



# SITE INVESTIGATION AND CLOSURE PROPOSAL

Friscoe Skelly #2 Ref. # 2004-00197

SE¼ of the NW¼ of Section 6, R37E, T17S Latitude 32°52'4.316"N and Longitude 103°17'38.146"W Elevation ~3,810'amsl

~7 miles southeast of Lovington, Lea County, New Mexico

April 2005

Prepared by

Environmental Plus, Inc. 2100 Avenue O P.O. Box 1558 Eunice, New Mexico 88231 Tele 505•394•3481 FAX 505•394•2601



### STANDARD OF CARE

Site Investigation and Closure Proposal

Friscoe Skelly #2 Ref. # 2004-00197

The information provided in this report was collected consistent with the Mexico Oil Conservation Division (NMOCD) New Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality The conclusions are based on field Assurance/Quality Control Plan. observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or professional with registered EPI a background in engineering, environmental, and/or the natural sciences.

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This report was prepared by:

A Maelang

Patrick W. McCasland

May 3, 2005 Date

This report was reviewed by:

Iain Olness, PC

16 May Jezs

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NMOCD - New Mexico Oil Conservation Division

Plains - Plains Pipeline, L.P. EPI - Environmental Plus, Inc.

BLM - U.S. Department of Interior Bureau of Land Management

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# **1.0 INTRODUCTION AND SUMMARY**

This site is located in UL-F (SE<sup>4</sup>/<sub>4</sub> of the NW<sup>4</sup>) of Section 6, R37E, T17S at a latitude of 32°52'4.316"N and a longitude of 103°17'38.146"W, approximately 7 miles southeast of Lovington, New Mexico on property owned by the Robert C. Rice. Site and topographical maps are included in Attachment I. The estimated 10 barrel (bbl) crude oil leak attributed to internal/external corrosion, occurred in the Plains Pipeline, L.P. (Plains) Friscoe Skelly 6" steel pipeline with no fluids recovered occurred on September 20, 2005 at 10:00 AM and was reported to the New Mexico Oil Conservation Division (NMOCD) immediately. Approximately 338 square feet (ft<sup>2</sup>) (18' x 20') of surface area was impacted. Local groundwater is estimated to occur at approximately 73-feet below ground surface ('bgs) and is based on water level measurements of monitoring wells associated with a Plains site approximately 1,300 feet due east of the site at a similar elevation. There are no surface water bodies or domestic or agricultural water wells observed to be within a 1,000 foot radius of the site. This gives the site a 10 point NMOCD ranking score for soil from the surface to 23'bgs and 20 points for soil >23'bgs. These rankings apply the following remedial guidelines for the "constituents/contaminants of concern" (CoCs):

CONSTITUENTS/CONTAMINANTS OF CONCERN	<b>REMEDIAL GOAL</b>
Benzene	10 mg/Kg
BTEX (mass sum of benzene, toluene, ethylbenzene, and xylenes	50 mg/Kg
Total Petroleum Hydrocarbon 8015m (TPH <sup>8015m</sup> ) Soil from the surface to 23'bgs	1,000 mg/Kg
TPH <sup>8015m</sup> (Soil >23'bgs)	100 mg/Kg

In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated 1,138 cubic yards (yd<sup>3</sup>) of impacted soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extent of impact had been delineated; however, contaminant levels in the floor of the excavation at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Analytical results for the samples collected from the leak origin trench indicated a decreasing TPH<sup>8015m</sup> gradient; however, the analytical results for the sample collected from the floor of the trench at 24'bgs were above the remedial goals for TPH<sup>8015m</sup>. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH<sup>8015m</sup> gradient (i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs). However, the TPH<sup>8015m</sup> concentration from the 41'bgs sample was 125 mg/Kg, in excess of the 100 mg/Kg remedial goal. On 12 April 2005, at the request of the NMOCD, additional samples were collected from a soil boring advanced to 46' bgs and 51' bgs adjacent to the leak origin soil boring (BH1). The TPH<sup>8015m</sup> concentration from the 46'bgs sample was an acceptable 37.6 mg/Kg. The TPH<sup>8015m</sup> concentration from the 51'bgs sample was reported as non-detectable at or above the method detection limits (MDL). The results establish a consistent decreasing gradient supporting the conclusion that the groundwater has not been

impacted. The benzene and BTEX data also support this conclusion, i.e., analytical results from the 36'bgs, 41'bgs, 46'bgs, and the 51'bgs samples were reported as not being detected at or above each analytes respective MDL.

To remediate and close the site, Plains proposes to install an oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating the crude oil residual and protecting the groundwater. Prior to liner installation, the excavation bottom will be screened in the field with a photoionization detector (PID) to determine the extent of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8-inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final C-141 and a request that the NMOCD require "no further action" at the site, except follow-up reseeding of the disturbed work area and resurfacing of the caliche road, consistent with the landowner.

# 2.0 Environmental Media Characterization

Chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved "General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000" and the NMOCD guidelines published in the following documents:

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs) (i.e., TPH, benzene, and the mass sum of benzene, toluene, ethylbenzene, and total xylene (BTEX)), will be determined based on the NMOCD Ranking Criteria as follows:

- Depth to Ground water (i.e., distance from the lower most acceptable concentration to the ground water),
- Wellhead Protection Area (i.e., distance from fresh water supply wells), and
- Distance to Surface Water Body (i.e., horizontal distance to all down gradient surface water bodies).

# 2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico" (A. Nicholson and A. Clebsch, 1961), describes the near surface geology of south central Lea County as an intergrade of the Quaternary Alluvium (QA) sediments (i.e., fine to medium sand) with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche.

# 2.2 ECOLOGICAL DESCRIPTION

The area is an intergrade of the Great Plains and the Upper Chihuahuan Desert biomes consisting primarily of flat to rolling hills with Honey Mesquite (*Prosopis* glandulosa) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's kangaroo rats, deer mice, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and Mule Deer. Reptiles, amphibians, and birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

# 2.3 AREA GROUND WATER

Local ground water is estimated to occur at 73 'bgs and is based primarily on November 2004 measurements of monitoring wells at a similar surface elevation, located approximately 1,300 feet east of the site at a Plains site. New Mexico Office of the State Engineer (NMOSE) Well #4712, at an elevation 10-feet lower than the site, is located approximately 0.65 mile south with a recorded water level of 75'bgs and is consistent with the November 2004 measurements. However, water well #2474 listed in the NMOSE water well database, located approximately 0.4 mile southwest of the site at a similar surface elevation, has a groundwater level of 40'bgs that was recorded in 1954, but can not be considered to be representative of the site groundwater given the distance and direction from the site. Further, the leak origin soil boring was advanced to 51'bgs and did not encounter groundwater or moist soil typically encountered when approaching the zone of saturation. According to the USGS, the ground water elevation decreases generally to the southeast.

### 2.4 AREA WATER WELLS

The area water wells recorded by the New Mexico Office of the State Engineer are annotated on the USGS topographical map included in Attachment I and the water well reports are included in Attachment IV.

# 2.5 AREA SURFACE WATER BODIES

There are no permanent or intermittent surface water bodies within a 1,000 feet radius of the site.

# 3.0 NMOCD SITE RANKING

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water, the site has an NMOCD ranking score-of\_10 for soil down to 23'bgs and 20 points for soil >23'bgs with the soil remedial goals highlighted below in the Site Ranking Matrix.

1. Gr	ound Water	2. 1	Wellhead Protection Area	3. Distance to Surface Water Body		
points	GW <50 feet: 20 GW 50 to 99 ts		' from water source, or;<200' vate domestic water source: 20	<200 horizontal feet: 20 points 200-100 horizontal feet: 10 points		
If Depth to points	GW >100 feet: 0		' from water source, or; >200' vate domestic water source: 0	>1000 horizontal feet: 0 points		
Ground water	Score = 10 & 20	Wellbead	Protection Area Score= 0	Surface Water Score= 0		
Site Rank (	(1+2+3) = 20 + 0	+ 0 =	10 and 20 points			
Total S	ite Ranking So	core and	d Acceptable Remedial G	oal Concentrations		
Parameter	>19 (23 to 73	'bgs)	10-19 (surface to 23'bgs)	0-9		
Benzene <sup>1</sup>	10 ppm		10 ppm	10 ppm		
BTEX <sup>1</sup> <b>50 ppm</b>			50 ррт	50 ppm		
ТРН	100 ppm		1000 ppm	5000 ppm		

## 4.0 SUBSURFACE SOIL INVESTIGATION

In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated <u>1,138 cubic yards (yd<sup>3</sup>) of impacted</u> soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extent of impact had been delineated; however, contaminant levels in the floor of the excavation at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Analytical results for the samples collected from the leak origin trench indicated a decreasing TPH<sup>8015m</sup> gradient; however, the analytical results for the sample collected from the floor of the trench at 24'bgs were above the remedial goals for TPH<sup>8015m</sup>. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH<sup>8015m</sup> gradient (i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs). However, the TPH<sup>8015m</sup> concentration from the 41'bgs sample was 125 mg/Kg, in excess of the 100 mg/Kg remedial goal. On 12 April 2005, at the request of the NMOCD, additional samples were collected from a soil boring advanced to 46' bgs and 51' bgs adjacent to the leak origin soil boring (BH1). The TPH<sup>8015m</sup> concentration from the 46'bgs sample was an acceptable 37.6 mg/Kg. The TPH<sup>8015m</sup> concentration from the 51'bgs sample was reported as non-detectable at or above the method detection limits (MDL). The results establish a consistent decreasing gradient supporting the conclusion that the groundwater has not been impacted. The benzene and BTEX data also support this conclusion, i.e., analytical results from the 36'bgs, 41'bgs, 46'bgs, and the 51'bgs samples were reported as not being detected at or above each analytes respective MDL. The laboratory reports are summarized and provided in Attachment III and illustrated below.

Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Volatile Organic Constituents (VOC) Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Total Petroleum Hydrocarbon 8015M Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Benzene D elineation



# 5.0 GROUND WATER INVESTIGATION

The soil investigation indicates the groundwater has not been impacted.

# 6.0 SOIL REMEDIATION PROPOSAL

To remediate and close the site, Plains proposes to install an oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating the crude oil residual and protecting the groundwater. Prior to liner installation the excavation bottom will be screened in the field with a PID to determine the extent of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final form C-141 and a request that the NMOCD require "no further action" at the site, except follow-up reseeding of the disturbed work area and resurfacing the caliche road, consistent with the landowner. Plains will also ensure that the NMOCD is notified at least 48 hours prior to liner installation.



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# ATTACHMENT I SITE MAPS

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# ATTACHMENT II

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### **P**HOTOGRAPHS

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FRISCOE SKELLY #2 2004-00197





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# ATTACHMENT III ANALYTICAL REPORTS AND SUMMARY

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		E. C		Plains Pipe					_					
		Friscoe S	kelly #2 #2	004-00197	Soil D	elineat	ion Into	rmation	1		1			
Osmula Lasatian	Vertical Sampling		D	1.1.1	VOC <sup>9</sup>	GRO <sup>3</sup>	DRO <sup>4</sup>	ТРН⁵	BTEX	Benzene	Toluene	Ethylbenzene	Xylene (m,p)	Xylene (0)
Sample Location	Interval (FT. BGS <sup>1</sup> )	SAMPLE ID#	Date	Lithology	ppm	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/K
South Sidewall Composite	2-10	SPFS92404SSWC4'	9/24/2004	Caliche		<10	25.9	25.9	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
East Sidewall Composite	2-10	SPFS92404ESWC4'	9/24/2004	Caliche	<u> </u>	<10	<10	<10	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
West Sidewall Composite	2-10	SPFS92404WSWC4'	9/24/2004	Caliche		10.9	50.9	61.8	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
South Bottom Composite	16	SPFS92404BHC16	9/24/2004	Caliche		(7.79])	35.1	35.1	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
Bottom	16	SPFS102804BH	10/28/2004	Caliche	140	1190	4,160	5,350	59.5	0.91	11.1	15.3	22.3	9.93
North Sidewall Composite	2-10	SPFS102804NSW	10/28/2004	Caliche	1.6	<10	56.7	56.7	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
East Sidewall Composite	2-10	SPFS102804ESW	10/28/2004	Caliche	0.7	<10	<10	<10	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
West Sidewall Composite	2-10	SPFS102804WSW	10/28/2004	Caliche	1.7	<10	<10	<10	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
Leak Origin Trench	16	SPFS110904BH16	11/9/2004	Caliche		796	2,570	3,360	NA	NA	NA	NA	NA	NA
Leak Origin Trench	18	SPFS110904BH18	11/9/2004	Caliche		8,060	18,900	18,900	NA	NA	NA	NA	NA	NA
Leak Origin Trench	20	SPFS110904BH20	11/9/2004	Caliche		8,190	13,100	21,300	NA	NA	NA	NA	NA	NA
Leak Origin Trench	24	SPFS110904BH24	11/9/2004	Caliche		4,400	6,490	10,900	NA	NA	NA	NA	NA	NA
Leak Origin Borehole #1	21	F.S. BH#1-5'	12/9/2005	Caliche	426	1,020	1,050	2,070	188	6.41	55.5	43.6	60.0	22.7
Leak Origin Borehole #1	26	F.S. BH#1-10'	12/9/2005	Caliche	175	498	1,330	1,830	25.2	0.153	4.14	6.81	10.5	3.64
Leak Origin Borehole #1	31	F.S. BH#1-15'	12/9/2005	Sand	171	243	438	681	27.2	0.203	4.82	7.24	10.7	4.28
Leak Origin Borehole #1	36	F.S. BH#1-20'	12/9/2005	Sand	7.6	(8.36J)	46.8	46.8	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
Leak Origin Borehole #1	41	F.S. BH#1-25'	12/9/2005	Sand	4.9	(5.82J)	125	125	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
Leak Origin Borehole #1	46	FS041205 30'	4/12/2005	Sand	0.0	<10	37.6	37.6	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	<0.02
Leak Origin Borehole #1	51	FS041205 35'	4/12/2005	Sand	2.3	<10	<10	<10	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.02
New Mexico Oil Conservation	n Division Site	e Remedial Goals - Surf	ace to 23'bgs		100			1,000	50	10				~
New Mexico Oil Co	nservation D	ivision Site Remedial Go	als - >23'bgs	I	100			100	50	10				
ogs – below ground surface							•							J
GRO-Gasoline Range Organics C <sub>6</sub> -C <sub>10</sub>														
DRO-Diesel Range Organics C10-C35														
PH-Total Petroleum Hydrocarbon = GRO	D+DRO.													
olded values are in excess of the New M		vation Division guideline threshol	ld for the paramete	r										
oil chloride residuals must not be capable			-		ion (WOC	C) standard	l of 250 mg	/L.						
NA - not analyzed	1		<u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,											
VOC - Volatile Organic Constituent/Conta	aminant Headspace	ce												
Description data at the balance the Description	•													

