1.00
TPH by SW8015 Mod	Extracted:	Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20	
	Analyzed:	Nov-16-11 17:48		Nov-16-11 18:18		Nov-16-11 18:51		Nov-16-11 19:25		Nov-16-11 19:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.6	ND	15.4	ND	17.3	ND	16.3	ND	16.5
C12-C28 Diesel Range Hydrocarbons		ND	16.6	ND	15.4	ND	17.3	ND	16.3	ND	16.5
C28-C35 Oil Range Hydrocarbons		ND	16.6	ND	15.4	ND	17.3	ND	16.3	ND	16.5
Total TPH		ND	16.6	ND	15.4	ND	17.3	ND	16.3	ND	16.5

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431405,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 431405-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 17:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	99.6	97	70-135	
o-Terphenyl	45.0	49.8	90	70-135	

Lab Batch #: 875023 **Sample:** 431405-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 18:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	99.6	97	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 875023 **Sample:** 431405-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 18:51

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 875023 **Sample:** 431405-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 19:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.5	109	70-135	
o-Terphenyl	51.1	49.8	103	70-135	

Lab Batch #: 875023 **Sample:** 431405-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 19:57

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	50.0	50.2	100	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431405,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431405-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 22:22

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0255	0.0300	85	80-120	

Lab Batch #: 875265 **Sample:** 431405-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 22:45

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 875265 **Sample:** 431405-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 23:07

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 875265 **Sample:** 431405-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 23:30

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 875265 **Sample:** 431405-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 23:53

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431405, **Project ID:** 2004-00061

Lab Batch #: 875023 **Sample:** 614247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 01:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 11:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:17

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

Lab Batch #: 875265 **Sample:** 614382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431405,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 614382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875023 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 21:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.3	50.1	72	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875265 **Sample:** 431398-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:43

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431405 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875265 **Sample:** 614382-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	71-133	35	

Analyst: BRB **Date Prepared:** 11/14/2011 **Date Analyzed:** 11/14/2011

Lab Batch ID: 874790 **Sample:** 874790-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	21.5	108	20.0	21.5	108	0	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431405 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875023 **Sample:** 614247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	824	82	1000	773	77	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	923	92	1000	868	87	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431405

Lab Batch #: 874790 **Project ID:** 2004-00061

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431397-010 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.18	104	96.6	93	75-125	

Lab Batch #: 874790

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.00	100	69.6	70	75-125	X

Lab Batch #: 875023

Date Analyzed: 11/16/2011 **Date Prepared:** 11/15/2011 **Analyst:** ASA

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	703	68	70-135	X
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	773	75	70-135	

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

- Below Reporting Limit

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea County, NM

Work Order # : 431405 **Project ID:** 2004-00061

Lab Batch ID: 875265 **QC- Sample ID:** 431398-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021 **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Benzene	<0.00102	0.102	0.0925	91	0.102	0.0960	94	4	70-130	35	
Toluene	<0.00205	0.102	0.0946	93	0.102	0.0977	96	3	70-130	35	
Ethylbenzene	<0.00102	0.102	0.0989	97	0.102	0.102	100	3	71-129	35	
m_p-Xylenes	<0.00205	0.205	0.195	95	0.203	0.202	100	4	70-135	35	
o-Xylene	<0.00102	0.102	0.0976	96	0.102	0.101	99	3	71-133	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431405

Lab Batch #: 874790 **Project ID:** 2004-00061

Date Analyzed: 11/14/2011 21:31 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.00	<5.00	0	20	U

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

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Bass e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431405

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell F G-1			11/10/2011	1400		1	X								SOIL			X									X			X				X
002	VZ Cell F G-2			11/10/2011	1410		1	X								SOIL			X									X			X				X
003	VZ Cell F G-3			11/10/2011	1420		1	X								SOIL			X									X			X				X
004	VZ Cell F G-4			11/10/2011	1430		1	X								SOIL			X									X			X				X
005	VZ Cell F G-5			11/10/2011	1440		1	X								Soil			X									X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Bass	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact?	N
VOCs Free of Headspace?	N
Labels on container(s)	N
Custody seals on container(s)	N
Custody seals on cooler(s)	N
Sample Hand Delivered	N
by Sampler/Client Rep. ?	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories		Document Title: Sample Receipt Checklist
XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa		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: 11.11.11 13:15

Lab ID #: 431405

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431404

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431404**
Lea County, NM
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 431404. 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. 431404 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

Sample Cross Reference 431404

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell G G-1	S	11-10-11 15:00		431404-001
VZ Cell G G-2	S	11-10-11 15:10		431404-002
VZ Cell G G-3	S	11-10-11 15:20		431404-003
VZ Cell G G-4	S	11-10-11 15:30		431404-004
VZ Cell G G-5	S	11-10-11 15:40		431404-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431404*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-874790 Inorganic Anions In Soil by E300
E300MI

Batch 874790, Chloride recovered below QC limits in the Matrix Spike.
Samples affected are: 431404-005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-875023 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875023, C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431404-002, -001, -003, -004, -005.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-875265 BTEX by EPA 8021
SW8021BM

Batch 875265, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 431404-005.

Certificate of Analysis Summary 431404

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431404-001		431404-002		431404-003		431404-004		431404-005	
	Field Id:	VZ Cell G G-1		VZ Cell G G-2		VZ Cell G G-3		VZ Cell G G-4		VZ Cell G G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 15:00		Nov-10-11 15:10		Nov-10-11 15:20		Nov-10-11 15:30		Nov-10-11 15:40	
BTEX by EPA 8021	*Extracted:*	Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41	
	Analyzed:	Nov-18-11 18:57		Nov-18-11 20:51		Nov-18-11 21:14		Nov-18-11 21:37		Nov-18-11 22:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00113	ND	0.00115	ND	0.00114	ND	0.00110	ND	0.00117
Toluene		ND	0.00225	ND	0.00229	ND	0.00228	ND	0.00220	ND	0.00234
Ethylbenzene		ND	0.00113	ND	0.00115	ND	0.00114	ND	0.00110	ND	0.00117
m_p-Xylenes		ND	0.00225	ND	0.00229	ND	0.00228	ND	0.00220	ND	0.00234
o-Xylene		ND	0.00113	ND	0.00115	ND	0.00114	ND	0.00110	ND	0.00117
Xylenes, Total		ND	0.00113	ND	0.00115	ND	0.00114	ND	0.00110	ND	0.00117
Total BTEX		ND	0.00113	ND	0.00115	ND	0.00114	ND	0.00110	ND	0.00117
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Nov-15-11 20:10		Nov-15-11 20:10		Nov-21-11 14:00		Nov-15-11 20:10		Nov-14-11 21:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.65	5.68	11.0	5.71	8.26	5.69	6.52	5.51	ND	5.79
Percent Moisture	*Extracted:*										
	Analyzed:	Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		12.0	1.00	12.5	1.00	12.1	1.00	9.23	1.00	13.7	1.00
TPH by SW8015 Mod	*Extracted:*	Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20	
	Analyzed:	Nov-16-11 08:21		Nov-16-11 15:39		Nov-16-11 16:11		Nov-16-11 16:42		Nov-16-11 17:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.1	ND	17.1	ND	17.0	ND	16.5	ND	17.4
C12-C28 Diesel Range Hydrocarbons		ND	17.1	ND	17.1	ND	17.0	ND	16.5	ND	17.4
C28-C35 Oil Range Hydrocarbons		ND	17.1	ND	17.1	ND	17.0	ND	16.5	ND	17.4
Total TPH		ND	17.1	ND	17.1	ND	17.0	ND	16.5	ND	17.4

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431404,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 431404-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 08:21

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	46.8	50.2	93	70-135	

Lab Batch #: 875023 **Sample:** 431404-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 15:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	99.8	94	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 875023 **Sample:** 431404-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 16:11

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.4	99.6	96	70-135	
o-Terphenyl	44.1	49.8	89	70-135	

Lab Batch #: 875023 **Sample:** 431404-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 16:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	99.9	96	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 875023 **Sample:** 431404-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 17:15

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	48.8	50.1	97	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431404,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431404-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 18:57

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 875265 **Sample:** 431404-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 20:51

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 875265 **Sample:** 431404-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 21:14

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 875265 **Sample:** 431404-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 21:37

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 875265 **Sample:** 431404-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 22:00

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0232	0.0300	77	80-120	*

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431404, **Project ID:** 2004-00061

