State of New Mexico Energy Minerals and Natural Resources

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

District Office in accordance with Rule 116 on back side of form

Form C-141

Release Notificati	ion and Corrective Ac	tion JU	SOUP			
	OPERATOR		Report X Final Report			
Name of Company Plains Pipeline	Contact Camille Bryant					
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 575-441-090	65				
Facility Name Pitchfork 8-Inch	Facility Type 8" Steel Pipel	line				
Surface Owner BLM Mineral Owner	er	Lease No	0.			
	ON OF RELEASE	i				
	orth/South Line Feet from the	East/West Line	County Lea			
Latitude 32° 08' 15.7" North	Longitude 103° 31	' 30.1" West.				
NATUR	RE OF RELEASE					
Type of Release Crude Oil	Volume of Release 5 barrels	Volume Re	ecovered 0 barrels			
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence 1/23/2008 @ 1600 hours		lour of Discovery @ 1645 hours			
Was Immediate Notice Given? Yes INO Not Required	If YES, To Whom? Pat Richards					
By Whom? Camille Bryant		Date and Hour 1/28/2008 @ 800 hours				
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.					
If a Watercourse was Impacted, Describe Fully.*						
Describe Cause of Problem and Remedial Action Taken: Internal corroc clamp was installed on the line to mitigate the release. The line is a 8-in pressure on the line is approximately 60 psi and the gravity of the swee approximately 4 feet bgs at the release point. Describe Area Affected and Cleanup Action Taken: Initially the crude release area it was determined to elevate the crude oil release to a report	nch steel gathering line that produce et crude oil is 42. The sweet crude h oil release was deemed to be a non- rtable status and an initial Form C-1	es approximately 1 has an H ₂ S content -reportable release. 141 was prepared a	,800 barrels of oil per day. The of <10 ppm. The line is . On further excavation of the nd submitted to the NMOCD.			
The impacted soil was excavated and placed on a poly liner. The final of length by 12 feet in depth. Approximately 475 cubic yards of impacted NMOCD approval. A <i>Remediation Summary and Site Closure Request</i> Office, this document provides full details of the remediation activities	I soil was excavated, blended, samp t dated July 2008 was prepared and s at the release site.	iled and used as exc submitted to the N	cavation backfill with MOCD – Hobbs District			
I hereby certify that the information given above is true and complete tregulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	e notifications and perform correction the NMOCD marked as "Final Republic the NMOCD marked as a structure of the transmission of transmission of the transmission of	ive actions for relea port" does not relie at to ground water,	ases, which may endanger we the operator of liability surface water, human health			
Signature: amile Eurent	OIL CONS	EBVATION I	DIVISION			
Printed Name: Camille Bryant	Approved by District Specty R	ONMENTAL E	NGINEER			
Title: Remediation Coordinator	Approval Date: 1.24.0	8 Expiration D	ate:			
E-mail Address: cjbryant@paalp.com	Conditions of Approval:		1RP-1781			
Date: 7/24/2008 Phone: 575-441-0965						

Basin Environmental Service Technologies, LLC

2800 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
cstanley@basinenv.com
Office: (505) 396-2378
Fax: (505) 396-1429

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REMEDIATION SUMMARY

AND FINAL

<u>SITE CLOSURE REQUEST</u>

PLAINS MARKETING, L.P. (231735) Pitehfork 8-Inch Lea County, New Mexico Plains SRS # 2008-00028 UNIT LTR B (NW ¼ /NE ¼), Section 13, Township 25 South, Range 33 East Latitude 32° 08' 15.7" North, Longitude 103° 31' 30.1" West NMOCD Reference # 1RP-1781

Prepared For:

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

111 2 4 2008

Prepared By: Basin Environmental Service Technologies, LLC

July 2008

Basin Environmental Service Technologies, LLC

TABLE OF CONTENTS

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INTRODUCTION AND SITE BACKGROUND	1
NMOCD SITE CLASSIFICATION	1
SUMMARY OF REMEDIATION ACTIVITIES	.2
SITE CLOSURE REQUEST	.3
LIMITATIONS	.3
DISTRIBUTION	.5

FIGURES

Figure 1 – Site Location Map Figure 2 – Site and Sample Location Map

TABLES

Table 1 - Concentrations of Benzene, BTEX and TPH in Soil

APPENDICES

Appendix A - BLM Report of Undesirable Event

Appendix B - Archaeological Survey

Appendix C - Photographs

Appendix D - Laboratory Reports

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

INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Plains Marketing, L.P. (Plains), has prepared this Remediation Summary and Site Closure Request for the release site known as Pitchfork 8-Inch. The legal description of the release site is Unit Letter B (NW ¼ NE ¼), Section 13, Township 25 South, Range 33 East, in Lea County, New Mexico. The property affected by the release is owned by United States Bureau of Land Management (BLM). The release site is located at the intersection of seven (7) steel or poly pipelines. The release site GPS coordinates are 32° 08' 15.7" North and 103° 31' 30.1" West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. The BLM Report of Undesirable Event is provided as Appendix A and a report documenting the results of an archeological survey are provided as Appendix B. The Release Notification and Corrective Action (Form C-141) is provided as Appendix E.

On January 23, 2008, Plains discovered a crude oil release from an eight (8)-inch steel gathering pipeline. During initial response activities Plains installed a temporary pipeline clamp on the pipeline. The resulting surface stain attributed to the release measured approximately four (4) feet in width by four (4) feet in length. Recovery of the released crude oil was not feasible during the initial response activities. Initially, Plains classified the Pitchfork 8-inch release as a non-reportable release based on the visual soil surface staining.

On January 28, 2008, Plains reclassified the release as a reportable incident and notified the New Mexico Oil Conservation Division (NMOCD) – Hobbs District office of the release. The Form C-141 reported the release as 5 (five) barrels of crude oil from an eight (8)-inch steel gathering pipeline and the release was attributed to internal corrosion of the steel pipeline.

NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), groundwater was encountered at a depth of 185 feet below ground surface (bgs) in a domestic water well located in Section 13. The depth to groundwater in this area 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 1000 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 NMOCD guidelines indicate the Pitchfork 8-Inch 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 REMEDIATION ACTIVITIES

On January 29, 2008, initial excavation of the saturated hydrocarbon impacted soil began at the site. An investigation trench was excavated adjacent to the 8-inch pipeline to assess the soil impact. Excavated soil was stockpiled on-site on a plastic liner to mitigate the leaching of contaminants into the vadose zone.

On January 20, 2008, two delineation soil samples (N/W FLR 13' and E/W 9') were collected and submitted to Environmental Lab of Texas in Odessa, Texas for determination of concentrations of benzene, toluene, ethyl-benzene and xylene (BTEX) using EPA method SW-846 8021b and total petroleum hydrocarbons (TPH) using method 8015M. The analytical results indicated benzene concentrations were 0.006 mg/Kg in soil sample N/W FLR 13' and 0.0617 mg/Kg in soil sample E/W 9'. The analytical results indicated BTEX concentrations were 0.288 mg/Kg in soil sample N/W FLR 13' and 85.98 mg/Kg in soil sample E/W 9'. The analytical results indicated BTEX concentrations exceeded the NMOCD regulatory standard of 50 mg/Kg in soil sample E/W 9'. Soil samples N/W FLR 13' and E/W 9' exhibited TPH concentrations of 126 mg/Kg and 5,713 mg/Kg, respectively. The analytical results indicated additional excavation of impacted soil would be required at the site. A summary of the analytical results is included in Table 1, Concentrations of benzene, BTEX and TPH in Soil. Laboratory results are included in Appendix D and soil samples locations are depicted on Figure 2, Site and Sample Location Map.

On March 17 through 20, 2008, additional excavation of impacted soil was conducted on-site. Impacted soil was combined and blended with soil excavated during the January 2008 excavation activities. A total of approximately 475 cubic yards (cy) of soil was excavated from the release site, blended and stockpiled on-site pending analytical results.

On April 11, 2008, five confirmation (5) excavation sidewall soil samples (North Wall – 10' bgs, South Wall – 10' bgs, East Wall – 10' bgs, West Wall – 9' bgs and East Wall – 8' bgs) and three (3) confirmation excavation floor soil samples (Release Point – 12' bgs, East Floor – 12' bgs and West Floor – 12' bgs) were collected and submitted to the laboratory for determination of benzene, BTEX and TPH concentrations. Please note, soil sample East Wall – 8' bgs was mislabeled in the field and is identified as West Wall – 8' bgs on the chain-of-custody and subsequent laboratory reports.

The analytical results of the collected soil samples indicated the benzene concentrations ranged from less than the laboratory method detection limit (MDL) of 0.001 mg/Kg in soil sample Release Point – 12' bgs to 0.038 mg/Kg in soil sample West Wall – 9' bgs. The analytical results further indicated BTEX concentrations ranged from 0.0312 mg/Kg in soil sample Release Point – 12' bgs to 1.2363 mg/Kg in soil sample West floor – 12' bgs. The analytical results indicated all of the collected soil samples exhibited TPH concentrations below the NMOCD regulatory standard of 5,000 mg/Kg with the exception of soil samples East Wall – 10' bgs (7,269 mg/Kg) and East Wall – 8' bgs (41,900 mg/Kg).

On April 11, 2008, a five-point composite soil sample was collected from the 475 cy on-site soil stockpile. The analytical results indicated benzene concentrations were 0.0026 mg/Kg, BTEX concentrations were 0.7438 mg/Kg and TPH concentrations were 2,880 mg/Kg. Based on the analytical results, the stockpile was deemed suitable for backfill material based on the NMOCD site classification.

On May 7, 2008, representatives from Plains and Basin met with an NMOCD representative to discuss the analytical results of the soil samples collected on April 11, 2008. The analytical results indicated confirmation sidewall soil samples East Wall – 10' bgs and East Wall – 8' bgs exhibited TPH concentrations of 7,269 mg/Kg and 41,900 mg/Kg, respectively and were not below the NMOCD regulatory standard required for a non-risk based site closure. Plains indicated that due to the numerous pipelines crossing the excavation and the close proximity of the EOG 2 inch steel pipeline on the east side of the existing excavation, further excavation would not be feasible and could constitute a safety and environmental hazard. The NMOCD representative concurred with the Plains request for a risk-based closure of the Pitchfork 8-inch release site. The NMOCD representative requested the east sidewall be re-sampled and analyzed for concentrations of BTEX and TPH prior to the backfilling of the excavation with the blended stockpile soil. Photographs are provided in Appendix C.

On May 27, 2008, a soil sample (East Wall – 1 @ 8' bgs) was collected from the east sidewall of the excavation and submitted to the laboratory for determination of BTEX and TPH concentrations. The analytical results indicated the benzene concentration was 0.0018 mg/Kg, the BTEX concentration was 0.3155 mg/Kg and the TPH concentration was 7,136 mg/Kg.

The excavation was partially backfilled to allow for the repair of the temporarily clamped pipeline by Plains Operations personnel. Following the repair of the pipeline the excavation will be fully backfilled and contoured to fit the surrounding topography. When conditions are optimal the site will be reseeded with BLM approved vegetation.

SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples collected from the floor and sidewalls of the excavation, Basin recommends Plains provide the NMOCD Hobbs district office a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant site closure to the Pitchfork 8-Inch release site.