J - Parameter detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag)

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# **Analytical Report**

# Prepared for:

Jeff Dann Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Friscoe-Skelly #2 Project Number: 2004-00197 Location: None Given

Lab Order Number: 4I24012

Report Date: 09/27/04

Plains All American EH & S	Project: Friscoe-Skelly #2	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX, 79706-4476	Project Manager: Jeff Dann	09/27/04 16:44

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPFS92404SSWC4'	4124012-01	Soil	09/24/04 08:00	09/24/04 13:45
SPFS92404ESWC4'	4124012-03	Soil	09/24/04 08:25	09/24/04 13:45
SPFS92404WSWC4'	4I24012-04	Soil	09/24/04 08:35	09/24/04 13:45
SPFS92404BHC16"	4I24012-05	Soil	09/24/04 08:45	09/24/04 13:45

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#### Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

#### Organics by GC

#### **Environmental Lab of Texas**

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SPFS92404SSWC4' (4I24012-01) Soil								<u></u>	
Benzene	ND	0.0250	mg/kg dry	25	EI42711	09/24/04	09/26/04	EPA 8021B	
Toluene	ND	0.0250	"		"	"	"	11	
Ethylbenzene	ND	0.0250	*		н		14	н	
Xylene (p/m)	ND	0.0250	"	"	"	*1	н	"	
Xylene (0)	ND	0.0250	11	"	**	"		"	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	80	120	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI42302	09/24/04	09/24/04	EPA 8015M	
Diesel Range Organics >C12-C35	25.9	10.0	"	"	"	н	0	"	
Total Hydrocarbon C6-C35	25.9	10.0	"	н	n		н	н	
Surrogate: 1-Chlorooctane		111 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		121 %	70	130	"	"	"	"	
SPFS92404ESWC4' (4124012-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42711	09/24/04	09/26/04	EPA 8021B	
Toluene	ND	0.0250	"		"	"			
Ethylbenzene	ND	0.0250	"	"	n	"	"	н	
Xylene (p/m)	ND	0.0250	11	"	"	"	"	"	
Xylene (0)	ND	0.0250	"	п	*1	н	н	n	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.2 %	80-1	120	"	11	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI42302	09/24/04	09/24/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	н	**	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0		11	"	"	**	"	
Surrogate: 1-Chlorooctane		115 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		123 %	70-1	130	"	"	"	"	
SPFS92404WSWC4' (4124012-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42711	09/24/04	09/26/04	EPA 8021B	
Toluene	ND	0.0250	"	u	u	u	'n	a	
Ethylbenzene	ND	0.0250	D	11	"	"	н	"	
Xylene (p/m)	ND	0.0250	11	"	n	H.	n	н	
Xylene (0)	ND	0.0250	"	v		"	н	11	
Surrogate: a,a,a-Trifluorotoluene		94.2 %	80-1	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	×.	80.2 %	80-1	120	"	"	"	n	
Gasoline Range Organics C6-C12	10.9	10.0	mg/kg dry	1	EI42302	09/24/04	09/24/04	EPA 8015M	
Diesel Range Organics >C12-C35	50.9	10.0	"	"	*	н	•	и	
Total Hydrocarbon C6-C35	61.8	10.0	"	н	n	"	n		

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety,

with written approval of Environmental Lab of Texas.

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476	Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann						Rep	432) 687-4914 Reported: 27/04 16:44	
		O	rganics b	y GC				<u> </u>	
		Environ	mental L	ab of To	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SPFS92404WSWC4' (4I24012-04) Soil						in			-
Surrogate: 1-Chlorooctane	•	117 %	70-1	30	EI42302	09 24 04	09 24 04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		122 %	70-1	30	"	"	"	"	
SPFS92404BHC16'' (4I24012-05) Soil					}				
Benzene	ND	0.0250	mg/kg dry	25	EI42711	09/24/04	09/26/04	EPA 8021B	
Toluene	ND	0.0250	н	н	. <b>"</b>		"	. <b>H</b>	
Ethylbenzene	ND	0.0250	," .	Ħ			n		
(ylene (p/m)	ND	0.0250	•	. "	"	"	n	<b>H</b>	· :
Kylene (0)	ND	0.0250	"	"	"	**	U		

80-120

80-120

70-130

70-130

1

99.8 %

85.3 %

10.0

10.0

106 %

104 %

10.0 mg/kg dry

J [7.79]

35.1

35.1

Surrogate: a,a,a-Trifluorotoluene

Surrogate: 4-Bromofluorobenzene

**Gasoline Range Organics C6-C12** 

Diesel Range Organics >C12-C35

Total Hydrocarbon C6-C35

Surrogate: 1-Chlorooctadecane

Surrogate: 1-Chlorooctane

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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09/24/04

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EPA 8015M

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

# Project Number: 2004-00197 Project Manager: Jeff Dann

#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SPFS92404SSWC4' (4124012-01) Soil									
% Solids	92.0		%	1	EI42712	09/24/04	09/24/04	% calculation	
SPFS92404ESWC4' (4124012-03) Soil									
% Solids	90.0		%	1	EI42712	09/24/04	09/24/04	% calculation	
SPFS92404WSWC4' (4124012-04) Soil									
% Solids	89.0		%	1	EI42712	09/24/04	09/24/04	% calculation	
SPFS92404BHC16'' (4124012-05) Soil									
% Solids	93.0		%	I	EI42712	09/24/04	09/24/04	% calculation	

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

#### Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

**Reported:** 09/27/04 16:44

### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
				20100						140105
Batch EI42302 - Solvent Extraction (GC)	<u> </u>		·							
Blank (EI42302-BLK1)				Prepared: (	09/23/04 A	nalyzed: 09	/24/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"					1 A.		
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	47.8		mg kg	50.0		95.6	70-130			
Surrogate: 1-Chlorooctadecane	52.3		"	50.0		105	70-130	**	1 - A	
Blank (EI42302-BLK2)				Prepared: (	)9/23/04 Ai	nalyzed: 09	/24/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	ų							:
Total Hydrocarbon C6-C35	ND	10.0	*							
Surrogate: 1-Chlorooctane	46.0		mg kg	50.0		92.0	70-130			
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130			
LCS (EI42302-BS1)				Prepared: 0	)9/23/04 Ai	nalyzed: 09/	/24/04			
Gasoline Range Organics C6-C12	444	10.0	mg/kg wet	500		88.8	75-125			
Diesel Range Organics >C12-C35	586	10.0	**	500		117	75-125			
Total Hydrocarbon C6-C35	1030	10.0	"	1000		103	75-125			
Surrogate: 1-Chlorooctane	57.8		mg kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	64.5		"	50.0		129	70-130			
LCS (E142302-BS2)				Prepared: 0	19/23/04 Ar	nalyzed: 09/	24/04			
Gasoline Range Organics C6-C12	434	10.0	mg/kg wet	500		86.8	75-125			
Diesel Range Organics >C12-C35	456	10.0		500		91.2	75-125			
Total Hydrocarbon C6-C35	890	10.0	"	1000		89.0	75-125			
Surrogate: 1-Chlorooctane	51.8		mg kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	38.8		"	50.0		77. <b>6</b>	70-130			
Calibration Check (EI42302-CCV1)				Prepared: 0	19/23/04 Ar	nalyzed: 09/	24/04			
Gasoline Range Organics C6-C12	448		mg/kg	500		89.6	80-120			
Diesel Range Organics >C12-C35	553		"	500		111	80-120			
Fotal Hydrocarbon C6-C35	1000		'n	1000		100	80-120			
Surrogate: 1-Chlorooctane	59.1		"	50.0		118	70-130			
Surrogate: 1-Chlorooctadecane	61.9		"	50.0		124	70-130			

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

#### Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

09/27/04 16:44

Organics	by GC	- Quality	Control
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#### **Environmental Lab of Texas**

	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit			Level	Result	/0NEC				INDIES
Batch EI42302 - Solvent Extraction (GC)										
Calibration Check (EI42302-CCV2)				Prepared: (	09/23/04 A	nalyzed: 09	0/24/04			
Gasoline Range Organics C6-C12	484		mg/kg	500		96.8	80-120			
Diesel Range Organics >C12-C35	546		"	500		109	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	54.7		"	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	52.8		"	50.0		106	70-130			
Matrix Spike (EI42302-MS1)	Source: 4123001-01		Prepared: (	)9/23/04 A	nalyzed: 09	/24/04				
Gasoline Range Organics C6-C12	493	10.0	mg/kg dry	532	19.3	89.0	75-125			
Diesel Range Organics >C12-C35	654	10.0	"	532	73.6	109	75-125			
Total Hydrocarbon C6-C35	1150	10.0	"	1060	92.9	99.7	75-125			
Surrogate: 1-Chlorooctane	58.6		mg kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	63.0		"	50.0		126	70-130			
Matrix Spike (EI42302-MS2)	Sour	ce: 4I23012	-10	Prepared: (	)9/23/04 A	nalyzed: 09	/25/04			
Gasoline Range Organics C6-C12	493	10.0	mg/kg dry	515	9.75	93.8	75-125			
Diesel Range Organics >C12-C35	738	10.0	"	515	199	105	75-125			
Total Hydrocarbon C6-C35	1230	10.0	н	1030	199	100	75-125			
Surrogate: 1-Chlorooctane	59.8		mg kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	49.6		"	50.0		<i>99.2</i>	70-130			
Matrix Spike Dup (EI42302-MSD1)	Sour	ce: 4123001-	-01	Prepared: 0	)9/23/04 A	nalyzed: 09	/24/04			
Gasoline Range Organics C6-C12	513	10.0	mg/kg dry	532	19.3	92.8	75-125	3.98	20	
Diesel Range Organics >C12-C35	661	10.0		532	73.6	110	75-125	1.06	20	
Total Hydrocarbon C6-C35	1170	10.0	"	1060	92.9	102	75-125	1.72	20	
Surrogate: 1-Chlorooctane	61.4		mg kg	50.0		123	70-130			
Surrogate: 1-Chlorooctadecane	63.4		"	50.0		127	70-130			
, Matrix Spike Dup (EI42302-MSD2)	Sour	ce: 4123012-	10	Prepared: 0	)9/23/04 A	nalyzed: 09	/25/04			
Gasoline Range Organics C6-C12	483	10.0	mg/kg dry	515	9.75	91.9	75-125	2.05	20	
Diesel Range Organics >C12-C35	739	10.0		515	199	105	75-125	0.135	20	
Total Hydrocarbon C6-C35	1220	10.0	U	1030	199	99.1	75-125	0.816	20	
Surrogate: 1-Chlorooctane	59.8		mg kg	50.0		120	70-130			
Surrogate: 1-Chlorooctadecane	48.7		"	50.0		97.4	70-130			

# Plains All American EH & S 1301 S. County Road 1150

Midland TX, 79706-4476

#### Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

Fax: (432) 687-4914

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Reported:

09/27/04 16:44

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
					TOSAL					110105
Batch EI42711 - EPA 5030C (GC)				· ····				· .		
Blank (EI42711-BLK1)				Prepared: (	09/24/04 A	nalyzed: 09	0/26/04	-		
Benzene	ND	0.0250	mg/kg wet						· · · · ·	
Toluene	ND	0.0250	u							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	u							
Xylene (0)	ND	0.0250								
Surrogate: a,a,a-Trifluorotoluene	104		ug kg	100		104	80-120			
Surrogate: 4-Bromofluorobenzene	81.6	· • •	"	100		81.6	80-120			
LCS (EI42711-BS1)				Prepared: 0	9/24/04 Ai	nalyzed: 09	/26/04			
Benzene	108	·	ug/kg	100		108	80-120			
Toluene	108		"	100		108	80-120			
Ethylbenzene	98.4			100		98.4	80-120			
Xylene (p/m)	217			200		108	80-120			
Xylene (0)	105			100	•	105	80-120			
Surrogate: a,a,a-Trifluorotoluene	119		"	100	1.41	119	80-120		- ··· <u>+-</u> -···-	
Surrogate: 4-Bromofluorobenzene	93.2		"	100		93.2	80-120			
Calibration Check (EI42711-CCV1)				Prepared: 0	9/24/04 Ar	nalyzed: 09	/27/04			
Benzene	96.3		ug/kg	100		96.3	80-120			
Foluene	95.9		**	100		95.9	80-120			
Ethylbenzene	85.6		**	100		85.6	80-120	•		
Xylene (p/m)	190		"	200		<b>95</b> .0	80-120		· -	
Xylene (o)	89.1		n	100		89.1	80-120		•	
Surrogate: a,a,a-Trifluorotoluene	114		"	100		114	80-120			
Surrogate: 4-Bromofluorobenzene	96.3		"	100		96.3	80-120			
Matrix Spike (EI42711-MS1)	Sou	rce: 4I24012-	01	Prepared: 0	9/24/04 Ar	nalyzed: 09	/26/04			
Benzene	102		ug/kg	100	ND	102	80-120			
Toluene	102		"	100	ND	102	80-120			
Ethylbenzene	97.8		"	100	ND	97.8	80-120			
Kylene (p/m)	220		м	200	ND	110	80-120			
Cylene (o)	104			100	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	118		"	100		118	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			

Environmental Lab of Texas

#### Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

09/27/04 16:44

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

•		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### Batch EI42711 - EPA 5030C (GC)

Matrix Spike Dup (EI42711-MSD1)	Source: 4	124012-01	Prepared: (	09/24/04 A	nalyzed: 0	9/26/04			
Benzene	103	ug/kg	100	ND	103	80-120	0.976	20	
Toluene	104	н	100	ND	104	80-120	1.94	20	
Ethylbenzene	99.8	•	100	ND	99.8	80-120	2.02	20	
Xylene (p/m)	224	"	200	ND	112	80-120	1.80	20	
Xylene (0)	106	u	100	ND	106	80-120	1.90	20	
Surrogate: a,a,a-Trifluorotoluene	118	"	100		118	80-120			
Surrogate: 4-Bromofluorobenzene	105	"	100		105	80-120			

Environmental Lab of Texas

Plains All American EH & S	Project: Friscoe-Skelly #2	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX, 79706-4476	Project Manager: Jeff Dann	09/27/04 16:44

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

Envi	ronment	al Lab	) of '	Texas
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42712 - % Solids									·	
Blank (EI42712-BLK1)				Prepared &	Analyzed:	09/24/04				
% Solids	100		%							
Duplicate (EI42712-DUP1)	Sourc	ce: 4122009-0	)1	Prepared &	Analyzed:	09/24/04				
% Solids	81.0		%		81.0			0.00	20	

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#### **Notes and Definitions**

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). DET Analyte DETECTED Analyte NOT DETECTED at or above the reporting limit ND NR Not Reported Sample results reported on a dry weight basis drv RPD Relative Percent Difference LCS Laboratory Control Spike MS Matrix Spike Duplicate Dup

Report Approved By:

Raland K houts Date: 9/27/04

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Biezugbe, Lab Tech.