Lab Batch #: 875023 **Sample:** 614247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 01:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 11:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:17

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

Lab Batch #: 875265 **Sample:** 614382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431404, **Project ID:** 2004-00061

Lab Batch #: 875265 **Sample:** 614382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875023 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 21:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.3	50.1	72	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875265 **Sample:** 431398-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:43

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431404 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875265 **Sample:** 614382-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	71-133	35	

Analyst: BRB **Date Prepared:** 11/14/2011 **Date Analyzed:** 11/14/2011

Lab Batch ID: 874790 **Sample:** 874790-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	21.5	108	20.0	21.5	108	0	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431404 **Project ID:** 2004-00061

Analyst: BRB **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/15/2011

Lab Batch ID: 874867 **Sample:** 874867-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	20.9	105	20.0	21.1	106	1	75-125	20	

Analyst: BRB **Date Prepared:** 11/21/2011 **Date Analyzed:** 11/21/2011

Lab Batch ID: 875325 **Sample:** 875325-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	20.3	102	20.0	20.8	104	2	75-125	20	

Analyst: ASA **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875023 **Sample:** 614247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	824	82	1000	773	77	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	923	92	1000	868	87	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431404

Lab Batch #: 874790 **Project ID:** 2004-00061

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431397-010 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.18	104	96.6	93	75-125	

Lab Batch #: 874790

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.00	100	69.6	70	75-125	X

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.14	103	101	98	75-125	

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431404-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	11.0	114	126	101	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

- Below Reporting Limit

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431404

Lab Batch #: 875325 **Project ID:** 2004-00061

Date Analyzed: 11/21/2011 **Date Prepared:** 11/21/2011 **Analyst:** BRB

QC- Sample ID: 431868-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	6240	4050	10300	100	75-125	

Lab Batch #: 875325

Date Analyzed: 11/21/2011 **Date Prepared:** 11/21/2011 **Analyst:** BRB

QC- Sample ID: 431893-003 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	52.4	106	156	98	75-125	

Lab Batch #: 875023

Date Analyzed: 11/16/2011 **Date Prepared:** 11/15/2011 **Analyst:** ASA

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH by SW8015 Mod	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	703	68	70-135	X
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	773	75	70-135	

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 County, NM

Work Order # : 431404 **Project ID:** 2004-00061

Lab Batch ID: 875265 **QC- Sample ID:** 431398-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00102	0.102	0.0925	91	0.102	0.0960	94	4	70-130	35	
Toluene	<0.00205	0.102	0.0946	93	0.102	0.0977	96	3	70-130	35	
Ethylbenzene	<0.00102	0.102	0.0989	97	0.102	0.102	100	3	71-129	35	
m_p-Xylenes	<0.00205	0.205	0.195	95	0.203	0.202	100	4	70-135	35	
o-Xylene	<0.00102	0.102	0.0976	96	0.102	0.101	99	3	71-133	35	

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

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

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

Final 1.000

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431404

Lab Batch #: 874790 **Project ID:** 2004-00061

Date Analyzed: 11/14/2011 21:31 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431404-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.00	<5.00	0	20	U

Lab Batch #: 874867

Date Analyzed: 11/15/2011 20:10 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.14	<5.14	0	20	U

Lab Batch #: 875325

Date Analyzed: 11/21/2011 14:00 **Date Prepared:** 11/21/2011 **Analyst:** BRB

QC- Sample ID: 431893-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	52.4	53.5	2	20	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Brown e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431404

LAB # (lab use only)	FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 8015M	TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell G G-1	X			11/10/2011	1500		1	X								SOIL	X									X			X		X
002	VZ Cell G G-2	X			11/10/2011	1510		1	X								SOIL	X									X			X		X
003	VZ Cell G G-3	X			11/10/2011	1520		1	X								SOIL	X									X			X		X
004	VZ Cell G G-4	X			11/10/2011	1530		1	X								SOIL	X									X			X		X
005	VZ Cell G G-5	X			11/10/2011	1540		1	X								SOIL	X									X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Brown	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact? (Y) N

VOCs Free of Headspace? (Y) N

Labels on container(s) (Y) N

Custody seals on container(s) (Y) N

Custody seals on cooler(s) Y (N)

Sample Hand Delivered (Y) N

by Sampler/Client Rep. ? (Y) N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11·11·11 13:15

Lab ID #: 431404

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431403

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea County, NM

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431403**
Lea County, NM
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 431403. 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. 431403 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

XENCO Laboratories

Sample Cross Reference 431403

PLAINS ALL AMERICAN EH&S, Midland, TX

Lea County, NM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VZ Cell H G-1	S	11-10-11 16:00		431403-001
VZ Cell H G-2	S	11-10-11 16:10		431403-002
VZ Cell H G-3	S	11-10-11 16:20		431403-003
VZ Cell H G-4	S	11-10-11 16:30		431403-004
VZ Cell H G-5	S	11-10-11 16:40		431403-005

CASE NARRATIVE

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: Lea County, NM

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431403*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875023 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875023, C6-C12 Gasoline Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431403-001, -002, -004, -003, -005.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

Certificate of Analysis Summary 431403

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea County, NM

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431403-001		431403-002		431403-003		431403-004		431403-005	
	Field Id:	VZ Cell H G-1		VZ Cell H G-2		VZ Cell H G-3		VZ Cell H G-4		VZ Cell H G-5	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-10-11 16:00		Nov-10-11 16:10		Nov-10-11 16:20		Nov-10-11 16:30		Nov-10-11 16:40	
BTEX by EPA 8021	*Extracted:*	Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41		Nov-18-11 09:41	
	Analyzed:	Nov-18-11 17:03		Nov-18-11 17:26		Nov-18-11 17:49		Nov-18-11 18:11		Nov-18-11 18:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00116	ND	0.00119	ND	0.00117	ND	0.00111	ND	0.00113
Toluene		ND	0.00232	ND	0.00238	ND	0.00235	ND	0.00221	ND	0.00226
Ethylbenzene		ND	0.00116	ND	0.00119	ND	0.00117	ND	0.00111	ND	0.00113
m_p-Xylenes		ND	0.00232	ND	0.00238	ND	0.00235	ND	0.00221	ND	0.00226
o-Xylene		ND	0.00116	ND	0.00119	ND	0.00117	ND	0.00111	ND	0.00113
Xylenes, Total		ND	0.00116	ND	0.00119	ND	0.00117	ND	0.00111	ND	0.00113
Total BTEX		ND	0.00116	ND	0.00119	ND	0.00117	ND	0.00111	ND	0.00113
Inorganic Anions In Soil by E300	*Extracted:*										
	Analyzed:	Nov-16-11 11:26		Nov-15-11 20:10		Nov-15-11 20:10		Nov-15-11 20:10		Nov-16-11 11:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.9	5.81	8.28	6.02	ND	5.90	ND	5.53	ND	5.63
Percent Moisture	*Extracted:*										
	Analyzed:	Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00		Nov-15-11 11:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		14.0	1.00	16.9	1.00	15.3	1.00	9.65	1.00	11.2	1.00
TPH by SW8015 Mod	*Extracted:*	Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20		Nov-15-11 13:20	
	Analyzed:	Nov-16-11 04:17		Nov-16-11 04:51		Nov-16-11 05:26		Nov-16-11 06:01		Nov-16-11 06:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	17.4	ND	18.0	ND	17.6	ND	16.6	ND	16.9
C12-C28 Diesel Range Hydrocarbons		ND	17.4	ND	18.0	ND	17.6	ND	16.6	ND	16.9
C28-C35 Oil Range Hydrocarbons		ND	17.4	ND	18.0	ND	17.6	ND	16.6	ND	16.9
Total TPH		ND	17.4	ND	18.0	ND	17.6	ND	16.6	ND	16.9

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431403,

Project ID: 2004-00061

Lab Batch #: 875023 **Sample:** 431403-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 04:17

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	100	95	70-135	
o-Terphenyl	44.8	50.0	90	70-135	

Lab Batch #: 875023 **Sample:** 431403-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 04:51

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.8	90	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

Lab Batch #: 875023 **Sample:** 431403-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 05:26

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	99.6	85	70-135	
o-Terphenyl	39.7	49.8	80	70-135	

Lab Batch #: 875023 **Sample:** 431403-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 06:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.9	89	70-135	
o-Terphenyl	40.9	50.0	82	70-135	

Lab Batch #: 875023 **Sample:** 431403-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 06:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.3	100	86	70-135	
o-Terphenyl	40.1	50.1	80	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution.

