District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
MAY 13 2009
HOBBSOCD

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	14 – inch Vac to Jal BLM	Facility Type	Pipeline

Surface Owner BLM	Mineral Owner	Lease No.

LOCATION OF RELEASE

CHEVRON AB COATES D 003 API # 30-025-11748-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	24	25S	37E					Lea

Latitude N 32° 6' 36'' **Longitude** W 103° 7' 8"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 18 bbls	Volume Recovered 0 bbls
Source of Release 14" Steel Pipeline	Date and Hour of Occurrence 04/09/2009	Date and Hour of Discovery 04/09/2009 10:00 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Larry Johnson on 05/13/2009 (release originally estimated 3-4 bbls, revised volume on 05/13/2009)	
By Whom? Jason Henry	Date and Hour 05/13/2009 @ 0900	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

During the purging of the 14-inch Sweet Vac to Jal Line, a release of crude oil occurred due to external corrosion. Throughput for the subject line is 0 bbls/day because the line is inactive and was being purged at the time of the release. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 38.

Describe Area Affected and Cleanup Action Taken.* .

The released crude resulted in a surface stain that measured approximately 50' x 30'. The impacted area will be remediated per applicable guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Jason Henry

Printed Name: Jason Henry

Title: Remediation Coordinator

E-mail Address: jhenry@paalp.com

Date: 05/13/2009 Phone: (575) 441-1099

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRO ENGR

Approval Date: 5.13.09 Expiration Date: 7.20.09

Conditions of Approval:

Attached ☐

IRP# 09.5.2182

* Attach Additional Sheets If Necessary

fAPI 09135325 23

Basin Environmental Consulting, LLC

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

Effective Solutions

REMEDIATION SUMMARY

AND

SITE CLOSURE REQUEST

PLAINS PIPELINE, L.P. (231735)
14-Inch Vac to Jal - BLM
Lea County, New Mexico
Plains SRS # 2009-093
UNIT "N" (SE/SW), Section 24, Township 25 South, Range 37 East
Latitude 32° 06' 36" North, Longitude 103° 07' 08" West
NMOCD Reference # 1RP-2182

Prepared For:

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

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

September 2009

Curt D. Stanley
Project Manager

Camille J. Bryant
Project Manager

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APPENDICES

INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as 14-Inch Vac to Jal - BLM (SRS #2009-093). The legal description of the release site is Unit Letter "N" (SE ¼ SW ¼), Section 24, Township 25 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by the United States Bureau of Land Management (BLM). The BLM Report of Undesirable Event is provided as Appendix A. An archaeological resource survey was performed by Boone Archaeological Services, LLC of Carlsbad, New Mexico. The archaeological survey findings were negative and the report documenting the findings is provided as Appendix B. The release site GPS coordinates are 32° 06' 36" North and 103° 07' 08' West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. Photographs are provided as Appendix C. The Release Notification and Corrective Action (Form C-141) is provided as Appendix E.

On April 9, 2009, Plains responded to a crude oil release occurring on the 14-Inch Vac to Jal pipeline. The release site is located on and adjacent to a caliche lease road, remediation of the release required the closure and diversion of traffic from the road. The release occurred during purging activities on the inactive pipeline and was initially deemed a non-reportable release of three (3) to four (4) barrels. The visible surface stain measured approximately thirty (30) feet in width and fifty (50) feet in length. In the course of excavation and delineation activities, Plains representatives revised the estimated volume of the release. On May 13, 2009, Plains submitted a Form C-141 to the NMOCD Hobbs District Office, indicating eighteen (18) barrels of crude oil was released, with no recovery.

NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells are recorded in Section 24 of the above referenced township. According to a depth to groundwater reference map utilized by the New Mexico Oil Conservation Division (NMOCD), groundwater should be encountered at approximately 150 feet below ground surface (bgs). This depth to groundwater results in a score of zero (0) being assigned to the site based on the New Mexico Oil Conservation Division (NMOCD) depth to groundwater criteria.

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

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

The *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, 1993) indicates the 14-Inch Vac to Jal - BLM release site has a ranking score of zero (0). Based on this score, the soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 mg/Kg (ppm)

SUMMARY OF FIELD ACTIVITIES

On April 20, 2009, excavation of the impacted soil began at the 14-Inch Vac to Jal – BLM release site. Impacted soil excavated from the site was stockpiled on plastic, adjacent to the excavation.

On May 8, 2009, two (2) excavation floor soil samples (West Exc. Floor @ 12' and West Exc. Floor @ 8') were collected and submitted to the laboratory. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. TPH concentrations were 144.3 mg/Kg and 85.2 mg/Kg for soil samples West Exc. Floor @ 12' and West Exc. Floor @ 8', respectively. A summary of Concentrations of BTEX, TPH and Chloride in Soil is provided as Table 1. Laboratory analytical reports are provided as Appendix D.

On May 8, 2009, three (3) excavation sidewall soil samples (West Exc. SSW @ 11' and West Exc. WSW @ 7' and West Exc. NSW @ 7') were collected and submitted to the laboratory. The analytical results indicated benzene concentrations were less than the laboratory MDL of 0.0011 for soil sample West Exc. SSW @ 11', 0.0018 mg/Kg for soil sample West Exc. WSW @ 7' and 0.0017 mg/Kg for soil sample West Exc. NSW @ 7'. BTEX concentrations were less than the laboratory MDL of 0.0021 mg/Kg for soil sample West Exc. SSW @ 11', 0.0268 mg/Kg for soil sample West Exc. WSW @ 7' and 0.0262 mg/Kg for soil sample West Exc. NSW @ 7'. TPH concentrations were 19.4 mg/Kg, 33.7 mg/Kg, and 162.1 mg/Kg for soil samples West Exc. SSW @ 11', West Exc. WSW @ 7', and West Exc. NSW @ 7', respectively.

On May 18, 2009, five (5) excavation sidewall soil samples (East Exc. NSW @ 2.5', East Exc. ESW @ 2.5', East Exc. SSW @ 2.5', NSW @ 7', SSW @ 7') were collected and submitted to the laboratory. The analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL in soil samples East Exc. ESW @ 2.5', East Exc. SSW @ 2.5', NSW @ 7', and SSW @ 7' to 0.0051 mg/Kg in soil sample East Exc. NSW @ 2.5'. BTEX concentrations ranged from less than the appropriate laboratory MDL in soil samples NSW @ 7' and SSW @ 7' to 0.3191 mg/Kg in soil sample East Exc. ESW @ 2.5'. TPH concentrations ranged from less than the laboratory MDL of 18.3 mg/Kg in soil sample SSW @ 7' to 5,929 mg/Kg in soil sample East Exc. ESW @ 2.5'.

On May 18, 2009, two (2) excavation floor soil samples (East Exc. Floor @ 3' and RP @ 8') were collected and submitted to the laboratory. The analytical results indicated benzene concentrations were 0.0221 mg/Kg and less than 0.001 mg/Kg for soil samples East Exc. Floor @ 3' and RP @ 8', respectively. BTEX concentrations were 1.609 mg/Kg and 0.0095 mg/Kg for soil samples East Exc. Floor @ 3' and RP @ 8', respectively. TPH concentrations were 8,200 mg/Kg and 113.6 mg/Kg for soil samples East Exc. Floor @ 3' and RP @ 8', respectively.

On May 18, 2009, two (2) stockpile soil samples (Stockpile 1 and Stockpile 2) were collected and submitted to the laboratory. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for soil samples Stockpile 1 and Stockpile 2. BTEX concentrations were 2.2022 mg/Kg and 3.7467 mg/Kg for soil samples Stockpile 1 and Stockpile 2, respectively. TPH concentrations were 995 mg/Kg and 1,277 mg/Kg for soil samples Stockpile 1 and Stockpile 2, respectively. Soil sample Stockpile 1 was analyzed for concentrations of chloride using method EPA 300.1. The analytical results indicated the chloride concentration was 441 mg/Kg.

Based on the analytical results, only soil samples East Exc. ESW @ 2.5 and East Exc. Floor @ 3' exhibited TPH concentrations in excess of the NMOCD regulatory standard of 5,000 mg/Kg. On May 28, 2009, equipment was mobilized to the release site to excavate impacted soil from the east side floor and sidewall. The excavated soil was added to the existing stockpiles. The final dimensions of the excavation were approximately 66 feet in width (north to south), 92 feet in length (east to west) and a maximum of 12 feet in depth. Approximately 3,000 cubic yards of impacted soil was excavated and stockpiled adjacent to the excavation during remediation activities.

On May 28, 2009, one (1) excavation floor soil sample (East Exc. Floor @ 3.5') and one (1) excavation sidewall soil sample (East Exc. ESW @ 3.5') were collected and submitted to the laboratory. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for soil samples East Exc. Floor @ 3.5' and East Exc. ESW @ 3.5'. Soil sample East Exc. Floor @ 3.5' was analyzed for concentrations of chloride using method EPA 300.1. The analytical results indicated the chloride concentration was 73.6 mg/Kg.

On June 11, 2009, Plains presented the *Remediation Summary and Site Closure Proposal* (Proposal) to a representative of the NMOCD Hobbs District Office. The Proposal was approved by the NMOCD representative and the proposed closure activities commenced.

On June 18, 2009, a soil sample (Blended-1) was collected and submitted to the laboratory from the 500 cy stockpile designated "Stockpile #1". The soil samples were be submitted to the laboratory and analyzed for concentrations of BTEX using EPA method 8021b and TPH using SW-846 8015M. The analytical results indicated the benzene concentration was 0.4051 mg/Kg, the BTEX concentration was 80.8051 mg/Kg and the TPH concentration was 4,780 mg/Kg. Based on the analytical results, the BTEX concentration exceeded the NMOCD regulatory standard of 50 mg/Kg and "Stockpile #1" required additional blending and sampling.

On June 22, 2009, soil samples (Blended-2 and Blended-3) were collected and submitted to the laboratory from the 500 cy stockpiles designated "Stockpile #2" and "Stockpile #3", respectively. The analytical results indicated the benzene concentration in soil samples Blended-2 and Blended-3 was 0.2833 mg/Kg and 0.7761 mg/Kg, respectively. The results indicated the BTEX concentration in soil samples Blended-2 and Blended-3 was 33.5893 mg/Kg and 90.2761 mg/Kg, respectively. The TPH concentration in soil samples Blended-2 and Blended-3 was 3,857 mg/Kg and 5,578 mg/Kg, respectively. Based on the analytical results, soil contained in "Stockpile #2" and represented by soil sample Blended-2 was deemed suitable as excavation backfill. The results indicated soil contained in Stockpile #3 and represented by soil sample Blended-3, contained BTEX and TPH concentrations exceeding the NMOCD regulatory standard of 50 mg/Kg and 5,000 mg/Kg, respectively. Based on the analytical results, Stockpile #3 required additional blending and sampling.

On June 24, 2009, soil samples (Blended-4, Blended-5 and Blended-6) were collected and submitted to the laboratory from the 500 cy stockpiles designated "Stockpile #4", Stockpile #5 and "Stockpile #6", respectively. The analytical results indicated the benzene concentration in soil samples Blended-4, Blended-5 and Blended-6 was less than the laboratory MDL in soil samples Blended-4 and Blended-5 and 2.767 mg/Kg in soil sample Blended-6. The results indicated the BTEX concentration in soil samples Blended-4, Blended-5 and Blended-6 was 97.47 mg/Kg, 78.9 mg/Kg and 362.507 mg/Kg, respectively. The TPH concentration in soil samples Blended-4, Blended-5 and Blended-6 was 7,088

mg/Kg, 6,260 mg/Kg and 20,570 mg/Kg, respectively. The analytical results indicated soil contained in Stockpile #4, Stockpile #5 and Stockpile #6 and represented by soil samples Blended-4, Blended-5 and Blended-6 contained BTEX and TPH concentrations exceeding the NMOCD regulatory standard of 50 mg/Kg and 5,000 mg/Kg, respectively. Based on the analytical results, Stockpile #4, Stockpile #5 and Stockpile #6 required additional blending and sampling.

On June 26, 2009, Plains presented the Proposal to a representative of the BLM Carlsbad District Office. The Proposal was approved by the BLM representative and seeding requirements were received.

On July 1, 2009, a soil sample (Blended-1A) was collected and submitted to the laboratory from the reblended 500 cy stockpile designated "Stockpile #1". The analytical results indicated the benzene concentration was 0.1041 mg/Kg, the BTEX concentration was 37.3500 mg/Kg and the TPH concentration was 3,549 mg/Kg. Based on the analytical results, soil contained in "Stockpile #1" and represented by soil sample Blended-1A was deemed suitable as excavation backfill.

On July 2, 2009, soil samples (Blended-3A and Blended-4A) were collected and submitted to the laboratory from the reblended 500 cy stockpiles designated "Stockpile #3" and "Stockpile #4", respectively. The analytical results indicated the benzene concentration in soil samples Blended-3A and Blended-4A were less than the laboratory MDL of 0.2635 mg/Kg and 0.1085 mg/Kg, respectively. The results indicated the BTEX concentration in soil samples Blended-3A and Blended-4A was 3.9207 mg/Kg and 3.8816 mg/Kg, respectively. The TPH concentration in soil samples Blended-3A and Blended-4A was 4,096 mg/Kg and 4,320 mg/Kg, respectively. Based on the analytical results, soil contained in "Stockpile #3" and "Stockpile #4 and represented by soil samples Blended-3A and Blended-4A was deemed suitable as excavation backfill.

On July 6, 2009, soil samples (Blended-5 and Blended-6) were collected and submitted to the laboratory from the reblended 500 cy stockpiles designated "Stockpile #5" and "Stockpile #6", respectively. The analytical results indicated the benzene concentration in soil sample Blended-5 was less than the laboratory MDL of 0.1095 mg/Kg and the benzene concentration in soil sample Blended-6 was 0.3148 mg/Kg. The results indicated the BTEX concentration in soil samples Blended-5 and Blended-6 was 24.13 mg/Kg and 119.4048 mg/Kg, respectively. The TPH concentration in soil samples Blended-5 and Blended-6 was 3,898 mg/Kg and 12,860 mg/Kg, respectively. Based on the analytical results, soil contained in "Stockpile #5" and represented by soil sample Blended-5 was deemed suitable as excavation backfill. The results indicated soil contained in Stockpile #6 and represented by soil sample Blended-6, contained BTEX and TPH concentrations exceeding the NMOCD regulatory standard of 50 mg/Kg and 5,000 mg/Kg, respectively. Based on the analytical results, Stockpile #6 required additional blending and sampling.

On July 15, 2009, following additional blending, a soil sample (Blended-6B) was collected and submitted to the laboratory from the 500 cy stockpile designated "Stockpile #6". The analytical results indicated the benzene concentration was 0.0098 mg/Kg, the BTEX concentration was 0.8805 mg/Kg and the TPH concentration was 4,629 mg/Kg. Based on the analytical results, soil contained in "Stockpile #6" and represented by soil sample Blended-6B was deemed suitable as excavation backfill.

On receipt of the analytical results, soil stockpiles deemed suitable for use as backfill were placed in the excavation in twelve (12) inch lifts and compacted to minimize the settling of the soil. Following the

backfill activities, the soil was contoured to fit the surrounding topography and non-impacted caliche was purchased from an off-site source. The caliche lease road was replaced and reopened, and any areas disturbed by remediation activities will be reseeded to BLM specifications.

SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples, Basin recommends Plains provide the NMOCD Hobbs District Office and the BLM Carlsbad District Office, a copy of this Remediation Summary and Site Closure Request and request the NMOCD and BLM grant site closure to the 14-Inch Vac to Jal - BLM release site.

LIMITATIONS

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

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

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

DISTRIBUTION:

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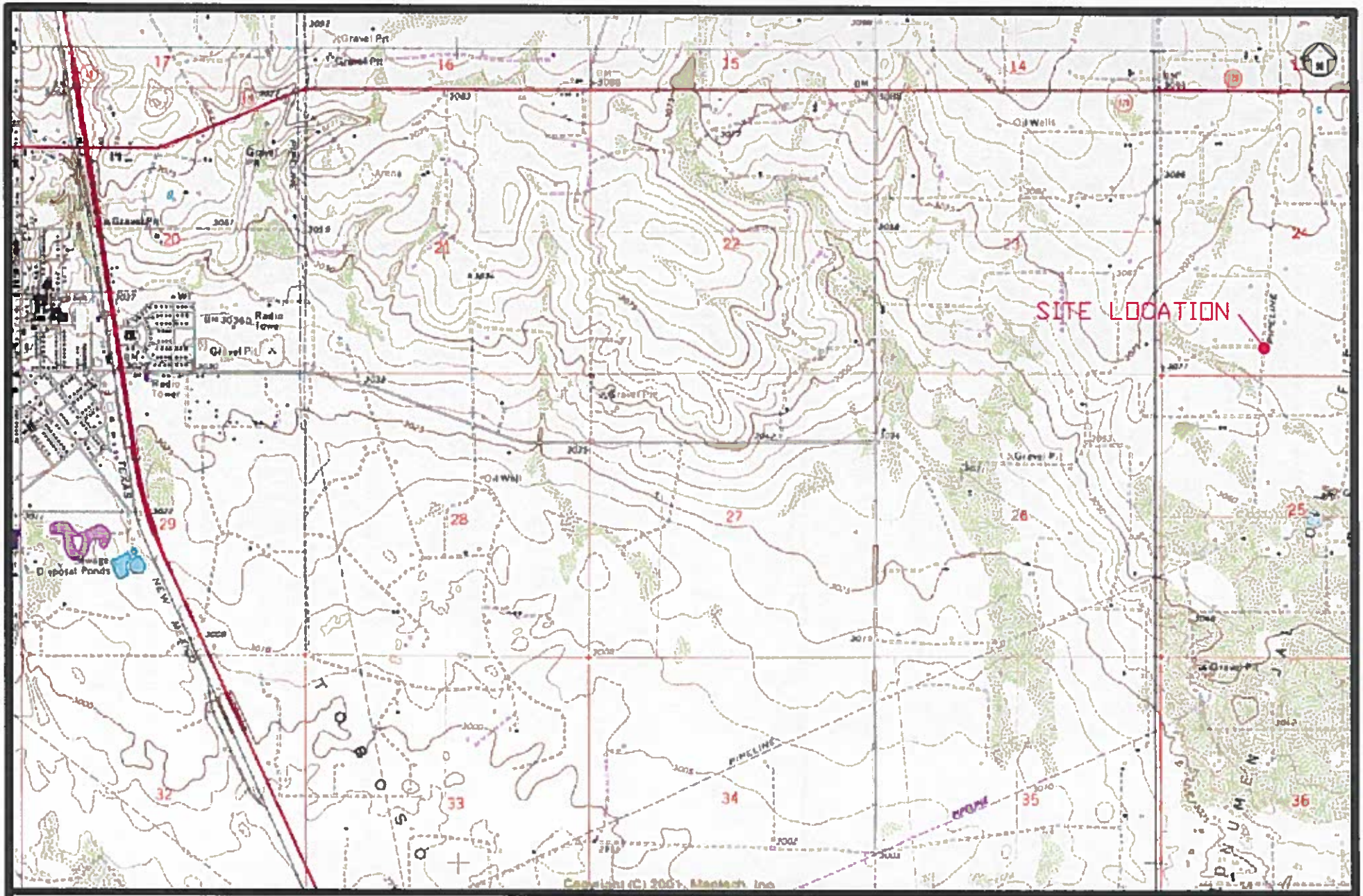
Figures