LIMITATIONS

Basin Environmental Service Technologies, 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 Service Technologies, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Service Technologies, 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 Service Technologies, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Service Technologies, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

DISTRIBUTION:

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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 Carlsbad Field Office United Stated Bureau of Land Management 620 E. Greene Street Carlsbad, New Mexico 88220
Copy 3:	Jeff Dann Plains Marketing, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002 jpdann@paalp.com
Сору 4:	Camille Bryant Plains Marketing, L.P. 3112 Highway 82 Lovington, New Mexico 88260 cjbryant@paalp.com
Copy 5:	Curt Stanley Basin Environmental P.O. Box 301 Lovington, New Mexico 88260 cstanley@basinenv.com

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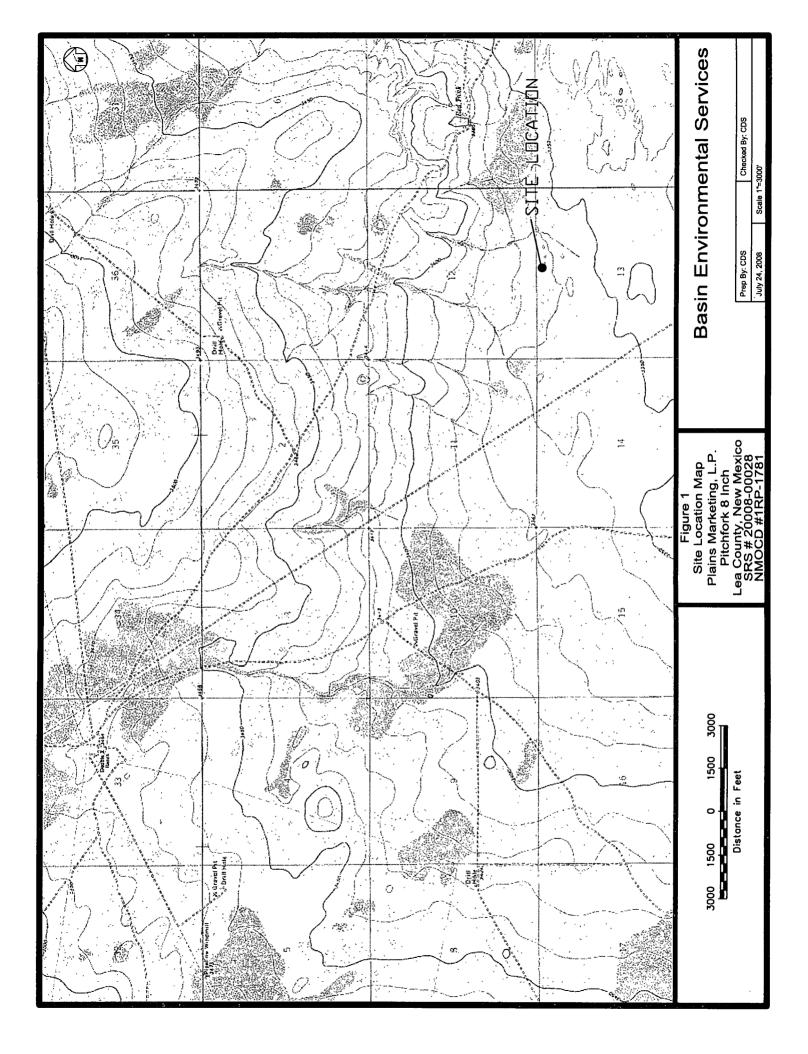
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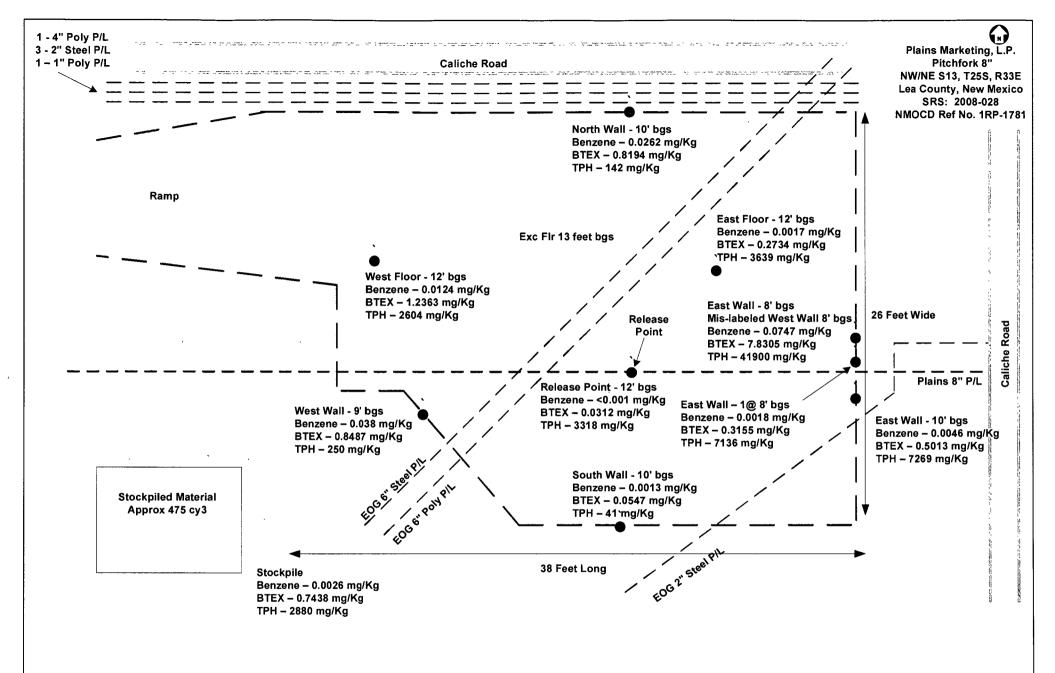
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TITLE	Figure 2					
Site and Sample Location Map						
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Basin Environmental Services						
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Tables

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TABLE 1

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CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

PLAINS MARKETING, L.P. PITCHFORK 8" LEA COUNTY, NEW MEXICO SRS: 2008-028 NMOCD REFERENCE NO: 1RP-1781

	CAMPLE					METH	OD: EPA SW 8	46-8021B, 503	0		METHO	D: 8015M	TOTAL
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	DATE ANALYZED	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE mg/Kg	ETHYL- BENZENE (mg/Kg)	M.P XYLENES (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)
N/W FLR 13'	13' bgs	03/20/08	03/24/08	Excavated	0.006	0.043	0.029	0.156	0.054	0.288	<15	126	126
E/W 9'	9' bgs	03/20/08	03/27/08	Excavated	0.0617	17.65	8.72	43.33	16.22	85.9817	1880	3833	5,713
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Release Point - 12' bgs	12' bgs	04/11/08	04/17/08	In-Situ	<0.001	0.0039	0.004	0.0151	0.0082	0.0312	62.5	3255	3,318
North Wall - 10' bgs	10' bgs	04/11/08	04/17/08	In Situ	0.0262	0.2501	0.0743	0.361	0.1078	0.8194	24	118	142
South Wall - 10' bgs	10' bgs	04/11/08	04/17/08	In Situ	0.0013	0.0096	0.0067	0.0259	0.0112	0.0547	<15	41	41
East Wall - 10' bgs	10' bgs	04/11/08	04/17/08	In Situ	0.0046	0.0771	0.053	0.2301	0.1365	0.5013	289	6980	7,269
West Wall - 9' bgs	9' bgs	04/11/08	04/17/08	In Situ	0.038	0.2203	0.0708	0.3937	0.1259	0.8487	39	211	250
East Floor - 12' bgs	12' bgs	04/11/08	04/17/08	In Situ	0.0017	0.0249	0.028	0.1328	0.086	0.2734	108	3531	3,639
West Floor - 12' bgs	12' bgs	04/11/08	04/17/08	In Situ	0.0124	0.2214	0.1246	0.6036	0.2743	1.2363	152	2452	2,604
Stockpile	-	04/11/08	04/17/08	Backfill	0.0026	0.0922	0.0601	0.3997	0.1892	0.7438	88	2792	2,880
East Wall - 8' bgs (mislabeled West Wall 8'	8' bgs	04/11/08	04/17/08	In Situ	0.0747	1.728	0.9888	2.915	2.124	7.8305	5820	36080	41,900
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East Wall - 1 @ 8' bgs	8' bgs	05/27/08	05/29/08	In Situ	0.0018	0.0467	0.0269	0.1088	0.3155	0.3909	176	6960	7,136
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NMOCD Criteria					10					50			5,000

Appendices

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Appendix A BLM Report of Undesirable Event

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Form NM 3162-1 (August 2004)
UNITED STATES DEPARTMENT OF THE INTERIOR * Bureau of Land Management New Mexico State Office
REPORT OF UNDESIRABLE EVENT
DATE OF OCCURRENCE/DISCOVERY: 123/2008TIME OF OCCURRENCE: 1645
DATE REPORTED TO BLM: 129/2008 TIME REPORTED: 1500
BLM OFFICE REPORTED TO: (FIELD/DESTRICT/OTHED) CAT Shap Office (Jim Amas)
LOCATION: (* 1) DUTESBETION 13_T. 255 R. 336_ MEREDIAN DEW MEREDIAN
1 40 40
OPERATOR: COMPANY NAME, PIAIRS PLOVE INC. PHONE NO. 575)441-1965
CONTACT PERSON'S NAME CAODILE KEYDOICES
SURFACE OWNER:
LEASE NO .: NIGHT-OF-WAY NO .: 1194802
UNIT NAME / COMMUNITIZATION AGREEMENT NO:
TYPE OF EVENT, CIRCLE APPROPRIATE ITEM (S):
BLOWOUT, FIRE, FATALITY, INJURY, PROPERTY DAMAGE OIL SPILL) SALTWATER SPILL, OIL AND SALTWATER SPILL, TOXIC FLIED SPILL, HAZARDOUS MATERIAL SPILL, UNCONTROLLED FLOW OF WELLBORE FLUIDS, OTHER (SPECIFY):
CAUSE OF EVENT: Internal Corrosion of 8-Unch steel
HazMat Notified: (for spills)
Law Enforcement Notified: (for thefts)
CAUSE AND EXTENT OF PERSONAL INIURIES/CAUSE OF DEATH(S):
Safety Officer Notified
EFFECTS OF BVENT: Soil LMMCT + FOM Crude oil release
ACTION TAKEN TO CONTROL EVENT: CLAMP installed on line to
LENGTH OF TIME TO CONTROL BLOWOUT OR FIRE:
VOLUMES DESCHARGED: OIL Starres WATER GAS
OTHER AGENCIES NOTIFIED: 47T Kichard AMOCD KODDO OTHIC

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	Page 2
TION TAKEN OR TO BE TAKEN TO PREVENT RECURRE	NCE:
NAL INVESTIGATION:	
TEAM NAME(S)	
FIELD INSPECTION DATE /	
SUMMARY OF RESULTS OF INSPECTION	
ESOURCE LOSS WAS (CIRCLE ITEM): AVOIDABLI	B UNAVOIDABLE
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ATE/TIME/PERSON NOTIFIED: DISTRICT OFFICE	
STATE OFFICE	
WASHINGTON OFFICE	
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Appendix B Archaeological Survey

