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

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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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**Page 1 of 203** 

Form C-141 MAY 1 3 2009 Revised October 10, 2003 Submit 2 Copies to appropriate HOBBS Objective Office in accordance with Rule 116 on back

side of form

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Release Notificat	tion a	and Co	rrective A	ction	<u></u>		
	0	PERAT	OR	$\left( \right)$	🛛 Initi	al Report	Final Report
Name of Company Plains Pipeline, LP		ntact	Jason Henry				
Address         2530 Hwy 214 – Denver City, Tx 7932.			lo. (575) 441-	1099			
Facility Name   14 – inch Vac to Jal BLM	Fac	cility Type	e Pipeline				
Surface Owner BLM Mineral Own	ner				Lease 1	No.	
LOCAT		OF DEI	CHEVE EASE AD	CON AB	COATES D	003	
		uth Line	Feet from the		Vest Line	County	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0101000			Dubu 1		Lea	
					<u></u>	I	
Latitude N 32°6	5' 36'' ]	Longitud	e W 103° 7' 8	"			
NATU	RE O	FREL	EASE				
Type of Release Crude Oil			Release 18 bbl	S	Volume I	Recovered	0 bbls
Source of Release 14" Steel Pipeline			our of Occurren	ce		Hour of Dis	
Was Immediate Notice Given?		04/09/2009 If YES, To			04/09/20	09 10:00 a.r	n.
Yes No X Not Required				)9 (relea	se original	y estimated	3-4 bbls, revised
			05/13/2009)				-
By Whom? Jason Henry		Date and H					
Was a Watercourse Reached?	1	lf yes, vo	lume Impacting	the Wat	ercourse.		
If a Watercourse was Impacted, Describe Fully.*							
Describe Cause of Problem and Remedial Action Taken.*			·				
							alo kulo 🦾 🛄 👘
During the purging of the 14-inch Sweet Vac to Jal Line, a release of	crude o	oil occurred	due to external	corrosio	n. Throug	hput for the	subject line is 0
bbls/day because the line is inactive and was being purged at the time The H2S concentration in the crude is less than 10 ppm and the gravi	tv of the	e crude is 3	R deput of the p	ipenne a	it the releas	e point is ap	proximatery 2 bgs.
	2 <b>7</b> , 94, 2783						
Describe Area Affected and Cleanup Action Taken.* .							
The released crude resulted in a surface stain that measured approxim	hately 50	0' x 30'. T	he impacted are	a will be	remediate	d per applica	ble guidelines.
······································						- F - FF	5
There has a set of the table information given above in two and a second		haat af mer	Imourlades and	un d'anata	nd that man	august to NDA	OCD miles and
I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain relea							
public health or the environment. The acceptance of a C-141 report t	by the N	MOCD ma	arked as "Final F	Report" o	loes not rel	ieve the ope	rator of liability
should their operations have failed to adequately investigate and reme							
or the environment. In addition, NMOCD acceptance of a C-141 rep federal, state, or local laws and/or regulations.	ort does	s not relieve	e the operator of	respons	ibility for c	compliance v	with any other
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				DLIC	111101		211
Signature: Jason Very			ENVIRO	ENGP	$\sim$		
Printed Name: Jason Henry	Ap	proved by	EN I (ap District Supervi	<sup>sor:</sup> <	-1 k	H	
· · · · · · · · · · · · · · · · · · ·							
Title: Remediation Coordinator	Ap	proval Dat	e: 5.13.0	9	Expiration	Date: $7.7$	20.09
E-mail Address: jhenry@paalp.com	Co	nditions of	Approval:				<b></b>
1.2/2000						Attached	—
Date: 05/13/2009 Phone: (575) 441-1099					· ···· · · · · · · · · · · · · · · · ·	IRP#	09.5.2182
Attach Additional Sheets If Necessary							

## 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



#### **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

Project Manager

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- Appendix B Archaeological Resource Survey
- Appendix C Photographs
- Appendix D Laboratory Analytical Reports
- Appendix E Release Notification and Corrective Action (Form C-141)

#### 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  $\frac{1}{4}$  SW  $\frac{1}{4}$ ), 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

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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

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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 0.0021 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 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. TPH 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.

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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, soli contained 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-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.

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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

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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.

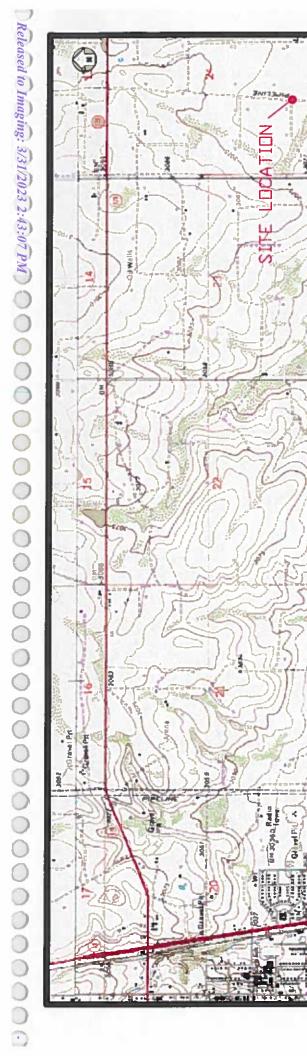
This report has been prepared for the benefit of Plains Pipeline, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Plains Pipeline, L.P.

#### **DISTRIBUTION:**

Copy 1:	Larry Johnson New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, New Mexico 88240
Copy 2:	James Amos United States Department of Interior Bureau of Land Management P.O. Box 1778 620 East Greene Street Carlsbad, New Mexico 88220
Copy 3:	Jeff Dann Plains Pipeline, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002 jpdann@paalp.com
Copy 4:	Jason Henry Plains Pipeline, L.P. 2530 State Highway 214 Denver City, Texas 79323 jhenry@paalp.com
Copy 5:	Curt D. Stanley Basin Environmental Consulting, LLC P.O. Box 381 Lovington, New Mexico 88260 cdstanley@basin-consulting.com

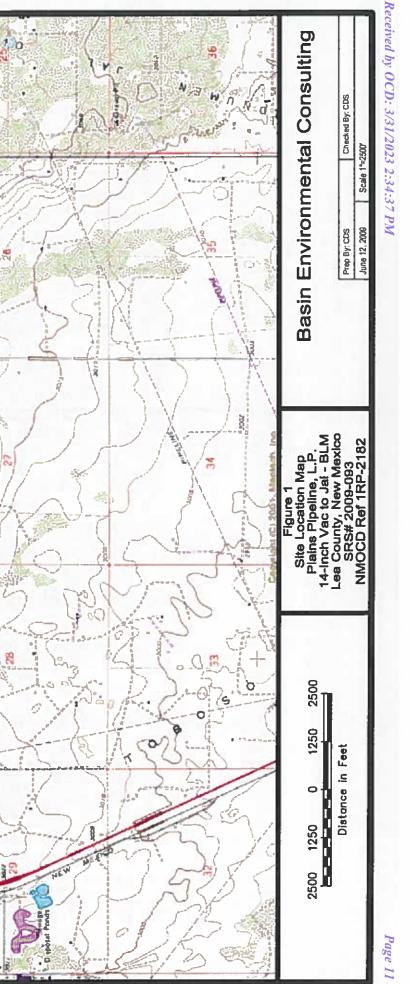
# Figures



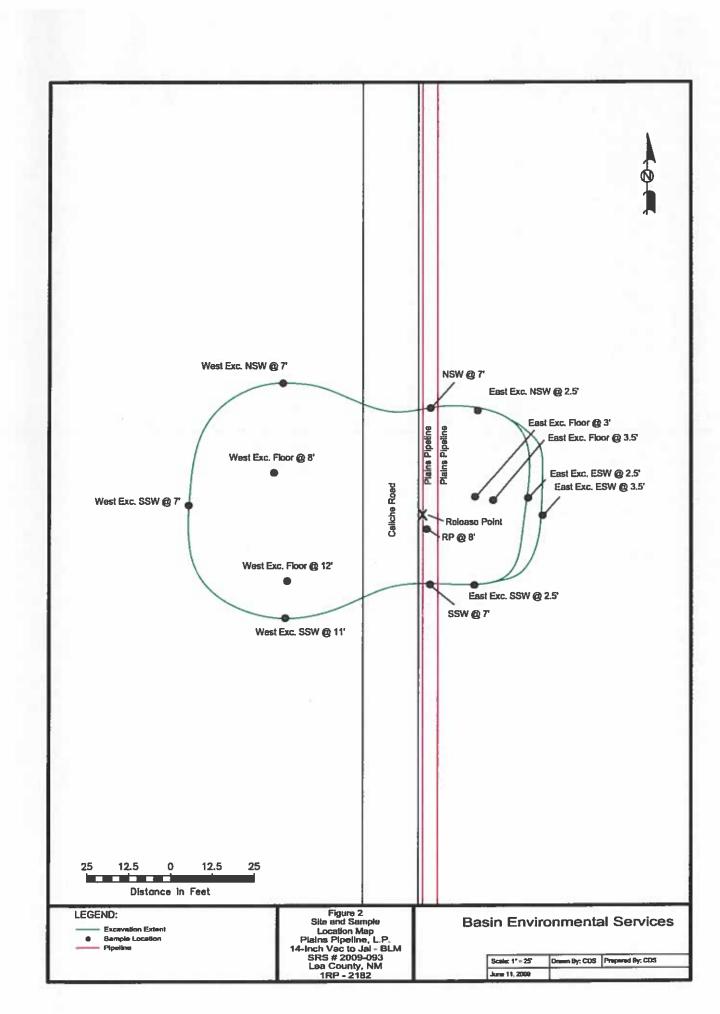


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# Tables

**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

						NIMOUD R	NMUCU KET. # 2102							
					METH	OD: EPA SV	METHOD: EPA SW 846-8021B, 5030	5030			SW 84	SW 848-8015M		300.1
CAMPLE LOCATION	DEPTH	SAMPLE	SOIL	DEALTCHIC		ЕТНУС.	M.P.	6	TOTAL	GRO	DRO	ORO	TOTAL	
	Ground	DATE	STATUS	(maika)	(maika) (maika)	BENZENE	XYLENE	XYLENE	BTEX	C <sub>6</sub> C <sub>12</sub>	C12-C28	C <sub>2l</sub> rC <sub>35</sub>	HL -	
	Surface)			/R	18.18.11	(B)/6m)	(BX/Bw)	(mg/Kg)	(mg/Kg)	(6 <i>3</i> //6m)	(BX/8m)	(B/Kgm)	روكية (mg/Kg)	ได้งาริแป
West Exc. Floor @ 12'	12'	02/08/09	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'	œ	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	1
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	1
West Exc. WSW @ 7	F	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	
					1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Support and the second second		I STATES			Contraction of			
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'	ē	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'	60	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	4	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	
				No. Commonly				Contraction of the local						
East Exc. Floor @ 3.5'	3.5	05/28/09		<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	
						The second s	No. of Lot of Lot of Lot			100	State of the		No. of Concession, Name	Number of States
Blended - 1	NA		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	NIA		Rebiended	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	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	
	Contraction of the second			The Aller	States and the second	Contraction of the second	1000000000			11 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The second s			
Blended-1A	AN	07/01/09	Backfill	0.1041	3.9880	8.832	17.09	7.335	37.3500	814	2,540	195	3,549	-
						the second second	and a second second	and a second		and an other	a will have a	States and		
Blended-3A	AN	07/02/09	Backfill	<0.2835	<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	

Page 1 of 2

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

					METH	METHOD: EPA SW 846-8021B, 5030	/ 846-8021B,	5030			SW 84	SW 848-8015M		300.1
SAMPLE LOCATION (Below Ground Surface)	SAMPLE DEPTH (Below Ground Surface)	SAMPLE DATE	SOIL	BENZENE TOLUENE (mg/Kg) (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE > (mg/Kg)	M,P- XYLENE (mg/Kg)	O- XYLENE (mg/Kg)	O- TOTAL GRO BTEX C <sub>6</sub> C <sub>12</sub> (mg/Kg) (mg/Kg)	GRO C <sub>6</sub> C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C21 <sup>-C25</sup> (mg/Kg)	TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
			States 1 B	Carlos martin										
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	07/06/09 Reblended	0.3148	18.9500	28.77	50.2	21.17	119.4048 3,500	3,500	8,690	670	12,860	•
						Carl according			Thinks I a	Same and				E CARE IS
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	
				Frank State			Support of the local of the loc							
<b>NMOCD REGULATORY STANDARD</b>	Y STANDA	RD		10					50				5,000	

Received by OCD: 3/31/2023 2:34:37 PM

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# Appendices

## Appendix A BLM Report of Undesirable Event

#### Form NM 3162-1 (August 2008)

#### **REPORT OF UNDESIRABLE EVENT**

	Colo	bad Field	J OFF		From:	J	ason H Plains	P	y voline
Reported to: AFMSS Event	Carisi	DAA I IEII	<u>x 011</u>	100	EPS Assigned to E	vent:		-lusidi	
Number									
Date of Occurr	rence:	04/09/20	09	Time	of Occurrence:	10:0	Ð	i	aip p.m.
Date Reported		06/10/20	09	Time	Reported to BLM:	12:0	00		a.m. / p.m.)
Date Reported				Тіпіе	Reported to FS:				a.m. / p.m.
Other Federal,	State, and L	ocal governmen	it Agenc	ies No	tified and Date(s):		10.00		
Larry	John	SON, NMO	<u>-</u> D /-	1060	s Office	05/13	12009		
	No. A	32° 6' 36	17 - SAI	1 103	° 7' 8"				
State:	New Me	12 6 30	Count		Lea			T	
Township:	255	XIED	Range		37 E		Section:	24	/
14 1/6:	SE, SH	7	Footag						
			-						
Operator:	DI	D /		-	Telephone I	umber:	ant -	500	0205
	Flain	s Pipeli	ne				106-	572	- 8305
Contact Person	n:	L			Telephone	Number	575 - 4	41.	-1099
	1-20.50	n Henry		-			13 13- 2	11	1911
Well Name/Fa	ailing and Mr	umber: 14	1/-	e 1	Jal Pipe	lind			
Lease Number	and the second se		10	<u>c to</u>	Right-of-Way Nu		LC - O	57	355
Lease Mumoer	Mumber or	C.A. Number:			Augue of trug the			and a second	
Surface Owner		BLM			Mineral Ow	nership			
Surrace Owner		(Fe	ederal (F	S. BL	M, Other), Indian, I		·		
				-,	13				
Type of Even	ti (Check the	e appropriate on	es)						
Blowout		Fatality		Fir	e	Gas V	enting		Hazardous Material Spill
and the second s						01.6	Toxic Fluid		Property Damage
		CHI Spill			& Saltwater	Spill	Toxic Finia		L'oberd, menuage
Injury				Sp.	xic Fluid Spill		ntrolled Flov		Other (Specify)
	Y	0.1 0.2		- 10	Хістина эрні і		In otters 1 10.		
Injury Saltwater S	Spill V	Saltwater & T	Toxic	1			llbore Fluid		
	Spill	Saltwater & T Fluid Spill	Toxic				ellbore Fluid		
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Action Taken to Co	ctrol Event	. Description	of Resultant Daniage, Clean-up Procedures, & Dates:
Crule oil :my	acted	soil was	excavated and stockpill on plastic during and April 2009.
Cause and Extent of			
/	a priorita 1		a brank ()
N/A			
Effects of Event:			،
The release approximatel			sulted in a sufface stain that measured
Sensitive Areas or S			
None			
Action Taken or Pla	mned to Cle	en Up and P	revent Recurrance:
rude oil imp	acted	soil was	excavated and stockpiled on plastic and ere collected from the excavation.
onfirmation	soil so	amples w	ere collected from the excavation.
Final Investigation	•		
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## Appendix B Archaeological Resource Survey

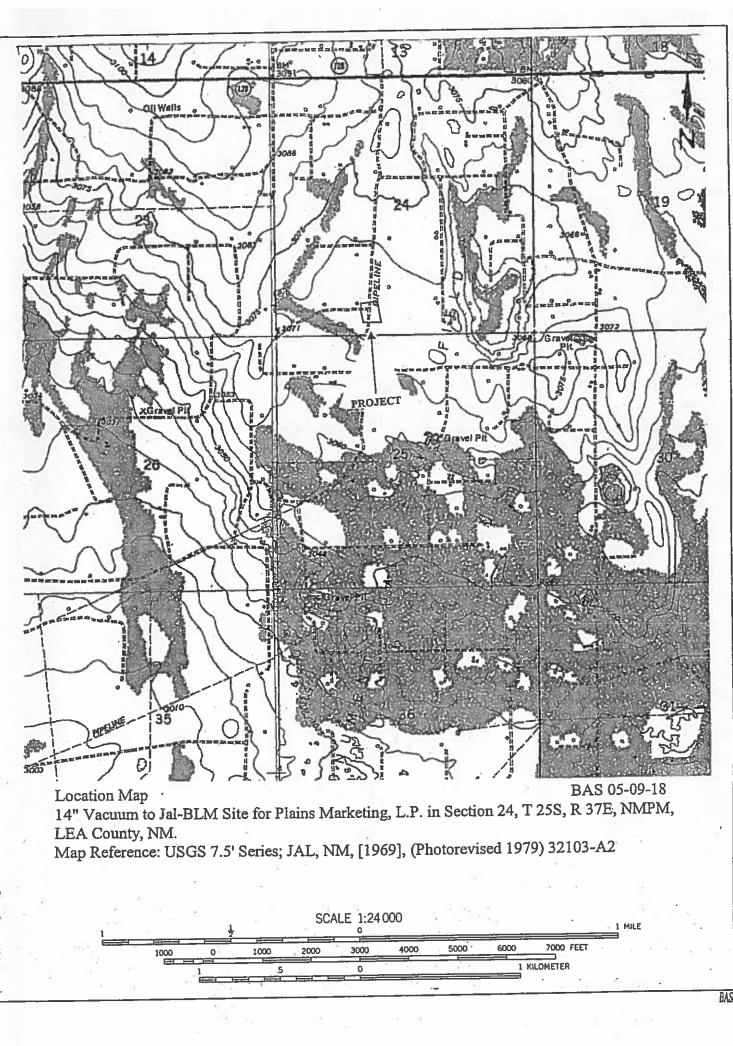
NMCRIS Activity No.:	2a. Lead (Sponsoring) Agency:		RACT FORM (N	3. Lead Agency Report No.:
13874	BLM, CFO			5. Type of Report
. Title of Report: 14" va	acuum to Jal-BLM release site.			Negative Positive
Author(s) Ann and Da	inny Boone			
. Investigation Type				ections/Non-Field Study
Research Design		aphic study		Other
Overview/Lit Review	Monitoring Ethnogr king (what does the project entail?): The		where petroleum flu	
The affected area had be	een excavated at the time of the surv	rey. A 100 foot be	iffer zone around the	impacted area was surveyed
and marked by pink flagg	ging tape tied to vegetation.		9. Report Date: 2	
3. Dates of Investigation:	; (from: 19 May 09 to: )		9. Report Date. 2	1 may 2000
10. Performing Agency/C 2030 North Canal, C	Consultant: Boone Archaeological Se Carlsbad, NM 88220	ervices, LLC	11. Performing A BAS 05-09-08	gency/Consultant Report No.:
575-885-1352		or: Danny Boone	12. Applicable C	ultural Resource Permit No(s):
Principal Investigate	mes: Danny Boone	on burny boond	BLM: 190-2920-0	
	oject proponent): Plains Marketing, L	P	14. Client/Custor	
<ol> <li>Cileni/Customer (pro Contact: Curt D. Str</li> </ol>	anley (Agent with Basin Enviromenta	al)		009-093
Address: 1301 S Co	ountry Road 1150		SRS" d	009-073
Midland, Phone: (432) 682-5	Texas 79706-4476			
	atus (Must be indicated on project map):			
Land Ownership Sta	Itus ( <u>Musi</u> be indicated on project map).	Acres	Surveyed Acres i	n APE
BLM		2.9	+/-) 1.1 (	-/+)
		TOTALS 2.9	(-/+) 1.1 (	+/-)
		TOTALS 2.9	(-/+) 1.1 (	+/-)
16 Records Search(es)	*			+/-)
Date(s) of ARMS File F	Review: 18 May 09 Name	of Reviewer(s):		+/-)
Date(s) of ARMS File F Date(s) of NR/SR File I	Review: 18 May 09 Name Review: Name	of Reviewer(s): / of Reviewer(s):	Ann Boone	nency: BI M. CEO
Date(s) of ARMS File F Date(s) of NR/SR File I	Review: 18 May 09 Name Review: Name	of Reviewer(s): / of Reviewer(s):	Ann Boone	nency: BI M. CEO
Date(s) of ARMS File F Date(s) of NR/SR File I	Review: 18 May 09 Name Review: Name	of Reviewer(s): / of Reviewer(s):	Ann Boone	nency: BI M. CEO
Date(s) of ARMS File F Date(s) of NR/SR File I Date(s) of Other Agenc Findings: No previous	Review:     18 May 09     Name       Review:     Name       cy File Review:     18 May     Name       ly recorded sites were located within	of Reviewer(s): / of Reviewer(s): of Reviewer(s): 1 0.25 mile, LA 48	Ann Boone Ac Danny Boone Ac 603, 96604 and post	nency: BI M. CEO
Date(s) of ARMS File F Date(s) of NR/SR File I Date(s) of Other Agenc Findings: No previous	Review:     18 May 09     Name       Review:     Name       cy File Review:     18 May     Name       ly recorded sites were located within	of Reviewer(s): of Reviewer(s): of Reviewer(s): 0.25 mile, LA 48 AD 83	Ann Boone Age Age Age Age Age Age Age Age Age Ag	gency: BLM, CFO sibly others are within 1.0 mile.
Date(s) of ARMS File F Date(s) of NR/SR File I Date(s) of Other Agenc Findings: No previousl 17. Survey Data:a. Sour	Review:       18 May 09       Name         Review:       Name         Cy File Review:       18 May       Name         Ly recorded sites were located within         ce Graphics       X NAD 27       NA         X USGS 7.5'       (1:24,000) topo map         X GPS Unit       Accuracy       <1	of Reviewer(s): of Reviewer(s): of Reviewer(s): 0.25 mile, LA 48 D 83 O Other 1.0m X 1-10r	Ann Boone Age Age Age Age Age Age Age Age Age Ag	nency: BI M. CEO
Date(s) of ARMS File F Date(s) of NR/SR File I Date(s) of Other Agenc Findings: No previousi 17. Survey Data:a. Sour	Review:       18 May 09       Name         Review:       Name       Name         cy File Review:       18 May       Name         ly recorded sites were located within       NAD 27       NA         ce Graphics       X NAD 27       NA         X USGS 7.5'       (1:24,000) topo map       S         GPS Unit       Accuracy       <1	of Reviewer(s): of Reviewer(s): of Reviewer(s): 0.25 mile, LA 48 D 83 O Other 1.0m X 1-10r	Ann Boone Age Age Age Age Age Age Age Age Age Ag	gency: BLM, CFO sibly others are within 1.0 mile.
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	200				
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					· · · · · · · · · · · · · · · · · · ·
Projected legal de f. Other Descriptio	scription? Yes [ n (e.g. well pad foota	] No [X] Unpl ges, mile markers,	atted [ ] plats, land grant nam	e, etc.):	
18. Survey Field M	Methods: % coverage				
			the flat with	🗍 other survey un	ite (enecify):
	block survey units				its (specny).
			thematic (selected si		
			other method (des	cribe)	
	): 15 Crew Size: 1				
Survey Person Ho	urs: 2 Recording F	Person Hours: 0 To	otal Hours: 2		ant arran are unknown and ar
Additional Narrativ	e: Location and surve	ey acres are estima excavated at the fir	nes based on a hand me of the survey A 1	neia GPS Unit. IMJ 00 foot buffer zone	pact acres are unknown and ar around the impacted area was
surveyed and mar	ked by pink tape tied	to vegetation.	ne er die earrey. /r i		
			live community; eleva	ition; etc.):	
			unts caliche gravels v		е.
			eed, various grasses a		
-					at are shallow to indurated
NRCS: Simona-	l'onuco association:	Nearly level and get	ntiy undulating, loam	y and sandy sons u	at are shallow to indurated
Elevation: 3070 f					
20 a Percent Grou	und Visibility: 90 over	all b. Condition of S rea, 2 roads, 2 or m	Survey Area (grazed, sore buried pipelines,	bladed, undisturbed one pad for a dry h	d, etc.): Area has impact from ole and one active well pad.
20. a. Percent Grou excavatio	und Visibility: 90 over	rea, 2 roads, 2 or m	ore buried pipelines,	bladed, undisturbed one pad for a dry h iscuss Why: Unkno	ole and one active well pad.
20. a. Percent Grou excavatio 21. CULTURAL RE 22. Required Attac	and Visibility: 90 over n of the oil soaked an ESOURCE FINDING chments (check all ap	rea, 2 roads, 2 or m S D Yes, See Pag propriate boxes):	ore buried pipelines, ge 3 🛛 🖾 No, D	one pad for a dry h iscuss Why: Unkno	ole and one active well pad.
20. a. Percent Grou excavatio 21. CULTURAL RE 22. Required Attac S USGS 7.5 Topo	and Visibility: 90 over n of the oil soaked an ESOURCE FINDING chments (check all ap ographic Map with sit	rea, 2 roads, 2 or m S D Yes, See Pag propriate boxes): es, isolates, and su	ore buried pipelines,	one pad for a dry h iscuss Why: Unkno	23. Other Attachments:
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## CULTURAL RESOURCE FINDINGS

