State of New Mexico Energy Minerals and Natural Resources

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

٩.

HOBBSOCD

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

			Rele	ease Notifica	atio	n and Co	orrective A	ction			
					1F	<b>RP-2068</b>					
						OPERA	TOR		🗌 Initia	al Report (X	Final Report
Name of Co	mpany	Plains Pipel	ine, LP	<u> </u>		Contact	Jason Henry	1000			
Address 2	530 State	Highway 21	$\frac{4}{1}$ , Denve	r City, Texas 793	523	Telephone I	No. $(5/5) 441$ -	1099	Unit Tio	In	
Facinty Nat	ne South	liand Koyai	ty 2-1110	i vaive		Facility Typ	e Out-oi-seivi	ice Laci	Unit Tie-	·III	
Surface Ow	ner Dec	k Estate		Mineral Ov	wner				Lease N	No.	]
				LOCA	τιο	N OF RE	LEASE	_			
Unit Letter "B"	Section 9	Township 21S	Range 37E	Feet from the	North	n/South Line	Feet from the	East/W	/est Line	County Lea	
		I	Latitude	32º 49705 <sup>°°</sup> Nort	th	Lo	ongitude 103°	16452 V	Vest		
<b></b>				NAT	URE	OF REL	EASE				
Type of Release Crude Oil						Volume of	Release 5 bbls		Volume F	Recovered 1 bb	
Source of Re	Source of Release 2" Valve					Date and H 1/17/2009	lour of Occurrence	ce	Date and 1/17/2009	Hour of Discove @ @ 1145	ry
Was Immedi	ate Notice C	Jiven? X	Yes No	Not Required		If YES, To	Whom? Larry J	ohnson			
By Whom? Jason Henry					Date and I	lour 1/19/2009 @	<u>ð</u> 1425 (v	voice mess	sage)		
Was a Watercourse Reached?				If YES, Vo	olume Impacting	the Wate	rcourse.				
If a Watercou	urse was Imp	pacted, Descr	ibe Fully.'	ķ					1	1	
Describe Cau unit had been disposal facil	use of Proble n removed c lity.	em and Reme ausing a relea	edial Actionates as a of cruck of the cruck of	on Taken. A cow ru le oil. The impact	ubbed ed cal	against a 2" v liche and soil	valve handle caus was excavated an	ing the v d stockp	alve to op iled to awa	en at a facility w ait transportation	here the LACT to an approved
Describe Are transported t Environmen	a Affected a o Lea Static tal Site Clo	and Cleanup on Landfarm, sure Request	Action Ta non-impa , dated M	ken. Site was exca leted soil was pure <b>arch 2009, for re</b> n	avated hased nedia	l, confirmation I from landow tion details.	soil samples we ner and the exca	re collect vation w	ted from th as backfill	ne excavation, im ed. Please see	pacted soil was attached Basin
I hereby cert regulations a public health should their or the enviro federal, state	ify that the ll operators or the envi operations h onment. In , or local lav	information are required ronment. The ave failed to addition, NM vs and/or regu	given abor to report e acceptar adequatel 10CD acc ilations.	ve is true and com and/or file certain nce of a C-141 rep y investigate and ro reptance of a C-14	plete releas oort by emedi 1 rep	to the best of se notification y the NMOCE iate contamina ort does not r	my knowledge a s and perform cc marked as "Fina tion that pose a t elieve the operate	and under prrective al Report hreat to p or of res	rstand that actions fo t" does not ground wa ponsibility	pursuant to NM r releases, which t relieve the oper ter, surface wate r for compliance	OCD rules and n may endanger rator of liability r, human health with any other
	$\cap$		1/				OIL CON	SERV	ATION	DIVISION	
Signature:	Jaco	n K	lenny			Approved by	ENN (L	e Engr	2	$\cap$	
Printed Name	e: Jason Her	ıry					District Supervis	<u>,,,, C</u>	Sto	lier	
Title: Remed	liation Coor	dinator				Approval Da	te: 4.29,	09 1	ر Expiration	Date:	
E-mail Addre	ess: jhenry@	paalp.com				Conditions	Approval:				
Date:4/29/20	09		Р	hone: (575) 441-10	)99	( / /	<u>RP-20</u>	<u>)68</u>			
								F	RECE	EIVED	
									MAY 0	7 2009	

## Basin Environmental Consulting, LLC

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

â Effective Solutions

## SITE CLOSURE REQUEST

### PLAINS MARKETING, L.P. (231735) Southland Royalty 2-Inch Valve Lea County, New Mexico Plains SRS # 2008-186 UNIT B (NW/NE), Section 9, Township 21 South, Range 37 East Latitude 32 ° 29' 49.8" North, Longitude 103 ° 09' 51.9" West NMOCD Reference # 1RP-2068

Prepared For:

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

MAY 0 7 2009 HOBBSOCD

Prepared By: Basin Environmental Consulting, LLC P.O. Box 381 Lovington, New Mexico 88260

March 2009

Project Manager

## **TABLE OF CONTENTS**

INTRODUCTION AND BACKGROUND INFORMATION	1
NMOCD SITE CLASSIFICATION	1
SUMMARY OF FIELD ACTIVITIES	2
SITE CLOSURE REQUEST	3
LIMITATIONS	3
DISTRIBUTION	4

## FIGURES

Õ

Ŏ

Ď

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

## TABLES

Table 1 - Concentrations of BTEX and TPH and Chlorides in Soil

## APPENDICES

Appendix A - Laboratory Reports Appendix B – Photographs Appendix C - Release Notification and Corrective Action (Form C-141)

.

### INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Marketing, L.P. (Plains), has prepared this Site Closure Request for the release site known as the Southland Royalty 2-Inch Valve (SRS# 2009-023). The site is located in Unit Letter B (NW ¼ NE ¼), Section 9, Township 21 South, Range 37 East, in Lea County, New Mexico. The property is owned by the Millard Deck Estate. The site latitude is 32° 29' 49.8" North, and the longitude is 103° 09' 51.9" West. The Site Location Map and Site and Sample Location Map are provided as Figure 1 and Figure 2, respectively. The Release Notification and Corrective Action (NMOCD Form C-141) indicated approximately five (5) barrels of crude oil was released from the Plains pipeline and one (1) barrel was recovered during the initial response activities. The Release Notification and Corrective Action is provided as Appendix C.

On January 23, 2009, Basin, on behalf of Plains responded to a pipeline release located on the lateral from the Hawk 4-Inch pipeline. Plains operations personnel mitigated the crude oil release by installing a bull plug in the 2-inch valve on the out of service LACT unit. The impacted soil excavated during initial response activities was stockpiled on a 6-mil poly liner adjacent to the excavation. The initial visually stained area covered an area measuring approximately 100 feet in length by 8 feet in width to the south of the valve and approximately 200 feet in length by 8 feet in width to the valve.

### NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) water well database did not identify the average depth to groundwater information for Section 9, Township 21 South, Range 37 East. The NMOSE database indicated depth to groundwater was approximately 75 feet below ground surface (bgs) in Section 4 of the same township and range. Utilizing a depth to groundwater of 75 feet bgs, a score of ten (10) points is assigned to the Southland Royalty 2-Inch Valve release, based on the NMOCD depth to groundwater criteria.

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

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

Based on this data, the site has an NMOCD Ranking Score of ten (10) points. The NMOCD Guidelines for the Remediation of Leaks, Spills and Releases (NMOCD, 1993) sets the remediation levels at:

Benzene:	10 mg/Kg (ppm)
BTEX:	50 mg/Kg (ppm)
TPH:	1,000 mg/Kg (ppm)

#### **SUMMARY OF FIELD ACTIVITIES**

During January and February 2009, hydrocarbon impacted soil was excavated at the release site. Approximately 200 cubic yards (cy) of impacted soil was stockpiled adjacent to the excavation pending transportation to the Plains Lea Station Landfarm. The final dimensions of the excavation were approximately 108 feet in length and 12 feet in width and approximately 2 feet in depth to the south of the valve and approximately 230 feet in length and 12 feet in width and approximately 2.5 feet in depth to east of the valve.

On February 5, 2009, five (5) soil samples (Sample #1, Sample #2, Sample #3, Sample #4 and Sample #5) were collected from the floor of the excavation and ranged from approximately two (2) to two and one half (2.5) feet in depth. The soil samples were submitted to the laboratory and analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) using method EPA 8021b and total petroleum hydrocarbons (TPH) using method SW-8015 modified. A summary of the analytical results are included in Table 1, Concentrations of BTEX, TPH and Chlorides in Soil. Laboratory analytical reports are included in Appendix A and soil sample locations are depicted on Figure 2, Site and Sample Location Map. Photographs of the site are included in Appendix B.

The laboratory analytical result indicated benzene concentrations were not detected above the laboratory method detection limit (MDL) for all the submitted soil samples. The analytical results indicated BTEX concentrations were either below the NMOCD regulatory standard or not detected above the MDL for all the submitted soil samples.

The analytical results indicated TPH concentrations were below the NMOCD regulatory standard for all submitted soil samples, with the exception of soil sample Sample #2. The TPH concentration exhibited in Sample #2 was just above the NMOCD standard at 1,005 mg/Kg.

Soil sample Sample #3 was analyzed for concentrations of chloride using method EPA 300. The analytical result indicated the chloride concentration was 169 mg/Kg.

On February 25, 2009, the NMOCD Hobbs District Office verbally approved the Southland Royalty 2-Inch Valve *Remediation Summary and Site Closure Proposal*.

Approximately 204 cubic yards (cy) of impacted soil was stockpiled adjacent to the excavation pending transportation to the Plains Lea Station Landfarm. The final dimensions of the excavation were approximately 108 feet in length and 12 feet in width and approximately 2 feet in depth to the south of the valve and approximately 230 feet in length and 12 feet in width and approximately 2.5 feet in depth to east of the valve.

Basin transported approximately 204 cy of impacted soil to Plains Lea Station Landfarm (NMOCD GW-351). The excavation was backfilled with the locally purchased soil and contoured to fit the surrounding topography. The site is located on a caliche pad and no seeding activities are anticipated.

### SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples collected from the excavation, Basin recommends Plains provide the NMOCD Hobbs District Office a copy of this Site Closure Request and request the NMOCD grant site closure to the Southland Royalty 2-Inch Valve release site.

### LIMITATIONS

0

0

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

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

This report has been prepared for the benefit of Plains 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 Consulting, LLC and/or Plains Marketing, L.P.

## **DISTRIBUTION:**

0

0

Copy 1:	Larry Johnson New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, New Mexico 88240 larry.johnson@state.nm.us
Copy 2:	Millard Deck Estate Tim Wolters Bank of America Midland, Texas 79702
Copy 3:	Jeff Dann Plains Marketing, L.P. 333 Clay Street, Suite 1600 Houston, Texas 77002 jpdann@paalp.com
Copy 4:	Jason Henry Plains Marketing, L.P. 2530 State Hwy. 214 Denver City, Texas 79323 jhenry@paalp.com
Copy 5	Basin Environmental Consulting, LLC P.O. Box 381 Lovington, New Mexico 88260 cjbryant@basin-consulting.com

.