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Title of Report: Pitchfo	ork 8 Inch crude oil releas	e site.	11 - A		5. Type of Report	S. S. S. S. M. M. M.
Author(s) Ann and Da	nov Boone	* *	· · ·		Negative	Positive
Investigation Type				•••••••••••	1	1 388 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Research Design	Survey/Inventory	Test Excava	tion 🛛 🗖 Ex	cavation CC	allections/Non-Field Stu	dy
Overview/Lit Review	Monitoring	Ethnographic	study 🔲 Si		Other	
Description of Undertak	ing (what does the project en lethods are unknown but	tail?): The project	ct is an area w	here petroleum f	luid leaked from a buried cavated and removed fro	pipeline m the site.
Dates of Investigation:	(from: 2/8/2008 to:	3	· · · · ·	9. Report Date:	12 Feb 08	
			· •.	J. Mepon Date.		
		<u> </u>	· · · · ·	· · · · · · · · · · · · · · · · · · ·		**************************************
Performing Agency/C 2030 North Canal, C 575-885-1352	onsultant: Boone Archae arlsbad, NM 88220	ological Service	s, LLC	11. Performing BAS 02-08-07	Agency/Consultant Rep	ort No.:
Principal Investigato	r: Danny Boone Fiel	Supervisor: Da	anny Boone.	12. Applicable	Cultural Resource Permi	I No(s)
Field Personnel Nar			·····	BLM: 190-2920	المالي المعادي المالية	
Client/Customer (oro	ject proponent): Plains M	arketing 1 0			omer Project No.:	a a galante a subserve
Contact: Ken Dutton		ai voniña' F'L.				
Address: 1301 S Co	untry Road 1150	ایش می داد. ۱۹۹۰ می داد. ۱۹۹۰ می داد.		· · · · · · · · · · · · · · · · · · ·		<u> </u>
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17. Survey Data (c d. Nearest City or	Conunuea):				
e. Legal Descript			and the state	· · · · · ·	
	Township (N/S)	Range (E/W).	Section	1 1/4 1/4	1/4
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	a the standard standard and a standa			and the second second	
	A Contract of the second se	a		1.2 - 1.4 4 5	
	scription? Yes [
f. Other Descriptio	n (e.g. well pad footag	es, mile markers, p	lats, land grant name	etc.): Cesses sin	فرید از معالی می معالی می افغان می واقع از این واقع از این این این این این می مراجع می مراجع این واقع این این و این این این این این این این این این این
18. Survey Field		9/		and a start of a start of	
ente da Norre III. Com	% coverage - 🔲 <100	an the second states of the		م بر المشر ال	
Configuration: 🔀 I	block survey units	linear survey units	s (l x w): [] other survey un	Its (specify):
Scope: Minon-sel	ective (all sites record	ed) 🗍 selective/t	nematic (selected site	es recorded)	and the second secon The second sec
• .= • ,	c				
	Systematic pedes	· · · · -		ne) (ean	
): 15 Crew Size: 1	10 1 10 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1	1		
Survey Person Ho	urs: 0.5 Recording (Person Hours: 0 To	otal Hours: 0.5		
Additional Namativ	re: No plat was availab	le for the project the	erefore location and i	acres are estimate	s based on a hand held GPS
					00 feet, the corners of the survey
	with a combination of p				
and a set	Setting (NRCS soil de			ion etc.):	
				10(1, 0 (0.).	ار میں ایک
Topography: Mo	derately rolling and u	odulating dunal plai		وهوه کې کې د د د مېر د د د د د د مېر د د د مېر د د	این کا میں ایک تحکی ایک ایک وال میں ایک ورد ا ایک میں ایک میں کا بیک تھی کا ایک میٹی کا ایک ایک ایک ایک
Vegetative com	nunity: Consists prima	rily of shinoak, sage	e brush, mesquite, yu	cca cactus, variou	s grasses and other flora.
NPCS Pourte N	Aaljamar-Kermit assoc	distion: Gently undu	Isting and rolling de	en condu colla	
	그는 것은 가장 같아요?	Tanon, Ocany and	naung ani ronmg, ut	wh, series 20110.	
Elevation: 3435	ect	<u> </u>			
20.a. Percent Grou	und Visibility: 90 overa	I b. Condition of Su	rvev Area (grazed, b	laded, undisturbed	1, etc.): Project is where
petroleun	n fluid leaked from a b	uried pipeline, also	a caliche capped rao	d and another bur	led pipeline are within the survey
area.				and the second	
				a a lath is the	
21. CULIURAL RI	ESOURCE FINDINGS	U Yes, See Page	e 3 IXINO, Di	scuss Why: Unkno	
22. Required Attac	chments (check all app	propriate boxes):	and the second	117 and the age with the providence of the second se	18 19 19 19 19 19 19 19 19 19 19 19 19 19
USGS 7.5 Top	ographic Map with site	s, isolates, and surv	vey area clearly draw	ที่ (รัว ร	23. Other Attachments:
	IS Mapserver Map Ch				Photographs and Log
LA Site Forms	- new sites (with sketch	map & topographic mi	90)		Other Attachments
LA Site Forms	(update) - previously re	ecorded & un-reloca	ated sites (first 2 page	<u>s minimum)</u>	(Describe):
	Property Inventory F	oms			
	ption of isolates, if app btion of Collections, if a				an and a second s
List and Descrip	MOIL OF CORECUONS, ILE	applicable		3, 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (🖌 🚁 પ્રદેશ કે પ્લેટ્સ્ટ્રેસ્ટ્રિટ્સ્ટ્રેસ્ટ્રિટ્સ્ટ્રેસ્ટ્રિટ્સ્ટ્રેસ્ટ્
24. I certify the inf	formation provided abo	ove is correct and a	ccurate and meets a	I applicable agend	y standards.
				e i se statione de la companya de la	
Principal Investiga	tor/Responsible Archa	eologist: Danny Bo	one:		
Signature	an so	oni	Date 13 Feb (8 Title (if not PI)	
25. Reviewing Ag			. SHPO		
Reviewer's Name/	Date 1	Re Alt	viewer's Name/Date		
Annantari I Sala	an an an tha an tha Tha an tha an	ue ue	Dion #		
Accepted (Rejected ()		'D Log #:		الم من المراجع المراجع المراجع المراجع المراجع المراجع المراجع
- No					
Tribal Constitution	(if annilioahla)		IPO File Location:	and the second sec	به و است که ام منه کور یا از منه کار که ایک از این از این که ایک برای میکند. این از این از مدینه است از این این ایک ایک ایک از در در این ایک میکند.
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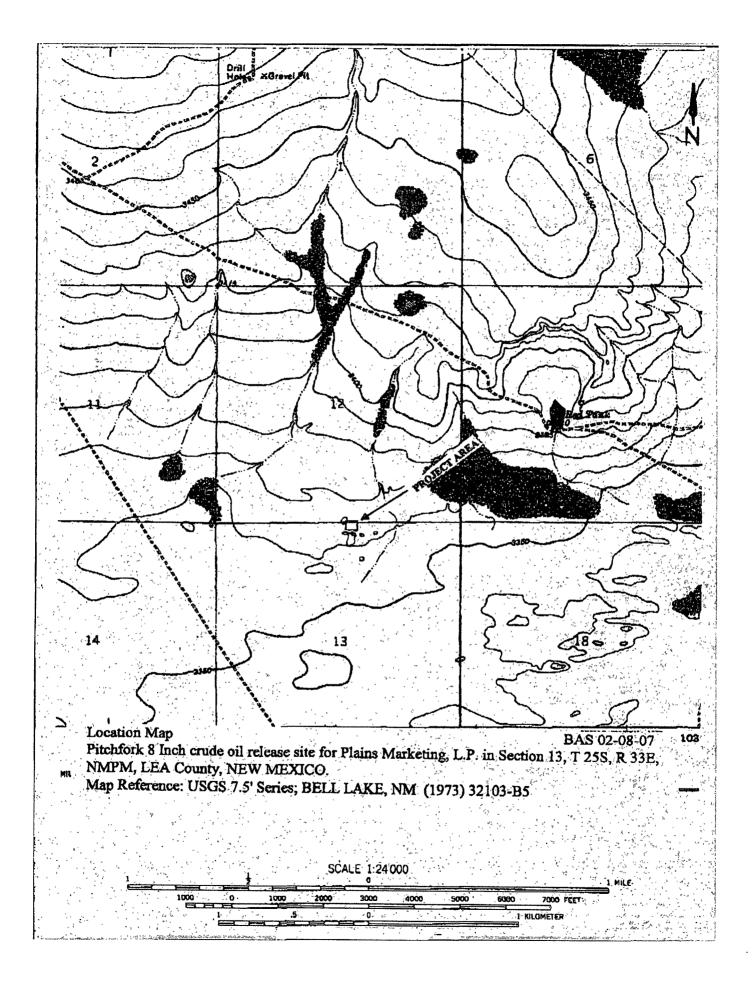
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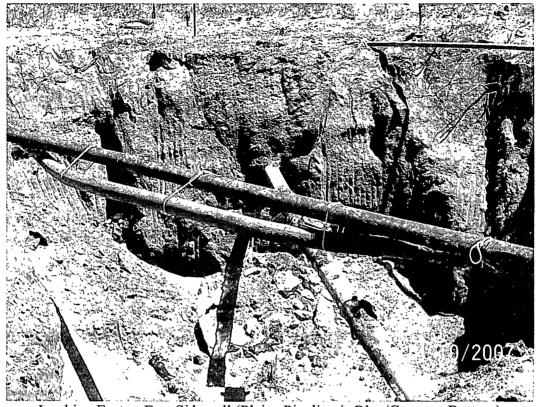
CULTURAL RESOURCE FINDINGS

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	ead (Sponsoring) Agency:	3. Lead Agency Report No.
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SURVEY RESULTS:		
Sites discovered and registered:	Ó sa tha sa sha ta ta ta ta ta ta ta	
Sites discovered and NOT regist	n herei	
Browing the second and the second		
Previously recorded sites revisite		
	ocated (site update form required): 0	
TOTAL SITES VISITED: 0		
Total isolates recorded: 0	Non-selective isolate recording?	
Total structures recorded (new ar	nd previously recorded, including acequias): 0	and the second
		- 「「「「「「「「」」」」、「「」」、「「」」、「「」」、「」
MANIA OCTATINIT OLIMANA DY	All all the set of the second s	Athing of the second of the second for the District Fund
WANAGEMENT SUMMART	ino cultural resources were encountered	therefore clearance of an area for the Pitchfork
8 Inch crude oil release site fo	or Plains Marketing, L.P. is recommended	d. If cultural resources are encountered at any
time all activity should cease a	and the BLM Archaeologist notified imme	ediately.
	IF REPORT IS NEGATIVE YOU ARE DONE	
SURVEY LA NUMBER LOG	The second s	
Sites Discovered:		
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and the second		A CARLES AND A CARLES AND
Previously recorded revisited site		
LA No.	Field/Agency_No. Eligible? (Y/N; applicable	criteria)
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MONITORING LA NUMBER LOG	S (site form required)	
Sites Discovered (site form require		dete form required)
LA No. Field/Agen	cy No. LA No. Fleid/Agency No.	
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Areas outside known nearby site	boundaries monitored? Yes [], No [] If no	explain why
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TESTING & EXCAVATION LA N		and the second
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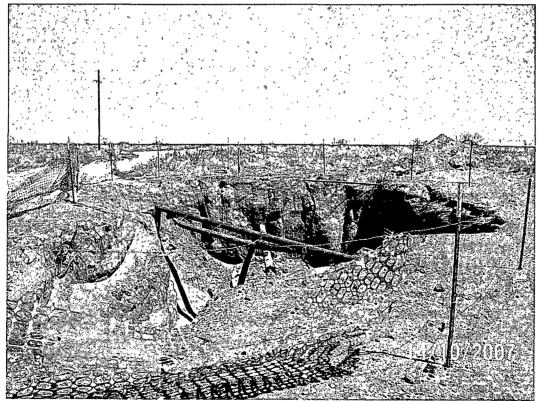
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Appendix C Photographs