		Inii in appropri		
1. NMCRIS Activity No.: 113874	2. Lead (Sponsoring) / BLM, CFO	Agency:		3. Lead Agency Report No.:
SURVEY RESULTS: Sites discovered and regis Sites discovered and NOT Previously recorded sites of Previously recorded sites of TOTAL SITES VISITED: 0 Total isolates recorded: 0 Total structures recorded (	registered: 0 revisited ( <i>site update form i</i> not relocated ( <i>site update</i> Non-selective isol new and previously recorde	form required): 0 ate recording? 🔀 d, including acequia:		
Vacuum to Jal-BLM Site all activity should cease	e for Plains Marketing, and the BLM Archaeo IF REPORT IS	L.P. is recomme logist notified im	nded. If cultural reso	haeological clearance of the 14" urces are encountered at any time
SURVEY LA NUMBER LO Sites Discovered:	G			
LA No.	Field/Agency No.	Eligible? (Y/N, ap	oplicable criteria)	
Previously recorded revisit LA No.	ted sites: Field/Agency No.	Eligible? (Y/N, ap	plicable criteria)	
			-	
MONITORING LA NUMBE Sites Discovered (site form		) usly recorded sites	s (Site update form require	ed):
	Agency No. LA No.		ncy No.	
Areas outside known near	by site boundaries monit	tored? Yes ], No	If no explain why:	
TESTING & EXCAVATION Tested LA number(s)	Excavated L	A number(s)		
			· · ·	





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## 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



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12600 West I-20 East Odessa, Texas 79765

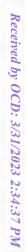
Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

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

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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

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### Sample Cross Reference 332440



Received by OCD: 3/31/2023 2:34:37 PM

### 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



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

Laberatories XENCO

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Date Received in Lab: Mon May-11-09 05:03 pm

Report Date: 15-MAY-09

Analysis Requested     Lab Id: Lab Id: Field Id: Depth: Martx:       Britick     Benter: Analyzed: Constructed:       Benzene     Units/RL: Units/RL:       Toluene     Extracted: Units/RL:	332440-001 West EXC Floor @ 12' SOIL	332440-002	117440-001	Project Manager: Brent Barron, Il	3rent Barron, 11
alysis Requested Lab Id: Field Id: Deph: Matrix: Sampled: Sampled: TEX by EPA 8021B Extracted: Analyzed: UnitsRL:	332440-001 West EXC Floor @ 12' SOIL	332440-002	TTTAAD.ON.		
alysis Requested Eridd Id: Deph: Marix: Sampled: Sempled: TEX by EPA 8021B Analyzed: Units/RL:	West EXC Floor (g) 12' SOIL			332440-004	332440-005
TEX by EPA 8021B	SOIL	West EXC Floor (#) 8"	West EXC SSW (g) 11'	West EXC WSW (g) 7	West EXC NSW (g) 7
TEX by EPA 8021B	SOIL.				
TEX by EPA 8021B	00.01 00 00 mild	SOIL	SOIL	SOIL	SOIL
TEX by EPA 8021B	10:21 20-00-KRW	May-08-09 12:10	May-08-09 12:20	May-08-09 12:30	May-08-09 12:40
	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
	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
Benzene Toluene Ethylbenzene m.pXylenes	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Toluene Ethylbenzme m.p.Xylenes	ND 0.0011	0100'0 QN	ND 0.0011	0100.0 8100.0	0.0017 0.0010
Ethylbenzene m.p.Xylencs	ND 0.0022	ND 0.0020	ND 0.0021	0.0117 0.0020	0.0111 0.0020
m.p-Xylencs	ND 0.0011	ND 0.0010	1100-0 UN	0.0048 0.0010	0.0050 0.0010
	ND 0.0022	ND 0.0020	ND 0.0021	0.0059 0.0020	0.0058 0.0020
o-Xytene	ND 0.0011	ND 0.0010	ND 0.0011	0.0026 0.0010	0.0026 0.0010
Total Xylenes	ND 0.0011	0100:0 CN	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					
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
Unlis/RL:	% RL	% RL	% RL	% RL	% RL
Percent Motsture	8.24 1.00	ND 1.00	6.57 1.00	1.86 1.00	2.06 1.00
TPH By SW8015 Mod	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	144 153 =
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

This analytical srpost, and the traine data package it represents, has been made for your cachaire and confidential use. The interpreteduat and realist expressed droughers this analytical report tracters the best had generat OK TCO Laboratories. XENCO absonstories attemes to requessibility and match no warmany to the end use of the data herby presentad. Our liability is limited to the amount invoised for this work order tailess otherwise agreed to its writing.

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**Odessa Laboratory Director** Brent Barron

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### **Flagging Criteria**



- X In our quality control review of the data a OC 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.
- RPD exceeded lab control limits. F
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Lab Batch #: 759032 Sample: 530032-1-BKS / BKS Batch: 1 Matrix: Solid							
Units: mg/kg	Date Analyzed: 05/14/09 21:36	05/14/09 21:36 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
1.4-Difluorobenzene	Analytes	0.0300	0.0300	100	80-120		
4-Bromofluorobenzene		0.0309	0.0300	103	80-120		
Lah Batch #: 759032	Sample: 530032-1-BSD / BS	D Bat	ch: 1 Matr	rix: Solid			
Units: mg/kg	Date Analyzed: 05/14/09 21:58	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
1.4-Difluorobenzene	Analytes	0.0299	0.0300	100	80-120		
4-Bromofluorobenzene		0.0299	0.0300	98	80-120		
Lab Batch #: 759032	Sample: 530032-1-BLK / BL	.K Bat	ch: 1 Mate	ix: Solid		_	
Units: mg/kg	Date Analyzed: 05/14/09 22:41		RROGATE R		STUDY	-	
	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
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:   Matrix: Soil					
Units: mg/kg	Date Analyzed: 05/15/09 03:41	SURROGATE RECOVERY STUDY					
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amoust [B]	Recovery %R [D]	Control Limits %R	Flag	
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	Bat	ch: 1 Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 05/15/09 04:03	SURROGATE RECOVERY STUDY					
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
1,4-Difluorobenzene	· · · · · · · · · · · · · · · · · · ·	0.0262	0.0300	87	80-120		
		100 March 100 Ma	1 Aug.	1		+	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 332440 Lab Batch #: 759032	, Sample: 332440-003 / SMP	Bat		D: SRS# 2009 ix: Soil	-73	
Units: mg/kg	Date Analyzed: 05/15/09 04:24	SU	RROGATE R	ECOVERY S	STUDY	_
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene		0,0262	0.0300	87	80-120	_
4-Bromofluorobenzene		0.0257	0.0300	86	80-120	
Lab Batch #: 759032	Sample: 332440-004 / SMP	Bat	tch: ] Matr	ix: Soil		Χ.
Units: mg/kg	Date Analyzed: 05/15/09 04:45	SU	RROGATE R	ECOVERY S	STUDY	
	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1.4-Difluorobenzene	Anarytta	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0,0282	0.0300	94	80-120	
Lab Batch #: 759032	Sample: 332440-005 / SMP	Pat	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/15/09 05:07		RROGATE R		STUDY	
	C by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,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	Bat	tch: 1 Matr	ix: Soil		1
Units: mg/kg	Date Analyzed: 05/15/09 06:54	SU	RROGATE R	ECOVERY S	STUDY	
втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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 / MS	D Bat	tch: I Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/15/09 07:16	SU	RROGATE R	ECOVERY S	STUDY	
	( by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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.

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Laboratories	3

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

York Orders:         332440,           Lab Batch #:         758988         Sample:	529958-1-BKS / BKS Ba		D: SRS# 2009 rix: Solid		
Units: mg/kg Date Analyzed:	05/14/09 06:33 SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctanc	110	100	110	70-135	
o-Terphenyl	48.7	50.0	97	70-135	
Lab Batch #: 758988 Sample:			rix: Solid		
Units: mg/kg Date Analyzed:	05/14/09 06:58 SU	RROGATE R	ECOVERY S	STUDY	1
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	46.8	50.0	94	70-135	
Lab Batch #: 758988 Sample:	529958-I-BLK / BLK Ba	tch:   Mati	rix: Solid		
Units: mg/kg Date Analyzed:		RROGATE R		STUDY	_
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctanc	92.9	100	93	70-135	
o-Terphenyl	53.3	50.0	107	70-135	
Lab Batch #: 758988 Sample:	332440-001 / SMP Ba	tch:   Mati	ix: Soil		
Units: mg/kg Date Analyzed: (	011	RROGATE R	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctanc	95.7	100	96	70-135	
o-Terphenyl	54.7	50.0	109	70-135	
Lab Batch #: 758988 Sample:	332440-002 / SMP Ba	tch: 1 Mati	ix: Soil		
Units: mg/kg Date Analyzed: (	05/14/09 10:40 SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane	91.5	100	92	70-135	
			1		

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 332440, Lab Batch #: 758988	Sample: 332440-003 / SMP	Ba	-	D: SRS# 2009 rix: Soil	9-93	
Units: mg/kg	Date Analyzed: 05/14/09 11:29		RROGATE R		STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	Truc 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	Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 05/14/09 11:54	SU	RROGATE R	ECOVERY	STUDY	_
	y SW8015 Mod Analytes	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	Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 05/14/09 12:44	SU	RROGATE R	ECOVERY	STUDY	
TPH B	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		92.5	100	93	70-135	
o-Terphenyl		51.5	50.0	103	70-135	1
Lab Batch #: 758988	Sample: 332440-001 S / MS	Ba	tch:   Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 05/14/09 16:04	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		130	100	130	70-135	
o-Terphenyl		58.7	50.0	117	70-135	
Lab Batch #: 758988	Sample: 332440-001 SD / MS	D Ba	tch: 1 Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 05/14/09 16:29	SU	RROGATE R	ECOVERY S	STUDY	
	y SW8015 Mod	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc		120	100	120	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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Project Name: 14" Vac to Jal BLM

Work Order #: 332440 Lab Batch ID: 759032 Analyst: ASA

Date Prepared: 05/14/2009

Batch #: 1

Sample: 530032-1-BKS

Project ID: SRS# 2009-93 Date Analyzed: 05/14/2009 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Splke	Blk. Spk Dup.	RPD	Cantrol Limits	Control Limits	Flag
Analytes	(v)	[8]		žē	[E]	Duplicate Result [F]	G X	*	жк	%RPD	
Benzene	QN	00100	0,1032	103	0.1	0.1006	101	3	70-130	35	
Tolucne	QN	0.1000	0.1053	105	0.1	0.1031	103	2	70-130	35	
Ethylbenzene	Q	0,1000	0.1073	107	0.1	0.1049	105	2	71-129	35	
m,p-Xylenes	QN	0.2000	0.2286	114	0,2	0.2231	112	2	70-135	35	
o-Xylene	QN	0,1000	0.1133	113	0.1	0.1104	110	3	71-133	35	
Analyst: BHW	De	ite Prepar	Date Prepared: 05/13/2009	6			Date A	nalyzed: 0	Date Analyzed: 05/14/2009		
Lab Batch ID: 758988 Sample: 529958-1-BKS	-BKS	Batch	Batch #: 1					Matrix: Solid	solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / B	ILANK S	<b>BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY</b>	ICATE	RECOVE	ERY STUD	Å	Γ

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / B	LANK S	PIKE DUPL	ICATE	RECOVE	RECOVERY STUDY	Y	
TPH By SW8015 Mod	Blank Sample Result IAI	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunicate	Blk. Spk Dup. *#	RPD %	Control Limits *AR	Control Limits %RPD	Flag
Analytes		<b>[B]</b>	[C]		E	Result [F]	5	Ł			
C6-C12 Gasoline Range Hydrocarbons	QN	1000	1090	109	1000	1060	106	°.	70-135	35	Γ
C12-C28 Dicsel Range Hydrocarbons	QN	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 XENCO



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Project Name: 14" Vac to Jal BLM



Released to Imaging: 3/31/2023 2:43:07 PM

Work Order #: 332440

Date Analyzed: 05/15/2009 Lab Batch ID: 759032

Reporting Units: mg/kg

Batch #: QC- Sample ID: 332747-003 S Date Prepared: 05/14/2009

Analyst: ASA

Matrix: Soil

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Project ID: SRS# 2009-93

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	C/MAT	RIX SPI	<b>CE DUPLICA</b>	TE RECO	<b>VERY S</b>	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD **	Centrol Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1017	0.0785	17	0.1017	0.0816	80	4	70-130	35	
Tolucue	QN	0.1017	0.0721	71	0.1017	0.0775	76	7	70-130	35	
Ethylbenzene	QN	0,1017	0.0490	48	0.1017	0.0637	63	26	71-129	35	×
m,p-Xylenes	0.0035	0.2033	0.1438	69	0.2033	0,1638	79	13	70-135	35	×
o-Xylcnc	0.0067	0,1017	0.0788	11	0.1017	0.0885	80	12	71-133	35	
Lab Batch ID: 758988	QC-Sample ID: 332440-001 S	332440	-001 S	Ba	Batch #:	1 Matrix: Soil	: Soil				

Date Analyzed: 05/14/2009	Date	Date Prepared: 05/13/2009	05/13/2	600	An	Analyst: BHW	BHW					
Reporting Units: mg/kg			2	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MAT	RIX SPI	KE DUPLICA	<b>FE RECO</b>	<b>VERY 5</b>	TUDY		Γ
TPH By SW8015 Mod		Parent Sample	Spike	Spiked Sample Spiked Result Sample		Spike	Duplicate Soiked Samole	<b>U U U</b>	RPD	Control	Control	Flac
Analytes		Result [A]	Added [B]		A R	Added [E]	Added Result [F]	G %	*	%R	%RPD	10 1
C6-C12 Gasoline Range Hydrocarbons	╞	17.3	0601	1360	123	1090	1290	117	s	70-135	35	
C12-C28 Diesel Range Hydrocarbons	_	127	0601	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 Spile Duplicate Percent Recovery [G] = 100\*(F-A)E

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

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Received by OCD: 3/31/2023 2:34:37 PM

Project Name: 14" Vac to Jal BLM

Work Order #: 332440

Lab Batch #: 758681 Date Analyzed: 05/13/2009	Date Prepared: 05/1	3/2009	-	D: SRS# 20 st: BEV	09-93
QC- Sample ID: 332394-001 D	Batch #: 1		Matr	ix: Soil	
Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	101	(B)			
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

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YAO FTAT Invite U NPDES Lore Ste ----en TAT HBU ę ZZZŻĘŻZZ 6000-000 25 5 Phone: 422-563-1800 Fex: 432-563-1713 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Trues NHOR 1940 101 Project Name: 14" Vac to Jal BLM INTER Y BOARD COLUMN 1 ж OCt Free of Headsproa? 47 cl vS Project #: 5RS# 2009-93 Project Loc: Les Csurry, WM X Standard PO#: PAA-L.Henry borntary Co -Report Format: 5/1/09/300 1X 1008 110 1008 140 5.1449 17:03 Hall × × × 81812 Soll clonmnt@basin-consulting.com Soil Boll Soll Sol UQ=A 14 ist mag unite Coligitum 12500 West 1-20 East Odessa, Texas 79765 HOW 'osfi 62H-96C (505) 20H "ONH when X 10 × × × × am ia na ÷ **NULL** Fax No: G-FTIOR: 1210 1230 1200 1220 1240 beingenes erail 50 B-Mey-05 10m 6-May-09 80-fam-8 6-May-03 B-118-09 Basin Environmental Service Technologies, LLC IS HER MENT 11 18 1200 under duppe Environmental Lab of Texas -2 Coden Busund F. amale Lovington, NM 85240 10 Camille Bryan Company Address: P.O. Box 301 015/405-7218 West EXC Floor @ 12\* West EXC Floor @ 6" West EXC \$5W @ 11' West EXC WSW @ 7" West EXC NSW @ 7 0442EE FIELD CODE Sampler Signature Project Manager: Company Name Telephone No: Chystate/Zp: annoo No. Inc. (Non seal only) ORDER #: 20 n, 2

**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	NL

#### Sample Receipt Checklist

#1	Temperature of container/ cooler?	(Yes)	No	5.5 0
#2	Shipping container in good condition?	Yes	No	
#3	Custody Seats intact on shipping container/ cooler?	Yes	No	(Not Present)
864 U	Custody Seals Intact on sample bottles/ container?	105	No	Not Present
#5	Chain of Custody present? *	Ves.	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	10 written on Cont./ Ltd
#9	Container label(s) legible and intact?	Clas	No	Not Applicable
#10	Sample matrb/ properties agree with Chain of Custody?	(Yes)	No	
#11	Containers supplied by ELOT?	Yes	No	
#12	Samples in proper container/ bottle?	Res	No	See Below
#13	Samples property preserved?	Yes?	No	Seo Bolow
#14	Sample bottles intact?	CYOF	No	
#15	Preservations documented on Chain of Custody?	(Yes)	No	AND
#16	Containers documented on Chain of Custody?	Yes	No	The second statement of the second
#17	Sufficient sample amount for indicated test(s)?	(Yes	No	See Below
#1B	All samples received within sufficient hold time?	Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	Not Applicable
#20	VOC samples have zero headspace?	(Yes )	No	Not Applicable

Contact. Regarding

Contacted by:

Date/ Time

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Corrective Action Taken:

Check all that Apply:

See attached e-mail lax Client understands and would like to proceed with analysis

Cooling process had begun shortly after sampling event

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# **Analytical Report 333090**

for

#### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

14" Vac to Jal BLM 2009-93

28-MAY-09



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#### 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





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,

TR

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



### Sample Cross Reference 333090



Received by OCD: 3/31/2023 2:34:37 PM

#### 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



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

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

#### None

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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

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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 reanalysis. 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



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

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Date Received in Lab: Tue May-19-09 08:12 am Report Date: 28-MAY-09

	Lab Id:	100-060£££	333090-002	333090-003	333090-004	333090-005	333090-006
Andweis Domortod	Field Id:	East EXC NSW (6) 2.5'	East EXC ESW (g) 2.5'	East EXC SSW (a) 2.5	East EXC Ploor (a) 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/tg 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-Xykenes		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	0100'0 QN	0.2728 0.0010	0.0015 0.0010	ND 0.0011
Total Xylenes		0.0074 0.0010	0.2515 0.0010	0100'0 QN	0.7859 0.0010	0.0044 0.0010	1100'0 QN
Total BTEX		0.0327 0.0010	0.3191 0,0010	0.0025 0.0010	0100'0 0609'1	0.0095 0.0010	1100'0 GN
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	% BL	% RL	% RL
Percent Moisture		ND 1.00	1.69 1.00	00'1 11'1	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 Dicsel 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

This analytical report, and the entire data package it represent, has been made for your exclusive and unofidential use. The improvement of the provement from the provement of the registerious of XENCO Laboratories. XENCO Laboratories advectes the registerious of XENCO Laboratories advected in the state no warranty to the end use of the data hardot presented. Our fieldlicy is limited to the amount invoiced for this work order talest otherwise agreed to it write.

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Odessa Laboratory Director Brent Barron

Certificate of Analysis Summary 333090 PLAINS ALL AMERICAN EH&S, Midland, TX HITH aboratories XENCO D

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Date Received in Lab: Tue May-19-09 08:12 am Project Name: 14" Vac to Jal BLM

Report Date: 28-MAY-09

					Project Manager: Brent Barron, II
	Lab Id:	333090-007	333090-008	333090-009	
Amineie Norweeded	Field Id:	SSW @ 7	Stockpile 1	Stockpile 2	
narowhore exclusion	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	
8	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	
Tolucne		ND 0.0024	ND 0.1088	ND 0.1061	
Ethylbenzene		ND 0.0012	0.4432 0.0544	0.8135 0.0531	
m,p-Xylencs		ND 0.0024	1,175 0,1088	1901.0 896.1	
o-Xytene		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:	% KL	% RL	% RL	
Percent Moisture		18.21 1.00	8.96 1.00	6.15 1.00	
TPH Bv 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		L UN	044 164	1277.4 16.0	

This analytical report, and the extire data package it represents, has been trade for your exclusive and confidential use. The interpretations and results expressed drought this analytical report repracts the basy displayment of XEVCD Laborations. XEVCO protonoides and results expressed droughts in a support on the real use of the data herby presented. Our liability is limited to the amount invoiced for this work order taless observise spreed to in writing.

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**Odessa Laboratory Director** Brent Barron

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### **Flagging Criteria**



Received by OCD: 3/31/2023 2:34:37 PM

- 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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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 333090, Lab Batch #: 759977 Sample: 53	0571-1-BKS/BKS Bs		ID: 2009-93 rix: Solid				
Units: mg/kg Date Analyzed: 05		RROGATE R		STUDY	-		
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
I.4-Difluorobenzenc	0.0297	0.0300	99	80-120			
4-Bromofluorobenzene	0.0333	0,0300	111	80-120			
Lab Batch #: 759977 Sample: 53	0571-1-BSD / BSD Ba	ı itch: 1 Matı	rix: Solid				
Units: mg/kg Date Analyzed: 05		RROGATE R		STUDY	-		
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0297	0,0300	99	80-120	_		
4-Bromofluorobenzene	0.0339	0.0300	113	80-120			
Lab Batch #: 759977 Sample: 53	0571-1-BLK / BLK Ba	tch:   Mati	rix: Solid				
Units: mg/kg Date Analyzed: 05	/22/09 15:49 SU	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	-		
4-Bromofluorobenzene	0.0230	0.0300	77	80-120	•		
Lab Batch #: 759977 Sample: 33	3090-001 / SMP Ba	tch: ] Matr	rix: Soil				
Units: mg/kg Date Analyzed: 05/	/22/09 21:54 SU	RROGATE R	ECOVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	Truc Amount (B)	Recovery %R [D]	Control Limits %R	Flags		
4-Difluorobenzene	0.0230	0.0300	77	80-120	٠		
4-Bromofluorobenzene	0.0311	0.0300	104	80-120			
ab Batch #: 759977 Sample: 333	3090-002 / SMP Bat	tch: 1 Matr	ix: Soil				
Units: mg/kg Date Analyzed: 05/	22/09 22:16 SU	RROGATE R	ECOVERY S	STUDY			
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags		
,4-Difluorobenzene	0.0231	0.0300	77	80-120	*		
I-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.

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

ork Orders : 333090. Lab Batch #: 759977	Sample: 333090-003 / SMP	Ba	-	D: 2009-93			
Units: mg/kg	Date Analyzed: 05/22/09 22:37		RROGATE R		STUDY		
	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
I,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	Ba	tch: 1 Mati	ix: Soil			
Units: mg/kg	Date Analyzed: 05/22/09 22:58	SU	RROGATE R	ECOVERY	STUDY		
	by EPA 8021B Analytes	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	Ba	tch: 1 Mati	ix: Soil			
Units: mg/kg	Date Analyzed: 05/22/09 23:20	SURROGATE RECOVERY STUDY					
	by EPA 8021B 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		0,0375	0.0300	125	80-120	•	
Lab Batch #: 759977	Sample: 333090-006 / SMP	Ba	tch: 1 Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 05/22/09 23:41	SU	RROGATE R	ECOVERY S	STUDY		
	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
l,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	Ba	tch: 1 Matr	ix: Soil			
Units: mg/kg	Date Analyzed: 05/23/09 00:02	SU	RROGATE R	ECOVERY S	STUDY		
	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
I,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.

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 333090 Lab Batch #: 759977	, Sample: 333087-003 S / MS	Ra	-	D: 2009-93		
Units: mg/kg	Date Analyzed: 05/23/09 00:45		RROGATE R		STUDY	
BTE	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1.4-Difluorobenzene		0.0260	0.0300	87	80-120	
4-Bromofluorobenzene		0,0200	0.0300	115	80-120	
Lab Batch #: 759977	Sample: 333087-003 SD / M	SD Ba	tch:   Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/23/09 01:07		RROGATE R		STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0256	0.0300	85	80-120	
4-Bromofluorobenzene		0.0333	0.0300	111	80-120	
Units: mg/kg BTEX	Sample: 530774-1-BKS / BK Date Analyzed: 05/27/09 10:23 K by EPA 8021B		tch: 1 Matr RROGATE R True Amount [B]	ECOVERY S	STUDY Control Limits %R	Flag
	Analytes	[A]	141	[D]		
1,4-Difluorobenzene		0.0332	0.0300	111	80-120	h.,
4-Bromofluorobenzene		0.0242	0.0300	81	80-120	
ab Batch #: 760298	Sample: 530774-1-BSD / BS	D Ba	tch: i Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 05/27/09 10:44	SU	RROGATE R	ECOVERY S	STUDY	
	K by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
,4-Difluorobenzene		0.0331	0.0300	011	80-120	
4-Bromofluorobenzene		0.0251	0.0300	84	80-120	
ab Batch #: 760298	Sample: 530774-1-BLK / BL	K Ba	tch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 05/27/09 11:27	SU	RROGATE R	ECOVERY S	STUDY	
	by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
,4-Difluorobenzene		0.0283	0.0300	94	80-120	
-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.

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 333090 Lab Batch #: 760298	, Sample: 333090-008 / SMP	Bat	-	D: 2009-93		
Units: mg/kg	Date Analyzed: 05/27/09 14:02	SU	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0261	0.0300	87	80-120	1.1
4-Bromofluorobenzene		0.0289	0.0300	96	80-120	
Lab Batch #: 760298	Sample: 333090-009 / SMP	Bat	ch: 1 Mate	rix: Soil	1 C. I	
Units: mg/kg	Date Analyzed: 05/27/09 14:23	SU	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0273	0.0300	91	80-120	
4-Bromofluorobenzene		0.0308	0.0300	103	80-120	
Lab Batch #: 760298 Units: mg/kg	Sample: 333233-020 S / MS Date Analyzed: 05/27/09 19:45	Bat SU	ch: <sup>1</sup> Matr RROGATE R	ix: Soil	STUDY	
втех	K by EPA 8021B 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		0.0291	0.0300	97	80-120	_
Lab Batch #: 760298	Sample: 333233-020 SD / MS	SD Bat	ch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/27/09 20:07	SU	RROGATE R	ECOVERY S	STUDY	
втех	L by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I 4-Difluorobenzene		0.0326	0.0300	109	80-120	
4-Bromofluorobenzene		0.0291	0.0300	97	80-120	
ab Batch #: 759476	Sample: 530300-1-BKS / BK	S Bat	ch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 05/19/09 13:56	SU	RROGATE R	ECOVERY S	STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
-Chlorooctanc		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.