## Tables

1

## ...........

TABLE 1

#### CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

PLAINS MARKETING, L.P. SOUTHLAND ROYALTY 2-VALVE LEA COUNTY, NEW MEXICO SRS# 2009-023 NMOCD REF. # 1RP-2068

	SAMPLE				METHO	DD: EPA SW	846-8021B,	5030			SW 84	8-8015M		300.1
SAMPLE LOCATION	DEPTH (Below normal surface grade)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M,P- XYLENE (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6-</sub> C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
Sample #1	25 Feet	02/05/09	In-Situ	< 0.0011	<0.0021	<0 0011	<0.0021	<0.0011	<0.0021	<16.0	104	<16.0	104	
Sample #2	25 Feet	02/05/09	In-Situ	<0.0010	0 0021	<0.0010	<0.0021	<0.0010	0.0021	<15.6	862	143	1,005	
Sample #3	2 Feet	02/05/09	In-Situ	<0.0010	<0 0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	<15.4	<15.4	<15 4	169
Sample #4	2 Feet	02/05/09	In-Situ	<0.0010	<0 0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	20.3	<15.3	20 3	
Sample #5	2.5 Feet	02/05/09	In-Situ	<0.0010	< 0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.6	21.9	<15.6	21.9	
*					1			-			с. 			
NMOCD REGUL	ATORY ST	ANDARD		10					50				1,000	250

# Appendices

## Appendix A Laboratory Reports

é

Ŏ

1

•

## Analytical Report 324344

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

Southland Royalty 2009-023

10-FEB-09





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



10-FEB-09



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

Reference: XENCO Report No: **324344 Southland Royalty** Project Address: Lea County, NM

#### Jason Henry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 324344. 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. 324344 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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



ALTALIS TOTAL STATEMENT OF THE SAME HAR AND TO AT A STATEMENT OF THE SAME AND THE SAME AND THE SAME AND THE SAM



## Sample Cross Reference 324344

## PLAINS ALL AMERICAN EH&S, Midland, TX

## Southland Royalty

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample # 1	S	Feb-05-09 13:30		324344-001
Sample # 2	S	Feb-05-09 13:45		324344-002
Sample # 3	S	Feb-05-09 13:55		324344-003
Sample # 4	S	Feb-05-09 14:05		324344-004
Sample # 5	S	Feb-05-09 14:15		324344-005

Laboratorics

Certificate of Analysis Summary 324344

PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Southland Royalty** 



Project Id: 2009-023

Contact: Jason Henry

Date Received in Lab:	Fri Feb-06-09 12.20 pm
-----------------------	------------------------

roject Location: Lea County, NM								Report	Date:	10-FEB-09		
								Project Ma	nager:	Brent Barron,	п	
	Lab Id:	324344-0	01	324344-0	02	324344-	003	324344-(	004	324344-0	005	
Analysis Rognostad	Field Id.	Sample #	ŧ1	Sample #	#2	Sample	# 3	Sample	# 4	Sample #	¥ 5	
Anulysis Requested	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Feb-05-09 1	13 30	Feb-05-09 1	13 45	Feb-05-09	13 55	Feb-05-09	14 05	Feb-05-09	14 15	
BTEX by EPA 8021B	Extracted:	Feb-06-09	14 45	Feb-06-09 1	14 45	Feb-06-09	14 45	Feb-06-09	14 45	Feb-06-09	14 45	
	Analyzed	Feb-07-09 (	02 42	Feb-07-09 (	03 03	Feb-07-09	03 24	Feb-07-09	03 45	Feb-07-09	04 07	
	Units/RL.	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		ND	0 0011	ND	0 0010	ND	0 0010	ND	0 0010	ND	0 0010	
Toluene		ND	0 0021	0 0021	0 0021	ND	0 0021	ND	0.0020	ND	0 0021	
Ethylbenzene		ND	0 0011	ND	0 0010	ND	0 0010	ND	0 0010	ND	0 0010	
m,p-Xylenes		ND	0 0021	ND	0 0021	ND	0 0021	ND	0 0020	ND	0 0021	
o-Xylene		ND	0 0011	ND	0 0010	ND	0 0010	ND	0 0010	ND	0 0010	
Total Xylenes		ND	0 0020	ND	0 0020	ND	0 0020	ND	0 0020	ND	0 0020	
Total BTEX		ND	0 0010	0 0021	0 0010	ND	0 0010	ND	0 0010	ND	0 0010	
Percent Moisture	Extracted:											
	Analyzed.	Feb-06-09	1745	Feb-06-09 1	17 45	Feb-06-09	17 45	Feb-06-09	17 45	Feb-06-09	17 45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		6 1 9		3 64		2 72		2 14		3 99		
TPH By SW8015 Mod	Extracted.	Feb-08-09	11 24	Feb-08-09 1	1 24	Feb-08-09	11 24	Feb-08-09	11 24	Feb-08-09	11 24	
	Analyzed:	Feb-08-09	14 50	Feb-08-09	15 12	Feb-08-09	15 34	Feb-08-09	15 56	Feb-08-09	16 18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	160	ND	156	ND	15 4	ND	153	ND	156	
C12-C28 Diesel Range Hydrocarbons		104	160	862	156	ND	15 4	20 3	153	21 9	156	
C28-C35 Oil Range Hydrocarbons		ND	160	143	156	ND	15 4	ND	153	ND	156	
Total TPH		104	15 0	1005	150	ND	15 0	20 3	15 0	21 9	15 0	