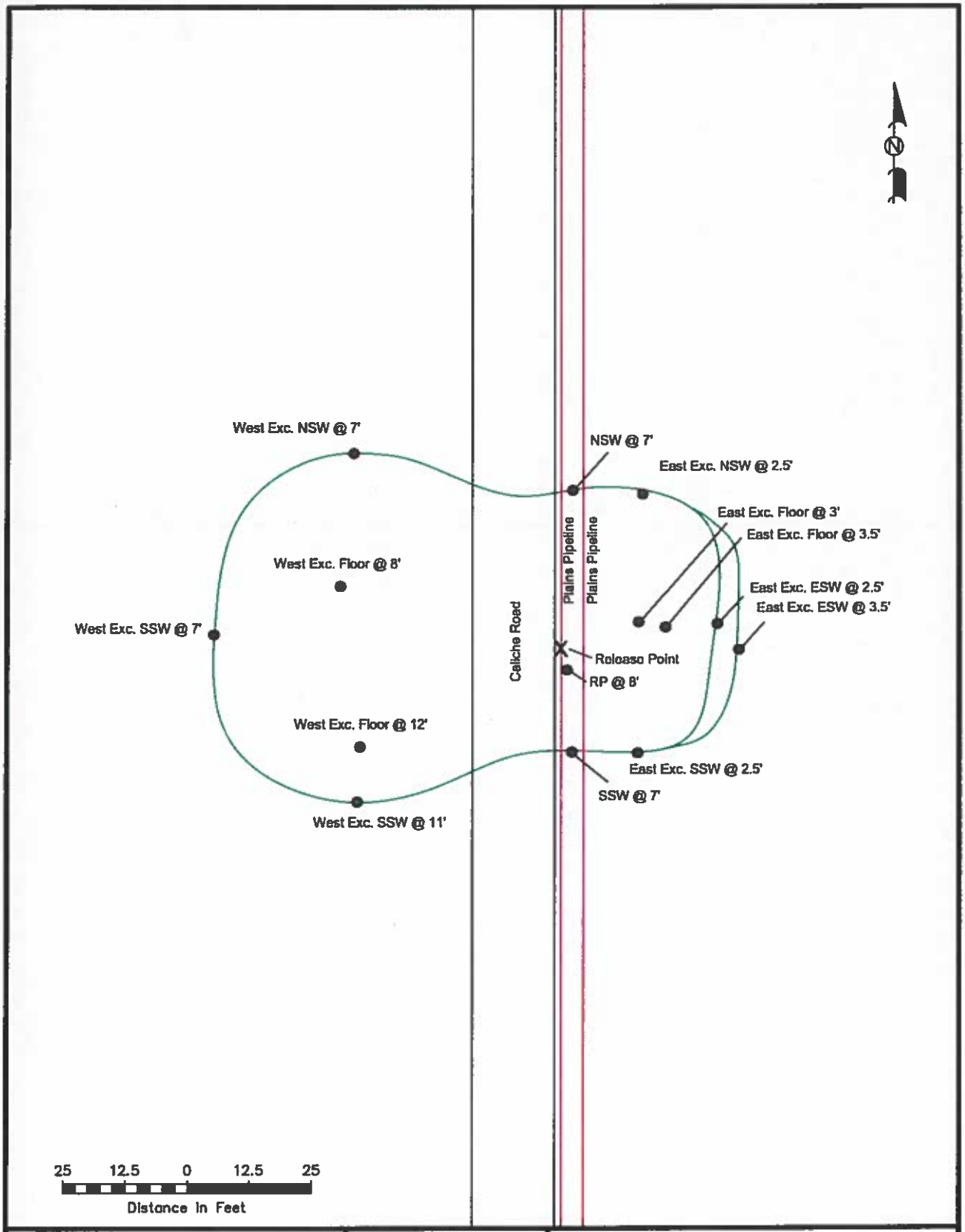
2500 1250 0 1250 2500

Distance in Feet

Figure 1
Site Location Map
Plains Pipeline, L.P.
14-Inch Vac to Jal - BLM
Lea County, New Mexico
SRS# 2009-093
NMOCD Ref 1RP-2182

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
June 12, 2009	Scale 1"=2500'



Tables

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

PLAINS PIPELINE, L.P.
14-INCH VAC TO JAL - BLM
LEA COUNTY, NEW MEXICO
SRS#2009-093
NMOCD REF. # 2182

SAMPLE LOCATION	SAMPLE DEPTH (Below Ground Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 846-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
West Exc. Floor @ 12'	12'	05/08/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	17.3	127	<16.3	144.3	-
West Exc. Floor @ 8'	8'	05/08/09	In-Situ	<0.0010	<0.0020	<0.0010	<0.0021	<0.0010	<0.0020	<15.1	85.2	<15.1	85.2	-
West Exc. SSW @ 11'	11'	05/08/09	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0010	<0.0021	<16.1	19.4	<16.1	19.4	-
West Exc. WSW @ 7'	7'	05/08/09	In-Situ	0.0018	0.0117	0.0048	0.0059	0.0026	0.0268	16.8	16.9	<15.3	33.7	-
West Exc. NSW @ 7'	7'	05/08/09	In-Situ	0.0017	0.0111	0.005	0.0058	0.0026	0.0262	<18.1	144.0	<15.3	162.1	
East Exc. NSW @ 2.5'	2.5'	05/18/09	In-Situ	0.0051	0.0157	0.0045	0.0052	0.0022	0.0327	<15.1	142	<15.1	142	-
East Exc. ESW @ 2.5'	2.5'	05/18/09	Excavated	<0.0010	0.0056	0.062	0.1545	0.097	0.3191	575	5,030	324	**5,929**	-
East Exc. SSW @ 2.5'	2.5'	05/18/09	In-Situ	<0.0010	0.0025	<0.0010	<0.0020	<0.0010	0.0025	20.4	115	<15.2	135	-
East Exc. Floor @ 3'	3'	05/18/09	Excavated	0.0221	0.4258	0.3754	0.5131	0.2728	1.6092	1,580	6,400	220	**8,200**	-
RP @ 8'	8'	05/18/09	In-Situ	<0.0010	0.0031	0.002	0.0029	0.0015	0.0095	22	91.5	<15.7	113.6	-
NSW @ 7'	7'	05/18/09	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	31	<16.4	31.4	-
SSW @ 7'	7'	05/18/09	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.3	<18.3	<18.3	<18.3	-
Stockpile 1	N/A	05/18/09	-	<0.0544	<0.1088	0.4432	1.175	0.584	2.2022	335	620	<16.5	955	441
Stockpile 2	N/A	05/18/09	-	<0.0531	<0.1061	0.8135	1.968	0.9562	3.7467	444.0	804	29	1,277	-
East Exc. Floor @ 3.5'	3.5'	05/28/09	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	<15.4	<15.4	<15.4	73.6
East Exc. ESW @ 3.5	3.5'	05/28/09	In-Situ	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	<15.3	<15.3	<15.3	-
Blended - 1	N/A	06/18/09	Reblended	0.4051	20.51	17.32	30.54	12.03	**80.8051**	1,460	2,970	350	4,780	-
Blended - 2	N/A	06/22/09	Backfill	0.2833	3.41	10.46	16.14	3.3	33.5893	921	2,710	226	3,857	-
Blended - 3	N/A	06/22/09	Reblended	0.7761	21.18	20.89	32.95	14.48	**90.2761**	1,510	3,780	288	**5,578**	-
Blended - 4	N/A	06/24/09	Reblended	<0.1068	17.08	25.09	38.99	16.31	**97.4700**	2,240	4,430	418	**7,088**	-
Blended - 5	N/A	06/24/09	Reblended	<0.1070	12.71	20.08	32.34	13.77	**78.9000**	1,770	4,100	390	**6,260**	-
Blended - 6	N/A	06/24/09	Reblended	2.767	111.30	73.55	127.1	47.79	**362.507**	6,810	12,700	1,060	**20,570**	-
Blended-1A	N/A	07/01/09	Backfill	0.1041	3.9880	8.832	17.09	7.335	37.3500	814	2,540	195	3,549	-
Blended-3A	N/A	07/02/09	Backfill	<0.2635	<0.5270	0.9328	2.063	0.9249	3.9207	608	3,240	248	4,096	-
Blended-4A	N/A	07/02/09	Backfill	<0.1085	0.2170	0.867	2.025	0.9896	3.8816	661	3,390	269	4,320	-

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

PLAINS PIPELINE, L.P.
14-INCH VAC TO JAL - BLM
LEA COUNTY, NEW MEXICO
SRS#2009-093
NMOCD REF. # 2182

SAMPLE LOCATION	SAMPLE DEPTH (Below Ground Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 846-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
Blended-5 (A)	N/A	07/06/09	Backfill	<0.1095	3.0750	5.782	10.57	4.703	24.1300	822	2,840	236	3,898	-
Blended-6 (A)	N/A	07/06/09	Reblended	0.3148	18.9500	28.77	50.2	21.17	119.4048	3,500	8,690	670	12,860	-
Blended-6B	N/A	07/15/09	Backfill	0.0098	0.0923	0.2026	0.3595	0.2163	0.8805	440	3,990	199	4,629	-
NMOCD REGULATORY STANDARD				10					50				5,000	

Appendices

Appendix A
BLM Report of Undesirable Event

Form NM 3162-1 (August 2008)

REPORT OF UNDESIRABLE EVENT

BLM Office Reported to:	Carlsbad Field Office	From:	Jason Henry @ Plains Pipeline
AFMSS Event Number		EPS Assigned to Event:	

Date of Occurrence:	04/09/2009	Time of Occurrence:	10:00	(a.m.) / p.m.
Date Reported to BLM:	06/10/2009	Time Reported to BLM:	12:00	a.m. / (p.m.)
Date Reported to FS:		Time Reported to FS:		a.m. / p.m.

Other Federal, State, and Local government Agencies Notified and Date(s):
Larry Johnson, NMOCD, Hobbs Office 05/13/2009

Location: GPS: N 32° 6' 36" W 103° 9' 8"

State:	New Mexico	County:	Lea		
Township:	25S	Range:	37E	Section:	24
¼ ¼:	SE, SW	Footages:			

Operator:	Plains Pipeline	Telephone Number:	806-592-8305
Contact Person:	Jason Henry	Telephone Number:	575-441-1099

Well Name/Facility and Number:	14" Vac to Jal Pipeline		
Lease Number:		Right-of-Way Number:	LC-057355
Unit Name and Number or C.A. Number:			
Surface Ownership:	BLM	Mineral Ownership:	

[Federal (FS, BLM, Other), Indian, Fee, State]

Type of Event: (Check the appropriate ones)

Blowout	Fatality	Fire	Gas Venting	Hazardous Material Spill
Injury	✓ Oil Spill	Oil & Saltwater Spill	Oil & Toxic Fluid Spill	Property Damage
Saltwater Spill	Saltwater & Toxic Fluid Spill	Toxic Fluid Spill	Uncontrolled Flow of Wellbore Fluids	Other (Specify)

Cause of Event:
A release of crude oil occurred due to external corrosion on the pipeline.

Volumes of Pollutants Discharged:

Volume of Discharged or Consumed:	18 bbls	Volume Recovered:	0 bbls

Notified:

HazMat Notified: (for Spills):	
Law Enforcement Notified: (for thefts):	
Safety Officer Notified:	

Time Required to Control Event (in hours):	
Length of Time to Control Blowout or Fire:	

Action Taken to Control Event, Description of Resultant Damage, Clean-up Procedures, & Dates:
Crude oil impacted soil was excavated and stockpiled on plastic during the months of May 2009 and April 2009.
Cause and Extent of Personal Injuries/Cause of Death(s):
N/A
Effects of Event:
The released crude oil resulted in a surface stain that measured approximately 50' x 30'.
Sensitive Areas or Surface Waters Potentially Affected:
None
Action Taken or Planned to Clean Up and Prevent Recurrance:
Crude oil impacted soil was excavated and stockpiled on plastic and confirmation soil samples were collected from the excavation.

Final Investigation:

Team Name(s):
Summary of Results of Inspection:

Resource Loss was:

Avoidable:		Unavoidable:	

Date of Memo Notifying Minerals Management Service (MMS) that loss was avoidable:	

Office	Date:	Time:	Person Notified:
District Office			
State Office			
Washington Office			

Summary of Results or Reclamation/Corrective Action:
General Remarks:

Signature of Authorized Officer:			
Title:		Date:	

Appendix B
Archaeological Resource Survey

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.:	2a. Lead (Sponsoring) Agency:	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:
113874	BLM, CFO		

4. Title of Report: 14" Vacuum to Jal-BLM release site.

Author(s) Ann and Danny Boone

5. Type of Report ☒ Negative ☐ Positive

6. Investigation Type
☐ Research Design ☒ Survey/Inventory ☐ Test Excavation ☐ Excavation ☐ Collections/Non-Field Study
☐ Overview/Lit Review ☐ Monitoring ☐ Ethnographic study ☐ Site specific visit ☐ Other

7. Description of Undertaking (what does the project entail?): The project is an area where petroleum fluids have leaked from a aburied pipeline. Location and survey acres are estimates based on a hand held GPS Unit. Impact acres are unknown and are estimates. The affected area had been excavated at the time of the survey. A 100 foot buffer zone around the impacted area was surveyed and marked by pink flagging tape tied to vegetation.

8. Dates of Investigation: (from: 19 May 09 to:)

9. Report Date: 21 may 2009

10. Performing Agency/Consultant: Boone Archaeological Services, LLC
2030 North Canal, Carlsbad, NM 88220
575-885-1352
Principal Investigator: Danny Boone Field Supervisor: Danny Boone
Field Personnel Names: Danny Boone

11. Performing Agency/Consultant Report No.:
BAS 05-09-08

12. Applicable Cultural Resource Permit No(s):
BLM: 190-2920-06-J

13. Client/Customer (project proponent): Plains Marketing, L.P.
Contact: Curt D. Stanley (Agent with Basin Enviromental)
Address: 1301 S Country Road 1150
Midland, Texas 79706-4476
Phone: (432) 682-5392

14. Client/Customer Project No.:
SRS# 2009-093

15. Land Ownership Status (*Must be indicated on project map*):

Land Owner	Acres Surveyed	Acres in APE
BLM	2.9 (+/-)	1.1 (-/+)
TOTALS	2.9 (-/+)	1.1 (+/-)

16 Records Search(es):

Date(s) of ARMS File Review: 18 May 09	Name of Reviewer(s): Ann Boone	
Date(s) of NR/SR File Review:	Name of Reviewer(s):	
Date(s) of Other Agency File Review: 18 May	Name of Reviewer(s): Danny Boone	Agency: BLM, CFO

Findings: No previously recorded sites were located within 0.25 mile, LA 48603, 96604 and possibly others are within 1.0 mile.

17. Survey Data:a. Source Graphics ☒ NAD 27 ☐ NAD 83
☒ USGS 7.5' (1:24,000) topo map ☐ Other topo map, Scale:
☒ GPS Unit Accuracy ☐<1.0m ☒ 1-10m ☐ 10-100m ☐>100m

b. USGS 7.5' Topographic Map Name / USGS Quad Code

JAL, NM, [1969], (Photorevised 1979)	32103-A2

c. County(ies): Lea

17. Survey Data (continued):
d. Nearest City or Town: Jal, NM
e. Legal Description:

Township (N/S)	Range (E/W)	Section	¼ ¼ ¼
25S	37E	24	se sw, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .

Projected legal description? Yes [ ] No [X] Unplatted [ ]
f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

18. Survey Field Methods:
Intensity: ☒ 100% coverage ☐ <100% coverage
Configuration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):
Scope: ☒ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)
Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)
Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: 19 May 09
Survey Person Hours: 2 Recording Person Hours: 0 Total Hours: 2
Additional Narrative: Location and survey acres are estimates based on a hand held GPS Unit. Impact acres are unknown and are estimates. The affected area had been excavated at the time of the survey. A 100 foot buffer zone around the impacted area was surveyed and marked by pink tape tied to vegetation.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):
Topography: Flat featurless plain with considerable amounts caliche gravels visible on the surface.
Vegetative community: Mesquite, creosote bush, snakeweed, various grasses and other flora.
NRCS: Simona-Tonuco association: Nearly level and gently undulating, loamy and sandy soils that are shallow to indurated caliche.
Elevation: 3070 feet

20. a. Percent Ground Visibility: 90 overall b. Condition of Survey Area (grazed, bladed, undisturbed, etc.): Area has impact from excavation of the oil soaked area, 2 roads, 2 or more buried pipelines, one pad for a dry hole and one active well pad.

21. CULTURAL RESOURCE FINDINGS ☐ Yes, See Page 3 ☒ No, Discuss Why: Unknown

22. Required Attachments (check all appropriate boxes):
☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn
☒ Copy of NMCRIS Mapserver Map Check
☐ LA Site Forms - new sites (*with sketch map & topographic map*)
☐ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*)
☐ Historic Cultural Property Inventory Forms
☐ List and Description of isolates, if applicable
☐ List and Description of Collections, if applicable

23. Other Attachments:
☐ Photographs and Log
☐ Other Attachments
(Describe):

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Danny Boone
Signature Danny Boone Date: 22 May 09 Title (if not PI):

25. Reviewing Agency:
Reviewer's Name/Date

Accepted ( ) Rejected ( )

Tribal Consultation (if applicable): ☐ Yes ☐ No

26. SHPO
Reviewer's Name/Date:

HPD Log #:
SHPO File Location:
Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.: 113874	2. Lead (Sponsoring) Agency: BLM, CFO	3. Lead Agency Report No.:

SURVEY RESULTS:
Sites discovered and registered: 0
Sites discovered and NOT registered: 0
Previously recorded sites revisited (*site update form required*): 0
Previously recorded sites not relocated *(site update form required):* 0
TOTAL SITES VISITED: 0
Total isolates recorded: 0 Non-selective isolate recording? ☒
Total structures recorded (*new and previously recorded, including acequias*): 0

MANAGEMENT SUMMARY: No cultural resources were encountered therefore archaeological clearance of the 14" Vacuum to Jal-BLM Site for Plains Marketing, L.P. is recommended. If cultural resources are encountered at any time all activity should cease and the BLM Archaeologist notified immediately.