Looking East at East Sidewall (Plains Pipeline is Blue/Green at Bottom)



Looking East at East Sidewall

Appendix D Laboratory Reports

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Analytical Report 300153

for

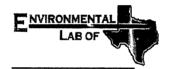
PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Pitchfork 8"

2008-028

31-MAR-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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31-MAR-08



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

Reference: XENCO Report No: 300153 Pitchfork 8" Project Address: Lea County, NM

Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 300153. 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. 300153 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 300153



PLAINS ALL AMERICAN EH&S, Midland, TX

Pitchfork 8"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
N/W Fir 13'	S	Mar-20-08 14:20		300153-003
E/W 9'	S	Mar-20-08 14:50		300153-006

T NYIRONMENTAL 1 49 0

Certificate of Analysis Summary 300153 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Pitchfork 8"

Project Id: 2008-028 Contact: Camilla Raynolds Pr

C6-C12 Gasoline Range Hydrocarbons

C12-C28 Diesel Range Hydrocarbons

C28-C35 Oil Range Hydrocarbons

Total TPH

110 jeti 10. 2008-028		3			D 1 NA . 01 00 00 15
Contact: Camille Reynolds					Fri Mar-21-08 03:15 pm
roject Location: Lea County, NM				Report Date:	31-MAR-08
	,	·····		Project Manager:	Brent Barron, 11
	Lab Id:	300153-003	300153-006		
Analysis Requested	Field Id:	N/W Fir 13'	E/W 9'		
Anulysis Requested	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	Mar-20-08 14:20	Mar-20-08 14:50		
BTEX by EPA 8021B	Extracted:	Mar-24-08 09:00	Mar-27-08 08:20		
	Analyzed:	Mar-24-08 21.34	Mar-27-08 13:34		
	Units/RL:	mg/kg RL	mg/kg RL		
Benzene		0.0067 0 0010	0.6172 0.0533		
Toluene		0.0431 0.0020	17.65 0.1066		
Ethylbenzene		0.0297 0.0010	8.720 0.0533		
m,p-Xylenes		0.1566 0.0020	43.33 0.1066		
o-Xylene		0.0541 0.0010	16.22 0.0533		
Xylenes, Total		0.2107	59.55		
Total BTEX		0.2902	86.5372		
Percent Moisture	Extracted:				
	Analyzed:	Mar-24-08 16.30	Mar-24-08 16:30		
	Units/RL:	% RL	% RL		
Percent Moisture		2 12	6.19		
TPH By SW8015 Mod	Extracted:	Mar-24-08 14:30	Mar-24-08 14:30		
; >, ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Analyzed:	Mar-28-08 15:14	Mar-28-08 14:20		
	Units/RL:	mg/kg RL	mg/kg RL		

1880

3470

363

5713

16.0

16.0

160

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

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ND

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153

15.3

Brent Barron Odessa Laboratory Director

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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(PQL) and above the SQL(MDL).
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- * Outside XENCO'S scope of NELAC Accreditation

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



Form 2 - Surrogate Recoveries



Project Name: Pitchfork 8"

Vork Order #: 300153			Project ID	D: 2008-028					
	mple: 300153-003 / SMP	Batc	tch: 1 Matrix	ix: Soil					
Units: mg/kg		SUF	RROGATE RE	COVERY S	STUDY				
BTEX by EPA 802	21B Amo Fou [A	ind	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Analytes									
1,4-Difluorobenzene	0.03		0.0300	· 117	80-120	**			
4-Bromofluorobenzene	0.053	,3	0.0300	178	80-120	**			
Lab Batch #: 718032 San Units: mg/kg	mple: 506398-1-BKS / BKS	Bate SUR	tch: ¹ Matrix RROGATE RE	ix: Solid ECOVERY S	STUDY				
BTEX by EPA 802 Analytes	21B Amo Fou [A	ount Ind	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	0 030	04	0.0300	101	80-120	L			
4-Bromofluorobenzene	0.03	ł	0.0300	119	80-120				
	mple: 506398-1-BLK / BLK	Batc	ll	ix: Solid	L				
Units: mg/kg		SURROGATE RECOVERY STUDY							
BTEX by EPA 802	21B Amo Fou [A	nd	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes				. [D]		I			
1,4-Difluorobenzene	0.032		0.0300	108	80-120				
4-Bromofluorobenzene	0.03	.8	0.0300	106	80-120	L			
	mple: 506398-1-BSD / BSD	Batc		ix: Solid					
Units: mg/kg		SUF	RROGATE RE	COVERY	STUDY				
BTEX by EPA 802 Analytes	21B Amo Fou [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Dıfluorobenzene	0.030	50	0,0300	100	80-120	í			
4-Bromofluorobenzene	0.031	14	0.0300	105	80-120	í			
Lab Batch #: 718459 San	mple: 300153-006 / SMP	Bate	tch: 1 Matrix	ix: Soil	<u>.</u>				
Units: mg/kg			RROGATE RE		STUDY	<u> </u>			
BTEX by EPA 802 Analytes	21B Amo Four [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobenzene	1.73	3	0.0300	5777	80-120	**			
4-Bromofluorobenzene	0.060	51	0.0300	200	80-120	**			

** 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: Pitchfork 8"

/ork Order #: 300153			Project II	D: 2008-028							
Lab Batch #: 718459 Sa	ample: 506613-1-BKS /]			ix: Solid	<u> </u>						
Units: mg/kg		SURROGATE RECOVERY STUDY									
BTEX by EPA 802 Analytes	21B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1,4-Difluorobenzene		0.0343	0.0300	114	80-120	i					
4-Bromofluorobenzene		0.0356	0.0300	114	80-120	í					
Lab Batch #: 718459 Sa	ample: 506613-1-BLK /	BLK Ba	itch: 1 Matri	ix: Solid							
Units: mg/kg	Impie,		JRROGATE RE		STUDY						
BTEX by EPA 80 Analytes	21B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1,4-Difluorobenzene		0.0331	0.0300	110	80-120	[
4-Bromofluorobenzene		0.0343	0.0300	114	80-120	Ī					
Lab Batch #: 718459 Sa	ample: 506613-1-BSD / 1	BSD Ba	ntch: 1 Matri	ix: Solid	<u> </u>						
Units: mg/kg	·····		SURROGATE RECOVERY STUDY								
BTEX by EPA 802	21B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
Analytes		0.0333	2.0200		00.120	I					
4-Bromofluorobenzene		0.0332	0.0300	111	80-120 80-120						
	- 200153 003 / SM				00-120						
Lab Batch #: 718508 Sa Units: mg/kg	ample: 300153-003 / SM		itch: Matri	ix: Soil	OTUNV						
TPH By SW8015 N	Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags					
Analytes				[D]		I					
1-Chlorooctane		77.4	100	77	70-135						
o-Terphenyl		36.4	50.0	73	70-135	L					
	ample: 300153-003 S / M			ix: Soil							
Units: mg/kg		SU	IRROGATE RE	ECOVERY S	STUDY						
TPH By SW8015 M Analytes	Vlod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
I-Chlorooctane		85.9	100	86	70-135	I					
o-Terphenyl	1	42.5	50.0	85	70-135						

** 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: Pitchfork 8"

Vork Order #: 300153			•	D: 2008-028						
Lab Batch #: 718508	Sample: 300153-003 SD /			ix: Soil						
Units: mg/kg		SU	RROGATE RE	ECOVERY	STUDY					
TPH By SW		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
I-Chlorooctane	y i c s	80.5	100	81	70-135	 				
o-Terphenyl		38.3	50 0	77	70-133	 				
Lab Batch #: 718508	Sample: 300153-006 / SM	AP Ba	tch: i Matri	ix: Soil	4	<u></u>				
Units: mg/kg			RROGATE RE		STUDY					
TPH By SW Analy		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	yits	84.3	100	84	70-135	<u> </u>				
o-Terphenyl		34.1	50.0	68	70-135	**				
Lab Batch #: 718508	Sample: 506628-1-BKS / 1	BKS Ba	tch: 1 Matri	ix: Solid	<u></u>					
Units: mg/kg		SURROGATE RECOVERY STUDY								
TPH By SW		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analy	ytes			[D]		 				
1-Chlorooctane		82.0	100 50 0	82	70-135	l				
	~ > 506620 1 DI V /				/0-135	I				
Lab Batch #: 718508 Units: mg/kg	Sample: 506628-1-BLK / 1	BLK Batch: 1 Matrix: Solid SURROGATE RECOVERY STUDY								
TPH By SW	V8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analy	iytes		'	[D]	!	1				
1-Chlorooctane		77.6	100	78	70-135	[
o-Terphenyl		31.1	50.0	62	70-135	**				
Lab Batch #: 718508	Sample: 506628-1-BSD /]			ix: Solid						
Units: mg/kg		SU!	RROGATE RE	ECOVERY	STUDY					
TPH By SW Analy		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane		87.5	100	88	70-135	[
o-Terphenyl		39.2	50.0	78	70-135	ſ				

** 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.





Project Name: Pitchfork 8"

Work Order #: 300153 Analyst: SHE	D,	ato Propar	ed: 03/24/200	18		Project ID: 2008-028 Date Analyzed: 03/24/2008						
Lab Batch ID: 718032 Sample: 5063		Batch		0		Matrix: Solid						
Units: mg/kg		BLANI	K/BLANK S	PIKE / B	IANK S	SPIKE DUPLICATE RECOVERY STUDY						
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added {E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Benzene	ND	0.1000	0.0920	92	0.1	0.0934	93	2	70-130	35		
Toluene	ND	0.1000	0.0928	93	0.1	0.0944	94	2	70-130	35		
Ethylbenzene	ND	0.1000	0.0919	92	0.1	0.0948	95	3	71-129	35		
m,p-Xylenes	ND	0.2000	0.1855	93	0.2	0.1902	95	3	70-135	35		
o-Xylene	ND	0.1000	0.0987	99	0.1	0.1001	100	1	71-133	35		
Analyst: SHE	Di	ate Prepar	ed: 03/27/200	18			Date A	nalyzed: ()3/27/2008			
Lab Batch ID: 718459 Sample: 5066	13-1-BKS	Batch	ı#: 1			Matrix: Solid						
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
				FINE / E	SLANK S	TIKE DUTT		RECOVI	ERY STUD	DY		
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	Sample Result	Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD	Control Limits	Control Limits	Flag	
Analytes	Sample Result [A]	Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag	
Analytes Benzene	Sample Result [A] ND	Added [B] 0.1000	Blank Spike Result [C] 0.0802	Blank Spike %R [D] 80	Spike Added [E] 0.1	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G] 81	RPD %	Control Limits %R 70-130	Control Limits %RPD 35	Flag	
Analytes Benzene Toluene	Sample Result [A] ND ND	Added [B] 0.1000 0.1000	Blank Spike Result [C] 0.0802 0.0820	Blank Spike %R [D] 80 82	Spike Added [E] 0.1 0.1	Blank Spike Duplicate Result [F] 0.0809 . 0.0835	Blk. Spk Dup. %R [G] 81 84	RPD %	Control Limits %R 70-130 70-130	Control Limits %RPD 35 35	Flag	

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





10972.66

Project Name: Pitchfork 8"