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

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

Brent Barron

Odessa Laboratory Director



0



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

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

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

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



₿

## Form 2 - Surrogate Recoveries

**Project Name: Southland Royalty** 

Work Orders: 324344,			Project II	D: 2009-023			
Lab Batch #: 748897	Sample: 324344-001 / SM	IP Ba	tch: 1 Matri	ix: Soil			
Units: mg/kg		SU SU	RROGATE RI	ECOVERY	STUDY		
BTEX by El	PA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analy	tes			[D]			
1,4-Dıfluorobenzene		0.0317	0.0300	106	80-120		
4-Bromofluorobenzene		0.0331	0.0300	110	80-120		
Lab Batch #: 748897	Sample: 324344-002 / SN	1P Ba	tch: 1 Matri	ix: Soil			
Units: mg/kg	•	SU	RROGATE RI	ECOVERY	STUDY		
BTEX by El	PA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
14-Difluorobenzene		0.0342	0.0300	114	80.120		
4-Bromofluorobenzene		0.0342	0.0300	107	80-120		
	a	0			00 120		
Lab Batch #: 748897	Sample: 324344-003 / SN	Ba	tch:   Matri	IX: SOIL	STUDY		
Umits: mg/kg		50			STUDY	=	
BTEX by El	PA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Anary 14 Difluorobenzene		0.0212	0.0200	104	80.100		
4-Bromofluorobenzene		0.0313	0.0300	104	80-120		
- 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5	a	0.0550	0.0500		00-120		
Lab Batch #: 748897	Sample: 324344-003 S / N	AS Ba	tch: Matri	ix: Soil	~~~~		
Units: mg/kg		SU	RROGATE RI		STUDY		
BTEX by El Analy	PA 8021B tes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Dıfluorobenzene		0.0290	0.0300	97	80-120		
4-Bromofluorobenzene		0.0306	0.0300	102	80-120		
Lab Batch #: 748897	Sample: 324344-003 SD /	MSD Ba	tch: 1 Matri	ix: Soil	-		
Units: mg/kg		SURROGATE RECOVERY STUDY					
BTEX by EI	PA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analy 14-Difluorobenzene		0.0280	0.0300	02	80-120		
4-Bromofluorobenzene		0.0280	0.0300	103	80-120		
		0.0300	0.0300	103	00-120		

\*\* 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: Southland Royalty** 

Vork Orders: 324344,		Project II	):2009-023		
Lab Batch #: 748897Sample: 32	24344-004 / SMP Bat	ch: <sup>1</sup> Matri	x: Soil		
Units: mg/kg	SU	RROGATE RE	COVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	
Lab Batch #: 748897 Sample: 32	24344-005 / SMP Bat	tch: 1 Matri	ix: Soil		
Units: mg/kg	SU	RROGATE RI	COVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount {B	Recovery %R {D]	Control Limits %R	Flags
1,4-Dıfluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	· · · · · ·
Lab Batch #: 748897 Sample: 52	24357-1-BKS / BKS Bat	tch: 1 Matri	ix: Solid	<u> </u>	
Units: mg/kg	SU	RROGATE RI	<b>COVERY</b> S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		0.000			
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromonuorobenzene	0.0281	0.0300	94	80-120	
Lab Batch #:748897Sample:52	24357-1-BLK / BLK Bat	tch:   Matri	x: Solid		
Units: mg/kg	SU	RROGATE RI	COVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
1,4-Dıfluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	
Lab Batch #: 748897 Sample: 52	24357-1-BSD / BSD Bat	tch: 1 Matri	ix: Solid		
Units: mg/kg	SU	RROGATE RI	<b>ECOVERY</b> S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	L
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	
		<u> </u>			

\*\* 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: Southland Royalty**

Vork Orders: 324344,			Project II	): 2009-023						
Lab Batch #:748792Sample	: 324344-001 / SMP	Bat	ch:   Matri	x: Soil						
Units: mg/kg		SUI	RROGATE RE	COVERY	STUDY					
TPH By SW8015 Mod	Amo Four [A	ınt 1d ]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
Analytes				D						
1-Chlorooctane	103		100	103	70-135					
o-Terphenyl	51.5		50.0	103	70-135					
Lab Batch #: 748792 Sample	: 324344-002 / SMP	Bat	ch: 1 Matri	x: Soil						
Units: mg/kg		SUI	RROGATE RE	COVERY S	STUDY					
TPH By SW8015 Mod Analytes	Amo Fou  A	ınt 1d 	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	99.7		100	. 100	70-135					
o-Terphenyl	56.1		50.0	112	70-135					
Lab Batch #: 748792 Sample	e: 324344-003 / SMP	3 / SMP Batch: 1 Matrix: Soil								
Units: mg/kg		SURROGATE RECOVERY STUDY								
TPH By SW8015 Mod	Amo Fou [A	int id i	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	96 (		100	96	70-135					
o-Terphenyl	48.2		50.0	96	70-135					
Lab Batch #: 748792 Sample	• 324344-003 S / MS	Bat	ch: 1 Matri	<b>v:</b> Soil	L					
Units: mg/kg	· · ·	SUI	RROGATE RE	COVERY S	STUDY					
TPH By SW8015 Mod Analytes	Amo Fou  A	ınt 1d	True Amount  B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooctane	115		100	115	70-135					
o-Terphenyl	56.6		50 0	113	70-135					
Lab Batch #: 748792 Sample	: 324344-003 SD / MSD	Bat	ch: <sup>1</sup> Matri	x: Soil						
Units: mg/kg		SUI	RROGATE RE	COVERY S	STUDY					
TPH By SW8015 Mod	Amoi Fou [A	ınt ıd	True Amount  B	Recovery %R	Control Limits %R	Flags				
Analytes				[D]						
I-Chlorooctane	115		100	115	70-135					
o-Terphenyl	54.7		50.0	109	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: Southland Royalty** 