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Environmental Lab of Texas



# **Analytical Report**

#### **Prepared for:**

Daniel Bryant Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Friscoe Skelly #2 Project Number: 2004-00197 Location: None Given

Lab Order Number: 4J29004

Report Date: 11/05/04

F	Plains All American EH & S	Project:	Friscoe Skelly	Fax: (432) 687-4914
	1301 S. County Road 1150	Project Number:	2004-00197	Reported:
	Midland TX, 79706-4476	Project Manager:	Daniel Bryant	11/05/04 14:45

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPFS102804BH	4J29004-01	Soil	10/28/04 14:00	10/29/04 11:03
SPFS102804NSW	4J29004-02	Soil	10/28/04 14:30	10/29/04 11:03
SPFS102804ESW	4J29004-03	Soil	10/28/04 14:45	10/29/04 11:03
SPFS102804WSW	4J29004-04	Soil	10/28/04 15:00	10/29/04 11:03

Plains All American EH & S			Project: Fri	scoe Skelly	,			Fax: (43)	2) 687-4914
1301 S. County Road 1150			Number: 200					Reg	orted:
Midland TX, 79706-4476		Project N	lanager: Da	niel Bryant	:			11/05/	04 14:45
		0	rganics b	y GC					
· · ·		Environ	mental L	ab of T	exas				•
	<b>.</b> .	Reporting							
Analyte SPFS102804BH (4J29004-01) Soil	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Benzene	0.910	0.100	mg/kg dry	100	EK40306	11/02/04	11/03/04	EPA 8021B	
Toluene	11.1	0.100	" "	"	EK40300 "	"	11/03/04	LIA 6021D	• .
Ethylbenzene	15.3	0.100	II						
Xylene (p/m)	22.3	0.100		п			n	Ħ	
Xylene (p)m) Xylene (o)	9.93	0.100		11				11	
Surrogate: a,a,a-Trifluorotoluene		174 %	80-1	20				"	
Surrogate: 4-Bromofluorobenzene		174 %	80-1. 80-1.		"	"	,		S-0 S-0
Gasoline Range Organics C6-C12	1190	124 /0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	3-0
Diesel Range Organics >C12-C35	4160	10.0		N	EJ42907	10/29/04	10/30/04	#	
Fotal Hydrocarbon C6-C35	5350	10.0			n	"		u	
Surrogate: 1-Chlorooctane		98.8 %	70-1.	30		"	#	"	
Surrogate: 1-Chlorooctadecane		82.4 %	70-1.		"	"	"	"	
- SPFS102804NSW (4J29004-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40306	11/02/04	11/03/04	EPA 8021B	
[oluene	ND	0.0250	14	"	**	"	н	н	
Ethylbenzene	ND	0.0250	n	"	H		"	"	
(ylene (p/m)	ND	0.0250	n	*	*1	U II	**		
Kylene (o)	ND	0.0250	"	"	"	н	**	"	
Surrogate: a,a,a-Trifluorotoluene		81.9 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %	80-12	20	n	"	"	"	
<b>Gasoline Range Organics C6-C12</b>	ND	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	56.7	10.0		u		н	*	n	
Fotal Hydrocarbon C6-C35	56.7	10.0	IT	"	"	M	ħ	н	
Surrogate: 1-Chlorooctane		101 %	70-13	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		120 %	70-13	80	"	"	"	"	
SPFS102804ESW (4J29004-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EK40306	11/02/04	11/03/04	EPA 8021B	
oluene	ND	0.0250	n	н	**		"	*	
Ethylbenzene	ND	0.0250	n	"	,		"		
(ylene (p/m)	ND	0.0250	n		*		11	**	
(ylene (o)	ND	0.0250	н	"	10	11	"	8	
Surrogate: a,a,a-Trifluorotoluene		87. <b>6</b> %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-12	20	"	"	"	"	
Fasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ42907	10/29/04	10/30/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	u	"	"	μ	"		
Total Hydrocarbon C6-C35	ND	10.0		"	u	"	n	"	

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#### Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

Organics by GC

Reported: 45

11/05/04	14:4
11/05/04	14:4

Environmental Lab of Texas											
Method	Notes										
EPA 8015M											
"											
EPA 8021B											
n											
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"											
"											
"											
"											
EPA 8015M											
'n											
"											
-	" " EPA 8015M "										

Environmental Lab of Texas

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476

#### Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

**Reported:** 11/05/04 14:45

#### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

Environmental Lab of Texas											
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note		
6PFS102804BH (4J29004-01) Soil											
% Moisture	8.0		%	ı	EK40102	11/01/04	11/01/04	% calculation			
5PFS102804NSW (4J29004-02) Soil			· .								
% Moisture	13.0		%		EK40102	11/01/04	11/01/04	% calculation			
SPFS102804ESW (4J29004-03) Soil											
% Moisture	11.0		%	1	EK40102	11/01/04	11/01/04	% calculation			
SPFS102804WSW (4J29004-04) Soil											
% Moisture	13.0		%	1	EK40102	11/01/04	11/01/04	% calculation	•		
				;				·			
									5		
			1								

Environmental Lab of Texas
## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

**Reported**:

11/05/04 14:45

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

	_	Environ	mentai L	ad of Te	xas					
	<b>D</b> . 1	Reporting	TL :-	Spike	Source		%REC	000	RPD	<b></b>
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EJ42907 - Solvent Extraction (GC)										<u> </u>
Blank (EJ42907-BLK1)				Prepared &	Analyzed:	10/29/04				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	u							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	44.5		mg kg	50.0		89.0	70-130			
Surrogate: 1-Chlorooctadecane	48.5		n	50.0		97.0	70-130			
Blank (EJ42907-BLK2)				Prepared: 1	10/29/04 A	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet			• • • • • • • • • • • • • • • • • • • •	·····			
Diesel Range Organics >C12-C35	ND	10.0	н							
Total Hydrocarbon C6-C35	ND	10.0	*							
Surrogate: 1-Chlorooctane	48.1		mg kg	50.0		96.2	70-130			
Surrogate: 1-Chlorooctadecane	48.8		"	50.0		97.6	70-130			
LCS (EJ42907-BS1)				Prepared &	Analyzed:	10/29/04				
Gasoline Range Organics C6-C12	473	10.0	mg/kg wet	500		94.6	75-125			
Diesel Range Organics >C12-C35	518	10.0	"	500		104	75-125			
Total Hydrocarbon C6-C35	991	10.0		1000		99.1	75-125			
Surrogate: 1-Chlorooctane	51.4		mg kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	46.5		"	50.0		93.0	70-130			
LCS (EJ42907-BS2)				Prepared: 1	0/29/04 Ai	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	518	10.0	mg/kg wet	500		104	75-125			
Diesel Range Organics >C12-C35	540	10.0	**	500		108	75-125			
Total Hydrocarbon C6-C35	1060	10.0		1000		106	75-125			
Surrogate: 1-Chlorooctane	57.9		mg kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	60.2		"	50.0		120	70-130			
LCS Dup (EJ42907-BSD2)				Prepared: 1	0/29/04 Ai	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	502	10.0	mg/kg wet	500		100	75-125	3.14	20	
Diesel Range Organics >C12-C35	551	10.0	"	500		110	75-125	2.02	20	
Total Hydrocarbon C6-C35	1050	10.0	"	1000		105	75-125	0.948	20	
Surrogate: 1-Chlorooctane	56.2		mg kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	58.8		"	50.0		118	70-130			

### Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:

t

## 11/05/04 14:45

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ42907 - Solvent Extraction (GC)	······································	• •								
Calibration Check (EJ42907-CCV1)				Prepared &	k Analyzed:	10/29/04	,		• • •	
Gasoline Range Organics C6-C12	492		mg/kg	500		98.4	80-120			
Diesel Range Organics >C12-C35	506		"	500		101	80-120			
Total Hydrocarbon C6-C35	<del>99</del> 8			1000		<b>99.8</b>	80-120			
Surrogate: 1-Chlorooctane	50.0		"	50.0		100	70-130			
Surrogate: 1-Chlorooctadecane	48.0		"	50.0		96.0	70-130			
Calibration Check (EJ42907-CCV2)				Prepared: 1	10/29/04 A	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	500		mg/kg	500		100	80-120			
Diesel Range Organics >C12-C35	559		n	500		112	80-120			
Total Hydrocarbon C6-C35	1060		**	1000		106	80-120			
Surrogate: 1-Chlorooctane	57.4		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	60.6		"	50.0		121	70-130			
Matrix Spike (EJ42907-MS1)	Sour	ce: 4J29003	-04	Prepared: 1	0/29/04 Aı	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	571	10.0	mg/kg dry	526	ND	. 109	75-125			
Diesel Range Organics >C12-C35	597	10.0	"	526	ND	113	75-125			
Total Hydrocarbon C6-C35	1170	10.0	"	1050	ND	111	75-125			
Surrogate: 1-Chlorooctane	57.9		mg kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	61.9		"	50.0		124	70-130			
Matrix Spike Dup (EJ42907-MSD1)	Sour	ce: 4J29003	-04	Prepared: 1	0/29/04 Ar	nalyzed: 10	/30/04			
Gasoline Range Organics C6-C12	566	10.0	mg/kg dry	526	ND	108	75-125	0.880	20	
Diesel Range Organics >C12-C35	548	10.0	"	526	ND	104	75-125	8.56	20	
Total Hydrocarbon C6-C35	1110	10.0	"	1050	ND	106	75-125	5.26	20	
Surrogate: 1-Chlorooctane	54.7		mg kg	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	53.5		"	50.0		107	70-130			

Environmental Lab of Texas

## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

Reported:

11/05/04 14:45

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

	Desult	Reporting	Tfuite	Spike	Source	1/DEC	%REC	רות ח	RPD	N-to-
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK40306 - EPA 5030C (GC)										
Blank (EK40306-BLK1)				Prepared &	Analyzed	: 11/02/04				
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	п							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	n							
Xylene (0)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	85.1		ug kg	100		85.1	80-120			
Surrogate: 4-Bromofluorobenzene	95.3		"	100		95.3	80-120			
LCS (EK40306-BS1)				Prepared &	Analyzed	11/02/04				
Benzene	95.3		ug/kg	100		95.3	80-120			
Toluene	99.5			100		99.5	80-120			
Ethylbenzene	103			100		103	80-120			
Xylene (p/m)	228		"	200		114	80-120			
Xylene (0)	107		"	100		107	80-120			
Surrogate: a,a,a-Trifluorotoluene	105		"	100		105	80-120			
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120			
Calibration Check (EK40306-CCV1)				Prepared: 1	1/02/04 A	nalyzed: 11	/03/04			
Benzene	93.8		ug/kg	100		93.8	80-120			
Toluene	95.6		"	100		95.6	80-120			
Ethylbenzene	89.3			100		89.3	80-120			
Xylene (p/m)	197		н	200		98.5	80-120			
Xylene (0)	92.9		и	100		92.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			
Matrix Spike (EK40306-MS1)	Sou	rce: 4K01005	5-01	Prepared: 1	1/02/04 A	nalyzed: 11	/03/04			
Benzene	92.0		ug/kg	100	ND	92.0	80-120			
Toluene	93.6			100	ND	93.6	80-120			
Ethylbenzene	97.3		"	100	ND	97.3	80-120			
Xylene (p/m)	217			200	ND	108	80-120			
Xylene (0)	104		"	100	ND	104	80-120			
Surrogate: a,a,a-Trifluorotoluene	102		"	100	• • • • • • • • • • • • • • • • • • • •	102	80-120			
Surrogate: 4-Bromofluorobenzene	116		"	100		116	80-120			

## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Daniel Bryant

**Reported:** 11/05/04 14:45

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit L	Jnits	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK40306 - EPA 5030C (GC)										
Matrix Spike Dup (EK40306-MSD1)	Sour	ce: 4K01005-01		Prepared: 1	1/02/04 A	analyzed: 11	/03/04			
Benzene	93.1	u	g/kg	100	ND	93.1	80-120	1.19	20	
Toluene	96.4			100	ND	· 96.4	80-120	2.95	20	
Ethylbenzene	<b>98</b> .0		н	100	ND	98.0	80-120	0.717	20	
Kylene (p/m)	218		"	200	ND	109	80-120	0.922	20	
Xylene (o)	103		*	100	ND	103	80-120	0.966	20	
Surrogate: a,a,a-Trifluorotoluene	97.9		"	100		97.9	80-120			
Surrogate: 4-Bromofluorobenzene	112		"	100		112	80-120		•	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 8 of 11

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Reported:

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environme	ntal Lab	of Texas
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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK40102 - General Preparati	on (Prep)									
Blank (EK40102-BLK1)				Prepared &	Analyzed:	11/01/04				
% Moisture	0.0		%							
Duplicate (EK40102-DUP1)	Sou	rce: 4J29002-0	)1	Prepared &	: Analyzed:	11/01/04				
% Moisture	8.0		%		8.0			0.00	20	

Environmental Lab of Texas

1301 S. (	II American EH & S County Road 1150 TX, 79706-4476	Project: Frisco Project Number: 2004-( Project Manager: Daniel	0197	Fax: (432) 687-4914 Reported: 11/05/04 14:45
	· · · ·	Notes and Definitio	ns	
S-04	The surrogate recovery for this sample is outsi	de of established control limits du	e to a sample matrix effect.	
DET	Analyte DETECTED			
ND	Analyte NOT DETECTED at or above the reporting	limit		
NR	Not Reported			· ·
dry	Sample results reported on a dry weight basis			
rpd	Relative Percent Difference			
LCS	Laboratory Control Spike			
MS	Matrix Spike			
Dup	Duplicate			

Ciliz D. Kune

Report Approved By:

11/5/2004

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Biezugbe, Lab Tech.