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

SURVEY LA NUMBER LOG
Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

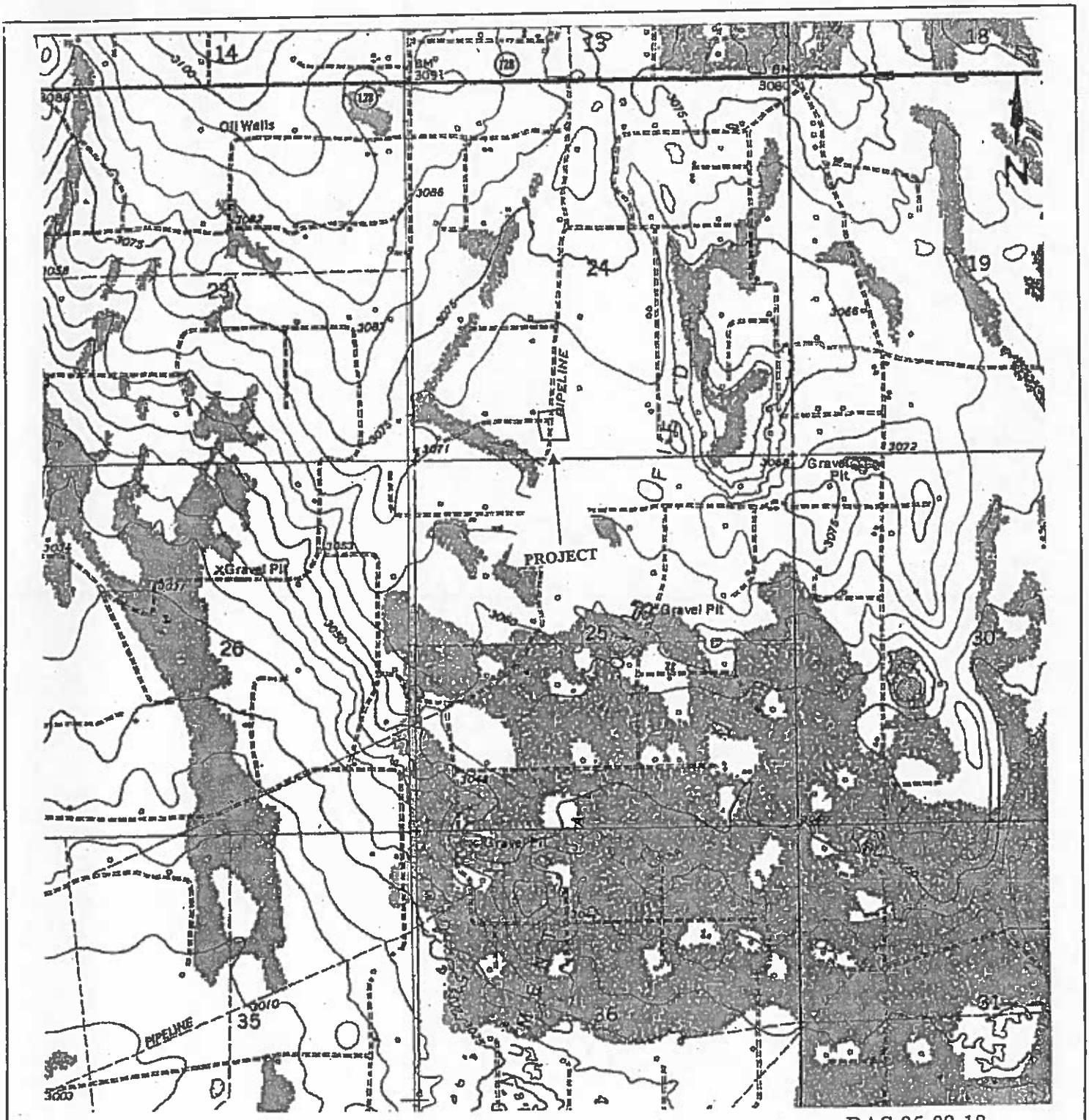
MONITORING LA NUMBER LOG *(site form required)*
Sites Discovered (*site form required*) : Previously recorded sites *(Site update form required):*

LA No.	Field/Agency No.	LA No.	Field/Agency No.

Areas outside known nearby site boundaries monitored? Yes ☐, No ☐ If no explain why:

TESTING & EXCAVATION LA NUMBER LOG (*site form required*)

Tested LA number(s)	Excavated LA number(s)



Location Map BAS 05-09-18

14" Vacuum to Jal-BLM Site for Plains Marketing, L.P. in Section 24, T 25S, R 37E, NMPM, LEA County, NM.

Map Reference: USGS 7.5' Series; JAL, NM, [1969], (Photorevised 1979) 32103-A2

SCALE 1:24000

1 0 1/2 0 1 MILE

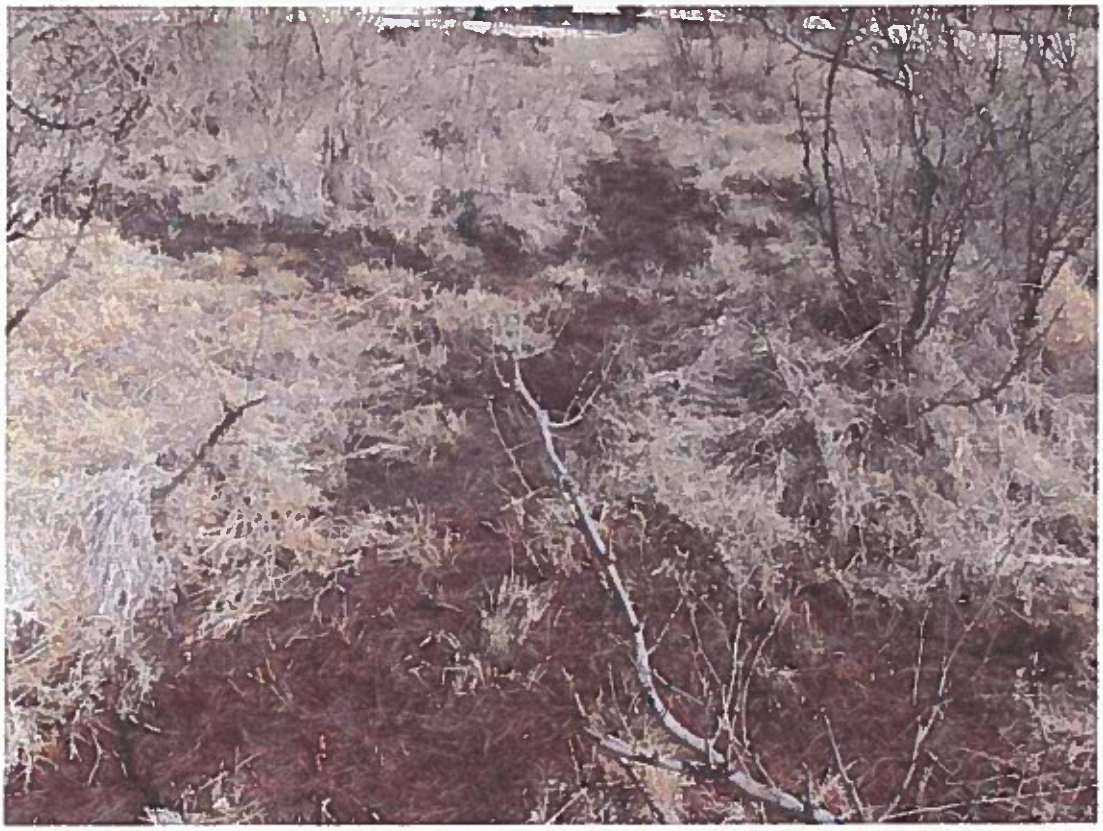
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

BAS

Appendix C
Photographs

Release Point of 14-Inch Vac to Jal – BLM Release Site



14-Inch Vac to Jal – BLM Initial Response

14-Inch Vac to Jal – BLM Release Excavation, looking southeast

14-Inch Vac to Jal – BLM Release Excavation, looking northeast

14-Inch Vac to Jal – BLM Release Remediation Completed, looking North

14-Inch Vac to Jal – BLM Release Remediation Completed, looking North

Appendix D
Laboratory Analytical Reports

Analytical Report 332440

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal BLM

SRS# 2009-93

15-MAY-09

12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

15-MAY-09

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

Reference: XENCO Report No: **332440**
14" Vac to Jal BLM
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 332440. 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. 332440 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 332440

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West EXC Floor @ 12'	S	May-08-09 12:00		332440-001
West EXC Floor @ 8'	S	May-08-09 12:10		332440-002
West EXC SSW @ 11'	S	May-08-09 12:20		332440-003
West EXC WSW @ 7'	S	May-08-09 12:30		332440-004
West EXC NSW @ 7'	S	May-08-09 12:40		332440-005

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal BLM

Project ID: SRS# 2009-93
Work Order Number: 332440

Report Date: 15-MAY-09
Date Received: 05/11/2009

Sample receipt non conformances and Comments:
None

Sample receipt Non Conformances and Comments per Sample:
None

Analytical Non Conformances and Comments:

Batch:	LBA-758681	Percent Moisture

Batch:	LBA-758988	TPH by SW8015 Mod

Batch:	LBA-759032	BTEX-MTBE EPA 8021B
4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 530032-1-BLK,332440-002. m,p-Xylenes recovered below QC limits in the Matrix Spike. Ethylbenzene recovered below QC limits in the Matrix Spike and Duplicate. Samples affected are: 332440-002, -003, -004, -005, -001. The Laboratory Control Sample for m,p-Xylenes , Ethylbenzene is within laboratory Control Limits		

Certificate of Analysis Summary 332440

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal BLM

Project Id: SRS# 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Mon May-11-09 05:03 pm
Report Date: 15-MAY-09
Project Manager: Brent Barron, II

Analysis Requested		332440-001		332440-002		332440-003		332440-004		332440-005		
	Lab Id:											
	Field Id:	West EXC Floor @ 12'		West EXC Floor @ 8'		West EXC SSW @ 11'		West EXC WSW @ 7'		West EXC NSW @ 7'		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	May-08-09 12:00		May-08-09 12:10		May-08-09 12:20		May-08-09 12:30		May-08-09 12:40		
BTEX by EPA 8021B	Extracted:	May-14-09 15:45		May-14-09 15:45		May-14-09 15:45		May-14-09 15:45		May-14-09 15:45		
	Analyzed:	May-15-09 03:41		May-15-09 04:03		May-15-09 04:24		May-15-09 04:45		May-15-09 05:07		
	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	0.0018	0.0010	0.0017	0.0010	
Toluene		ND	0.0022	ND	0.0020	ND	0.0021	0.0117	0.0020	0.0111	0.0020	
Ethylbenzene		ND	0.0011	ND	0.0010	ND	0.0011	0.0048	0.0010	0.0050	0.0010	
m,p-Xylenes		ND	0.0022	ND	0.0020	ND	0.0021	0.0059	0.0020	0.0058	0.0020	
o-Xylene		ND	0.0011	ND	0.0010	ND	0.0011	0.0026	0.0010	0.0026	0.0010	
Total Xylenes		ND	0.0011	ND	0.0010	ND	0.0011	0.0085	0.0010	0.0084	0.0010	
Total BTEX		ND	0.0011	ND	0.0010	ND	0.0011	0.0268	0.0010	0.0262	0.0010	
Percent Moisture	Extracted:											
	Analyzed:	May-13-09 08:56		May-13-09 08:56		May-13-09 08:56		May-13-09 08:56		May-13-09 08:56		
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		8.24	1.00	ND	1.00	6.57	1.00	1.86	1.00	2.06	1.00	
TPH By SW8015 Mod	Extracted:	May-13-09 12:11		May-13-09 12:11		May-13-09 12:11		May-13-09 12:11		May-13-09 12:11		
	Analyzed:	May-14-09 10:15		May-14-09 10:40		May-14-09 11:29		May-14-09 11:54		May-14-09 12:44		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		17.3	16.3	ND	15.1	ND	16.1	16.8	15.3	18.1	15.3	
C12-C28 Diesel Range Hydrocarbons		127	16.3	85.2	15.1	19.4	16.1	16.9	15.3	144	15.3	
C28-C35 Oil Range Hydrocarbons		ND	16.3	ND	15.1	ND	16.1	ND	15.3	ND	15.3	
Total TPH		144.3	16.3	85.2	15.1	19.4	16.1	33.7	15.3	162.1	15.3	

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 332440,

Project ID: SRS# 2009-93

Lab Batch #: 759032 **Sample:** 530032-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 21:36

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

Lab Batch #: 759032 **Sample:** 530032-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 21:58

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 759032 **Sample:** 530032-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 22:41

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0198	0.0300	66	80-120	**

Lab Batch #: 759032 **Sample:** 332440-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 03:41

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 759032 **Sample:** 332440-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 04:03

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0231	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: 14" Vac to Jal BLM

Work Orders : 332440, **Project ID:** SRS# 2009-93

Lab Batch #: 759032 **Sample:** 332440-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 04:24

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 759032 **Sample:** 332440-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 04:45

BTEX by EPA 8021B	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	0.0282	0.0300	94	80-120	

Lab Batch #: 759032 **Sample:** 332440-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 05:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	

Lab Batch #: 759032 **Sample:** 332747-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 06:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	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	0.0322	0.0300	107	80-120	

Lab Batch #: 759032 **Sample:** 332747-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/15/09 07:16

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 332440, **Project ID:** SRS# 2009-93

Lab Batch #: 758988 **Sample:** 529958-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 06:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	48.7	50.0	97	70-135	

Lab Batch #: 758988 **Sample:** 529958-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 06:58

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	46.8	50.0	94	70-135	

Lab Batch #: 758988 **Sample:** 529958-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/09 07:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	100	93	70-135	
o-Terphenyl	53.3	50.0	107	70-135	

Lab Batch #: 758988 **Sample:** 332440-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 10:15

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	100	96	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 758988 **Sample:** 332440-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 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	91.5	100	92	70-135	
o-Terphenyl	49.6	50.0	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

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 332440,

Project ID: SRS# 2009-93

Lab Batch #: 758988 **Sample:** 332440-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 11:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	100	92	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 758988 **Sample:** 332440-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 11:54

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	100	89	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 758988 **Sample:** 332440-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 12:44

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	100	93	70-135	
o-Terphenyl	51.5	50.0	103	70-135	

Lab Batch #: 758988 **Sample:** 332440-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 16:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 758988 **Sample:** 332440-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/09 16:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	57.5	50.0	115	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: 14" Vac to Jal BLM

Work Order #: 332440 **Project ID:** SRS# 2009-93

Analyst: ASA **Date Prepared:** 05/14/2009 **Date Analyzed:** 05/14/2009

Lab Batch ID: 759032 **Sample:** 530032-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.1032	103	0.1	0.1006	101	3	70-130	35	
Toluene	ND	0.1000	0.1053	105	0.1	0.1031	103	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1073	107	0.1	0.1049	105	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2286	114	0.2	0.2231	112	2	70-135	35	
o-Xylene	ND	0.1000	0.1133	113	0.1	0.1104	110	3	71-133	35	

Analyst: BHW **Date Prepared:** 05/13/2009 **Date Analyzed:** 05/14/2009

Lab Batch ID: 758988 **Sample:** 529958-1-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	ND	1000	1090	109	1000	1060	106	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1050	105	1000	1010	101	4	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order # : 332440 **Project ID:** SRS# 2009-93

Lab Batch ID: 759032 **QC- Sample ID:** 332747-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/15/2009 **Date Prepared:** 05/14/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B 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	ND	0.1017	0.0785	77	0.1017	0.0816	80	4	70-130	35	
Toluene	ND	0.1017	0.0721	71	0.1017	0.0775	76	7	70-130	35	
Ethylbenzene	ND	0.1017	0.0490	48	0.1017	0.0637	63	26	71-129	35	X
m,p-Xylenes	0.0035	0.2033	0.1438	69	0.2033	0.1638	79	13	70-135	35	X
o-Xylene	0.0067	0.1017	0.0788	71	0.1017	0.0885	80	12	71-133	35	

Lab Batch ID: 758988 **QC- Sample ID:** 332440-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/14/2009 **Date Prepared:** 05/13/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	17.3	1090	1360	123	1090	1290	117	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	127	1090	1360	113	1090	1330	110	2	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14" Vac to Jal BLM

Work Order #: 332440

Lab Batch #: 758681 **Project ID:** SRS# 2009-93

Date Analyzed: 05/13/2009 **Date Prepared:** 05/13/2009 **Analyst:** BEV

QC- Sample ID: 332394-001 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	1.48	2.54	53	20	F

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

Environmental Lab of Texas

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: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575) 605-7210
Fax No: (505) 396-1429
Sampler Signature: Camille Bryant
e-mail: cbryant@basin-consulting.com

Project Name: 14" Vac to Jal BLM
Project #: SRS# 2009-93
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 332440

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Total # of Containers	Ice	Matrix	TPH 418.1 8015M	BTEX 8021B/5030	Standard TAT 4 DAY
01	West EXC Floor @ 12'			8-May-09	1200	1	X	Soil	X	X	X
02	West EXC Floor @ 8'			8-May-09	1210	1	X	Soil	X	X	X
03	West EXC SSW @ 11'			8-May-09	1220	1	X	Soil	X	X	X
04	West EXC WSW @ 7'			8-May-09	1230	1	X	Soil	X	X	X
05	West EXC NSW @ 7'			8-May-09	1240	1	X	Soil	X	X	X

Analyze For: TCLP: / TOTAL: X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
Camille Bryant	5/11/09	1200	Curt D. Stanley	5/11/09	1300
Curt D. Stanley	5/11/09	1703	Received by ELOT: Andrea Lam	5.11.09	17:03

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
402915755
Temperature Upon Receipt: 5.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Environmental

Date/ Time: 5/11/09 17:03

Lab ID #: 332440

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	5.5 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 333090

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal BLM

2009-93

28-MAY-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

28-MAY-09

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

Reference: XENCO Report No: **333090**
14" Vac to Jal BLM
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 333090. 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. 333090 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 333090

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East EXC NSW @ 2.5'	S	May-18-09 12:30		333090-001
East EXC ESW @ 2.5'	S	May-18-09 12:40		333090-002
East EXC SSW @ 2.5'	S	May-18-09 12:50		333090-003
East EXC Floor @ 3'	S	May-18-09 13:00		333090-004
RP @ 8'	S	May-18-09 13:10		333090-005
NSW @ 7'	S	May-18-09 13:20		333090-006
SSW @ 7'	S	May-18-09 13:30		333090-007
Stockpile 1	S	May-18-09 13:40		333090-008
Stockpile 2	S	May-18-09 13:50		333090-009

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal BLM

Project ID: 2009-93 *Report Date:* 28-MAY-09
Work Order Number: 333090 *Date Received:* 05/19/2009

Sample receipt non conformances and Comments:
None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-759451 Percent Moisture
None

Batch: LBA-759454 Percent Moisture
None

Batch: LBA-759476 TPH by SW8015 Mod
None

Batch: LBA-759627 TPH by SW8015 Mod
None

Batch: LBA-759742 TX1005
None

Batch: LBA-759977 BTEX-MTBE EPA 8021B
SW8021BM

Batch 759977, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 333090-002,333090-004,333090-005,333090-001,333090-003.
4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis.
Samples affected are: 530571-1-BLK.