Vork Orders: 324344,		Project I	<b>D:</b> 2009-023					
Lab Batch #: 748792 Sample: 324344-	004 / SMP Bat	tch: 1 Matr	rix: Soil					
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
Analytes			[D]					
1-Chlorooctane	92.2	100	92	70-135				
o-Terphenyl	45.3	50.0	91	70-135				
Lab Batch #: 748792 Sample: 324344-	005 / SMP Bat	tch: 1 Mati	rix: Soil					
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R {D]	Control Limits %R	Flags			
1-Chlorooctane	95.5	100	96	70-135	L			
o-Terphenyl	46.9	50.0	94	70-135				
Lab Batch #: 748792 Sample: 524290-	1-BKS/BKS Bat	tch: <sup>1</sup> Mati	rix: Solid	1				
Units: mg/kg	SU	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
	100	100	109	70-135				
o-Terphenyl	51.0	50.0	102	70-135				
L L D ( L H 748702 S L 524200			t Salid					
Lab Batch #: /40/32 Sample: 324290-		DPOCATE D	TX: SOLU	STUDY				
TPH By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags			
Analytes	[A]	[B]	%R [D]	%R				
1-Chlorooctane	97.2	100	97	70-135	L			
o-Terphenyl	48.0	50.0	96	70-135				
Lab Batch #: 748792 Sample: 524290-	1-BSD / BSD Bat	tch: l Matr	rix: Solid	•				
Units: mg/kg	SU	RROGATE R	ECOVERY	STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
I-Chlorooctane	110	100	110	70-135				
o-Terphenyl	51.6	50.0	103	70-135	<u> </u>			

\*\* 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.



**BS / BSD Recoveries** 



## **Project Name:** Southland Royalty

Work Order #: 324344	D	. 4. D		0			Proj Data Ar	ject ID: 2	2009-023		
Lab Batch ID: 748897 Sample: 524357-1	-BKS	ate Prepar Bate	•ea: 02/00/200 h #: 1	19			Date A	Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added	Blank Spike Duplicate Result (F)	Bik. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0966	97	0.1	0.0981	98	2	70-130	35	
Toluene	ND	0.1000	0.0970	97	0.1	0.0984	98	1	70-130	35	
Ethylbenzene	ND	0 1000	0 0986	99	0.1	0.1006	101	2	71-129	35	
m,p-Xylenes	ND	0.2000	0 2053	103	0 2	0.2103	105	2	70-135	35	
o-Xylene	ND	0 1000	0.1030	103	0.1	0.1057	106	3	71-133	35	
Analyst: BHW	DKS	ate Prepai	•ed: 02/08/200	)9			Date A	nalyzed: () Matrix: S	2/08/2009		
Lab Batch ID: 748792 Sample: 524290-1	-BKS										
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	SLANK S			RECOVE		·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	6.50	1000	953	95	1000	958	96	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	12.3	1000	991	99	1000	995	100	0	70-135	35	

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



Form 3 - MS / MSD Recoveries

## **Project Name: Southland Royalty**



Work Order # : 324344						Project II	): 2009-02	23			
Lab Batch ID: 748897 Q Date Analyzed: 02/07/2009	C- Sample ID: Date Prepared:	324344 02/06/2	-003 S 009	Ba An:	tch #: alyst:	l Matrix ASA	<b>K:</b> Soil				
Reporting Units: mg/kg		М	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	ND	0.1028	0.0758	74	0.1028	0.0791	77	4	70-130	35	
Toluene	ND	0.1028	0.0744	72	0.1028	0.0771	75	4	70-130	35	
Ethylbenzene	ND	0.1028	0.0707	69	0.1028	0.0739	72	4	71-129	35	Х
m,p-Xylenes	ND	0 2056	0.1470	71	0.2056	0.1540	75	5	70-135	35	
o-Xylene	ND	0.1028	0.0707	69	0.1028	0.0742	72	5	71-133	35	Х
Lab Batch ID:         748792         Q           Date Analyzed:         02/08/2009         1	C- Sample ID: Date Prepared:	324344 02/08/2	-003 S 009	Ba An:	tch #: alyst:	l <b>Matri</b> : BHW	<b>x:</b> Soil				
Reporting Units: mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPĪ	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	ND	1030	986	96	1030	985	96	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1030	1060	103	1030	1060	103	0	70-135	35	

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

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



## Sample Duplicate Recovery



## **Project Name: Southland Royalty**

Work Order #: 324344

Lab Batch #:         748916           Date Analyzed:         02/06/2009           QC- Sample ID:         324327-018 D	epared: 02/0 Batch #: 1	06/2009	Project I Analy Matr	D: 2009-023 st: BEV ix: Soil	\$
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		ניון			
Percent Moisture	25.4	23.9	6	20	