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431403,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 431403-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 17:03

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875265 **Sample:** 431403-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 17:26

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 875265 **Sample:** 431403-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 17:49

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 875265 **Sample:** 431403-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 18:11

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 875265 **Sample:** 431403-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 18:34

BTEX by EPA 8021	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431403, **Project ID:** 2004-00061

Lab Batch #: 875023 **Sample:** 614247-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 01:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 875265 **Sample:** 614382-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 11:48

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:17

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

Lab Batch #: 875265 **Sample:** 614382-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:16

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 875023 **Sample:** 614247-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/16/11 00:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	44.6	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea County, NM

Work Orders : 431403,

Project ID: 2004-00061

Lab Batch #: 875265 **Sample:** 614382-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 10:39

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875023 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/16/11 21:04

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	36.3	50.1	72	70-135	

Lab Batch #: 875265 **Sample:** 431398-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:20

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 875265 **Sample:** 431398-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 19:43

BTEX by EPA 8021 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431403 **Project ID:** 2004-00061

Analyst: ASA **Date Prepared:** 11/18/2011 **Date Analyzed:** 11/18/2011

Lab Batch ID: 875265 **Sample:** 614382-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.104	104	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.109	109	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.217	109	1	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	71-133	35	

Analyst: BRB **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/15/2011

Lab Batch ID: 874867 **Sample:** 874867-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions In Soil by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	20.0	20.9	105	20.0	21.1	106	1	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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Lea County, NM

Work Order #: 431403 **Project ID:** 2004-00061

Analyst: BRB **Date Prepared:** 11/16/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875224 **Sample:** 875224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions In Soil by E300	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<1.00	20.0	19.7	99	20.0	20.7	104	5	75-125	20	

Analyst: ASA **Date Prepared:** 11/15/2011 **Date Analyzed:** 11/16/2011

Lab Batch ID: 875023 **Sample:** 614247-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	824	82	1000	773	77	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	923	92	1000	868	87	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

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431403

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<5.14	103	101	98	75-125	

Lab Batch #: 874867

Date Analyzed: 11/15/2011 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431404-002 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	11.0	114	126	101	75-125	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431403-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	10.9	116	127	100	75-125	

Lab Batch #: 875224

Date Analyzed: 11/16/2011 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1.77	21.1	23.4	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

' - Below Reporting Limit

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Lea County, NM

Work Order #: 431403

Lab Batch #: 875023

Project ID: 2004-00061

Date Analyzed: 11/16/2011

Date Prepared: 11/15/2011

Analyst: ASA

QC- Sample ID: 431398-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	703	68	70-135	X
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	773	75	70-135	

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 - MSD Recoveries

Project Name: Lea County, NM

Work Order # : 431403 **Project ID:** 2004-00061

Lab Batch ID: 875265 **QC- Sample ID:** 431398-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00102	0.102	0.0925	91	0.102	0.0960	94	4	70-130	35	
Toluene	<0.00205	0.102	0.0946	93	0.102	0.0977	96	3	70-130	35	
Ethylbenzene	<0.00102	0.102	0.0989	97	0.102	0.102	100	3	71-129	35	
m_p-Xylenes	<0.00205	0.205	0.195	95	0.203	0.202	100	4	70-135	35	
o-Xylene	<0.00102	0.102	0.0976	96	0.102	0.101	99	3	71-133	35	

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

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

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

Sample Duplicate Recovery

Project Name: Lea County, NM

Work Order #: 431403

Lab Batch #: 874867 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 20:10 **Date Prepared:** 11/15/2011 **Analyst:** BRB

QC- Sample ID: 431398-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<5.14	<5.14	0	20	U

Lab Batch #: 875224

Date Analyzed: 11/16/2011 11:26 **Date Prepared:** 11/16/2011 **Analyst:** BRB

QC- Sample ID: 431408-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions In Soil by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	1.77	2.33	27	20	F

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Shannon Brown e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431403

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge; GW = Groundwater S=Soil/Solid; NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 8015B / TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	VZ Cell H G-1			11/10/2011	1600		1	X								SOIL	X									X			X		X
002	VZ Cell H G-2			11/10/2011	1610		1	X								SOIL	X									X			X		X
003	VZ Cell H G-3			11/10/2011	1620		1	X								SOIL	X									X			X		X
004	VZ Cell H G-4			11/10/2011	1630		1	X								SOIL	X									X			X		X
005	VZ Cell H G-5			11/10/2011	1640		1	X								SOIL	X									X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Brown	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11-11-11	13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	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: 11-11-11 13:15

Lab ID #: 431403

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431411

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431411**
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 431411. 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. 431411 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

Sample Cross Reference 431411

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	11-11-11 09:00		431411-001
TZ Cell A G-2	S	11-11-11 09:05		431411-002
TZ Cell A G-3	S	11-11-11 09:10		431411-003
TZ Cell A G-4	S	11-11-11 09:15		431411-004
TZ Cell A G-5	S	11-11-11 09:20		431411-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431411*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875077 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875077, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431411-002, -001, -004, -005, -003.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analys ummary 431411

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested												
	Lab Id:	431411-001		431411-002		431411-003		431411-004		431411-005		
	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		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Nov-11-11 09:00		Nov-11-11 09:05		Nov-11-11 09:10		Nov-11-11 09:15		Nov-11-11 09:20		
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-19-11 20:11		Nov-19-11 20:28		Nov-19-11 21:19		Nov-19-11 21:36		Nov-19-11 22:27		
	Analyzed:	Nov-19-11 20:11		Nov-19-11 20:28		Nov-19-11 21:19		Nov-19-11 21:36		Nov-19-11 22:27		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		6.27	1.05	6.73	1.05	3.39	1.04	3.12	1.06	2.38	1.04	
Percent Moisture SUB: TX104704215	*Extracted:*											
	Analyzed:	Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		4.69	1.00	4.67	1.00	4.16	1.00	5.54	1.00	3.75	1.00	
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 16:03		Nov-16-11 16:06		Nov-16-11 16:09		Nov-16-11 16:12		Nov-16-11 16:15		
	Analyzed:	Nov-17-11 14:01		Nov-17-11 14:25		Nov-17-11 14:50		Nov-17-11 15:15		Nov-17-11 15:40		
	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	15.7	ND	15.6	ND	15.8	ND	15.5	
C12-C28 Diesel Range Hydrocarbons		272	15.7	411	15.7	219	15.6	213	15.8	108	15.5	
C28-C35 Oil Range Hydrocarbons		132	15.7	166	15.7	98.8	15.6	99.4	15.8	67.3	15.5	
Total TPH		404	15.7	577	15.7	318	15.6	312	15.8	175	15.5	

Brent Barron II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431411,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 431411-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.9	117	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 875077 **Sample:** 431411-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.9	114	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

Lab Batch #: 875077 **Sample:** 431411-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:50

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	99.4	93	70-135	
o-Terphenyl	39.3	49.7	79	70-135	

Lab Batch #: 875077 **Sample:** 431411-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 15:15

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	99.5	122	70-135	
o-Terphenyl	49.5	49.8	99	70-135	

Lab Batch #: 875077 **Sample:** 431411-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 15:40

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.6	112	70-135	
o-Terphenyl	47.0	49.8	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431411,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 614271-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:00

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 875077 **Sample:** 614271-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.8	100	85	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:05

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.8	129	70-135	
o-Terphenyl	43.2	49.9	87	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.9	127	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431411 **Project ID:** 2004-00061

Lab Batch #: 875267 **Sample:** 614383-1-BKS **Matrix:** Solid

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
		BLANK /BLANK SPIKE RECOVERY STUDY				
Chloride	<1.00	100	99.8	100	90-110	

Lab Batch #: 875077 **Sample:** 614271-1-BKS **Matrix:** Solid

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
		BLANK /BLANK SPIKE RECOVERY STUDY				
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	948	95	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1050	105	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431411 **Project ID:** 2004-00061

Lab Batch ID: 875267 **QC- Sample ID:** 431399-004 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB
Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1.44	106	106	99	106	109	101	3	80-120	20	

Lab Batch ID: 875267 **QC- Sample ID:** 431411-005 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB
Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.38	104	111	104	104	106	100	5	80-120	20	

Lab Batch ID: 875077 **QC- Sample ID:** 431399-001 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH
Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	1020	874	86	1020	938	92	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	575	1020	1110	52	1020	1190	60	7	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431411

