Basin Environmental Service Technologies, LLC

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REVISED PRELIMINARY SITE INVESTIGATION REPORT and REMEDIATION/CLOSURE PLAN

PLAINS MARKETING, L.P. Lovington Pump Station Lea County, New Mexico Plains EMS # 2005-00015 UNIT D (NW/NW), Section 16, Township 17 South, Range 37 East Latitude 32°, 50', 30.7" North, Longitude 103°, 15', 45.3" West

Prepared For:

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



Prepared By: Basin Environmental Service Technologies, LLC P. O. Box 301 Lovington, New Mexico 88260

31 October 2005

Basin Environmental Service Technologies, LLC

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INTRODUCTION

Basin Environmental Service Technologies, LLC (Basin), responded to a crude oil release for Plains Marketing, L.P. (Plains), located at the Lovington Pump Station on 14 January 2005. The equipment malfunction was repaired and excavation of the impacted soil was initiated and impacted soil was stockpiled on a 6-mil poly-liner.

This site is located in Unit D (NW/NW), Section 16, Township 17 South, Range 37 East, in Lea County, New Mexico (topographic Site Location Map is attached as Figure 1). The latitude is 32°, 50, 30.7 North, and longitude is 103°, 15, 45.3 West. The site is characterized as an operational pipeline pumping station containing various pieces of crude oil pumping equipment. The visually stained area included the release point and covered an area approximately 15 feet long by 20 feet wide. It is estimated 6 barrels of crude oil were released from the Lovington Pump Station and 0 barrels were recovered.

Plains Pipeline operations personnel marked their respective lines inside the pumping station before excavation activities commenced.

Mr. Larry Johnson, New Mexico Oil Conservation Division (NMOCD), Hobbs, New Mexico District 1 was verbally notified of the release on 14 January 2005. Mr. Leon Anderson and Ms. Myra Meyers, New Mexico State Land Office (NMSLO), Hobbs Office, were notified 14 January 2005. A Right of Entry Permit was not required as the crude oil release occurred in a Plains leased area.

SUMMARY OF FIELD ACTIVITIES

On 14 January 2005, Basin arrived at the Lovington Pump Station crude oil release to repair and contain the crude oil pipeline release under the direction of Plains operations personnel. After repairing the malfunctioning equipment, excavation of the impacted soil was initiated. The visually stained area was approximately 15 feet long by 20 feet wide and extended to approximately 5 feet below ground surface (bgs) at the release point.

On 26 January 2005, Basin excavated the release point area to a depth of 14 feet bgs attempting to delineate the vertical and horizontal extent of crude oil impacted soil at the release point (see Site Map, Figure 2). Photoionization Detector (PID) readings indicate elevated concentrations of Volatile Organic Compounds (VOC) remain in place. The delineation trench was backfilled to a depth of 5 feet bgs due to operational and safety concerns. Approximately 75 cubic yards of impacted soil was excavated and stockpiled on-site as a result of this delineation activity.

On 05 May 2005, Basin installed four soil borings utilizing Straub Corporation, of Stanton, Texas, collecting soil samples every 5 feet in order to delineate the horizontal and vertical nature and extent of crude oil impacted soil at the pipeline

release (see Site Map, Figure 2). The soil borings were installed adjacent to the release point, up gradient, down gradient and cross gradient to ensure effective delineation of the site. The soil borings ranged in depth from 68 feet bgs to 20 feet bgs (soil boring logs are attached as Appendix C). Each sample was screened with a PID, which was calibrated on 05 May 2005. The selected soil samples were analyzed for concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO).

On 14 October 2005, Basin excavated the release point area to a depth of approximately 12 feet bgs and expanded the original excavation to an area approximately 21 feet long by 24 feet wide. Confirmation soil samples were collected from the excavation 17 October 2005. The soil samples were analyzed for concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO). Approximately 300 cubic yards of impacted soil was excavated and stockpiled on-site as a result of this delineation activity.

New Mexico Oil Conservation Division (NMOCD) Soil Classification

Actual groundwater gauging data obtained from the Plains Moore to Jal # 2 remediation site, located less than one-half mile to the south, southeast, indicates the depth to groundwater ranges from 77 feet to 79 feet bgs. There are no surface water bodies or water wells within 1000 feet of the release site. Based on this data, the site has an NMOCD Ranking Score of 10 -19, which sets the remediation levels at:

Benzene: 10 ppm

BTEX: 50 ppm

TPH: 1000 ppm

The above criterion is assumed and may be adjusted based on the actual results of the soil delineation activities.

Distribution of Hydrocarbons in the Unsaturated Zone

The release point and visually stained area has been excavated to a depth of approximately 12 feet bgs and evidence of crude oil impact still exists on the floor and sidewalls at the release point. Analytical results and PID readings indicate elevated concentrations of VOC's remain in place. The five confirmation soil samples from the sidewalls and excavation floor were collected at a depth of approximately 6 and 12 feet bgs, respectively. Analytical results indicated that BTEX concentrations were below NMOCD regulatory standards for all sidewall samples and the excavation floor soil sample. Analytical results indicated that BTEX concentrations were not detected above the laboratory method detection limits on the

2

3

north sidewall, south sidewall and west sidewall soil samples. Analytical results indicated that detectable TPH concentrations exceeded NMOCD regulatory standards for the release point excavation east sidewall and excavation floor soil samples at 2530 mg/kg and 4950 mg/kg, respectively. Analytical results indicated that detectable TPH concentrations were below NMOCD regulatory standards on the west sidewall soil sample and were not detected above the laboratory method detection limits on the north sidewall and south sidewall soil samples. Approximately 300 cubic yards of impacted soil was excavated and stockpiled on a 6-mil poly-liner.

A drill rig was utilized to delineate the horizontal and vertical extent of crude oil impacted soil. The four soil borings were installed adjacent to the release point, up gradient, down gradient and cross gradient to ensure effective delineation of the site. Soil samples were collected in the subsurface from the soil borings at 5 feet intervals. No visual observations of free phase hydrocarbons were encountered during the installation of the four soil borings. PID field screenings were utilized to determine which soil samples were to be submitted to the laboratory for analysis. Selected soil samples were analyzed for concentrations of BTEX and TPH. Laboratory data sheets and chain-of-custody forms are attached as Appendix B.

Soil Boring 1, as depicted on the Site Map (Figure 2) was installed adjacent to the release point. Due to the numerous pipelines and electrical conduit lines at and around the release point, the soil boring could not be installed at the exact release point due to safety concerns. Soil samples collected at 10, 20 and 30 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits from these three soil samples. Soil Boring 1 was advanced to a total depth below surface of 68 feet bgs. PID field readings for the soil samples collected at 5 feet intervals from Soil Boring 1 were all less than 5 ppm to total depth.

Soil Boring 2, as depicted on the Site Map (Figure 2) was installed up gradient of the release point. Soil samples collected at the 10 and 20 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits from these two soil samples.

Soil Boring 3, as depicted on the Site Map (Figure 2) was installed down gradient of the release point. Soil samples collected at the 10 and 20 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits from these two soil samples.

Soil Boring 4, as depicted on the Site Map (Figure 2) was installed cross gradient of the release point. Soil samples collected at the 10 and 20 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits from these two soil samples.

RECOMMENDATIONS FOR DELINEATION/REMEDIATION

Approximately 300 cubic yards of impacted soil has been excavated and stockpiled on-site resulting from the emergency response and equipment repair. Based on the results of the soil delineation investigation which indicate the impacted soils are limited in extent and Lovington Pump Station being an operational location, Basin and Plains requests approval from the NMOCD and NMSLO to install an impermeable 40-ml poly liner at the release point (see Figure 4, Installation of 40-ml Poly Liner). The impermeable liner, approximately 25 feet wide by 22 feet long, will mitigate vertical migration of contaminates and allow natural attenuation of the limited impacted soils. Cushion sand will be placed above and below the liner to protect the integrity of the liner. The stockpiled material will be transported to the Lea Station Landfarm and clean soil will be transported to the site and utilized as backfill material. Upon cessation of operational activities at Lovington Pump Station, Plains will remediate the area to NMOCD regulatory standards as required.

LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this Preliminary Investigation Report and Work Plan to the best of its ability. No other warranty, expressed or implied, is made or intended.

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

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

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DISTRIBUTION

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Copy 3: Mr. Larry Johnson New Mexico Oil Conservation Division 1625 N. French Dr. Hobbs, New Mexico 88240 Larry.johnson@state.nm.us

Copy 4: New Mexico State Land Office P. O. Box 1148 Santa Fe, New Mexico 87404-1148 <u>cmorrow@slo.state.nm.us</u>

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SITE LOCATION MAP



Copyright (C) 1999, Maptech, Inc.



SITE MAP



DIGITAL PHOTO OF SITE







INSTALLATION OF 40-ML POLY LINER

Lovington Pump Station 40-ml Poly-Liner Installation

Plains Marketing, L. P. Lovington Pump Station NW/NW S16, T17S, R37E Lea County, New Mexico EMS No. 2005-00015



TITLE	DATE
Lovington Pump Station	31 Oct 05
DRAWN BY	LABEL.
Basin Environmental Services KAD	Installation of 40 ml Poly Liner

Excavation

TABLES

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TABLE 1

SOIL CHEMISTRY TABLE

TABLE 1

SOIL CHEMISTRY

PLAINS MARKETING, L.P. LOVINGTON PUMP STATION LEA COUNTY, NEW MEXICO PLAINS EMS: 2005-00015

SAMPLE	SAMPLE	SAMPLE		METHOD: E	PA SW 846-	8021B, 5030		METHOD	8015M	TOTAL	300.0
LOCATION	DEPTH	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	O-XYLENE	GRO	DRO	ТРН	CHLORIDE
					BENZENE	XYLENES					
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-1 10'	10' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-1 20'	20' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-1 30'	30' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	14.9
SB-2 10'	10' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-2 20'	20' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-3 10'	10' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-3 20'	20' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-4 10'	10' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
SB-4 20'	20' bgs	05/05/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
8 - 16 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -									an a		
R/P EXCV BTM	5' bgs	05/05/05	0.101	0.399	0.336	1.12	0.273	324	3460	3780	
R/P EXCV N/SW	3' bgs	05/05/05	0.754	0.330	0.322	1.14	0.261	922	5150	6070	
R/P EXCV S/SW	3' bgs	05/05/05	0.115	0.447	0.438	1.48	0.321	890	6600	7490	
R/P EXCV E/SW	3' bgs	05/05/05	0.287	0.876	0.661	1.90	0.419	7040	22900	29900	
R/P EXCV W/SW	3' bgs	05/05/05	<0.025	<0.025	<0.025	0.046	<0.025	254	5640	5890	
						A second					
North S/W	6' bgs	10/21/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
South S/W	6' bgs	10/21/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
East S/W	6' bgs	10/21/05	<0.025	<0.025	0.225	0.111	0.0269	<10.0	2530	2530	
West S/W	6' bgs	10/21/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	546	546	
Excv Flr	12' bgs	10/21/05	<0.025	0.092	7.74	0.278	0.109	585	4360	4950	
			40				I			4000	
NMOCD CRITERIA			10		5	i0				1000	