4-Bromofluorobenzene recovered high QC limits; Matrix interferences is suspected; data not confirmed by re-analysis.
Samples affected are: 333090-002,333090-004,333090-005,333090-006
SW8021BM

Batch 759977, Benzene, Toluene recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 333090-001, -007, -003, -002, -004, -005, -006.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal BLM

Project ID: 2009-93
Work Order Number: 333090

Report Date: 28-MAY-09
Date Received: 05/19/2009

Batch: LBA-760298 BTEX-MTBE EPA 8021B
SW8021BM

Batch 760298, 4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis. Samples affected are: 530774-1-BLK.

SW8021BM

Batch 760298, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 333090-009, -008.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Certificate of Analysis Summary 333090

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal BLM

Project Id: 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue May-19-09 08:12 am
Report Date: 28-MAY-09
Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	333090-001		333090-002		333090-003		333090-004		333090-005		333090-006	
		Field Id:	East EXC NSW @ 2.5'		East EXC ESW @ 2.5'		East EXC SSW @ 2.5'		East EXC Floor @ 3'		RP @ 8'		NSW @ 7'	
		Depth:												
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	May-18-09 12:30		May-18-09 12:40		May-18-09 12:50		May-18-09 13:00		May-18-09 13:10		May-18-09 13:20	
BTEX by EPA 8021B		Extracted:	May-22-09 12:09		May-22-09 12:09		May-22-09 12:09		May-22-09 12:09		May-22-09 12:09		May-22-09 12:09	
		Analyzed:	May-22-09 21:54		May-22-09 22:16		May-22-09 22:37		May-22-09 22:58		May-22-09 23:20		May-22-09 23:41	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene			0.0051	0.0010	ND	0.0010	ND	0.0010	0.0221	0.0010	ND	0.0010	ND	0.0011
Toluene			0.0157	0.0020	0.0056	0.0020	0.0025	0.0020	0.4258 E	0.0020	0.0031	0.0021	ND	0.0022
Ethylbenzene			0.0045	0.0010	0.0620	0.0010	ND	0.0010	0.3754	0.0010	0.0020	0.0010	ND	0.0011
m,p-Xylenes			0.0052	0.0020	0.1545	0.0020	ND	0.0020	0.5131	0.0020	0.0029	0.0021	ND	0.0022
o-Xylene			0.0022	0.0010	0.0970	0.0010	ND	0.0010	0.2728	0.0010	0.0015	0.0010	ND	0.0011
Total Xylenes			0.0074	0.0010	0.2515	0.0010	ND	0.0010	0.7859	0.0010	0.0044	0.0010	ND	0.0011
Total BTEX			0.0327	0.0010	0.3191	0.0010	0.0025	0.0010	1.6090	0.0010	0.0095	0.0010	ND	0.0011
Percent Moisture		Extracted:												
		Analyzed:	May-20-09 08:59		May-20-09 08:59		May-20-09 08:59		May-20-09 08:59		May-20-09 08:59		May-20-09 08:59	
		Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture			ND	1.00	1.69	1.00	1.11	1.00	1.84	1.00	4.66	1.00	8.37	1.00
TPH By SW8015 Mod		Extracted:	May-19-09 19:45		May-19-09 19:45		May-20-09 17:00		May-20-09 17:00		May-19-09 15:06		May-19-09 15:06	
		Analyzed:	May-19-09 22:13		May-19-09 22:38		May-22-09 04:12		May-22-09 04:36		May-21-09 03:49		May-21-09 04:14	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons			ND	15.1	575	15.3	20.4	15.2	1580	153	22.1	15.7	ND	16.4
C12-C28 Diesel Range Hydrocarbons			142	15.1	5030	15.3	115	15.2	6400	153	91.5	15.7	31.4	16.4
C28-C35 Oil Range Hydrocarbons			ND	15.1	324	15.3	ND	15.2	220	153	ND	15.7	ND	16.4
Total TPH			142	15.1	5929	15.3	135.4	15.2	8200	153	113.6	15.7	31.4	16.4

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Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 333090

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal BLM

Project Id: 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue May-19-09 08:12 am
Report Date: 28-MAY-09
Project Manager: Brent Barron, II

Analysis Requested		333090-007		333090-008		333090-009				
	Lab Id:	333090-007		333090-008		333090-009				
	Field Id:	SSW @ 7'		Stockpile 1		Stockpile 2				
	Depth:									
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	May-18-09 13:30		May-18-09 13:40		May-18-09 13:50				
BTEX by EPA 8021B	Extracted:	May-22-09 12:09		May-27-09 10:00		May-27-09 10:00				
	Analyzed:	May-23-09 00:02		May-27-09 14:02		May-27-09 14:23				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		ND	0.0012	ND	0.0544	ND	0.0531			
Toluene		ND	0.0024	ND	0.1088	ND	0.1061			
Ethylbenzene		ND	0.0012	0.4432	0.0544	0.8135	0.0531			
m,p-Xylenes		ND	0.0024	1.175	0.1088	1.968	0.1061			
o-Xylene		ND	0.0012	0.5840	0.0544	0.9652	0.0531			
Total Xylenes		ND	0.0012	1.759	0.0544	2.9332	0.0531			
Total BTEX		ND	0.0012	2.2022	0.0544	3.7467	0.0531			
Percent Moisture	Extracted:									
	Analyzed:	May-20-09 09:06		May-20-09 09:06		May-20-09 09:06				
	Units/RL:	%	RL	%	RL	%	RL			
Percent Moisture		18.21	1.00	8.96	1.00	6.15	1.00			
TPH By SW8015 Mod	Extracted:	May-19-09 15:06		May-19-09 15:06		May-19-09 15:06				
	Analyzed:	May-21-09 04:39		May-21-09 05:03		May-21-09 05:29				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		ND	18.3	335	16.5	444	16.0			
C12-C28 Diesel Range Hydrocarbons		ND	18.3	620	16.5	804	16.0			
C28-C35 Oil Range Hydrocarbons		ND	18.3	ND	16.5	29.4	16.0			
Total TPH		ND	18.3	955	16.5	1277.4	16.0			

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759977 **Sample:** 530571-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 14:44

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 759977 **Sample:** 530571-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 15:06

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

Lab Batch #: 759977 **Sample:** 530571-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 15:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0230	0.0300	77	80-120	*

Lab Batch #: 759977 **Sample:** 333090-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 21:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0230	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 759977 **Sample:** 333090-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 22:16

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0231	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0568	0.0300	189	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759977 **Sample:** 333090-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 22:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0357	0.0300	119	80-120	

Lab Batch #: 759977 **Sample:** 333090-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 22:58

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	80-120	*
4-Bromofluorobenzene	0.1184	0.0300	395	80-120	*

Lab Batch #: 759977 **Sample:** 333090-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 23:20

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0375	0.0300	125	80-120	*

Lab Batch #: 759977 **Sample:** 333090-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 23:41

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0362	0.0300	121	80-120	*

Lab Batch #: 759977 **Sample:** 333090-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/23/09 00:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0331	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759977 **Sample:** 333087-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/23/09 00:45

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 759977 **Sample:** 333087-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/23/09 01:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 760298 **Sample:** 530774-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/27/09 10:23

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0242	0.0300	81	80-120	

Lab Batch #: 760298 **Sample:** 530774-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/27/09 10:44

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	80-120	
4-Bromofluorobenzene	0.0251	0.0300	84	80-120	

Lab Batch #: 760298 **Sample:** 530774-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/27/09 11:27

BTEX by EPA 8021B	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	0.0164	0.0300	55	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 760298 **Sample:** 333090-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/27/09 14:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 760298 **Sample:** 333090-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/27/09 14:23

BTEX by EPA 8021B 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	0.0308	0.0300	103	80-120	

Lab Batch #: 760298 **Sample:** 333233-020 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/27/09 19:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 760298 **Sample:** 333233-020 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/27/09 20:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 759476 **Sample:** 530300-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/19/09 13:56

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	45.8	50.0	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759476 **Sample:** 530300-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/19/09 14:20

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	46.0	50.0	92	70-135	

Lab Batch #: 759476 **Sample:** 530300-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/19/09 14:45

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	100	92	70-135	
o-Terphenyl	52.3	50.0	105	70-135	

Lab Batch #: 759476 **Sample:** 333090-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/19/09 22:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	100	91	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 759476 **Sample:** 333090-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/19/09 22:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

Lab Batch #: 759476 **Sample:** 333087-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/19/09 23:53

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	49.2	50.0	98	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759476 **Sample:** 333087-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/20/09 00:18

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	49.2	50.0	98	70-135	

Lab Batch #: 759627 **Sample:** 530386-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/21/09 02:34

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	47.0	50.0	94	70-135	

Lab Batch #: 759627 **Sample:** 530386-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/21/09 02:59

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	47.4	50.0	95	70-135	

Lab Batch #: 759627 **Sample:** 530386-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/21/09 03:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	100	91	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 759627 **Sample:** 333090-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 03:49

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	100	87	70-135	
o-Terphenyl	49.2	50.0	98	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759627 **Sample:** 333090-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 04:14

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	100	90	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

Lab Batch #: 759627 **Sample:** 333090-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 04:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	100	89	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 759627 **Sample:** 333090-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 05:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.8	100	96	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 759627 **Sample:** 333090-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 05:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 759627 **Sample:** 333090-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 09:39

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	48.8	50.0	98	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759627 **Sample:** 333090-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/21/09 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	105	100	105	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 759742 **Sample:** 530461-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 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	106	100	106	70-135	
o-Terphenyl	49.3	50.0	99	70-135	

Lab Batch #: 759742 **Sample:** 530461-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 02:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

Lab Batch #: 759742 **Sample:** 530461-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/22/09 03:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	100	93	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 759742 **Sample:** 333090-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 04:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	100	83	70-135	
o-Terphenyl	44.7	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: 14" Vac to Jal BLM

Work Orders : 333090,

Project ID: 2009-93

Lab Batch #: 759742 **Sample:** 333090-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 04:36

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	46.8	50.0	94	70-135	

Lab Batch #: 759742 **Sample:** 332876-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 05:51

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	47.4	50.0	95	70-135	

Lab Batch #: 759742 **Sample:** 332876-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/22/09 06:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	51.8	50.0	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

BS / BSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order #: 333090 **Project ID:** 2009-93

Analyst: BRB **Date Prepared:** 05/22/2009 **Date Analyzed:** 05/22/2009

Lab Batch ID: 759977 **Sample:** 530571-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.1183	118	0.1	0.1172	117	1	70-130	35	
Toluene	ND	0.1000	0.1143	114	0.1	0.1132	113	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1190	119	0.1	0.1181	118	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2396	120	0.2	0.2368	118	1	70-135	35	
o-Xylene	ND	0.1000	0.1148	115	0.1	0.1140	114	1	71-133	35	

Analyst: ASA **Date Prepared:** 05/27/2009 **Date Analyzed:** 05/27/2009

Lab Batch ID: 760298 **Sample:** 530774-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.1000	100	0.1	0.1002	100	0	70-130	35	
Toluene	ND	0.1000	0.0963	96	0.1	0.0968	97	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1030	103	0.1	0.1046	105	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2083	104	0.2	0.2113	106	1	70-135	35	
o-Xylene	ND	0.1000	0.0985	99	0.1	0.1001	100	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: 14" Vac to Jal BLM

Work Order #: 333090
Analyst: BHW
Lab Batch ID: 759476 **Sample:** 530300-1-BKS
Units: mg/kg

Date Prepared: 05/19/2009 **Batch #:** 1

Project ID: 2009-93
Date Analyzed: 05/19/2009
Matrix: Solid

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	ND	1000	1010	101	1000	990	99	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	964	96	1000	954	95	1	70-135	35	

Analyst: BHW
Lab Batch ID: 759627 **Sample:** 530386-1-BKS
Units: mg/kg

Date Prepared: 05/19/2009 **Batch #:** 1

Date Analyzed: 05/21/2009
Matrix: Solid

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	ND	1000	1050	105	1000	1040	104	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	982	98	1000	980	98	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

BS / BSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order #: 333090 **Project ID:** 2009-93

Analyst: BHW **Date Prepared:** 05/20/2009 **Date Analyzed:** 05/22/2009

Lab Batch ID: 759742 **Sample:** 530461-1-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	ND	1000	1020	102	1000	1100	110	8	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	953	95	1000	1030	103	8	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 / MSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order # : 333090 **Project ID:** 2009-93

Lab Batch ID: 759977 **QC- Sample ID:** 333087-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/23/2009 **Date Prepared:** 05/22/2009 **Analyst:** BRB

Reporting Units: mg/kg

BTEX by EPA 8021B 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	0.0073	0.1024	0.2245	212	0.1024	0.2088	197	7	70-130	35	X
Toluene	0.0354	0.1024	0.3688	326	0.1024	0.3445	302	7	70-130	35	X
Ethylbenzene	0.0158	0.1024	0.1478	129	0.1024	0.1382	120	7	71-129	35	
m,p-Xylenes	0.0249	0.2048	0.2332	102	0.2048	0.2213	96	5	70-135	35	
o-Xylene	0.0090	0.1024	0.1041	93	0.1024	0.0991	88	5	71-133	35	

Lab Batch ID: 760298 **QC- Sample ID:** 333233-020 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/27/2009 **Date Prepared:** 05/27/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B 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	ND	0.1092	0.0619	57	0.1092	0.0656	60	6	70-130	35	X
Toluene	ND	0.1092	0.0606	55	0.1092	0.0644	59	6	70-130	35	X
Ethylbenzene	ND	0.1092	0.0677	62	0.1092	0.0720	66	6	71-129	35	X
m,p-Xylenes	ND	0.2183	0.1392	64	0.2183	0.1474	68	6	70-135	35	X
o-Xylene	ND	0.1092	0.0628	58	0.1092	0.0671	61	7	71-133	35	X

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

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

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order # : 333090 **Project ID:** 2009-93

Lab Batch ID: 759476 **QC- Sample ID:** 333087-005 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 05/19/2009 **Date Prepared:** 05/19/2009 **Analyst:** BHW
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	ND	1080	1150	106	1080	1160	107	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1080	1100	102	1080	1120	104	2	70-135	35	

Lab Batch ID: 759627 **QC- Sample ID:** 333090-005 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 05/21/2009 **Date Prepared:** 05/19/2009 **Analyst:** BHW
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	22.1	1050	1090	102	1050	1070	100	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	91.5	1050	1140	100	1050	1130	99	1	70-135	35	

Lab Batch ID: 759742 **QC- Sample ID:** 332876-003 S **Batch #:** 1 **Matrix:** Soil
Date Analyzed: 05/22/2009 **Date Prepared:** 05/20/2009 **Analyst:** BHW
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	ND	1180	1260	107	1180	1340	114	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1180	1200	102	1180	1280	108	6	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: 14" Vac to Jal BLM

Work Order #: 333090

Lab Batch #: 759451 **Project ID:** 2009-93

Date Analyzed: 05/20/2009 **Date Prepared:** 05/20/2009 **Analyst:** BEV

QC- Sample ID: 333088-001 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	ND	ND	NC	20	

Lab Batch #: 759454

Date Analyzed: 05/20/2009 **Date Prepared:** 05/20/2009 **Analyst:** BEV

QC- Sample ID: 333090-007 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	18.2	15.9	14	20	

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 1 of 1

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC Service Tech
Company Address: P.O. Box 381
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210
Fax No: (505) 396-1429
Sampler Signature: Camille Bryant
e-mail: cjbryant@basin-consulting.com

Project Name: 14" Vac to Jal BLM
Project #: SRS# 2009-93
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 333096

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	Matrix	TPH: 418.1 8015M 8015B	BTEX 8021B/5030 or BTEX 8260	Standard TAT 4 DAY
01	East EXC NSW @ 2.5'			5/18/09	1230		1	X	Soil	X	X	X
02	East EXC ESW @ 2.5'			5/18/09	1240		1	X	Soil	X	X	X
03	East EXC SSW @ 2.5'			5/19/09	1250		1	X	Soil	X	X	X
04	East EXC Floor @ 3'			5/18/09	1300		1	X	Soil	X	X	X
05	KP @ 8'			5/18/09	1310		1	X	Soil	X	X	X
06	NSW @ 7'			5/18/09	1320		1	X	Soil	X	X	X
07	SSW @ 7'			5/18/09	1330		1	X	Soil	X	X	X
08	Stockpile 1			5/18/09	1340		1	X	Soil	X	X	X
09	Stockpile 2			5/18/09	1350		1	X	Soil	X	X	X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
Camille Bryant	[redacted]	1400	[illegible]	5/[illegible]	1400
[illegible]	5/19/09	0812			
			Received by ELOT: Guadalupe Valdez	05/19/09	8:12

Laboratory Comments: 4 °C
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: 1.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: Basin / Plains

te/ Time: 05/19/19 8:12

ID #: 333090

lals: Quick

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	1.5 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont / Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
0 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
1 Containers supplied by ELOT?	Yes	No		
2 Samples in proper container/ bottle?	Yes	No	See Below	
3 Samples properly preserved?	Yes	No	See Below	
4 Sample bottles intact?	Yes	No		
5 Preservations documented on Chain of Custody?	Yes	No		
6 Containers documented on Chain of Custody?	Yes	No		
7 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
8 All samples received within sufficient hold time?	Yes	No	See Below	
9 Subcontract of sample(s)?	Yes	No	Not Applicable	
0 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

ontact: _____ Contacted by: _____ Date/ Time _____

egarding: _____

_____

orrective Action Taken:

_____

_____

_____

heck all that Apply:

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

Analytical Report 333091

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal BLM

2009-93

22-MAY-09

12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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

XENCO Laboratories

22-MAY-09

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

Reference: XENCO Report No: **333091**
14" Vac to Jal BLM
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 333091. 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. 333091 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 333091

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile 1	S	May-18-09 13:40		333091-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal BLM

Project ID: 2009-93
Work Order Number: 333091

Report Date: 22-MAY-09
Date Received: 05/19/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-759599 Percent Moisture
AD2216A

Batch 759599, Percent Moisture detected in the blank below the MQL but above the SQL; possible laboratory contamination.
Samples affected are: 333091-001.