Lab Batch #: 874808 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431411-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte: Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.67	4.18	11	20	

Lab Batch #: 874808

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431413-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte: Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.27	2.44	7	20	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Shannon Bros e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431411

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell A G-1			11/10/2011	0900		1	X								SOIL	X											X				X
002	TZ Cell A G-2			11/10/2011	0905		1	X								SOIL	X											X				X
003	TZ Cell A G-3			11/10/2011	0910		1	X								SOIL	X											X				X
004	TZ Cell A G-4			11/10/2011	0915		1	X								SOIL	X											X				X
005	TZ Cell A G-5			11/10/2011	0920		1	X								SOIL	X											X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Bros	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	Date 11-11-11	Time 13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

XENCO Laboratories	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: 11.11.11 13:15

Lab ID #: 431411

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431399

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431399**
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 431399. 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. 431399 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

Sample Cross Reference 431399

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	11-10-11 09:25		431399-001
TZ Cell B G-1	S	11-10-11 09:30		431399-002
TZ Cell B G-1	S	11-10-11 09:35		431399-003
TZ Cell B G-1	S	11-10-11 09:40		431399-004

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431399*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875077 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875077, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431399-002, -001, -003, -004.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analy. Summary 431399

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested													
	Lab Id:	431399-001		431399-002		431399-003		431399-004					
	Field Id:	TZ Cell B G-1		TZ Cell B G-1		TZ Cell B G-1		TZ Cell B G-1					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Nov-10-11 09:25		Nov-10-11 09:30		Nov-10-11 09:35		Nov-10-11 09:40					
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-19-11 18:28		Nov-19-11 18:45		Nov-19-11 19:02		Nov-19-11 19:19					
	Analyzed:	Nov-19-11 18:28		Nov-19-11 18:45		Nov-19-11 19:02		Nov-19-11 19:19					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2.21	1.02	1.70	1.02	1.92	1.06	1.44	1.06				
Percent Moisture SUB: TX104704215	*Extracted:*												
	Analyzed:	Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		2.29	1.00	1.76	1.00	5.76	1.00	5.40	1.00				
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 15:33		Nov-16-11 15:42		Nov-16-11 15:45		Nov-16-11 15:48					
	Analyzed:	Nov-17-11 16:22		Nov-17-11 14:00		Nov-17-11 14:24		Nov-17-11 14:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.3	ND	15.2	ND	15.9	ND	15.8				
C12-C28 Diesel Range Hydrocarbons		575	15.3	429	15.2	260	15.9	197	15.8				
C28-C35 Oil Range Hydrocarbons		202	15.3	143	15.2	74.8	15.9	75.0	15.8				
Total TPH		777	15.3	572	15.2	335	15.9	272	15.8				

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

Brent Barron II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431399,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 431399-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:00

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	99.6	93	70-135	
o-Terphenyl	47.6	49.8	96	70-135	

Lab Batch #: 875077 **Sample:** 431399-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.6	91	70-135	
o-Terphenyl	46.2	49.8	93	70-135	

Lab Batch #: 875077 **Sample:** 431399-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 14:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	99.4	89	70-135	
o-Terphenyl	45.6	49.7	92	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.5	99.6	76	70-135	
o-Terphenyl	36.5	49.8	73	70-135	

Lab Batch #: 875077 **Sample:** 614271-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:00

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431399,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 614271-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.8	100	85	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:05

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.8	129	70-135	
o-Terphenyl	43.2	49.9	87	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.9	127	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431399 **Project ID:** 2004-00061

Lab Batch #: 875267 **Sample:** 614383-1-BKS **Matrix:** Solid

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<1.00	100	99.8	100	90-110	

Lab Batch #: 875077 **Sample:** 614271-1-BKS **Matrix:** Solid

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	948	95	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1050	105	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431399 **Project ID:** 2004-00061

Lab Batch ID: 875267 **QC- Sample ID:** 431399-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1.44	106	106	99	106	109	101	3	80-120	20	

Lab Batch ID: 875267 **QC- Sample ID:** 431411-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.38	104	111	104	104	106	100	5	80-120	20	

Lab Batch ID: 875077 **QC- Sample ID:** 431399-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	1020	874	86	1020	938	92	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	575	1020	1110	52	1020	1190	60	7	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431399

Lab Batch #: 874808 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431411-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.67	4.18	11	20	

Lab Batch #: 874808

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431413-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.27	2.44	7	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Bass e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431399

LAB # (lab use only)	FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell B G-1	X			11/10/2011	0925		1	X								SOIL		X								X				X				X
002	TZ Cell B G-2	X			11/10/2011	0930		1	X								SOIL		X								X				X				X
003	TZ Cell B G-3	X			11/10/2011	0935		1	X								SOIL		X								X				X				X
004	TZ Cell B G-4	X			11/10/2011	0940		1	X								SOIL		X								X				X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Bass	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	Date 11.11.11	Time 13:15

Laboratory Comments:

Sample Containers Intact?	N	
VOCs Free of Headspace?	N	
Labels on container(s)	N	
Custody seals on container(s)	N	
Custody seals on cooler(s)	N	
Sample Hand Delivered	N	
by Sampler/Client Rep. ?	N	
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11.11.11 13:15

Lab ID #: 431399

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431412

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431412**
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 431412. 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. 431412 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

XENCO Laboratories

Sample Cross Reference 431412

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	11-11-11 09:45		431412-001
TZ Cell D G-2	S	11-11-11 09:50		431412-002
TZ Cell D G-3	S	11-11-11 09:55		431412-003
TZ Cell D G-4	S	11-11-11 10:00		431412-004
TZ Cell D G-5	S	11-11-11 10:05		431412-005

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Lea Station Landfarm

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431412*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875154 TPH by Texas1005
SW8015MOD_NM

Batch 875154, 1-Chlorooctane recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 431412-001 S,431412-001 SD.

SW8015MOD_NM

Batch 875154, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431412-003, -004, -002, -005, -001.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analy Summary 431412

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested												
	Lab Id:	431412-001		431412-002		431412-003		431412-004		431412-005		
	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		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Nov-11-11 09:45		Nov-11-11 09:50		Nov-11-11 09:55		Nov-11-11 10:00		Nov-11-11 10:05		
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-19-11 21:53		Nov-19-11 22:10		Nov-19-11 23:19		Nov-19-11 23:36		Nov-19-11 23:53		
	Analyzed:	Nov-19-11 21:53		Nov-19-11 22:10		Nov-19-11 23:19		Nov-19-11 23:36		Nov-19-11 23:53		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		3.11	1.04	12.3	1.04	5.94	1.02	2.12	1.04	2.35	1.03	
Percent Moisture SUB: TX104704215	*Extracted:*											
	Analyzed:	Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		4.06	1.00	4.26	1.00	2.07	1.00	3.42	1.00	2.47	1.00	
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 16:36		Nov-16-11 16:45		Nov-16-11 16:48		Nov-16-11 16:51		Nov-16-11 16:54		
	Analyzed:	Nov-18-11 14:49		Nov-18-11 05:17		Nov-18-11 05:41		Nov-18-11 06:06		Nov-18-11 06:31		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.6	ND	15.6	ND	15.3	ND	15.5	ND	15.3	
C12-C28 Diesel Range Hydrocarbons		259	15.6	436	15.6	521	15.3	594	15.5	609	15.3	
C28-C35 Oil Range Hydrocarbons		126	15.6	177	15.6	214	15.3	218	15.5	216	15.3	
Total TPH		770	15.6	1230	15.6	1470	15.3	1620	15.5	1650	15.3	

Brent Barron II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431412,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 431412-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 05:17

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.5	117	70-135	
o-Terphenyl	46.9	49.8	94	70-135	

Lab Batch #: 875154 **Sample:** 431412-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 05:41

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-135	
o-Terphenyl	46.8	49.9	94	70-135	

Lab Batch #: 875154 **Sample:** 431412-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 06:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	47.8	49.9	96	70-135	

Lab Batch #: 875154 **Sample:** 431412-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 06:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.6	113	70-135	
o-Terphenyl	43.5	49.8	87	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 14:49

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.5	107	70-135	
o-Terphenyl	45.9	49.8	92	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431412,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 614274-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 875154 **Sample:** 614274-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:43

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.8	110	70-135	
o-Terphenyl	37.9	49.9	76	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-135	
o-Terphenyl	38.7	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431412 **Project ID:** 2004-00061