APPENDICES

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APPENDIX A

NEW MEXICO OFFICE OF THE STATE ENGINNER WATER WELL DATA BASE

1

	New Mexico Office of the State Engineer Well Reports and Downloads
Townsh	nip: 178 Range: 37E Sections: 16
NAD27	X: Y: Zone: Search Radius:
County:	Basin: Number: Suffix:
Owner Nam	e: (First) (Last) C Non-Domestic C Domestic © All
	Well / Surface Data Report Avg Depth to Water Report
	Water Column Report
	Clear Form WATERS Menu Help

AVERAGE DEPTH OF WATER REPORT 01/18/2005

								(Depth)	Water in	Feet)
Bsn	Tws	Rng	Sec	Zone	x	Y	Wells	Min	Max	Avç
\mathbf{L}	17S	37E	16				2	40	40	4 Ū
Reco	rd Co	unt:	2							

APPENDIX B

ENVIRONMENTAL LABORATORY OF TEXAS ANALYTICAL RESULTS



Analytical Report

<u>Prepared for:</u> Camille Reynolds

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

Project: Lovington Pump Station Project Number: EMS: 2005-00015 Location: Lea County, NM

Lab Order Number: 5J23005

Report Date: 10/27/05

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	10/27/05 16:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North S/W	5J23005-01	Soil	10/21/05 09:00	10/21/05 16:40
South S/W	5J23005-02	Soil	10/21/05 09:15	10/21/05 16:40
East S/W	5J23005-03	Soil	10/21/05 09:30	10/21/05 16:40
West S/W	5J23005-04	Soil	10/21/05 09:45	10/21/05 16:40
Excv Flr	5J23005-05	Soil	10/21/05 10:00	10/21/05 16:40

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476		Project: Lovington Pump Station Project Number: EMS: 2005-00015 Project Manager: Camille Reynolds						Fax: (432) 687-4914 Reported: 10/27/05 16:01		
		Or Environi	ganics b nental L	-	xas					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
North S/W (5J23005-01) Soil										
Benzene	ND	0.0250	mg/kg dry	25	EJ52502	10/25/05	10/25/05	EPA 8021B		
Toluene	ND	0.0250	*	"	"	*	"	"		
Ethylbenzene	ND	0.0250		"	"	· •	"	"		

Xylene (p/m)	ND	0.0250	**	"	"			"	
Xylene (o)	ND	0.0250	"	11	n		u	8	
Surrogate: a,a,a-Trifluorotoluene		86.2 %	80-120		"	"	"	W ·	
Surrogate: 4-Bromofluorobenzene		91.5 %	80-120		n	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ52405	10/24/05	10/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		11	*	"	•	"	
Total Hydrocarbon C6-C35	ND	10.0	**	"	"	"		10	
Surrogate: 1-Chlorooctane		85.2 %	70-130		"	"	"	11	
Surrogate: 1-Chlorooctadecane		99 .0 %	70-130		"	н	"	"	

South S/W (5J23005-02) Soil

Benzene	ND	0.0250	mg/kg dry	25	EJ52502	10/25/05	10/25/05	EPA 8021B	
Toluene	ND	0.0250	"			"	*		
Ethylbenzene	ND	0.0250	"	"		"	"	*	
Xylene (p/m)	ND	0.0250	41	•	"	н	*	*	
Xylene (o)	ND	0.0250	**			"	*	*	
Surrogate: a,a,a-Trifluorotoluene		96.2 %	80-120)	"	"	"	11	
Surrogate: 4-Bromofluorobenzene		108 %	80-120)	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ52405	10/24/05	10/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	н	*		"		•	
Total Hydrocarbon C6-C35	ND	10.0	n				н	*	
Surrogate: 1-Chlorooctane	<u> </u>	90.2 %	70-130)	"	н	H	11	
Surrogate: 1-Chlorooctadecane		92.2 %	70-130)	"	"	"	"	

East S/W (5J23005-03) Soil

Benzene	ND	0.0250	mg/kg dry	25	EJ52502	10/25/05	10/25/05	EPA 8021B	
Toluene	J [0.0103]	0.0250	"			н	"	"	J
Ethylbenzene	0.225	0.0250				*		"	
Xylene (p/m)	0.111	0.0250		**			•	"	
Xylene (o)	0.0269	0.0250				"	м	"	
Surrogate: a,a,a-Trifluorotoluene		96.2 %	80-12	0	"	н	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	80-12	0.	"	"	"	"	
Gasoline Range Organics C6-C12	ND	50.0	mg/kg dry	5	EJ52405	10/24/05	10/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	2530	50.0		"	"	"	*		
Total Hydrocarbon C6-C35	2530	50.0		"	н	"	•	*	

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,

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Plains All American EH & S]	Project: Lo	vington Pun	np Station			Fax: (432) 6	87-4914
1301 S. County Road 1150		Project N	umber: EN	1S: 2005-00	0015			ed:	
Midland TX, 79706-4476		Project M	anager: Ca	mille Reyno	olds			10/27/05	16:01
		O	ganics b	y GC					
		Environ	mental L	ab of Te	xas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
East S/W (5J23005-03) Soil									
Surrogate: 1-Chlorooctane		20.4 %	70	130	EJ52405	10/24/05	10/26/05	EPA 8015M	S-0
Surrogate: 1-Chlorooctadecane		17.7 %	70	130	"	"	"	"	S-0
West S/W (5J23005-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EJ52509	10/25/05	10/25/05	EPA 8021B	
Toluene	ND	0.0250	"	n	"	•			
Ethylbenzene	ND	0.0250		"	"	. •	**	"	
Xylene (p/m)	ND	0.0250		"	"	*		n	
Xylene (o)	ND	0.0250	"	n				H	
Surrogate: a,a,a-Trifluorotoluene		97.5 %	80	120	н	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	80	120	"	"	*	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EJ52405	10/24/05	10/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	546	10.0	"	•	11	"	· ••	н	
Total Hydrocarbon C6-C35	546	10.0	"					10	
Surrogate: 1-Chlorooctane		89.8 %	70	130	n	"	"	"	
Surrogate: 1-Chlorooctadecane		141 %	70- .	130	н	"	"	"	S-0
Excv Fir (5J23005-05) Soil									
Benzene	J [0.0186]	0.0250	mg/kg dry	25	EJ52509	10/25/05	10/26/05	EPA 8021B	
Toluene	0.0929	0.0250	н	•	"	"			
Ethylbenzene	7.74	0.100	н	100	**			4	
Xylene (p/m)	0.278	0.0250	"	25	"		"		
Xylene (0)	0.109	0.0250		11	u	"	"	· ••	
Surrogate: a,a,a-Trifluorotoluene		130 %	80	120	"	H	n	11	S-0
Surrogate: 4-Bromofluorobenzene		88.8 %	80	120	"	"	"	"	
Gasoline Range Organics C6-C12	585	50.0	mg/kg dry	5	EJ52405	10/24/05	10/26/05	EPA 8015M	
Diesel Range Organics >C12-C35	4360	50.0	*	11	н				
Total Hydrocarbon C6-C35	4950	50.0	"	н	"	· •			
Surrogate: 1-Chlorooctane		19.6 %	70-	130	"	"	"	"	S-0
Surrogate: 1-Chlorooctadecane		25.2 %	70	130	"	"	"	"	S-0

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	Project: Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	10/27/05 16:01

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
North S/W (5J23005-01) Soil									
% Moisture	7.9	0.1	%	1	EJ52503	10/24/05	10/25/05	% calculation	
South S/W (5J23005-02) Soil									
% Moisture	11.3	0.1	%	1	EJ52503	10/24/05	10/25/05	% calculation	
East S/W (5J23005-03) Soil							-		
% Moisture	7.2	0.1	%	1	EJ52503	10/24/05	10/25/05	% calculation	
West S/W (5J23005-04) Soil									
% Moisture	3.9	0.1	%	1	EJ52503	10/24/05	10/25/05	% calculation	
Excv Fir (5J23005-05) Soil									
% Moisture	9.3	0.1	%	1	EJ52503	10/24/05	10/25/05	% calculation	

Environmental Lab of Texas

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Plains All American EH & S		F	roject: Lov	ington Pum	p Station				Fax: (432)	687-4914
1301 S. County Road 1150		Project Nu	umber: EM	S: 2005-00	015				Repo	
Midland TX, 79706-4476		Project Ma	nager: Can	nille Reynol	ds				10/27/0	5 16:01
	0	rganics by	GC - Q	uality Co	ontrol					
		Environ	nental L	ab of Te	xas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ52405 - Solvent Extraction (GC)										
Blank (EJ52405-BLK1)				Prepared: 1	10/24/05 A1	nalyzed: 10)/25/05			
Basoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0								
Fotal Hydrocarbon C6-C35	ND	10.0								
Surrogate: 1-Chlorooctane	45.6		mg/kg	50.0		91.2	70-130		<u> </u>	
Surrogate: 1-Chlorooctadecane	64.0		"	50.0		128	70-130			
LCS (EJ52405-BS1)				Prepared:	10/24/05 Ai	nalyzed: 10)/25/05			
Basoline Range Organics C6-C12	450	10.0	mg/kg wet	500		90.0	75-125		······	
Diesel Range Organics >C12-C35	442	10.0		500		88.4	75-125			
Fotal Hydrocarbon C6-C35	892	10.0	•	1000		89.2	75-125			
Surrogate: 1-Chlorooctane	51.9		mg/kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	58.1		"	50.0		116	70-130			
Calibration Check (EJ52405-CCV1)				Prepared:	10/24/05 A	nalyzed: 10)/26/05			
Gasoline Range Organics C6-C12	453		mg/kg	500		90.6	80-120			
Diesel Range Organics >C12-C35	568			500		114	80-120			
Total Hydrocarbon C6-C35	1020			1000		102	80-120			
Surrogate: 1-Chlorooctane	47.4		"	50.0		94.8	70-130			
Surrogate: 1-Chlorooctadecane	60.3		"	50.0		121	70-130			
Matrix Spike (EJ52405-MS1)	Sou	irce: 5J23004	-21	Prepared:	10/24/05 A	nalyzed: 10)/25/05			
Gasoline Range Organics C6-C12	462	10.0	mg/kg dry	530	ND	87.2	75-125			
Diesel Range Organics >C12-C35	428	10.0	•	530	ND	80.8	75-125			
Fotal Hydrocarbon C6-C35	890	10.0	*	1060	ND	84.0	75-125			
Surrogate: 1-Chlorooctane	52.7		mg/kg	50.0		105	70-130			
urrogate: 1-Chlorooctadecane	55.2		u	50.0		110	70-130			
Matrix Spike Dup (EJ52405-MSD1)	Sou	rce: 5J23004	-21	Prepared:	10/24/05 A	nalyzed: 10)/25/05			
Gasoline Range Organics C6-C12	478	10.0	mg/kg dry	530	ND	90.2	75-125	3.40	20	
Diesel Range Organics >C12-C35	451	10.0	**	530	ND	85.1	75-125	5.23	20	
Total Hydrocarbon C6-C35	929	10.0		1060	ND	87.6	75-125	4.29	20	
Surrogate: 1-Chlorooctane	54.2		mg/kg	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	56.6		n	50.0		113	70-130			