Batch: LBA-759635 Inorganic Anions by EPA 300
None

Certificate of Analysis Summary 333091

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal BLM

Project Id: 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue May-19-09 08:12 am
Report Date: 22-MAY-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	333091-001					
	Field Id:	Stockpile 1					
	Depth:						
	Matrix:	SOIL					
	Sampled:	May-18-09 13:40					
Anions by EPA 300	*Extracted:*						
	Analyzed:	May-20-09 16:27					
	Units/RL:	mg/kg	RL				
Chloride		441	11.0				
Percent Moisture	*Extracted:*						
	Analyzed:	May-21-09 09:23					
	Units/RL:	%	RL				
Percent Moisture		8.96	1.00				

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Blank Spike Recovery

Project Name: 14" Vac to Jal BLM

Work Order #: 333091 **Project ID:** 2009-93

Lab Batch #: 759635 **Sample:** 759635-1-BKS **Matrix:** Solid

Date Analyzed: 05/20/2009 **Date Prepared:** 05/20/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.16	92	90-110	

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

Form 3 - MS Recoveries

Project Name: 14" Vac to Jal BLM

Work Order #: 333091

Lab Batch #: 759635

Project ID: 2009-93

Date Analyzed: 05/20/2009

Date Prepared: 05/20/2009

Analyst: LATCOR

QC- Sample ID: 332876-021 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	1530	544	2160	116	80-120	

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

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: 14" Vac to Jal BLM

Work Order #: 333091

Lab Batch #: 759635 **Project ID:** 2009-93

Date Analyzed: 05/20/2009 **Date Prepared:** 05/20/2009 **Analyst:** LATCOR

QC- Sample ID: 332876-021 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	1530	1630	6	20	

Lab Batch #: 759599

Date Analyzed: 05/21/2009 **Date Prepared:** 05/21/2009 **Analyst:** BEV

QC- Sample ID: 333164-001 D **Batch #:** 1 **Matrix:** Solid

Reporting Units: %

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

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

(1 of 1)

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC SERVICE TECH.
Company Address: P.O. Box 381
City/State/Zip: Lovington, NM 88260
Telephone No: (575)605-7210
Sampler Signature: Camille Bryant
Fax No: (505) 396-1429
e-mail: cjbryant@basin-consulting.com

Project Name: 14" Vac to Jal BLM
Project #: SRS# 2009-93
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 333091

Analyze For: TCLP / TOTAL (X under BTEX)

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # 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)	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	Stockpile 1			5/13/09	1340		1	X								soil				X												

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
Camille Bryant	5/13/09	1401	[signature]	5/8/09	1402
[signature]	5/19/09	0812			
			Received by ELOT: [signature]	05/14/09	8:12

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: 1.5 °C

Page 10 of 11

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent. Basin / Plains

te/ Time 05/19/09 8:12

ı ID # 333091

lals Quick

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	1.5 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
0 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
1 Containers supplied by ELOT?	Yes	No		
2 Samples in proper container/ bottle?	Yes	No	See Below	
3 Samples properly preserved?	Yes	No	See Below	
4 Sample bottles intact?	Yes	No		
5 Preservations documented on Chain of Custody?	Yes	No		
6 Containers documented on Chain of Custody?	Yes	No		
7 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
8 All samples received within sufficient hold time?	Yes	No	See Below	
9 Subcontract of sample(s)?	Yes	No	Not Applicable	
0 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

ntact: _____ Contacted by: _____ Date/ Time: _____

garding. _____

rrective Action Taken:

heck all that Apply:

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

Analytical Report 333999

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal - BLM

2009-093

05-JUN-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

05-JUN-09

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

Reference: XENCO Report No: **333999**
14" Vac to Jal - BLM
Project Address: Jal, 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 333999. 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. 333999 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 333999

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal - BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East Exc. - Floor @ 3.5'	S	May-28-09 15:00		333999-001
East Exc. - ESW @ 3.5'	S	May-28-09 15:10		333999-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal - BLM

Project ID: 2009-093
Work Order Number: 333999

Report Date: 05-JUN-09
Date Received: 05/28/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-760577 Percent Moisture
AD2216A
Batch 760577, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 333999-002, -001.

Batch: LBA-760797 BTEX-MTBE EPA 8021B
SW8021BM

Batch 760797, 4-Bromofluorobenzene recovered below QC limits; QC Data not confirmed by re-analysis. Samples affected are: 531040-1-BLK.

SW8021BM

Batch 760797, Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 333999-002, -001.
The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits

Batch: LBA-760837 TPH by SW8015 Mod
None

Batch: LBA-761125 Inorganic Anions by EPA 300
None

Certificate of Analysis Summary 333999

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal - BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Jal, NM

Date Received in Lab: Thu May-28-09 05:45 pm
Report Date: 05-JUN-09
Project Manager: Brent Barron, II

Analysis Requested								
	Lab Id:	333999-001		333999-002				
	Field Id:	East Exc. - Floor @ 3.5'		East Exc. - ESW @ 3.5'				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	May-28-09 15:00		May-28-09 15:10				
Anions by EPA 300	*Extracted:*							
	Analyzed:	Jun-03-09 13:29						
	Units/RL:	mg/kg	RL					
Chloride		73.6	10.3					
BTEX by EPA 8021B	*Extracted:*	Jun-01-09 08:00		Jun-01-09 08:00				
	Analyzed:	Jun-01-09 14:08		Jun-01-09 15:28				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Benzene		ND	0.0010	ND	0.0010			
Toluene		ND	0.0020	ND	0.0020			
Ethylbenzene		ND	0.0010	ND	0.0010			
m,p-Xylenes		ND	0.0020	ND	0.0020			
o-Xylene		ND	0.0010	ND	0.0010			
Total Xylenes		ND	0.0010	ND	0.0010			
Total BTEX		ND	0.0010	ND	0.0010			
Percent Moisture	*Extracted:*							
	Analyzed:	May-29-09 14:05		May-29-09 14:05				
	Units/RL:	%	RL	%	RL			
Percent Moisture		2.91	1.00	2.15	1.00			
TPH By SW8015 Mod	*Extracted:*	Jun-01-09 12:14		Jun-01-09 12:14				
	Analyzed:	Jun-01-09 20:26		Jun-01-09 20:49				
	Units/RL:	mg/kg	RL	mg/kg	RL			
C6-C12 Gasoline Range Hydrocarbons		ND	15.4	ND	15.3			
C12-C28 Diesel Range Hydrocarbons		ND	15.4	ND	15.3			
C28-C35 Oil Range Hydrocarbons		ND	15.4	ND	15.3			
Total TPH		ND	15.4	ND	15.3			

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Work Orders : 333999,

Project ID: 2009-093

Lab Batch #: 760797 **Sample:** 531040-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 09:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 760797 **Sample:** 531040-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 09:51

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 760797 **Sample:** 531040-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 10:34

BTEX by EPA 8021B	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	0.0220	0.0300	73	80-120	*

Lab Batch #: 760797 **Sample:** 333999-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 14:08

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

Lab Batch #: 760797 **Sample:** 333999-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 15:28

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0244	0.0300	81	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: 14" Vac to Jal - BLM

Work Orders : 333999,

Project ID: 2009-093

Lab Batch #: 760797 **Sample:** 333729-025 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 19:04

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 760797 **Sample:** 333729-025 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 19:26

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 760837 **Sample:** 531068-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 12:23

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 760837 **Sample:** 531068-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 12:46

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 760837 **Sample:** 531068-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/01/09 13:10

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Work Orders : 333999,

Project ID: 2009-093

Lab Batch #: 760837 **Sample:** 333999-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 20:26

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 760837 **Sample:** 333999-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 20:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	100	99	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 760837 **Sample:** 333729-027 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 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	113	100	113	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 760837 **Sample:** 333729-027 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/01/09 21:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	49.1	50.0	98	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: 14" Vac to Jal - BLM

Work Order #: 333999 **Project ID:** 2009-093

Lab Batch #: 761125 **Sample:** 761125-1-BKS **Matrix:** Solid

Date Analyzed: 06/03/2009 **Date Prepared:** 06/03/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by EPA 300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	9.17	92	80-120	

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

BS / BSD Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order #: 333999
Analyst: ASA
Lab Batch ID: 760797 **Sample:** 531040-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 06/01/2009
Project ID: 2009-093
Date Analyzed: 06/01/2009
Matrix: Solid

BTEX by EPA 8021B	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	ND	0.1000	0.1105	111	0.1	0.1094	109	1	70-130	35	
Toluene	ND	0.1000	0.1066	107	0.1	0.1053	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1109	111	0.1	0.1096	110	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2246	112	0.2	0.2219	111	1	70-135	35	
o-Xylene	ND	0.1000	0.1060	106	0.1	0.1053	105	1	71-133	35	

Analyst: BHW
Lab Batch ID: 760837 **Sample:** 531068-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 06/01/2009
Date Analyzed: 06/01/2009
Matrix: Solid

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	ND	1000	842	84	1000	841	84	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1040	104	1000	1040	104	0	70-135	35	

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

Form 3 - MS Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order #: 333999
Lab Batch #: 761125
Date Analyzed: 06/03/2009
QC- Sample ID: 334249-003 S
Reporting Units: mg/kg

Date Prepared: 06/03/2009
Batch #: 1

Project ID: 2009-093
Analyst: LATCOR
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5950	2470	8850	117	80-120	

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: 14" Vac to Jal - BLM

Work Order # : 333999 **Project ID:** 2009-093

Lab Batch ID: 760797 **QC- Sample ID:** 333729-025 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/01/2009 **Date Prepared:** 06/01/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1162	0.1004	86	0.1162	0.1043	90	4	70-130	35	
Toluene	ND	0.1162	0.0976	84	0.1162	0.0997	86	2	70-130	35	
Ethylbenzene	ND	0.1162	0.0802	69	0.1162	0.0777	67	3	71-129	35	X
m,p-Xylenes	ND	0.2323	0.2091	90	0.2323	0.2156	93	3	70-135	35	
o-Xylene	ND	0.1162	0.1001	86	0.1162	0.1025	88	2	71-133	35	

Lab Batch ID: 760837 **QC- Sample ID:** 333729-027 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/01/2009 **Date Prepared:** 06/01/2009 **Analyst:** BHW

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	ND	1170	1030	88	1170	1060	91	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	69.7	1170	1320	107	1170	1380	112	4	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14" Vac to Jal - BLM

Work Order #: 333999

Lab Batch #: 761125 **Project ID:** 2009-093

Date Analyzed: 06/03/2009 **Date Prepared:** 06/03/2009 **Analyst:** LATCOR

QC- Sample ID: 334249-003 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	5950	5840	2	20	

Lab Batch #: 760577

Date Analyzed: 05/29/2009 **Date Prepared:** 05/29/2009 **Analyst:** JLG

QC- Sample ID: 333999-001 S 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	2.91	5.39	60	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

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: CAMILLE BRYANT
Company Name: BASIN ENVIRONMENTAL
Company Address: 2800 PLAINS HWY
City/State/Zip: LOVINGTON, NM 88260
Telephone No.: 575-605-7210
Fax No: 575-396-1429
Sampler Signature: [signature]
e-mail:

Project Name: 14" VACTO JCT. - BLM
Project #: 2009-093
Project Loc: LEA, NM
PO #: PAA - J. HENRY
Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 333999

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled (2009)	Time Sampled	Field Filtered	Total # 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)	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 (TOTAL: X)	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	EAST EXC. - FLOOR @ 3.5'			5/28/09	1500		1	X								SOIL	X								X				X
02	EAST EXC. - E SIDE 3.5'			5/28/09	1510		1	X								SOIL	X								X				X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/28/09	1745			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: [signature]	05.28.09	1745

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: 4.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains /Basin

Date/ Time: 05-28-09 @ 1745

Lab ID #: 332999

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container? /label	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

Check all that Apply:

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

Gracie Avalos

From: Camille J. Bryant [cjbryant@basin-consulting.com]
Sent: Tuesday, June 02, 2009 6:02 PM
To: Gracie Avalos
Subject: Re: WO 333999 / 14" Vac to Jal-BLM

Gracie,

Please run a chloride test on soil sample East Exc. Floor @3.5'.

Thanks,
Camille

---- Original Message ----
From: Gracie Avalos
To: Camille Bryant w/Basin ; cstanley@basinenv.com
Sent: Tuesday, June 02, 2009 2:42 PM
Subject: WO 333999 / 14" Vac to Jal-BLM

Gracie Avalos
Project Assistant
Xenco Labs - Odessa
432-563-1800 Office
432-4563-1713 Fax
gracie.avalos@xenco.com

6/2/2009

Analytical Report 335956

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal BLM

SRS# 2009-93

26-JUN-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

26-JUN-09

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

Reference: XENCO Report No: **335956**
14" Vac to Jal BLM
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 335956. 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. 335956 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

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XENCO Laboratories

Sample Cross Reference 335956

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-1	S	Jun-18-09 15:00		335956-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal BLM

Project ID: *SRS# 2009-93*
Work Order Number: *335956*

Report Date: *26-JUN-09*
Date Received: *06/19/2009*

Sample receipt non conformances and Comments:
None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763001 Percent Moisture
None

Batch: LBA-763323 TPH by SW8015 Mod
None

Batch: LBA-763672 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763672, 1,4-Difluorobenzene recovered below QC limits . Data confirmed by re-analysis.
Samples affected are: 335956-001.
4-Bromofluorobenzene recovered below QC limits. Data confirmed by re-analysis.
Samples affected are: 532618-1-BLK.
4-Bromofluorobenzene recovered above QC limits. Data caonfirmed by re-analysis.
Samples affected are: 335956-001.

Certificate of Analysis Summary 335956

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal BLM

Project Id: SRS# 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received In Lab: Fri Jun-19-09 08:40 am
Report Date: 26-JUN-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	335956-001					
	Field Id:	Blended-1					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jun-18-09 15:00					
BTEX by EPA 8021B	*Extracted:*	Jun-25-09 17:00					
	Analyzed:	Jun-26-09 01:23					
	Units/RL:	mg/kg	RL				
Benzene		0.4051	0.2036				
Toluene		20.51	0.4071				
Ethylbenzene		17.32	0.2036				
m,p-Xylenes		30.54	0.4071				
o-Xylene		12.03	0.2036				
Total Xylenes		42.57	0.2036				
Total BTEX		80.8051	0.2036				
Percent Moisture	*Extracted:*						
	Analyzed:	Jun-22-09 10:23					
	Units/RL:	%	RL				
Percent Moisture		1.75	1.00				
TPH By SW8015 Mod	*Extracted:*	Jun-22-09 08:57					
	Analyzed:	Jun-23-09 09:51					
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		1460	76.0				
C12-C28 Diesel Range Hydrocarbons		2970	76.0				
C28-C35 Oil Range Hydrocarbons		350	76.0				
Total TPH		4780	76.0				

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 335956,

Project ID: SRS# 2009-93

Lab Batch #: 763672 **Sample:** 532618-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/25/09 22:10

BTEX by EPA 8021B 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	0.0320	0.0300	107	80-120	

Lab Batch #: 763672 **Sample:** 532618-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/25/09 22:31

BTEX by EPA 8021B 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	0.0326	0.0300	109	80-120	

Lab Batch #: 763672 **Sample:** 532618-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/25/09 23:15

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0157	0.0300	52	80-120	**

Lab Batch #: 763672 **Sample:** 335956-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/26/09 01:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0417	0.0300	139	80-120	**

Lab Batch #: 763323 **Sample:** 532416-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/09 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	80.8	100	81	70-135	
o-Terphenyl	39.0	50.0	78	70-135	

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Work Orders : 335956,

Project ID: SRS# 2009-93

Lab Batch #: 763323 **Sample:** 532416-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/09 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	80.8	100	81	70-135	
o-Terphenyl	37.5	50.0	75	70-135	

Lab Batch #: 763323 **Sample:** 532416-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/23/09 08:08

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

Lab Batch #: 763323 **Sample:** 335956-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/09 09:51

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	51.4	49.8	103	70-135	

Lab Batch #: 763323 **Sample:** 335951-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/09 17:45

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

Lab Batch #: 763323 **Sample:** 335951-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/23/09 18:11

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

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

BS / BSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order #: 335956
Analyst: ASA
Lab Batch ID: 763672 **Sample:** 532618-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 06/25/2009
Project ID: SRS# 2009-93
Date Analyzed: 06/25/2009
Matrix: Solid

BTEX by EPA 8021B	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	ND	0.1000	0.1077	108	0.1	0.1091	109	1	70-130	35	
Toluene	ND	0.1000	0.1054	105	0.1	0.1069	107	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1112	111	0.1	0.1127	113	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.2232	112	0.2	0.2261	113	1	70-135	35	
o-Xylene	ND	0.1000	0.1067	107	0.1	0.1080	108	1	71-133	35	

Analyst: BHW
Lab Batch ID: 763323 **Sample:** 532416-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 06/22/2009
Date Analyzed: 06/23/2009
Matrix: Solid

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	ND	1000	773	77	1000	736	74	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	715	72	1000	763	76	6	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal BLM

Work Order # : 335956 **Project ID:** SRS# 2009-93

Lab Batch ID: 763323 **QC- Sample ID:** 335951-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/23/2009 **Date Prepared:** 06/22/2009 **Analyst:** BHW

Reporting Units: mg/kg

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

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

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: 14" Vac to Jal BLM

Work Order #: 335956

Lab Batch #: 763001 **Project ID:** SRS# 2009-93

Date Analyzed: 06/22/2009 **Date Prepared:** 06/22/2009 **Analyst:** BEV

QC- Sample ID: 335900-001 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	9.45	10.1	7	20	

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

Environmental Lab of Texas

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: Camille Bryant
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575) 605-7210
Sampler Signature: [signature: Camille Bryant]
Fax No: (505) 396-1429
e-mail: cjbryant@basin-consulting.com

Project Name: 14" Vac to Jal BLM
Project #: SRS# 2009-93
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 335956