Lab Batch #: 875267 **Sample:** 614383-1-BKS **Matrix:** Solid

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<1.00	100	99.8	100	90-110	

Lab Batch #: 875154 **Sample:** 614274-1-BKS **Matrix:** Solid

Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	812	81	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	806	81	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431412 **Project ID:** 2004-00061

Lab Batch ID: 875267 **QC- Sample ID:** 431399-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1.44	106	106	99	106	109	101	3	80-120	20	

Lab Batch ID: 875267 **QC- Sample ID:** 431411-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/19/2011 **Date Prepared:** 11/19/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.38	104	111	104	104	106	100	5	80-120	20	

Lab Batch ID: 875154 **QC- Sample ID:** 431412-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.6	1040	838	81	1040	804	77	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	259	1040	877	59	1040	899	62	2	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431412

Lab Batch #: 874808 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431411-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.67	4.18	11	20	

Lab Batch #: 874808

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431413-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.27	2.44	7	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Bass e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431412

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell D G-1			11/10/2011	0945		1	X								SOIL	X											X		X
002	TZ Cell D G-2			11/10/2011	0950		1	X								SOIL	X											X		X
003	TZ Cell D G-3			11/10/2011	0955		1	X								SOIL	X											X		X
004	TZ Cell D G-4			11/10/2011	1000		1	X								SOIL	X											X		X
005	TZ Cell D G-5			11/10/2011	1005		1	X								SOIL	X											X		X

TCLP: / TOTAL: X (BTEX 8021B/5030 or BTEX 8260)

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Bass	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)	(Y)	N
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

XENCO Laboratories	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: 11.11.11 13:15

Lab ID #: 431412

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431410

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

21-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

21-NOV-11

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

Reference: XENCO Report No: **431410**
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 431410. 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. 431410 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

XENCO Laboratories

Sample Cross Reference 431410

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	11-10-11 10:10		431410-001
TZ Cell E G-2	S	11-10-11 10:15		431410-002
TZ Cell E G-3	S	11-10-11 10:20		431410-003
TZ Cell E G-4	S	11-10-11 10:25		431410-004

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*21-NOV-11*
Work Order Number:	*431410*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875077 TPH by SW8015 Mod
SW8015MOD_NM

Batch 875077, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431410-001, -003, -004, -002.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Batch: LBA-875144 Inorganic Anions by EPA 300/300.1
E300

Batch 875144, Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431410-001, -003, -004, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analy. Summary 431410

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 21-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431410-001		431410-002		431410-003		431410-004			
	Field Id:	TZ Cell E G-1		TZ Cell E G-2		TZ Cell E G-3		TZ Cell E G-4			
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Nov-10-11 10:10		Nov-10-11 10:15		Nov-10-11 10:20		Nov-10-11 10:25			
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Nov-18-11 04:25		Nov-18-11 04:25		Nov-18-11 04:25		Nov-18-11 04:25			
	Analyzed:	Nov-18-11 11:24		Nov-18-11 11:41		Nov-18-11 11:58		Nov-18-11 12:15			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1.45	1.03	1.41	1.04	1.42	1.02	1.46	1.02		
Percent Moisture SUB: TX104704215	***Extracted:***										
	Analyzed:	Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:05			
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		2.85	1.00	3.72	1.00	2.33	1.00	2.22	1.00		
TPH by SW8015 Mod SUB: TX104704215	***Extracted:***	Nov-16-11 15:51		Nov-16-11 15:54		Nov-16-11 15:57		Nov-16-11 16:00			
	Analyzed:	Nov-17-11 15:12		Nov-17-11 15:35		Nov-17-11 15:58		Nov-17-11 16:22			
	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	15.3	ND	15.3		
C12-C28 Diesel Range Hydrocarbons		198	15.4	174	15.6	45.2	15.3	181	15.3		
C28-C35 Oil Range Hydrocarbons		69.9	15.4	58.9	15.6	18.7	15.3	75.8	15.3		
Total TPH		268	15.4	233	15.6	63.9	15.3	257	15.3		

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431410,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 431410-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 15:12

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.9	99.7	84	70-135	
o-Terphenyl	43.4	49.9	87	70-135	

Lab Batch #: 875077 **Sample:** 431410-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 15:35

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	99.9	88	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 875077 **Sample:** 431410-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 15:58

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.7	99.7	84	70-135	
o-Terphenyl	44.4	49.9	89	70-135	

Lab Batch #: 875077 **Sample:** 431410-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:22

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	99.8	85	70-135	
o-Terphenyl	43.7	49.9	88	70-135	

Lab Batch #: 875077 **Sample:** 614271-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:00

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	100	85	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431410,

Project ID: 2004-00061

Lab Batch #: 875077 **Sample:** 614271-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 14:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.8	100	85	70-135	
o-Terphenyl	44.7	50.0	89	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:05

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.8	129	70-135	
o-Terphenyl	43.2	49.9	87	70-135	

Lab Batch #: 875077 **Sample:** 431399-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 16:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.9	127	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431410 **Project ID:** 2004-00061

Lab Batch #: 875144 **Sample:** 614326-1-BKS **Matrix:** Solid

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** MAB

Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
		BLANK /BLANK SPIKE RECOVERY STUDY				
Chloride	<1.00	100	101	101	90-110	

Lab Batch #: 875077 **Sample:** 614271-1-BKS **Matrix:** Solid

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
		BLANK /BLANK SPIKE RECOVERY STUDY				
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	948	95	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1050	105	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431410 **Project ID:** 2004-00061

Lab Batch ID: 875144 **QC- Sample ID:** 431603-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1630	103	1370	0	103	1370	0	0	80-120	20	X

Lab Batch ID: 875144 **QC- Sample ID:** 431605-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/18/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	7.48	101	109	101	101	113	104	4	80-120	20	

Lab Batch ID: 875077 **QC- Sample ID:** 431399-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.3	1020	874	86	1020	938	92	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	575	1020	1110	52	1020	1190	60	7	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431410

Lab Batch #: 874808 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431411-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.67	4.18	11	20	

Lab Batch #: 874808

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431413-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.27	2.44	7	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Bynum e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431410

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 8015B / TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell E G-1			11/10/2011	1010		1	X								SOIL	X								X			X				X
002	TZ Cell E G-2			11/10/2011	1015		1	X								SOIL	X								X			X				X
003	TZ Cell E G-3			11/10/2011	1020		1	X								SOIL	X								X			X				X
004	TZ Cell E G-4			11/10/2011	1025		1	X								SOIL	X								X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Bynum	11/11/11	475			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	11.11.11	13:15

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)	Y	(N)
Custody seals on cooler(s)	(Y)	N
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories		
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: 11.11.11 13:15

Lab ID #: 431410

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

Corrective Action Taken: _____

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

Analytical Report 431413

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431413**
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 431413. 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. 431413 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

XENCO Laboratories

Sample Cross Reference 431413

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	11-11-11 10:30		431413-001
TZ Cell F G-2	S	11-11-11 10:35		431413-002
TZ Cell F G-3	S	11-11-11 10:40		431413-003
TZ Cell F G-4	S	11-11-11 10:45		431413-004
TZ Cell F G-5	S	11-11-11 10:50		431413-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431413*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875154 TPH by Texas1005
SW8015MOD_NM

Batch 875154, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431413-004, -005, -001, -002, -003.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 875154, 1-Chlorooctane recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 431412-001 S,431412-001 SD.