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Plains All American EH & S			~	ington Pum					Fax: (432)	687-4914
1301 S. County Road 1150				(S: 2005-000					Repo	
Midland TX, 79706-4476		Project Ma	anager: Car	nille Reynol	ds				10/27/0	5 16:01
	0	rganics by		•						
		Environ	nental L	ab of Te	Kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ52502 - EPA 5030C (GC)										
Blank (EJ52502-BLK1)				Prepared &	Analyzed	10/25/05				
Benzene	ND	0.0250	mg/kg wet							
Foluene	ND	0.0250	11							
Ethylbenzene	ND	0.0250	**							
Xylene (p/m)	ND	0.0250								
Xylene (o)	ND	0.0250	n							
Surrogate: a,a,a-Trifluorotoluene	39.9		ug/kg	40.0		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	39.1		"	40.0		97.8	80-120			
LCS (EJ52502-BS1)				Prepared &	Analyzed	10/25/05				
Benzene	0.0540	0.00100	mg/kg wet	0.0500		108	80-120			·····
Foluene	0.0551	0.00100	"	0.0500		110	80-120			
Ethylbenzene	0.0594	0.00100	"	0.0500		119	80-120			
Kylene (p/m)	0.120	0.00100		0.100		120	80-120			
Kylene (o)	0.0570	0.00100	18	0.0500		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.1		ug/kg	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	45.8		"	40.0		114	80-120			
Calibration Check (EJ52502-CCV1)				Prepared &	t Analyzed	10/25/05				
Benzene	55.4		ug/kg	50.0		111	80-120			
ſoluene	54.4		"	50.0		109	80-120			
Ethylbenzene	58.4		"	50.0		117	80-120			
Xylene (p/m)	114		"	100		114	80-120			
Xylene (o)	58.4			50.0		117	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.1		n	40.0		97.8	80-120			
Surrogate: 4-Bromofluorobenzene	42.8		. "	40.0		107	80-120			
Matrix Spike (EJ52502-MS1)		rce: 5J23004		Prepared &						
Benzene	0.0563	0.00100	mg/kg dry	0.0530	ND	106	80-120			
Toluene	0.0569	0.00100	"	0.0530	ND	107	80-120			
Ethylbenzene	0.0624	0.00100	**	0.0530	ND	118	80-120			
Xylene (p/m)	0.118	0.00100	"	0.106	ND	111	80-120			
Xylene (o)	0.0612	0.00100	"	0.0530	ND	115	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.7		ug/kg	40.0		96.8	80-120			
Surrogate: 4-Bromofluorobenzene	41.3		n	40.0		103	80-120			

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Plains All American EH & S		F	roject: Lov	ington Pump	o Station				Fax: (432)	687-4914
1301 S. County Road 1150		Project N	umber: EM	S: 2005-000)1 5				Repo	rted:
Midland TX, 79706-4476		Project Ma	mager: Can	hille Reynol	ds				10/27/0	5 16:01
	0	rganics by	7 GC - Q	uality Co	ntrol					
		Environ	nental L	ab of Tex	as					
		Reporting		Spike	Source		%REC	555	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EJ52502 - EPA 5030C (GC)										
Matrix Spike Dup (EJ52502-MSD1)	Sou	ırce: 5J23004	-20	Prepared &	Analyzed:	10/25/05				
Benzene	0.0623	0.00100	mg/kg dry	0.0530	ND	118	80-120	10.7	20	
Toluene	0.0635	0.00100	"	0.0530	ND	120	80-120	11.5	20	
Ethylbenzene	0.0635	0.00100		0.0530	ND	120	80-120	1.68	20	
Xylene (p/m)	0.127	0.00100		0.106	ND	120	80-120	7.79	20	
Xylene (o)	0.0618	0.00100		0.0530	ND	117	80-120	1.72	20	
Surrogate: a,a,a-Trifluorotoluene	42.2		ug/kg	40.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	47.2		"	40.0		118	80-120			
,										
Batch EJ52509 - EPA 5030C (GC)										·
Blank (EJ52509-BLK1)				Prepared &	Analyzed:	10/25/05				
Blank (EJ52509-BLK1) Benzene	ND	0.0250	mg/kg wet	Prepared &	Analyzed:	10/25/05				
Blank (EJ52509-BLK1) Benzene Foluene	ND	0.0250	•	Prepared &	Analyzed:	10/25/05				
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene	ND ND	0.0250 0.0250		Prepared &	Analyzed:	10/25/05			<u></u>	
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m)	ND ND ND	0.0250 0.0250 0.0250	•	Prepared &	Analyzed:	10/25/05				
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o)	ND ND ND ND	0.0250 0.0250	1) 71 13 17		Analyzed:					
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a-Trifluorotoluene	ND ND ND 38.0	0.0250 0.0250 0.0250	" " " ug/kg	40.0	Analyzed:	95.0	80-120			
Blank (EJ52509-BLK1) Benzene Foluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a,a,a-Trifluorotoluene	ND ND ND ND	0.0250 0.0250 0.0250	1) 71 13 17		Analyzed:		80-120 80-120			
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o)	ND ND ND 38.0	0.0250 0.0250 0.0250	" " " ug/kg	40.0		95.0 101				
Blank (EJ52509-BLK1) Benzene Foluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EJ52509-BS1)	ND ND ND 38.0	0.0250 0.0250 0.0250	" " " ug/kg	40.0 40.0		95.0 101				
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a.Trifluorotoluene Surrogate: 4-Bromofluorobenzene	ND ND ND 38.0 40.4	0.0250 0.0250 0.0250 0.0250	" " " ug/kg "	40.0 40.0 Prepared &		95.0 101 10/25/05	80-120			
Blank (EJ52509-BLK1) Benzene Foluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EJ52509-BS1) Benzene Foluene	ND ND ND 38.0 40.4	0.0250 0.0250 0.0250 0.0250	" " ug/kg "	40.0 40.0 Prepared & 0.0500		<i>95.0</i> <i>101</i> 10/25/05 105	80-120 80-120			
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EJ52509-BS1) Benzene	ND ND ND 38.0 40.4	0.0250 0.0250 0.0250 0.0250 0.0250	" " <i>ug/kg</i> " mg/kg wet	40.0 40.0 Prepared & 0.0500 0.0500		<i>95.0</i> <i>101</i> 10/25/05 105 107	80-120 80-120 80-120			
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a.Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EJ52509-BS1) Benzene Toluene Ethylbenzene	ND ND ND 38.0 40.4 0.0526 0.0537 0.0587	0.0250 0.0250 0.0250 0.0250 0.0250 0.00100 0.00100 0.00100	" " <i>ug/kg</i> " mg/kg wet	40.0 40.0 Prepared & 0.0500 0.0500 0.0500		<i>95.0</i> <i>101</i> 10/25/05 105 107 117	80-120 80-120 80-120 80-120			
Blank (EJ52509-BLK1) Benzene Toluene Ethylbenzene Xylene (p/m) Xylene (o) Surrogate: a.a.a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene LCS (EJ52509-BS1) Benzene Toluene Ethylbenzene Xylene (p/m)	ND ND ND 38.0 40.4 0.0526 0.0537 0.0587 0.114	0.0250 0.0250 0.0250 0.0250 0.0250 0.00100 0.00100 0.00100 0.00100	" " <i>ug/kg</i> " mg/kg wet	40.0 40.0 Prepared & 0.0500 0.0500 0.0500 0.100		95.0 101 10/25/05 105 107 117 114	80-120 80-120 80-120 80-120 80-120	· · · · · · · · · · · · · · · · · · ·		

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		•	10,000		r					
1301 S. County Road 1150				IS: 2005-00					Repo	
Midland TX, 79706-4476		Project Ma	anager: Car	nille Reynol	ds				10/27/0	5 16:01
	Or	ganics by	GC-Q	uality Co	ontrol					
		Environ	-	•						
A	Result	Reporting Limit	Units	Spike	Source	%REC	%REC Limits	RPD	RPD Limit	N
Analyte	Kesut	Limit	Units	Level	Result	%oREC	Limis	RPD		Notes
Batch EJ52509 - EPA 5030C (GC)										
Calibration Check (EJ52509-CCV1)				Prepared:	10/25/05 A	nalyzed: 10	/26/05			
Benzene	49.8		ug/kg	50.0		99.6	80-120			
Toluene	49.8		**	50.0		99.6	80-120			
Ethylbenzene	54.2		"	50.0		108	80-120			
Xyiene (p/m)	103			100		103	80-120			
Kylene (o)	54.8		**	50.0		110	80-120			
Surrogate: a, a, a-Trifluorotoluene	34.8		"	40.0		87.0	80-120			
Surrogate: 4-Bromofluorobenzene	36.0		н	40.0		90.0	80-120			
Matrix Spike (EJ52509-MS1)	Sour	·ce: 5J25005	-02	Prepared:	10/25/05 A	nalyzed: 10	/26/05			
Benzene	1.29	0.0250	mg/kg dry	1.34	ND	96.3	80-120			
Toluene	1.34	0.0250	"	1.34	0.0127	99 .1	80-120			
Ethylbenzene	1.55	0.0250	**	1.34	0.0225	114	80-120			
Xylene (p/m)	2.93	0.0250	54	2.68	0.0609	107	80-120			
Xylene (o)	1.45	0.0250	1 4	1.34	0.0264	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.3		ug/kg	40.0		88.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.2		"	40.0		106	80-120			
Matrix Spike Dup (EJ52509-MSD1)	Sour	rce: 5J25005	-02	Prepared:	10/25/05 A	nalyzed: 10	/26/05			
Benzene	1.24	0.0250	mg/kg dry	1.34	ND	92.5	80-120	4.03	20	
Toluene	1.29	0.0250		1.34	0.0127	95.3	80-120	3.91	20	
Ethylbenzene	1.51	0.0250	"	1.34	0.0225	111	80-120	2.67	20	
Xylene (p/m)	2.91	0.0250	"	2.68	0.0609	106	80-120	0.939	20	
Xylene (o)	1.51	0.0250	**	1.34	0.0264	111	80-120	4.61	20	
Surrogate: a,a,a-Trifluorotoluene	33.6		ug/kg	40.0		84.0	80-120			
_										