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	Blended - 1			06/18/09	1500		1	X								Soil	X								X				X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
[signature: Camille Bryant]	6/18/09	1600	[signature]	6/18/09	1600
[signature]	6/19/09	0840	Received by:		
Relinquished by:			Received by ELOT: [signature: Jeanne Fitch]	06-19-09	0840

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.? UPS DHL FedEx Lone Star
by Courier?
Temperature Upon Receipt: 1.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains / Basin

Date/ Time: 06 19-09 @ 0840

Lab ID #: 335956

Initials: JMF

Sample Receipt Checklist

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

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 336189

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal-BLM

2009-093

01-JUL-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

01-JUL-09

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

Reference: XENCO Report No: **336189**
14" Vac to Jal-BLM
Project Address: Jal, 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 336189. 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. 336189 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 336189

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal-BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-2	S	Jun-22-09 12:00		336189-001
Blended-3	S	Jun-22-09 15:00		336189-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal-BLM

Project ID: 2009-093
Work Order Number: 336189

Report Date: 01-JUL-09
Date Received: 06/23/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763345 Percent Moisture
None

Batch: LBA-763477 TX1005
None

Batch: LBA-763727 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763727, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 336189-002.
4-Bromofluorobenzene recovered below QC limits. Laboratory Control Sample Data not confirmed by re-analysis. Sample Data confirmed by re-analysis. Samples affected are: 532647-1-BLK.336189-002

Batch: LBA-763987 BTEX-MTBE EPA 8021B
SW8021BM

Batch 763987, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 336189-001.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 763987, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 336189-001.
4-Bromofluorobenzene recovered below QC limits. Laboratory Control Sample Data not confirmed by re-analysis. Sample Data conrirmed by re-analysis.
Samples affected are: 532807-1-BLK, 336189-001

Certificate of Analysis Summary 336189

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal-BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Jal, NM

Date Received In Lab: Tue Jun-23-09 09:25 am
Report Date: 01-JUL-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	336189-001		336189-002					
	Field Id:	Blended-2		Blended-3					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-22-09 12:00		Jun-22-09 15:00					
BTEX by EPA 8021B	*Extracted:*	Jun-27-09 11:00		Jun-26-09 08:30					
	Analyzed:	Jun-29-09 11:19		Jun-26-09 19:13					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		0.2833	0.0545	0.7761	0.1053				
Toluene		3.406	0.1089	21.18	0.2106				
Ethylbenzene		10.46	0.0545	20.89	0.1053				
m,p-Xylenes		16.14	0.1089	32.95	0.2106				
o-Xylene		3.300	0.0545	14.48	0.1053				
Total Xylenes		19.44	0.0545	47.43	0.1053				
Total BTEX		33.5893	0.0545	90.2761	0.1053				
Percent Moisture	*Extracted:*								
	Analyzed:	Jun-24-09 10:42		Jun-24-09 10:42					
	Units/RL:	%	RL	%	RL				
Percent Moisture		8.76	1.00	5.42	1.00				
TPH By SW8015 Mod	*Extracted:*	Jun-24-09 14:06		Jun-24-09 14:06					
	Analyzed:	Jun-24-09 23:41		Jun-25-09 00:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		921	16.4	1510	15.8				
C12-C28 Diesel Range Hydrocarbons		2710	16.4	3780	15.8				
C28-C35 Oil Range Hydrocarbons		226	16.4	288	15.8				
Total TPH		3857	16.4	5578	15.8				

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal-BLM

Work Orders : 336189,

Project ID: 2009-093

Lab Batch #: 763727 **Sample:** 532647-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/09 09:16

BTEX by EPA 8021B	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	0.0322	0.0300	107	80-120	

Lab Batch #: 763727 **Sample:** 532647-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/09 09:37

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	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	0.0332	0.0300	111	80-120	

Lab Batch #: 763727 **Sample:** 532647-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/26/09 10:20

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0208	0.0300	69	80-120	*

Lab Batch #: 763727 **Sample:** 336189-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/26/09 19:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0563	0.0300	188	80-120	**

Lab Batch #: 763987 **Sample:** 532807-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/09 08:49

BTEX by EPA 8021B	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	0.0312	0.0300	104	80-120	

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal-BLM

Work Orders : 336189,

Project ID: 2009-093

Lab Batch #: 763987 **Sample:** 532807-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/09 09:10

BTEX by EPA 8021B 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	0.0312	0.0300	104	80-120	

Lab Batch #: 763987 **Sample:** 532807-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/09 09:53

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0182	0.0300	61	80-120	*

Lab Batch #: 763987 **Sample:** 336189-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/09 11:19

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0224	0.0300	75	80-120	**
4-Bromofluorobenzene	0.1090	0.0300	363	80-120	**

Lab Batch #: 763987 **Sample:** 336278-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/09 18:52

BTEX by EPA 8021B 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	0.0341	0.0300	114	80-120	

Lab Batch #: 763987 **Sample:** 336278-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/09 19:14

BTEX by EPA 8021B 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	0.0335	0.0300	112	80-120	

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal-BLM

Work Orders : 336189,

Project ID: 2009-093

Lab Batch #: 763477 **Sample:** 532498-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/09 14:37

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 763477 **Sample:** 532498-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/09 15:04

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	50.8	50.1	101	70-135	

Lab Batch #: 763477 **Sample:** 532498-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/09 15:30

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	100	98	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

Lab Batch #: 763477 **Sample:** 336189-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/09 23:41

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	62.1	50.0	124	70-135	

Lab Batch #: 763477 **Sample:** 336189-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/09 00:07

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.9	114	70-135	
o-Terphenyl	54.5	50.0	109	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: 14" Vac to Jal-BLM

Work Orders : 336189,

Project ID: 2009-093

Lab Batch #: 763477 **Sample:** 336111-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/09 00:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.6	118	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 763477 **Sample:** 336111-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/09 01:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	99.6	121	70-135	
o-Terphenyl	53.6	49.8	108	70-135	

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

BS / BSD Recoveries

Project Name: 14" Vac to Jal-BLM

Work Order #: 336189
Analyst: ASA
Lab Batch ID: 763727
Sample: 532647-1-BKS
Date Prepared: 06/26/2009
Batch #: 1
Project ID: 2009-093
Date Analyzed: 06/26/2009
Matrix: Solid
Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0916	92	0.1	0.0915	92	0	70-130	35	
Toluene	ND	0.1000	0.0897	90	0.1	0.0894	89	0	70-130	35	
Ethylbenzene	ND	0.1000	0.0953	95	0.1	0.0954	95	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.1918	96	0.2	0.1916	96	0	70-135	35	
o-Xylene	ND	0.1000	0.0915	92	0.1	0.0919	92	0	71-133	35	

Analyst: ASA
Lab Batch ID: 763987
Sample: 532807-1-BKS
Date Prepared: 06/27/2009
Batch #: 1
Date Analyzed: 06/29/2009
Matrix: Solid
Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0927	93	0.1	0.0938	94	1	70-130	35	
Toluene	ND	0.1000	0.0892	89	0.1	0.0904	90	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0913	91	0.1	0.0931	93	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.1837	92	0.2	0.1865	93	2	70-135	35	
o-Xylene	ND	0.1000	0.0871	87	0.1	0.0880	88	1	71-133	35	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: 14" Vac to Jal-BLM

Work Order #: 336189 **Project ID:** 2009-093

Analyst: BHW **Date Prepared:** 06/24/2009 **Date Analyzed:** 06/24/2009

Lab Batch ID: 763477 **Sample:** 532498-1-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	ND	1000	817	82	1000	844	84	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	873	87	1000	898	90	3	70-135	35	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal-BLM

Work Order # : 336189 **Project ID:** 2009-093

Lab Batch ID: 763987 **QC- Sample ID:** 336278-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/29/2009 **Date Prepared:** 06/27/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B 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	ND	0.1190	0.0415	35	0.1190	0.0589	49	35	70-130	35	X
Toluene	ND	0.1190	0.0422	35	0.1190	0.0580	49	32	70-130	35	X
Ethylbenzene	ND	0.1190	0.0458	38	0.1190	0.0594	50	26	71-129	35	X
m,p-Xylenes	ND	0.2379	0.0944	40	0.2379	0.1199	50	24	70-135	35	X
o-Xylene	ND	0.1190	0.0436	37	0.1190	0.0554	47	24	71-133	35	X

Lab Batch ID: 763477 **QC- Sample ID:** 336111-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/25/2009 **Date Prepared:** 06/24/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1240	1110	90	1240	1130	91	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1240	1220	98	1240	1220	98	0	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14" Vac to Jal-BLM

Work Order #: 336189

Lab Batch #: 763345 **Project ID:** 2009-093

Date Analyzed: 06/24/2009 **Date Prepared:** 06/24/2009 **Analyst:** BEV

QC- Sample ID: 336189-001 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	8.76	7.66	13	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

The Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Curt Stanley

Company Name: Basin Environmental

Company Address: 2800 Plains Hwy

City/State/Zip: Lovington, NM 88260

Telephone No: 575-441-2244

Fax No:

Sampler Signature: C.H. Stanley for/ Walter

Project Name: 4" Vacto Jal - BLM

Project #: 2009-093

Project Loc: Jal, NM

PO #: DAH - S. Henry

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 336189

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix	TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	BLENDED-2			6/22/2009	1200		X	X								SOIL	X								X				X
02	BLENDED-3			6/22	1500		X	X								SOIL	X								X				X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
C.H. Stanley	6/23/09	0925			
			Received by ELOT: [signature]	06/23/09	0925

Laboratory Comments: 4.2 °C
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: 4.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

lient: Basin / Plains

late/ Time: 04/23/09 9:25

ab ID #: 336189

nitials: gilet

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	2.1 °C	
#2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	(Yes)	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: ____________ Contacted by: ____________ Date/ Time: ____________

Regarding: ____________

Corrective Action Taken:

____

Check all that Apply:

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

Analytical Report 336449

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal -BLM

2009-093

07-JUL-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

Arixona certification numbers:
Houston, TX AZ0738

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

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

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

07-JUL-09

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

Reference: XENCO Report No: **336449**
14" Vac to Jal -BLM
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 336449. 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. 336449 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 336449

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal -BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-4	S	Jun-24-09 10:10		336449-001
Blended-5	S	Jun-24-09 15:30		336449-002
Blended-6	S	Jun-24-09 15:50		336449-003

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal -BLM

Project ID: 2009-093
Work Order Number: 336449

Report Date: 07-JUL-09
Date Received: 06/25/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-763629 Percent Moisture
None

Batch: LBA-763866 TPH by SW8015 Mod
None

Batch: LBA-764617 BTEX-MTBE EPA 8021B
SW8021BM

Batch 764617, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 336449-002.

4-Bromofluorobenzene recovered below QC limits. QC Data not confirmed by re-analysis.
Samples affected are: 533185-1-BLK.

4-Bromofluorobenzene recovered above QC limits. Sample Data confirmed by re-analysis.
Samples affected are: 533185-1-BSD, 336449-001, 336449-002, 336449-003
Matirx interferences is suspected.

XENCO Laboratories

Certificate of Analysis Summary 336449

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal -BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Thu Jun-25-09 09:05 am
Report Date: 07-JUL-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	336449-001		336449-002		336449-003					
	Field Id:	Blended-4		Blended-5		Blended-6					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-24-09 10:10		Jun-24-09 15:30		Jun-24-09 15:50					
BTEX by EPA 8021B	*Extracted:*	Jul-06-09 10:00		Jul-06-09 10:00		Jul-06-09 10:00					
	Analyzed:	Jul-06-09 17:58		Jul-06-09 18:20		Jul-06-09 18:41					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.1068	ND	0.1070	2.767	0.5342				
Toluene		17.08	0.2136	12.71	0.2140	111.3	1.068				
Ethylbenzene		25.09	0.1068	20.08	0.1070	73.55	0.5342				
m,p-Xylenes		38.99	0.2136	32.34	0.2140	127.1	1.068				
o-Xylene		16.31	0.1068	13.77	0.1070	47.79	0.5342				
Total Xylenes		55.3	0.1068	46.11	0.1070	174.89	0.5342				
Total BTEX		97.47	0.1068	78.9	0.1070	362.507	0.5342				
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-25-09 16:00		Jun-25-09 16:00		Jun-25-09 16:00					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		6.38	1.00	6.56	1.00	6.41	1.00				
TPH By SW8015 Mod	*Extracted:*	Jun-27-09 11:17		Jun-27-09 11:17		Jun-27-09 11:17					
	Analyzed:	Jun-27-09 19:57		Jun-27-09 20:23		Jun-27-09 20:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		2240	80.0	1770	80.3	6810	80.0				
C12-C28 Diesel Range Hydrocarbons		4430	80.0	4100	80.3	12700	80.0				
C28-C35 Oil Range Hydrocarbons		418	80.0	390	80.3	1060	80.0				
Total TPH		7088	80.0	6260	80.3	20570	80.0				

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Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal -BLM

Work Orders : 336449, **Project ID:** 2009-093

Lab Batch #: 764617 **Sample:** 533185-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 10:41

BTEX by EPA 8021B	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	0.0357	0.0300	119	80-120	

Lab Batch #: 764617 **Sample:** 533185-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 11:02

BTEX by EPA 8021B	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	0.0368	0.0300	123	80-120	*

Lab Batch #: 764617 **Sample:** 533185-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 11:45

BTEX by EPA 8021B	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	0.0163	0.0300	54	80-120	*

Lab Batch #: 764617 **Sample:** 336449-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 17:58

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0596	0.0300	199	80-120	**

Lab Batch #: 764617 **Sample:** 336449-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 18:20

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0624	0.0300	208	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: 14" Vac to Jal -BLM

Work Orders : 336449,

Project ID: 2009-093

Lab Batch #: 764617 **Sample:** 336449-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 18:41

BTEX by EPA 8021B 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	0.0459	0.0300	153	80-120	**

Lab Batch #: 763866 **Sample:** 532726-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/09 12:58

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	47.4	50.0	95	70-135	

Lab Batch #: 763866 **Sample:** 532726-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/09 13:24

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	46.6	50.0	93	70-135	

Lab Batch #: 763866 **Sample:** 532726-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/09 13:51

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	100	93	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 763866 **Sample:** 336449-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/09 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	116	99.8	116	70-135	
o-Terphenyl	53.0	49.9	106	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: 14" Vac to Jal -BLM

Work Orders : 336449,

Project ID: 2009-093

Lab Batch #: 763866 **Sample:** 336449-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/09 20:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	132	100	132	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

Lab Batch #: 763866 **Sample:** 336449-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/09 20:49

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	57.0	49.9	114	70-135	

Lab Batch #: 763866 **Sample:** 336334-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/09 23:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	194	200	97	70-135	
o-Terphenyl	89.6	100	90	70-135	

Lab Batch #: 763866 **Sample:** 336334-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/09 00:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	197	200	99	70-135	
o-Terphenyl	91.5	99.9	92	70-135	

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

BS / BSD Recoveries

Project Name: 14" Vac to Jal -BLM

Work Order #: 336449
Analyst: ASA
Lab Batch ID: 764617 **Sample:** 533185-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 07/06/2009
Project ID: 2009-093
Date Analyzed: 07/06/2009
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0905	91	0.1	0.0940	94	4	70-130	35	
Toluene	ND	0.1000	0.0872	87	0.1	0.0910	91	4	70-130	35	
Ethylbenzene	ND	0.1000	0.0978	98	0.1	0.1017	102	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.2006	100	0.2	0.2085	104	4	70-135	35	
o-Xylene	ND	0.1000	0.0949	95	0.1	0.0987	99	4	71-133	35	

Analyst: BHW
Lab Batch ID: 763866 **Sample:** 532726-1-BKS **Batch #:** 1
Units: mg/kg

Date Prepared: 06/27/2009
Date Analyzed: 06/27/2009
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	849	85	1000	843	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	912	91	1000	899	90	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 / MSD Recoveries

Project Name: 14" Vac to Jal -BLM

Work Order # : 336449 **Project ID:** 2009-093

Lab Batch ID: 763866 **QC- Sample ID:** 336334-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/27/2009 **Date Prepared:** 06/27/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1010	869	86	1010	878	87	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1010	970	96	1010	989	98	2	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14" Vac to Jal -BLM

Work Order #: 336449

Lab Batch #: 763629 **Project ID:** 2009-093

Date Analyzed: 06/25/2009 **Date Prepared:** 06/25/2009 **Analyst:** WRU

QC- Sample ID: 336424-001 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	17.2	17.2	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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant PAGE 01 OF 01
Project Name: 14" Vac to Jal - BLM
Company Name: Basin Environmental Service Technologies, LLC
Project #: 2009-093
Company Address: 2800 Plains Hwy
Project Loc: Lea County, NM
City/State/Zip: Lovington, NM 88260
PO #: PAA - J. Henry
Telephone No: (575) 605-7210 Fax No: (505) 396-1429 Report Format: [X] Standard [ ] TRRP [ ] NPDES
Sampler Signature: e-mail: cibryant@basin-consulting.com

(lab use only) ORDER #: 330449

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 (HOA ≤ 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: Soil	Analyze For: TPH: 418.1 / 8015	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	BAR / ESP / CEC	Metals: As, Ag, Ba, Cd, Cr, Pb, Hg, Se	Volatiles	Semivolatiles	BTEX 8260	RCI	HOLD	PAH	EPA Paint Filter Test	Chlorides E 300	RUSH TAT (pre-schedule 24, 48, 72 hrs)	Standard TAT
01	Blended - 4			6/24/2009	1010		1	X								Soil	X								X							X
02	Blended - 5			6/24/2009	1530		1	X								Soil	X								X							X
03	Blended - 6			6/24/2009	1550		1	X								Soil	X								X							X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:		4:45 pm	Received by:		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELO: Andrea Fam	Date 6-25-09	Time 9:05

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)		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
4029435
Temperature Upon Receipt: 4.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin / Plains

Date/ Time: 6 25 09 9:05

Lab ID #: 336449

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.6 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply.

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

Analytical Report 337027

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14" Vac to Jal - BLM

2009-093

10-JUL-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

Arizona certification numbers: Houston, TX AZ0738

New Jersey certification numbers: Houston, TX TX007

Pennsylvania certification numbers: Houston, TX 68-03610

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

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

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

10-JUL-09

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

Reference: XENCO Report No: **337027**
14" Vac to Jal - BLM
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 337027. 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. 337027 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 337027

PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal - BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended 1 A	S	Jul-01-09 16:10		337027-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14" Vac to Jal - BLM

Project ID: 2009-093
Work Order Number: 337027

Report Date: 10-JUL-09
Date Received: 07/02/2009

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764500 Percent Moisture
None

Batch: LBA-764581 TPH by SW8015 Mod
None

Batch: LBA-764887 BTEX-MTBE EPA 8021B
SW8021BM

Batch 764887, 4-Bromofluorobenzene recovered outside of the QC limits. Data not confirmed by re-analysis. Samples affected are: 533308-1-BLK, 533308-1-BSD, 337016-001 S, 337016-001 SD
Sample 337027-001 was reanalyzed for Matrix interference confirmation for the failure of 4-Bromofluorobenzene.