Certificate of Analy Summary 431413

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431413-001		431413-002		431413-003		431413-004		431413-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-11-11 10:30		Nov-11-11 10:35		Nov-11-11 10:40		Nov-11-11 10:45		Nov-11-11 10:50	
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-20-11 01:18		Nov-20-11 01:35		Nov-20-11 01:53		Nov-20-11 02:10		Nov-20-11 02:27	
	Analyzed:	Nov-20-11 01:18		Nov-20-11 01:35		Nov-20-11 01:53		Nov-20-11 02:10		Nov-20-11 02:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.6	1.03	10.8	1.02	19.8	1.03	5.51	1.04	2.16	1.05
Percent Moisture SUB: TX104704215	*Extracted:*										
	Analyzed:	Nov-15-11 16:05		Nov-15-11 16:05		Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.71	1.00	2.27	1.00	3.07	1.00	3.79	1.00	4.67	1.00
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 16:57		Nov-16-11 17:00		Nov-16-11 17:03		Nov-16-11 17:06		Nov-16-11 17:09	
	Analyzed:	Nov-18-11 06:55		Nov-18-11 07:18		Nov-18-11 07:42		Nov-18-11 08:06		Nov-18-11 08:30	
	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	ND	15.6	ND	15.7
C12-C28 Diesel Range Hydrocarbons		561	15.4	516	15.3	762	15.4	537	15.6	264	15.7
C28-C35 Oil Range Hydrocarbons		217	15.4	202	15.3	255	15.4	223	15.6	125	15.7
Total TPH		1560	15.4	1440	15.3	2030	15.4	1520	15.6	778	15.7

Brent Barron II
Odessa Laboratory Manager

Final 1.000

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431413,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 431413-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 06:55

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.9	111	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 875154 **Sample:** 431413-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 07:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.6	112	70-135	
o-Terphenyl	46.7	49.8	94	70-135	

Lab Batch #: 875154 **Sample:** 431413-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 07:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.7	119	70-135	
o-Terphenyl	42.0	49.9	84	70-135	

Lab Batch #: 875154 **Sample:** 431413-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 08:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	40.9	49.9	82	70-135	

Lab Batch #: 875154 **Sample:** 431413-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 08:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.6	106	70-135	
o-Terphenyl	44.7	49.8	90	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431413,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 614274-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 875154 **Sample:** 614274-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:43

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.8	110	70-135	
o-Terphenyl	37.9	49.9	76	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-135	
o-Terphenyl	38.7	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431413 **Project ID:** 2004-00061

Lab Batch #: 875268 **Sample:** 614386-1-BKS **Matrix:** Solid
Date Analyzed: 11/20/2011 **Date Prepared:** 11/20/2011 **Analyst:** MAB
Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<1.00	100	100	100	90-110	

Lab Batch #: 875154 **Sample:** 614274-1-BKS **Matrix:** Solid
Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH
Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	812	81	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	806	81	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431413 **Project ID:** 2004-00061

Lab Batch ID: 875268 **QC- Sample ID:** 431413-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/20/2011 **Date Prepared:** 11/20/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.16	105	110	103	105	109	102	1	80-120	20	

Lab Batch ID: 875154 **QC- Sample ID:** 431412-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.6	1040	838	81	1040	804	77	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	259	1040	877	59	1040	899	62	2	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431413

Lab Batch #: 874808 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431411-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.67	4.18	11	20	

Lab Batch #: 874808

Date Analyzed: 11/15/2011 16:05 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431413-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.27	2.44	7	20	

Lab Batch #: 874809

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431415-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.07	3.71	9	20	

Lab Batch #: 874809

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431479-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	22.0	22.7	3	20	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Shannon Brown e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 431413

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW = Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 8015M 418.1	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell F G-1			11/10/2011	1030		1	X								SOIL	X											X				X
002	TZ Cell F G-2			11/10/2011	1035		1	X								SOIL	X											X				X
003	TZ Cell F G-3			11/10/2011	1040		1	X								SOIL	X											X				X
004	TZ Cell F G-4			11/10/2011	1045		1	X								SOIL	X											X				X
005	TZ Cell F G-5			11/10/2011	1050		1	X								SOIL	X											X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Brown	11/11/11	1175			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	11-11-11	13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env. / Plains

Date/Time: 11.11.11 13:15

Lab ID #: 431413

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431414

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

22-NOV-11

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

Reference: XENCO Report No: **431414**
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 431414. 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. 431414 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

XENCO Laboratories

Sample Cross Reference 431414

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	11-11-11 10:55		431414-001
TZ Cell G G-2	S	11-11-11 11:00		431414-002
TZ Cell G G-3	S	11-11-11 11:05		431414-003
TZ Cell G G-4	S	11-11-11 11:10		431414-004
TZ Cell G G-5	S	11-11-11 11:15		431414-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431414*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875139 TPH by Texas1005
SW8015MOD_NM

Batch 875139, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike.
Samples affected are: 431414-002, -003, -004, -005, -001.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 875139, C12-C28 Diesel Range Hydrocarbons, C28-C35 Oil Range Hydrocarbons RPD was outside QC limits.
Samples affected are: 431414-002, -003, -004, -005, -001

Certificate of Analysis Summary 431414

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431414-001		431414-002		431414-003		431414-004		431414-005	
	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	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-11-11 10:55		Nov-11-11 11:00		Nov-11-11 11:05		Nov-11-11 11:10		Nov-11-11 11:15	
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-20-11 03:18		Nov-20-11 04:09		Nov-20-11 04:26		Nov-20-11 04:44		Nov-20-11 05:01	
	Analyzed:	Nov-20-11 03:18		Nov-20-11 04:09		Nov-20-11 04:26		Nov-20-11 04:44		Nov-20-11 05:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1.69	1.05	2.02	1.06	3.55	1.04	2.79	1.03	ND	1.06
Percent Moisture SUB: TX104704215	*Extracted:*										
	Analyzed:	Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.88	1.00	6.05	1.00	4.11	1.00	3.26	1.00	6.07	1.00
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 10:36		Nov-16-11 10:45		Nov-16-11 10:48		Nov-16-11 10:51		Nov-16-11 10:54	
	Analyzed:	Nov-17-11 21:24		Nov-17-11 22:35		Nov-17-11 22:59		Nov-17-11 23:22		Nov-17-11 23:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		17.3	15.7	ND	15.9	ND	15.6	15.8	15.4	ND	15.9
C12-C28 Diesel Range Hydrocarbons		2510	15.7	1190	15.9	2040	15.6	2590	15.4	370	15.9
C28-C35 Oil Range Hydrocarbons		397	15.7	277	15.9	370	15.6	510	15.4	92.7	15.9
Total TPH		2920	15.7	1470	15.9	2410	15.6	3120	15.4	463	15.9

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431414,

Project ID: 2004-00061

Lab Batch #: 875139 **Sample:** 431414-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 21:24

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.6	82	70-135	
o-Terphenyl	48.2	49.8	97	70-135	

Lab Batch #: 875139 **Sample:** 431414-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 22:35

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.2	99.8	82	70-135	
o-Terphenyl	45.8	49.9	92	70-135	

Lab Batch #: 875139 **Sample:** 431414-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 22:59

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.9	99.8	84	70-135	
o-Terphenyl	50.0	49.9	100	70-135	

Lab Batch #: 875139 **Sample:** 431414-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 23:22

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.5	99.5	72	70-135	
o-Terphenyl	44.8	49.8	90	70-135	

Lab Batch #: 875139 **Sample:** 431414-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 23:46

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	99.6	86	70-135	
o-Terphenyl	42.3	49.8	85	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431414,

Project ID: 2004-00061

Lab Batch #: 875139 **Sample:** 614277-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 20:37

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	54.6	50.0	109	70-135	

Lab Batch #: 875139 **Sample:** 614277-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/17/11 21:01

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

Lab Batch #: 875139 **Sample:** 431414-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 21:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.4	104	70-135	
o-Terphenyl	54.9	49.7	110	70-135	

Lab Batch #: 875139 **Sample:** 431414-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/17/11 22:12

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.4	99.7	88	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

/ork Order #: 431414 **Project ID:** 2004-00061

Lab Batch #: 875268 **Sample:** 614386-1-BKS **Matrix:** Solid
Date Analyzed: 11/20/2011 **Date Prepared:** 11/20/2011 **Analyst:** MAB
Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<1.00	100	100	100	90-110	

Lab Batch #: 875139 **Sample:** 614277-1-BKS **Matrix:** Solid
Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH
Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	1090	109	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	961	96	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431414 **Project ID:** 2004-00061

Lab Batch ID: 875268 **QC- Sample ID:** 431413-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/20/2011 **Date Prepared:** 11/20/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.16	105	110	103	105	109	102	1	80-120	20	

Lab Batch ID: 875139 **QC- Sample ID:** 431414-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/17/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	17.3	1050	1170	110	1050	1020	95	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	2510	1050	2230	0	1050	3250	70	37	70-135	35	XF

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431414

Lab Batch #: 874809 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431415-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.07	3.71	9	20	

Lab Batch #: 874809

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431479-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	22.0	22.7	3	20	

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

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

Project Manager: Ben J. Arguijo
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-2378 Fax No: (575) 396-1429
Sampler Signature: Shannon Brown e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm
Project #: 2004-00061
Project Loc: Lea County, NM
PO #: PAA - J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) AH 11/8/11
ORDER #: 43141164