Date:

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 10 of 11

Environmental Lab of Texa12600 West 1-20 EastPhone:915-563Odessa Texas 79763Fax:915-563	3-1800																										
Project Manager: Pat McCasland	·								_		Pro	oject	Nan	ne: _	F	risc	oe S	kel	ly_								_
Company Name: Plains All American Mark	eting											Pro	oject	:#:	2	004	001	.97									
Company Address:											I	Proje	ct L	oc:													
City/State/Zip:																											-
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Telephone No: Sampler Signature: <u>Feliv</u> Herran	duy_		<u></u>				<u></u>		-																		
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NT CON	Date Sampled	Time Sampled	No. of Containers	ICE	ONH	HCI	NaOH	Den	Athon (Smoth)	Water	Sludge	Soil	Other (Specify)	TDS/CL/SAR/EC	1.7H 418.1	TPH8015M	Metals	Volatiles	Semivolatiles	BTEX 8021B/50307	Reactivity	Corrosivity	Ignitiabilty	Chlorides		RUSH TAT	
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## Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: PI	ains P/L
Date/Time:	10-29-04 @ 1130
Order #:	4529004
Initials:	JMM

## Sample Receipt Checklist

Temperature of container/cooler?	Ves	No	3.5	С
Shipping container/cooler in good condition?	(Yes)	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not preser	7t
Custody Seals intact on sample bottles?	Yes	No	Not preser	
Chain of custody present?	(Yes)	No		
Sample Instructions complete on Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished and received?	Yes	No		
Chain of custody agrees with sample label(s)	Yes	No		
Container labels legible and intact?	Yes	No		
Sample Matrix and properties same as on chain of custody?	(Yes)	No		
Samples in proper container/bottle?	(Yes)	No		
Samples properly preserved?	Yes	No		
Sample bottles intact?	(Yes)	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	(Yes)	No		
Sufficient sample amount for indicated test?	(es)	No		
All samples received within sufficient hold time?	(es)	No		
VOC samples have zero headspace?	(Yes	No	Not Applicat	le

Other observations:

Variance Documentation:

.

Contact Person: -\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Regarding:

Corrective Action Taken:

Environmental Lab of 12600 West I-20 East Phone Odessa Texas 79763 Fax:	•	800									1			, <b>-</b>															<b>.</b>	
Project Manager: <u>Pat McCasland</u>	- <u></u>		·									]	Proj	ect N	ame	e:	Fr	isco	e S	kel	ly									
Company Name: Plains All Americ	an Marketi	ing												Proj	ect #	ŧ:	20	04-	001	97										
Company Address:													P	roject	: Loc	::							_							
City/State/Zip:															POŧ	ŧ:														
Telephone No:																														
Telephone No: Sampler Signature: <u>Felix</u> He	renand	lup	-		-																									
		1													$\vdash$		CLP			An	aly	ze F	or					-		
															- 2		TAI	_				304								
		Date Sampled	Time Sampled	No. of Containers	ICE	HNO	HCI	NaOH	OSH	None	Other (Specify)	Water	Sludge	Soil Soil	TDS/CL/SAR/EC	TPH 418.1	TPH TX 1005Extended	TPH8015M	Metals	Volatiles	Semivolatiles	BTEX 8021B/50304	Reactivity	Corrosivity	Ignitiabilty	Chlorides			RUSH TAT	Standard TAT
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# **Analytical Report**

## **Prepared for:**

Jeff Dann Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Friscoe-Skelly #2 Project Number: 2004-00197 Location: None Given

Lab Order Number: 4K19001

Report Date: 11/24/04

Plains All American EH & S	Project: Friscoe-Skelly #2	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX, 79706-4476	Project Manager: Jeff Dann	11/24/04 15:01

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SPFS110904BH16	4K19001-01	Soil	11/09/04 11:30	11/19/04 09:10
SPFS110904BH18	4K19001-02	Soil	11/09/04 11:50	11/19/04 09:10
SPFS110904BH20	4K19001-03	Soil	11/09/04 13:30	11/19/04 09:10
SPFS110904BH24	4K19001-04	Soil	11/09/04 14:40	11/19/04 09:10

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 70706 4476		Project N	Project: Fris Number: 2004	4-00197	/ #2			Fax: (432) ( Report	ted:
Midland TX, 79706-4476			lanager: Jeff					11/24/04	15:01
			rganics by						
к. л. 		Environ	mental La	b of Te	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SPFS110904BH16 (4K19001-01) Soil									
Gasoline Range Organics C6-C12	796	10.0	mg/kg dry	1	EK42101	11/19/04	11/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	2570	10.0	"	н	"	**	n	**	
Fotal Hydrocarbon C6-C35	3360	10.0	"	u	n	"		"	
Surrogate: 1-Chlorooctane		101 %	70-13	0	"	"	"	"	
Surrogate: 1-Chlorooctadecane		129 %	70-13	0	"	"	"	"	
SPFS110904BH18 (4K19001-02) Soil									
Gasoline Range Organics C6-C12	8060	50.0	mg/kg dry	5	EK42101	11/19/04	11/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	10900	50.0	н	"	н	"	"		
Cotal Hydrocarbon C6-C35	18900	50.0	"	u	"	H	"	п	
Surrogate: 1-Chlorooctane		48.1 %	70-13	0	"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		52.8 %	70-13	0	"	"	"	"	S-00
SPFS110904BH20 (4K19001-03) Soil									
Gasoline Range Organics C6-C12	8190	100	mg/kg dry	10	EK42101	11/19/04	11/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	13100	100	"		н	μ	"	**	
otal Hydrocarbon C6-C35	21300	100	*			"	"	н	
Surrogate: 1-Chlorooctane		25.7 %	70-13	0	17	н	"	11	S-00
Turrogate: 1-Chlorooctadecane		29.7 %	70-13	0	"	"	"	"	S-00
SPFS110904BH24 (4K19001-04) Soil									
Gasoline Range Organics C6-C12	4400	50.0	mg/kg dry	5	EK42101	11/19/04	11/19/04	EPA 8015M	
Diesel Range Organics >C12-C35	6490	50.0		"		*		n	
Total Hydrocarbon C6-C35	10900	50.0	"	"	u	n	H	n	
Surrogate: 1-Chlorooctane		35.7 %	70-13	0	"	n	"	"	S-06
Surrogate: 1-Chlorooctadecane		21.4 %	70-13	0	"	"	**	"	S-06

Environmental Lab of Texas

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 2 of 7

## Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

**Reported:** 11/24/04 15:01

### General Chemistry Parameters by EPA / Standard Methods

**Environmental Lab of Texas** 

<u></u>			•••••••••						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SPFS110904BH16 (4K19001-01) Soil									
% Moisture	2.0		%	1	EK42211	11/19/04	11/22/04	% calculation	
SPFS110904BH18 (4K19001-02) Soil									
% Moisture	9.0		%	1	EK42211	11/19/04	11/22/04	% calculation	
SPFS110904BH20 (4K19001-03) Soil	_								
% Moisture	7.0		%	1	EK42211	11/19/04	11/22/04	% calculation	
SPFS110904BH24 (4K19001-04) Soil									
% Moisture	8.0		%	1	EK42211	11/19/04	11/22/04	% calculation	

Environmental Lab of Texas

Plains All American EH & S
1301 S. County Road 1150
Midland TX, 79706-4476

.

## Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

Reported:

11/24/04 15:01

## **Organics by GC - Quality Control**

Environmental	Lab of Texas
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Ameter	Desult	Reporting		Spike	Source	4/050	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EK42101 - Solvent Extraction (GC)										
Blank (EK42101-BLK1)				Prepared &	Analyzed:	11/19/04				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet						······	
Diesel Range Organics >C12-C35	ND	10.0	0							
Total Hydrocarbon C6-C35	ND	10.0	н							
Surrogate: 1-Chlorooctane	35.4		"	50.0		70.8	70-130			
Surrogate: 1-Chlorooctadecane	37.4		"	50.0		74.8	70-130			
Blank (EK42101-BLK2)				Prepared: 1	1/19/04 Aı	nalyzed: 11	/20/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	н							
Surrogate: 1-Chlorooctane	35.4		n	50.0		70.8	70-130			
Surrogate: 1-Chlorooctadecane	38.5		"	50.0		77.0	70-130			
LCS <del>(</del> EK42101-BS1)				Prepared &	Analyzed:	11/19/04				
Gasoline Range Organics C6-C12	450	10.0	mg/kg wet	500		90.0	75-125			
Diesel Range Organics >C12-C35	573	10.0	"	500		115	75-125			
Total Hydrocarbon C6-C35	1020	10.0	"	1000		102	75-125			
Surrogate: 1-Chlorooctane	<b>49</b> .7		n	50.0		99.4	70-130			
Surrogate: 1-Chlorooctadecane	49.4		"	50.0		98.8	70-130			
LCS (EK42101-BS2)				Prepared: 1	1/19/04 An	alyzed: 11	/20/04			
Gasoline Range Organics C6-C12	417	10.0	mg/kg wet	500		83.4	75-125			
Diesel Range Organics >C12-C35	594	10.0		500		119	75-125			
Total Hydrocarbon C6-C35	1010	10.0	n	1000		101	75-125			
Surrogate: 1-Chlorooctane	52.1		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	50.6		"	50.0		101	70-130			
Calibration Check (EK42101-CCV1)				Prepared: 1	1/19/04 An	alyzed: 11	/20/04			
Gasoline Range Organics C6-C12	449		mg/kg	500		89.8	80-120			
Diesel Range Organics >C12-C35	555		"	500		111	80-120			
Total Hydrocarbon C6-C35	1000			1000		100	80-120			
Surrogate: 1-Chlorooctane	49.9		mg kg wet	50.0		99.8	70-130			
Surrogate: 1-Chlorooctadecane	48.8		"	50.0		97.6	70-130			

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## Project: Friscoe-Skelly #2 Project Number: 2004-00197 Project Manager: Jeff Dann

Reported:

11/24/04 15:01

## Organics by GC - Quality Control Environmental Lab of Texas

		LUVITOI		au of te.	143					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK42101 - Solvent Extraction (GC)					result					
Calibration Check (EK42101-CCV2)					1/19/04 A					
Gasoline Range Organics C6-C12	451		mg/kg	500		90.2	80-120			
Diesel Range Organics >C12-C35	586			500		117	80-120			
Total Hydrocarbon C6-C35	1040			1000		104	80-120			
Surrogate: 1-Chlorooctane	50.5		mg kg wet	50.0		101	70-130			
Surrogate: 1-Chlorooctadecane	48.6		"	50.0		97.2	70-130			
Matrix Spike (EK42101-MS1)	Sou	rce: 4K18004	4-02	Prepared &	Analyzed:	11/19/04				
Gasoline Range Organics C6-C12	403	10.0	mg/kg dry	532	ND	75.8	75-125			
Diesel Range Organics >C12-C35	515	10.0	и	532	ND	96.8	75-125			
Total Hydrocarbon C6-C35	918	10.0	ч	1060	ND	86.6	75-125			
Surrogate: 1-Chlorooctane	46.9		"	53.2		88.2	70-130			
Surrogate: 1-Chlorooctadecane	44.2		"	53.2		83.1	70-130			
Matrix Spike (EK42101-MS2)	Sour	rce: 4K19007	7-12	Prepared: 1	1/19/04 A	nalyzed: 11	/20/04			
Gasoline Range Organics C6-C12	486	10.0	mg/kg dry	515	ND	94.4	75-125			
Diesel Range Organics >C12-C35	612	10.0	n	515	ND	119	75-125			
Fotal Hydrocarbon C6-C35	1100	10.0	"	1030	ND	107	75-125			
Surrogate: 1-Chlorooctane	53.7		"	51.5		104	70-130			
Surrogate: 1-Chlorooctadecane	52.0		"	51.5		101	70-130			
Matrix Spike Dup (EK42101-MSD1)	Sour	rce: 4K18004	1-02	Prepared &	Analyzed:	11/19/04				
Gasoline Range Organics C6-C12	468	10.0	mg/kg dry	532	ND	88.0	75-125	14.9	20	
Diesel Range Organics >C12-C35	540	10.0	н	532	ND	102	75-125	4.74	20	
Total Hydrocarbon C6-C35	1040	10.0	11	1060	ND	98.1	75-125	12.5	20	
Surrogate: 1-Chlorooctane	54.4		"	53.2		102	70-130			
Surrogate: 1-Chlorooctadecane	52.2		"	53.2		98.1	70-130			
Matrix Spike Dup (EK42101-MSD2)	Sour	rce: 4K19007	7-12	Prepared: 1	1/19/04 A	nalyzed: 11	/20/04			
Gasoline Range Organics C6-C12	464	10.0	mg/kg dry	515	ND	90.1	75-125	4.63	20	
Diesel Range Organics >C12-C35	603	10.0	"	515	ND	117	75-125	1.48	20	
Fotal Hydrocarbon C6-C35	1070	10.0	•	1030	ND	104	75-125	2.76	20	
Surrogate: 1-Chlorooctane	50.6		"	51.5		98.3	70-130			
Surrogate: 1-Chlorooctadecane	<b>49.0</b>		"	51.5		95.1	70-130			