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### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Vork Orders : 333090, Lab Batch #: 759476 San	nple: 530300-1-BSD / BSD	D.		D: 2009-93 ix: Solid		
		Bate	h: 1 Matr		STUDY	_
Units: mg/kg Date Analy TPH By SW8015 M Analytes	F	nount ound [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		02	100		70-135	
o-Terphenyl		6.0	50.0	92	70-135	
				ix: Solid		
	aple: 530300-1-BLK / BLK /zed: 05/19/09 14:45	Bate	h: 1 Matr		STUDY	_
TPH By SW8015 M Analytes	F	nount bund [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9	1.9	100	92	70-135	
o-Terphenyl	5	2.3	50.0	105	70-135	
	rple: 333090-001 / SMP rzed: 05/19/09 22:13	Bate	h: <sup>1</sup> Matr ROGATE R	ix: Soil ECOVERY !	STUDY	
TPH By SW8015 M Analytes	Four Four	ount ound A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9	1.4	100	91	70-135	
o-Terphenyl	5	),4	50.0	101	70-135	
Lab Batch #: 759476 Sam	ple: 333090-002 / SMP	Bate	h: I Matr	ix: Soil		
Units: mg/kg Date Analy	zed: 05/19/09 22:38	SUR	ROGATE R	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	Fo	ount und A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		15	100	115	70-135	
o-Terphenyl	5	.6	50.0	115	70-135	
ab Batch #: 759476 Sam	pte: 333087-005 S / MS	Bate	h: 1 Matr	ix: Soil		
Units: mg/kg Date Analy	zed: 05/19/09 23:53	SÜR	ROGATE R	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	Fa Fa	ount und A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	10	)7	100	107	70-135	
o-Terphenyl	49		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.

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#### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

ork Orders : 333090, Lab Batch #: 759476	Sample: 333087-005 SD / N	ASD Ba	-	D: 2009-93 rix: Soil		
Units: mg/kg D	ate Analyzed: 05/20/09 00:18	SU	RROGATE R	ECOVERY	STUDY	
	W8015 Mod lytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		108	100	108	70-135	
o-Terphenyl		49.2	50.0	98	70-135	
Lab Batch #: 759627	Sample: 530386-1-BKS / B	KS Bai	ch: 1 Mati	rix: Solid		
Units: mg/kg D	ate Analyzed: 05/21/09 02:34	SU	RROGATE R	ECOVERY	STUDY	
TPH By SV	W8015 Mod lytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		104	100	104	70-135	
o-Terphenyl		47.0	50.0	94	70-135	
Lab Batch #: 759627	Sample: 530386-1-BSD / B	SD Bat	ch: 1 Mate	ix: Solid		
Units: mg/kg D	ate Analyzed: 05/21/09 02:59	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SV		Amount Found [A]	True Amount  B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctanc		105	100	105	70-135	
o-Terphenyl		47.4	50,0	95	70-135	
Lab Batch #: 759627	Sample: 530386-1-BLK / B	LK Bat	ch: l Matr	ix: Solid	1.00	
Units: mg/kg D	ate Analyzed: 05/21/09 03:24	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SV Anal		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane		91.4	100	91	70-135	
o-Terphenyl		51.1	50.0	102	70-135	
Lab Batch #: 759627	Sample: 333090-005 / SMP	Bat	ch: I Matr	ix: Soil		
Units: mg/kg D	ate Analyzed: 05/21/09 03:49	SUI	RROGATE R	ECOVERY S	STUDY	
TPH By SV Anal		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
-Chlorooctane		87.4	100	87	70-135	
o-Terphenyi		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.



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#### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Vork Orders : 333090 Lab Batch #: 759627	), Sample: 333090-006 / SMP	Da		D: 2009-93 rix: Soil		
Units: mg/kg	Date Analyzed: 05/21/09 04:14		RROGATE R		STUDY	-
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctanc		89.9	100	90	70-135	
o-Terphenyl		50.1	50.0	100	70-135	_
Lab Batch #: 759627	Sample: 333090-007 / SMP	Ba	tch: [ Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 05/21/09 04:39		RROGATE R		STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		89.3	100	89	70-135	
o-Terphenyl		49.7	50.0	99	70-135	_
Lab Batch #: 759627 Units: mg/kg	Sample: 333090-008 / SMP Date Analyzed: 05/21/09 05:03		tch:   Matu	ix: Soil	STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		95.8	100	96	70-135	
o-Terphenyl		51.9	50.0	104	70-135	
Lab Batch #: 759627	Sample: 333090-009 / SMP	Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/21/09 05:29	SU	RROGATE R	ECOVERY S	STUDY	
	By SW8015 Mod Analytes	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	
_ab Batch #: 759627	Sample: 333090-005 S / MS	Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/21/09 09:39	SU	RROGATE R	ECOVERY S	STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	- name g 4703	106	100	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.

MANIA
XENCO
Laboratories

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## Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Vork Orders : 333090, Lab Batch #: 759627	Sample: 333090-005 SD / M	ASD Ba	-	D: 2009-93 rix: Soil		
Units: mg/kg	Date Analyzed: 05/21/09 10:03	SL	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		105	100	105	70-135	
o-Terphenyl		47.7	50.0	95	70-135	
Lab Batch #: 759742	Sample: 530461-1-BKS / B	KS Ba	tch: 1 Mati	ix: Solid	·	
Units: mg/kg	Date Analyzed: 05/22/09 02:32	SU	RROGATE R	ECOVERY	STUDY	
10 A 10 A 10 A	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Centrol Limits %R	Flags
1-Chlorooctanc		106	100	106	70-135	
o-Terphenyl		49,3	50.0	99	70-135	
Lab Batch #: 759742 Units: mg/kg	Sample: 530461-1-BSD / B Date Analyzed: 05/22/09 02:57		tch: I Matr	ix: Solid ECOVERY S	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		117	100	117	70-135	
o-Terphenyl		53.6	50,0	107	70-135	
Lab Batch #: 759742	Sample: 530461-1-BLK / B	LK Ba	tch: 1 Matr	ix: Solid	1	
Units: mg/kg	Date Analyzed: 05/22/09 03:22	SU	RROGATE R	ECOVERY S	STUDY	
	7 SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		93.2	100	93	70-135	
o-Terphenyl		52.0	50.0	104	70-135	
ab Batch #: 759742	Sample: 333090-003 / SMP	Ba	ich: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 05/22/09 04:12	SU	RROGATE R	ECOVERY S	STUDY	
	SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
-Chlorooctane		83.0	100	83	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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

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#### Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

Vork Orders : 333090, Lab Batch #: 759742	Sample: 333090-004 / SMP			D: 2009-93 rix: Soil	STUDY	
Units: mg/kg	Date Analyzed: 05/22/09 04:36	30	KRUGATE N	ECOVERT	STUDI	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		108	100	108	70-135	
o-Terphenyl		46.8	50.0	94	70-135	
Lab Batch #: 759742	Sample: 332876-003 S / MS	Ba	tch: 1 Mat	rix: Soil	·	
Units: mg/kg	Date Analyzed: 05/22/09 05:51	SU	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		106	100	106	70-135	
o-Terphenyl		47.4	50.0	95	70-135	
Lab Batch #: 759742	Sample: 332876-003 SD / MS	SD Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 05/22/09 06:16	SU	RROGATE R	ECOVERY S	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		115	100	115	70-135	
o-Terphenyl		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.

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D

Project Name: 14" Vac to Jal BLM



#: 333090	BRB	759977
Work Order #:	Analyst:	Lab Batch ID: 759977

Date Prepared: 05/22/2009

Batch #:

Sample: 530571-1-BKS

Project ID: 2009-93 Date Analyzed: 05/22/2009 Matrix: Solid

Units: mg/kg		BLAN	K/BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result IAI	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Durdleate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		(B)	[C]	a	[E]	Result [F]	5	۹	Ne/	79 KLD	Ċ,
Benzene	DN	0,1000	0.1183	118	0.1	0.1172	117	-	70-130	35	
Tolucne	DN	0.1000	0.1143	114	0.1	0.1132	[1]	-	70-130	35	
Ethylbenzene	QN	0,1000	0,1190	119	0.1	0.1181	118	-	71-129	35	
m,p-Xylcnes	QN	0.2000	0.2396	120	0.2	0.2368	118	1	70-135	35	
0-Xylcnc	Q	0,1000	0.1148	115	1.0	0.1140	114	-	71-133	35	
Analyst: ASA	Da	te Prepare	Date Prepared: 05/27/2009	6			Date Ar	Date Analyzed: 05/27/2009	5/27/2009		

ASA	760298
Analyst:	Batch ID:
	Lab

Units: mg/kg

Sample: 530774-1-BKS

Date Prepared: 05/27/2009 Batch #: ]

Matrix: Solid

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** 

BTEX by EPA 8021B	Blank Sr Sample Result Ad [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spîke Duplkate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[0]	3	Result [F]	Ū	1			Ī
Benzene	DN	0.1000	0,1000	001	0.1	0.1002	100	0	70-130	35	
Toluche	QN	0,1000	0.0963	96	0.1	0.0968	16	1	70-130	35	
Ethylbenzene	QN	0.1000	0.1030	103	0.1	0.1046	105	2	71-129	35	
m,p-Xylenes	QN	0.2000	0.2083	104	0.2	0.2113	901	1	70-135	35	
o-Xylenc	ŊŊ	0.1000	0.0985	66	0.1	0.1001	001	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



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Project Name: 14" Vac to Jal BLM

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

Matrix: Solid

**BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Date Prepared: 05/19/2009 Batch #: 1 Spike Added Sample Result Blank Sample: 530300-1-BKS TPH By SW8015 Mod Work Order #: 333090 Lab Batch ID: 759476 Units: mg/kg Analyst: BHW

Flag Limits %RPD Control 35 33 70-135 Control Limits %R 70-135 Date Analyzed: 05/21/2009 Matrix: Solid RPD % 2 Blk. Spk Dup. %R 66 35 Duplicate Result [F] Blank Spike 954 066 Spike Added 0001 1000 Ξ Blank Spike %R [D] 101 96 Date Prepared: 05/19/2009 Blank Spike Result 1010 964 Ó Batch #: 000 0001 8 Q g M Sample: 530386-1-BKS C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Lab Batch ID: 759627 Analyst: BHW Analytes

Flag Limits %RPD Control 35 33 **BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Control Limits %R 70-135 70-135 RPD % 0 Blk. Spk Dup. %R 104 86 Duplicate Result [F] Blank Spike 1040 980 Splke Added 1000 1000 Ξ Blank Spike %R [D] 105 86 Blank Spike Result 1050 982 <u>0</u> Spike Added 1000 000 B Blank Sample Result ≤ ĝ 9 TPH By SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

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



Project Name: 14" Vac to Jal BLM



Work Order #: 333090						
Analyst: BHW		Da	ite Prepar	Date Prepared: 05/20/2009	6	
Lab Batch ID: 759742 Sa	Sample: 530461-1-BKS		Batch #:	ii #: 1		
Units: mg/kg			BLAN	BLANK /BLANK SPIKE / BL	SPIKE / I	E.
TPH By SW8015 Mod	po	Blank Sample Result	Spike Added	Blank Soike	Blank Solke	
Analytes		[V]	[ <b>8</b> ]	Result [C]	a% a [d]	•

Project ID: 2009-93 Date Analyzed: 05/22/2009 Matrix: Solid ANK SPIKE DUPLICATE RECOVERY STUDY

Flag

Control Limits %RPD

Control Limits %R

RPD %

Duplicate Result [F] Blank Spike

Blk. Spk Dup. S.R.

**Spike** Added

35 35

70-135

70-135

00 00

110 103

0011 1030

102 95

1020

0001 1000

Q Ð

C6-C12 Gasoline Range Hydrocarbons C12-C28 Dicsel Range Hydrocarbons

953

1000 0001 Ξ

Received	
by	
OCD:	
3/31/	
/2023	
2:34	
:37	
ΡM	

Rclative 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 0000000



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Project Name: 14" Vac to Jal BLM



Released to Imaging: 3/31/2023 2:43:07 P.M. C===

ji,

333090	759977	05/23/2009	mg/kg
Work Order #: 333090	Lab Batch ID: 759977	Date Analyzed: 05/23/2009	Reporting Units: mg/kg

Project ID: 2009-93 -Batch #:

Matrix: Soil

QC- Sample ID: 333087-003 S Date Prepared: 05/22/2009

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analyst: BRB

									1 77 1 1		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Splke 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	a la Balla
Benzene	0.0073	0.1024	0.2245	212	0.1024	0.2088	197	-	70-130	35	×
Tolucne	0.0354	0.1024	0.3688	326	0.1024	0.3445	302	7	70-130	35	×
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	S	70-135	35	
o-Xylcnc	0.0090	0.1024	0.1041	93	0.1024	1660'0	88	s	71-133	35	
Lab Batch ID: 760298 Date Analyzed: 05/27/2009 Reporting Units: mg/kg	QC-Sample ID: 333233-020 S Date Prepared: 05/27/2009 MATED	. 333233- . 05/27/20	020 S 009 A TELY SELV	Ba An	Batch #: Analyst: /	l Matrix: Soil ASA VE DIDI ICATE DE	: Soil				
						MAINLA SFINE / MAINLA SFINE DUFLICATE RECUVERY STUDY	IE KECI	JVEKY	YUU I		
DTEV L. EN A OATE	Parent		Sniked Snmle Sniked	Sniked		Durlinta	Sullad		Control Control	Control	

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample S Result [C]	Spiked Sample %R [D]	Spike Added  E	Duptkate Spiked Sample Result [F]	Splked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	E B B B B B B B B B B B B B B B B B B B
Benzene	QN	0.1092	0.0619	57	0.1092	0.0656	60	9	70-130	35	×
Totucne	ND	0.1092	0,0606	55	0.1092	0.0644	59	9	061-07	35	×
Ethylbenzene	ND	0.1092	0.0677	62	0.1092	0.0720	66	6	71-129	35	×
m,p-Xylencs	QN	0.2183	0.1392	64	0.2183	0.1474	68	9	70-135	35	×
o-Xylcnc	QN	0.1092	0.0628	58	0,1092	0.0671	61	7	71-133	35	×

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

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

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

Form 3 - MS / MSD Recoveries XENCO



Project Name: 14" Vac to Jal BLM



Released to Imaging: 3/31/2023 2:43:07 PM

Work Order # : 333090						Project II	Project ID: 2009-93	~			
Lab Batch ID: 759476 Date Analyzed: 05/19/2009	QC- Sample ID: Date Prepared:	333087-005 S 05/19/2009	-005 S 009	Ba	Batch #: Analyst:	l Matrix: BHW	k: Soil				
Reporting Units: mg/kg		W	ATRIX SPIK	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY :	TUDY		
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Splke 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	QN	1080	1150	901	1080	1160	107	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1080	1100	102	1080	1120	104	2	70-135	35	
Lab Batch ID: 759627 Date Analyzed: 05/21/2009 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	33309	005 S 009 ATRIX SPIK	Ba An	Batch #: Analyst:   ATDIX CDI	0-005 S Batch #: 1 Matrix: Soil 2009 Analyst: BHW MATRIX SPIKE / MATRIX SPIKE DIDI 17 ATE DECOVEDV	t: Soil		STIN		
	2					NE PULLICA	NEN TE	UVERI	Innis		
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	22.1	1050	0601	102	1050	1070	100	2	70-135	35	ł
C12-C28 Diesel Range Hydrocarbons	91.5	1050	1140	100	1050	1130	99	-	70-135	35	
Lab Batch ID: 759742 Date Analyzed: 05/22/2009 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	33287 05/20/	003 S 009	Ba An E / MAT	Batch #: Analyst: ]	6-003 S Batch #: 1 Matrix: Soil 2009 Analyst: BHW MATRIX SPIKE / MATRIX SPIKE DIIDI ICATE DECOVEDV STIDV	t: Soil	VICED V 6			
							TE VEC	AFAL	Idolo		
TPH By SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	(B)		<b>I</b> <u>0</u> ]	[2]		[6]	5	1		
C6-C12 Gasoline Range Hydrocarbons	DN	1180	1260	107	1180	1340	114	6	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	QN	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

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#### Sample Duplicate Recovery



Received by OCD: 3/31/2023 2:34:37 PM

Project Name: 14" Vac to Jal BLM

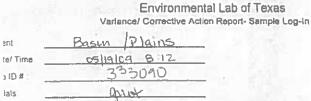
Work Order #: 333090

Lab Batch #: 759451			Project I	D: 2009-93	
Date Analyzed: 05/20/2009	Date Prepared: 05/2	20/2009	Analy	st: BEV	
QC- Sample ID: 333088-001 D	Batch #: 1	1	Matr	ix: Soil	
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	ND	ND	NC	20	
Lab Batch #: 759454			1.2		
Date Analyzed: 05/20/2009	Date Prepared: 05/2	20/2009	Analy	st: BEV	
QC- Sample ID: 333090-007 D	Batch #: 1		Matr	ix: Soil	
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)			
Percent Moisture	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

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YAG A TAT Breb 1301 ONPOES H-12 10-11 #IVL HB 9 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713 WBGN 0 TRRP 101 Project Name: 14" Vac to Jal BLM 012300 X311 Project 8: SRS# 2009-93 Project Lac: Lee County, NM X Standard PO B1 PANJ. Henry Free of He NU SEL CEC Ci un the was a Report Format: 9001 X1 Het 11 1400 S. D. ŝ 1108 51 cibryant@basin-consulting.com 20 Nor No Ã So: ŝ Ś 8 5 12800 West I-20 East Odesse, Yezas 79765 O'E'IN HOWN \*08<sup>4</sup>H 6271-94C (506) 1014 SERVICE TECH 1014 83 panel ( Fau No: 5 12 18 12 30 5 19 19 18 12 30 5 19 19 18 18 50 5 18 18 18 18 10 5 18 18 18 13 10 5 18 18 13 13 20 5 18 18 13 13 20 5 18 18 13 13 20 5 18 18 13 13 20 ABE-0 1330 AVO LOV 15/09 NO INVITA Dura S DIT. BO 12 Silved. updag Gupp F1/8 0X17 Environmental Lab of Texas updated generation and Ca 2mmille Lovington, NM 88250 N54) 0.2 0020 0 21 In CamiDe Bryant 9121-Stale)4] Company Address: P.O. Box 341 **Bushs Enviro** 333096 e fund FIELD CODE 18 East EXC SSI DA Shorl' Dis Sampler Signature: Project Manager JYS the 1000 Company Name 222 Telephone No: 9 City/State/Zip: SIU 20th (White the only) DRDER #: 110 (40



#### Sample Receipt Checklist

Temperature of container/ cooler?	(Val	No	1.5 0
Shipping container in good condition?	CPB	No	
Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present
Custody Seals Intact on sample bottles/ container?	(Yeb)	No	Not Present
Chain of Custody present?	Tes	No	
Sample Instructions complete of Chain of Custody?	Tes	No	10.00 King 10.00
Chain of Custody signed when relinquished/ received?	Ces !	No	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Chain of Custody agrees with sample label(s)?	CTES	No	ID written on Cont / Lid
Container label(s) legible and Intact?	100	No	Not Applicable
Sample matrix/ properties agree with Chain of Custody?	(Ye)	No	The second second second
1 Containers supplied by ELOT?	(Yes,	No	the second second second
2 Samples in proper container/ bottle?	100	No	Sce Below
3 Samples properly preserved?	Yes	No	See Below
4 Sample bottles intact?	Yes	No	
5 Preservations documented on Chain of Custody?	(Yes	No	and the second second second
6 Containers documented on Chain of Custody?	Ves	No	ALL MARK OF ALL ALL
7 Sufficient sample amount for Indicated test(s)?	(YAS)	No	See Below
8 All samples received within sufficient hold time?	Yee	No	See Below
9 Subcontract of sample(s)?	Yes	No	Gol Applicator
0 VOC samples have zero headspace?	Tes	No	Not Applicable

Variance Documentation

Date/ Time

untact.

prective Action Taken:

See attached e-mail/ fex

Contacted by

neck all that Apply:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event Received by OCD: 3/31/2023 2:34:37 PM

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7

# **Analytical Report 333091**

for

#### PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

14" Vac to Jal BLM 2009-93

22-MAY-09



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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

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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**:

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DDD

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

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PLAINS ALL AMERICAN EH&S, Midland, TX

14" Vac to Jal BLM

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

Lab Sample Id 333091-001

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Page 72 of 203



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 LWITH XENCO



0

Project Location: Lea County, NM Contact: Jason Henry

Project Name: 14" Vac to Jal BLM

Date Received in Lab: Tue May-19-09 08:12 am Report Date: 22-MAY-09

			Project Manager: Brent Barron. Il
	Lab Id:	333091-001	
Amalineis Dominardad	Field Id:	Stockpile 1	
naicanhay ciclinity	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:	Analyzed: May-21-09 09:23	
	Units/RL:	% RL	
Percent Moisture		8.96 1.00	

This multiplies frepore, and the entire data package it represents, has been trade for your reduive and confidential tute. The interpretations and results expressed from bloat this analytical ryon research the bark high present XENCO Laboratories. XENCO haberarories assumes to requessibility and maths no warmany to the red use of the data hereby presented. Our liability is finited to the amount invoiced for this work order turkes otherwise agreed to its writing.

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Odessa Laboratory Director Brent Barron



# **Flagging Criteria**



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- 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.

5757 NW 158th St, Miami Lakes, FL 33014 12600 West I-20 East, Odessa, TX 79765

842 Cantwell Lane, Corpus Christi, TX 78408

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(361) 884-0371

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(361) 884-9116





Received by OCD: 3/31/2023 2:34:37 PM

### Project Name: 14" Vac to Jal BLM

Work Order #: 333091		Pi	roject ID:			2009-93
Lab Batch #: 759635 Date Analyzed: 05/20/2009	Sample: 759635- Date Prepared: 05/20/20			ix: Solid st: LATC	OR	
Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY	STUDY
Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes		(B)	Result [C]	%R (D)	%R	
Chloride	ND	10.0	9.16	92	90-110	

•

Date Analyz	h #: 759635 ed: 05/20/2009 ID: 332876-021 S		Date	Prepared: Batch #: MAT	05/20/2009 1 RIX / MA		Analyst: Matrix:		JDY
		ons by EPA 300 llytes		Parent Sample Result [A]	Spike Added (B)	Spiked Sample Result [C]	%R [D]	Control Limits %R	Fla
Chloridc				1530	544	2160	116	80-120	

0 0

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D 0

D

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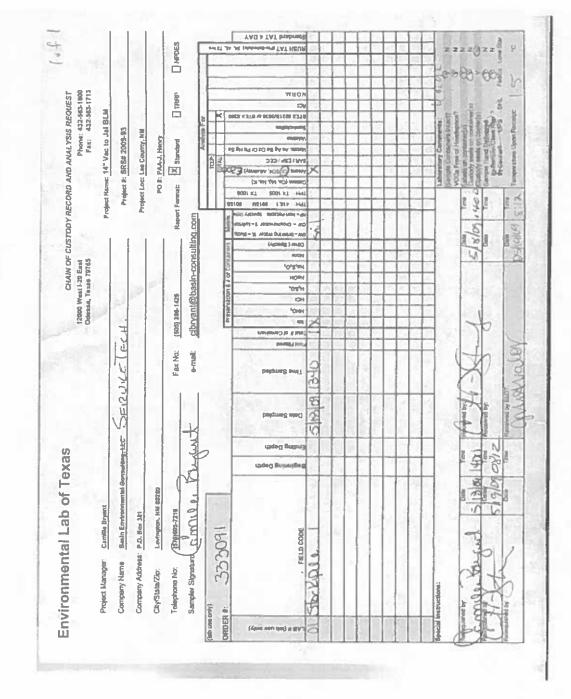
Project Name: 14" Vac to Jal BLM

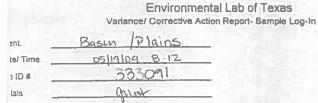
Work Order #: 333091

Lab Batch #: 759635 Date Analyzed: 05/20/2009 QC- Sample ID: 332876-021 D	Date Prepared: 05/2 Batch #: 1	20/2009	Analy	D: 2009-93 st: LATCOF ix: Soil	2
Reporting Units: mg/kg	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	1530	1630	6	20	
Lab Batch #: 759599					
Date Analyzed: 05/21/2009	Date Prepared: 05/2	21/2009	Analy	st: BEV	
QC- Sample ID: 333164-001 D	Batch #: i		Matr	ix: Solid	
Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	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

0





#### Sampia Receipt Checklist

Temperature of container/ cooler?	(Yal)	No	1.5 .0
Shipping container in good condition?	(Yeb)	No	the second second second
Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present
Custody Seats intact on sample bottles/ container?	Yeb	No	Not Present
Chain of Custody present?	(19)	No	Contraction of the second second
Sample Instructions complete of Chain of Custody?	Cres	No	the of the second second
Chain of Custody signed when railinguished/ received?	1 ATED	No	and the second states where a
Chain of Clistody agrees with sample label(s)?	CTED	No	ID written on ConL/Lid
Container label(s) legible and intact?	Tes	No	Not Applicable
0 Sample matrix/ properties agree with Chain of Custody?	963	No	In the second state of the second sec
1 Containers supplied by ELOT?	Yeb	No	12 C 1 1 1 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3
2 Samples in proper container/ bottle?	TEP	No	See Below
3 Samples property preserved?	Cap	No	See Bolow
4 Sample bottles intact?	(Yes)	No	A CONTRACTOR OF
5 Preservations documented on Chain of Custody?	(Yes)	No	AND AND A SHORE AND A SHORE
6 Containers documented on Chain of Custody?	Nes	No	The second second
7 Sufficient sample amount for indicated test(s)?	Yes	No	See Below
8 All samples received within sufficient hold time?	400	No	See Below
9 Subcontract of sample(a)?	Yes	No	Got Applicable
0 VOC samples have zero headspace?	765	No	Not Applicable

Variance Documentation

intact: igarding. Contacted by:

\_\_\_\_ Date/ Time:

Irrective Action Taken.

neck all that Apply

#### See attached e-mal/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

# **Analytical Report 333999**

1.1

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

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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,

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**Brent Barron**, II Odessa Laboratory Manager

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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



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

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#### 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 reanalysis. 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 XENCO D



Project Name: 14" Vac to Jal - BLM

TX 중국 28-09 05:45 pm

Project Location: Jal, NM				Report Date: 05-JUN-09 Project Manager: Breat Barron II	
	Lab Id:	333999-001	333999-002		
Americ Donverted	Field Id:	East Exe Floor (@ 3.5'	East Exc ESW (0 3.5		
naicanhair ciclimit	Depth:		-	2	
	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	0100.0 UN		
Tolucne		ND 0.0020	ND 0.0020		
Ethylbenzene		0100 0 GN	0100-0 UN		
m.p-Xylenes		ND 0.0020	ND 0.0020		
o-Xylene		ND 0.0010	0100.0 UN		
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 Bv 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 Dicsel 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		

This analytical report, and the carite data package it represents, has been made for your cachaive and confidential tue. The interpretations and realist expersion throughout this mativital report represents the bark holds and KENCO Laboratories. XENCO Laboratories and realist expressed throughout this mativital report reports of the data lineity presented Our liability is limited to the annotat invoiced for this work order unless otherwise agreed to in writing.