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

Environmen	tal Lab of T	exa	IS					12 Od	600 1 Iossa	Nes a, Te	CH. t I-2 ixas	AIN 10 Ea 1797	OF st 65	CU	5700	)Y R	EC	ORI	A C	VD.	AN. F	AL ) Phor Fax	'S/S	6 RE 432- 432-	QU 563- 563-	ES7 180 171:	0 3				
Project Manager	Camille Bryant														-	Pr	ojec	t Na	me:	So	uth	land	R	oyai	ty						
Company Name	Basin Environmental S	ervice T	echnol	ogies, LLC											-		P	rojec	:t#•	200	09-0	)23									
Company Address	S P O. Box 301															4	Proje	ect L	.oc.	Lea	Go	unty	, N N	•				_			
City/State/7in	Lovington NM 88260														-			P	ים. אם י	PA	8-1	Hen	~					_			
Telephone No	(575)605-7210	-2		-1	Fax No		(50	5) 3	<b>96</b> -1/	429					- R	ерог	t Fo	rmai		X	Ster	ndan	4	-	П т	RRP		0	NPD	ES	-
Sampler Signatur	<u>Camelle</u>	- 12	žγ	fanil	e-mail		<u>Cit</u>	ory	ant(	@b	asi	<u>n-c</u>	ons	sulti	ng.c	om						Δn	alum	Eor	_	_				-	
(tab use only)			Ċ	)														-		TO	1.P	_	-		T	Т	Т	Π	1	E L	
order #: 30	4344			_				Pr	eserv	ation	18.4	of G	onța	iners	Ma	atrix	8	Π		Ť	AL	3	+							Ŧ	
(Aucorean del) \$ 64 Fil	ELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	otal # of Contamers	ŝ	HNO1	Đ	H <sub>2</sub> SO.	ABOH The Co	(D) C mu	ridine Other ( Specify)	JW = Drinking Water St - Sludg	ow - Groundwater 5- Solvson W- Non-Potable Specify Gth	PH 418 1 8015M 801	PH 1X 1005 TX 1006	Cations (Ca Mg Na K)	vuons (CI, SOM, Abalimity)	SAR / ESP / CEC	Metals As Ag Ba Cd Cr Pb Hg	Joiettes	Semevolables AFEX ADD ( RADON // DTC/ 60		U O.R.M				RUSH IAT (Pre Schedule) 24,	Stendard TAT 4 DAY
01 5	ample #1		<u> </u>	5-Feb-09	1330	<u> </u>	1	x		-			1		sc		x	-		1	<u>~</u>	4	2	<u>,</u>	<u>, 1</u>	Ť	$\square$	1	ギ	-	<u>थ</u> Х
01 s	ample #2			5-Feb-09	1345		1	x		1					s	DIL	x							٦,				$\square$		Ι	x
03 S	ample #3			5-Feb-09	1355		1	x							so	DIL.	x							],						_	x
04 s	ample #4	_	L	5-Feb-09	1405		1	x				_			sc	DIL	x				_	_	_	$\downarrow$	4			_	_	$\downarrow$	X
<u>05</u> s	ample #5		-	5-Feb-09	1415		1	x		-	-	+	+	+	so	)IL	x	$\square$	_	_		+	+	,	4	+-	$\square$	-+	+	+	X
		+								+	+	╉	+	+	┝		┝		+	-	-	+	+		+	+-	$\square$	+	╉	╉	
														T			Γ													T	
																										L			$\rightarrow$	4	
														1_			L	Ц						1				$\bot$		1	
Relinguished by Relinguished by Relinguished by	C.J. 2/100	07	me Me	Received by Received by	Dre	k	1-1	iu	l	, . 			.0	74	1/69	70	TIM	•D	Serr VOC Labe Cus Cus Serr	oration ple cs F als c tody ple by S by C	Con ree ( sea sea Han amp com	tering of He onter its or its	ans li aads ner(i n coi n coi slive lent	ntes: pace a) ntama bler(s Rep JPS	? 97 97(s) 8) 2 Dł	11.	ر ر Fedl	CHORD SOL		i i i i i i i i i i i i i i i i i i i	ır
Reinquished by	i and Allo	3 12	ŹU	Received by ELC	rla J	20	n	$\sim$						ь. 2.Ц	ate 1 101	1	Timi V.	ω	Теп	4 в pera	alure	y la sUp	on R	ece	pt <sup>.</sup>		ية. معر	)	•	с	

#### Environmental Lab of Texas

#### Variance/ Corrective Action Report- Sample Log-In



#### Sample Receipt Checklist

Client Initials

Date/ Time

				•	
#1	Temperature of container/ cooler?	Yes	No	- D° Č	
#2	Shipping container in good condition?	Res	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	NotPresent	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Ves	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No	_	
#8	Chain of Custody agrees with sample label(s)?	(es	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Xes	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	Hot Applicable -	
#20	VOC samples have zero headspace?	Xes)	No	Not Applicable	

Variance Documentation

Contacted by:

Contact

Regarding

1

4

Corrective Action Taken:

\_\_\_\_\_

Check all that Apply.

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

## Analytical Report 325009

Ø

Õ

Ŏ

Ŏ

Õ

for

## PLAINS ALL AMERICAN EH&S

**Project Manager: Jason Henry** 

Southland Royalty 2009-023

17-FEB-09





12600 West I-20 East Odessa, Texas 79765

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

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

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

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

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



17-FEB-09



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

Reference: XENCO Report No: **325009 Southland Royalty** Project Address: Lea County, NM

#### Jason Henry:

٩

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 325009. 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. 325009 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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

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



•

•

0

0 • 0 0 0 0 • 0 0 0 A 0 0 Ó 0 • 0 • • • • • 

Ō

al all a grander and the the the set of the property and and the states of the set of the set of the set of the



Sample Cross Reference 325009

## PLAINS ALL AMERICAN EH&S, Midland, TX

Southland Royalty

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample # 3	S	Feb-05-09 13:55		325009-001