General Chemistry Parameters by EPA / Standard Methods - Quality Control Environmental Lab of Texas     Analyte   Reporting Result   Spike Limit   Source Units   Spike Level   Source Result   %REC   RPD Limit   Notes     Statch EK42211 - General Preparation (Prep)   Prepared: 11/19/04   Analyzed: 11/22/04   Prepared: 11/19/04   Analyzed: 11/22/04     Moisture   0.0   %   Prepared: 11/19/04   Analyzed: 11/22/04	Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476		Project Number: 20		12				Fax: (432) Repo	rted:
Environmental Lab of Texas     knalyte   Result   Spike   Source   %REC   Limit   RPD   Limit   Notes     intent EK42211-General Preparation (Prep)    Prepared: 11/19/04 Analyzed: 11/22/04		l Chemistry Para			Metho	ds - Qua	lity Con	trol	11/24/0	4 13.01
Analyze     Result     Limit     Units     Level     Result     %REC     Limit     RPD     Limit     Notes       iatch EK42211-GLeX1)     Prepared:     11/19/04     Analyzed:     11/12/04		·····								
Iank (EK42211-BLK1)     Prepared: 11/19/04     Analyzed: 11/22/04       Moisture     0.0     %       huplicate (EK42211-DUP1)     Source: 4K19001-01     Prepared: 11/19/04     Analyzed: 11/22/04       Moisture     2.0     %     2.0     0.00     20	Analyte	Result		-		%REC		RPD		Notes
Moisture     0.0     %       uplicate (EK42211-DUP1)     Source: 4K19001-01     Prepared: 11/19/04 Analyzed: 11/22/04       Moisture     2.0     %     2.0     0.00     20	Batch EK42211 - General Preparati	on (Prep)						·		
Source: 4K19001-01     Prepared: 11/19/04 Analyzed: 11/22/04       Moissure     2.0     %     2.0     0.00     20	Blank (EK42211-BLK1)			Prepared: 1	1/19/04 A	nalyzed: 11	/22/04			
Moisture 20 % 20 0.00 20				Dronorodi 1	1/10/04 4	nalugadi 11	122/04			
	6 Moisture			Prepared: 1		naryzed: 11	/22/04	0.00	20	
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Environmental Lab of Texas

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Plains A	ll American EH & S	Project: Friscoe-Skelly #2	Fax: (432) 687-4914
1301 S. (	County Road 1150	Project Number: 2004-00197	Reported:
Midland	TX, 79706-4476	Project Manager: Jeff Dann	11/24/04 15:01
		Notes and Definitions	
S-06	The recovery of this surrogate is ou matrix interference's.	tside control limits due to sample dilution required from high analyte concen	tration and/or

LCS Laboratory Control Spike

DET ND

NR

dry RPD Analyte DETECTED

Relative Percent Difference

Not Reported

Analyte NOT DETECTED at or above the reporting limit

Sample results reported on a dry weight basis

- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Raland Kertuck Date: 11/24/2004

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

	<b>xas, Inc.</b> 5-563-1800 5-563-1713	4																									
Project Manager: Pat McCasland					•••••••					P	rojec	: Na	me: _	F	'risc	<u>:0e                                    </u>	Ske	lly #	<u>#2</u>								
Company Name: Plains		- a									P	rojec	t#:_														
Company Address:					****						Proj																
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e e e e e e e e e e e e e e e e e e e	Date Sampled	Time Sampled	No. of Containers	1	ONH	HCI	HS0 HS0	None	Other (Specify)	Water	Sludge Soil	Other (Specify)	TDS/CL/SAR/EC	1911-11-11	OMUCHERNER	Metals	Volatiles	Semivolatiles	BTEX 8021B/6030	Reactivity	Corrosivity	Ignitiabilty	Chlorides			RUSH TAT	Standard TAT
01 SPFS110904BH16	11/09/2004	11:30	1	X							X			X	X				- FA	44	9	7	0		$\rightarrow$	-+	
SPFS110904BH18 SPFS110904BH20	11/09/2004	<u>11:50</u> 1:30	1	X X									-	XX		-	<b> </b>					_				_	
SPFS110904BH24	11/09/2004	2:40		X							X	_		<u>k</u>	$\int_{\mathbf{x}}$		1				-					+	
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	Date Time -19-04 0910	Received by				$\sim$		<i>,</i>		-				ate / 9-0-1		Tim 297						ł	0 C				

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

Client: Plans 1/2

Date/Time: 11-19-04@ 0930

Order #: <u>4K 19001</u>

Initials: Jnm

## Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	1.0 C
Shipping container/cooler in good condition?	Yes	No	NIA
Custody Seals intact on shipping container/cooler?	Yes	No	Not present */4
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	(ৰহ্য)	No	
Sample Instructions complete on Chain of Custody?	Kes)	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	Yeg	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	765	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	(Tes)	No	
VOC samples have zero headspace?	Tes	No	Not Applicable

Other observations:

## Variance Documentation:

	on: - Pa+McCa	sland Date/Time	9: 11-19-04@0910	Contacted by:	Jeanne McMurra
Regarding:	TPH 418.1	+ TPH BOISN	rnarked on Co	X	
<b></b>		·····			
Corrective Ad	tion Taken:				
	(1	ient only u	Jants TPH BOI	<u>5M</u>	
	*****			يلون و در و در و در ورو مورد و در و و و و و و و و و و و و و و و و	
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#### 12600 West I-20 East - Odessa, Texas 79765

# Analytical Report

Prepared for:

Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Friscoe Skelly Project Number: 2004-00197 Location: None Given

Lab Order Number: 4L13008

Report Date: 12/16/04

	Plains All American EH & S	Project: Friscoe Skelly	Fax: (432) 687-4914
	1301 S. County Road 1150	Project Number: 2004-00197	Reported:
	Midland TX, 79706-4476	Project Manager: Camille Reynolds	12/16/04 09:37

### ANALYTICAL REPORT FOR SAMPLES

2

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
F.S. BH #1 5'	4L13008-01	Soil	12/09/04 08:25	12/13/04 13:20
F.S. BH #1 10'	4L13008-02	Soil	12/09/04 09:32	12/13/04 13:20
F.S. BH #1 15'	4L13008-03	Soil	12/09/04 10:16	12/13/04 13:20
F.S. BH #1 20'	4L13008-04	Soil	12/09/04 11:47	12/13/04 13:20
F.S. BH #1 25'	4L13008-05	Soil	12/09/04 13:13	12/13/04 13:20

Plains All American EH & S	Project: Friscoe Skelly	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX; 79706-4476	Project Manager: Camille Reynolds	12/16/04 09:37
Midiand 1X, 79706-4476	Project Manager: Camille Reynolds	12/16/04 05

## Organics by GC

## **Environmental Lab of Texas**

		Reporting	22 - C						
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
F.S. BH #1 5' (4L13008-01) Soil	****								
Benzene	6.41	0.200	mg/kg dry	200	EL41402	12/13/04	12/14/04	EPA 8021B	
Toluene	55.5	0.200	"	"	H	н	"	*	
Ethylbenzene	43.6	0.200	**			м		"	
Xylene (p/m)	60.0	0.200	**	"	"	n	n	**	
Xylene (0)	22.7	0.200			u	۳	11	"	
Surrogate: a,a,a-Trifluorotoluene		207 %	80-1	20	"	"	"	"	S-0
Surrogate: 4-Bromofluorobenzene		137 %	80-1	20	"	"	"	"	S-0
Gasoline Range Organics C6-C12	1020	10.0	mg/kg dry	1	EL41311	12/13/04	12/14/04	EPA 8015M	
Diesel Range Organics >C12-C35	1050	10.0	"	u	"				
Total Hydrocarbon C6-C35	2070	10.0	۳	**		11	u		
Surrogate: 1-Chlorooctane		122 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		120 %	70-1	30	"	**	"	"	
F.S. BH #1 10' (4L13008-02) Soil									
Benzene	0.153	0.0250	mg/kg dry	25	EL41402	12/13/04	12/13/04	EPA 8021B	
Toluene	4.14	0.0250			. "	97		"	
Ethylbenzene	6.81	0.0250	"	"	*	n	"	"	
Kylene (p/m)	10.5	0.0250	н	"		н	"	"	
Kylene (o)	3.64	0.0250	"	"		n	и	n	
Surrogate: a,a,a-Trifluorotoluene		286 %	80-1.	20	"	"	"	"	S-0-
Surrogate: 4-Bromofluorobenzene		138 %	80-1.	20	"		"	"	S-0
Gasoline Range Organics C6-C12	498	10.0	mg/kg dry	1	EL41311	12/13/04	12/14/04	EPA 8015M	
Diesel Range Organics >C12-C35	1330	10.0	"	*		"	"	"	
Fotal Hydrocarbon C6-C35	1830	10.0	H			H	"	"	
Surrogate: 1-Chlorooctane		110 %	70-1.	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		122 %	70-1.	30	"	"	"	"	
F.S. BH #1 15' (4L13008-03) Soil									
Benzene	0.203	0.0250	mg/kg dry	25	EL41402	12/13/04	12/13/04	EPA 8021B	
Foluene	4.82	0.0250	н	"		"	"	"	
Ethylbenzene	7.24	0.0250	н	n			"	"	
Kylene (p/m)	10.7	0.0250	u	"		"	"	u	
Kylene (o)	4.28	0.0250	"	n	u	n	n	н	
Surrogate: a,a,a-Trifluorotoluene		284 %	80-12	20	"	"	n	"	S-0-
Surrogate: 4-Bromofluorobenzene		147 %	80-12	20	"	"	"	"	S-0-
Gasoline Range Organics C6-C12	243	10.0	mg/kg dry	1	EL41311	12/13/04	12/14/04	EPA 8015M	
Diesel Range Organics >C12-C35	438	10.0	n			"	n	"	
Total Hydrocarbon C6-C35	681	10.0	"			"	"	м	

Environmental Lab of Texas

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Plains All American EH & S				iscoe Skelly				Fax: (432) 6	5 <b>87-4</b> 914
1301 S. County Road 1150			umber: 20					Repor	
Midland TX, 79706-4476	_	Project M	lanager: Ca	mille Reyno	olds			12/16/04	09:37
		O	rganics b	oy GC					
		Environ	mental I	Lab of Te	exas				
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
F.S. BH #1 15' (4L13008-03) Soil	· · · · · · · · · · · · · · · · · · ·								
Surrogate: 1-Chlorooctane		102 %	70-	130	EL41311	12 13 04	12 14 04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		104 %	70-	130	11	"	"	"	
F.S. BH #1 20' (4L13008-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EL41402	12/13/04	12/14/04	EPA 8021B	
Toluene	ND	0.0250	н	"	"	н	н	"	
Ethylbenzene	ND	0.0250	"	"	a		"	**	
Xylene (p/m)	ND	0.0250		м	"	"	н	u	
Xylene (o)	ND	0.0250		"	"	н	"	"	
Surrogate: a,a,a-Trifluorotoluene		113 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	J [8.36]	10.0	mg/kg dry	1	EL41311	12/13/04	12/14/04	EPA 8015M	
Diesel Range Organics >C12-C35	46.8	10.0	"		n	"	"	μ	
Total Hydrocarbon C6-C35	46.8	10.0	"	н	n	n	n	**	
Surrogate: 1-Chlorooctane		97.4 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-	130	"	"	"	"	
F.S. BH #1 25' (4L13008-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EL41402	12/13/04	12/14/04	EPA 8021B	
Toluene	ND	0.0250	n	"	я	"	н	"	
Ethylbenzene	ND	0.0250	n		"	"	и	"	
Xylene (p/m)	ND	0.0250	"		"	**	"	"	
Xylene (o)	ND	0.0250	11	"	"	"	u	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	80	120	"	"	"	"	
Gasoline Range Organics C6-C12	J [5.82]	10.0	mg/kg dry	1	EL41311	12/13/04	12/14/04	EPA 8015M	
Diesel Range Organics >C12-C35	125	10.0	"	"	"	11	"	"	
Total Hydrocarbon C6-C35	125	10.0	"	"	n	"	"	n	
Surrogate: 1-Chlorooctane		91.2 %	70	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		91.6 %	70	130	"	"	n	"	

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## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

Reported: 12/16/04 09:37

## General Chemistry Parameters by EPA / Standard Methods

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Noto
F.S. BH #1 5' (4L13008-01) Soil				Ditution	Daten	Frepared	Analyzeu	Method	Note
% Moisture	4.9		%	1	EL41401	12/13/04	12/14/04	% calculation	
F.S. BH #1 10' (4L13008-02) Soil									· ·
% Moisture	4.3		%	1	EL41401	12/13/04	12/14/04	% calculation	
F.S. BH #1 15' (4L13008-03) Soil									
% Moisture	8.1		%	1	EL41401	12/13/04	12/14/04	% calculation	÷
F.S. BH #1 20' (4L13008-04) Soil									· · ·
% Moisture	7.2		%	1	EL41401	12/13/04	12/14/04	% calculation	
F.S. BH #1 25' (4L13008-05) Soil									· .
% Moisture	5.0		%	1	EL41401	12/13/04	12/14/04	% calculation	