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
001	TZ Cell G G-1			11/10/2011	1055		1	X								SOIL	X											X		X
002	TZ Cell G G-2			11/10/2011	1100		1	X								SOIL	X											X		X
003	TZ Cell G G-3			11/10/2011	1105		1	X								SOIL	X											X		X
004	TZ Cell G G-4			11/10/2011	1110		1	X								SOIL	X											X		X
005	TZ Cell G G-5			11/10/2011	1115		1	X								SOIL	X											X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Brown	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Elam	11-11-11	13:15

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

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories	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: 11·11·11 13:15

Lab ID #: 431414

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

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

Regarding: _____

_____

Corrective Action Taken: _____

_____

_____

_____

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

Analytical Report 431415

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

Lea Station Landfarm

2004-00061

22-NOV-11

Collected By: Client

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 (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

22-NOV-11

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

Reference: XENCO Report No: **431415**
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 431415. 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. 431415 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

Sample Cross Reference 431415

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	11-10-11 11:20		431415-001
TZ Cell H G-2	S	11-10-11 11:25		431415-002
TZ Cell H G-3	S	11-10-11 11:30		431415-003
TZ Cell H G-4	S	11-10-11 11:35		431415-004
TZ Cell H G-5	S	11-10-11 11:40		431415-005

CASE NARRATIVE

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

Project ID:	*2004-00061*	*Report Date:*	*22-NOV-11*
Work Order Number:	*431415*	*Date Received:*	*11/11/2011*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875154 TPH by Texas1005
SW8015MOD_NM

Batch 875154, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431415-004, -003, -005, -002, -001.
The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits

Certificate of Analys ummary 431415

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Lea Station Landfarm

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

Date Received in Lab: Fri Nov-11-11 01:15 pm
Report Date: 22-NOV-11
Project Manager: Brent Barron II

Analysis Requested												
	Lab Id:	431415-001		431415-002		431415-003		431415-004		431415-005		
	Field Id:	TZ Cell H G-1		TZ Cell H G-2		TZ Cell H G-3		TZ Cell H G-4		TZ Cell H G-5		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Nov-10-11 11:20		Nov-10-11 11:25		Nov-10-11 11:30		Nov-10-11 11:35		Nov-10-11 11:40		
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Nov-22-11 09:37		Nov-22-11 09:54		Nov-22-11 10:11		Nov-22-11 10:28		Nov-22-11 10:45		
	Analyzed:	Nov-22-11 09:37		Nov-22-11 09:54		Nov-22-11 10:11		Nov-22-11 10:28		Nov-22-11 10:45		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		6.46	1.06	84.4	1.04	6.01	1.03	5.31	1.06	3.79	1.05	
Percent Moisture SUB: TX104704215	*Extracted:*											
	Analyzed:	Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15		Nov-15-11 16:15		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		6.07	1.00	4.07	1.00	3.04	1.00	5.45	1.00	4.87	1.00	
TPH by SW8015 Mod SUB: TX104704215	*Extracted:*	Nov-16-11 17:12		Nov-16-11 17:15		Nov-16-11 17:18		Nov-16-11 17:21		Nov-16-11 17:24		
	Analyzed:	Nov-18-11 09:18		Nov-18-11 09:42		Nov-18-11 10:06		Nov-18-11 10:30		Nov-18-11 10:55		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.9	ND	15.6	ND	15.5	ND	15.8	ND	15.7	
C12-C28 Diesel Range Hydrocarbons		1300	15.9	1540	15.6	759	15.5	622	15.8	359	15.7	
C28-C35 Oil Range Hydrocarbons		293	15.9	365	15.6	212	15.5	193	15.8	113	15.7	
Total TPH		3190	15.9	3810	15.6	1940	15.5	1630	15.8	944	15.7	

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect 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 quantiation limit and above the detection limit.

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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431415,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 431415-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 09:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.6	99	70-135	
o-Terphenyl	37.0	49.8	74	70-135	

Lab Batch #: 875154 **Sample:** 431415-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 09:42

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	39.7	50.0	79	70-135	

Lab Batch #: 875154 **Sample:** 431415-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:06

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	40.0	50.0	80	70-135	

Lab Batch #: 875154 **Sample:** 431415-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.4	96	70-135	
o-Terphenyl	37.2	49.7	75	70-135	

Lab Batch #: 875154 **Sample:** 431415-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 10:55

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-135	
o-Terphenyl	40.3	49.9	81	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Lea Station Landfarm

Work Orders : 431415,

Project ID: 2004-00061

Lab Batch #: 875154 **Sample:** 614274-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:18

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 875154 **Sample:** 614274-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/18/11 03:43

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	41.3	50.0	83	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:30

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.8	110	70-135	
o-Terphenyl	37.9	49.9	76	70-135	

Lab Batch #: 875154 **Sample:** 431412-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/18/11 04:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.8	111	70-135	
o-Terphenyl	38.7	49.9	78	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

XENCO Laboratories

Blank Spike Recovery

Project Name: Lea Station Landfarm

Work Order #: 431415 **Project ID:** 2004-00061

Lab Batch #: 875400 **Sample:** 614464-1-BKS **Matrix:** Solid

Date Analyzed: 11/22/2011 **Date Prepared:** 11/22/2011 **Analyst:** MAB

Reporting Units: mg/kg **Batch #:** 1

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
Chloride	<1.00	100	103	103	90-110	

Lab Batch #: 875154 **Sample:** 614274-1-BKS **Matrix:** Solid

Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

TPH by SW8015 Mod Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	812	81	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	806	81	70-135	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Lea Station Landfarm

Work Order # : 431415 **Project ID:** 2004-00061

Lab Batch ID: 875400 **QC- Sample ID:** 431415-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/22/2011 **Date Prepared:** 11/22/2011 **Analyst:** MAB

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	3.79	105	110	101	105	112	103	2	80-120	20	

Lab Batch ID: 875154 **QC- Sample ID:** 431412-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/18/2011 **Date Prepared:** 11/16/2011 **Analyst:** JAH

Reporting Units: mg/kg

TPH by SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.6	1040	838	81	1040	804	77	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	259	1040	877	59	1040	899	62	2	70-135	35	X

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Lea Station Landfarm

Work Order #: 431415

Lab Batch #: 874809 **Project ID:** 2004-00061

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431415-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.07	3.71	9	20	

Lab Batch #: 874809

Date Analyzed: 11/15/2011 16:15 **Date Prepared:** 11/15/2011 **Analyst:** MAB

QC- Sample ID: 431479-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	22.0	22.7	3	20	

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

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

Project Manager: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature: Shannon Brown e-mail: bjarguijo@basinenv.com

Project Name: Lea Station Landfarm

Project #: 2004-00061

Project Loc: Lea County, NM

PO #: PAA - J. Henry

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431415

LAB # (lab use only)	FIELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
CC1	TZ Cell H G-1	X			11/10/2011	1120		1	X								SOIL	X											X			X
CC2	TZ Cell H G-2	X			11/10/2011	1125		1	X								SOIL	X											X			X
CC3	TZ Cell H G-3	X			11/10/2011	1130		1	X								SOIL	X											X			X
CC4	TZ Cell H G-4	X			11/10/2011	1135		1	X								SOIL	X											X			X
CC5	TZ Cell H G-5	X			11/10/2011	1140		1	X								SOIL	X											X			X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Shannon Brown	11/11/11	1:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Glass	Date 11-11-11	Time 13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.5 °C

Final 1.000

XENCO Laboratories

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: 11·11·11 13:15

Lab ID #: 431415

Initials: AE

Sample Receipt Checklist

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

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	5.5 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