"

40.0

43.6

Project: Lovington Pump Station

Environmental Lab of Texas

Surrogate: 4-Bromofluorobenzene

Plains All American EH & S

109

80-120

Fax: (432) 687-4914

Plains All American EH & S	Project: Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	10/27/05 16:01

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	Ktsun			Kesuit	/uice				110103
Batch EJ52503 - General Preparation	(Prep)								
Blank (EJ52503-BLK1)			Prepared:	10/24/05 A	nalyzed: 10	/25/05			
% Solids	. 100	%							
Duplicate (EJ52503-DUP1)	Sour	ce: 5J21011-01	Prepared:	10/24/05 A	nalyzed: 10	/25/05	•		
% Solids	94.3	%		93.8			0.532	20	
Duplicate (EJ52503-DUP2)	Sour	ce: 5J23004-15	Prepared:	10/24/05 A	nalyzed: 10	/25/05			
% Solids	94.6	%		94.5			0.106	20	
Duplicate (EJ52503-DUP3)	Sour	ce: 5J23005-04	Prepared:	10/24/05 A	nalyzed: 10	/25/05			
% Solids	95.4	%		96.1			0.731	20	

Plains All American EH & S	Project: Lovin	gton Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS:	2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Cami	lle Reynolds	10/27/05 16:01

Notes and Definitions

S-0 6	
S-04	
J	
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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 Date:

Report Approved By:

10/27/2005

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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Environm 12600 West I-20 East Odessa, Texas 79763	, 	Phone: 915-6 Fax: 915-6	i63-1800 i63-1713	l, Ltd.								a		≂ xFCL	STOL		CORE					aves		~	
Project Ma	nager: <u>KE</u>	N Du	TTON							<u></u>			F	Projec	t Nan	10; 🦯	-ov	ΞN	67	<u>o</u> N		<u>an</u>	لأرح	TAI	TION
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Telepho	ne No: 20) 44 1-	224	,	Fax No;	6	øş	25	67	-1	42	7													
Sampler Sign	seture:	Sent	Ant	the											ويوادر مارانيا		Niciaco ana Ang	Anol	yzø F	-	9.400.00 ^{.70}		-	٦	
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							—	Pre	servati	ive		M	atrix	-		TOTAL	8		X						
5523005 558# (isb use only)		FIELD CODE		Date Sampled	Time Sampled	No. of Containers	ice	HNO ₃ HCI	NaOH	H ₂ BO4 Norse	Other (Bpacity)	Water Sludge	Soli	Other (specify); TPH: 418.1 (Softin)1005 1008	1 1	Anions (CI, SO4, CO3, HCO3) SAR / ESP / CEC	8 2 2 2 2 3	Volatības Semtvolatijas	BTEX 80218/5030	RCI	N.O.R.M. Total Gamma			RUSH TAT (Pre-Schedule	Standard TAT
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client:	Plains	
Date/Time:	10/21/05	16:40
Order #:	53210	5723005
Initials:	CK	

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	<u>3,0</u> C
Shipping container/cooler in good condition?	(Tes)	No	j
Custody Seals intact on shipping container/cooler?	(Tes	No	Not present
Custody Seals intact on sample bottles?	হৈছ	No	Not present
Chain of custody present?	X23	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?	(res	No	
Samples in proper container/bottle?	(es)	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yeş	No	
Containers documented on Chain of Custody?	Ves	No	
Sufficient sample amount for indicated test?	(Pes)	No	
All samples received within sufficient hold time?	(e)	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: Regarding:	Date/Time:	Contacted by:	<u></u>
a ya ana ana ana ana ana ana ana ana ana			
Corrective Action Taken:			



Analytical Report

Prepared for:

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

Project: Lovington Pump Station Project Number: EMS: 2005-00015 Location: Lea County, NM

Lab Order Number: 5E13017

Report Date: 05/17/05

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
R/P EXCV BTM	5E13017-01	Soil	05/05/05 08:30	05/13/05 09:40
R/P EXCV N/SW	5E13017-02	Soil	05/05/05 08:40	05/13/05 09:40
R/P EXCV S/SW	5E13017-03	Soil	05/05/05 08:50	05/13/05 09:40
R/P EXCV E/SW	5E13017-04	Soil	05/05/05 08:59	05/13/05 09:40
R/P EXCV W/SW	5E13017-05	Soil	05/05/05 09:08	05/13/05 09:40

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
R/P EXCV BTM (5E13017-01) Soil		· · · · · · · · · · · · · · · · · · ·	<u> </u>					<u></u>	
Benzene	0.101	0.0250	mg/kg dry	25	EE51312	05/13/05	05/14/05	EPA 8021B	
Toluene	0.399	0.0250	"		H	*	"	•	
Ethylbenzene	0.336	0.0250	"			н	•	*	
Xylene (p/m)	1.12	0.0250	"	н	H	и	"	**	
Xylene (o)	0.273	0.0250	"		"	"	"		
Surrogate: a,a,a-Trifluorotoluene		143 %	80-1	20	H	"	"	"	S-0
Surrogate: 4-Bromofluorobenzene		117 %	80-1	20	"	n	"	"	
Gasoline Range Organics C6-C12	324	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	3460	10.0	"	*	*1		*	•	
Total Hydrocarbon C6-C35	3780	10.0	н						
Surrogate: 1-Chlorooctane		112 %	70-1	30	"	"	N	"	
Surrogate: 1-Chlorooctadecane		121 %	70-1	30	"	"	n	"	
R/P EXCV N/SW (5E13017-02) Soil									
Benzene	0.0754	0.0250	mg/kg dry	25	EE51312	05/13/05	05/14/05	EPA 8021B	
Foluene	0.330	0.0250	"		· •	"	ŧ	H	
Ethylbenzene	0.322	0.0250	w	*		"	*1	W	
Xylene (p/m)	1.14	0.0250	*	"	н		•	"	
Xylene (o)	0.261	0.0250	"	"		*		*	
Surrogate: a,a,a-Trifluorotoluene		127 %	80-1	20	N	"	"	"	S-0
Surrogate: 4-Bromofluorobenzene		114 %	80-1	20	"	n	"	"	
Gasoline Range Organics C6-C12	922	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	5150	10.0	"				n		
Total Hydrocarbon C6-C35	6070	10.0	•	•			"	и	
Surrogate: 1-Chlorooctane		104 %	70-1	30	н	"	#	"	
Surrogate: 1-Chlorooctadecane		109 %	70-1	30	"	"	"	"	
R/P EXCV S/SW (5E13017-03) Soil									
Benzene	0.115	0.0250	mg/kg dry	25	EE51312	05/13/05	05/14/05	EPA 8021B	
Toluene	0.447	0.0250					"	11	
Ethylbenzene	0.438	0.0250	"	**	"	•	•	**	
Xylene (p/m)	1.48	0.0250	"	**	u		•	•	
Xylene (0)	0.321	0.0250	"		•	"	"	•	
Surrogate: a,a,a-Trifluorotoluene		130 %	80-1	20	"	н	n	. "	S-0
Surrogate: 4-Bromofluorobenzene		115 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	890	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	6600	10.0	"		"	•	**		
Total Hydrocarbon C6-C35	7490	10.0	н				n	13	

Environmental Lab of Texas

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

Project: Lovington Pump Station Project Number: EMS: 2005-00015 Project Manager: Camille Reynolds

Reported: 05/17/05 09:08

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
R/P EXCV S/SW (5E13017-03) Soil	<u></u>						······	<u></u>	
Surrogate: 1-Chlorooctane		109 %	70-	130	EE51305	05/13/05	05/14/05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		104 %	70-	130	"	"	"	"	
R/P EXCV E/SW (5E13017-04) Soil									
Benzene	0.287	0.0250	mg/kg dry	25	EE51312	05/13/05	05/14/05	EPA 8021B	
Toluene	0.876	0.0250	м	11			**	H	
Ethylbenzene	0.661	0.0250	*	"	"		*	**	
Xyiene (p/m)	1.90	0.0250	"	11		H	**	**	
Xylene (0)	0.419	0.0250	**	ч	H	*		"	
Surrogate: a,a,a-Trifluorotoluene		467 %	80-	120	"	H	n	"	S-0-
Surrogate: 4-Bromofluorobenzene		104 %	80-	120	"	"	n	"	
Gasoline Range Organics C6-C12	7040	50.0	mg/kg dry	5	EE51305	05/13/05	05/16/05	EPA 8015M	
Diesel Range Organics >C12-C35	22900	50.0	"	"	**	U		*	
Total Hydrocarbon C6-C35	29900	50.0	"	"	*	"	*	۳	
Surrogate: 1-Chlorooctane		34.2 %	70-	130	н	"	11	"	S-0
Surrogate: 1-Chlorooctadecane		19.2 %	70-	130	"	и	**	"	S-0
R/P EXCV W/SW (5E13017-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250		"		н	**		
Ethylbenzene	J [0.0203]	0.0250		*	"				
Xylene (p/m)	0.0462	0.0250	u	"	**	۳	*	*	
Xylene (0)	J [0.0175]	0.0250		Ħ					
Surrogate: a,a,a-Trifluorotoluene		90.7 %	80-	120	"	и	"	#	
Surrogate: 4-Bromofluorobenzene		99 .0 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	254	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	5640	10.0	**			u	•		
Total Hydrocarbon C6-C35	5890	10.0				"		*	
Surrogate: 1-Chlorooctane	· · · · · · · · · · · · · · · · · · ·	93.8 %	70-	130	"	H	"	"	
Surrogate: 1-Chlorooctadecane		100 %	70-	120	"	"	"	"	