Environmental Lab of Texas	
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## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

Reported:

12/16/04 09:37

#### **Organics by GC - Quality Control**

## **Environmental Lab of Texas**

	Desite	Reporting	11-14-	Spike	Source	MARC	%REC	0.000	RPD	Nu
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41311 - Solvent Extraction (GC)				·						
Blank (EL41311-BLK1)				Prepared &	Analyzed:	12/13/04				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	*							
Total Hydrocarbon C6-C35	ND	10.0	н							
Surrogate: 1-Chlorooctane	37.1		mg kg	50.0		74.2	70-130			
Surrogate: 1-Chlorooctadecane	36.5		"	50.0		73.0	70-130			
Blank (EL41311-BLK2)				Prepared: 1	12/13/04 Ar	nalyzed: 12	2/14/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	39.0		mg kg	50.0		78.0	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EL41311-BS1)				Prepared &	Analyzed:	12/13/04				
Gasoline Range Organics C6-C12	478	10.0	mg/kg wet	500		95.6	75-125			
Diesel Range Organics >C12-C35	499	10.0	"	500		<b>99.8</b>	75-125			
Total Hydrocarbon C6-C35	977	10.0	"	1000		97.7	75-125			
Surrogate: 1-Chlorooctane	51.3		mg kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130			
LCS (EL41311-BS2)				Prepared: 1	2/13/04 Ar	nalyzed: 12	/14/04			
Gasoline Range Organics C6-C12	492	10.0	mg/kg wet	500		98.4	75-125			
Diesel Range Organics >C12-C35	503	10.0	"	500		101	75-125			
Total Hydrocarbon C6-C35	995	10.0	"	1000		99.5	75-125			
Surrogate: 1-Chlorooctane	52.0		mg kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	41.7		"	50.0		83.4	70-130			
Calibration Check (EL41311-CCV1)				Prepared &	Analyzed:	12/13/04				
Gasoline Range Organics C6-C12	472		mg/kg	500		94.4	80-120			
Diesel Range Organics >C12-C35	528		"	500		106	80-120			
Total Hydrocarbon C6-C35	1000		"	1000		100	80-120			
Surrogate: 1-Chlorooctane	50.1		"	50.0		100	70-130			
Surrogate: 1-Chlorooctadecane	43.8		"	50.0		87.6	70-130			

Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds Fax: (432) 687-4914

Reported: 12/16/04 09:37

## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41311 - Solvent Extraction (GC)	-	- 002						•		
Calibration Check (EL41311-CCV2)				Prepared: 1	12/13/04 A	nalyzed: 12	/14/04			
Gasoline Range Organics C6-C12	483		mg/kg	500		96.6	80-120			· · ·
Diesel Range Organics >C12-C35	522		**	500		104	80-120			
Total Hydrocarbon C6-C35	1000			1000		· 100	80-120			
Surrogate: 1-Chlorooctane	51.5		"	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	48.1		"	50.0		96.2	70-130			
Matrix Spike (EL41311-MS1)	Sou	rce: 4L13002	2-02	Prepared: 1	2/13/04 A	nalyzed: 12	/14/04			
Gasoline Range Organics C6-C12	504	10.0	mg/kg dry	553	ND	91.1	75-125			
Diesel Range Organics >C12-C35	531	10.0	"	553	ND	<b>96</b> .0	75-125			
Total Hydrocarbon C6-C35	1040	10.0	n	1110	ND	93.7	75-125			
Surrogate: 1-Chlorooctane	50.9		mg kg	50.0		102	70-130			
Surrogate: 1-Chiorooctadecane	48.7		"	50.0		97.4	70-130			
Matrix Spike (EL41311-MS2)	Sou	rce: 4L13007	-01	Prepared: 1	2/13/04 Aı	nalyzed: 12	/14/04			
Gasoline Range Organics C6-C12	596	10.0	mg/kg dry	575	12.3	102	75-125			
Diesel Range Organics >C12-C35	586	10.0		575	17.2	.98.9	75-125			
Fotal Hydrocarbon C6-C35	1180	10.0	"	1150	29.5	100	75-125			
Surrogate: 1-Chlorooctane	57.4		mg kg	50.0		115	70-130			· · · · ·
Surrogate: 1-Chlorooctadecane	52.6		"	50.0		105	70-130			
Matrix Spike Dup (EL41311-MSD1)	Sou	rce: 4L13002	-02	Prepared: 1	2/13/04 Ar	halyzed: 12/	/14/04			
Gasoline Range Organics C6-C12	523	10.0	mg/kg dry	553	ND	94.6	75-125	3.70	20	
Diesel Range Organics >C12-C35	524	10.0		553	ND	94.8	75-125	1.33	20	
Total Hydrocarbon C6-C35	1050	10.0	"	1110	ND	94.6	75-125	0.957	20	
Surrogate: 1-Chlorooctane	51.8		mg kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	49.5		"	50.0		99.0	70-130			
Matrix Spike Dup (EL41311-MSD2)	Sou	rce: 4L13007	-01	Prepared: 1	2/13/04 Ar	alyzed: 12/	/14/04			
Gasoline Range Organics C6-C12	572	10.0	mg/kg dry	575	12.3	97.3	75-125	4.11	20	
Diesel Range Organics >C12-C35	581	10.0	"	575	17.2	<b>98</b> .1	75-125	0.857	20	
Total Hydrocarbon C6-C35	1150	10.0		1150	29.5	97.4	75-125	2.58	20	
Surrogate: 1-Chlorooctane	55.5		mg kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	51.2		"	50.0		102	70-130			

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## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

Reported:

12/16/04 09:37

## **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

							·			
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41402 - EPA 5030C (GC)										
Blank (EL41402-BLK1)				Prepared &	Analyzed:	12/13/04				
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	•							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	п							
Surrogate: a,a,a-Trifluorotoluene	112		ug kg	100		112	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			
LCS (EL41402-BS1)				Prepared &	Analyzed:	12/13/04				
Benzene	92.3		ug/kg	100	•	92.3	80-120			
Toluene	95.4		"	100		95.4	80-120			
Ethylbenzene	110			100		110	80-120			
Xylene (p/m)	240		"	200		120	80-120			
Xylené (o)	119			100		119	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	115		"	100		115	80-120			
Calibration Check (EL41402-CCV1)				Prepared: 1	2/13/04 Ar	nalyzed: 12	/14/04			
Benzene	90.4		ug/kg	100		90.4	80-120			
Toluene	90.3		"	100		90.3	80-120			
Ethylbenzene	94.7		•	100		94.7	80-120			
Xylene (p/m)	209			200		104	80-120			
Xylene (0)	108			100		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	119		"	100		119	80-120			
Surrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			
Matrix Spike (EL41402-MS1)	Sou	rce: 4L10005	-01	Prepared &	Analyzed:	12/13/04				
Benzene	87.7		ug/kg	100	ND	87.7	80-120			
Toluene	84.5			100	ND	84.5	80-120			
Ethylbenzene	89.1		"	100	ND	89.1	80-120			
	203		"	200	ND	102	80-120			
Xylene (p/m)	205									
Xylene (p/m) Xylene (o)	93.4			100	ND	93.4	80-120			
·			"		ND	93.4	80-120 80-120			

Environmental Lab of Texas

#### Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

**Reported:** 12/16/04 09:37

## **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Spike	Source		%REC		RPD		
Analyte	Result	Limit Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41402 - EPA 5030C (GC)									
Matrix Spike Dup (EL41402-MSD1)	Source	e: 4L10005-01	Prepared &	Analyzed:	12/13/04				
Benzene	99.1	ug/kg	100	ND	99.1	80-120	12.2	20	
Toluene	102	w	100	ND	102	80-120	18.8	20	
Ethylbenzene	108	"	100	ND	108	80-120	19.2	20	
Xylene (p/m)	235	P	200	ND	118	80-120	14.5	20	
Xylene (0)	114	N	100	ND	114	80-120	19.9	20	
Surrogate: a,a,a-Trifluorotoluene	115	"	100		115	80-120		· · ·	
Surrogate: 4-Bromofluorobenzene	107	"	100		107	80-120			

Environmental Lab of Texas

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## Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

Reported:

12/16/04 09:37

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

**Environmental Lab of Texas** 

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41401 - General Preparation (Pre	)									
Blank (EL41401-BLK1)				Prepared: 1	2/13/04 A	nalyzed: 12	/14/04			
% Moisture	0.001		%							
Duplicate (EL41401-DUP1)	Sou	rce: 4L10023-	01	Prepared: 1	2/13/04 A	nalyzed: 12	/14/04			
% Moisture	3.0		%		3.2			6.45	20	

Environmental Lab of Texas

Plains All American EH & S		n EH & S Project: Friscoe Skelly			
1301 S. County Road 1150		Project Number:	2004-00197	Reported:	
Midland	TX, 79706-4476	Project Manager:	Camille Reynolds	12/16/04 09:37	
		Notes and De	finitions		
S-04	The surrogate recovery for this same	ple is outside of established control l	limits due to a sample matrix effect.	• .	
J	Detected but below the Reporting L	imit; therefore, result is an estimated	i concentration (CLP J-Flag).		
DET	Analyte DETECTED				
ND	Analyte NOT DETECTED at or above the	he reporting limit			
NR	Not Reported				
dry	Sample results reported on a dry weight	basis			
RPD	Relative Percent Difference				
LCS	Laboratory Control Spike				
MS	Matrix Spike				
Dup	Duplicate				

Ciliz & Kune

Report Approved By:

12/16/2004

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

Date:

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Environmental Lab of Texas

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Project Manager:     Pat McCaaland     Project Name:     Friscos Skelly       Company Name:     Pinins     Project Name:     Project According       Company Name:     Pinins     Project Name:     Project According       Company Name:     Pinins     Project Name:     Project Name:       City/State/Zip:     POI:     2004.00197       Talcephone Ne:     Sampler:     Signature:     Manayze:       Sampler:     Signature:     Manayze:     POI:     2004.00197       Sampler:     Signature:     Signature:     Signature:     Signature:       Sampler:     Signature:     Signature:     Signature:     Signature:       Sampler:     Signature:     Signature:     Signature:     Signature:       Sample: <th>Line in the second se</th> <th></th> <th>I</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>1</th> <th></th> <th></th> <th></th> <th></th>	Line in the second se																	I									1					
Company Address     Project Le:       City/State/Zip     PO:     2004/00197       Telephone No:     Sampler Signature:     Manaayze Por       V     V     V     V       V     V     V     V       V     V     V     V       V     V     V     V     V       V     V     V     V     V     V       V     V     V     V     V     V     V       V     V     V     V     V     V     V     V       V     <	Project Manager: Pat McCasland												Proj	ect	Nan	ne:		Fri	sco	e S	kel	ly								<b></b>		
Company Address:     Project Lo:       City/State/Zip:     PO:     2004-00197       Tatephone No:     Sampler Signature:     Madual     <	Company Name: Plains										_			Pro	oject	:#:						-		_								
City/Rata/Zip:	Company Address:										-																					
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Image: Special Instructions     FAX RESULTS TO Pat MoCasland ASAP       Relinquicible:     Date     Time     Received by:     Date     Time     Here your content	(/ ·														F																	
of:   P.S. BH #1.5   12/09/2004   8:25   1   X				1 #	F	 T	1	7				<b>—</b>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								8	030						F		-Feri	
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Act [F.S. BH #110'   12/09/2004   9-32   1   X   <	F.S. BH #1 5'					+	╉───	╉┯			۲Ľ			. 1	<b>-</b> +	F		<u>н</u>						Lœ.	10	Ē	19	+	+	-+		
-edf   F.S. BH #1 20   12/09/2004   11:47   1   X <t< td=""><td>F.S. BH #1 10'</td><td></td><td></td><td>1</td><td>X</td><td></td><td>1</td><td>1</td><td></td><td>t</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-+</td><td></td></t<>	F.S. BH #1 10'			1	X		1	1		t				X					X										-	-+		
-edf   F.S. BH #1 20   12/09/2004   11:47   1   X <t< td=""><td>F.S. BH #1 15'</td><td>12/09/2004</td><td>10:16</td><td>1</td><td>X</td><td></td><td>Τ</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td>T</td><td></td></t<>	F.S. BH #1 15'	12/09/2004	10:16	1	X		Τ	1						X					X				X							T		
Special Instructions FAX RESULTS TO Pat McCasland ASAP   Relinquished: Date   Time Received by:   Date Time   Relinquished: Date   Time Received by:	- 6 F.S. BH #1 20'	12/09/2004	11:47	1								l		X					X				X					$\Box$	Τ	T		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice	F.S. BH #1 25	12/09/2004	1:13	1	X									X					Χ				X					T	Т	T		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice				Ι		T	Γ							Τ	Τ													T	T	1		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice				Τ	Γ	Τ	Τ	T								1													T	+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice				T	Γ	T	T	T						-				-												T		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	1	Γ	1	1	1																						+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	T	Γ		1	1							1	-1					_							<b>†</b>				
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	1	1	1	1	1						-	1	1	-									<b></b>				+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	1	Ē	1		1																				-		+	*	
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice																													T	T		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			<u> </u>	4	┣	4	_		L			<b> </b>			_						_					<b></b>				_		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			+		┣	+	_	+	<b> </b>			<b> </b>			-+											ļ	<b>  </b>	<b>+</b>		-+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			+	+	┢──	+		+						-+	-+											┝┙	h	<del> </del>	+	-+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°c     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	+	-	+	+	+-						+	-+											<u>├</u> ──┤	-			-+		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1	1	$\vdash$	+	†	+						-+	-	-1											$\vdash$	<u> </u>	-+	-+-		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice								T																					1	1		
FAX RESULTS TO Pat McCasland ASAP   Temperature Upon Request     Relinquished:   Date   Time   Received by:   Date   Time   Laboratory Comments:   1.5°C     Watter   Date   Time   Received by:   Date   Time   Hoz glass onice     Relinquished:   Date   Time   Received by:   Date   Time   Hoz glass onice			1		L															_									T			
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## Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: P	lains P/L
Date/Time	12-13-04@ 1320
Order #: _	4213008
Initials:	JMM

## Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	1.5	C
Shipping container/cooler in good condition?	Yes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not present	
Custody Seals intact on sample bottles?	Yes	No	Not present	
Chain of custody present?	Tes	No		
Sample Instructions complete on Chain of Custody?	res	No		
Chain of Custody signed when relinquished and received?	(Tes)	No		
Chain of custody agrees with sample label(s)	(Tes)	No		
Container labels legible and intact?	Ves	No		
Sample Matrix and properties same as on chain of custody?	res	No		
Samples in proper container/bottle?	(Yes)	No		1
Samples property preserved?	(Tes)	No		
Sample bottles intact?	(Yes)	No		
Preservations documented on Chain of Custody?	es	No		
Containers documented on Chain of Custody?	(tes)	No -		
Sufficient sample amount for indicated test?	(res)	No		
All samples received within sufficient hold time?	(es)	No		
VOC samples have zero headspace?	Yes	No	Not Applicable	

Other observations:

## Variance Documentation:

Contact Person: Regarding:	Date/Time:	Contacted by:	en e
••••••••••••••••••••••••••••••••••••••			,
Corrective Action Taken:	an a	, , , , , , , , , , , , , , , , , , ,	
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# Analytical Report

## **Prepared for:**

Camille Reynolds Plains All American EH & S 1301 S. County Road 1150 Midland, TX 79706-4476

Project: Friscoe Skelly Project Number: 2004-00197 Location: None Given

Lab Order Number: 5D13011

Report Date: 04/20/05

Plains All American EH & S	Project: Friscoe Skelly	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	04/20/05 16:07

. . . . .