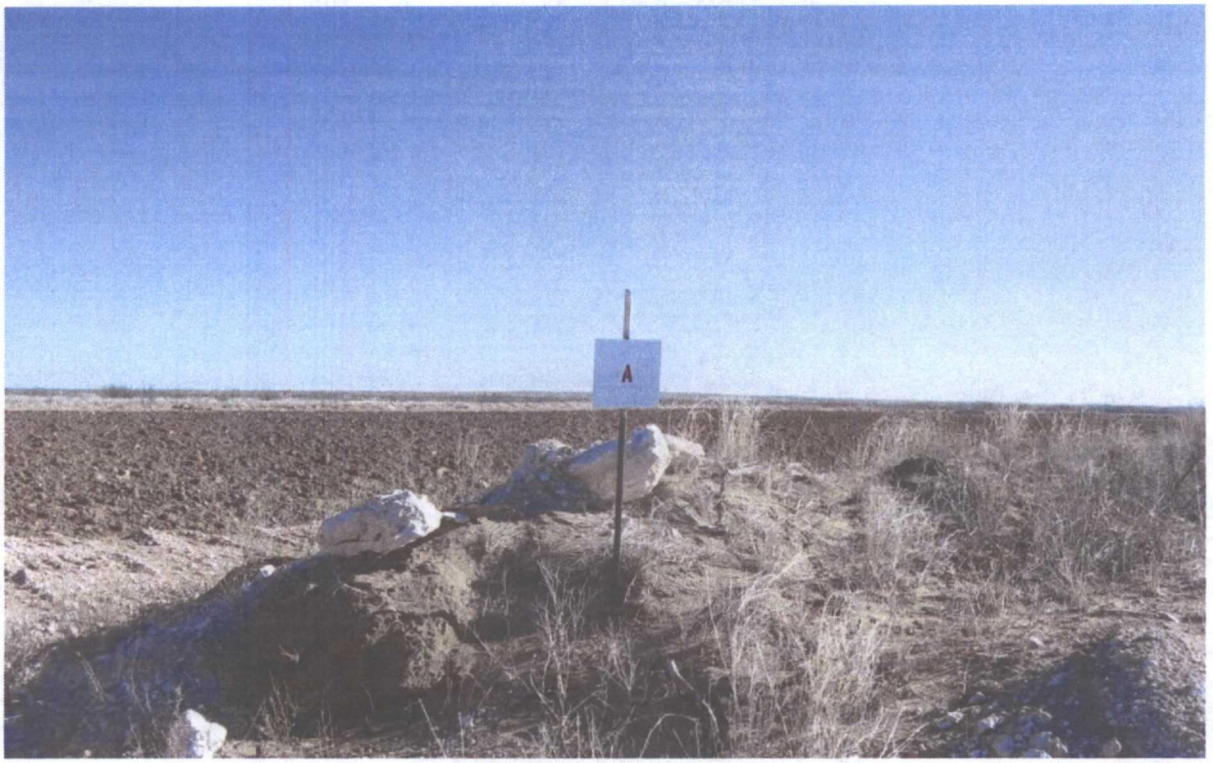
Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: _____

Corrective Action Taken: _____

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

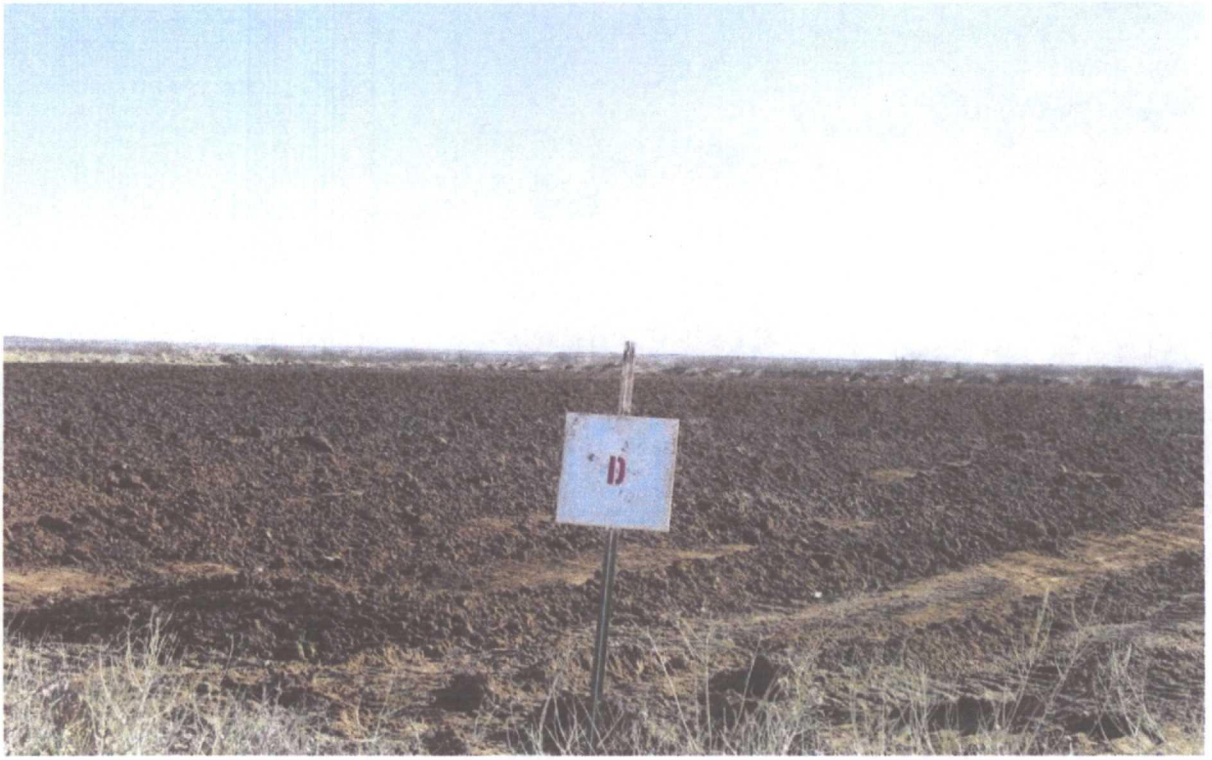
Photographs



Lea Station Landfarm - Cell A

Lea Station Landfarm - Cell B

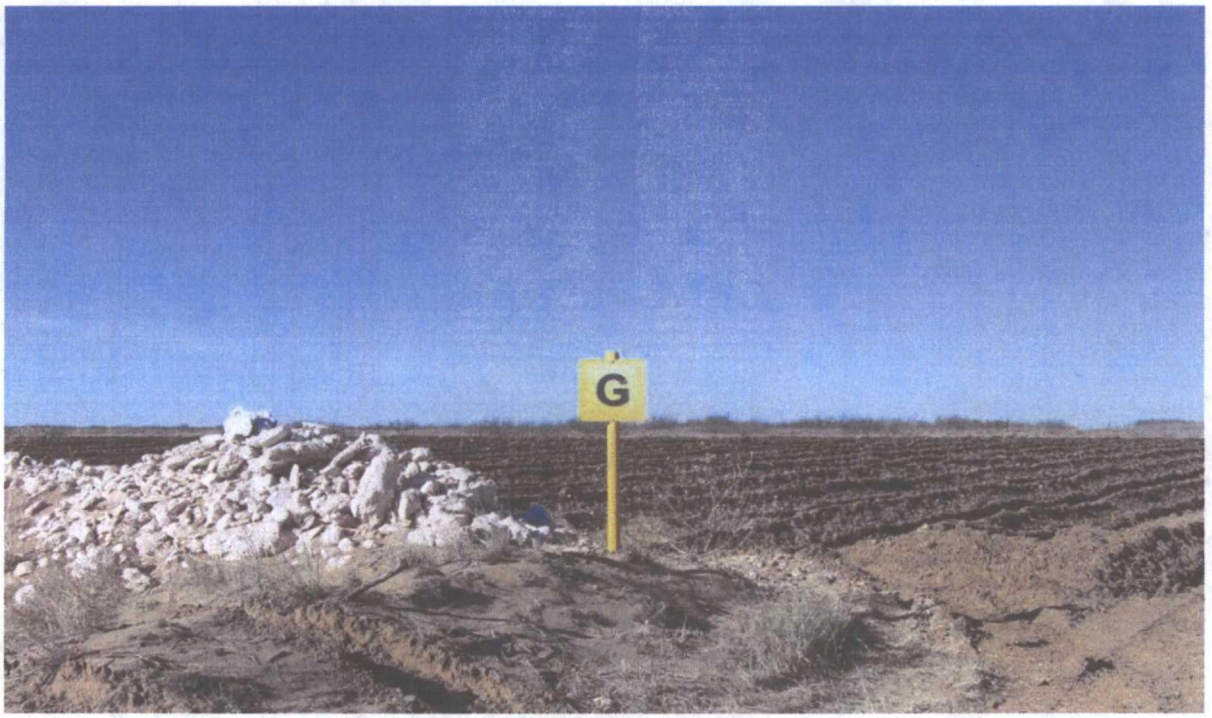
Lea Station Landfarm - Cell C



Lea Station Landfarm - Cell D

Lea Station Landfarm - Cell E

Lea Station Landfarm - Cell F



Lea Station Landfarm - Cell G

Lea Station Landfarm - Cell H