Environmental Lab of Texas

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
9.5	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
7.9	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
7.8	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
13.7	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
6.9	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
	9.5 7.9 7.8 13.7	Result Limit 9.5 0.1 7.9 0.1 7.8 0.1 13.7 0.1	Result Limit Units 9.5 0.1 % 7.9 0.1 % 7.8 0.1 % 13.7 0.1 %	Result Limit Units Dilution 9.5 0.1 % 1 7.9 0.1 % 1 7.8 0.1 % 1 13.7 0.1 % 1	Result Limit Units Dilution Batch 9.5 0.1 % 1 EE51301 7.9 0.1 % 1 EE51301 7.8 0.1 % 1 EE51301 13.7 0.1 % 1 EE51301	Result Limit Units Dilution Batch Prepared 9.5 0.1 % 1 EE51301 05/13/05 7.9 0.1 % 1 EE51301 05/13/05 7.8 0.1 % 1 EE51301 05/13/05 13.7 0.1 % 1 EE51301 05/13/05	Result Limit Units Dilution Batch Prepared Analyzed 9.5 0.1 % 1 EE51301 05/13/05 05/13/05 7.9 0.1 % 1 EE51301 05/13/05 05/13/05 7.8 0.1 % 1 EE51301 05/13/05 05/13/05 13.7 0.1 % 1 EE51301 05/13/05 05/13/05	Result Limit Units Dilution Batch Prepared Analyzed Method 9.5 0.1 % 1 EE51301 05/13/05 05/13/05 % calculation 7.9 0.1 % 1 EE51301 05/13/05 05/13/05 % calculation 7.8 0.1 % 1 EE51301 05/13/05 05/13/05 % calculation 13.7 0.1 % 1 EE51301 05/13/05 05/13/05 % calculation

Environmental Lab of Texas

Plains All American EH & S		F	roject: Lov	rington Pum;	p Station				Fax: (432)	687-4914
1301 S. County Road 1150			umber: EM				ŧ		Repo	rted:
Midland TX, 79706-4476			anager: Can						05/17/0	5 09:08
	Oı	rganics by	y GC - Q	uality Co	ontrol					
		Environ	mental L	ab of Te	kas					
A1. A.	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Limit	01113	Level	Kesun					Rotes
Batch EE51305 - Solvent Extraction (GC)							<u> </u>			
Blank (EE51305-BLK1)				Prepared: (05/13/05 A	nalyzed: 05	/14/05			
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	и							
Surrogate: 1-Chlorooctane	39.4		mg/kg	50.0		78.8	70-130			
Surrogate: 1-Chlorooctadecane	37.6		. н	50.0		75.2	70-130			
LCS (EE51305-BS1)				Prepared: (05/13/05 A	nalyzed: 05	6/14/05			
Gasoline Range Organics C6-C12	475	10.0	mg/kg wet	500		95.0	75-125			
Diesel Range Organics >C12-C35	505	10.0	11	500		101	75-125			
Total Hydrocarbon C6-C35	980	10.0	"	1000		9 8.0	75-125			
Surrogate: 1-Chlorooctane	38.6		mg/kg	50.0		77.2	70-130			
Surrogate: 1-Chlorooctadecane	36.2		н	50.0		72.4	70-130			
Calibration Check (EE51305-CCV1)				Prepared: (05/13/05 A	nalyzed: 05	5/14/05			,
Gasoline Range Organics C6-C12	499		mg/kg	500		99.8	80-120			
Diesel Range Organics >C12-C35	530		"	500		106	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	48.4		"	50.0		96.8	70-130			
Surrogate: 1-Chlorooctadecane	41.2		"	50.0		82.4	70-130			
Matrix Spike (EE51305-MS1)	Sou	rce: 5E1302	1-02	Prepared: (05/13/05 A	nalyzed: 05	5/14/05			
Gasoline Range Organics C6-C12	477	10.0	mg/kg dry	517	ND	92.3	75-125			<u> </u>
Diesel Range Organics >C12-C35	502	10.0	"	517	ND	97.1	75-125			
Total Hydrocarbon C6-C35	979	10.0	"	1030	ND	95.0	75-125			
Surrogate: 1-Chlorooctane	52.8		mg/kg	50.0		106	70-130			, , ,
Surrogate: 1-Chlorooctadecane	47.0		"	50.0		94.0	70-130			
Matrix Spike Dup (EE51305-MSD1)	Sou	rce: 5E13021	1-02	Prepared: (05/13/05 A	nałyzed: 05	6/14/05			
Gasoline Range Organics C6-C12	488	10.0	mg/kg dry	517	ND	94.4	75-125	2.28	20	
Diesel Range Organics >C12-C35	511	10.0		517	NID	08.8	75 175	1 79	20	

Matrix Spike Dup (EE51305-MSD1)	Source	e: 5E13021	-02	Prepared: ()5/13/05 A	nalyzed: 0.	5/14/05			
Gasoline Range Organics C6-C12	488	10.0	mg/kg dry	517	ND	94.4	75-125	2.28	20	
Diesel Range Organics >C12-C35	511	10.0	"	517	ND	98.8	75-125	1.78	20	
Total Hydrocarbon C6-C35	. 999	10.0	"	1030	ND	97.0	75-125	2.02	20	
Surrogate: 1-Chlorooctane	53.3	·····	mg/kg	50.0		107	70-130			• • • • • • • • • • • • • • • • • • • •
Surrogate: 1-Chlorooctadecane	48.5		"	50.0		97.0	70-130			

Environmental Lab of Texas

Plains All American EH & S 1301 S. County Road 1150				vington Pum 1S: 2005-000					Fax: (432) Repo		
Midland TX, 79706-4476				mille Reynol					05/17/05 09:08		
	0	rganics by	GC - Q	ouality Co	ontrol		_				
		Environn	-	•							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EE51312 - EPA 5030C (GC)											
Blank (EE51312-BLK1)				Prepared &	- Analyzed:	05/13/05					
Benzene	ND	0.0250	mg/kg wet			,					
Foluene	ND	0.0250	*								
Ethylbenzene	ND	0.0250	"								
Xylene (p/m)	ND	0.0250	"								
Kylene (o)	ND	0.0250	*1								
Surrogate: a,a,a-Trifluorotoluene	102		ug/kg	100		102	80-120		<u></u>		
urrogate: 4-Bromofluorobenzene	85.2		"	100		85.2	80-120				
LCS (EE51312-BS1)				Prepared: ()5/13/05 A	nalyzed: 05	5/14/05				
Benzene	90.3		ug/kg	100		90.3	80-120				
oluene	82.9		"	100		82.9	80-120				
thylbenzene	82.2		*	100		82.2	80-120				
(yłene (p/m)	185		*	200		92.5	80-120				
(ylene (o)	91.0		R	100		91.0	80-120				
urrogate: a,a,a-Trifluorotoluene	115		"	100		115	80-120				
urrogate: 4-Bromofluorobenzene	99 <u>.</u> 3		"	100		99.3	80-120				
Calibration Check (EE51312-CCV1)				Prepared: ()5/13/05 A	nalyzed: 05	5/14/05				
Senzene	95.4		ug/kg	100		95.4	80-120				
Toluene	93.0			100		93.0	80-120				
Ethylbenzene	91.5			100		91.5	80-120				
Kylene (p/m)	208			200		104	80-120				
(ylene (o)	97.1		"	100		97 .1	80-120				
urrogate: a,a,a-Trifluorotoluene	119		"	100		119	80-120				
urrogate: 4-Bromofluorobenzene	104		"	100		104	80-120				
Matrix Spike (EE51312-MS1)	Sou	rce: 5E12014	-02	Prepared: ()5/13/05 A	nalyzed: 05	5/14/05				
Benzene	88.8		ug/kg	100	ND	88.8	80-120				
Toluene	85.7		n	100	ND	85.7	80-120				
Ethylbenzene	84.8		**	100	ND	84.8	80-120				
Kylene (p/m)	192		47	200	ND	96.0	80-120				
Kylene (o)	84.6		•	100	ND	84.6	80-120				
Surrogate: a, a, a-Trifluorotoluene	101		"	100		101	80-120				
urrogate: 4-Bromofluorobenzene	103		"	100		103	80-120				

Environmental Lab of Texas

Plains All American EH & S	Project: Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	05/17/05 09:08

Organics by GC - Quality Control

Environmental Lab of Texas

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

Batch EE51312 - EPA 5030C (GC)

Matrix Spike Dup (EE51312-MSD1)	Source: 5	Source: 5E12014-02		05/13/05 A	Analyzed: 05/14/05			
Benzene	92.9	ug/kg	100	ND	92.9	80-120	4.51	20
Toluene	90.3	"	100	ND	90.3	80-120	5.23	20
Ethylbenzene	92.0		100	ND	92.0	80-120	8.14	20
Xylene (p/m)	211		200	ND	106	80-120	9.90	20
Xylene (o)	94.4	*	100	ND	94.4	80-120	10.9	20
Surrogate: a,a,a-Trifluorotoluene	115	#	100		115	80-120		
Surrogate: 4-Bromofluorobenzene	113	"	100		113	80-120		

Batch EE51401 - EPA 5030C (GC)

Blank (EE51401-BLK1)				Prepared & Anal	lyzed: 05/14/05		
Benzene	ND	0.0250	mg/kg wet				
Tolucae	ND	0.0250	"				
Ethylbenzene	ND	0.0250	n				
Xylene (p/m)	ND	0.0250	n				
Xylene (o)	ND	0.0250					
Surrogate: a,a,a-Trifluorotoluene	90.0		ug/kg	100	90.0	80-120	
Surrogate: 4-Bromofluorobenzene	92.4		#	100	92.4	80-120	
LCS (EE51401-BS1)				Prepared & Anal	lyzed: 05/14/05		
Benzene	85.3		ug/kg	100	85.3	80-120	
Toluene	82.9		"	100	82.9	80-120	
Ethylbenzene	86.9			100	86,9	80-120	
Xylene (p/m)	200		•	200	100	80-120	
Xylene (o)	91.1		•	100	91.1	80-120	
Surrogate: a,a,a-Trifluorotoluene	104		"	100	104	80-120	
Surrogate: 4-Bromofluorobenzene	114		"	100	114	80-120	

Environmental Lab of Texas

	Organics by CC Quelity Control	
Midland TX, 79706-4476	Project Manager: Camille Reynolds	05/17/05 09:08
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Plains All American EH & S	Project: Lovington Pump Station	Fax: (432) 687-4914