Work Order #: 300153 Analyst: ASA Lab Batch ID: 718508	Sample: 506628-1-BKS							Project ID: 2008-028 Date Analyzed: 03/28/2008 Matrix: Solid					
Units: ^{mg/kg} TPH By SW8(Analytes	015 Mod Sam	Blank Spike Blank Blank					BLANK SPIKE DUPLICATE RECOVERY STUDY Spike Blank Blk. Spk Control Control Added Spike Dup. RPD Limits Limits [E] Result [F] [G] % %R %RPD					Flag	
C6-C12 Gasoline Range Hydro	carbons	ND	1000	889	89	1000	931	93	5	70-135	35		
C12-C28 Diesel Range Hydroc	arbons	ND	1000	877 .	88	1000	926	93	5	70-135	35		

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



Form 3 - MS / MSD Recoveries

Project Name: Pitchfork 8"



Work Order #: 300153	Project ID: 2008-028										
Lab Batch ID: 718508 Date Analyzed: 03/28/2008 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	03/24/2	2008	An	tch #: alyst: RIX SPI		x: Soil	OVERV	STUDY		
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
C6-C12 Gasoline Range Hydrocarbons	[A]	[B]	855	[D] 84	[E] 1020	812	[G] 	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	126	1020	975	83	1020	921	78	6	70-135	35	

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

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



Sample Duplicate Recovery



Project Name: Pitchfork 8"

Work Order #: 300153

Lab Batch #: 718053 Date Analyzed: 03/24/2008 QC- Sample ID: 300152-001 D	Project ID: 2008-028 Date Prepared: 03/24/2008 Analyst: RBA Batch #: 1 Matrix: Soil
Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVER
Percent Moisture	Parent SampleSampleControlResultDuplicateRPDLimits[A]Result%RPD
Analyte	(A) [B]
Percent Moisture	1 57 1.22 25 20 F

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

	vironment	al Lab of T	exa	IS						00 W	est	I-20	Eas	ıt	cust	TODY R	EC	DRD	AN	ID A	PI	1011	SIS I 2: 43 43	32-5	63-1	800				
	Project Manager	Ken Dutton			PAGE 01 O	F_01										Pr	ojec	t Nar	ne:	рιт	CHE	OR	K 8	•						
	Company Name	Basin Environmental Se	rvice T	echno	logies, LLC												Pr	ojec	:#:_	200	8-02	28								
	Company Address:	P. O. Box 301														1	Proje	ect L	oc I	Lea	Cou	nty,	NM							
	City/State/Zip	Lovington, NM 88260																РС)#:_	PAA	- <u>c</u> .	Rey	mole	is _						
	Telephone No	(505) 441-2124		-		Fax No		(50	5) 39	16-143	29					Repor	t Fo	rmat	. [X	Stane	tard		Ľ] тв	RP		N	PDE	s
	Sampler Signature	Ken De	et l	en D		e-mail		<u>kđ</u>	utte	on@	ba	sin	env	.co	m		_													-
(lab use	only)		-														⊢	-		TC	-	Ana	lyze	For.	T	1		T	┥▖	
ORDE	3001	53						5	Dro	serva	tion	E C	of Co.	ötalo	ers 1	Matrix	Ľ.		- T	101		+	Ŧ	P	-				2	
AB # (lab use only)		d code	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	- wid Fatered	Total # of Containers 40.		- ONH			Na,S,O,			DW-Drinking water SL-Skudd CW - Croundwater 5-SollSol NP-Non-Potable Socify Oth	12	1X 10	Cations (Ca. Mg Na, K)	Amons (Ct SO4 Alkalinity)	SAR / ESP / CEC	Metals As Ag ball od of Formig Se	V usures Serri volatifes	BTEX 80218/5030 or BTEX 8260		NORM	CHLORIDES		RUSH TAT (Pro-Schedule) 24	F
1	R	/P 13'			20-Mar-08	1400			x							SOIL				Ť	1			Τ						Ι
2.	S/E	Fir 13'			20-Mar-08	1410		1	X							SOIL							Τ							
3	N/V	V Fir 13'		L	20-Mar-08	1420		1	X							SOIL	x)	4				\perp	
<u> </u>	1	IW 9'	ļ	<u> </u>	20-Mar-08	1430		1	x							SOIL								_	1	₋		-+-	4	+-
<u> </u>		W 9'	<u> </u>		20-Mar-08	1440 /		1	x	_				ļ		SOIL				_		_		_	1	1	\vdash	_	╇	╇
6	E	W 9'	1		20-Mar-08	1450		1	x		1		⊥	_		SOIL	X				\downarrow	_	4)	4		┢		+	4
1	v	/W 9*			20-Mar-08	1500	-	1	x	_	+	_	1	_		SOIL	┢			4	_	_		4	+-	╞			+	╋
- 8		S/P		_	20-Mar-08	1510		1	×		+	╞	+	┢		SOIL	╀╴			-	+	-	+-	+-	+	+	┢──		+	┿
			+						-	┿	+	╋	╋	┢			┢	\mathbb{H}	-	-+	╉	+	┿	┿	╋	┿	┝╌		╉	╋
Relinguis	ned by	W SAMPLES AS INDIC	15 15	ima 15 ime	Received by		ES	FOF	R PC	DSSI		E AI	NAL	YSI	Dai	te	Tim Tim	ю Ю	San VOC Lab Cus Cus San	tody tody by \$	Conf ree c in co sea sea Han	taine Intali Is or Is or Is or Is or	imen asin adsp icon icoo liven lient 1 U	itact pace i) itaini der(s ed	er(5) s)		(
Relinquis	hed by	Date	T	ime	Received by ELC	Le Fr	h	5						6	Ба 5-2		Tim /5/	-					on Ri	ecei	pt		1	3.0	•	c

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

Client	Plains
Date/ Time	03-21-08 (* 1515
Lab ID #	300153
Initials	JMF

Sample Receipt Checklist

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

Variance Documentation

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 301918

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Pitchfork 8"

2008-00028

22-APR-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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22-APR-08



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

Reference: XENCO Report No: 301918 Pitchfork 8" Project Address: Lea County, NM

Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 301918. 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. 301918 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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そうに、1991年1月1日になった。1991年1月1日には、1991年1日に、1991年1日(1991年1日)に、1991年1日に、1991年1日に、1991年1日に、1991年1日1日(1991年1日) 1991年1日 - 1991年1日に、1991年1日、1991年1日、1991年1日、1991年1日(1991年1日)に、1991年1日に、1991年1日に、1991年1日、1991年1日、1991年1日、1991年1日、1



Sample Cross Reference 301918

PLAINS ALL AMERICAN EH&S, Midland, TX

Pitchfork 8"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Release Point - 12' bgs	S	Apr-11-08 11:20		301918-001
North Wall -10' bgs	S	Apr-11-08 11:28		301918-002
South Wall - 10' bgs	S	Apr-11-08 11:35		301918-003
East Wall - 10' bgs	S	Apr-11-08 11:43		301918-004
West Wall - 9' bgs	S	Apr-11-08 11:51	٠	301918-005
East Floor - 12' bgs	S	Apr-11-08 11:59		301918-006
West Floor - 12' bgs	S	Apr-11-08_12:10		301918-007
Stockpile	S	Apr-11-08 12:24		301918-008
West Wall - 8' bgs	S	Apr-11-08 12:35		301918-009



Certificate of Analysis Summary 301918 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Pitchfork 8"

Project Id: 2008-00028 Contact: Camille Reynolds Project Location: Lea County, NM

Date Received in Lab: Thu Apr-17-08 08:10 am

Report Date: 22-APR-08

- ·								Project Ma	nager:	Brent Barron	, 11		
	Lab Id:	301918-001		301918-0	02	301918-0	003	301918-0	004	301918-	005	301918-	006
Analysis Desworted	Field Id:	Release Point - 12' b	gs	North Wall -1	0' bgs	South Wall -	10' bgs	East Wall - I	0' bgs	West Wall -	9' bgs	East Floor -	12' bgs
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	-
	Sampled:	Apr-11-08 11:20		Apr-11-08 1	1:28	Apr-11-08	11:35	Apr-11-08	11:43	Apr-11-08	11:51	Apr-11-08	11 59
BTEX by EPA 8021B	Extracted:	Apr-17-08 17.33	3	Apr-17-08 1	7:33	Apr-17-08	17.33	Apr-17-08	17:33	Apr-18-08	11:46	Apr-18-08	11 46
	Analyzed:	Apr-17-08 20:51	I	Apr-17-08 2	21:15	Apr-17-08	21.38	Apr-17-08	22:02	Apr-18-08	14:21	Apr-18-08	14.45
	Units/RL:	mg/kg I	RL	mg/kg	RL.	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND 0.00	10	0.0262	0.0010	0 0013	0 0010	0 0046	0.0010	0.0380	0.0010	0.0017	0.0010
Toluene		0.0039 0.00	20	0 2501	0.0020	0 0096	0 0020	0.0771	0.0020	0.2203	0.0020	0.0249	0.0020
Ethylbenzene		0.0040 0.00	10	0.0743	0.0010	0 0067	0.0010	0.0530	0.0010	0.0708	0.0010	0.0280	0.0010
m,p-Xylenes		0.0151 0.00	20	0 3610	0.0020	0 02 59	0.0020	0.2301	0.0020	0.3937	0.0020	0.1328	0.0020
o-Xylene		0.0082 0.00	10	0 1078	0.0010	0 01 12	0.0010	0.1365	0.0010	0.1259	0.0010	0.0860	0.0010
Xylenes, Total		0.0233		0.4688		0.0371		0.3666		0.5196		0.2188	
Total BTEX		. 0.0312		0.8194		0 0547		0.5013		0.8487		0.2734	
Percent Moisture	Extracted:												
	Analyzed:	Apr-17-08 16:30		Apr-17-08 1	6 30	Apr-17-08	16.30	Apr-17-08	16:30	Apr-17-08	16.30	Apr-17-08	16.30
	Units/RL:	% I	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		1.42		61		1.36		1.23		.723		.971	
TPH By SW8015 Mod	Extracted:	Apr-18-08 15.25	5	Apr-18-08 1	5:25	Apr-18-08	15:25	Apr-18-08	15.25	Apr-18-08	15:25	Apr-18-08	15:25
	Analyzed:	Apr-18-08 19 35	5	Apr-18-08 2	20:00	Apr-18-08	20:25	Apr-21-08	09·44	Apr-20-08	09·14	Apr-20-08	09.39
	Units/RL:	mg/kg l	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		62.5 15	5.2	23.7	151	ND	15.2	289	759	39.1	15.1	108	15.1
C12-C28 Diesel Range Hydrocarbons		2660 15	5.2	63.9	15.1	41 1	15.2	5810	759	118	15.1	2860	151
C28-C35 Oil Range Hydrocarbons		595 15	5.2	54 6	151	ND	15.2	1170	75.9	92.9	15.1	671	15
Total TPH		3317 5		142.2		41.1		7269		250		3639	

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

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Brent Barron

Odessa Laboratory Director



Project Id: 2008-00028

Project Location: Lea County, NM

Contact: Camille Reynolds

Certificate of Analysis Summary 301918 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Pitchfork 8"