Certificate of Analysis Summary 325009

PLAINS ALL AMERICAN EH&S, Midland, TX



**Project Name: Southland Royalty** 

Project Id: 2009-023

Contact: Jason Henry

Project Location: Lea County, NM

Date Received in Lab: Fri Feb-06-09 12.20 pm

Report Date: 17-FEB-09

Project Manager: Brent Barron, II

	Lab Id:	325009-001			
Analysis Requested	Field Id:	Sample # 3			
Anuiysis Requesieu	Depth:				
	Matrix:	SOIL			
	Sampled:	Feb-05-09 13 55			
Anions by EPA 300	Extracted:				
	Analyzed:	Feb-16-09 11 03			
	Units/RL:	mg/kg RL			(
Chloride		169 10 3			
Percent Moisture	Extracted:				
	Analyzed:	Feb-06-09 17 45			
	Units/RL:	% RL			
Percent Moisture		2 72 1 00			

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

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

Brent Barron

Odessa Laboratory Director



1

0

0



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

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

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

Fax

(281) 240-4280

(214) 351-9139

(210) 509-3335

(813) 620-2033

(305) 823-8555

(432) 563-1713

(361) 884-9116

 4143 Greenbriar Dr, Stafford, Tx 77477
 Phone

 4143 Greenbriar Dr, Stafford, Tx 77477
 (281) 240-4200

 9701 Harry Hines Blvd, Dallas, TX 75220
 (214) 902 0300

 5332 Blackberry Drive, San Antonio TX 78238
 (210) 509-3334

 2505 North Falkenburg Rd, Tampa, FL 33619
 (813) 620-2000

 5757 NW 158th St, Miami Lakes, FL 33014
 (305) 823-8500

 12600 West I-20 East, Odessa, TX 79765
 (432) 563-1800

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





## **Project Name: Southland Royalty**

Work Order #: 325009

## Project ID:

2009-023

Lab Batch #: 749735 Date Analyzed: 02/16/2009	Sample: 749735- Date Prepared: 02/16/20	1-BKS 009	Mati Analy	rix: Solid yst: LATC	OR	
Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SP	IKE REC	COVERY S	STUI
Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Fla
Analytes				[D]		
Chloride	ND	10.0	114	114	90-110	
						<b>.</b>

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

	orm 3 - MS F	Recover	ries	))		olle II A
Laberatorics Project N	ame: Southland	Royalty				ne
Work Order #: 325009 Lab Batch #: 749735			Pr	oject ID:	2009-023	
Date Analyzed: 02/16/2009	Date Prepared:	02/16/2009	1	Analyst:	LATCOR	
QC- Sample ID: 325035-001 S	Batch #:	1		Matrix:	Soil	
Reporting Units: mg/kg	MAT	RIX / MA	TRIX SPIKE	RECOV	VERY STU	<b>DY</b>
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
Chloride	5150	2350	7710	109	80-120	

.

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



Ď

•

•

0

0

é

9

•

## Sample Duplicate Recovery



## **Project Name: Southland Royalty**

Work Order #: 325009

Lab Batch #: 749735			Project I	<b>D:</b> 2009-023	3
Date Analyzed: 02/16/2009 Date Pr	epared: 02/1	6/2009	Analy	st: LATCOF	٤
QC- Sample ID: 325035-001 D	Batch #: 1		Matr	ix: Soil	
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Chloride	5150	5050	2	20	
Lab Batch #: 748916					
Date Analyzed: 02/06/2009 Date Pr	epared: 02/0	)6/2009	Analy	st: BEV	
QC- Sample ID: 324327-018 D	Batch #: 1		Matr	ix: Soil	
Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	25.4	23.9	6	20	

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

Env	ironment	al Lai	o of T	exa	IS					1260 Ode	10 Wa 55a,	C/ est I- Texa	łAIN 20 Ea 5 797	0F ( st 65	cus	וססד	' RE	COR	DÁ	ND A	NAL Pho Fa	YS/S one - x: -	8 RE( 432-5 432-5	9 <i>UE</i> 63-11 63-11	57 300 713			
	Project Manager.	Camille Br	rant														Prop	ict N	ame	Sout	hlar	nd Re	oyalt	y				
	Company Name	Basin Envi	ronmental Se	ervice T	echnol	ogies, LLC												Proje	ct#	2009	-023	3						
	Company Address	P. O. Box 3	01														Pr	oject	Loc	Lea C	ount	y, NN	(					
	City/State/Zip.	Lovington,	NM 88260															F	0#		. J. H	enry						
	Telephone No	(575) 605-7	210				Fax No		(50:	5) 39(	- 142	ġ				Rep	xort F	omu	nt	X s	anda	rd	Г	TRF	₹₽		VPDE	s
	Sampler Signature	ami	u Ru	in	£		e-mail		cib	orva	nt@	bas	in-ci	onsi	ultin	a co	m						-	•				
(lahuse o	(nlv)			0	<u>.</u>												F			fcu	A	nalyze	For	T I	—	TT	┦.	1
ORDER	# <sup>(</sup> )	4001							1	Pres	ervat	101 \$	4 Of C	ontair	iers l	Mat	-			TOTA	-		1×				8, 72 h	
LAB # (lab use only)	FIEI	LD CODE		Beglinning Depth	Ending Depth	paldues Date Service S-Feb-09	time Sampled	Field Filtered	Total # of Containers	2 X	HCI	H SGL	NBOH No.S.O	Name	Other ( Specify)	OW - Drifking Water 9 = Sudg G GW - Groundwater 5 - SoltSol	NP - Non Potatite Sperity Oth	TPH TX 1005 TX 1006	Caluns (Cal Ng Na K)	Autoris (CI SCM Automnity) SAR / ESt' / CEC	Metals As Ag Ba Cd Cr Pb Hg Si	Volatios	Semwolahles BTEX \$0218/5030 or BTEX \$26	RCI			RUSH TAT (Pre Schedule) 24, 4	X Standard TAT 4 DAY
		npie #5		1	<u> </u>	3-1 60-03	1000	+	H	1	+	Ħ	1	t	$\mathbf{H}$	30	╧╋	+	H		+	H	+	$\left  \right $	ť	++	+	f
											1			Γ													T	L
								<u>  </u>		_	╇	Н		+			-+	+		_	$\square$		+-	$ \vdash $	-+-	++	+	┡
										+	+	H	-+-	┢	┝╴┥		+	+			Η		+-	$\vdash$	+	╆╊	+	+
											T							+-			Π						T	Ē
								-			+		_		$\square$		4	-		_	Ц		_		_	$\downarrow$	_	$\downarrow$
				+					$\left  \right $	-+-	+	-		+-	$\left  \right $		+	+-			H	-	+	$\vdash$	-+-	┿┾	+-	╞
Special in Belinguish Relinguish	structions.	Breyer	Date Date Date	1 07 1 1	me 'SD - me	Received by Received by Received by	Pace	ke	لب مەر		ł	· ]		27	Dat Dat	• 9 •			Lab San VO( Lab Cus San	orator npie Ci Cs Free els on tody si tody si tody si tody si tody si tody si tody si	y Con ontair e of H contair eals o hais o hais o hpier/i ner?	mme mme leads alner(s an cor an cor an cor clent Clent L	lints ntact? pace? s) ntainei pler(s) red Rep 1 IPS	(s) , DHL	 Fe			<u>i</u> tar