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 EE51401 - EPA 5030C (GC)		Linit							Child	110005
Calibration Check (EE51401-CCV1)	<u></u>			Prepared: 0	5/14/05 A	nalvzed: ()5	/15/05			
Benzene	98.5		ug/kg	100	J114/05 71	98.5	80-120			
Toluene	93.6		н.	100		93.6	80-120			
Ethylbenzene	88.8			100		88.8	80-120			
Xylene (p/m)	200			200		100	80-120			
Xylene (o)	96.2		н	100		96.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	115		n	100		115	80-120			·
Surrogate: 4-Bromofluorobenzene	103		n	100		103	80-120			
Matrix Spike (EE51401-MS1)	Sou	rce: 5E13021-01		Prepared &	Analyzed:	05/14/05				
Benzene	87.4		ug/kg	100	ND	87.4	80-120			
Toluene	86.5			100	ND	86.5	80-120			
Ethylbenzene	86.8		н	100	ND	86.8	80-120			
Xylene (p/m)	198			200	ND	99.0	80-120			
Xylene (o)	92.0		"	100	ND	92.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		H	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	114		"	100		114	80-120			
Matrix Spike Dup (EE51401-MSD1)	Sou	rce: 5E13021-01		Prepared &	Analyzed:	05/14/05				
Benzene	90.9		ug/kg	100	ND	90.9	80-120	3.93	20	
Toluene	90.7			100	ND	90.7	80-120	4.74	20	
Ethylbenzene	93.4		"	100	ND	93.4	80-120	7.33	20	
Xylene (p/m)	215		"	200	ND	108	80-120	8.70	20	
Xylene (o)	98.1			100	ND	98.1	80-120	6.42	20	
Surrogate: a,a,a-Trifluorotoluene	108		"	100		108	80-120			
Surrogate: 4-Bromofluorobenzene	116		"	100		116	80-120			

Environmental Lab of Texas

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51301 - General Preparation (Prep)									
Blank (EE51301-BLK1)				Prepared &	Analyzed:	05/13/05				
% Moisture	ND	0.1	%							
Duplicate (EE51301-DUP1)	Sou	rce: 5E12011-	01	Prepared &	Analyzed:	05/13/05				
% Solids	98.2		%		97.4			0.818	20	

Environmental Lab of Texas

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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

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 Junis

5/17/2005

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.

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

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:08

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or
	matrix interference's.

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- J 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 dry
- RPD **Relative Percent Difference**
- Laboratory Control Spike LCS
- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Raland K Juits

5/17/2005

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.

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

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lessa, Texas 79765 Fax: 432-5																	,				2		1 .1		-
Project Manager: <u>KEN DUTTO</u>	N																						\$ 57		
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City/State/Zip: LOVINGTON,			,	· · · · · ·				~					:		PÓ	#:	PA	R/	10	<u>.</u> k	<u>>F</u>]	<u> Ni</u>	063	5	
Telephone No: (5\$5) 441-2124			Fax No	: (5	øŞ	3	69-	Ł٩	20	t	_							Ŧ							
Telephone No: (505) 441-2124 Sampler Signature:	utton)																أجز الأرد الأربعي								
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<i>N</i> ,			77	sta										TPH: 418.1 6015M 1005	Ω. N	Anions (Cl. SO4, CO3, HCO3)	Metals: As Ao Ba Cd Cr Pb Ho			D or BT					
(PDV)	Date Sampled		Time Sampled	No. of Containers						ecity)			ίλ Μ	is)	Cations (Ca, Mg, Na, K)	Anions (Cl. 504, 1	Ao Ba		88	8/03					
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Sex Diller SHAVES	7920 Time Received	by ELO	<u>г</u> .								Date		<u> </u>	lime			4	2							
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		Ju	<u> </u>	-4	[01	<u> </u>		<u> </u>												

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

Client:	Plaing Prodine
Date/Time:	5/13/03 9:50
Order #:	5E13017
Initials	NR

Sample Receipt Checklist

Temperature of container/ccoler?	Yes	No	0.0 01
Shipping container/cooler in good condition?	1 CB	No	
Custody Seals Intact on snipping container/ccoler?	1 (ES)	No	Not present
Custody Seals intact on sample bottles?	1231	No	Not present
Chain of custody present?	1 Yes	No 1	{
Sample Instructions complete on Chain of Custody?	1785	NC 1	
Chain of Custody signed when relinquished and received?	10001	NC	
Chain of custody agrees with sample label(s)	1 (29)	No	
Container labels legible and intact?	(35)	No I	ł
Sample Matrix and properties same as on chain of custody?	103	No	
Samples in proper container/bottle?	1 Mes 1	No I	
Samples procerly preserved?	1 Ces 1	No 1	{
Sample bottles intact?	(3)	Nic	}
Freservations documented on Chain of Custody?	1 (100)	Nic I	(
Containers documented on Chain of Custody?	I Ces I	No 1	:
Sufficient sample amount for indicated test?	1000	No i	i
All samples received within sufficient hold time?	1 Cer 1	No	1
VCC samples have zero headspace?	102	NC I	Not Acolicable

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:
Corrective Action Taken:		
	· · · · · · · · · · · · · · · · · · ·	



Analytical Report

Prepared for:

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

Project: Lovington Pump Station Project Number: EMS: 2005-00015 Location: Lea County, NM

Lab Order Number: 5E13021

Report Date: 05/17/05

Plains All American EH & S	Project: Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	05/17/05 09:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 10'	5E13021-01	Soil	05/05/05 10:07	05/13/05 09:40
SB-1 20'	5E13021-02	Soil	05/05/05 10:17	05/13/05 09:40
SB-1 30'	5E13021-03	Soil	05/05/05 10:30	05/13/05 09:40
SB-2 10'	5E13021-07	Soil	05/05/05 13:10	05/13/05 09:40
SB-2 20'	5E13021-08	Soil	05/05/05 13:20	05/13/05 09:40
SB-3 10'	5E13021-09	Soil	05/05/05 14:01	05/13/05 09:40
SB-3 20'	5E13021-10	Soil	05/05/05 14:10	05/13/05 09:40
SB-4 10'	5E13021-11	Soil	05/05/05 14:40	05/13/05 09:40
SB-4 20	5E13021-12	Soil	05/05/05 14:47	05/13/05 09:40

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:24

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB-1 10' (5E13021-01) Soil		<u></u>							
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	"	11				**	
Ethylbenzene	ND	0.0250	"	"		•			
Xylene (p/m)	ND	0.0250	"		*	"		**	
Xylene (o)	ND	0.0250	"		•		"	n	
Surrogate: a,a,a-Trifluorotoluene		95.1 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		*		"	**	**	
Total Hydrocarbon C6-C35	ND	10.0	"			н	"	**	
Surrogate: 1-Chlorooctane		95.4 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		95.2 %	70-1	30	"	W	"	"	
SB-1 20' (5E13021-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	n	"	**	•	"		
Ethylbenzene	ND	0.0250	"	**	"	"	"		
Xylene (p/m)	ND	0.0250	n	**				15	
Xylene (o)	ND	0.0250	"	**	**	"	U	14	
Surrogate: a,a,a-Trifluorotoluene		<i>93.7 %</i>	80-1	20	"	н	"	"	
Surrogate: 4-Bromofluorobenzene		<i>93.7 %</i>	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	u	"		*	"	"	
Total Hydrocarbon C6-C35	ND	10.0	14	"	11	"	u	H	
Surrogate: 1-Chlorooctane		104 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-1	30	"	"	"	u	
SB-1 30' (5E13021-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	n	"	**		ч	**	
Ethylbenzene	ND	0.0250	"		*	"			
Xylene (p/m)	ND	0.0250	"			n	"		
Xylene (o)	ND	0.0250	n	"	**	н	"		
Surrogate: a,a,a-Trifluorotoluene		92.9 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	1	92.7 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"		**		u	и	
Total Hydrocarbon C6-C35	ND	10.0	"	·		"			

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Page 2 of 11

Plains All American EH & S		1	Project: Lov	ington Pun	np Station			Fax: (432) 6	87-4914
1301 S. County Road 1150			umber: EM					Report	
Midland TX, 79706-4476		Project M	anager: Can	nille Reyno	olds			05/17/05	09:24
		Oı	rganics by	y GC					
		Environ	mental La	ab of Te	xas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SB-1 30' (SE13021-03) Soil					•				
Surrogate: 1-Chlorooctane		93.2 %	70-1	30	EE51305	05/13/05	05/14/05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		93.6 %	70-1	30	n	"	"	"	
SB-2 10' (5E13021-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	"	"		"	"	**	
Ethylbenzene	ND	0.0250		"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	4	"	**	"	
Xylene (o)	ND	0.0250		•		"	"	•	
Surrogate: a,a,a-Trifluorotoluene		95.0 %	80-1	20	"	н	"	"	
Surrogate: 4-Bromofluorobenzene		90.4 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"		"	**		
Total Hydrocarbon C6-C35	ND	10.0	"			"		**	
Surrogate: 1-Chlorooctane		78.2 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		71.4 %	70-1	30	"	"	n	n	
SB-2 20' (5E13021-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	"	•		"	"		
Ethylbenzene	ND	0.0250	н	"	"	u		"	
Xylene (p/m)	ND	0.0250	"	"	"			*	
Xylene (o)	ND	0.0250	"	u	"		"	"	
Surrogate: a,a,a-Trifluorotoluene		92.1 %	80-1	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.4 %	80-1	20	H	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0			"	п	н		
Total Hydrocarbon C6-C35	ND	10.0		u	н	4	"	и	
Surrogate: 1-Chlorooctane		78.8 %	70-1	30	"	"	"	N	
Surrogate: 1-Chlorooctadecane		73.0 %	70-1	30	п	"	"	"	

Environmental Lab of Texas

Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687	-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:	:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09	:24