Date Received in Lab: Thu Apr-17-08 08:10 am

Report Date: 22-APR-08

Project Manager: Brent Barron, II

					Project Manager:	Blein Barlon, II
	Lab Id:	301918-007	301918-008	301918-009		
Analysis Requested	Field Id:	West Floor - 12' bgs	Stockpile	West Wall - 8' bgs	l	
Аницуыз Кециемеи	Depth:					
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Apr-11-08 12:10	Apr-11-08 12:24	Apr-11-08 12.35		
BTEX by EPA 8021B	Extracted:	Apr-18-08 11:46	Apr-18-08 11:46	Apr-18-08 11.46		
	Analyzed:	Apr-18-08 15.09	Apr-18-08 15:33	Apr-18-08 15 57		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		0.0124 0.0010	0.0026 0.0010	0.0747 0.0053		
Toluene		0.2214 0.0020	0 0922 0 0020	1.728 0.0106		
Ethylbenzene		0.1246 0.0010	0 0601 0 0010	0.9888 0.0053		
m,p-Xylenes		0.6036 0 0020	0 3997 0.0020	2.915 0.0106		
o-Xylene		0.2743 0 0010	0 1892 0.0010	2.124 0 0053		
Xylenes, Total		0 8779	0.5889	5.039		
Total BTEX		1.2363	0.7438	7.8305		·
Percent Moisture	Extracted:					
	Analyzed:	Apr-17-08 16.30	Apr-17-08 16.30	Apr-17-08 16:30		
	Units/RL:	% RL	% RL	% RL		
Percent Moisture		1 37	.48	5 79		
TPH By SW8015 Mod	Extracted:	Apr-18-08 15.25	Apr-18-08 15.25	Apr-18-08 15:25		
	Analyzed:	Apr-20-08 10:04	Apr-20-08 10:30	Apr-21-08 13:12		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		152 152	87.8 15.1	5820 159		•
C12-C28 Diesel Range Hydrocarbons		2020 152	2210 15.1	30900 159		
C28-C35 Oil Range Hydrocarbons		432 15.2	582 15.1	5180 159		
Total TPH		2604	2879 8	41900		

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

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Brent Barron

Odessa Laboratory Director



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

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5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
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Project Name: Pitchfork 8"

Vork Order #: 301918			-): 2008-0002	.8	
Lab Batch #: 720343	Sample: 301918-001 / SMP			ix: Soil		
Units: mg/kg		SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EP.		Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analyte	28			[D]		
1,4-Dıfluorobenzene		0.0350	0.0300	117	80-120	
4-Bromofluorobenzene		0.0357	0.0300	119	80-120	
Lab Batch #: 720343	Sample: 301918-002 / SMP	Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg	Г	SU	RROGATE RI	ECOVERY	STUDY	1 1888
BTEX by EP. Analyte		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Dıfluorobenzene		0.0328	0.0300	109	80-120	
4-Bromofluorobenzene		0.0331	0.0300	110	80-120	
Lab Batch #: 720343	Sample: 301918-003 / SMP	Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg	Г		RROGATE RI	ECOVERY	STUDY	
BTEX by EP.	A 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analyte	es			[D]		
1,4-Difluorobenzene		0.0355	0.0300	118	80-120	
4-Bromofluorobenzene		0.0325	0.0300	108	80-120	
Lab Batch #: 720343	Sample: 301918-004 / SMP	` Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg		SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EP Analyte		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0334	0.0300	111	80-120	
4-Bromofluorobenzene		0.0356	0.0300	119	80-120	
Lab Batch #: 720343	Sample: 507702-1-BKS / BI	KS Ba	tch: 1 Matri	ix: Solid		
Units: mg/kg	Г	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA Analyte		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0320	0.0300	107	80-120	
4-Bromofluorobenzene		0.0333	0.0300	111	80-120	

** 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: Pitchfork 8"

/ork Order #: 301918	ט ער א	-): 2008-0002	.8	
Lab Batch #: 720343 Sample: 507702-1-BLK / Units: mg/kg		tch: Matri RROGATE RE	ix: Solid	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	
Lab Batch #: 720343 Sample: 507702-1-BSD / Units: mg/kg		tch: ¹ Matri RROGATE RE	ix: Solid	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0 0300	111	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	
Lab Batch #: 720487 Sample: 301918-005 / SM	IP Ba	tch: 1 Matri	ix: Soil		
Units: mg/kg		RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	
Lab Batch #: 720487 Sample: 301918-006 / SM Units: mg/kg		tch: ¹ Matri RROGATE RE	ix: Soil	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	80-120	
4-Bromofluorobenzene	0 0404	0.0300	135	80-120	**
Lab Batch #: 720487 Sample: 301918-007 / SM Units: mg/kg		tch: ¹ Matri RROGATE RE	ix: Soil	STUDV	
BTEX by EPA 8021B	Amount	True		Control	
Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
1400		0.0200			
1,4-Dıfluorobenzene	0 0337	0.0300	112	80-120	

** 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: Pitchfork 8"

Vork Order #: 301918		Project II	D: 2008-0002	.8	
Lab Batch #: 720487 Sample: 301918-008 /	SMP Ba	tch: ¹ Matr	ix: Soil		
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	
Lab Batch #: 720487 Sample: 301918-009 /	SMP Ba	tch: 1 Matr	ix: Soil		
Units: mg/kg		RROGATE R		STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.9411	0.0300	3137	80-120	**
4-Bromofluorobenzene	0.1545	0.0300	515	80-120	**
Lab Batch #: 720487 Sample: 302002-001 S	/MS Ba	tch: ¹ Matr	ix: Soil	II	
Units: mg/kg		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	0.0354	0.0300	118	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	
Lab Batch #: 720487 Sample: 302002-001 S	D/MSD Ba	tch: 1 Matr	ix: Soil	<u></u>	
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Dıfluorobenzene	0.0348	0.0300	116	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	
Lab Batch #: 720487 Sample: 507783-1-BK	S/BKS Ba	tch: 1 Matr	ix: Solid	•	
Units: mg/kg		RROGATE R		STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Dıfluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

** 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: Pitchfork 8"

	Project I	D: 2008-0002	28	
BLK / BLK Bat	tch: 1 Matr	ix: Solid		
SU	RROGATE R	ECOVERY (STUDY	
Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
0.0329	0.0300	110	80-120	
0.0254	0.0300	85	80-120	
BSD / BSD Baf	tch: 1 Matr	rix: Solid	<u></u>	
			STUDY	
Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
0.0279	0.0300	93	80-120	<u> </u>
0.0255	0.0300	85	80-120	[
I / SMP Bat	tch: 1 Matr	riv: Soil	<u> </u>	
			STUDY	
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		[D]		
70.2	100	70	70-135	ļ
35.7	50.0	71	70-135	L
SU	RROGATE R	ECOVERY S	STUDY	
Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
70.2	100	70	70-135	[
36.3	50.0	73	70-135	[
3 / SMP Bat	tch: 1 Matr	rix: Soil		
SU	RROGATE R	ECOVERY	STUDY	
Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
84.8	100		70-135	İ
	50.0	83	70-135	i
	SU Amount Found [A] 0.0329 0.0254 BSD / BSD BSD / BAT 0.0279 0.0255 0.0255 O1 / SMP Bat 70.2 35.7 2 / SMP Bat SUI Amount Found [A] 70.2 36.3 3 / SMP Bat SUI Amount Found [A] The suite	BLK / BLK Batch: 1 Matr SURROGATE RI Amount True Amount Found Amount [B] 0.0329 0.0300 0.0300 BSD / BSD Batch: 1 Matr SURROGATE RI Matr Matr SURROGATE RI Matr Matr Amount True Amount [B] 0.0279 0.0300 0.0279 0.0300 0.0279 0.0300 0.0255 0.0300 0.0279 0.0300 0.0255 0.0300 0.0279 0.0300 0.0255 0.0300 0.0279 0.0300 0.0255 0.0300 0.0279 0.0300 0.0279 0.0300 0.0272 0.0300 0.0279 0.0300 0.0272 100 35.7 50.0 2/ SMP Batch: 1 Matr Found Amount [B] 1 70.2 100 36.3 50.0 3/ SMP Batch: 1 Matr Found	BLK / BLK Batch: 1 Matrix: Solid SURROGATE Recovery Solid Recovery Solid Amount Found Amount Image: Solid Recovery %R 0.0329 0.0300 110 0.0329 0.0300 85 BSD / BSD Batch: 1 Matrix: Solid SURROGATE Recovery %R [D] 0.0254 0.0300 85 BSD / BSD Batch: 1 Matrix: Solid Version Image: Solid SURROGATE Recovery %R [A] [B] %R [D] %R [D] 0.0279 0.0300 93 0.0255 0.0300 85 MP Batch: 1 Matrix: Soil SURROGATE Recovery [A] [B] Recovery %R [D] %R [D] 70.2 100 70 35.7 50.0 71 2 /	SURROGATE RECOVERY STUDYAmount Found [A]True Amount [B]Recovery $\frac{\sqrt{R}}{\sqrt{R}}$ [D]Control Limits $\frac{\sqrt{R}}{\sqrt{R}}$ [D]0.03290.030011080-1200.02540.03008580-120BSD / BSDBatch:1Matrix: SolidSURROGATE RECOVERY STUDYAmount [A]True (B]Recovery \sqrt{R} (D]Control Limits \sqrt{R} (P)0.02790.03009380-1200.02790.03009380-1200.02550.03008580-1200.02550.03008580-1200.1/ SMPBatch:1Matrix: SoilTrue Amount Found [A]Control Limits \sqrt{R} (D]0.02790.03009380-1200.1/ SMPBatch:1Matrix: SoilSURROGATE RECOVERY STUDYAmount [A]True (B]Control \sqrt{R} (D]70.21007070-1352 / SMPBatch:1Matrix: SoilSURROGATE RECOVERY STUDYAmount [A]Recovery (D)Control Limits \sqrt{R} (D)70.21007070-1353/ SMPBatch:1Matrix: SoilSURROGATE RECOVERY STUDYAmount [A]Recovery (D)Control Limits \sqrt{R} (D)9Batch:1Matrix: SoilSURROGATE RECO

** 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: Pitchfork 8"

Vork Order #: 301918		Project I	D: 2008-0002	28	
Lab Batch #: 720433 Sample: 301918-0	004 / SMP Bate	ch: 1 Matr	rix: Soil		
Units: mg/kg	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					ļ
1-Chlorooctane	94.7	100	95	70-135	
o-Tcrphcnyl	46.8	50.0	94	70-135	
Lab Batch #: 720433 Sample: 301918-0 Units: mg/kg		ich: ¹ Matr RROGATE R	rix: Soil	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	100	85	70-135	
o-Terphenyl	43.6	50.0	87	70-135	
Lab Batch #: 720433 Sample: 301918-0	006 / SMP Bat	tch: 1 Matr	rix: Soil		·
Units: mg/kg	SUI	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	100	88	70-135	
o-Terphenyl	43.6	50.0	87	70-135	
Lab Batch #: 720433 Sample: 301918-0	007 / SMP Bat	tch: 1 Matr	rix: Soil	<u></u>	
Units: mg/kg		RROGATE R		STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctanc	87.0	100	87	70-135	
o-Terphenyl	43.2	50.0	86	70-135	
Lab Batch #: 720433 Sample: 301918-0			rix: Soil		
Units: mg/kg	SUI	RROGATE R	ECOVERY :	STUDY	
TPH By SW8015 Mod	Amount Found	True Amount	Recovery %R	Control Limits %R	Flags
Analytes	[A]	[B]	[D]		ļ
Analytes 1-Chlorooctane	[A] 94.8	100		70-135	

** 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.





Project Name: Pitchfork 8"