r

.

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

Client	Brow Env. 171-1113
Date/ Time	ZUCA VELL
Lab ID #	325009
Initials	( iL

0

8

0

0

۲

.

#### Sample Receipt Checklist

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

#### Variance Documentation

Contact	 Contacted by:	Date/ Time.	
Regarding			
Corrective Action Taken			
Check all that Apply	See attached e-mail/ fax Client understands and would like to proceed w Cooling process had begin shortly after sampli	nth analysis	

## Appendix B Photographs

•



Southland Royalty 2-Inch Valve Release Site facing south



Southland Royalty 2-Inch Valve Release Site facing west



) ()

) () ()

D

0

Southland Royalty 2-Inch Valve facing west



Southland Royalty 2-Inch Valve facing south

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

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

8

**C**i

### 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

Release Notification and Corrective Action													
						<b>OPERA</b>	ror		🛛 Initi	al Report		Final Report	
Name of Co	Name of Company Plains Pipeline, LP C						Jason Henry						
Address		2530 Hwy 2	214 – Dei	nver City, Tx 79	323	Telephone No. (575) 441-1099							
Facility Na	Facility Name         Southland Royalty 2-Inch Valve         Facility Type         Out-of-service LACT Unit Tie-in												
Surface Ow	ner Deck	Estate		Mineral C	Iwner			······································	Lease 1	No.			
<b>,</b> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	N OF REI	OF RELEASE NERRBY WELL 30.025.35766.00.00											
Unit Letter B	Section 9	Township 21S	Range 37E	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County Lea	County Lea		
Latitude N 32.49705° Longitude W 103.16452°													
Type of Rale		de Oil		NAI	URE	Volume of	Release 5 bbls		Volume	Recovered	1 bble		
Source of Re	Source of Release 2" valve					Date and Hour of Occurrence Date and H			Hour of Dis	Hour of Discovery			
Was Immedi	ate Notice (	Given?	Yes F		cauired	If YES, To Larry John	Whom? son						
By Whom?	Iscon Henr					Date and H	lour 01/19/200	0 @ 14	·25 (voice	message)			
Was a Water	course Rea	ched?	<u></u>			If YES, Vo	lume Impacting t	the Wate	ercourse.	message			
			Yes 🛛	No								i	
Describe Car	use of Probl	em and Reme	dial Actio	n Taken.*		1	روم و چې و						
A cow rubbe	A cow, rubbed against a 2 svalve bandle causing the valve to open at a facility where the LACT unit had been removed causing a release of crude oil. The impacted caliche and soil was excavated and stockpiled to await transportation to an approved disposal facility.								ide (i) 7. The				
Describe Are	a Affected	and Cleanup	Action Tal	ken.* .			·····				hog.,		
Released crude oil stayed on the caliche location and pooled to the south and east of the 2" valve. Impacted area will be remediated per applicable guidelines.									able				
I hereby cert regulations a public health should their or the enviro federal, state	ify that the Il operators or the envi operations h nment. In a , or local la	information g are required to ronment. The ave failed to addition, NMC ws and/or reg	iven above to report a e acceptan adequately DCD accep ulations.	e is true and comp nd/or file certain a ce of a C-141 rep v investigate and r btance of a C-141	olete to the release neort by the remediate report de	he best of my otifications a e NMOCD m e contaminati oes not reliev	knowledge and u nd perform correc arked as "Final R on that pose a thr e the operator of	indersta ctive act ceport" c reat to g respons	nd that pur ions for re loes not re round wate ibility for o	suant to NM leases which lieve the ope er, surface w compliance	IOCD r may ex- prator of ater, hu with any	ules and ndanger liability man health y other	
					OIL CONSERVATION DIVISION								
Signature: Jaam Ry					2 johnson								
Printed Name: Jason Henry						Approved by District Superviser.							
Title: Remediation Coordinator					Approval Date: 1.29.09 Expiration Date: 3.29.09					09			
E-mail Addr	ess: jhenry	@paalp.com	<u></u>			Conditions of Approval:				,			
Date: 01 - 29 - 2009 Phone: (575) 441-1099										1PP#1	0.00	. 2068	

\* Attach Additional Sheets If Necessary