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SB-3 10' (5E13021-09) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Foluene	ND	0.0250	"	н		υ.	"		
Ethylbenzene	ND	0.0250		**	**	"	*		
Kylene (p/m)	ND	0.0250	17	"		"	"		
(ylene (o)	ND	0.0250	"	"		11	"	*	
Surrogate: a,a,a-Trifluorotoluene		95.3 %	80-1	120	"	n	"	"	
Surrogate: 4-Bromofluorobenzene		89.3 %	80-1	120	"	u	"	11	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	н		
Fotal Hydrocarbon C6-C35	ND	10.0	*	n	*	*	n	n	
Surrogate: 1-Chlorooctane	······································	79.4 %	70-1	130	"	п	"	"	
Surrogate: 1-Chlorooctadecane		73.2 %	70-1	130	"	п	"	"	
SB-3 20' (5E13021-10) Soil							•		
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
foluene	ND	0.0250	u		*	"	**		
Ethylbenzene	ND	0.0250	"	W	•	n		n	
Kylene (p/m)	ND	0.0250		п		"	"	n	
Kylene (o)	ND	0.0250	H	"	"	"	*	"	
Surrogate: a,a,a-Trifluorotoluene		96.4 %	80-1	120	"	n	"	н	
Surrogate: 4-Bromofluorobenzene		98.1 %	80-1	120	п	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		**		и.		n	
Fotal Hydrocarbon C6-C35	ND	10.0		**		14			
Surrogate: 1-Chlorooctane		77.0 %	70-1	130	"	"	"	"	
Surrogate: 1-Chlorooctadecane		71.4 %	70- 2	130	"	u	"	"	
5B-4 10' (5E13021-11) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/16/05	EPA 8021B	
Toluene	ND	0.0250	"	14	59	11		*	
Ethylbenzene	ND	0.0250	н			1 ¹	"		
(ylene (p/m)	ND	0.0250		n				*	
(v)	ND	0.0250	"	"	"	"	"	*	
Surrogate: a,a,a-Trifluorotoluene		95.4 %	80-1	120	"	"	n	"	
Surrogate: 4-Bromofluorobenzene		93.5 %	80-1	20	"	17	"	**	
Jasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	u	"	**				
Fotal Hydrocarbon C6-C35	ND	10.0	"		н	*		**	

Environmental Lab of Texas

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Plains All American EH & S		F	roject: Lovi	ington Pun	p Station			Fax: (432) 6	87-4914
1301 S. County Road 1150			umber: EMS					Report	ed:
Midland TX, 79706-4476		05/17/05 09:24							
		Or	ganics by	y GC					
		Environ	nental La	ab of Te	xas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB-4 10' (SE13021-11) Soil					-				
Surrogate: 1-Chlorooctane		79.8 %	70-1.	30	EE51305	05/13/05	05/14/05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		74.2 %	70-1.	30	H	"	"	"	
SB-4 20' (5E13021-12) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE51401	05/14/05	05/14/05	EPA 8021B	
Toluene	ND	0.0250	"	u		**	"	•	
Ethylbenzene	ND	0.0250	"	"	"		"	••	
Xylene (p/m)	ND	0.0250	"	*	"	17			
Xylene (o)	ND	0.0250	"	"		"	11	"	
Surrogate: a,a,a-Trifluorotoluene		84.8 %	80-1.	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.9 %	80-1.	20	"	"	"	17	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EE51305	05/13/05	05/14/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	n	
Total Hydrocarbon C6-C35	ND	10.0	**	н		11	11	n	
Surrogate: 1-Chlorooctane		80.6 %	70-1.	30	H	"	"	"	
Surrogate: 1-Chlorooctadecane	1	75.2 %	70-1.	30	н	"	"	"	

Environmental Lab of Texas

Plains All American EH & S	Project: Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number: EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager: Camille Reynolds	05/17/05 09:24

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

·····	<u> </u>							······	
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB-1 10' (5E13021-01) Soil									
% Moisture	7.5	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-1 20' (5E13021-02) Soil									
% Moisture	3.3	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-1 30' (5E13021-03) Soil									
Chloride	14.9	5.00	mg/kg	10	EE51404	05/13/05	05/13/05	EPA 300.0	
% Moisture	4.2	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-2 10' (5E13021-07) Soil									
% Moisture	10.3	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-2 20' (5E13021-08) Soil									
% Moisture	3.5	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-3 10' (5E13021-09) Soil									
% Moisture	11.4	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-3 20' (5E13021-10) Soil									
% Moisture	3.5	0.1	%	1	EE51301	05/13/05	05/13/05	% calculation	
SB-4 10' (5E13021-11) Soil									
% Moisture	10.6	0.1	%	1	EE51301	05/13/05	05/16/05	% calculation	
SB-4 20' (5E13021-12) Soil									
% Moisture	3.0	0.1	%	1	EE51301	05/13/05	05/16/05	% calculation	

Environmental Lab of Texas

Plains All American EH & S		P	roject: Lov	ington Pum	p Station				Fax: (432) 687-4914		
1301 S. County Road 1150				S: 2005-00					Repor	rted:	
Midland TX, 79706-4476	Project Manager: Camille Reynolds								05/17/0	5 09:24	
	O	rganics by	GC - Q	uality Co	ontrol						
		Environn	nental L	ab of Te	xas						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EE51305 - Solvent Extraction (GC)											
Blank (EE51305-BLK1)				Prepared: (05/13/05 Ai	nalyzed: 05	/14/05				
Basoline 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	39.4		mg/kg	50.0		78.8	70-130				
Surrogate: 1-Chlorooctadecane	37.6		"	50.0		75.2	70-130				
LCS (EE51305-BS1)				Prepared: (05/13/05 Ai	nalyzed: 05	/14/05				
Gasoline Range Organics C6-C12	475	10.0	mg/kg wet	500	·····	95.0	75-125				
Diesel Range Organics >C12-C35	505	10.0		500		101	75-125				
Fotal Hydrocarbon C6-C35	980	10.0		1000		98.0	75-125				
Surrogate: 1-Chlorooctane	38.6		mg/kg	50.0		77.2	70-130				
Surrogate: 1-Chlorooctadecane	36.2		~	50.0		72.4	70-130				
Calibration Check (EE51305-CCV1)				Prepared: (05/13/05 A	nalyzed: 05	/14/05				
Gasoline Range Organics C6-C12	499		mg/kg	500		99.8	80-120				
Diesel Range Organics >C12-C35	530			500		106	80-120				
Total Hydrocarbon C6-C35	1030			1000		103	80-120				
Surrogate: 1-Chlorooctane	48.4		n	50.0		96.8	70-130				
Surrogate: 1-Chlorooctadecane	41.2		"	50.0		82.4	70-130				
Matrix Spike (EE51305-MS1)	Sou	rce: 5E13021	-02	Prepared: (05/13/05 A	nalyzed: 05	6/14/05				
Gasoline Range Organics C6-C12	477	10.0	mg/kg dry	517	ND	92.3	75-125				
Diesel Range Organics >C12-C35	502	10.0	**	517	ND	97.1	75-125				
Total Hydrocarbon C6-C35	979	10.0	u	1030	ND	95.0	75-125				
Surrogate: 1-Chlorooctane	52.8		mg/kg	50.0		106	70-130			,	
Surrogate: 1-Chlorooctadecane	47.0		"	50.0		94.0	70-130				
Matrix Spike Dup (EE51305-MSD1)	Source: 5E13021-02		Prepared: (05/13/05 A							
Gasoline Range Organics C6-C12	488	10.0	mg/kg dry	517	ND	94.4	75-125	2.28	20		
Diesel Range Organics >C12-C35	511	10.0		517	ND	98.8	75-125	1.78	20		
Fotal Hydrocarbon C6-C35	999	10.0		1030	ND	97.0	75-125	2.02	20		
Surrogate: 1-Chlorooctane	53.3		mg/kg	50.0		107	70-130	<u> </u>			
Surrogate: 1-Chlorooctadecane	48.5		"	50.0		97.0	70-130				

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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 ${\it Environmental}$ Lab of Texas.

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Plains All American EH & S				vington Pum					Fax: (432)	
1301 S. County Road 1150 Midland TX, 79706-4476	Project Number: EMS: 2005-00015 Project Manager: Camille Reynolds									rted: 5 09:24
	0	rganics by	-	•						
		Environn	nental L	ab of Te	KAS				· · · · · · · · · · · · · · · · · · ·	· •••
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51401 - EPA 5030C (GC)								~		
Blank (EE51401-BLK1)				Prepared &	Analyzed:	05/14/05				
Benzene	ND	0.0250	mg/kg wet							
foluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Kylene (p/m)	ND	0.0250								
(ylene (o)	ND	0.0250	••							
Surrogate: a,a,a-Trifluorotoluene	90.0		ug/kg	100		90.0	80-120			
urrogate: 4-Bromofluorobenzene	92.4		"	100		92.4	80-120			
.CS (EE51401-BS1)				Prepared &	Analyzed:	05/14/05				
lenzene	85.3		ug/kg	100		85.3	80-120			
oluene	82.9		"	100		82.9	80-120			
thylbenzene	86.9		"	100		86.9	80-120			
(ylene (p/m)	200		N	200		100	80-120			
(v)	91.1		N	100		91.1	80-120			
urrogate: a,a,a-Trifluorotoluene	104		"	100		104	80-120			·
urrogate: 4-Bromofluorobenzene	114		н	100		114	80-120			
Calibration Check (EE51401-CCV1)				Prepared: ()5/14/05 A	nalyzed: 05	5/15/05			
Benzene	98.5		ug/kg	100		98.5	80-120	· · · · · · ·		
oluene	93.6		N	100		93.6	80-120			
thylbenzene	88.8			100		88.8	80-120			
(ylene (p/m)	200		n	200		100	80-120			
(ylene (o)	96.2		н	100		96.2	80-120			
urrogate: a,a,a-Trifluorotoluene	115	·····	"	100		115	80-120	· · · · · · · · · · · ·		
urrogate: 4-Bromofluorobenzene	103		"	100		103	80-120			
Matrix Spike (EE51401-MS1)	Sou	rce: 5E13021	-01	Prepared &	Analyzed:	05/14/05				
Benzene	87.4		ug/kg	100	ND	87.4	80-120			
oluene	86.5		۳	100	ND	86.5	80-120			
thylbenzene	86.8		n	100	ND	86.8	80-120			
(ylene (p/m)	198			200	ND	99.0	80-120			
(ylene (o)	92.0		"	100	ND	92.0	80-120			
urrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120		· · · · · · · ·	
urrogate: 4-Bromofluorobenzene	114		"	100		114	80-120			

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Plains All American EH & S	Project:	Lovington Pump Station	Fax: (432) 687-4914
1301 S. County Road 1150	Project Number:	EMS: 2005-00015	Reported:
Midland TX, 79706-4476	Project Manager:	Camille Reynolds	05/17/05 09:24

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 EE51401 - EPA 5030C (GC)