/ork Order #: 301918			5	D: 2008-0002	28							
	Sample: 301918-007 SD /			ix: Soil								
Units: mg/kg	·	SU	RROGATE RE	COVERY S	STUDY	• <u></u>						
TPH By SW8015	Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes		!		[D]		L						
1-Chlorooctane		84.5	100	85	70-135							
o-Terphenyl		40.8	50.0	82	70-135							
Lab Batch #: 720433 Units: mg/kg	Sample: 301918-008 / SM		ntch: 1 Matri JRROGATE RE	ix: Soil ECOVERY S	STUDY							
				1								
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		77.6	100	78	70-135	[
o-Terphenyl		41 8	50.0	84	70-135	(
	Sample: 301918-009 / SM			ix: Soil								
Units: mg/kg		SURROGATE RECOVERY STUDY										
TPH By SW8015	j Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes		!	<u> </u> '	[D]	ļ	L						
1-Chlorooctane		137	100	137	70-135	**						
o-Terphenyl		277	50 0	554	70-135	**						
	Sample: 507749-1-BKS /			ix: Solid								
Units: mg/kg		SU	JRROGATE RE	LCOVERY 2	STUDY							
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
I-Chlorooctane		85.2	100	85	70-135	(
o-Terphenyl		46.0	50 0	92	70-135	[
Lab Batch #: 720433	Sample: 507749-1-BLK /	/ BLK Ba [.]	ntch: ¹ Matri	ix: Solid	·							
Units: mg/kg	- -	SU	RROGATE RE	ECOVERY S	STUDY							
TPH By SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
I-Chlorooctane		81.3	100	81	70-135	[
o-Tcrphcnyl		43.4	50.0	87	70-135	1						
4			1 .		1 ,							

** 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.





Project Name: Pitchfork 8"

Vork Order #: 301918 Lab Batch #: 720433 Units: mg/kg	Sample: 507749-1-BSD / B	Project ID: 2008-00028 BSD Batch: 1 Matrix: Solid SURROGATE RECOVERY STUDY									
TPH By SW Analy		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1-Chlorooctane		88 2	100	88	70-135						
o-Terphenyl		49.1	50.0	98	70-135						

** 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: Pitchfork 8"

Work Order #: 301918 Analyst: SHE	D	ate Prepar	ed: 04/17/200)8	•				2008-00028 04/17/2008		
Lab Batch ID: 720343 Sample: 507702-1-	BKS	Bate	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	ICATE	RECOVI	ERY STUD	Ŷ	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0817	82	0.1	0.1041	104	24	70-130	35	
Toluene	ND	0.1000	0.0811	81	0.1	0.1032	103	24	70-130	35	
Ethylbenzene	ND	0.1000	0.0937	94	0.1	0.1130	113	19	71-129	35	
m,p-Xylenes	ND	0.2000	0.1938	97	0.2	0.2329	116	18	70-135	35	
o-Xylenc	ND	0.1000	0.0946	95	0.1	0 1094	109	15	71-133	35	
Analyst: SHE		•	ed: 04/18/200)8				•	04/18/2008		
Lab Batch ID: 720487 Sample: 507783-1-	BKS		h #: 1					Matrix: S			
Units: mg/kg	-	BLAN	K /BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	9Y	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0900	90	0.1	0.0940	94	4	70-130	35	
Toluene	NĎ	0.1000	0.0884	88	0.1	0.0920	92	4	70-130	35	
Ethylbenzene	ND	0,1000	0.0944	94	0.1	0.0985	99	4	71-129	35	
m,p-Xylenes	ND	0.2000	0 1945	97	0.2	0.2031	102	4	70-135	35	
o-Xylenc	ND	0.1000	0.0903	90	0.1	0.0939	94	4	71-133	35	

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





,

Project Name: Pitchfork 8"

Work Order #: 301918 Analyst: ASA Lab Batch ID: 720433	Sample: 507749-1-BKS	Date Prepared: 04/18/2008 Project ID: 2008-00028 -BKS Batch #: 1 Date Analyzed: 04/18/2008										
Units: mg/kg			BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPL	ICATE 1	RECOVI	ERY STUD	Ŷ	
TPH By SW80)15 Mod Sam	Blank pple 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]	[D]	[E]	Result [F]	[G]				
C6-C12 Gasoline Range Hydrod	carbons	ND	1000	858	86	1000	866	87	1	70-135	35	
C12-C28 Diesel Range Hydroca	arbons	ND	1000	952	95	1000	959	96	1	70-135	35	

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

,



Form 3 - MS / MSD Recoveries

Project Name: Pitchfork 8"



Work Order #: 301918						Project II): 2008-0	0028			
Lab Batch ID: 720487 Date Analyzed: 04/19/2008 Reporting Units: mg/kg	QC- Sample ID: Date Prepared:	04/18/2	008	An	,	1 Matrix SHE					
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	N Spike Added [B]	Spiked Sample Result [C]		Spike Added [E]	KE DUPLICA Duplicate Spiked Sample Result [F]	TE REC Spiked Dup. %R [G]	RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0017	0.1083	0.1041	95	0.1083	0.0966	88	8	70-130	35	
Tolucne	0.0225	0.1083	0.0938	66	0.1083	0.0888	61	8	70-130	35	х
Ethylbenzene	0.0223	0.1083	0.0932	65	0.1083	0.0961	68	5	71-129	35	х
m,p-Xylenes	0.0911	0.2165	0.1887	45	0.2165	0.1726	38	17	70-135	35	х
o-Xylene	0.0347	0.1083	0.0910	52	0.1083	0.0877	49	6	71-133	35	Х
Lab Batch ID: 720433 Date Analyzed: 04/20/2008	QC- Sample ID: Date Prepared:				tch #: alyst:	l Matriy ASA	c: Soil	·			
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		÷
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	152	1010	986	83	1010	893	73	13	70-135	35	
C12-C28 Diesel Range Hydrocarbons	2020	1010	2740	71	1010	2230	21	109	70-135	35	XF

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

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

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





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Project Name: Pitchfork 8"

Work Order #: 301918

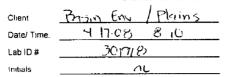
Lab Batch #: 720286 Date Analyzed: 04/17/2008 QC- Sample ID: 301918-001 D Reporting Units: %	Date Pro B	atch #: 1	7/2008	Analy Matr	D: 2008-000 st: RBA ix: Soil ATE REC	
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Percent Moisture		1.42	1.42	0	20	

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

Env	/ironment	al Lab of `	Texa	S								сни	AIN C	DF (cus	τοργ	REC	COR	D,	ANE) AI	NAI	. YS	is f	REQ	ĮUE	ST				
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	Project Manager	Ken Dutton			PAGE 01 OI	F 01										F	roje	ict N	ame	a: <u>P</u>	Itch	nfor	k 8'								
	Company Name	Basin Environmental	Service To	echnol	ogles, LLC												1	Proje	ect #	• <u>s</u>	RS	200	08-0	002	28						
	Company Address	P. O. Box 301															Pre	yject	Loc	ն։ <u>Լ</u>	69 C	our	nty, N	154							
	City/State/Zip:	Lovington, NM 88260	1															1	×0¢	Ø. <u>P</u>	<u> </u>	<u>с.</u>	JR	iyn:	olds						
	Telephone No:	(505) 441-2124				Fax No		(50	5) 31	96-1	429					Rep	ort F	orm	at.)] s	tand	and		D] TR	RP			NPD	ES
	Sampler Signature	<u>bl Black</u>	wal	1		e-mail		kc	utt	on(Qba	ışır	nen	/ <u>.cc</u>	m		_														
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ORDER	an: 301918	5							Pre	esen	ation	81	of Co	ntair	iers	Matri		8	Т	7	IOTA	L I g	+	┢	X						47 ZPro
AB # (lab use only)		LD CODE	3aginning Depth	Ending Depth	Date Sampled	Time Sampled	Teid Filtered	focal # of Contrainers	25616204 BD	HNO,	HC	H,SQ,	NACH NASEO	None	Other (Specify)	12 8	ron Potable Specify Oth	TPH TY OVER BUTSHERE BUTSHERE BUTSHERE	an In the Ma	au au		Cd Cr Dh Ho	Votables	Serruvolatides	BTEX 80218/5030 or BTEX 8260		NORM				RUSH TAT (Pre-Schedule) 24, Standard TAT
01		Point - 12' bgs			11-Apr-08	1120	ľ	1				+	-	\top		SOI		x	T		1		Ť	Ť	X		Γ		\Box		X
02	North W	Vall - 10' bgs			11-Apr-08	1128		1	x							soil	. [x					Ι	Ι	X						X
¢3	South V	Vall - 10' bgs			11-Apr-08	1135		1	х							SOI	-	x					┶	\perp	×	_			\vdash		<u>x</u>
54	East W	ali-10'bgs			11-Apr-08	1143		1				\downarrow				SOI	-	x	1			_	╇	∔	X		\vdash	\square	\vdash	\rightarrow	<u>×</u>
05	West V	Vall - 9' bgs		L	11-Apr-08	1151		1	-		-	_			-	501	_	×	+-	_	_	_	╇	┢	X	+	\vdash	\vdash	┢╾┥	\rightarrow	<u> </u>
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Environmental Lab of Texas

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



Sample Receipt Checklist

	The second	Yee	No	Client Init
<u>#1</u>	Temperature of container/ cooler?			6, °C
#2	Shipping container in good condition?	Ves	No	
#3	Custody Seals intact on shipping container/ cooler?	(Cop	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
#5	Chain of Custody present?	(VB)	No	
#6	Sample instructions complete of Chain of Custody?	1 es	No	
#7	Chain of Custody signed when relinguished/ received?	Yes)	No	
#8	Chain of Custody agrees with sample label(s)?	63	No	ID written on Cont / Lid
#9	Container label(s) legible and intact?	Y@	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No	
#11	Containers supplied by ELOT?	(es	No	
#12	Samples in proper container/ bottle?	Ð,	No	See Below
#13	Samples properly preserved?	Ý	No	See Below
#14	Sample bottles intact?	Yes)	No	
#15	Preservations documented on Chain of Custody?	Yes	No	
#16	Containers documented on Chain of Custody?	Yes	No	
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below
#18	All samples received within sufficient hold time?	Ves	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 304633

for

PLAINS ALL AMERICAN EH&S

Project Manager: Camille Reynolds

Pitchfork 8"

2008-028

30-MAY-08

E NVIRONMENTAL

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

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

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

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

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



30-MAY-08



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

Reference: XENCO Report No: **304633 Pitchfork 8''** Project Address: Lea County, NM

Camille Reynolds:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 304633. 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. 304633 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 304633



PLAINS ALL AMERICAN EH&S, Midland, TX

Pitchfork 8"

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East Wall -1 @ 8' bgs	S	May-27-08 13:00		304633-001

NVIRONMENTAL LABO

Certificate of Analysis Summary 304633 PLAINS ALL AMERICAN EH&S, Midland, TX

Project Name: Pitchfork 8"