Batch: LBA-765019 BTEX-MTBE EPA 8021B
SW8021BM

Batch 765019, Toluene recovered below QC limits in the Matrix Spike.
Samples affected are: 337027-001.
The Laboratory Control Sample for Toluene is within laboratory Control Limits

SW8021BM

Batch 765019,
4-Bromofluorobenzene recovered outside of the QC limits in some QC samples, these samples were not reanalyzed.
Sample 337027-001/DL was reanalyzed for matrix interference confirmation.
SW8021BM

Certificate of Analysis Summary 337027

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14" Vac to Jal - BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Thu Jul-02-09 11:52 am
Report Date: 10-JUL-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	337027-001					
	Field Id:	Blended 1 A					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jul-01-09 16:10					
BTEX by EPA 8021B	*Extracted:*	Jul-06-09 18:00					
	Analyzed:	Jul-08-09 16:46					
	Units/RL:	mg/kg	RL				
Benzene		0.1041	0.0010				
Toluene		3.988 D	0.2060				
Ethylbenzene		8.832 D	0.1030				
m,p-Xylenes		17.09 D	0.2060				
o-Xylene		7.335 D	0.1030				
Total Xylenes		24.4300	0.1030				
Total BTEX		37.3500	0.0010				
Percent Moisture	*Extracted:*						
	Analyzed:	Jul-06-09 08:41					
	Units/RL:	%	RL				
Percent Moisture		2.90	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-06-09 09:31					
	Analyzed:	Jul-06-09 13:37					
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		814	77.2				
C12-C28 Diesel Range Hydrocarbons		2540	77.2				
C28-C35 Oil Range Hydrocarbons		195	77.2				
Total TPH		3549	77.2				

Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Work Orders : 337027,

Project ID: 2009-093

Lab Batch #: 764887 **Sample:** 533308-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 08:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 764887 **Sample:** 533308-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 08:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0380	0.0300	127	80-120	*

Lab Batch #: 764887 **Sample:** 533308-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 09:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0166	0.0300	55	80-120	*

Lab Batch #: 764887 **Sample:** 337027-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 16:46

BTEX by EPA 8021B 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	0.0803	0.0300	268	80-120	**

Lab Batch #: 764887 **Sample:** 337016-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 20:21

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0404	0.0300	135	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: 14" Vac to Jal - BLM

Work Orders : 337027,

Project ID: 2009-093

Lab Batch #: 764887 **Sample:** 337016-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 20:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0378	0.0300	126	80-120	*

Lab Batch #: 765019 **Sample:** 533394-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0370	0.0300	123	80-120	*

Lab Batch #: 765019 **Sample:** 533394-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:34

BTEX by EPA 8021B 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	0.0348	0.0300	116	80-120	

Lab Batch #: 765019 **Sample:** 533394-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 23:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0127	0.0300	42	80-120	*

Lab Batch #: 765019 **Sample:** 337027-001 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 02:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0569	0.0300	190	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: 14" Vac to Jal - BLM

Work Orders : 337027,

Project ID: 2009-093

Lab Batch #: 765019 **Sample:** 337025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0397	0.0300	132	80-120	*

Lab Batch #: 765019 **Sample:** 337025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:39

BTEX by EPA 8021B	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	0.0368	0.0300	123	80-120	*

Lab Batch #: 764581 **Sample:** 533163-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 10:44

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	42.0	50.0	84	70-135	

Lab Batch #: 764581 **Sample:** 533163-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 11:08

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	42.9	50.0	86	70-135	

Lab Batch #: 764581 **Sample:** 533163-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/06/09 11:33

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	100	96	70-135	
o-Terphenyl	44.7	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: 14" Vac to Jal - BLM

Work Orders : 337027,

Project ID: 2009-093

Lab Batch #: 764581 **Sample:** 337027-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 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	49.2	50.0	98	70-135	

Lab Batch #: 764581 **Sample:** 337025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 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	110	100	110	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

Lab Batch #: 764581 **Sample:** 337025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/06/09 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	111	100	111	70-135	
o-Terphenyl	42.7	50.0	85	70-135	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order #: 337027 **Project ID:** 2009-093

Analyst: BRB **Date Prepared:** 07/06/2009 **Date Analyzed:** 07/08/2009

Lab Batch ID: 764887 **Sample:** 533308-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.0885	89	0.5	0.4494	90	134	70-130	35	
Toluene	ND	0.1000	0.0836	84	0.5	0.4291	86	135	70-130	35	
Ethylbenzene	ND	0.1000	0.0935	94	0.5	0.4909	98	136	71-129	35	
m,p-Xylenes	ND	0.2000	0.1901	95	1	1.002	100	136	70-135	35	
o-Xylene	ND	0.1000	0.0904	90	0.5	0.4748	95	136	71-133	35	

Analyst: BRB **Date Prepared:** 07/09/2009 **Date Analyzed:** 07/09/2009

Lab Batch ID: 765019 **Sample:** 533394-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.0776	78	0.1	0.0799	80	3	70-130	35	
Toluene	ND	0.1000	0.0738	74	0.1	0.0759	76	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0813	81	0.1	0.0840	84	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene	ND	0.1000	0.0793	79	0.1	0.0809	81	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

BS / BSD Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order #: 337027
Analyst: BHW
Lab Batch ID: 764581
Sample: 533163-1-BKS
Units: mg/kg

Date Prepared: 07/06/2009
Batch #: 1

Project ID: 2009-093
Date Analyzed: 07/06/2009
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	847	85	1000	854	85	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	990	99	1000	1000	100	1	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order # : 337027 **Project ID:** 2009-093

Lab Batch ID: 764887 **QC- Sample ID:** 337016-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/08/2009 **Date Prepared:** 07/06/2009 **Analyst:** BRB

Reporting Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1015	0.0824	81	0.1015	0.0767	76	7	70-130	35	
Toluene	ND	0.1015	0.0884	87	0.1015	0.0787	78	12	70-130	35	
Ethylbenzene	ND	0.1015	0.0922	91	0.1015	0.0846	83	9	71-129	35	
m,p-Xylenes	ND	0.2029	0.1928	95	0.2029	0.1733	85	11	70-135	35	
o-Xylene	ND	0.1015	0.0914	90	0.1015	0.0819	81	11	71-133	35	

Lab Batch ID: 765019 **QC- Sample ID:** 337025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/10/2009 **Date Prepared:** 07/09/2009 **Analyst:** BRB

Reporting Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1006	0.0715	71	0.1006	0.0767	76	7	70-130	35	
Toluene	ND	0.1006	0.0692	69	0.1006	0.0731	73	5	70-130	35	X
Ethylbenzene	ND	0.1006	0.0781	78	0.1006	0.0807	80	3	71-129	35	
m,p-Xylenes	ND	0.2012	0.1601	80	0.2012	0.1638	81	2	70-135	35	
o-Xylene	ND	0.1006	0.0751	75	0.1006	0.0770	77	2	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

Form 3 - MS / MSD Recoveries

Project Name: 14" Vac to Jal - BLM

Work Order # : 337027 **Project ID:** 2009-093

Lab Batch ID: 764581 **QC- Sample ID:** 337025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/06/2009 **Date Prepared:** 07/06/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1010	869	86	1010	877	87	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1010	1030	102	1010	1050	104	2	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14" Vac to Jal - BLM

Work Order #: 337027

Lab Batch #: 764500 **Project ID:** 2009-093

Date Analyzed: 07/06/2009 **Date Prepared:** 07/06/2009 **Analyst:** BEV

QC- Sample ID: 337016-001 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	1.43	1.44	1	20	

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Curt Stanley — PAGE 01 OF 01 — Project Name: 14" Vac to Jal - BLM

Company Name: Basin Environmental Service Technologies, LLC — Project #: 2009-093

Company Address: 2800 Plains Hwy — Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260 — PO #: PAA - J. Henry

Telephone No: (575) 441-2244 — Fax No: (575) 396-1429 — Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: — e-mail: cstanley@basinenv.com

(lab use only) ORDER #: 337021

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 (VOA 2-7)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: Drinking Water	Groundwater	Wastewater	Sludge	Other	Analyze For: 8015M	TPH: 418.1	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8260	RCI	N O R M	PAH	EPA Point Flow Test	Chlorides 4500	RUSH TAT (Pre-Schedule) 24 48 72 hrs	Standard TAT
	Blended 1A			7/1/2009	1610		1	X												Soil	X									X							X
	Blended 2A			7/1/2009	1615		1	X												Soil	X									X							X

Special Instructions:

Relinquished by	Date 7/6/09	Time 0925	Received by		Date	Time
Relinquished by	Date	Time	Received by		Date	Time
Relinquished by	Date	Time	Received by ELOT	Andrea Sam	Date 7/7/09	Time 9:20

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	
Temperature Upon Receipt	1.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Brown Env./Plains

Date/ Time: 7.7.09 9:25

Lab ID #: 337027

Initials: AL

Sample Receipt Checklist

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

Variance Documentation

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

Regarding: _____

Corrective Action Taken.

Check all that Apply:

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

Analytical Report 337281

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal - BLM

2009-93

10-JUL-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

Arizona certification numbers: Houston, TX AZ0738

New Jersey certification numbers: Houston, TX TX007

Pennsylvania certification numbers: Houston, TX 68-03610

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

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

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

XENCO Laboratories

10-JUL-09

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

Reference: XENCO Report No: **337281**
14-Inch Vac to Jal - BLM
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 337281. 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. 337281 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 337281

PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal - BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-3 A	S	Jul-02-09 11:15		337281-001
Blended-4 A	S	Jul-02-09 15:12		337281-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14-Inch Vac to Jal - BLM

Project ID:	*2009-93*	*Report Date:*	*10-JUL-09*
Work Order Number:	*337281*	*Date Received:*	*07/07/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764742 Percent Moisture
None

Batch: LBA-764867 TPH by SW8015 Mod
None

Batch: LBA-765019 BTEX-MTBE EPA 8021B
SW8021BM

Batch 765019, Toluene recovered below QC limits in the Matrix Spike.
Samples affected are: 337281-001, -002.
The Laboratory Control Sample for Toluene is within laboratory Control Limits

SW8021BM

Batch 765019, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 337281-002.

4-Bromofluorobenzene recovered outside of the QC limits in some QC samples, these samples were not reanalyzed.

SW8021BM

XENCO Laboratories

Certificate of Analysis Summary 337281

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal - BLM

Project Id: 2009-93
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Jul-07-09 10:15 am
Report Date: 10-JUL-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	337281-001		337281-002					
	Field Id:	Blended-3 A		Blended-4 A					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-02-09 11:15		Jul-02-09 15:12					
BTEX by EPA 8021B	*Extracted:*	Jul-09-09 17:00		Jul-09-09 17:00					
	Analyzed:	Jul-09-09 23:38		Jul-10-09 00:00					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.2635	ND	0.1085				
Toluene		ND	0.5270	ND	0.2170				
Ethylbenzene		0.9328	0.2635	0.8670	0.1085				
m,p-Xylenes		2.063	0.5270	2.025	0.2170				
o-Xylene		0.9249	0.2635	0.9896	0.1085				
Total Xylenes		2.9879	0.2635	3.0146	0.1085				
Total BTEX		3.9207	0.2635	3.8816	0.1085				
Percent Moisture	*Extracted:*								
	Analyzed:	Jul-07-09 16:00		Jul-07-09 16:00					
	Units/RL:	%	RL	%	RL				
Percent Moisture		5.12	1.00	7.84	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-08-09 13:39		Jul-08-09 13:39					
	Analyzed:	Jul-08-09 16:48		Jul-08-09 17:15					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		608	78.7	661	81.4				
C12-C28 Diesel Range Hydrocarbons		3240	78.7	3390	81.4				
C28-C35 Oil Range Hydrocarbons		248	78.7	269	81.4				
Total TPH		4096	78.7	4320	81.4				

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

Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Orders : 337281, **Project ID:** 2009-93

Lab Batch #: 765019 **Sample:** 533394-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0370	0.0300	123	80-120	*

Lab Batch #: 765019 **Sample:** 533394-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:34

BTEX by EPA 8021B	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	0.0348	0.0300	116	80-120	

Lab Batch #: 765019 **Sample:** 533394-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 23:17

BTEX by EPA 8021B	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	0.0127	0.0300	42	80-120	*

Lab Batch #: 765019 **Sample:** 337281-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/09 23:38

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	

Lab Batch #: 765019 **Sample:** 337281-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 00:00

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0436	0.0300	145	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: 14-Inch Vac to Jal - BLM

Work Orders : 337281, **Project ID:** 2009-93

Lab Batch #: 765019 **Sample:** 337025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0397	0.0300	132	80-120	*

Lab Batch #: 765019 **Sample:** 337025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:39

BTEX by EPA 8021B	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	0.0368	0.0300	123	80-120	*

Lab Batch #: 764867 **Sample:** 533304-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:03

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

Lab Batch #: 764867 **Sample:** 533304-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:30

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 764867 **Sample:** 533304-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:56

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	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

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Orders : 337281, **Project ID:** 2009-93

Lab Batch #: 764867 **Sample:** 337281-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 16:48

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.6	124	70-135	
o-Terphenyl	63.4	49.8	127	70-135	

Lab Batch #: 764867 **Sample:** 337281-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 17:15

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	63.0	50.0	126	70-135	

Lab Batch #: 764867 **Sample:** 337279-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 19:25

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 764867 **Sample:** 337279-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 19:51

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	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

BS / BSD Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337281 **Project ID:** 2009-93

Analyst: BRB **Date Prepared:** 07/09/2009 **Date Analyzed:** 07/09/2009

Lab Batch ID: 765019 **Sample:** 533394-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0776	78	0.1	0.0799	80	3	70-130	35	
Toluene	ND	0.1000	0.0738	74	0.1	0.0759	76	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0813	81	0.1	0.0840	84	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene	ND	0.1000	0.0793	79	0.1	0.0809	81	2	71-133	35	

Analyst: BHW **Date Prepared:** 07/08/2009 **Date Analyzed:** 07/08/2009

Lab Batch ID: 764867 **Sample:** 533304-1-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	ND	1000	816	82	1000	818	82	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	848	85	1000	843	84	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 / MSD Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Order # : 337281 **Project ID:** 2009-93

Lab Batch ID: 765019 **QC- Sample ID:** 337025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/10/2009 **Date Prepared:** 07/09/2009 **Analyst:** BRB

Reporting Units: mg/kg

BTEX by EPA 8021B 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	ND	0.1006	0.0715	71	0.1006	0.0767	76	7	70-130	35	
Toluene	ND	0.1006	0.0692	69	0.1006	0.0731	73	5	70-130	35	X
Ethylbenzene	ND	0.1006	0.0781	78	0.1006	0.0807	80	3	71-129	35	
m,p-Xylenes	ND	0.2012	0.1601	80	0.2012	0.1638	81	2	70-135	35	
o-Xylene	ND	0.1006	0.0751	75	0.1006	0.0770	77	2	71-133	35	

Lab Batch ID: 764867 **QC- Sample ID:** 337279-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/08/2009 **Date Prepared:** 07/08/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	23.7	1030	872	82	1020	891	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	126	1030	1040	89	1020	1060	92	2	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337281

Lab Batch #: 764742 **Project ID:** 2009-93

Date Analyzed: 07/07/2009 **Date Prepared:** 07/07/2009 **Analyst:** BEV

QC- Sample ID: 337200-001 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	4.27	3.58	18	20	

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Curt Stanley
Company Name: Basin Environmental Service Technologies, LLC
Company Address: P. O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No: (575)396-7219
Fax No: (505) 396-1429
Sampler Signature: Curt Stanley (signature) boy Wartens
e-mail: cdstanley@basin-consulting.com

Project Name: 14" Vac to Jal BLM
Project #: SRS# 2009-83
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 337181

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	Blended - 3A			07/02/09	1115		1	X								Soil	X								X				X
	Blended - 4A			07/02/09	1512		1	X								Soil	X								X				X

Preservation & # of Containers: 4 ° g . c

Matrix: DW = Drinking Water, SL = Sludge; GW = Groundwater, S = Soil/Solid; NP = Non-Potable, Specify Other

Analyze For: TCLP / TOTAL

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Curt Stanley (signature)	7/7/09	1015			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: (signature)	07/07/09	10:15

Laboratory Comments: 4.0 ° C
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: 0.4 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Plains

Date/ Time: 12/16/19 10:15

Lab ID #: 337281

Initials: [illegible]

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	1.4 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 337282

for

PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal - BLM

2009-093

10-JUL-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX
Corpus Christi, TX T104704370-08-TX - Dallas, TX T104704295-08-TX

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

Arizona certification numbers: Houston, TX AZ0738

New Jersey certification numbers: Houston, TX TX007

Pennsylvania certification numbers: Houston, TX 68-03610

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

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

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

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

10-JUL-09

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

Reference: XENCO Report No: **337282**
14-Inch Vac to Jal - BLM
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 337282. 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. 337282 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 337282

PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal - BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended-5	S	Jul-06-09 11:50		337282-001
Blended-6	S	Jul-06-09 15:25		337282-002

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14-Inch Vac to Jal - BLM

Project ID:	*2009-093*	*Report Date:*	*10-JUL-09*
Work Order Number:	*337282*	*Date Received:*	*07/07/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-764742 Percent Moisture
None

Batch: LBA-764867 TPH by SW8015 Mod
None

Batch: LBA-765019 BTEX-MTBE EPA 8021B
SW8021BM

Batch 765019, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 337282-002,337282-001.
4-Bromofluorobenzene recovered outside of the QC limits in some QC samples, these samples were not reanalyzed.