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

Odessa Laboratory Director Brent Barron



# **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL 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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## Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

/ork Orders : 333999, Lab Batch #: 760797 Sample: 531040-1-BKS / BB	S Ba	-	D: 2009-093 rix: Solid		
Units: mg/kg Date Analyzed: 06/01/09 09:29	SU	RROGATE R	ECOVERY	STUDY	_
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,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 / BS	D Ba	tch:   Mati	rix: Solid		
Units: mg/kg Date Analyzed: 06/01/09 09:51	SU	RROGATE R	ECOVERY	STUDY	_
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	
Lab Batch #: 760797 Sample: 531040-1-BLK / BL	.K Ba	tch: 1 Mate	ix: Solid		
Units: mg/kg Date Analyzed: 06/01/09 10:34	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0,0300	92	80-120	
4-Bromofluorobenzene	0.0220	0.0300	73	80-120	٠
Lab Batch #: 760797 Sample: 333999-001 / SMP	Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg Date Analyzed: 06/01/09 14:08	SU	RROGATE R	ECOVERY S	STUDY	_
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,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	Bat	ich: I Matr	ix: Soil		
Units: mg/kg Date Analyzed: 06/01/09 15:28	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0244	0.0300	81		

\* 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.

Page 87 of 203



# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Vork Orders : 333999, Lab Batch #: 760797	Sample: 333729-025 S / MS	Ra	-	D: 2009-093		
	Date Analyzed: 06/01/09 19:04		RROGATE R		STUDY	
BTEX by	EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0315	0.0300	105	80-120	
4-Bromofluorobcnzcnc		0.0281	0.0300	94	80-120	_
Lab Batch #: 760797	Sample: 333729-025 SD / MS	SD Bai	tch:   Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 06/01/09 19:26	SU	RROGATE R	ECOVERY	STUDY	
	EPA 8021B alytes	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/BK	S Bat	ch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 06/01/09 12:23	SU	RROGATE R	ECOVERY S	STUDY	
	W8015 Mod alytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		105	100	105	70-135	
o-Terphenyl		42,0	50.0	84	70-135	
Lab Batch #: 760837	Sample: 531068-1-BSD / BSI	D Bat	ch: 1 Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 06/01/09 12:46	SÜ	RROGATE R	ECOVERY S	STUDY	
	W8015 Mod alytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		106	100	106	70-135	
o-Terphenyl		42.8	50.0	86	70-135	
Lab Batch #: 760837	Sample: 531068-1-BLK / BL	C Bat	ch: 1 Matri	ix: Solid		
Units: mg/kg	Date Analyzed: 06/01/09 13:10	SU	RROGATE RI	ECOVERY S	STUDY	
	W8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		92.3	100	92	70-135	
o-Terpheny]		47.0	50.0	94	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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



# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Vork Orders : 333999, Lab Batch #: 760837	Sample: 333999-001 / SMP	Ba	-	D: 2009-093		
Units: mg/kg	Date Analyzed: 06/01/09 20:26	SL	RROGATE R	ECOVERY	STUDY	_
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		98.7	100	99	70-135	
o-Terphenyl		51.7	50.0	103	70-135	
Lab Batch #: 760837	Sample: 333999-002 / SMP	Ba	tch:   Mati	ix: Soil		
Units: mg/kg	Date Analyzed: 06/01/09 20:49	SU	RROGATE R	ECOVERY	STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		99.1	100	99	70-135	
o-Terphenyl		52.5	50.0	105	70-135	2
Lab Batch #: 760837	Sample: 333729-027 S / MS	Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 06/01/09 21:35	SU	RROGATE R	ECOVERY S	STUDY	1
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R (D)	Control Limits %R	Flags
I-Chlorooctane		113	001	113	70-135	
o-Terphenyl		47.5	50.0	95	70-135	
Lab Batch #: 760837	Sample: 333729-027 SD / MS		tch: <sup>1</sup> Matr RROGATE R	ix: Soil	STUDY	
Units: mg/kg	Date Analyzed: 06/01/09 21:58			LCOVERTI		_
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-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.

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## Project Name: 14" Vac to Jal - BLM

Wor

Work Order #: 333999		P	roject ID:			2009-093
Lab Batch #: 761125 Date Analyzed: 06/03/2009	Sample: 761125- Date Prepared: 06/03/20			ix: Solid st: LATCO	OR	
Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY	STUDY
Anions by EPA 300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes		(B)	Result [C]	%R [D]	%R	
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

0

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**BS / BSD Recoveries** 



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Project Name: 14" Vac to Jal - BLM



ork b Bat	Work Order #: 333999	Analyst: ASA	Lab Batch ID: 760797 Sample: 53	Units: mg/kg	
--------------	----------------------	--------------	---------------------------------	--------------	--

Date Prepared: 06/01/2009

Batch #: 1

1040-1-BKS

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

		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANK S	PIKE DUPI	ICATE	RECOVI	ERY STUI	X	Γ
Blank	- 1 C	Spike	Blank	Blank	Spike	Blank	Blk. Spk	ſ	Control	Control	
Sample Result [A]		Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R	RPD %	Limits %R	Limits %RPD	Flag
		8		[a]	[E]	Result [F]	[0]				
DN		0.1000	0.1105	111	0.1	0.1094	601	-	70-130	35	
QN		0.1000	0.1066	107	0.1	0,1053	105	-	70-130	35	
ND		0.1000	0.11.09	111	0.1	0.1096	110	-	71-129	35	
QN		0.2000	0.2246	112	0.2	0.2219	111	-	70-135	35	
QN		0.1000	0.1060	106	0.1	0.1053	105	-	71-133	35	
D		te Prepar	Date Prepared: 06/01/2009	æ			Date Ar	nalyzed: (	Date Analyzed: 06/01/2009		
Sample: 531068-1-BKS		Batch #:	1 #: 1					Matrix: Solid	Solid		
		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE DECOVERV STUDV	PIKE / B	I.ANK S	PTKE DUPT	ICATE 1	PECOVI	PPV STIF	N	ſ

Sugar Sun Sun			DEMINISTERIA SERVES DEMIN SERVE DUFLICATE RECUVERT STUDY		C UNIVIT		TOTE	KELUVE	TOTE INT	X	
TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Splke Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup.	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[8]	ס	a	[E]	Result [F]	[0]				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	842	84	0001	841	84	0	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	QN	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

Work Order #: 333999 Lab Batch #: 761125 Date Analyzed: 06/03/2009 QC- Sample ID: 334249-003 S	Tojeet Nam	e: 14" Vac to Date Prepared: Batch #:	06/03/2009 1	Pro	Analyst: Matrix:	Soil	
Reporting Units: mg/kg Inorganic Anions by Analytes	y EPA 300	Parent Sample Result [A]	RIX / MA <sup>*</sup> Spike Added [B]	TRIX SPIKE Spiked Sample Result [C]	RECO %R [D]	VERY STU Control Limits %R	Fla
Chloride		5950	2470	8850	117	80-120	

BRL - Below Reporting Limit

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Form 3 - MS / MSD Recoveries XENCO



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Work Order #: 333999 Lab Batch ID: 760797

Project Name: 14" Vac to Jal - BLM

Project ID: 2009-093

Matrix: Soil

-SA

Batch #:

QC- Sample ID: 333729-025 S



Released to Imaging: 3/31/2023 2:43:07 PM

Date Analyzed: 06/01/2009	Date Prepared: 06/01/2009	06/01/20	60	An	Analyst: ASA	ASA			
Reporting Units: mg/kg		W	ATRIX SPIKI	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	<b>DVERY S</b>	TUDY
BTEX by EPA 8021B Analytes	Parent Sample Result (A)	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spliked Dup. %R [G]	RPD %	Control Limits %R
Bettzene	QN	0.1162	0.1004	86	0.1162	0.1043	90	4	70-130
Tolucne	QN	0.1162	0.0976	84	0.1162	79997	86	4	70-130
Ethylbenzene	QN	0,1162	0.0802	69	0.1162	0.0777	67	-	71-129
m,p-Xylenes	QN	0.2323	0.2091	06	0.2323	0.2156	53	-	70-135
o-Xylene	QN	0,1162	0.1001	86	0.1162	0.1025			71-133

Flag

Limits %RPD Control

Control Limits %R

33

70-130 70-130 71-129 70-135

35 35 35

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33

71-133

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80

0.1025

Lab Batch ID: 760837 Date Analyzed: 06/01/2009	QC- Sample ID: 333729-027 S Date Prepared: 06/01/2009	333729- 06/01/20	027 S 009	Ba	Batch #: Analyst: E	l Matrix: Soil BHW	:: Soil				
Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TAM / 3	<b>HIAS XIX</b>	CE DUPLICA	TE RECO	OVERY 5	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample		Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>5</u>	R IO	Added [E]	Result [F]	%R [G]	*	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	â	1170	1030	88	1170	1060	16	m	70-135	35	
C12-C28 Diesel Range Hydrocarbons	69.7	0/11	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 Spile: Duplicate Percent Recovery [G] = 100\*(F-A)E

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



## Sample Duplicate Recovery



Received by OCD: 3/31/2023 2:34:37 PM

Project Name: 14" Vac to Jal - BLM

Work Order #: 333999

Lab Batch #: 761125 Date Analyzed: 06/03/2009 QC- Sample ID: 334249-003 D		epared: 06/0 Batch #: 1	3/2009	Analy	D: 2009-093 st: LATCO	
Reporting Units: mg/kg		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300		Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Chloride		5950	5840	2	20	
Lab Batch #: 760577						
Date Analyzed: 05/29/2009	Date Pr	epared: 05/2	9/2009	Analy	st: JLG	
QC- Sample ID: 333999-001 S D	1	Batch #: I		Matr	ix: Soil	
Reporting Units: %		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[A]	[B]		/0KFU	
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

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Xenco Laboratories In Environmental Laboratories Project Manager:	Company Name	1.000	Telephone Na. Sampler Signature.	333999	FIELD CODE	r Eke - F		H	Ede-	0
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#### Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	Plains Basin
Date/ Time:	05-28-09 C 1745
Lab ID # :	333999
In:tials.	JMF

#### Sample Receipt Checklist

				Client Initial
#1	Temperature of container/ cooler?	(Yes)	No	4,5 °C
#2	Shipping container in good condition?	Ves>	No	
#3	Custody Seats intact on shipping container/ cooler?	Yes	No	Not Present>
#4	Custody See's intact on sample bottles/ container? //chel	(Yes)	No	Not Present
#5	Chain of Custody present?	Yes,	No	ALCONTRACTOR DUCTION
#8	Sample instructions complete of Chain of Custody?	NeD	No	
#7	Chain of Custody signed when relinguished/ received?	(AD)	No	CEREMON CONTRACTOR
#8	Chain of Custody agrees with sample label(\$)?	Yes?	No	1D written on Cont./ Lid
#9	Container label(s) legible and intect?	Ves 1	No	Not Applicable
# 0	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No	
#11	Containers supplied by ELOT?	Ves	No	Second Second Second
#12	Samples in proper container/ bottle?	(Yes>)	No	See Below
#13	Samples properly preserved?	(Yes )X	No	See Below
#14	Sample bottles Intact?	(Yeso	No	
#15	Preservations documented on Chain of Custody?	Nes	No	
#16	Containers documented on Chain of Custody?	dep	No	
#17	Sufficient sample amount for indicated test(s)?	(Yes )	No	See Below
#18	All samples received within sufficient hold time?	AUS.	No	See Below
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable
#20	VOC samples have zero headspace?	Xes )	No	Not Applicable

**Variance Documentation** 

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

Date/ Time:

Contact.

Regarding: **Corrective Action Taken:** Check all that Apply: See attached e-mail/ fax

Contacted by:

-1

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#### Gracie Avalos

From: Camille J. Bryant [cjbryant@basin-consulting.com] Sent: Tuesday, June 02, 2009 6:02 PM To: Gracle 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

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

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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 Received by OCD: 3/31/2023 2:34:37 PM



# IENCO Laboratorics

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,

T\$

**Brent Barron, H** Odessa Laboratory Manager

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







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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



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 0000 0 laberatories **CENCO** 0000

Project Name: 14" Vac to Jal BLM



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

Date Received in Lab: Fri Jun-19-09 08:40 am Report Date: 26-1UN-09

		1	
60-NIOF-07	Brent Barron, II		
Inchair There The The	Project Manager:		

Inalysis Requested     Field Id: Depth:     Blended- Blended-       BTEX by EPA 8021B     Extracted: Jun-26-09 17 Analyzed: Jun-26-09 17 Analyzed: Data     Jun-26-09 17 Jun-26-09 17 Analyzed: Jun-22-09 10       BTEX by EPA 8021B     Extracted: Jun-26-09 17 Analyzed: Data     Jun-26-09 17 Jun-22-09 10       me     20.51     0.4051       me     20.51     0.4051       me     10.17-22-09 10       me     11.73       me     11.73       me     11.73       me     11.73       me     11.73       me     11.75       me     11.75       finityRL:     %       oistor     1.75       finityRet     Jun-22-09 10       finityErd:     Jun-22-09 10       me     1.75       finityErd:     Jun-22-09 10       finityErd:     Jun-22-09 00       finityRet     Jun-22-09 00 <t< th=""><th></th><th>1 .4. 14.</th><th>114046 001</th><th></th><th></th><th></th></t<>		1 .4. 14.	114046 001			
Inallysis Requested         Field Id: Deptis         Bicnded-1           BTEX by EPA 8021B         Deptis: Sampled:         Jun-26-09 01           BTEX by EPA 8021B         Extracted:         Jun-26-09 01           BTEX by EVA 80         Indifred:         Jun-22-09 10           BTEX by EVA 8015 Mod         Extracted:         Jun-22-09 00           Analyzed:         Jun-22-09 00         Jun-22-09 00           BTEX By SW8015 Mod         Extracted:         Jun-22-09 00           BTEX By SW8015 Mod         Indifred:         %           Indifred:         Indifred:         %           Indifred:         Indifred:         %           Indifred:         Indifred:         %           Indiffere:         Indifred:         %						
Depth:         Depth:         Solit           BTEX by EPA 8021B         Matrix:         SOIL           BTEX by EPA 8021B         Extracted:         Jun-25-09 15           BTEX by EPA 8021B         Extracted:         Jun-26-09 01           BTEX by EPA 8021B         Extracted:         Jun-26-09 01           BTEX by EPA 8021B         Extracted:         Jun-26-09 01           Image:         0.4051 0         0.4051 0           Image:         0.4051 0         0.42.57 0           Image:         0.4051 0	Amalucic Donnordad	Field Id:	Blended-I			
Matrix         Solution           BTEX by EPA 8021B         Extracted:         Jun-26-09 01           Gampted:         Jun-26-09 01         Jun-26-09 01           Imaryzed:         Imaryzed:         Jun-26-09 01           Imaryzed:         Imaryzed:         Jun-26-09 01           Imaryzed:         Jun-26-09 01         Jun-26-09 01           Imaryzed:         Jun-22-09 10         Jun-22-09 10           Imaryzed:         Jun-22-09 10         Jun-22-09 00           Imaryzed:         Jun-22-09 00         Jun-23-09 00           Imaryzed:         Jun-23-09 00	naisanhay sistemu	Depth:				
Sampled:         Jun-18-09   15           BTEX by EPA 8021B         Extracted:         Jun-26-09   1           BTEX by EPA 8021B         Extracted:         Jun-26-09   1           Imalyzed:         Jun-26-09   1         Jun-26-09   1           Imalyzed:         Jun-22-09   10         Jun-22-09   10           Imalyzed:         Jun-22-09   10         Jun-23-09   10           Imalyzed:         Jun-22-09   10         Jun-23-09   10		Matrix:	SOIL			
BTEX by EPA 8021B     Extracted: Jun-25-09 11       Analyzed: Units/RL     Jun-25-09 10       analyzed: Units/RL     0.4051 0       analyzed: Units/RL     0.4051 0       analyzed: Units/RL     0.4051 0       analyzed: Units/RL     10.12.0 0       analyzed: Units/RL     10.122-09 10       Analyzed: Units/RL     10.122-09 10       Analyzed: Units/RL     10.122-09 08       Analyzed: Units/RL     10.122-09 08       Sisture     1.75       Sisture     1.75       Sisture     1.75       Oiline Range Hydrocarbons     Units/RL       Soline Range Hydrocarbons     Units/RL       Sisture     Units/RL       Soline Range Hydrocarbons     Units/RL       Soline Range Hydrocarbons     Units/RL       Sisture     Units/RL       Soline Range Hydrocarbons     1.75       Sisture     0.175       Soline Range Hydrocarbons     1.75       Soline Range Hydrocarbons     2.750		Sampled:	Jun-18-09 15:00	<u> </u>		
Analyzeal:         Jun-26-09 01           Inits/RL:         mg/kg           0.4051         0.4051           ne         17.32           es         30.54           es         42.57           ass         42.57           es         12.03           hass         12.03           es         10.1-22-09           es         10.1-25           es	BTEX hv EPA 8021B	Extracted:	Jun-25-09 17:00			
Units/RL:     mg/rg       ne     0.4051		Analyzed:	Jun-26-09 01:23			
me         0.4051         0.4051         0.4051         0.4051         0.4051         0.4051         0.55         0.51         0.55         0.51         0.55		Units/RL:				
me         20.51         0           es         20.54         0           es         30.54         0           es         30.54         0           ars         30.54         0           A         20.51         0           ars         42.57         0           A         20.54         0           A         20.51         0           A         12.03         0           A         10.05         10.05           A         10.05         <	Benzene		0.4051 0.2036			
me         17.32         0           es         30.54         0           es         30.54         0           as         42.57         0           Analyzed:         42.57         0           X         80.8051         0           X         80.8051         0           Percent Moisture         Extracted:         Jun-22-09           Analyzed:         Jun-22-09         0           isture         Initis/RL:         %           Disture         Initis/RL:         %           Initis/RL:         Initis/RL:         Initis/RC           Initis/RE:         Initis/RC         Initis/RC           Initis/RC         Initis/RC         Initis/RC           Initis/RC         Initis/RC         Initis/RC           Initis/RC         Initis/R         Initis/RC	Tolucne		20.51 0.4071			
cs         30.54         0           nes         42.57         0           Amaiyzed:         42.57         0           Percent Moisture         Extracted:         42.57         0           Percent Moisture         Extracted:         Jun-22-09         10           Sisture         Units/RL:         %         1.75         1.75           Sisture         Extracted:         Jun-22-09         00         1.75           Sisture         Inits/RL:         %         1.75         1.75           Sisture         Extracted:         Jun-23-09         00           Inits/RL:         Inits/RL:         %         1.75         00           Sisture         Extracted:         Jun-23-09         00         00         1.460         1.75         00         00         00         1.460         1.75         00         00         1.75         00         00         1.75         00         00         1.75         00         00         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460         1.460	Ethylbenzene		17.32 0.2036			
nes         12.03         0           X         42.57         0           X         80.8051         0           Percent Moisture         Extracted:         42.57           Indiversion         Indiversion         40.8051           Sisture         Undiversion         1.75           Sisture         Undiversion         1.75           Sisture         Indiversion         1.75           Sisture         Undiversion         1.75           Sisture         Indiversion         1.75           Sisture         Undiversion         1.75           Sisture         Interverted:	m.p-Xylenes		30.54 0.4071			
nes         42.57         0           X         80.8051         0           Percent Moisture         Extracted:         Jun-22-09           Indivert:         %         1.175           Sisture         Undivert:         %           Sisture         Undivert:         %           Firstnace         Jun-22-09         10           CPH By SW8015 Mod         Extracted:         Jun-23-09           Analyzed:         Jun-23-09         08           CPH By SW8015 Mod         Extracted:         Jun-23-09           Analyzed:         Jun-23-09         08           Intersections         Units/RL:         mg/kg           solinc Range Hydrocarbons         1460         1460           Dister Hydrocarbons         2970         1350           Dister Hydrocarbons         2370         1450	o-Xylcne		12.03 0.2036			
X     80.8051     0       Percent Moisture     Extracted:     Jun-22-09       Analyzed:     Jun-22-09     10       sisture     Units/RL:     %       Sisture     Large/RL:     %       CPH By SW8015 Mod     Extracted:     Jun-23-09       Restracted:     Jun-23-09     09       Indiyzed:     Jun-23-09     09       Sisture     Units/RL:     mg/kg       soline Range Hydrocarbons     1460       Distel Range Hydrocarbons     2970       Dister Hydrocarbons     350	Total Xylcnes		42.57 0.2036			
Percent Moisture     Extracted: Analyzed:     Jun-22-09 10       Disture     Units/RL:     %       Disture     Units/RL:     %       CPH By SW8015 Mod     Analyzed:     Jun-23-09 09       Analyzed:     Jun-23-09 09     09       Analyzed:     Jun-23-09 09     09       CPH By SW8015 Mod     Analyzed:     Jun-23-09 09       State     Units/RL:     mg/kg       stoline Range Hydrocarbons     1460       Dissel Range Hydrocarbons     2970       Dissel Range Hydrocarbons     350	Total BTEX		80.8051 0.2036			
Analyzed:     Jun-22-09 10       Joints/RL:     %       Juin-22-09 10     %       Inits/RL:     %       Inits/RL:     %       Inits/RL:     %       Inits/RL:     mg/kg	Percent Moisture	Extracted:				
Units/RL:     %       Distance     Units/RL:     %       I:75     I:75     1:75       FPH By SW8015 Mod     Extracted:     Jun-22-09 08       Analyzed:     Jun-23-09 09       Lonics/RL:     mg/kg       stolinc Range Hydrocarbons     Units/RL:     1460       Diese Range Hydrocarbons     2970       District Range Hydrocarbons     350		Analyzed:	Jun-22-09 10:23			
isture 1.75 1.75 1.75 1.75 1.75 1.75 1.75 1.75		Units/RL:				
Image: Contract of the second seco	Percent Moisture					
Analyzed:     Jun-23-09 09       soliinc Range Hydrocarbons     Units/RL:     mg/kg       isoliinc Range Hydrocarbons     1460       bit Range Hydrocarbons     2970       bit Range Hydrocarbons     350	TPH Bv SW8015 Mod	Extracted:	Jun-22-09 08:57			
solinc Range Hydrocarbons Units/RL: mg/kg itsel Range Hydrocarbons 2970 bit Range Hydrocarbons 350		Analyzed:	Jun-23-09 09:51			
soline Range Hydrocarbons 1460 Niesel Range Hydrocarbons 2970 Dil Range Hydrocarbons 350		Units/RL:				
Dicsel Range Hydrocarbons 2970 Dil Range Hydrocarbons 350 4780	C6-C12 Gasoline Range Hydrocarbons					
Dil Range Hydrocarbons 350 4780	C12-C28 Diesel Range Hydrocarbons					
4780	C28-C35 Oil Range Hydrocarbons		E -			
	Total TPH		4780 76.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results represend droughton this analytical report research the bar had approved to XENCO Laboratories. XENCO habermanies anarches no requestionity and males no warmany to the end use of the data hardy processed. Our liability is limited to the amount invoiced for this work order calters otherwise agreed to in writing.