Project Id: 2008-028 Contact: Camille Reynolds Project Location: Lea County, NM

Date Received in Lab: Wed May-28-08 08:35 am

Report Date: 30-MAY-08

Project Manager: Brent Barron, II

· · · · · · · · · · · · · · · · · · ·				1 Toject Manager.	21011, 2011011, 11	
	Lab Id:	304633-001				
Analysis Requested	Field Id:	East Wall -1 @ 8' bgs				
Analysis Kequestea	Depth:					
	Matrix:	SOIL				
	Sampled:	May-27-08 13.00				
BTEX by EPA 8021B	Extracted:	May-29-08 12:39				
	Analyzed:	May-29-08 13-29				
	Units/RL:	mg/kg RL				
Benzene		0.0018 0.0010				
Toluene		0 0467 0.0020	 			
Ethylbenzene		0 0269 0.0010				
m,p-Xylenes		0.2067 0.0020				
o-Xylene		0.1088 0.0010				
Total Xylenes		0.3155				
Total BTEX		0.3909				
Percent Moisture	Extracted:					
	Analyzed:	May-28-08 17:00				
	Units/RL:	% RL				
Percent Moisture		ND 100				
TPH by SW8015 Mod	Extracted:	May-28-08 12:20				
	Analyzed:	May-28-08 17.08				
	Units/RL:	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		176 753				
C12-C28 Diesel Range Hydrocarbons		5620 75.3				
C28-C35 Oil Range Hydrocarbons		1340 753				
Total TPH		7136	 -			

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

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Brent Barron

Odessa Laboratory Director



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

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





Project Name: Pitchfork 8"

Vork Order #: 304633			Project ID	2008-028								
Lab Batch #: 723909 Sam	ple: 304633-001 / SMP	Batch	: 1 Matrix	x: Soil								
Units: mg/kg		SURF	ROGATE RE	COVERY S	STUDY							
BTEX by EPA 8021 Analytes	B Amo Fou [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene	0.03		0.0300	113	80-120							
4-Bromofluorobenzene	0.03		0.0300	113	80-120	**						
Lab Batch #: 723909 Samj Units: mg/kg	ple: 509755-1-BKS / BKS											
		SURROGATE RECOVERY STUDY										
BTEX by EPA 80211 Analytes	B Amo Fou [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene	0.02	75	0 0300	92	80-120							
4-Bromofluorobenzenc	0.03	32	0.0300	111	80-120							
Lab Batch #: 723909 Samp	ple: 509755-1-BLK / BLK	Batch	n: 1 Matrix	x: Solid								
Units: mg/kg			ROGATE RE	COVERY S	STUDY							
BTEX by EPA 80211	B Amo Fou [A	nd	True Amount [B]	Recovery %R	Control Limits %R	Flags						
Analytes				[D]								
1,4-Difluorobenzene	0.03		0.0300	119	80-120							
	0.03		0 03 00	101	80-120							
-	ple: 509755-1-BSD / BSD	Batch		x: Solid								
Units: mg/kg			ROGATE RE	COVERY								
BTEX by EPA 8021 Analytes	B Amo Fou [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Dıfluorobenzene	0 02	77	0.0300	92	80-120							
4-Bromofluorobenzene	0.03	23	0.0300	108	80-120							
Lab Batch #: 723783 Samp	ple: 304633-001 / SMP	Batch	: 1 Matri	x: Soil								
Units: mg/kg			ROGATE RE		STUDY							
TPH by SW8015 Mo Analytes	Dd Amo Fou [A	nd	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
I-Chlorooctane	95.	7	100	96	70-135							
o-Terphenyl	52.1	3	50.0	105	70-135	 I						

** 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.





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1

Project Name: Pitchfork 8"

ork Order #: 304633 Lab Batch #: 723783 Sample	e: 509699-1-BKS / BKS	Project ID: 2008-028 / BKS Batch: 1 Matrix: Solid										
Units: mg/kg		SURROGATE RECOVERY STUDY										
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
1-Chlorooctanc	101	100	101	70-135								
o-Terpheny]	49.3	50.0	99	70-135								
Lab Batch #: 723783 Sample	e: 509699-1-BLK / BLK	Batch: 1 Mat	rix: Solid	•								
Units: mg/kg		SURROGATE RECOVERY STUDY										
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
Analytes					·							
I-Chlorooctanc	98.4	100	98	70-135								
o-Terphenyj	54.1	50.0	108	70-135								
Lab Batch #: 723783 Sample	e: 509699-1-BSD / BSD	Batch: 1 Mat	rix: Solid									
Units: mg/kg		SURROGATE R	ECOVERY	STUDY								
TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
1-Chlorooctane	102	· 100	102	70-135								
o-Terphenyl	50.9	50.0	102	70-135								

** 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.





Nº Materia .

Project Name: Pitchfork 8"

Work Order #: 304633 Analyst: SHE	Da	ate Prepar	ed: 05/29/200		Project ID: 2008-028 ite Analyzed: 05/29/2008									
Lab Batch ID: 723909 Sample: 509755-1-1		-						Matrix: Solid						
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]							
Benzene	ND	0.1000	0.0967	97	0.1	0.0853	85	13	70-130	35				
Toluene	ND	0.1000	0.1031	103	0.1	0.0904	90	13	70-130	35				
Ethylbenzene	ND	0.1000	0.1186	119	0.1	0.1038	104	13	71-129	35				
m,p-Xylencs	ND	0.2000	0.2337	117	0.2	0 2117	106	10	70-135	35				
o-Xylene	ND	0.1000	0.1167	117	0.1	0.1074	107	8	71-133	35				
Analyst: ASA	Da	Date Prepared: 05/28/2008						Date Analyzed: 05/28/2008						
Lab Batch ID: 723783 Sample: 509699-1-1	BKS	Batc	h #: 1					Matrix: S	Solid					
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUP	LICATE	RECOVE	ERY STUD	Y				
TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1060	106	1000	1070	107	1	70-135	35				
C12-C28 Diesel Range Hydrocarbons	ND	1000	1010	101	1000	1020	102	1	70-135	35				

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



Sample Duplicate Recovery



Project Name: Pitchfork 8"

Work Order #: 304633

Lab Batch #: 723811 Date Analyzed: 05/28/2008 QC- Sample ID: 304633-001 D	Date Prepared: 0: Batch #:	5/28/2008 1	Analy	D: 2008-028 st: JLG ix: Soil	8
Reporting Units: %	SAMPL	E / SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Samp Result [A]	ole Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
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.

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	Preject Manager	Curt Stanley				PAGE 01 0	F 01									_		Pro	ect	Nan	ie.	что	HF	DR	< 8"							
	Company Name Basin Environmental Service Technologies, LLC																		Pro	ect	#:	2008	-02	3						_		
	Company Address	P D. Box 30	1															P	oje	et Le	ю· <u>I</u>	.ea C	oun	ty, N	M							
	City/State/Zip.	Lovington, N	M 88260																	ΡO	#: 5	-	- C 1	Reyn	nolds	,						
	Telephone No	(505) 441-21	24				Fax No		(50	15) 3	96-14	429					Rep	ort	For	mat:	Ī	× s	tand	and		<u> </u>	TRRF	, ,] NP	DES	5
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(lab use)	C	202								_		ation					_					TCL TOTA		t	E	x					48 72 M	
LAB# (ab use only)	FIE	LD CODE 11 -1 @ 8' bg	5	Beginning Depth	Ending Depth	Sample Sa	Time Sampled	F retd F thered	L Total # of Containers	02111120		HCI H SO.						Na - Non Potable Specify Oth	BIA	1	Catory (Ca Mg Na K)	Americ (CI SOA Aleainay)	Metals As Ag Ba Cd Cr Pb Hq Se	Volames	Semuolatites	X BIEX 80218/5030 BIEX 8280	RCI	CHIORDES			RUSH TAT (Pril Schedule) 24.	K Standard T&T
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Reinquisi Reinquisi Reinquisi	to by St-		Date D25/28 Date Date	87	me me	Received by Received by	A									Date	-	۲ ۲	îme Îme		iam OC ust ust iam b	ple C s Fre ls on ody s ody br>s ody s ody s s s ody s ody e of conta eals eals and npter uner?	Head aine on c on c Deliv (Ciles	vered nt Re UPS	ict? ce? iner(s r(s) i i sp ? 5 [s) DHL	Fe		Lon		21	
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Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client	Basin Env / Plains
Date/ Time	<u>57808 8:35</u>
Lab ID #	304633
Initials	G1

Sample Receipt Checklist

	bumpic Receipt	UNCORNEL			
					lient Initia
#1	Temperature of container/ cooler?	(Yes	No		
#2	Shipping container in good condition?	(es)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	-
#4	Custody Seals intact on sample bottles/ container?	(es	No	Not Present	
#5	Chain of Custody present?	Yes?	No		
#6	Sample instructions complete of Chain of Custody?	Kes	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 matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	(des	No	See Below	
#14	Sample bottles intact?	Ves	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)?	Kes	No	See Below	
#18	All samples received within sufficient hold time?	Kes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	
			<u></u>		

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

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

2

			Rele	ease Notific	ation	and Co	orrective A	Action	1			
				OPER A	al Report)	Final Report						
Name of Co		-			nille Reynolds							
		Hwy 82, Lov	vington, l	NM 88260			No. 505-441-0					
Facility Nat	me Pitchto	rk 8″				Facility Typ	e 8"Steel Pipe	line				
Surface Ow	mer BLM			Mineral O	wner				Lease 1	No.]	
				LOCA	TIO	N OF REI	LEASE					
Unit Letter B						South Line	Feet from the	East/	West Line	County Lea		
Latitude_32° 08' 15.7" Longitude_103° 31' 30.1"												
				NAT	URE	OF REL	EASE			ť	\$ 0	
Type of Rele	ase Crude C	Dil					Release 5 barre	ls	Volume I	Recovered 0 ba	rrels	
Source of Re							lour of Occurren	nce		Hour of Discov	/ery	
Was Immedi	ate Notice (iven?		•		1/23/2008 If YES, To			1/23/200	8@16:45		
]Yes [] No 🔲 Not Re	quired	Pat Richard			D	ECEN		
By Whom? (Camille Rey	nolds					lour 1/28/2008				VEL	
Was a Water	course Read		Yes 🛛	1 No		If YES, Vo	lume Impacting	the Wat	ercourse.			
If a Waterco	· · · · · · · · · · · · · · · · · · ·			-		<u> </u>				FEB 0 8 2	108	
installed on t on the line is 4 feet bgs at 1 Describe Are oil release wa	he line to m approximate the release p a Affected a as deemed to	itigate the rele ely 60 psi and oint. Ind Cleanup A b be a non-rep	the gravi	n Taken: Internal line is an 8-inch st ty of the sweet cru cen.* The initial vi lease. Upon furth ckpiled on site on	eel gath ide oil is isual imper excav	ering line that s 42. The swo pacted area w vation of the r	t produces appreter crude has an approximate	H_2S con	y 1,800 bar tent of <10 long by 4 fc	rels of oil per da ppm. The line	ay. The pressure is approximately at time the crude	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.												
(15		OIL CON	ISERV	ATION	DIVISION		
Signature!	(U)	LULE		z CA TON	<u>と</u>			J	-10km	Son		
Printed Name	: Camille R	eynolds)	<u> </u>		Approved by	District Supervi	10 NMI	ENTAL E	NGINEER		
Title: Remedi	ation Coord	linator		· · · · · · · · · · · · · · · · · · ·			e: Z.8.02			Date: 4.8	.08	
E-mail Addre	ss: cjreynolo	is@paalp.com	<u>n</u>	- -		Conditions of Approval:						
Date: 2/6/200				none:505-441-096	5	SUBMIT	RLAND / FI	PAL	<u>C.141</u>	1RP. 1-	181	
Attach Addit	ional Sheet	ts If Necessa	ry	f co	HO	8070	7LAND/FI 51155	-				