SW8021BM

Batch 765019, Toluene recovered below QC limits in the Matrix Spike.
Samples affected are: 337282-001, -002.
The Laboratory Control Sample for Toluene is within laboratory Control Limits

Certificate of Analysis Summary 337282

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal - BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Tue Jul-07-09 10:15 am
Report Date: 10-JUL-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	337282-001		337282-002					
	Field Id:	Blended-5		Blended-6					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-06-09 11:50		Jul-06-09 15:25					
BTEX by EPA 8021B	*Extracted:*	Jul-09-09 17:00		Jul-09-09 17:00					
	Analyzed:	Jul-10-09 00:21		Jul-10-09 00:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.1095	0.3148	0.2762				
Toluene		3.075	0.2190	18.95	0.5524				
Ethylbenzene		5.782	0.1095	28.77	0.2762				
m,p-Xylenes		10.57	0.2190	50.20	0.5524				
o-Xylene		4.703	0.1095	21.17	0.2762				
Total Xylenes		15.273	0.1095	71.37	0.2762				
Total BTEX		24.13	0.1095	119.4048	0.2762				
Percent Moisture	*Extracted:*								
	Analyzed:	Jul-07-09 16:00		Jul-07-09 16:00					
	Units/RL:	%	RL	%	RL				
Percent Moisture		8.69	1.00	9.48	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-08-09 13:39		Jul-08-09 13:39					
	Analyzed:	Jul-08-09 17:41		Jul-08-09 18:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		822	82.1	3500	82.7				
C12-C28 Diesel Range Hydrocarbons		2840	82.1	8690	82.7				
C28-C35 Oil Range Hydrocarbons		236	82.1	670	82.7				
Total TPH		3898	82.1	12860	82.7				

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

Brent Barron
Odessa Laboratory Director

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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Orders : 337282,

Project ID: 2009-093

Lab Batch #: 765019 **Sample:** 533394-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:13

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0370	0.0300	123	80-120	*

Lab Batch #: 765019 **Sample:** 533394-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 22:34

BTEX by EPA 8021B	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	0.0348	0.0300	116	80-120	

Lab Batch #: 765019 **Sample:** 533394-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/09 23:17

BTEX by EPA 8021B	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	0.0127	0.0300	42	80-120	*

Lab Batch #: 765019 **Sample:** 337282-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 00:21

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0502	0.0300	167	80-120	*

Lab Batch #: 765019 **Sample:** 337282-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 00:43

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0507	0.0300	169	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: 14-Inch Vac to Jal - BLM

Work Orders : 337282,

Project ID: 2009-093

Lab Batch #: 765019 **Sample:** 337025-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0397	0.0300	132	80-120	*

Lab Batch #: 765019 **Sample:** 337025-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/09 08:39

BTEX by EPA 8021B 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	0.0368	0.0300	123	80-120	*

Lab Batch #: 764867 **Sample:** 533304-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:03

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	53.0	50.0	106	70-135	

Lab Batch #: 764867 **Sample:** 533304-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 764867 **Sample:** 533304-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/08/09 15:56

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	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

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Orders : 337282, **Project ID:** 2009-093

Lab Batch #: 764867 **Sample:** 337282-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 17:41

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	59.2	50.0	118	70-135	

Lab Batch #: 764867 **Sample:** 337282-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 18:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.8	125	70-135	
o-Terphenyl	63.4	49.9	127	70-135	

Lab Batch #: 764867 **Sample:** 337279-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 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	126	100	126	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 764867 **Sample:** 337279-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/08/09 19:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	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.

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BS / BSD Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337282 **Project ID:** 2009-093

Analyst: BRB **Date Prepared:** 07/09/2009 **Date Analyzed:** 07/09/2009

Lab Batch ID: 765019 **Sample:** 533394-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.0776	78	0.1	0.0799	80	3	70-130	35	
Toluene	ND	0.1000	0.0738	74	0.1	0.0759	76	3	70-130	35	
Ethylbenzene	ND	0.1000	0.0813	81	0.1	0.0840	84	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene	ND	0.1000	0.0793	79	0.1	0.0809	81	2	71-133	35	

Analyst: BHW **Date Prepared:** 07/08/2009 **Date Analyzed:** 07/08/2009

Lab Batch ID: 764867 **Sample:** 533304-1-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	ND	1000	816	82	1000	818	82	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	848	85	1000	843	84	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 / MSD Recoveries

Project Name: 14-Inch Vac to Jal - BLM

Work Order # : 337282 **Project ID:** 2009-093

Lab Batch ID: 765019 **QC- Sample ID:** 337025-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/10/2009 **Date Prepared:** 07/09/2009 **Analyst:** BRB

Reporting Units: mg/kg

BTEX by EPA 8021B 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	ND	0.1006	0.0715	71	0.1006	0.0767	76	7	70-130	35	
Toluene	ND	0.1006	0.0692	69	0.1006	0.0731	73	5	70-130	35	X
Ethylbenzene	ND	0.1006	0.0781	78	0.1006	0.0807	80	3	71-129	35	
m,p-Xylenes	ND	0.2012	0.1601	80	0.2012	0.1638	81	2	70-135	35	
o-Xylene	ND	0.1006	0.0751	75	0.1006	0.0770	77	2	71-133	35	

Lab Batch ID: 764867 **QC- Sample ID:** 337279-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/08/2009 **Date Prepared:** 07/08/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	23.7	1030	872	82	1020	891	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	126	1030	1040	89	1020	1060	92	2	70-135	35	

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

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337282

Lab Batch #: 764742 **Project ID:** 2009-093

Date Analyzed: 07/07/2009 **Date Prepared:** 07/07/2009 **Analyst:** BEV

QC- Sample ID: 337200-001 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	4.27	3.58	18	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

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Curt Stanley
Company Name: Basin Environmental
Company Address: 2800 Plains Hwy
City/State/Zip: Lovington, NM 88260
Telephone No: 575-441-2244
Fax No:
Sampler Signature: [signature] for John Walter
e-mail:

Project Name: 14" Vac to Jal - BLM
Project #: 2009-093
Project Loc: Lea Co, NM
PO #: DAA - J. Henry

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 337782

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled (2009)	Time Sampled	Total # of Containers	Ice	Matrix	TPH: 418.1 8015M	BTEX 8021B	Standard TAT
	Blended-5			7/6	1150	1	X	Soil	X	X	X
	Blended-6			7/6	1525	1	X	Soil	X	X	X

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7/7/09	1015			
			Received by ELOT: [signature]	07/07/09	10:15

Laboratory Comments: 452g C
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: 0.4 °C

Page 13 of 14

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Basin Disposals

Date/ Time: 10/20/19 10:15

Lab ID #: 337782

Initials: AM

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	0.4 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	Yes	No		
#6 Sample instructions complete of Chain of Custody?	Yes	No		
#7 Chain of Custody signed when relinquished/ received?	Yes	No		
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11 Containers supplied by ELOT?	Yes	No		
#12 Samples in proper container/ bottle?	Yes	No	See Below	
#13 Samples properly preserved?	Yes	No	See Below	
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Yes	No		
#16 Containers documented on Chain of Custody?	Yes	No		
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

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

Analytical Report 338243

for

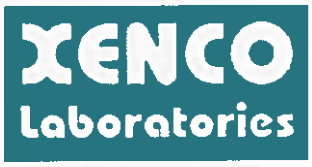
PLAINS ALL AMERICAN EH&S

Project Manager: Jason Henry

14-Inch Vac to Jal BLM

2009-093

22-JUL-09



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

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

Xenco-Miramar (EPA Lab code: FL01246): Florida (E86349)

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

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

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

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

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XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

22-JUL-09

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

Reference: XENCO Report No: **338243**
14-Inch Vac to Jal BLM
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 338243. 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. 338243 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 338243

PLAINS ALL AMERICAN EH&S, Midland, TX

14-Inch Vac to Jal BLM

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Blended 6B	S	Jul-15-09 15:00		338243-001

CASE NARRATIVE

XENCO Laboratories

Client Name: PLAINS ALL AMERICAN EH&S
Project Name: 14-Inch Vac to Jal BLM

Project ID:	*2009-093*	*Report Date:*	*22-JUL-09*
Work Order Number:	*338243*	*Date Received:*	*07/17/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-765833 Percent Moisture
None

Batch: LBA-766045 BTEX-MTBE EPA 8021B
SW8021BM

Batch 766045, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 338243-001.
4-Bromofluorobenzene recovered below QC limits Data not confirmed by re-analysis. Samples affected are: 533980-1-BLK.
4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 338243-001
4-Bromofluorobenzene recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 533980-1-BKS, 533980-1-BSD

SW8021BM

Batch 766045, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 338243-001.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-766215 TPH by SW8015 Mod
None

Certificate of Analysis Summary 338243

PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: 14-Inch Vac to Jal BLM

Project Id: 2009-093
Contact: Jason Henry
Project Location: Lea County, NM

Date Received in Lab: Fri Jul-17-09 09:00 am
Report Date: 22-JUL-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	338243-001					
	Field Id:	Blended 6B					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jul-15-09 15:00					
BTEX by EPA 8021B	*Extracted:*	Jul-20-09 15:15					
	Analyzed:	Jul-20-09 19:39					
	Units/RL:	mg/kg	RL				
Benzene		0.0098	0.0010				
Toluene		0.0923	0.0021				
Ethylbenzene		0.2026	0.0010				
m,p-Xylenes		0.3595	0.0021				
o-Xylene		0.2163	0.0010				
Total Xylenes		0.5758	0.0010				
Total BTEX		0.8805	0.0010				
Percent Moisture	*Extracted:*						
	Analyzed:	Jul-20-09 09:38					
	Units/RL:	%	RL				
Percent Moisture		3.64	1.00				
TPH By SW8015 Mod	*Extracted:*	Jul-21-09 09:48					
	Analyzed:	Jul-21-09 15:15					
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		440	15.6				
C12-C28 Diesel Range Hydrocarbons		3990	15.6				
C28-C35 Oil Range Hydrocarbons		199	15.6				
Total TPH		4629	15.6				

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - 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 effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

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

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

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

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal BLM

Work Orders : 338243,

Project ID: 2009-093

Lab Batch #: 766045 **Sample:** 533980-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 18:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0382	0.0300	127	80-120	*

Lab Batch #: 766045 **Sample:** 533980-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 18:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0376	0.0300	125	80-120	*

Lab Batch #: 766045 **Sample:** 533980-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/20/09 19:02

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0161	0.0300	54	80-120	*

Lab Batch #: 766045 **Sample:** 338243-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 19:39

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.1031	0.0300	344	80-120	**

Lab Batch #: 766045 **Sample:** 338034-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 21:49

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	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	0.0287	0.0300	96	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: 14-Inch Vac to Jal BLM

Work Orders : 338243,

Project ID: 2009-093

Lab Batch #: 766045 **Sample:** 338034-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/20/09 22:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 766215 **Sample:** 534063-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:02

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	45.4	50.0	91	70-135	

Lab Batch #: 766215 **Sample:** 534063-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:28

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	44.9	50.0	90	70-135	

Lab Batch #: 766215 **Sample:** 534063-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/21/09 11:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	100	90	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 766215 **Sample:** 338243-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 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	84.3	100	84	70-135	
o-Terphenyl	50.8	50.1	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

Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal BLM

Work Orders : 338243,

Project ID: 2009-093

Lab Batch #: 766215 **Sample:** 338237-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 17:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	43.3	50.0	87	70-135	

Lab Batch #: 766215 **Sample:** 338237-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/21/09 18:12

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	47.4	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

BS / BSD Recoveries

Project Name: 14-Inch Vac to Jal BLM

Work Order #: 338243 **Project ID:** 2009-093

Analyst: ASA **Date Prepared:** 07/20/2009 **Date Analyzed:** 07/20/2009

Lab Batch ID: 766045 **Sample:** 533980-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	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	ND	0.1000	0.0759	76	0.1	0.0772	77	2	70-130	35	
Toluene	ND	0.1000	0.0756	76	0.1	0.0767	77	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0889	89	0.1	0.0894	89	1	71-129	35	
m,p-Xylenes	ND	0.2000	0.1804	90	0.2	0.1808	90	0	70-135	35	
o-Xylene	ND	0.1000	0.0850	85	0.1	0.0850	85	0	71-133	35	

Analyst: BHW **Date Prepared:** 07/21/2009 **Date Analyzed:** 07/21/2009

Lab Batch ID: 766215 **Sample:** 534063-1-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	ND	1000	826	83	1000	845	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	987	99	1000	1010	101	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 / MSD Recoveries

Project Name: 14-Inch Vac to Jal BLM

Work Order # : 338243 **Project ID:** 2009-093

Lab Batch ID: 766045 **QC- Sample ID:** 338034-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/20/2009 **Date Prepared:** 07/20/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B 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	0.0020	0.1010	0.0434	41	0.1010	0.0468	44	8	70-130	35	X
Toluene	ND	0.1010	0.0252	25	0.1010	0.0275	27	9	70-130	35	X
Ethylbenzene	ND	0.1010	0.0157	16	0.1010	0.0168	17	7	71-129	35	X
m,p-Xylenes	ND	0.2019	0.0299	15	0.2019	0.0320	16	7	70-135	35	X
o-Xylene	ND	0.1010	0.0137	14	0.1010	0.0148	15	8	71-133	35	X

Lab Batch ID: 766215 **QC- Sample ID:** 338237-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/21/2009 **Date Prepared:** 07/21/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	116	1290	1260	89	1290	1310	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	428	1290	2030	124	1290	1970	120	3	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: 14-Inch Vac to Jal BLM

Work Order #: 338243

Lab Batch #: 765833 **Project ID:** 2009-093

Date Analyzed: 07/20/2009 **Date Prepared:** 07/20/2009 **Analyst:** BEV

QC- Sample ID: 338241-001 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	19.0	19.8	4	20	

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant
Company Name: Basin Environmental Consulting, LLC
Company Address: P.O. Box 301
City/State/Zip: Lovington, NM 88260
Telephone No.: (575)605-7210
Fax No: (505) 396-1429
Sampler Signature: Camille Bryant
e-mail: cdstanley@basin-consulting.com

Project Name: 14-Inch Vac to Jal BLM
Project #: SRS# 2009-093
Project Loc: Lea County, NM
PO #: PAA-J. Henry
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 338243

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # 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)	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
01	Blended 6B			07/15/09	1500		1	X								Soil	X								X							X

Analyze For: TCLP / TOTAL: X (BTEX)

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time
Camille Bryant	7/16/09	1700	[signature]	7/16/09	1700
[signature]	7/17/09	0900			
			Received by ELOT: [signature]	07/17/09	09:00

Laboratory Comments: 462 c
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: 3.1 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Plains

Date/ Time: 11/17/04 9:00

Lab ID #: 338243

Initials: JMM

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	3.1 °C	
#2 Shipping container in good condition?	Yes	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	Yes	No		
#6 Sample instructions complete of Chain of Custody?	Yes	No		
#7 Chain of Custody signed when relinquished/ received?	Yes	No		
#8 Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	Yes	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11 Containers supplied by ELOT?	Yes	No		
#12 Samples in proper container/ bottle?	Yes	No	See Below	
#13 Samples properly preserved?	Yes	No	See Below	
#14 Sample bottles intact?	Yes	No		
#15 Preservations documented on Chain of Custody?	Yes	No		
#16 Containers documented on Chain of Custody?	Yes	No		
#17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18 All samples received within sufficient hold time?	Yes	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	Not Applicable	
#20 VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

Contact: ____________ Contacted by: ____________ Date/ Time: ____________

Regarding: ____________

Corrective Action Taken: ____________

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	14 – inch Vac to Jal BLM	Facility Type	Pipeline

Surface Owner	Mineral Owner	Lease No.
BLM		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	24	25S	37E					Lea

Latitude N 32° 6' 36" **Longitude** W 103° 7' 8"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 18 bbls	Volume Recovered: 0 bbls
Source of Release: 14" Steel Pipeline	Date and Hour of Occurrence: 04/09/2009	Date and Hour of Discovery: 04/09/2009 10:00 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Larry Johnson on 05/13/2009 (release originally estimated 3-4 bbls, revised volume on 05/13/2009)	
By Whom? Jason Henry	Date and Hour: 05/13/2009 @ 0900	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

During the purging of the 14-inch Sweet Vac to Jal Line, a release of crude oil occurred due to external corrosion. Throughput for the subject line is 0 bbls/day because the line is inactive and was being purged at the time of the release. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 38.

Describe Area Affected and Cleanup Action Taken.* .

The released crude resulted in a surface stain that measured approximately 50' x 30'. The impacted area will be remediated per applicable guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Jason Henry

Printed Name: Jason Henry

Title: Remediation Coordinator

E-mail Address: jhenry@paalp.com

Date: 05/13/2009 Phone: (575) 441-1099

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRO ENGR

Approval Date: 5.13.09 Expiration Date: 7.20.09

Conditions of Approval:

Attached ☐

IRP# 09.5.2182

* Attach Additional Sheets If Necessary

2009-093 NM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

1RP-2182

OPERATOR

☐ Initial Report X Final Report

Name of Company	Plains Pipeline, LP	Contact	Jason Henry
Address	2530 Hwy 214 – Denver City, Tx 79323	Telephone No.	(575) 441-1099
Facility Name	14 – inch Vac to Jal BLM	Facility Type	Pipeline

Surface Owner BLM	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	24	25S	37E					Lea

Latitude N 32° 6' 36" Longitude W 103° 7' 8"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 18 bbls	Volume Recovered 0 bbls
Source of Release 14" Steel Pipeline	Date and Hour of Occurrence 04/09/2009	Date and Hour of Discovery 04/09/2009 10:00 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? Larry Johnson on 05/13/2009 (release originally estimated 3-4 bbls, revised volume on 05/13/2009)	
By Whom? Jason Henry	Date and Hour 05/13/2009 @ 0900	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
NOV 05 2009
HOBBSOCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

During the purging of the 14-inch Sweet Vac to Jal Line, a release of crude oil occurred due to external corrosion. Throughput for the subject line is 0 bbls/day because the line is inactive and was being purged at the time of the release. The depth of the pipeline at the release point is approximately 2' bgs. The H2S concentration in the crude is less than 10 ppm and the gravity of the crude is 38.

Describe Area Affected and Cleanup Action Taken.* .

Please see the attached Basin Environmental Consulting *Remediation Summary and Site Closure Request* for details of remedial activities conducted at the site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Jason Henry

Printed Name: Jason Henry

Title: Remediation Coordinator

E-mail Address: jhenry@paalp.com

Date: 11-09-2009 Phone: (575) 441-1099

OIL CONSERVATION DIVISION

Approved by District Supervisor: L Johnson

ENVIRONMENTAL ENGINEER

Approval Date: 11.9.09 Expiration Date:

Conditions of Approval:

Attached ☐
1RP 09.5.2182

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 202922

CONDITIONS

Operator: PLAINS MARKETING L.P. 333 Clay Street Suite 1900 Houston, TX 77002	OGRID: 34053
	Action Number: 202922
	Action Type: [IM-SD] Facility File Support Doc (ENV) (IM-BFF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/31/2023