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**Odessa Laboratory Director** Brent Barron



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## **Flagging Criteria**



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

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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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 1-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116

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# Form 2 - Surrogate Recoveries

### Project Name: 14" Vac to Jal BLM

Jork Orders : 335956,           Lab Batch #: 763672         Sample: -	532618-1-BKS / BKS B		D:SRS# 2009	9-93		
Units: mg/kg Date Analyzed:	06/25/09 22:10 SI	URROGATE R	ECOVERY	STUDY		
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
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 B	atch:   Mati	rix: Solid			
Units: mg/kg Date Analyzed:	06/25/09 22:31 SI	URROGATE R	ECOVERY S	STUDY		
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
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 B	atch: l Mati	rix: Solid		1	
Units: mg/kg Date Analyzed: (	06/25/09 23:15 St	URROGATE R	ECOVERY S	STUDY		
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag	
1,4-Difluorobenzene	0.0255	0.0300	85	80-120		
4-Bromofluorobenzene	0.0157	0.0300	52	80-120	**	
Lab Batch #: 763672 Sample: 3	335956-001 / SMP Ba	atch: 1 Matr	ix: Soil			
Units: mg/kg Date Analyzed: (	06/26/09 01:23 St	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
I,4-Difluorobenzene	0.0227	0.0300	76	80-120	++	
4-Bromofluorobenzene	0,0417	0.0300	139	80-120	**	
Lab Batch #: 763323 Sample: 5			ix: Solid			
Units: mg/kg Date Analyzed: 0	06/23/09 07:17 St	JRROGATE R	ECOVERY S	STUDY		
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag	
I-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.

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XENCO
Laboratories

## Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal BLM

/ork Orders : 335956, Lab Batch #: 763323 Same	le: 532416-1-BSD / BSD	Batch: ]	roject ID: SRS# 200 Matrix: Solid	09-95	
	ed: 06/23/09 07:42	SURROGA	TE RECOVERY	STUDY	
TPH By SW8015 M Analytes	od Amou Foun [A]		ount Recovery	Control Limits %R	Flags
I-Chlorooctanc	80.8	10	0 81	70-135	
o-Tcrphcnyl	37.5	50	0.0 75	70-135	
Lab Batch #: 763323 Samp	le: 532416-1-BLK / BLK	Batch: 1	Matrix: Solid		1.
Units: mg/kg Date Analyz	ed: 06/23/09 08:08	SURROGA	TE RECOVERY	STUDY	
TPH By SW8015 M Analytes	od Amou Foun [A]		unt Recovery	Control Limits %R	Flags
1-Chiorooctanc	75.9	10	0 76	70-135	
o-Terphenyl	39.1	50	.0 78	70-135	·
Lab Batch #: 763323 Samp	le: 335956-001 / SMP	Batch: 1	Matrix: Soil		
Units: mg/kg Date Analyze	ed: 06/23/09 09:51	SURROGA	TE RECOVERY	STUDY	_
TPH By SW8015 Me Analytes	Dd Amoun Found [A]		unt Recovery	Control Limits %R	Flags
1-Chlorooctane	121	99	.5 122	70-135	_
o-Terphenyl	51.4	49	.8 103	70-135	
Lab Batch #: 763323 Samp	le: 335951-001 S / MS	Batch: 1	Matrix: Soil		
Units: mg/kg Date Analyze	ed: 06/23/09 17:45	SURROGA	TE RECOVERY	STUDY	
TPH By SW8015 Me Analytes	od Amour Found [A]		unt Recovery	Control Limits %R	Flags
I-Chlorooctane	119	99.	.6 119	70-135	
o-Terphenyl	53.7	49.	.8 108	70-135	
Lab Batch #: 763323 Samp	le: 335951-001 SD / MSD	Batch: I	Matrix: Soil		
Units: mg/kg Date Analyze	d: 06/23/09 18:11	SURROGA	TE RECOVERY	STUDY	
TPH By SW8015 Mo Analytes	od Amoun Found [A]		unt Recovery	Control Limits %R	Flags
-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.

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Received by OCD: 3/31/2023 2:34:37 PM

**BS / BSD Recoveries** 



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Project Name: 14" Vac to Jal BLM

Sample: 532618-1-BKS Work Order #: 335956 Lab Batch ID: 763672 Analyst: ASA

Date Prepared: 06/25/2009

Batch #: ]

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

Units: mg/kg			BLAN	K/BLANKS	PIKE / F	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	A 8021B	Blank Sample Result IAI	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		E	[8]			[3]	Result [F]	[0]	*	AIN.	7ekru	2
Benzene		QN	0.1000	0.1077	108	0.1	0,1091	109	-	70-130	35	
Toluenc		QN	0.1000	0.1054	105	0.1	0.1069	107	-	70-130	35	
Ethylbenzene		QN	0,1000	0,1112	Ξ	0.1	0.1127	113	-	71-129	35	
m,p-Xylencs		QN	0.2000	0.2232	112	0.2	0.2261	113	-	70-135	35	
o-Xylene		DN	0.1000	0,1067	107	0.1	0.1080	108	-	71-133	35	
Analyst: BHW		Da	te Prepare	Date Prepared: 06/22/2009	6			Date Ar	Date Analyzed: 06/23/2009	6/23/2009		
Lab Batch ID: 763323	Sample: 532416-1-BKS	KS	Batch #:	#: 1					Matrix: Solid	olid		

Units: mg/kg		BLAN	BLANN / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	FINE / B	LANKS	PLKE DUPL	ICATE R	LECOVE	RY STUD	K	Ì	
TPH By SW8015 Mod	Blank S Sample Result A	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spikc Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits	Control Limits %RPD	Flag	
Analytes		[8]	<u>כ</u>		[E]	Result [F]	0					
C6-C12 Gasoline Range Hydrocarbons	QN	1000	173	17	1000	736	74	s	70-135	35		
C12-C28 Diesel Range Hydrocarbons	QN	1000	715	72	1000	763	9/	9	70-135	35		

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

Form 3 - MS / MSD Recoveries 00000 000 000



Project Name: 14" Vac to Jal BLM



Released to Imaging: 3/31/2023 2:43:07 PM

335956	
Order	
Work (	

Date Analyzed: 06/23/2009 Lab Batch ID: 763323 Reporting Units: mg/kg

Analyst: BHW Batch #: QC-Sample ID: 335951-001 S Date Prepared: 06/22/2009

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Project ID: SRS# 2009-93

Matrix: Soil

-

						TURN DE LA COMPANY	Nav al	VENT	Innic		
TPH Bv SW8015 Mod	Parent		Spiked Sample Spiked	Spitked		Duplicate			Control	Control	
	Sample	Spike	Result	Sample	pike	5		RPD	Limits	Limits	Flag
	Result	Added	<u>כ</u>	%R	Added	Result [F]	<b>%R</b>	%	%R	%RPD	)
Analytes	[4]	[8]	l	a	Ξ		[6]	ì	Ì		
C6-C12 Gasoline Range Hydrocarbons	56.8	866	943	68	666	895	84	5	70-135	35	
CI2-C28 Diesel Range Hydrocarbons	603	866	1600	100	666	06£1	61	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

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Received by OCD: 3/31/2023 2:34:37 PM

Project Name: 14" Vac to Jal BLM

Work Order #: 335956

Lab Batch #: 763001 Date Analyzed: 06/22/2009	Date Prepared:	06/22	2/2009		D: SRS# 20 st: BEV	09-93
QC- Sample ID: 335900-001 D	Batch #:	1		Matr	ix: Soil	
Reporting Units: %	SAM	PLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent : Res	ult	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	[A	4	[B]			
Percent Moisture	9.4	5	10.1	7	20	1

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

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D D D 0 000 D

YAO A TAT brebers zzzzgzzz O NPDES ATAT HEU tim to be be for ę 1.6 Phone: 432-863-1506 Fax: 432-663-1713 CHAIN OF CUSTODY RECORD AND ANAL YEIS REQUEST TRNP THO H Project Name: 14" Vac to Jal BILM ALL LIGHT C 0658 X 118 (2) Project 8: SRS# 2009-93 ADCa Free of Hoadage Project Loc: Lee County, NM X Standard PO 8: PAAJ, Honry WE REAL FOR THE PARTY 323/463/IM we lear anny EN THE TOP WERE Report Formet: Charley 1000 1001 111 SOOF AT HART 0480 154-51-90 Tend and a **81**9 444 1997 - 1999 1997 - 1995 clbrrant@basin-consulting com Soli No. 1 . March 1995-1 AN 9163Q \* N Disk. Olini (R Mine Mine Average of a contact 12800 West I-20 East Odessu, Tezas 79765 нонн Polefiel 104 (505) 396-1429 fami PR 34 Kane Tith points; ; pp Fax No: e-mailt 1500 belgmaß emiT Invest by EAD 06/18/09 Bestn Environmental Service Technologies, LLC S MIRC Di Linguit 0091 19610 J 0200 underg Burneu Environmental Lab of Texas unders the Lerington, Nil 62200 Cum001 Camille Bryant 335956 D 905-2210 Company Address: P. 0, Bax 381 Blended - 1 FIELD CODE DAMALIN Sampler Signeture. Project Manager Company Name City/Slale/Zip-Telephone No. Gunnelle. (Ano east day) ORDER II: (400 ann qu) a m

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

Plains / Basin
06-19-09 2 0840
335956
JMF

#### Sample Receipt Checklist

#1	Temperature of container/ cooler?	(es )	No	1.6 *0
#2	Shipping container in good condition?	(res 51	No	
#3	Custody Seals Intact on shipping container/ cooler?	Yes	No	Not Present
#4	Custody Sea's intact on sample bottles/ container? //ght-l	(Tes)	No	Not Present
#5	Chain of Custody present?	Yes	No	
#6	Sample instructions complete of Chain of Custody?	(TES)	No	WARD BUILD STREET
#7	Chain of Custody signed when relinguished/ received?	CTes 1	Na	and the second second probability
#8	Chain of Custody agrees with sample label(s)?	CH857	No	ID written en Cont./ Lid
#9	Container label(s) legible and intact?	(Jes)	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	(Ces)	No	and the second second second
#11	Containers supplied by ELOT?	(Tes)	No	
#12	Samples in proper container/ bottle?	(Tes)	No	See Below
#13	Samples properly preserved?	(163)	No	See Below
#14	Sample bottles intact?	Cles	No	
<b>#15</b>	Preservations documented on Chain of Custody?	100	No	Very and the sector support
#16	Containers documented on Chain of Custody?	100	No	
#17	Sufficient sample amount for indicated test(s)?	(Tes )	No	See Below
#18	All samples received within sufficient hold time?	Res	No	See Below
#19	Subcontract of sample(s)?	Yes	No	(Not Application)
#20	VOC samples have zero headspace?	(Tes)	No	Not Applicable

Variance Documentation

Contact:

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D 0

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Contacted by-

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

Date/ Time:

# **Analytical Report 336189**

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

14" Vac to Jal-BLM 2009-093

01-JUL-09



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12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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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

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## Sample Cross Reference 336189



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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



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

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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 Laboratories Xenco



Project Name: 14" Vac to Jal-BLM

Contact: Jason Henry Project Id: 2009-093

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Date Received in Lab: Tue Jun-23-09 09:25 am

				Project Manager: Brent Barron, 11
	Lab Id:	336189-001	336189-002	
A malineie Donnedad	Field Id:	Blended-2	Blended-3	
crumbus reducien	Depth:			
	Marrix:	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	
0-Xylcnc		3.300 0.0545	14.48 0.1053	
Total Xylencs		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 Maisture		8.76 1.00	5.42 1.00	
TPH By SW8015 Mod	Extracted:	Jun-24-09 14:06	Jun-24-09 14:06	
	Analyzed:	Jua-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	

This analytical report, and the entire data package it represents, has been mude for your exclusive and confidential use. The interpretations and readits represend throughout that analytical insport reports the base paignent to XEWCO Laboratories. XEWC Debromotions attemates to represent base how symmetry as the eval and of the data heritry presented. Our liability it limited to the arrount invoiced for this work order unlets otherwise agreed on in writing.

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Odessa Laboratory Director Brent Barron

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# **Flagging Criteria**



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

BRL Below Reporting Limit.

RL Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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



Project Name: 14" Vac to Jal-BLM

/ork Orders : 336189, Lab Batch #: 763727 Sample: 53	2647-1-BKS/BKS Ba		D: 2009-093		
Units: mg/kg Date Analyzed: 06.	j/26/09 09:16 SU	RROGATE R	ECOVERY	STUDY	-
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0294	0,0300	98	80-120	
4-Bromofluorobenzene	0.0322	0,0300	107	80-120	-
Lab Batch #: 763727 Sample: 53	2647-I-BSD / BSD Ba	tch: 1 Mati	ix: Solid		
Units: mg/kg Date Analyzed: 06	/26/09 09:37 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0,0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0332	0,0300	111	80-120	
Lab Batch #: 763727 Sample: 532	2647-1-BLK / BLK Ba	tch: 1 Matr	ix: Solid		
Units: mg/kg Date Analyzed: 06/	/26/09 10:20 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0.0255	0,0300	85	80-120	
4-Bromofiuorobenzene	0.0208	0.0300	69	80-120	•
Lab Batch #: 763727 Sample: 336	6189-002 / SMP Bat	tch: 1 Matr	ix: Soil		
Units: mg/kg Date Analyzed: 06/	/26/09 19:13 SU	RROGATE R	ECOVERY S	STUDY	-
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0563	0,0300	188	80-120	**
Lab Batch #: 763987 Sample: 532	2807-1-BKS / BKS Bat	ich: l Matr	ix: Solid		
Units: mg/kg Date Analyzed: 06/	/29/09 08:49 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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.

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Project Name: 14" Vac to Jal-BLM

Vork Orders : 336189, Lab Batch #: 763987	Sample: 532807-1-BSD / E	SD Ba	-	D: 2009-093		
Units: mg/kg	Date Analyzed: 06/29/09 09:10		RROGATE R		STUDY	
	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	-	0.0294	0.0300	98	80-120	-
4-Bromofluorobenzene		0.0312	0,0300	104	80-120	_
Lah Batch #: 763987	Sample: 532807-1-BLK / B			ix: Solid		
Units: mg/kg	Date Analyzed: 06/29/09 09:53		tch: 1 Mati		STUDY	
BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0262	0.0300	87	80-120	
4-Bromofluorobenzene		0.0182	0.0300	61	80-120	
Lab Batch #: 763987 Units: mg/kg	Sample: 336189-001 / SMF Date Analyzed: 06/29/09 11:19	SU	RROGATE R	ix: Soil ECOVERY S		
	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,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	S Ba	tch:   Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 06/29/09 18:52	SU	RROGATE R	ECOVERY S	STUDY	
	by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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 / N	ASD Bat	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 06/29/09 19:14	SU	RROGATE R	ECOVERY S	STUDY	
	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I.4-Difluorobenzene		0.0290	0.0300	97	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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Project Name: 14" Vac to Jal-BLM

ork Orders : 336189, Lab Batch #: 763477	Sample: 532498-1-BKS / BK	S Ba	-	D: 2009-093		
Units: mg/kg Dat	e Analyzed: 06/24/09 14:37		RROGATE R	ECOVERY	STUDY	DY
TPH By SW Analy		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 / BS	D Ba	tch: 1 Mati	ix: Solid		0
Units: mg/kg Dat	e Analyzed: 06/24/09 15:04	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW Analy		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		114	100	114	70-135	
o-Terphenyl		50.8	50.1	101	70-135	
Lab Batch #: 763477	Sample: 532498-1-BLK / BL	K Bat	tch: 1 Matr	ix: Solid		
Batch #: 763477         Sample: 532498-1-BLK /           Units: mg/kg         Date Analyzed: 06/24/09 15:30           TPH By SW8015 Mod		SU	RROGATE R	ECOVERY	STUDY	
TPH By SWA		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloreoctane		98.0	100	98	70-135	
o-Terphenyl		53.0	50,0	106	70-135	
Lab Batch #: 763477	Sample: 336189-001 / SMP	Bat	ich: 1 Matr	ix: Soil		
Units: mg/kg Date	e Analyzed: 06/24/09 23:41	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8 Analys		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		123	99.9	123	70-135	
o-Terphenyl		62.1	50,0	124	70-135	
Lab Batch #: 763477	Sample: 336189-002 / SMP	Bat	tch: 1 Matr	ix: Soil		
Units: mg/kg Date	e Analyzed: 06/25/09 00:07	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analyt	es	114	00.0		70.136	
1-Chlorooctane		114	99.9	114	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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

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# Project Name: 14" Vac to Jal-BLM

Vork Orders : 336189 Lab Batch #: 763477	Sample: 336111-001 S / MS		tch: 1 Mat	D: 2009-093 fix: Soil	CONTRACT	
Units: mg/kg	Date Analyzed: 06/25/09 00:58 By SW8015 Mod	Amount Found	RROGATE R	Recovery	Control Limits	Flags
	Analytes	[A]	[B]	%R [D]	%R	
I-Chiorooctane		118	99.6	118	70-135	
o-Tcrphcnyl		51.9	49.8	104	70-135	
Lab Batch #: 763477 Units: mg/kg	Sample: 336111-001 SD / M Date Analyzed: 06/25/09 01:23					
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
I-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** 



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Project Name: 14" Vac to Jal-BLM



	Spike Added	Blank Sample Result	BTEX by EPA 8021B
Ϋ́	BLANK /		Units: mg/kg
#	Batch #:	iks	Lab Batch ID: 763727 Sample: 532647-1-BKS
ed:	Date Prepared:	Da	Analyst: ASA
			Work Order #: 336189

06/26/2009

Date Analyzed: 06/26/2009 Matrix: Solid

Project ID: 2009-093

Units: mg/kg			BLANI	K/BLANK S	PIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplkate	Blk. Spk Dup. %R	RPD %	Control Limits	Control Limits ** RPD	Flag
Analytes			(B)	[c]	[q]	9	Result [F]	6				
Benzene		QN	0,1000	0.0916	92	0.1	0.0915	92	0	70-130	35	
Tolucne		QN	0,1000	0.0897	66	0.1	0.0894	68	0	70-130	35	
Ethylbenzene		QN	0.1000	0.0953	95	0.1	0.0954	95	0	71-129	35	
m,p-Xylenes		QN	0.2000	0.1918	96	0.2	0.1916	96	0	70-135	35	
o-Xylene		QN	0.1000	0.0915	92	0.1	0.0919	92	0	71-133	35	
Analyst: ASA		Da	te Prepare	Date Prepared: 06/27/2009	6			Date An	talyzed: 0	Date Analyzed: 06/29/2009		
Lab Batch ID: 763987	Sample: 532807-1-BKS	KS	Batch #: 1	#: 1					Matrix: Solid	iolid		
IIite. mo/ko			BLANE	<b>ZARIANKS</b>	PTKE / B	I ANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPT ICATE BECOVERV STUDV	ICATE I	RCOVE	RV STUD	^	

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Å	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup.	RPD *	Control Limits	Control Limits %RPD	Fjag
Analytes		[B]		ā	[3]	Result [F]	<u>נ</u>		ī,		
Benzene	DN -	0.1000	0.0927	93	0.1	0.0938	94	-	70-130	35	
Toluene	DN	0001'0	0.0892	89	0.1	0.0904	90	-	70-130	35	Ĩ
Ethylbenzene	DN	0.1000	0.0913	91	0.1	1660.0	93	2	71-129	35	
m,p-Xylenes	DN	0.2000	0,1837	92	0.2	0.1865	93	5	70-135	35	
o-Xylenc	DN	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

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**BS / BSD Recoveries** 



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Project Name: 14" Vac to Jal-BLM



Date Analyzed: 06/24/2009

Matrix: Solid

Project ID: 2009-093

Date Prepared: 06/24/2009 Batch #: Sample: 532498-1-BKS Work Order #: 336189 Lab Batch ID: 763477 Units: mg/kg Analyst: BHW

Flag Limits %RPD Control 33 35 **BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Control Limits %R 70-135 70-135 RPD % m m Blk. Spk Dup. %R 8 90 Spike Duplicate Result [F] Blank 844 898 Spike Added 1000 1000 Ξ Blank Spike %R [D] 82 87 Spike Result Blank 873 0 817 Spike Added 0001 0001 8 Sample Result [A] Blank g Ð TPH By SW8015 Mod C6-C12 Gasoline Range Hydrocarbons CI2-C28 Dicsel Range Hydrocarbons Analytes

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

Form 3 - MS / MSD Recoveries 0 00000 0

Project Name: 14" Vac to Jal-BLM



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Lab Batch ID: 763987 Date Analyzed: 06/29/2009 Reporting Units: mg/kg

QC-Sample ID: 336278-002 S Batch #: Date Prepared: 06/27/2009 Analyst:

Analyst: ASA

-

Project ID: 2009-093 Matrix: Soil

Reporting Units: mg/kg		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA'	TE RECO	<b>DVERY 5</b>	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]		Spike Spiked Sample Added Result [F] [E]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1190	0,0415	35	0611.0	0.0589	49	35	70-130	35	×
Tolucne	QN	0.1190	0.0422	35	0,1190	0.0580	49	32	70-130	35	×
Ethylbenzene	QN	0611.0	0.0458	38	0.1190	0.0594	50	26	71-129	35	×
m,p-Xylenes	QN	0.2379	0.0944	40	0.2379	0,1199	50	24	70-135	35	×
o-Xylcnc	DN	0611.0	0.0436	37	0,1190	0.0554	47	24	71-133	35	×
Lab Batch ID: 763477 Date Analyzed: 06/25/2009	QC-Sample ID: 336111-001 S Date Prepared: 06/24/2009	336111	-001 S 009	Ba	Batch #: Analyst:	l Matrix: Soil BHW	: Soil				]

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Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	CE DUPLICA	TE RECO	OVERY S	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked	Snike	Duplicate Solked Sample	Spiked	uda	Control Limite	Control Limite	
Analytes	Result [A]	Added [B]	<u>כ</u>	%R [D]	Added [E]	Result [F]	S.R.	*	%R	%RPD	0
C6-C12 Gasoline Range Hydrocarbons	QN	1240	1110	96	1240	1130	16	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	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, J = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



Received by OCD: 3/31/2023 2:34:37 PM

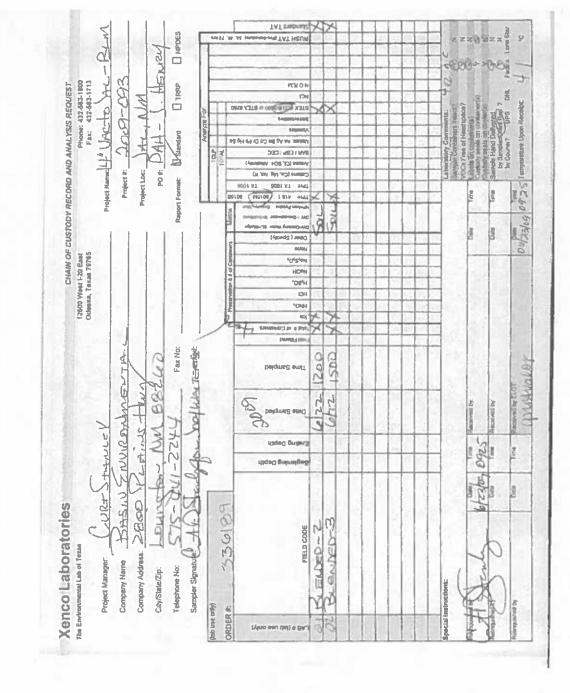
Project Name: 14" Vac to Jal-BLM

Work Order #: 336189

Lab Batch #: 763345		F	Project I	D: 2009-093	5
Date Analyzed: 06/24/2009	Date Prepared: 06/2	4/2009	Analy	st: BEV	
QC- Sample ID: 336189-001 D	Batch #:		Matr	ix: Soil	
Reporting Units: %	SAMPLE	SAMPLE D	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result	Duplicate	RPD	Control Limits	Flag
Analyte	[A]	Result [B]		%RPD	
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

-



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

lient	Basm /Pla	
ustel Time.	010/23/09	9.25
ab ID #	3361	89
nitials	aner	

#### Sample Receipt Checklist

12	Temperature of container/ cooler?	Yes !	No	- 4.1	* C
12	Shipping container in good condition?	Yes	No	1. C	
13	Custody Seals Intact on shipping container/ cooler?	Yes	No	Not F	resent
7.5	Custody Seals intact on sample bottles/ container?	Yes	No	Not	Tesant
*5	Chain of Custody present?	CY8	No	-	
48	Sample instructions complete of Chain of Custody?	Yes	No	10	
#7	Chain of Custody signed when relinquished/ received?	Yes	No	10000	
#8	Chain of Custody agrees with sample label(s ?	(Yes	No	ID written	on Cont/Lid
<b>#9</b>	Container label(s) legible and intact?	Tes	No	Not A	plicable
#10	Sample matnot properties agree with Chain of Custody?	Yes	No	1.	
#11	Containers supplied by ELOT?	Yes	Na		and the second sec
#12	Samples in proper container/ bottle?	Yes	No	See	Below
#13	Samples properly preserved?	Cas	No	See	Below
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		S. 1 2.3
#16	Containers documented on Chain of Custody?	Yes	No	1.	and the state of the state
#17	Sufficient sample amount for indicated test(s)?	Yes	No	Sec	Below
#18	All samples received within sufficient hold time?	(Yes)	No	See	Below
#19	Subcontract of sample(s)?	Yes	No	Not A	oplicable >
#20	VOC samples have zero headspace?	Yes.	No	Not A	ppicable

#### Variance Documentation

Contact: Regarding:

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Corrective Action Taken.

Check all that Apply

#### See attached e-mail/ fax

Contacted by:

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event Received by OCD: 3/31/2023 2:34:37 PM

Date/ Time.