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS041205 30'	5D13011-01	Soil	04/12/05 13:31	04/13/05 14:24
FS041205 35'	5D13011-02	Soil	04/12/05 14:20	04/13/05 14:24



12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds Fax: (432) 687-4914

**Reported:** 04/20/05 16:07

## Organics by GC

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FS041205 30' (5D13011-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED51502	04/15/05	04/18/05	EPA 8021B	
Toluene	ND	0.0250	"	и	u	"	**	n	
Ethylbenzene	ND	0.0250	"	н	"	"	"		
Xylene (p/m)	ND	0.0250	н	**	"	**	н	"	
Xylene (o)	ND	0.0250	'n		"	"	0	"	
Surrogate: a,a,a-Trifluorotoluene		116 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.5 %	80-1	20	"	"	"	n	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED51402	04/14/05	04/15/05	EPA 8015M	
Diesel Range Organics >C12-C35	37.6	10.0	"	"		"	н	н	
Total Hydrocarbon C6-C35	37.6	10.0	"	"		н	"	"	
Surrogate: 1-Chlorooctane		74.4 %	70-1	30	n	"	"	"	
Surrogate: 1-Chlorooctadecane		83.0 %	70-1	30	"	"	"	"	
FS041205 35' (5D13011-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	ED51502	04/15/05	04/18/05	EPA 8021B	
Toluene	ND	0.0250		"	"		"	"	
Ethylbenzene	ND	0.0250		"	"	n	"	"	
Xylene (p/m)	ND	0.0250	••		"	"	"	"	
Xylene (0)	ND	0.0250	n	"	"	n	"	"	
Surrogate: a,a,a-Trifluorotoluene		112 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.5 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	ED51402	04/14/05	04/15/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"		"	"		"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	и			**	
Surrogate: 1-Chlorooctane		74.6 %	70-1	30	n	"	"	"	
Surrogate: 1-Chlorooctadecane		82.6 %	70-1	30	"	"	"	"	

Environmental Lab of Texas

1301 S. County Road 1150 Pro	bject Number: 2004-00197 Reported:
Midland TX, 79706-4476 Pro	ject Manager: Camille Reynolds 04/20/05 16:07

## General Chemistry Parameters by EPA / Standard Methods

### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FS041205 30' (5D13011-01) Soil			· · ·						
% Moisture	4.7	0.1	%	1	ED51511	04/14/05	04/15/05	% calculation	
FS041205 35' (5D13011-02) Soil			-						
% Moisture	5.6	0.1	%	1	ED51511	04/14/05	04/15/05	% calculation	

Environmental Lab of Texas

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Page 3 of 8

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713
Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds

**Reported:** 04/20/05 16:07

### **Organics by GC - Quality Control**

**Environmental Lab of Texas** 

	<b>.</b> .	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch ED51402 - Solvent Extraction (GC	<u>;)</u>			<u></u>						
Blank (ED51402-BLK1)				Prepared: (	)4/14/05 A	nalyzed: 04	/15/05			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	n							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: I-Chlorooctane	38.6		mg/kg	50.0		77.2	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			
LCS (ED51402-BS1)				Prepared: 0	)4/14/05 A	analyzed: 04	/15/05			
Gasoline Range Organics C6-C12	438	10.0	mg/kg wet	500		87.6	75-125			
Diesel Range Organics >C12-C35	496	10.0	11	500		99.2	75-125			
Total Hydrocarbon C6-C35	934	10.0	"	1000		93.4	75-125			
Surrogate: 1-Chlorooctane	45.3		mg/kg	50.0		90.6	70-130			
Surrogate: 1-Chlorooctadecane	39.9		н	50.0		79.8	70-130			
Calibration Check (ED51402-CCV1)				Prepared: 0	04/14/05 A	nalyzed: 04	/15/05			
Gasoline Range Organics C6-C12	516		mg/kg	500		103	80-120			
Diesel Range Organics >C12-C35	548		"	500		110	80-120			
Total Hydrocarbon C6-C35	1060		"	1000		106	80-120			
Surrogate: 1-Chlorooctane	54.7		"	50.0		109	70-130			
Surrogate: 1-Chlorooctadecane	48.2		"	50.0		96. <b>4</b>	70-130			
Matrix Spike (ED51402-MS1)	Sou	rce: 5D13010	-19	Prepared: 0	04/14/05 A	nalyzed: 04	/15/05			
Gasoline Range Organics C6-C12	481	10.0	mg/kg dry	509	ND	94.5	75-125			
Diesel Range Organics >C12-C35	529	10.0	"	509	ND	104	75-125			
Total Hydrocarbon C6-C35	1010	10.0		1020	ND	99.0	75-125			
Surrogate: 1-Chlorooctane	46.0		mg/kg	50.0		92.0	70-130			
Surrogate: 1-Chlorooctadecane	41.1		"	50.0		82.2	70-130			
Matrix Spike Dup (ED51402-MSD1)	Sou	rce: 5D13010	-19	Prepared: 0	4/14/05 A	nalyzed: 04	/15/05			
Gasoline Range Organics C6-C12	458	10.0	mg/kg dry	509	ND	90.0	75-125	4.90	20	
Diesel Range Organics >C12-C35	530	10.0	н	509	ND	104	75-125	0.189	20	
Total Hydrocarbon C6-C35	988	10.0	"	1020	ND	96.9	75-125	2.20	20	
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	70-130			
Surrogate: 1-Chlorooctadecane	40.7		"	50.0		81.4	70-130			

Environmental Lab of Texas

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Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476 Project: Friscoe Skelly Project Number: 2004-00197 Project Manager: Camille Reynolds Fax: (432) 687-4914

Reported: 04/20/05 16:07

#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED51502 - EPA 5030C (GC)										
Blank (ED51502-BLK1)				Prepared &	Analyzed	04/15/05	<u>.</u>		<u>.</u>	
Benzene	ND	0.0250	mg/kg wet	Tioparoa a	. / thui y 200.	. 04/15/05				
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250								
Xylene (p/m)	ND	0.0250								
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	119		ug/kg	100		119	80-120			
Surrogate: 4-Bromofluorobenzene	84.3		"	100		84.3	80-120		•	
LCS (ED51502-BS1)				Prepared &	Analyzed:	04/15/05				
Benzene	99.8		ug/kg	100		99.8	80-120	· · · · ·		
Toluene	105		"	100		105	80-120			
Ethylbenzene	110		H	100		110	80-120			
Xylene (p/m)	239			200		120	80-120			
Xylene (o)	117		••	100		117	80-120		;	
Surrogate: a,a,a-Trifluorotoluene	119		"	100		119	80-120			
Surrogate: 4-Bromofluorobenzene	111		"	100		111	80-120			
Calibration Check (ED51502-CCV1)				Prepared: 0	4/15/05 Ai	nalyzed: 04	/16/05			
Benzene	108		ug/kg	100		108	80-120			
Toluene	108		"	100		108	80-120			
Ethylbenzene	97.8		н .	100		97.8	80-120			
Xylene (p/m)	215			200		108	80-120			
Xylene (0)	106			100		106	80-120			
Surrogate: a,a,a-Trifluorotoluene	116		"	100		116	80-120			
Surrogate: 4-Bromofluorobenzene	80.6		"	100		80.6	80-120			
Matrix Spike (ED51502-MS1)	Sour	ce: 5D14010-	-01	Prepared: 0	4/15/05 Ar	nalyzed: 04	/18/05			
Benzene	99.9		ug/kg	100	ND	99.9	80-120			
Toluene	104		"	100	ND	104	80-120			
Ethylbenzene	105		"	100	ND	105	80-120			
Xylene (p/m)	240		н	. 200	ND	120	80-120			
Xylene (o)	113		"	100	ND	113	80-120			
Surrogate: a,a,a-Trifluorotoluene	119	···· ·· ·· ·· ·· ··	"	100		119	80-120			
Surrogate: 4-Bromofluorobenzene	93.4		"	100		93.4	80-120			

Environmental Lab of Texas

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Plains All American EH & S	Project: Friscoe Skelly	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: 2004-00197	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	04/20/05 16:07

# **Organics by GC - Quality Control**

#### Environmental Lab of Texas

Analyte	Result	Reporting Limit Unit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED51502 - EPA 5030C (GC)									
– Matrix Spike Dup (ED51502-MSD1)	Sourc	Prepared:	04/15/05 A	nalyzed: 04	/16/05				
Benzene	90.2	ug/kg	100	ND	90.2	80-120	10.2	20	
Toluenc	93.4	"	100	ND	93.4	80-120	10.7	20	
Ethylbenzene	95.1	"	100	ND	95.1	80-120	9.90	20	
Xylene (p/m)	216	H	200	ND	108	80-120	10.5	20	
Xylene (o)	105	"	100	ND	105	80-120	7.34	20	
Surrogate: a,a,a-Trifluorotoluene	109	"	100		109	80-120			
Surrogate: 4-Bromofluorobenzene	95.2	"	100		95.2	80-120			

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	Plains All American EH & S Project:	Friscoe Skelly	Fax: (432) 687-4914
	1301 S. County Road 1150 Project Number:	2004-00197	Reported:
. 1	Midland TX, 79706-4476 Project Manager:	Camille Reynolds	04/20/05 16:07

## General Chemistry Parameters by EPA / Standard Methods - Quality Control

### **Environmental Lab of Texas**

		Environm	ental 1	Lab of Tex	ras					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED51511 - General Preparation (Prep)										
Blank (ED51511-BLK1)				Prepared: 0	4/14/05 A	nalyzed: 04	/15/05			
% Moisture	ND	0.1	%							
Duplicate (ED51511-DUP1)	Sou	rce: 5D13009-	01	Prepared: 0	4/14/05 A	nalyzed: 04	/15/05			
% Moisture	14.2	0.1	%		13.7		•	3.58	20	

Environmental Lab of Texas

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Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:

Raland K Just

Date:

4/20/2005

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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Environmental Lab of Texas

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	5-563-1800 5-563-1713																									
Project Manager: Pat McCasland						<u> </u>				Pı	rojec	t Na	me:		*****	Frie	icoe	Ske	lly							
Company Name: Plains											P	rojec	:t #:_						<i></i>							
Company Address:											Proj	ect ]	Loc:													
City/State/Zip:				*****				-				F			- q-	200	<u>4-00</u>	197			<u> </u>					
														0 4/8/	1000											
Sampler Signature:		· · · · · · · · · · · · · · · · · · ·						•					<b></b>		100	=		A	- 1			ويوار ويوار		ور مواند زنجه		
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	Date Sampled	Time Sampled	No. of Containers	ICE	ONH	HCI NaOH	HSO	None	Other (Specify)	Water	Soil	Other (Specify)	TDS/CL/SAR	TPH 418.1	TPH TX 10068x4ee	TTHEOREMCRODED	Metals	Volatiles	Semivolatile	BTEX 8021B/5030	Reactivity	Corrosivity	gnitiabilty	Chlorides	Julfates	
9 FS041205 30' FS041205 35'	04/12/2005	1:31 2:20		X X			<u>†</u>				X	1	É.	K	Ý	X				X		러	#	4	<u>"</u>	+
	04/12/2000	2;20					1-					·		*		Ľ				X		_		+	╧	╈
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Manuel Del 4	Date Time <u>-13-05 8:36.4.</u> Date Time	Received by	<u>a</u>	//	ĄĮ	e f	h						1 <u>-</u> 1	Date 13 Date		20	ime	2	Lab	юга	tory	Con	nme cf	ents:	<b>;</b>	
Berg Call o	1-13-05 1424	Jan	r. 7.	nc	m	im	ry.						0	4-13	505	14	24				ŧ	02	· Gr	455	, 0'	1