**Client** Initialia

# Received by OCD: 3/31/2023 2:34:37 PM

# **Analytical Report 336449**

for

# PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

14" Vac to Jal -BLM 2009-093

07-JUL-09



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#### 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

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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

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## Sample Cross Reference 336449



Received by OCD: 3/31/2023 2:34:37 PM

## 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



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

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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. Certificate of Analysis Summary 336449 PLAINS ALL AMERICAN EH&S, Midland, TX



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

Laberatories XENCO

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Date Received in Lab: Thu Jun-25-09 09:05 am Report Date: 07-JUL-09

					Project Manager: Brent Barron, II	
	Lab Id:	336449-001	336449-002	336449-003		
A sector Damandad	Field Id:	Blended-4	Blended-5	Blended-6		
naisaihay eiclinit	Depth:					
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Jun-24-09 10:10	Jun-24-09 15:30	Jun-24-09 15:50		ľ
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-Xylcnc	-	16.31 0.1068	13.77 0,1070	47.79 0.5342		
Total Xylcnes	-	55.3 0.1068	46.11 0,1070	174.89 0.5342		
Tolal BTEX		97.47 0.1068	78.9 0.1070	362.507 0.5342		
Percent Moisture	Extracted:					
	Analyzed:	Jun-25-09 [6:00	Jun-25-09 16:00	Jun-25-09 16:00		1
	Units/RL:	% RL	% RL	% BL		Ī
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 [1]: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		Ì
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 Hydrocarhons		418 80.0	390 80.3	1060 80.0		
Total TPH		7088 80.0	6260 80.3	20570 80.0		
						]

This analytical report, and the extire data package it represents, has been made for your creduive and confidential tue. The interpretations and realist expressed through the analytical report research the best packerner of XENCO Laboratories. XENCO absormed is assumes to requessibility and marks no warmany to the real tare of the data harby presentad. Our liability it limited to the annual invoiced for this work order turken otherwise agreed in in writing.

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**Odessa Laboratory Director** Brent Barron

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# **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.

- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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

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Laboratories

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## Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal -BLM

Pork Orders:         336449,           Lab Batch #:         764617         Sample:         53.	3185-1-BKS / BKS Ba		D: 2009-093 ix: Solid		
Units: mg/kg Date Analyzed: 07.		RROGATE R	_	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0357	0.0300	119	80-120	
Lab Batch #: 764617 Sample: 53	3185-1-BSD / BSD Ba	tch: 1 Mati	ix: Solid		
Units: mg/kg Date Analyzed: 07.	/06/09 11:02 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	•
Units: mg/kg Date Analyzed: 07/ BTEX by EPA 8021B Analytes	/06/09 t1:45 SU Amount Found [A]	RROGATE R True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0163	0.0300	54	80-120	•
Lab Batch #: 764617 Sample: 33			rix: Soil		
Units: mg/kg Date Analyzed: 07/	/06/09 17:58 SU	RROGATE R	ECOVERY 8	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0596	0.0300	199	80-120	**
Lab Batch #: 764617 Sample: 33	6449-002 / SMP Ba	tch: 1 Mati	rix: Soil		1
Units: mg/kg Date Analyzed: 07/	/06/09 18:20 SU	RROGATE R	ECOVERY S	STUDY	_
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,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.

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## Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal -BLM

Vork Orders : 336449 Lab Batch #: 764617	, Sample: 336449-003 / SMP								
Units: mg/kg	Date Analyzed: 07/06/09 18:41	SU	RROGATE R	ECOVERY	STUDY				
	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag			
I.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	S Ba	tch: 1 Matr	ix: Solid					
Units: mg/kg	Date Analyzed: 06/27/09 12:58	SU	RROGATE R	ECOVERY	STUDY				
трн і	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctane		108	100	801	70-135	_			
o-Terphenyl		47.4	50.0	95	70-135				
Lab Batch #: 763866	Sample: 532726-1-BSD / BSI	) Ba	tch: 1 Matr	ix: Solid					
Units: mg/kg	Date Analyzed: 06/27/09 13:24	SU	RROGATE R	ECOVERY	STUDY				
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctane		106	100	106	70-135				
o-Terphenyl		46.6	50.0	93	70-135				
Lab Batch #: 763866	Sample: 532726-1-BLK / BLK	C Ba	tch: 1 Matr	ix: Solid					
Units: mg/kg	Date Analyzed: 06/27/09 13:51	SU	RROGATE R	ECOVERY S	STUDY				
	By SW8015 Mod Analytes	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	Ba	tch:   Matr	ix: Soil					
Units: mg/kg	Date Analyzed: 06/27/09 19:57	SU	RROGATE R	ECOVERY S	STUDY				
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctane		116	99,8	[16	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.



# Project Name: 14" Vac to Jal -BLM

Vork Orders : 336449 Lab Batch #: 763866	, Sample: 336449-002 / SMP	Ba	-	D: 2009-093		
Units: mg/kg	Date Analyzed: 06/27/09 20:23	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		132	100	132	70-135	11
o-Terphenyl		57.2	50.0	114	70-135	
Lab Batch #: 763866	Sample: 336449-003 / SMP	Ba	tch: 1 Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 06/27/09 20:49	SU	RROGATE R	ECOVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		129	99.8	129	70-135	
o-Terphenyl		57.0	49.9	114	70-135	
Lab Batch #: 763866	Sample: 336334-001 S / MS	Ba	tch: ] Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 06/27/09 23:48	SU	RROGATE R	ECOVERY	STUDY	
ТРН І	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		194	200	97	70-135	
o-Terphenyl		89,6	001	90	70-135	
Lab Batch #: 763866	Sample: 336334-001 SD / MS	D Ba	tch: 1 Mati	ix: Soil	100	
Units: mg/kg	Date Analyzed: 06/28/09 00:13	SU	RROGATE R	ECOVERY S	STUDY	
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I-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

Flag Control Limits %RPD Control 35 5 35 33 35 **BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY** Date Analyzed: 07/06/2009 Control Limits %R 70-130 71-129 Date Analyzed: 06/27/2009 70-130 70-135 71-133 Project ID: 2009-093 Control Matrix: Solid Matrix: Solid RPD % 4 4 4 4 Blk. Spk Blk. Spk CG CI <u>10</u> 5 94 66 6 Spike Duplicate Result [F] 0160.0 0.1017 Blank 0.0940 0.2085 0.0987 Blank Spike Added 0,1 -0.1 5 2 0'1 Blank Spike %R 80 87 95 16 98 Date Prepared: 07/06/2009 Date Prepared: 06/27/2009 0.0905 0.0872 0.0978 0.2006 0.0949 Blank Spike Result <u>0</u> Batch #: ] Batch #: 1 0.1000 0.2000 0.1000 0.1000 0.1000 Spike Added Spike Added 8 Blank Sample Result Blank [V] QN Ð Q QZ Q Sample: 533185-1-BKS Sample: 532726-1-BKS TPH By SW8015 Mod **BTEX by EPA 8021B** Work Order #: 336449 Lab Batch ID: 764617 Lab Batch ID: 763866 Units: mg/kg Units: mg/kg Analyst: BHW Analyst: ASA Analytes Ethylbenzene m,p-Xylenes o-Xylcnc Tolucne Benzene

Flag Limits %RPD 35 35 Limits %R 70-135 70-135 RPD % Dup. 1G 8 85 Duplicate Result [F] Splike 899 843 Spike Added 1000 1000 Ξ Blank Spike %R [D] 85 6 Blank Spike Result [C] 849 912 1000 0001 8 Sample Result Q [V] R C6-C12 Gasoline Range Hydrocarbons C12-C28 Dicsel Range Hydrocarbons Analytes

Relative Percent Difference RPD = 200•[(C-F)/(C+F)] Blank Spike Recovery [D] = 100•(C)/[B] Blank Spike Duplicate Recovery [G] = 100•(F)/[E] All results are based on MDL and Validated for QC Purposes Received by OCD: 3/31/2023 2:34:37 PM

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Form 3 - MS / MSD Recoveries 



Project Name: 14" Vac to Jal -BLM



Released to Imaging: 3/31/2023 2:43:07 PM C=----

336449	763866
Work Order # :	Lab Batch ID:

Date Analyzed: 06/27/2009

Batch #: QC- Sample ID: 336334-001 S Date Prepared: 06/27/2009

Matrix: Soil BHW Analyst:

-

Project ID: 2009-093

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TAM / 3	<b>SPII</b>	KE DUPLICA	TE RECO	OVERY!	STUDY	1	
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Spiked Spiked Sample Spiked (Spiked Sample Spiked (Spiked Spiked (Spiked Spiked Spiked (Spiked Spiked Spike	Spiked Sample %R [D]	ded E]	Duplicate Splked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	20 20 20
C6-C12 Gasoline Range Hydrocarbons	QN	1010	869	86	1010	878	87	-	70-135	35	
CI2-C28 Dicscl Range Hydrocarbons	QN	1010	970	96	1010	686	86	2	70-135	35	

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

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

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



# Sample Duplicate Recovery



Received by OCD: 3/31/2023 2:34:37 PM

Project Name: 14" Vac to Jal -BLM

Work Order #: 336449

Lab Batch #: 763629 Date Analyzed: 06/25/2009 OC- Sample ID: 336424-001 D	Date Prepared: 06/2. Batch #: 1	5/2009	Analy	D: 2009-093 st: WRU ix: Soil	3
Reporting Units: %	SAMPLE /	SAMPLE			OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	1.41	[B]		74	
ercent 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

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

Client	Basin / Plains
Date/ Time	6 25 09 7:05
Lab ID #	336449
Initials	aL

#### Sample Receipt Checklist

**Client Initials** Yas 40 No ° C #1 Temperature of container/ cooler? #2 Shipping container in good condition? (Yes) No #3 Custody Seals intact on shipping container/ cooler? Yes No Not Present No Not Present des #4 Custody Seels intact on sample bottles/ container? (Yes) (Yes) No #5 Chain of Custody present? #6 Sample instructions complete of Chain of Custody? No #7 Chain of Custody signed when relinquished/ received? Yar No (Yes) No #8 Chain of Custody agrees with sample label(s)? ID written on Cont./ Lid No Not Applicable #9 Container label(s) legible and intact? No #10 Sample matrix/ properties agree with Chain of Custody' Yes #11 Containers supplied by ELOT? No Yes #12 Semples in proper container/ bottle? No See Below #13 Samples properly preserved? No See Balow (Yas #14 Sample bottles intact? No #15 Preservations documented on Chain of Custody? 1.Yes No Yes/ #16 Containers documented on Chain of Custody? No Yes #17 Sufficient sample amount for indicated test(s)? See Below No #18 All samples raceived within sufficient hold time? No See Below #19 Subcontract of sample(s)? Yes No Not Applicable #20 VOC samples have zero headspace? (Yes) No Not Applicable

#### Variance Documentation

Date! Time

Contact Regarding

•

Corrective Action Taken:

Check all that Apply.

#### See attached e-mail/ fax

Contacted by

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





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#### 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

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10-JUL-09

XENCO Laboratories

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,

TI

Brent Barron, II Odessa Laboratory Manager

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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	

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## CASE NARRATIVE



9

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 Laboratories XENCO 1 D



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

Date Received in Lab: Thu Jul-02-09 11:52 am Report Date: 10-JUL-09

					Project Manager: Brent Barron, II	Brent Barron, II	
	Lab Id:	337027-001	_	 			
Amfucic Ronusciad	Field Id:	Blended 1 A	<	 			
nswathan weights	Depth:						
	Matrix:	SOIL.		 			
	Sampled:	Jul-01-09 16:10	010				
BTEX hv EPA 8021B	Extracted:	Jul-06-09 18:00	00:				
	Analyzed:	Jul-08-09 16:46	5:46				
	Units/RL:	mg/kg	RL	 _			
Benzene		0.1041 0.0010	0100				
Toluene		3.988 D 0.2060	0.2060				
Ethylbenzene		8.832 D 0.1030	0.1030				
m.p-Xylenes	-	17.09 D 0.2060	1.2060				
o-Xylcnc		7.335 D 0.1030	0:1030				
Total Xylcnes		24.4300 0.1030	0:1030				5
Total BTEX		37.3500 0.0010	0100'1				
Percent Moisture	Extracted:						
	Analyzed:	Jul-06-09 08:41	3:41				
	Units/RL:	%	RL				
Percent Moisture		2.90	1.00				
TPH Bv SW8015 Mod	Extracted:	Jul-06-09 09:31	ΠΩ				
	Analyzed.	Jul-06-09 13:37	137				
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		814	77.2				
C12-C28 Dicsel Range Hydrocarbons		2540	77.2				
C28-C35 Oil Range Hydrocarbons	-	195	77.2				
Total TPH	-	3549	77.2				

This analyzical report, and the extire data package it represents, has been trade for your retriative and confidential use. The interpretational and realist expressed throught this analytical insport trades and adgreem of XEOVC Laboratories. XEOVC Indocursoine attements to requessibility and marker no warrangy to the text late of the data herdry presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to its writerly.

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Odessa Laboratory Director Вгепt Ваrron

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# **Flagging Criteria**



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

BRL Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

/ork Orders : 337027, Lab Batch #: 764887 Sample: 533	3308-1-BKS / BKS Bat		D: 2009-093 rix: Solid		
Units: mg/kg Date Analyzed: 07/	08/09 08:37 SU	RROGATE R		STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0308	0,0300	103	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	
Lab Batch #: 764887 Sample: 533	308-1-BSD / BSD Bat	ch: 1 Mati	ix: Solid		
Units: mg/kg Date Analyzed: 07/	08/09 08:59 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0,0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0380	0.0300	127	80-120	+
Lab Batch #: 764887 Sample: 533	308-1-BLK / BLK Bat	ch: 1 Matr	ix: Solid		
Units: mg/kg Date Analyzed: 07/		RROGATE R		STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0.0271	0,0300	90	80-120	
4-Bromofluorobenzene	0.0166	0.0300	55	80-120	٠
Lab Batch #: 764887 Sample: 337	027-001 / SMP Bat	ch: 1 Matr	ix: Soil		
Units: mg/kg Date Analyzed: 07/0	08/09 16:46 SUI	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	_
4-Bromofluorobenzene	0,0803	0,0300	268	80-120	**
Lab Batch #: 764887 Sample: 337	016-001 S / MS Bat	ch:   Matr	ix: Soil		
Units: mg/kg Date Analyzed: 07/0	08/09 20:21 SUI	RROGATE R	ECOVERY S	TUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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.



# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

ork Orders : 337027. Lab Batch #: 764887	, Sample: 337016-001 SD / i	MSD Ba	-	D: 2009-093		
Units: mg/kg	Date Analyzed: 07/08/09 20:43	SL	RROGATE R	ECOVERY	STUDY	
BTEX	K by EPA 8021B 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-Bromofluorobcnzene		0.0378	0.0300	126	80-120	•
Lab Batch #: 765019	Sample: 533394-1-BKS / E	KS Ba	tch: 1 Mati	rix: Solid		1
Units: mg/kg	Date Analyzed: 07/09/09 22:13	SU	RROGATE R	ECOVERY	STUDY	
	K by EPA 8021B 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 Units: mg/kg	Sample: 533394-1-BSD / E Date Analyzed: 07/09/09 22:34	SU	RROGATE R	ix: Solid		
	K by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
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 / B	LK Ba	tch: I Mate	ix: Solid		
Units: mg/kg	Date Analyzed: 07/09/09 23:17	SU	RROGATE R	ECOVERY S	STUDY	
	L by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0265	0.0300	88	80-120	
4-Bromofluorobenzene		0.0127	0.0300	42	80-120	*
ab Batch #: 765019	Sample: 337027-001 / DL	Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 07/10/09 02:30	SU	RROGATE R	ECOVERY S	STUDY	
	by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0243	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

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

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# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Vork Orders: 337027 Lab Batch #: 765019	7, Sample: 337025-001 S / MS	Bi	-	D: 2009-093 ix: Soil		
Units: mg/kg	Date Analyzed: 07/10/09 08:17		JRROGATE R		STUDY	-
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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 / MS	SD Ba	atch: 1 Matr	ix: Soil		
Units: mg/kg	Date Analyzed: 07/10/09 08:39	St	JRROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,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 / BK	S Ba	itch: I Matr	ix: Solid		
Units: mg/kg	Date Analyzed: 07/06/09 10:44		JRROGATE R		STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	Analytes	106	100	106	70-135	
o-Terphenyl		42.0	50.0	84	70-135	
Lab Batch #: 764581	Sample: 533163-1-BSD / BSI			ix: Solid		-
Units: mg/kg	Date Analyzed: 07/06/09 11:08		JRROGATE R		STUDY	_
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		107	100	107	70-135	
p-Terphenyl		42.9	50.0	86	70-135	
ab Batch #: 764581	Sample: 533163-1-BLK / BLI	K Ba	tch:   Matr	ix: Solid	I	
Units: mg/kg	Date Analyzed: 07/06/09 11:33	SU	RROGATE R	ECOVERY S	STUDY	
ТРН Н	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	Analytes	06.6	100		70.125	
		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.



# Form 2 - Surrogate Recoveries

Project Name: 14" Vac to Jal - BLM

Vork Orders : 337027 Lab Batch #: 764581	, Sample: 337027-001 / SMP	Bs		I <b>D:</b> 2009-093 rix: Soil		
Units: mg/kg	Date Analyzed: 07/06/09 13:37	SL	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		109	100	109	70-135	
o-Terphenyl		49.2	50.0	98	70-135	
Lab Batch #: 764581	Sample: 337025-001 S / MS	Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg	Date Analyzed: 07/06/09 16:05	SL	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		110	100	110	70-135	
o-Terphenyl		42,2	50.0	84	70-135	-
Lab Batch #: 764581	Sample: 337025-001 SD / M	SD Ba	tch:   Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 07/06/09 16:30	SU	RROGATE R	ECOVERY	STUDY	
трн і	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		111	100	111	70-135	
o-Terphenyl		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.

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**BS / BSD Recoveries** ñ



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Project Name: 14" Vac to Jal - BLM



: 337027	BRB	78827
Work Order #:	Analyst: I	I.ah Batch ID: 764887

Date Prepared: 07/06/2009

Batch #: 1

Sample: 533308-1-BKS

Project ID: 2009-093 Date Analyzed: 07/08/2009 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result IAI	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlfate	Blk. Spk Dup. %R	RPD	Control Limits *AR	Control Limits	Flag
Analytes		[8]	[ <u>c</u> ]		E	Result [F]	5	2			
Benzenc	Q	0,1000	0.0885	89	0.5	0.4494	66	134	70-130	35	
Tolucne	Q	0.1000	0.0836	84	0.5	0.4291	86	135	70-130	35	Γ
Ethylbenzene	QN	0.1000	0.0935	94	0.5	0.4909	98	136	71-129	35	
m.p-Xylencs	QN	0.2000	0,1901	95	-	1.002	100	136	70-135	35	
o-Xylcnc	QN	0.1000	0.0904	96	0.5	0.4748	95	136	71-133	35	
Analyst: BRB	D	ate Prepar	Date Prepared: 07/09/2009	6(			Date AI	nalyzed: 0	Date Analyzed: 07/09/2009		
Lab Batch ID: 765019 Sample: 533394-1-BKS	-BKS	Batcl	Batch #: 1					Matrix: Solid	iolid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	ILANK S	<b>BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY</b>	ICATE 1	RECOVE	<b>CRY STUD</b>	Y	

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<b>V</b>	[B]	Result [C]	8% [0]	<b>(</b> <u></u> <u></u> <u></u> <u></u> <u></u>	Duplicate Result [F]	6 G	*	%R	%RPD	
Benzenc	DN	0.1000	0.0776	78	0.1	0.0799	80	~	70-130	35	
Tolucne	DN	0.1000	0.0738	74	0.1	0.0759	76	3	70-130	35	
Ethylbenzene	DN	0.1000	0.0813	-18	1.0	0.0840	84	3	71-129	35	
m,p-Xylencs	QN	0.2000	0,1665	83	0.2	0.1716	86	m	70-135	35	
o-Xylene	QN	0.1000	0.0793	61	0.1	0.0809	81	2	71-133	35	

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

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**BS / BSD Recoveries** 



Project Name: 14" Vac to Jal - BLM

Date Prepared: 07/06/2009 Batch #: 1 Sample: 533163-1-BKS Work Order #: 337027 Lab Batch ID: 764581 Analyst: BHW

Project ID: 2009-093 Date Analyzed: 07/06/2009 Matrix: Solid Γ

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	[8]			[3]	Duplicate Result [F]	0		7•K	7aKFU	
C6-C12 Gasoline Range Hydrocarbons	QN	1000	847	85	1000	854	85	-	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	DN	1000	066	66	0001	1000	001	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 0 ŏ 0000 **XENCO** 000

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Project Name: 14" Vac to Jal - BLM



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Date Analyzed: 07/08/2009 Lab Batch ID: 764887

Reporting Units: mg/kg

Batch #: QC- Sample ID: 337016-001 S Date Prepared: 07/06/2009

Analyst: BRB

-

Project ID: 2009-093 Matrix: Soil

Reporting Units: mg/kg		X	ATRIX SPIK	E/MAT	RLX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	TUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	e Spiked Sample %R [D]		Spike Duplicate Spike Spiked Sample Added Result [F] [E]	Spiked Dup. %R [G]	RPD **	Control Limits %R	Control Limits %RPD	
Benzene	QN	0.1015	0.0824	8	0.1015	0.0767	76	7	70-130	35	
Tolucne	QN	0.1015	0.0884	87	0.1015	0.0787	78	12	70-130	35	
Ethylbenzene	QN	0.1015	0.0922	16	0.1015	0.0846	83	6	71-129	35	
m,p-Xykenes	QN	0.2029	0,1928	95	0.2029	0.1733	85	=	70-135	35	
o-Xylene	QN	0.1015	0.0914	96	0,1015	0.0819	81	=	71-133	35	
Lab Batch ID: 765019 Date Analyzed: 07/10/2009	QC-Sample ID: 337025-001 S Date Prepared: 07/09/2009	337025 07/09/2	-001 S	Ani	Batch #: Analyst: ]	l Matrix: Soil BRB	: Soil				

Reporting Units: mg/kg		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA	re reco	<b>VERY S</b>	TUDY		Γ
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spliked Sample %R [D]	Spike Added [E]	Duplicate Splked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	QN	0.1006	0.0715	71	0.1006	0.0767	76	7	70-130	35 -	
Tolucne	DN	0.1006	0.0692	69	0.1006	0.0731	73	2	70-130	35	×
Ethylbenzene	DN	0.1006	0.0781	78	0.1006	0.0807	80		71-129	35	
m,p-Xylencs	ND	0.2012	0,1601	80	0.2012	0.1638	18	2	70-135	35	
o-Xylene	QN	0.1006	0.0751	75	0.1006	0.0770	17	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

Form 3 - MS / MSD Recoveries 00000000 



Project Name: 14" Vac to Jal - BLM



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Date Analyzed: 07/06/2009 Lab Batch ID: 764581

Batch #: Analyst: QC- Sample ID: 337025-001 S Date Prepared: 07/06/2009

Matrix: Soil BHW -

Project ID: 2009-093

Keporting Units: mg/kg		M	ATRIX SPIKI	S/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	<b>FE RECO</b>	<b>DVERY S</b>	TUDY		Γ
TPH By SW8015 Mod	Parent Sample	1	i i	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	R% [D]		Added Result [F]	%R [G]	%	%R	%RPD	0
C6-C12 Gasoline Range Hydrocarbons	QN	1010	869	86	1010	877	87	-	70-135	35	Γ
C12-C28 Dicsel Range Hydrocarbons	QN	1010	1030	102	1010	1050	104	6	70-135	35	Γ
											1

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

Malrix Spile: Duplicate Percent Recovery [G] = 100\*(F-A)/E

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

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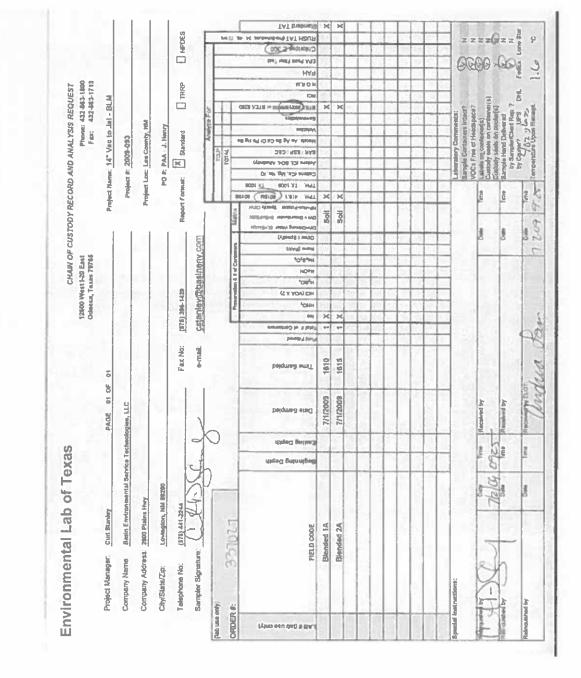


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Project Name: 14" Vac to Jal - BLM

Work Order #: 337027

Lab Batch #: 764500 Date Analyzed: 07/06/2009 QC- Sample ID: 337016-001 D	Date Prepared: 07/ Batch #:	/06/2009 1	Analy	D: 2009-093 st: BEV ix: Soil	3
Reporting Units: %	SAMPLE	/SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sampl Result [A]	e Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		(B)			
Percent Moisture	1.43	1.44	1	20	



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

Client.
Date/Time
Lab ID #

Indials

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Pinna FW Bur 7.2.09 9:25 337027 a

Sample Receipt Checklist

£1	Temperature of container/ cooler?	(des)	No	1 / 6 * 0
#2	Shipping container in good condition?	Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present>
#4	Custody Seals intact on sample bottles/ container?	Nes	No	Not Present
<b>#</b> 5	Chain of Custody present?	365	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./ Ltd
#9	Container label(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrbul properties agree with Chain of Custody?	Yes	No	The second se
#11	Containers supplied by ELOT?	Yes	No	
#12	Samples in proper container/ bottle?	(Yes	No	See Below
#13	Samples property 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	Sec Below
#1B	All samples received within sufficient hold time?	Yes	No	See Below
#10	Subcontract of sample(s)?	Yes	No	Not Applicable
#20	VOC samples have zero headspace?	Yes	No	Not Applicable
		Yes	And in case of the local division of the loc	and the second s
Con	tact: Contacted by:			Date/ Time

Corrective Action Taken.

Regarding:

Check all that Apply:

See ottached 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





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#### 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

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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

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# Sample Cross Reference 337281



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# 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

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

Project ID: 2009-93 Work Order Number: 337281 Report Date: 10-JUL-09 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

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Certificate of Analysis Summary 337281 PLAINS ALL AMERICAN EH&S, Midland, TX Project Name: 14-Inch Vac to Jal - BLM



Date Received in Lah: Tue Jul-07-09 10:15 am

Report Date: 10-JUL-09

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

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ALC: CONTRACT OF				Project Manager: Brent Barron, Il	rent Barron, 11	
	Lab Id:	337281-001	337281-002			
Amelineie Romocioel	Field Id:	Blended-3 A	Blended-4 A			
nascanhast octimut	Depth:					
	Matrix:	SOIL	SOIL			
	Sampled:	Jul-02-09 11:15	Jul-02-09 15:12			Ì
BTEX hv 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			
Tolucne		ND 0.5270	ND 0.2170			
Ethytbenzene		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	% BL			
Percent Moisture		5,12 1.00	7.84 1.00			
TPH Bv 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 Runge 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			ł
Total TPH		4096 78.7	4320 81.4			

This analytical report, and the carite data package it represents, has been made for your cuckuaire and confidential tue. The interpretations and realist expressed droughen that analytical report traceaution the high present of XENCO Laboratories. XENC Obsermations and measures to responsibility and makes no warmenty to the end use of the data herity presentad. Our (tability is limited to the amount invoiced for this work order unless otherwise agreed to in a wining.

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Odessa Laboratory Director Brent Barron



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.

**Flagging Criteria** 

- **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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# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

<b>/ork Orders :</b> 337281, Lab Batch #: 765019 Sample:	533394-1-BKS / BKS Ba	-	D: 2009-93 ix: Solid		
Units: mg/kg Date Analyzed:		RROGATE R		STUDY	-
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,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 Ba	tch: 1 Mate	ix: Solid	_	
Units: mg/kg Date Analyzed:	07/09/09 22:34 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	
Units: mg/kg Date Analyzed: BTEX by EPA 8021B Analytes	07/09/09 23:17 SU Amount Found [A]	RROGATE R True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
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 Ba	tch: 1 Matr	ix: Soil		1.1
Units: mg/kg Date Analyzed:	07/09/09 23:38 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
I,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0356	0.0300	119	80-120	
Lab Batch #: 765019 Sample:			ix: Soil		
Units: mg/kg Date Analyzed:	07/10/09 00:00 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	0.0236	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0436	0.0300	145	80-120	*

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\* Surrogate outside of Laboratory QC limits

\*\*\* Poor recoveries due to dilution

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

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

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# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

York Orders : 337281, Lab Batch #: 765019 Sample: 3.	37025-001 S / MS Ba	-	D: 2009-93 rix: Soil		
Units: mg/kg Date Analyzed: 0		RROGATE R		TUDY	
BTEX by EPA 8021B 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: 3.	37025-001 SD / MSD Ba	tch: I Mati	rix: Soil		
Units: mg/kg Date Analyzed: 0	7/10/09 08:39 SU	RROGATE R	ÉCOVERY S	TUDY	
BTEX by EPA 8021B 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: 5	33304-1-BKS / BKS Ba	tch: 1 Mati	rix: Solid		
Units: mg/kg Date Analyzed: 0'		RROGATE R		TUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Fiage
I-Chlorooctanc	121	100	121	70-135	
o-Terphenyl	53.0	50.0	106	70-135	
Lab Batch #: 764867 Sample: 53	33304-1-BSD / BSD Ba	tch: 1 Mati	ix: Solid		
Units: mg/kg Date Analyzed: 0	7/08/09 15:30 SU	RROGATE R	ECOVERY S	TUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc	120	100	120	70-135	
o-Terphenyl	51,6	50.0	103	70-135	
ab Batch #: 764867 Sample: 53	33304-1-BLK / BLK Ba	tch: 1 Mate	ix: Solid		
Units: mg/kg Date Analyzed: 07	7/08/09 15:56 SU	RROGATE R	ECOVERY S	TUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	112	100	112	70-135	
				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.

Received by OCD: 3/31/2023 2:34:37 PM

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Laboratories	}

# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

ork Orders : 337281, Lab Batch #: 764867	Sample: 337281-001 / SMP	Ba		D: 2009-93 ix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 16:48	SU	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Centrol Limits %R	Flags
I-Chlorooctane	•	124	99.6	124	70-135	
o-Terphenyl		63.4	49.8	127	70-135	
Lab Batch #: 764867	Sample: 337281-002 / SMP	Ba	tch: 1 Mate	ix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 17:15	SU	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount jBj	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		125	100	125	70-135	
o-Terphenyl		63.0	50.0	126	70-135	
Lab Batch #: 764867	Sample: 337279-001 S / MS	Ba	tch:   Mati	ix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 19:25	SU	RROGATE R	<b>ECOVERY</b>	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		126	100	126	70-135	
o-Terphenyl		54.7	50.0	109	70-135	
Lab Batch #: 764867	Sample: 337279-001 SD / MS	D Ba	tch:   Mati	ix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 19:51	SU	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod 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.



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**BS / BSD Recoveries** 



Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337281 Analyst: BRB Lab Batch ID: 765019 Sample: 533394-1-BKS Units: mg/kg

Date Prepared: 07/09/2009

Batch #: 1

Project ID: 2009-93 Date Analyzed: 07/09/2009 Matrix: Solid

Units: mg/kg			BLAN	K /BLANK S	SPIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Biank Spike Dunlicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[8]	<u>C</u>	(a)	[E]	Result [F]	0	:			1
Benzene		ND	0.1000	0.0776	78	0.1	0.0799	80	m	70-130	35	
Toluene		QN	0,1000	0.0738	74	0.1	0.0759	76	2	70-130	35	
Ethylbenzene		QN	0,1000	0.0813	81	0.1	0.0840	84	£	71-129	35	
m,p-Xylenes		ND	0.2000	0.1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene		QN	0.1000	0.0793	<u>-79</u>	0.1	0.0809	81	2	71-133	35	
Analyst: BHW		Di	ate Preparo	Date Prepared: 07/08/2009	6(			Date AI	Date Analyzed: 07/08/2009	7/08/2009	-	
Lab Batch ID: 764867	Sample: 533304-1-BKS	KS	Batch #:	1 #: 1					Matrix: Solid	olid		
Units: mg/kg			BLAN	K /BLANK S	SPIKE / B	<b>LANKS</b>	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	Γ

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Splke Result	Blank Spike %R	Spike Added	Blank Spike Dunlfcate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	
Analytes	•	[ <b>B</b> ]		ē	E	Result [F]	<u>5</u>				
C6-C12 Gasoline Range Hydrocarbons	QN	1000	816	82	1000	818	82	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	QN	1000	848	85	1000	843	84	1	70-135	35	
				ľ							

Flag

Relative Percent Difference RPD = 200\*((C-F)/(C+F)) Blank Spike Recovery [D] = 100\*(C)/[B] Blank Spike Duplicate Recovery [G] = 100\*(F)/[E] All results are based on MDL and Validated for QC Purposes Form 3 - MS / MSD Recoveries õ 00000 O SNA S Ď Õ



Project Name: 14-Inch Vac to Jal - BLM



337281
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Order
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Wor

Date Analyzed: 07/10/2009 Lab Batch ID: 765019 Reporting Units: mg/kg

Batch #:

Matrix: Soil -

Project ID: 2009-93

QC-Sample ID: 337025-001 S Date Prepared: 07/09/2009

MATRIX SPIKE / MATRIX SPIKE DUPLICATE BECOVERV STUDY Analyst: BRB

					II I O IV	MAINIASSINE/ MAINIASSINE DUFLICATE RECUVERT STUDI	IE NEC	VENTS	10010		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]		SpikeDupikateSpikeSpiked SampleAddedResult [F][E]	Spitked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	a a L
Benzene	QN	0.1006	0.0715	12	0.1006	0.0767	92	7	70-130	35	
Toluche	QN	0,1006	0.0692	69	0.1006	1670.0	73	S	061-07	35	×
Ethylbenzene	DN	0.1006	0.0781	78	0.1006	0.0807	80	5	71-129	35	
m,p-Xylencs	DN	0.2012	0,1601	80	0.2012	0.1638	50	11	70-135	35	
o-Xylene	DN -	0.1006	0.0751	75	0.1006	0.0770	77	2	71-133	35	
Lab Batch ID: 764867 Date Analyzed: 07/08/2009	<b>CC- Sample ID: 337279-001 S</b> <b>Date Prepared: 07/08/2009</b>	337279. 07/08/2	-001 S 009	Ba	Batch #: Analyst:	1 Matrix: Soil BHW	:: Soil				

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/ MAT	AIX SPII	CE DUPLICA	TE RECO	<b>VERY</b>	TUDY		Γ
TPH By SW8015 Mod	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spilked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	0	7% [0]	Added [E]	Result [F]	%R [G]	*	%R	%RPD	
C6-C12 Gasoline Runge Hydrocarbons	23.7	1030	872	82	1020	891	85	14	70-135	35	
CI2-C28 Dicsel Range Hydrocarbons	126	1030	1040	89	1020	1060	92	7	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 = Noi Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



Received by OCD: 3/31/2023 2:34:37 PM

### Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337281

Lab Batch #: 764742 Date Analyzed: 07/07/2009 QC- Sample ID: 337200-001 D	<b>Date Prepared:</b> 07/0 <b>Batch #:</b> 1		Analy	st: BEV	
Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result	Sample Duplicate Result	RPD	Analyst: BEV Matrix: Soil LICATE RECO PD Control Limits %RPD	Flag
Analyte	[14]	#:     1     Matrix: Soil       MPLE / SAMPLE DUPLICATE RECOV       It Sample Result     Sample Duplicate RPD     Control Limits       [A]     Result     %RPD			
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

0

Environmental Lab of Texas	Project Manager. Cart Bundey	Company Name Basin Environmental Service Technologies, LLC	Company Address: P.O. Box 201	City/State/Zpc Levingion, MA 82360	1217004315	The Strature A A A A A A A A	Can use only 2 3 7 CAN	(Yean own Call) (See Under State See Call of Section 1999)	Blended - 3A	Blamded - 4A		The lois	and and the second	anguared by the termination of the
10		Indopies, LLC				HAMMER DON IN PARTY OF THE COMPANY		ritige() gerlind betyneiti eta()	87/02/08	07/02/09		E	Agramment by	Amounted by 61.01
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CHAIN OF 12800 West I-20 East Odessa, Texas 79783				5	2	Cobasin-c		Санк (phody) има има има има има има има има има има					St. 18	
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 11-20 East 11-20 East	£				Bro	odstanlew@basin-consulting.com		Mount Conception	1 100	Bolt		Date	1	67 miles
RECORD A	roject Name:	Project #;	Project Loc:	POR	Format:			2010 (11 10 10 10 10 10 10 10 10 10 10 10 10 1		×		1	and a	Ten Ten
ND ANALYS	Project Name: 14" Vac to Jai BLM	Project #; BRS# 2009-83	Project Loc: Les County, NM	PO B: PAAJ, Henry	Name	Annalo	TOPAL FORMU	Addition Marines for Addition Col Col Sol Hig Sol Marines for Addition Col Col Col Sol Hig Sol Marines for Addition Col Col Col Marines for Addition Col Col Marines for Addition Col Col Marines for Addition Col Col Marines for Addition Col Marines for			Sample Comment Interio VOCs Free of Hendersond	Liktele ary continentel Controly weaks ary control Controly weaks ary chole	Sample Hand Call	Terriphentary Upon Receipt.
AL YSIS REQUEST Phone: 432-663-1806 Fac: 432-663-1713	M BLM	13			[] TRUE	a For	×	ND KIN NCI NCI NCI NCI NCI NCI NCI NCI NCI N				(0)	2	
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#### Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client.	BASIN / PRINS	
Date/ Time	17101-9 10:15	
Lab ID #	337281	
nitials.	(ANR)	
	1 Sample Receipt Ch	eckilst

#### **Client Initiale** #1 Temperature of container/ cooler? No \* C Yes No #2 Shipping container in good condition? Yes Yes No Not Present #3 Custody Seats intact on shipping container/contain? Eustody Seals Intact on sample bottles/;containtr? Chain of Custody present? Mes No Not Present Yes No Yes #6 Sample instructions complete of Chain of Custody? No #7 Chain of Custody signed when relinquished/ received? No #8 Chain of Custody agrees with sample label(s)? Yes No D written on Cont/ Lld #9 Container label(s) legible and intact? Yes. No Not Applicable #10 Sample matrix/ properties agree with Chain of Custody? TES No #11 Containers supplied by ELOT? Yes No #12 Samples in proper container/ bottle? Yes No See Below #13 Samples property preserved? Yes No See Below Yes No #14 Sample bottles intact? Yes No #15 Preservations documented on Chain of Custody? Yes #16 Containers documented on Chain of Custody? No #17 Sufficient sample amount for indicated test(s)? 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? Not Applicable Yes No

Variance Documentation

Date/ Time

Contact.

Contacted by

Regarding:

Corrective Action Taken:

Check all that Apply:

See stached 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

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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

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# Sample Cross Reference 337282



Received by OCD: 3/31/2023 2:34:37 PM

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

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# CASE NARRATIVE

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

Project ID: 2009-093 Work Order Number: 337282 Report Date: 10-JUL-09 Date Received: 07/07/2009

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

#### None

0

0

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

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Certificate of Analysis Summary 337282 PLAINS ALL AMERICAN EH&S, Midland, TX Ď Õ O O

Project Name: 14-Inch Vac to Jal - BLM



Project Location: Lea County, NM Contact: Jason Henry Project 1d: 2009-093

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Date Received in Lab: Tue Jul-07-09 10:15 am Report Date: 10-JUL-09

				Proj	Project Manager: Brent Barron, II	Brent Barron, II	×
	Lab Id:	337282-001	337282-002				
Analysis Ronnestod	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	00:71 00-00-1nf				
	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.Xylcnc		4,703 0,1095	21.17 0.2762		1		
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 1 6:00				
	Units/RL:	% RL	% RL				
Percent Moisture		8.69 1.00	9.48 1.00				
TPH Bv 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		1		
Total TPH		3898 82.1	12860 82.7				
						5	

This analytical report, and the entire data package it represents, has been made for your technive and confidential tue. The interpretations and results represend droughen dis analytical report transcent the bear padpernet OTCOL dabunatories. XENCO I absormation assumes no requessionibility and malks no warranty in the read use of the data herby presented. Our liability is limited to the anount invoiced for this work order unless coherwise agreed to its writing.

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**Odessa Laboratory Director** Brent Barron

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Page 5 of 14

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# **Flagging Criteria**



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

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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12600 West 1-20 East, Odessa, TX 79765
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(361) 884-0371	(361) 884-9116

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Laboratorias	TENCO
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# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

/ork Orders : 337282, Lab Batch #: 765019 Sample: 53339	94-1-BKS/BKS Ba	-	D: 2009-093 rix: Solid		
		RROGATE R		STUDY	
Units: mg/kg Date Analyzed: 07/09	/09 22:13	AROGATE R			
BTEX by EPA 8021B 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: 53339	94-1-BSD / BSD Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg Date Analyzed: 07/09	/09 22:34 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0,0300	101	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	
Lab Batch #: 765019 Sample: 53339	94-1-BLK / BLK Ba	tch: 1 Mat	rix: Solid		
Units: mg/kg Date Analyzed: 07/09/		RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0127	0.0300	42	80-120	•
Lab Batch #: 765019 Sample: 33728	32-001 / SMP Ba	tch: 1 Mat	rix: Soil		
Units: mg/kg Date Analyzed: 07/10/	011	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flags
I.4-Difluorobenzene	0,0234	0.0300	78	80-120	
4-Bromofluorobenzene	0.0502	0,0300	167	80-120	•
Lab Batch #: 765019 Sample: 33728	32-002 / SMP Ba	tch:   Mati	rix: Soil		
Units: mg/kg Date Analyzed: 07/10/	/09 00:43 SU	RROGATE R	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene	0.0237	0.0300	79	80-120	
	0.0497	010000		1	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution

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

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

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# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

<b>ork Orders :</b> 337282, Lab Batch #: 765019		De	-	D: 2009-093		
	Sample: 337025-001 S / MS		itch: 1 Mati		STUDY	
Units: mg/kg	Date Analyzed: 07/10/09 08:17	50		L		
BTEX	by EPA 8021B	Amount Found [A]	True Amount (B)	Recovery %R	Control Limits %R	Flage
	Analytes	(**)	1-1	[D]		
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 / M	ISD Ba	tch: 1 Mati	ix: Soil		
Units: mg/kg	Date Analyzed: 07/10/09 08:39	SU	RROGATE R	ECOVERY	STUDY	1.1
	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1.4-Difluorobenzene	Analytes	0.0304	0.0300		80-120	
4-Bromofluorobenzene		0.0304	0.0300	101	80-120	+
					60-120	_
Lab Batch #: 764867	Sample: 533304-1-BKS / BI			ix: Solid		
Units: mg/kg	Date Analyzed: 07/08/09 15:03	su	RROGATE R	ECOVERY	STUDY	
	y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctanc	Anaryus	121	100	121	70-135	
o-Terphenyl		53.0	50.0	106	70-135	
Lab Batch #: 764867			tch: 1 Mate	ix: Solid		
	Date Analyzed: 07/08/09 15:30		RROGATE R		STUDY	-
Units: mg/kg			1			
	sy SW8015 Mod Analytes	Amount Found [A]	True Amount (B)	Recovery %R [D]	Control Limits %R	Flag
I-Chlorooctane		120	100	120	70-135	
o-Terphenyl		51.6	50.0	103	70-135	
ab Batch #: 764867	Sample: 533304-1-BLK / BI	.K Ba	tch: 1 Mate	ix: Solid		
Units: mg/kg	Date Analyzed: 07/08/09 15:56	SU	RROGATE R	ECOVERY S	STUDY	
ТРН В	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
	Analytes					
I-Chiorooctanc		112	100	112	70-135	

Surrogate outside of Laboratory QC limits
 Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

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

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

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# Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal - BLM

/ork Orders : 337282 Lab Batch #: 764867	Sample: 337282-001 / SMP		tch: 1 Mat	D: 2009-093 rix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 17:41	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chiorooctanc		127	100	127	70-135	
o-Terphenyl		59.2	50.0	118	70-135	
Lab Batch #: 764867	Sample: 337282-002 / SMP	Ba	tch:   Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 18:07	SU	RROGATE R	ECOVERY S	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		125	99.8	125	70-135	
o-Terphenyl		63.4	49.9	127	70-135	
Lab Batch #: 764867	Sample: 337279-001 S / MS	Ba	tch: 1 Mati	rix: Soil		
Units: mg/kg	Date Analyzed: 07/08/09 19:25	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		126	001	126	70-135	
o-Terphenyl		54.7	50.0	109	70-135	
Lab Batch #: 764867	Sample: 337279-001 SD / MS	D Ba	tch: 1 Mati	rix: Soil	1.1	
Units: mg/kg	Date Analyzed: 07/08/09 19:51	SURROGATE RECOVERY STUDY				
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-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** 



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Project Name: 14-Inch Vac to Jal - BLM

Sample: 533394-1-BKS Work Order #: 337282 Lab Batch ID: 765019 Analyst: BRB

Date Prepared: 07/09/2009

Batch #: 1

Project ID: 2009-093 Date Analyzed: 07/09/2009 Matrix: Solid

Units: mg/kg			BLANI	K /BLANK S	PIKE / F	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Å	
BTEX by EPA 8021B	A 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	య ఇ [ఒ
Analytes			[8]	<u>[</u> ]	[a]	3	Result [F]	[0]			Ċ,	
Benzene		Q	0,1000	0.0776	78	0.1	664.0"0	80	9	70-130	- 35 -	
Toluene		QN	0,1000	0.0738	74	0.1	0.0759	76	9	70-130	35	
Ethylbenzene		QN	0.1000	0.0813	81	0.1	0.0840	84	3	71-129	35	
m,p-Xylencs		QN	0.2000	0,1665	83	0.2	0.1716	86	3	70-135	35	
o-Xylene		ND	0.1000	0.0793	62	0.1	0.0809	81	2	71-133	35	
Analyst: BHW I ab Beich ID: 764967	Samula: 533304-1 DVC	۰.	ate Prepar	Date Prepared: 07/08/2009 Batch #: 1	6			Date A	Date Analyzed: 07/08/2009 Matrix: Solid	7/08/2009 Solid		
			RI ANI	K /RI ANK	PIKE / I	I ANK S	BLANK /BLANK SPIKE / BLANK SPIKE DIPLICATE RECOVERY STIIDY	ICATE	RECOVE	RV STUD	~	

Units: mg/kg		BLAN	V/BLANN S		TANKS	BLANK / BLANK SPLKE / BLANK SPLKE DUPLICATE RECOVERY STUDY		RECOVE	UUIS XX.		
TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		(B)	[c]	[0]	[E]	Result [F]	[0]				
C6-C12 Gasoline Range Hydrocarbons	QN	0001	816	82	0001	818	82	0	70-135	\$£	
C12-C28 Dicsel Range Hydrocarbons	ND	1000	848	85	1000	843	84		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 Ď 000 õ 0000 D



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Project Name: 14-Inch Vac to Jal - BLM



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Work Order #: 337282

Date Analyzed: 07/10/2009

Lab Batch ID: 765019

QC- Sample ID: 337025-001 S

Matrix: Soil -

Batch #:

Project ID: 2009-093

Date Prepared: 07/09/2009

MATDIY SPIKE NII BRB Analyst:

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICA	TE REC	OVERY:	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplikate Spliked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	a E
Benzene	QN	0.1006	0.0715	11	0.1006	0.0767	76	7	70-130	35	
Toluctic	QN	0.1006	0.0692	69	0.1006	0.0731	73	s	70-130	35	×
Ethylbenzene	QN	0.1006	0.0781	78	0,1006	0.0807	80	9	71-129	35	
m.p-Xykenes	QN	0.2012	0,1601	80	0.2012	0.1638	81	2	70-135	35	
o-Xykene	DN	0.1006	0.0751	75	0.1006	0.0770	11	2	71-133	35	
Lab Batch ID: 764867	QC- Sample ID: 337279-001 S	337279	-001 S	Ba			Matrix: Soil				
Date Analyzed: 07/08/2009	Date Prepared: 07/08/2009	07/08/2	600	An	Analyst: ]	BHW					

Reporting Units: mg/kg		W	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/ MATI	IIAS XIX	<b>(E DUPLICA</b>	TE RECO	VERY S	TUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Splked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		Added [B]			Added [E]	Kesult [F]	<u>G</u>	\$	%•K	%KPD	
C6-C12 Gasoline Range Hydrocarbons	23.7	1030	872	82	1020	891	85	2	70-135	35	
C12-C28 Dicsel Range Hydrocarbons	126	0£01	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





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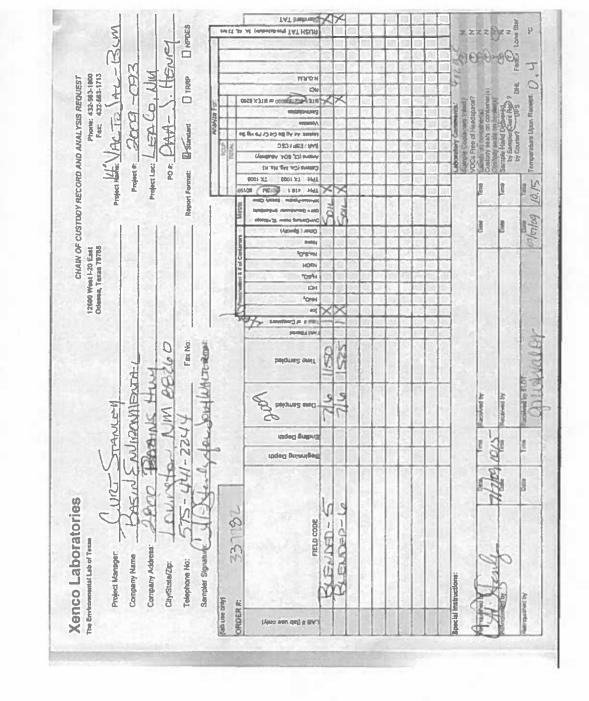
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Project Name: 14-Inch Vac to Jal - BLM

Work Order #: 337282

Lab Batch #: 764742 Date Anaiyzed: 07/07/2009 QC- Sample ID: 337200-001 D	Date Prepared: 07/0 Batch #: 1	07/2009	Analy	D: 2009-093 st: BEV ix: Soil	3
Reporting Units: %	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.27	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



Client:	Basim Plaurs				
Date/ Time	337282				
Lab ID #	331292				
Intials:	Avr.d.				
	Sample Receipt	Checklist			ilent initials
#1 Temperature of	containet/ cooler?	Yes'	No	104 °CI	IS WEST AND THE FORMATION
	per in good condition?	(Yes-	No	- Not and the second	
And a state of the	Intact on shipping container cooler?	Yes	No	Not Present	10.10.00
	intact on sample bottles/ container?	Yes	No	Not Present	100
#5 Chain of Custo		Yes	No		
	tions complete of Chain of Custody?	Yes	No		1000
	dy signed when relinguished/ received?	Yes	No	The state of the state of the	1
	dy agrees with sample label(s)?	Ves	No	ID written on Cont / Lid	G-10324
	(s) legible and intact?	Yes	No	Not Applicable	5 - 6 - 5
	/ properties agree with Chain of Custody?	TES	No		10000
#11 Containers su		Ves	No	A CONTRACTOR OF STOLEN	100.000
And a standard of the second standard standard standards and the second standard s	oper container/ bottle?	Yes	No	See Below	10.000
#13 Samples prop		Yes	No	See Below	10000000
#14 Sample bottle:		Yes	No	000 0000	17 P.B. 400
	documented on Chain of Custody?	Yes	No		
	cumented on Chain of Custody?	Yes	No	S. SCOLLEGE MAL	A.S. C. S. P.S.
	ple amount for indicated test(s)?	Yes	No	See Below	1.0.73.27.20.
	ceived within sufficient hold time?	Yes	No	See Below	1210210
#19 Subcontract o	f sample(s)?	Yes	No	Not Applicable	10002-01-31
#20 VOC samples	have zero headspace?	Yes	No	Not Applicable	1884 B.1
Contact:	Variance Docu	mentation		Date/ Time:	
Corrective Action To	aken.				
Check all that Apply	r See attached e-mail/ fax Citent understands and wou	ki like to pro	caed with		-81
	Cooling process had begun				

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## Analytical Report 338243

for

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### 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)

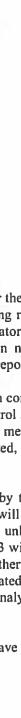
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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 Laboratorics

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,

TI

Brent Barron, II Odessa Laboratory Manager

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### Sample Cross Reference 338243



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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 Laboratorics

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

Project ID: 2009-093 Work Order Number: 338243 Report Date: 22-JUL-09 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

	Cert	tificate of A	Certificate of Analysis Summary 338243
aberatorics	PL	<b>AINS ALL AM</b>	PLAINS ALL AMERICAN EH&S, Midland, TX
Project Id: 2009-093		<b>Project Name</b>	
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
	Lab Id:	338243-001	
Analysis Renuested	Field Id:	Blended 6B	
manna have not finners	Depth:		
	Matrix:	SOIL	
	Sampled:	Jul-15-09 15:00	
BTEX hv EPA 8021B	Extracted:	Jul-20-09 15:15	
	Analyzed:	Jul-20-09 19:39	
	Units/RL:	mg/kg RL	
Benzene			
Tolucne		0.0923 0.0021	
Ethylbenzene			
m,p-Xylencs		0.3595 0.0021	
o-Xylene		0.2163 0.0010	
Total Xylencs		0.5758 0.0010	
Total BTEX		0100'0 \$088'0	
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 Dicsel Range Hydrocarbons	_	3990 15.6	
C28-C35 Oil Range Hydrocarbons		199 15.6	
Total TPH		4629 15.6	

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

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Odessa Laboratory Manager Brent Barron, II

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## **Flagging Criteria**



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

**BRL** Below Reporting Limit.

**RL** Reporting Limit

\* Outside XENCO's scope of NELAC Accreditation.