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

Client: <u>E</u>	PI
Date/Time:	04-13-05 @ 1424
Order #:	5013011
Initials:	Jam

### Sample Receipt Checklist

Temperature of container/cooler?	(Ye	s)	No	12.0	С
Shipping container/cooler in good condition?	স্থ	51	No	Į	}
Custody Seals intact on shipping container/cooler?	Ye	s	No	Notprese	55
Custody Seals intact on sample bottles?	Ye	s I	No	Not-crese	nts
Chain of custody present?	(Ye	5)	No	1	
Sample Instructions complete on Chain of Custody?	Te	s)!	No	ļ	
Chain of Custody signed when relinquished and receiv	red?   (Te	51	No		
Chain of custody agrees with sample label(s)	Re	\$) (	No	}	7
Container labels legible and intact?	(Te	<u>5</u> ⊺	No	1	}
Sample Matrix and properties same as on chain of cus	tody? (Ye	s)	No	)	1
Samples in proper container/bottle?	(Te		No		
Samples properly preserved?	(Te		No		
Sample bottles intact?	(Te	<b>)</b>	No		l
Preservations documented on Chain of Custody?	Te	<u>)</u> !	No		
Containers documented on Chain of Custody?	Te	DI	No	2	
Sufficient sample amount for indicated test?	fre	$\mathbb{D}^{\mathbb{L}}$	No	:	
All samples received within sufficient hold time?	( e	$\Sigma$	No		
VOC samples have zero headspace?	Xə	5, 1	No	Not Applica	bie

Other observations:

Variance Documentation:

Contact Person: - Yea	McCasland Date/Tim	e: 04-13-05@165	_ Contacted by:	Jeane MgMurg
Regarding:				
TPH me:	thed			

Corrective Action Taken:

Juneouve Mullon Tanun					
alient wants	to run	TPH EDISM	not TPH	418.1	



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# ATTACHMENT IV AREA WATER INFORMATION

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New Mexico Office of the State Engineer

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Page 1 of 1

X		<i>ice of the State Engineer</i> rts and Downloads	
Township: 178	Range: 37E	Sections: 5,6,7,8	
NAD27 X:	Y:	Zone: Sean	ch Radius:
County: Bas	in:	Number:	Suffix:
Owner Name: (First)	(Last	•	on-Domestic C Domestic
		• All	
Well / Surfac	cë Data Report	Avg Depth to Wa	ter Report
	Water	Column Report	
	Clear Form	WATERS Menu Help	

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		AVER	AGE	DEPTH OF	WATER	REPORT	0	3/09/20	05		
									(Depth	Water in	Feet)
Bsn	Tws	Rng	Sec	Zone	Х	3	Ŷ	Wells	Min	Max	Avg
Ŀ	17S	37È	05					18	38	76	62
L	175	37E	0.6					2	40	40	40
L	175	37E	07					.8	39	75	65
Ľ	175	37E	08					1	50	50	50

Record Count: 29

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher

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New Mexico Office of the State Engineer

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Page 1 of 1

	<i>New Mexico Of</i> Well Repo	fice of the St orts and Dov		ineer
Township: 16	S Range: 37E	Sections: 3	1,32	
NAD27 X:	Y:	Zone:	×	Search Radius:
County:	Basin:		Numbe	er: Suffix:
Owner Name: (First)	(Las	t) @ All		C Non-Domestic C Domestic
Well	Surface Data Report	يتهير سيبسيعن التحمين سي		to Water Report
	Clear Form	r Column Rep WATERS M		Help

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		AVER	AGE	DEPTH OF	WATER	REPORT	03/09/20	05		
								(Depth	Water in	Feet)
Bsn	Tws	Rng	Sec	Zone	х	Ŷ	Wells	Min	Max	Ävg
Ŀ	16S	37È	31				8	50	72	53
L	16S	37E	32				3	35	45	3.8

Record Count: 11

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher

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New Mexico Office of the State Engineer

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Page 1 of 1

	New Mexico Office of the State Engineer Well Reports and Downloads
	Township: 168 Range: 36E Sections: 36
	NAD27 X: Y: Zone: Search Radius:
<u>-</u>	County: Basin: Number: Suffix:
!	Owner Name: (First) (Last) C Non-Domestic C Domestic C All
	Well / Surface Date Report Avg Depth to Water Report Water Column Report Clear Form WATERS Menu Help
	County: Basin: Number: Suffix: Suffix: Owner Name: (First) (Last) C Non-Domestic C Domestic All Well / Surface Date Report Avg Depth to Water Report Water Column Report

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		AVER	AGE I	EPTH OF	WATER	REPORT	03/09/20	05		
								(Depth	Water in	Feet)
Bsn	Tws	Rng	Sec	Zone	х	Ý	Wells	Min	Max	Avg
Ŀ	165	36E	36				6	40	257	116
Recö	rđ Cơ	unt:	6							

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher

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Page 1 of 1

		ffice of the State Engineer orts and Downloads
Township: 17	'S Range: 36E	Sections: 1,12
NAD27 X:	Y:	Zone: Search Radius:
County:	Basin:	Number: Suffix:
Owner Name: (First)	(Las	st) CNon-Domestic CDomestic CAll
Well /	Surface Data Report	Avg Depth to Water Report
	Wate	ar Column Report
	Clear Form	WATERSMenu
	······································	

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							03/09/20		Water in	Feet)
Bsn	Tws	Rng	Sec	Zone	х	Ý	Wells	Min	Max	Avg
Ŀ	17S	36E	01				6	48	110	64
L	17S	36E	12				3	45	47	4.6

Record Count: 9

http://iwaters.ose.state.nm.us:7001/iWATERS/WellAndSurfaceDispatcher

# ATTACHMENT V

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# SITE INFORMATION & METRICS FORM AND INFORMATIONAL C-141

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	, L.P. Site	Incident Date: September 20, 200	4 10.00 AM	NMOCD Notified: September 20, 2004 10:00AM			
Information and		-		-			
SITE: Friscoe S		Assigne		nce #: 2004-00197			
Company: Plair				ESPONSE CENTER - 800.424.8802			
Street Address:			Notified Date/Time:				
Mailing Address:	5805 East Highw	ay 80	Notified by:				
	Midland, Texas	79702	Person Notified:				
Representative: C			NRC Report	<b>#</b> :			
Representative To	elephone: 505.44	41.0965					
Telephone:							
	eased (bbls): 10 b		lecovered (bb				
>2		D verbally within 24 hi es to unauthorized rele		orm C-141 within 15 days. Natural Gas)			
5-25 bbls: Sub	mit form C-141 within	15 days (Also applies	to unauthorize	d releases of 50-500 mcf Natural Gas)			
	t (LSP) Name: F						
Source of contam	ination: 6" Steel I	Pipeline		· · · · · · · · · · · · · · · · · · ·			
Land Owner, i.e.,	BLM, ST, Fee, Ot	her: Robert C. Rice					
LSP Dimensions			·····				
LSP Area:	338 ft <sup>2</sup>						
Location of Refe							
	e and direction from	m RP					
	°52'4.316"N	<u></u>					
Longitude: 103							
Elevation above		3,810'amsl		· · · · · · · · · · · · · · · · · · ·			
Feet from South							
Feet from West S							
Location- Unit o		e NW¼	Unit	Letter: F			
Location - Section			0 111				
Location- Towns							
Location- Range:							
Location Range.							
Surface water bo	dy within 1000 ' ra	dius of site: none					
	ay within 1000 ia						
	dy within 1000 ' ra						
	dy within 1000 ' ra wells within 1000' r	dius of site:	·····				
Domestic water v	vells within 1000' r	dius of site: adius of site: none					
Domestic water v Agricultural wate	vells within 1000' r r wells within 1000	dius of site: radius of site: none )' radius of site: no	ne				
Domestic water w Agricultural wate Public water supp	vells within 1000' r r wells within 1000 ply wells within 100	dius of site: radius of site: none )' radius of site: no 00' radius of site: r	ne				
Domestic water v Agricultural wate Public water supp Public water supp	vells within 1000' n r wells within 1000 ply wells within 100 ply wells within 100	dius of site: radius of site: none )' radius of site: no 00' radius of site: r 00' radius of site:	ne Ione				
Domestic water v Agricultural wate Public water supp Public water supp Depth from land	vells within 1000' r r wells within 1000 ply wells within 100 ply wells within 100 surface to ground	dius of site: radius of site: none )' radius of site: no 00' radius of site: r	ne Ione				
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Domestic water v Agricultural wate Public water supp Public water supp Depth from land Depth of contam Depth to ground	vells within 1000' r r wells within 1000 ply wells within 100 ply wells within 100 surface to ground ination (DC) – water (DG – DC =	dius of site: radius of site: none )' radius of site: no 00' radius of site: r 00' radius of site: water (DG) ~78 'b = DtGW) - 0	ne none gs	3. Distance to Surface Wat			
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Domestic water v Agricultural wate Public water supp Public water supp Depth from land Depth of contam Depth to ground <b>1. Groun</b> If Depth to GW <i>points</i> If Depth to GW	vells within 1000' r r wells within 1000 ply wells within 100 surface to ground ination (DC) – water (DG – DC = nd Water <50 feet: 20 50 to 99 feet: 10	dius of site: adius of site: none )' radius of site: none 00' radius of site: no 00' radius of site: water (DG) ~78 'b = DtGW) - 0 2. Wellhead P If <1000' from wat or;<200' from priv source: 20 points If >1000' from wat >200' from private	ne none gs Protection Ar ter source, ate domestic ter source, or	ea     Body       water     <200 horizontal feet: 20 points       200-100 horizontal feet: 1 points       ;     >1000 horizontal feet: 0			
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Domestic water v Agricultural water Public water supp Public water supp Depth from land Depth of contam Depth of contam Depth to ground1. Ground If Depth to GW pointsIf Depth to GW pointsIf Depth to GW pointsIf Depth to GW fointsSite Rank (1+2+3) Total Site Rankin Parameter	wells within 1000' r r wells within 1000 ply wells within 1000 surface to ground ination (DC) – water (DG – DC = nd Water <50 feet: 20 50 to 99 feet: 10 >100 feet: 0 e = 10 & 20 g = 10 & 20 ag Score and Accep >19	dius of site: adius of site: none of adius of site: none of radius of site: no contradius of site:	ne none gs Protection Ar ter source, ate domestic ter source, or domestic wa Area Score= 0 is 10-19	ea Body water <pre>200 horizontal feet: 20 points 200-100 horizontal feet: 1 points ; ter </pre> >1000 horizontal feet: 0 points <pre>Surface Water Score= 0</pre>			
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District I 1625 N, French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

L		,		5	anta I	$e, NM \delta/2$	03			فيرد ومراجع والمراجع			
			Rele	ase Notifi	catio	on and Co	orrective A	ction					
						<b>OPERA</b>	TOR		x Initia	al Report		Final R	lepor
Name of Co	mpany Pla	ins Marketir	ig, LP	231749		Contact Camille Reynolds							
Address 580	)5 East Hv	vy. 80, Midla	nd, TX 7	79706		Telephone No. 505-441-0965							
Facility Nar	ne Frisco S	Skelly #2				Facility Type 6"Steel Pipeline							
Surface Ow	ner Rot	vort R		Mineral (	Owner	r Lease No.							
<b></b>				······································	·	ON OF REI	FASE	······					
Unit Letter	Section	Township	Range	Feet from the		h/South Line	Feet from the	East/We	East/West Line County				
F	6	175	37E							Lea			
· ·	L	Latitu	le <u>32° 5</u>	2'04.9"	_ <b>k</b>	Longitude	a 103° 17'38.3"	1		1,			
					ritri	E OF REL	· · · · · · · · · · · · · · · · · · ·	,		-			
Type of Rele	ase Crude (	);i					Release 10 barre	ls	Volume I	Recovered (	) barre	s	
Source of Re				· · · · · · · · · · · · · · · · · · ·			Iour of Occurrence			Hour of Di			
						9-20-04@		!	9-20-04 (	@ 10:00			
Was Immedi	ate Notice (		Yes [	] No 📋 Not R	Require	If YES, To d Larry John							
By Whom? (	Camille Rey	nolds	· · · · · · · · · · · · · · · · · · ·			Date and H	Iour 9-20-04 @ 1	7:30				·····	
Was a Water		ched?				If YES, Vo	olume Impacting t	the Water	course.				
							· · · · · · · · · · · · · · · · · · ·					·	
If a Watercon	urse was Im	pacted, Descri	be Fully.	•									
							1						
	65.11	1.0				C.4. (1)	1	1. 1					
							' steel pipeline. A						
gravity of the	e sweet cruc	le oil is 39. T	IE STROEP	rude has an H2S	conten	t of <10 ppm		Per entr				-o por une	
		10	L	A.S.			100	A /					
							ARE	40					
		/ŵ		LI (51)		<u></u>		<u> </u>	·				
Describe Are	a Affected	and Cleanup A	Action Tal	keng She impac	ted soil	was excavated	and stockpiled or	n plastic.	Aerial ex	ktent of surf	ace im	pact was	180
		15	الي من ا	5 6/									
		101	` <b>.</b>	- 3/									
		101	<b>)</b> ,			•	knowledge and u						
I hereby cert	ify that the	information of		intrue and com	nlete to	the best of my	knowledge and i	inderstan	i that mur	sugnt to NN		rules and	
regulations a	il operators	are required t	o report a	nd/or file certain	release	e notifications a	nd perform correct	ctive actic	ons for re	leases which	n may	endanger	
public health	or the envi	ronment. The	acceptan	ce of a C-141 rep	port by	the NMOCD n	narked as "Final R	leport" do	es not rel	lieve the op	erator	of liability	1
							ion that pose a the operator of						dth
		ws and/or regi			героп		te me operator or	responsio	111ty 101 v	ompnance	with a	iy onici	
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Signaturo			·Ye	y were	<u>&amp;</u>	Approved by	District Supervis	or.					
Printed Nam	e: Camille	Reynolds		<u></u>	· · · · ·	Approved by					<del></del>		
Title: Remed	liation Cool	dinator	· · · · · · · · · · · · · · · · · · ·	*****	<u></u>	Approval Da	te:	E	xpiration	Date:	<u></u>	i	
E-mail Addr	ess: cjreyno	lds@paalp.co	<u>m</u>			Conditions o	f Approval:			Attache	d 🗖		
Date: 9-23-0	4	•		Phone:505-441	-0965		<u>.</u>						
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