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

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### Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal BLM

/ork Orders : 338243, Lab Batch #: 766045 Sample: 533	3980-1-BKS/BKS Ba	-	D: 2009-093		
		RROGATE R		STUDY	
Units: mg/kg Date Analyzed: 07/ BTEX by EPA 8021B 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: 533	3980-1-BSD / BSD Ba	itch: 1 Mati	rix: Solid		
Units: mg/kg Date Analyzed: 07/	/20/09 18:25 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0376	0.0300	125	80-120	•
Lab Batch #: 766045 Sample: 533	3980-1-BLK / BLK Ba	tch: 1 Mati	rix: Solid		
Units: mg/kg Date Analyzed: 07/	/20/09 19:02 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0161	0.0300	54	80-120	*
Lab Batch #: 766045 Sample: 338	8243-001 / SMP Ba	tch:   Mati	rix: Soil		1.1
Units: mg/kg Date Analyzed: 07/	20/09 19:39 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.1031	0.0300	344	80-120	**
Lab Batch #: 766045 Sample: 338	8034-001 S / MS Ba	itch: I Mati	rix: Soil		
Units: mg/kg Date Analyzed: 07/	20/09 21:49 SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	0.0296	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.

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TENCO
Laboratorias
Laboratories

### Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jai BLM

/ork Orders : 338243, Lab Batch #: 766045 Samj	ole: 338034-001 SD / MSD	Bat	-	D: 2009-093 ix: Soil		
	ed: 07/20/09 22:07	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 802 Analytes	1B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I.4-Difluorobenzene		0.0299	0,0300	100	80-120	
4-Bromofluorobcnzene	_	0.0291	0.0300	97	80-120	
Lab Batch #: 766215 Sam	ote: 534063-1-BKS/BKS	Bat	tch: 1 Matri	ix: Solid		
Units: mg/kg Date Analyz	ed: 07/21/09 11:02	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	od	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		101	t 0:0	101	70-135	
o-Terphenyl		45.4	50.0	91	70-135	
Lab Batch #: 766215 Same	le: 534063-1-BSD / BSD	Bat	tch: 1 Matri	ix: Solid	·	
Units: mg/kg Date Analyz	ed: 07/21/09 11:28	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	od	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		104	100	104	70-135	
o-Terphenyl		44.9	50.0	90	70-135	
Lab Batch #: 766215 Samp	le: 534063-1-BLK / BLK	Bat	ich: 1 Matri	x: Solid		
Units: mg/kg Date Analyz	ed: 07/21/09 11:53	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	od	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane		90.3	100	90	70-135	
o-Terphenyl		48.5	50.0	97	70-135	
Lab Batch #: 766215 Samp	le: 338243-001 / SMP	Bat	ich: I Matri	ix: Soil		
Units: mg/kg Date Analyz	ed: 07/21/09 15:15	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 M Analytes	od	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctanc		84.3	100	84	70-135	
		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.

MANTON
Laboratories

### Form 2 - Surrogate Recoveries

Project Name: 14-Inch Vac to Jal BLM

/ork Orders : 338243, Lab Batch #: 766215 Sample: 338237-003 S / M3	S Ba		D: 2009-093		
Units: mg/kg Date Analyzed: 07/21/09 17:46	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R  D	Control Limits %R	Flags
1-Chlorooctane	103	99,9	103	70-135	
o-Terphenyi	43.3	50,0	87	70-135	
Lab Batch #: 766215         Sample: 338237-003 SD / N           Units: mg/kg         Date Analyzed: 07/21/09 18:12		tch: 1 Mata RROGATE R	rix: Soil ECOVERY	STUDY	_
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-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 / BAll results are based on MDL and validated for QC purposes.



D

BS / BSD Recoveries



-

Project Name: 14-Inch Vac to Jal BLM

Work Order #: 338243 Analyst: ASA Lab Batch ID: 766045 Sample: 533980-1-BKS

Date Prepared: 07/20/2009

Batch #: ]

Date Analyzed: 07/20/2009 Matrix: Solid

Project ID: 2009-093

	l										
Units: mg/kg		BLAN	K/BLANK S	SPIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u>.</u>	B			[E]	Result [F]		°/	7.K	74KPD	
Benzene	- UN	0,1000	0.0759	76	0.1	0.0772	17	2	70-130	35	
Toluene	DN	0.1000	0.0756	9/	0.1	0.0767	11	_	70-130	35	
Ethylbenzene	QN	0.1000	0.0889	89	0,1	0.0894	89	-	71-129	35	
m,p-Xylenes	QN	0.2000	0.1804	96	0.2	0.1808	66	0	70-135	35	
o-Xylcnc	QN	0.1000	0.0850	85	0.1	0.0850	85	0	71-133	35	
Analyst: BHW	Da	te Prepare	Date Prepared: 07/21/2009	6(			Date A	nalyzed: 0	Date Analyzed: 07/21/2009		
Lab Batch ID: 766215 Sample: 534063-1-BKS	BKS	Batch #: ]	#: 1					Matrix: Solid	solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	<b>ERY STUD</b>	Y	

Flag

Control Limits %RPD

Control Limits %R

> RPD %

Blank Spike Duplicate Result [F]

Spike Added

Blank Spike %R [D]

Blank Spike Result [C]

Spike Added

Blank Sample Result [A]

TPH By SW8015 Mod

Blk. Spk Dup. %R [G] 35

70-135

85

845 1010

[E]

8 6

826 987

1000 IBI

g g

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

Analytes

70-135

Relative Fercent 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 Received by OCD: 3/31/2023 2:34:37 PM

Form 3 - MS / MSD Recoveries XENCO



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Project Name: 14-Inch Vac to Jal BLM



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Date Analyzed: 07/20/2009 Lab Batch ID: 766045 Reporting Units: mg/kg

Batch #: QC-Sample ID: 338034-001 S Date Prepared: 07/20/2009

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Analyst: ASA

-

Project ID: 2009-093 Matrix: Soil

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result ICI	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	0.101.0	0.0468	44		70-130	35	×
Toluene	DN	0.1010	0.0252	25	0.1010	0.0275	27	6	70-130	35	×
Ethylbenzene	- DN	0,1010	0.0157	91	0.1010	0.0168	17	7	71-129	35	×
m,p-Xyknes	ND	0.2019	0.0299	15	0.2019	0.0320	91	7	70-135	35	×
o-Xylene	QN	0.1010	0.0137	14	0.1010	0.0148	15	80	71-133	35	×
Lab Batch ID: 766215 Q	QC-Sample ID: 338237-003 S	338237-	-003 S	Bai	Batch #:	1 Matrix: Soil	: Soil				

Date Analyzed: 07/21/2009	Date Prepared: 07/21/2009	07/21/2	600	An	Analyst:	BHW					
Reporting Units: mg/kg		W	ATRIX SPIK	E/MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	FE RECO	<b>DVERY S</b>	STUDY		
TPH Ry CW2015 Mod	Parent		Spiked Sample Spiked	Spiked		Duplicate	Spiked		Control	Control	
	Sample	Spike	Result	Sample		Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result	Added	<u></u>	%R		Result [F]	%R	*	%.R	%RPD	
Analytes	[V]	[8]		[a]		Ξ	ច			ł	1
C6-C12 Gasoline Range Hydrocarbons	116	1290	1260	89	1290	1310	93	4	70-135	35	Γ
C12-C28 Diesel Range Hydrocarbons	428	1290	2030	124	124 1290	1970	120	~	70-135	35	

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

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

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





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Project Name: 14-Inch Vac to Jal BLM

Work Order #: 338243

Lab Batch #: 765833 Date Analyzed: 07/20/2009 QC- Sample ID: 338241-001 D	Date Prepared: 07/2 Batch #: 1	0/2009	Analy	D: 2009-093 st: BEV ix: Soil	3
Reporting Units: %	SAMPLE /	SAMPLE	DUPLIC	ATE REC	ÓVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	101	[B]			
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

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MLYSIS REQUEST Phone: 422-563-1213 Fax: 432-563-1713	쾨	8	nty. J	E	K				Annual Annual yet yet an OS OL (-) -) H	-	+	The second second
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CHAIN OF CUSTODY RECORD AND AMALYSIS REQUEST 1-20 East 1-20 East 1-20 East 1-20 East 1-20 East	Project Name: 14-Inch Vac to Jal BLM	Project #1 SRS# 2009-093	Project Loc: Lea County, MM	PD 8: PAA-J. Henry	X Sundard		TOTAL:		(Annual Act and a probability			Lutationary Comments: Single Complements: Market and Managements Catalogy seas on contraction Catalogy seas on contraction Catalogy seas on contraction Catalogy seas on contraction Catalogy seas on contraction Sample reaction (2013) by Catalogy (2013)
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Environmental Lab of Texas	Camille Bryant	Beers Environmental Consulting, LLC	P.D. Box 301	Lovington, HM 68259	116,003-7210	amag	220712	2	ä	68		and 1
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Date/ Time	us e estella			
ab ID # 🔡 🔄	338243			
nitials"	mild			
		01		
	Sample Receipt	Checklist		Ctient Initia
	of container/ cooler?	1 Yes 1	No	- か-1 °C
	aner in good condition?	( COD	No	
	intact on shipping container/ cooler?	Yes	No	Not Present
#4 Custody Seals	Intact on sample bottles/ container?	(Yes)	No	Not Present
#5 Chain of Cust	ody present?	des	No	
#6 Sample Instru	ctions complete of Chain of Custody?	Yes	No	
#7 Chain of Cust	ody signed when relinquished/ received?	Yes	No	
	ody agrees with sample label(s)?	100	No	D written on Cont / Ltd
	el(s) legible and intact?	िंग्रि	No	Not Applicable
#10 Sample matr	x/ properties agree with Chain of Custody?	Cres	No	
#11 Containers s		Creg	No	
	roper container/ bottle?	Yes	No	See Below
#13 Samples pro		(TES	No	See Below
#14 Sample bottle		Nes	No	
	s documented on Chain of Custody?	Clas	No	
	ocumented on Chain of Custody?	Y05	No	
	nple amount for indicated test(s)?	(Yes	No	See Below
	eceived within sufficient hold time?		No	See Balaw
#19 Subcontract	s have zero headspace?	Yes	No	Not Applicable
agu vuc sample	s nave zero neaospace?	Tes	1 140	ADD ADDREAME
	Variance Docu	mentation		
Coritact.	Contacted by			Date/ Time:
Regarding				
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	Client understands and wo			-
	Cooling process had begu:	shortly after	sampling	a event

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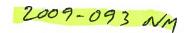
# Appendix E Release Notification and Corrective Action (Form C-141)

1

#### State of New Mexico Energy Minerals and Natural Resources **Oil Conservation Division**

Released to Imaging: 3/31/2023 2:43:07	1301 W. Grand Avenue, Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505	Energy Mineral Oil Conse 1220 Sou Santa I Santa I Notificatio	ervation Div th St. Franc Fe, NM 875 on and Co OPERAT Contact	Resources ision is Dr. 05 rrective Actio OR Jason Henry 0. (575) 441-1099	HOBBS	IVED Form C-141 2009 Revised October 10, 2003 Submit 2 Copies to appropriate Office in accordance with Rule 116 on back side of form
7 P	Surface Owner BLM	Mineral Owner			Lease N	0
PM OOO	N 24 25S 37Ĕ		h/South Line	Feet from the East	/West Line	County Lea
		NATURE	E OF RELE	ASE		
õ	Type of Release Crude Oil			Release 18 bbls	Volume R	ecovered 0 bbls
0	Source of Release 14" Steel Pipeline			our of Occurrence		lour of Discovery
000	Was Immediate Notice Given?	Not Required	volume on	on on 05/13/2009 (rele )5/13/2009)	ase originally	9 10:00 a.m. estimated 3-4 bbis, revised
J	By Whom? Jason Henry Was a Watercourse Reached?		Date and H	our 05/13/2009@0 tume Impacting the Wa		
0	Yes ⊠ No		II 1E5, VO	une impacting the wa	acreouise.	
000000	If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Tak During the purging of the 14-inch Sweet Vac to Jal Li bbls/day because the line is inactive and was being pu The H2S concentration in the crude is less than 10 pp	ine, a release of cru irged at the time of m and the gravity o	the release. Th	e depth of the pipeline	on. Through at the release	put for the subject line is 0 point is approximately 2' bgs.
000	Describe Area Affected and Cleanup Action Taken.* The released crude resulted in a surface stain that mea		ly 50' x 30'. T	he impacted area will b	e remediated	per applicable guidelines.
0000	I hereby certify that the information given above is tru- regulations all operators are required to report and/or public health or the environment. The acceptance of a should their operations have failed to adequately inve- or the environment. In addition, NMOCD acceptance federal, state, or logal laws and/or regulations.	file certain release a C-141 report by t stigate and remedia	notifications an he NMOCD ma ate contamination	d perform corrective as rked as "Final Report" in that pose a threat to the operator of respon	tions for rele does not relig ground water, sibility for co	ases which may endanger eve the operator of liability surface water, human health mpliance with any other
2	1 611		-	OIL CONSER	VATION	DIVISION
000	Signature: Jason Derry		Approved by	ENJIRO ENG District Supervisor:		en
2	Title: Remediation Coordinator		Approval Date	5.13.09	Expiration I	Date: 7.20.09
0	E-mail Address: jhenry@paalp.com	-	Conditions of			Attached
2	Date: 05/13/2009 Phone: (575	) 441-1099				IRP# 09.5.2182
Ď	Attach Additional Sheets If Nccessary					

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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

	· · · · · ·		Rel	ease Notifie			orrective A	ction	<u> </u>		
	S       2530 Hwy 214 - Denver City, Tx 79323       Telephone No. (575) 441-1099         I Name       14 - Inch Vac to Jal BLM       Facility Type       Pipeline         2 Owner       BLM       Mineral Owner       Lease No.         2 Owner BLM       Mineral Owner       Lease No.         LOCATION OF RELEASE         Section Township Range 37E         24       25S       37E       Feet from the North/South Line Feet from the East/West Line County Lea         Lease No.         Latitude N 32 °6 '36'' Longitude W 103° 7' 8"         NATURE OF RELEASE         Release Crude Oil Volume of Release 18 bbis Volume Recovered 0 bbis         Output of Occurrence 0409/2009         Od/99/2009         MATURE OF RELEASE         Release Crude Oil Volume of Release 18 bbis Volume Recovered 0 bbis         Output of Occurrence 0409/2009         Od/99/2009         Mate and Hour of Occurrence 0409/2009         Output of Sizzoo9         Trey Sizzoo9         The Release To Nom?         Last and Hour 05/13/2009 (release originally estimated 3-4 bbis, revised volume on 05/13/2009)         Materourse Reached?										
	IRP-2182 OPERATOR Initial Report X Final Report Company Plains Pipeline, LP Contact Jason Henry Z350 Hay 214 - Derver City, Tr 7923 Telephone No. (375) 441-1699 Name 14 - inch Yac to Jal BLM Pacility Type Pipeline Owner BLM Mineral Owner LOCATION OF RELEASE ter Section Township Z35 37E Peet from the North/South Line Feet from the East/West Line County Latitude N 32*6* 36** Longitude W 103* 7*8* NATURE OF RELEASE ter Section Township Z4* District Section 2000 Press Release Crude Oil Volume Recovered 0 bbbs Release 14** Steel Pipeline Data and Hour Of Discovery 04409/2009 10:00 a.m. UNIT VES UN Required Volume of Release 18 bbb review of Si32009 (release originally estimated 34 bbb, review of volume Recovered 0 bbbs Release 14** Steel Pipeline Data and Hour Of Mineral Owner Lary Johnson on 86/13/2009 (release originally estimated 34 bbb, review of volume Recovered 0 bbbs Release Heary Data and Hour Of Mineral Owner HY ES, To Whom? Lary Johnson on 86/13/2009 (release originally estimated 34 bbb, review of volume Impacting the Water CELIVED NUV UY HOBBSUCLP Cause of Problem and Remedial Action Taken.* re parging of the 14-inch Sweet Vac to Jal Line, a release of crude oil bccarred due to external corrosion. Throughput for the subject bbdy bccause the film is to lactive and was being purged at the time of the release. The depth of the pipeline at the release point is ataty 2* pp. The H32 Concentration to the crude is less than 10 ppm and the gravity of the crude is 38. Area Affected and Cleanup Action Taken.* reverse the Bine to lactive and was being purged at the time of the release. The depth of the pipeline at the release point is ataty 2* pp. The H32 Concentration to the crude is less than 10 ppm and the gravity of the crude is 38. Area Affected and Cleanup Action Taken.* rever the Bine K lactive and was being purged at the time of the release. The depth of the pipeline at the release point is at the site. The attended Basin Eavironmental Consulting Remediation Summary and Site Cloaure Reparest for details of re										
Address	IRP-2182 OPERATOR Initial Report X Final Rep OPERATOR Initial Report I Contact I Jason Henry I Lease No. IDCATION OF RELEASE Init Letter Section I Township Range Feet from the North/South Line Feet from the East/West Line County Lease No NATURE OF RELEASE Po OPERATOR I Volume Recovered 0 bbb Date and floor of Docume I Lary Joheson on 05132009 (release originally estimated 34 bbla, I TYES, Towhang I Lary Joheson on 05132009 (release originally estimated 34 bbla, Prevised valuem on 05132009 (release originally estimated 34 bbla, I TYES, Towhang I YES, Volume Impacting the Water RECEIVED Whong I Juson Henry I Yes IN 0 Waterourse was Impacted, Describe Fully.* NUV U S HOBBOULL Seribe Cause of Problem and Remedial Action Taken.* Init the information given abve is true and complete to the best of my knowledge and understand the pursuant to NMCD Dutes and I dutes is the atthe site and was brief pursual to the orige at S. Initial Report I and Prove I Dy I and Repute the open original serial serial serial composite is the site and the date or external complete at the release point is Proving the 14-left Sweet Var to Jal Line, a release of crude oil occurred due to external complete at the release point is Proving the the atternet and was being purged at the fine of the release. The depth of the pippline at the release point is Proving the the atternet and was being purged at the fine of the r										
Facility Na	ne 🧧	14 – inch V	ac to Jal	BLM		Facility Typ	e Pipeline				
Surface Ow	ner BLM			Mineral C	Owner		·····	Lease	No.		
				LOCA	ATIC	<b>DN OF RE</b>	LEASE				
Unit Letter N	IRP-2182       OPERATOR       Initial Report         dress       2539 Hwy 214 - Denver City, Tr 79323       Telephone No. (575) 441-1099       Idity Name       14 - inch Vac to Jal BLM       Facility Type       Fipeline         face Owner BLM       Mineral Owner       Lease No.       LocATION OF RELEASE       Lease No.         it Letter       Section       Township       Range       Feet from the       Range Voltage       LocATION OF RELEASE         it Letter       24       258       37E       Feet from the       North/South Line       Feet from the       Last/West Line       County Lease         a Latitude N 32*6' 36'' Longitude W 103* 7' 8''       NATURE OF RELEASE       Volume Recovered       Data and Hour of Occurrence       04:097:009 (release originally estin revised volume on 05/13/2009 (release or originally estin revised volume on 05/13/2009 (release originally estin rev										
<u> </u>			I	Latitude N 32	2°6'3	6" Longitud	le W 103° 7' 8'	n	<u> </u>		3
				NAT	URI	E OF REL	EASE				
						Volume of	Release 18 bbl		Recovered	0 bbls	
Source of Rel	ease 14'	" Steel Pipeli	ne					e Date and	Hour of Dis	cover	
Was Immedia	te Notice (	liven?						04/09/20	09 10:00 a.	n.	
was mineur			Yes 🗍 No	) 🛛 Not Requir	ed	Larry Joh	nson on 05/13/20	009 (release origin 009)	ally estimat	ed 3-4	i bbls,
				· · · · · · · · · · · · · · · · · · ·		Date and U	OF/12/200	0 @ 0000	-		
Was a Watero	ourse Reac		Yes 🛛	No		If YES, Vo	olume Impacting t	the Waterconner (	EIVE	D	
If a Watercou	rse was Imp	pacted, Descri	be Fully.*					NUV	09735		
Describe Cau	se of Proble	em and Remec	lial Action	n Taken.*				HOR	RAUCL	<u>ئې</u>	
line is 0 bbls/	day becaus	e the line is i	nactive aı	nd was being pur	ged at	the time of th	e release. The d	lepth of the nineli	Throughput ne at the re	for th lease p	e subject point is
Describe Area	Affected a	nd Cleanup A	ction Tak	en.* .		······································					
Please see the conducted at	e attached ] the site.	Basin Enviro	nmental (	Consulting <i>Reme</i>	diation	n Summary an	d Site Closure Ro	equest for details o	of remedial	activi	ties
regulations all public health of should their op or the environ	operators a or the enviro perations ha ment. In ad	are required to onment. The a twe failed to a dition, NMO	report an acceptance dequately CD accept	d/or file certain re e of a C-141 repor investigate and re	elease i rt by th media	notifications ar ne NMOCD ma te contamination	id perform correc arked as "Final Re on that pose a thre	tive actions for rele eport" does not reli eat to ground water	eases which eve the oper	may e ator o ter hu	ndanger
	Λ	Al T			Τ		OIL CONS	SERVATION	DIVISIO	N	
Signature:	Jason	Den	'y				C	2 Johns	07~ <sup>~</sup>		
Printed Name:	/ Jason He	nry	/			Approved by	District Supervise	PINMENTAL E	NGINEER		
Title: Remed	IRP-2182         OPERATOR       Initial Report       X Final Report         2530 Hwy 214 - Denver City, Tx 79323         Telephone No. (575) 441-1099         me 14 - Inch Vac to Jal BLM       Figure Pipeline         Mort Section Township Range         24 25S       Range       Feet from the       North/South Line       Feet from the       East/West Line       County       Last         Lastitude N 32 *6' 36*'' Longitude W 103* 7' 8"         NATURE OF RELEASE         Crude Oil       Volume of Release 18 bbls       Volume Recovered 0 bbls         Date and Hour of Occurrence         Attract ON Required       Larry Johnson on 06/13/2009 (release originally estimated 3-4 bbls, revised volume on 05/13/2009 (release originally estimated 3-4 bbls, revised volume on 05/13/2009 (role a.m.         Jasen Meary       Date and Hour 05/13/2009 (release orig										
E-mail Addres	s: jhenry@	paalp.com				Conditions of	Approval:		Attached	П	
Date: //-0	09-200	09	Phone:	(575) 441-1099					ITCP (	Я.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

Operator:	OGRID:
PLAINS MARKETING L.P.	34053
333 Clay Street Suite 1900	Action Number:
Houston, TX 77002	202922
	Action Type:
	[IM-SD] Facility File Support Doc (ENV) (IM-BFF)

#### CONDITIONS

Created By		Condition Date
amaxwell	None	3/31/2023

Action 202922