Matrix Spike Dup (EE51401-MSD1)	Source: 5	Prepared &	Analyzed:	05/14/05				
Benzene	90.9	ug/kg	100	ND	90.9	80-120	3.93	20
Toluene	90.7	"	100	ND	90.7	80-120	4.74	20
Ethylbenzene	93.4	"	100	ND	93.4	80-120	7.33	20
Xylene (p/m)	215	н	200	ND	108	80-120	8.70	20
Xylene (o)	98.1	"	100	ND	98.1	80-120	6.42	20
Surrogate: a,a,a-Trifluorotoluene	108	"	100		108	80-120		
Surrogate: 4-Bromofluorobenzene	116	"	100		116	80-120		

Environmental Lab of Texas

Plains All American EH & S 1301 S. County Road 1150 Midland TX, 79706-4476	Project: Lovington Pump Station Project Number: EMS: 2005-00015 Project Manager: Camille Reynolds							Fax: (432) 687-4914 Reported: 05/17/05 09:24		
General	Chemistry Para	umeters by Environm				ls - Qua	lity Cont	trol		
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51301 - General Preparatio	n (Prep)									
Blank (EE51301-BLK1)		Prepared & Analyzed: 05/13/05								
% Moisture	ND	0.1	%	• • · · ·						
Duplicate (EE51301-DUP1)	Sou	rce: 5E12011-	-01	Prepared &	Analyzed:	05/13/05				
% Solids	98.2	····· · · · · · · · · · · · · · · · ·	%		97.4			0.818	20	
Batch EE51404 - Water Extraction										
Blank (EE51404-BLK1)				Prepared &	Analyzed:	05/13/05				
Chloride	ND	0.500	mg/kg							
LCS (EE51404-BS1)				Prepared &	Analyzed:	05/13/05				
Chloride	10.2	··	mg/L	10.0		102	80-120			
Calibration Check (EE51404-CCV1)				Prepared &	Analyzed:	05/13/05				
Chloride	10.4		mg/L	10.0		104	80-120		• · · ·	
Duplicate (EE51404-DUP1)	Sou	rce: 5E13025-	04	Prepared &	Analyzed:	05/13/05				Ϋ́.
Chloride	1670	50.0	mg/kg		1680			0.597	20	-

Plains All American EH & SProject:1301 S. County Road 1150Project Number:Midland TX, 79706-4476Project Manager:

Reported: 05/17/05 09:24

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. Iwit

5/17/2005

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.

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

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Page 11 of 11

Environmental Lab of Texas I, Ltd.

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City/State/Zip;	LOVINGTON, NM	18260											F	ю#;	<u> </u>	H F	ųc	-	RE	<u>YN</u>	Oh	DŚ	
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LAB # (lab use only)	FIELD CODE	Dat D	j.	Ŷ	ęs k	<u> </u>	O R	Nora Nora	ð	Water Skudae	8	ð	HE S	Anlor	SAR	Motal	Volatites		Į Į	N.O.R.M.	Total		
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client	Plaing Pipeline
Date/Time:	5/13/05 9:50
Order #:	5E13021
Initials:	CK

Sample Receipt Checklist

Temperature of container/ccoler?	Yes]	No	0,0 C
Shicoing container/cooler in good condition?		Nic	
Custody Seals intact on shicoing container/cooler?	1 (45)	No	Nct present
Custody Seals intact on sample bottles?		No	Not cresent
Chain of custody present?	1 Yes	Nc	
Sample Instructions complete on Chain of Custody?	XI	No	
Chain of Custody signed when relinquished and received?	10-51	No	
Chain of custody agrees with sample label(s)		No	
Container lacels legible and intact?		Nic	
Sample Matrix and properties same as on chain of custody?	1031	No	
Samcies in proper container/bottle?	1/31	No	
Samples procerty preserved?	1 (3)	No	
Sample bottles intact?	1 (195)	Pro 1	
Preservations documented on Chain of Custody?	1 (==)	∱i⊂ I	
Containers occumented on Chain of Custody?	I Cer I	NC	
Sufficient sample amount for indicated test?	125	Ne	
All samples received within sufficient hold time?		No	
VCC samples have zero headspace?	10000	N.C	Not Accilcacie

Other observations:

Centact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:	
			*
Corrective Action Taken:			
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APPENDIX C

SOIL BORING LOGS

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Plains Marketing, L. P. Lovington Pump Station Lea County, New Mexico
					Caliche Layer, Gray-Black, Moist	NW/NW S16, T17S, R37E EMS No. 2005-00015
5		2.8 ppm	Slight	Heavy	Sand (SP) White-Brown, Very Fine Grained, Well Sorted, imbedded w	
10		3.2 ppm	None	Slight	caliche, moist	Installed 05 May 05 Basin Environmental Service Technologies
15		1.2 ppm	None	None		Samples selected for analysis
20		1.7 ppm	None	None	Caliche Layer, moist	↓ Groundwater Depth Soil Boring Plugging Data Hydrated Bentonite Plug,
25		1.9 ppm	None	None	Sand (SP) White-Brown, Very Fine Grained, Well Sorted, imbedded w	Surface to 68' bgs
30		1.8 ppm	None	None	caliche, moist	
35		1.7 ppm	None	None	Caliche Layer, dry	
40		2.3 ppm	None	None	Sand (SP) Red-Brown, Very Fine Grained, Well Sorted, imbedded w gravel rock, dry	1
45		0.7 ppm	None	None	Sand Stone Layer, dry	
50		0.7 ppm	None	None	Sand (SP) White-Brown, Very Fine Grained, Well Sorted, imbedded w caliche, dry	
55		0.5 ppm	None	None		
60		0.2 ppm	None	None		
65		0.2 ppm	None	None	T	ITLE DESCRIPTION Lovington Pump SB-1
		0.1 ppm	None	None	D	Station RAWN BY DATE KAD 05 May 05

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Plains Marke Lovington Pu Lea County, N NW/NW S16, EMS No. 20	mp Station lew Mexico Г17S, R37E
						Soil B	oring Completion Data
							0 Feet bgs
5		0.6 ppm	None	None	Caliche Layer, dry	Basin	ed 05 May 05 Environmental e Technologies
							Samples selected for analysis
10		0.8 ppm	None	None	Sand (SP) Red-Brown, Very Fine Grained, Well Sorted, imbedded w/	Soil Borin	g Plugging Data Hydrated Bentonite Plug,
					caliche, dry		Surface to 20' bgs
15		0.1 ppm	None	None			
20			Nega	Nega			
20		0.1ppm	None	None			
							· · · · · · · · · · · · · · · · · · ·
					ТІТІ		DESCRIPTION
						Lovington Pump Station	SB-2
					DRA	AWN BY KAD	DATE 05 May 05

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Plains Mark Lovington Pl Lea County, NW/NW S16, EMS No. 2	ump Station New Mexico T17S, R37E
						Soil I	Boring Completion Data
							20 Feet bgs
5		1.0 ppm	None	None	Caliche Layer, moist	Basi	alled 05 May 05 in Environmental ice Technologies
							Samples selected for analysis
10		0.9 ppm	None	None	Sand (SP) White-Brown, Very Fine	Soil Bor	ing Plugging Data
-		(0.9 ppn)	None	None	Grained, Well Sorted, imbedded w/ caliche, moist		Hydrated Bentonite Plug Surface to 20' bgs
- 15		0.1 ppm	None	None	Caliche Layer, dry		
- 20		0.3ppm	None	None			
-							
-							
					ודוד	.E	DESCRIPTION
						ovington Pump	SB-3
					DRA	AWN BY KAD	DATE 05 May 05

Depth	Soil Column	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Plains Mark Lovington Pu Lea County,	Imp Station New Mexico
						NW/NW S16, EMS No. 20 Soil E	T17S, R37E 105-00015 Foring Completion Data
							20 Feet bgs
5		1.5 ppm	None	None	Caliche Layer, moist	Basi	lled 05 May 05 n Environmental ce Technologies
							Samples selected for analysis
10		1.5 ppm	None	None	Sand (SP) Red-Brown, Very Fine	Soil Bori	ng Plugging Data
					Grained, Well Sorted, imbedded w/ caliche, dry		Hydrated Bentonite Plug Surface to 20' bgs
15 		1.1 ppm	None	None	Caliche Layer, dry		
- 20		0.8 ppm	None	None			
_							
	,						
 .							
				-	ТІТЦ		DESCRIPTION
						⊂ ovington Pump Station	SB-4
					DRA	WN BY KAD	DATE 05 May 05

APPENDIX D

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NMOCD C-141

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BIRELI 25 N. French Dr., Hobbs, NM 88240 Estrict II 1301 W. Grand Avenue, Artesia, NM 88210 <u>District III</u> D0 Rio Brazos Road, Aztec, NM 87410 <u>strict IV</u> 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 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification	on and Co	rrective A	ction							
	OPER/		x Init	ial Report 🔲 Final Repor						
Name of Company Plains Marketing, LP		nille Reynolds								
Address 5805 East Hwy. 80, Midland, TX 79706		No. 505-441-090								
acility Name Lovington Station	Facility Type 4"Steel Pipeline									
Surface Owner State Of New Mexico Mineral Owner	er Lease No.									
LOCATI	ON OF RE	LEASE								
Unit Letter Section Township Range Feet from the Nor	th/South Line	Feet from the	East/West Line	County						
D 16 175 378				Lea						
Latitude_32°50'31.2"	Longitude	103°15'45.5"								
	E OF REL	EASE								
ype of Release Crude Oil	اختذاذ الخذيب والمتحد والمحد المحدد المحدد المحدد والأ	Release 6 barrels		Recovered 0 barrels						
Source of Release 4" Steel Pipeline	Date and H 1/14/05 @	lour of Occurrenc 08:55	e Date and 1/14/05 (Hour of Discovery @ 09:00						
Vas Immediate Notice Given?	If YES, To									
Yes No Not Require	d Larry John	900								
By Whom? Camille Reynolds		iour 1/14/05 @ 1								
Vas a Watercourse Reached?	If YES, Vo	lume Impacting t	he Watercourse.							
Yes 🕅 No			[:	1977 - 1977 ABIS						
If a Watercourse was Impacted, Describe Fully.*			•	Hobbs OCD						
escribe Cause of Problem and Remedial Action Taken.* Failure of papproximately 70 psi and produces approximately 780 barrels of crude of ppm. escribe Area Affected and Cleanup Action Taken.* The pump was reproved approximately 15 x 20 feet.	oil per day. The	e gravity on the cr	ude is 35.7 and th	e H2S combant is less than 10						
I hereby certify that the information given above is true and complete to gulations all operators are required to report and/or file certain release ablic health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remedii or the environment. In addition, NMOCD acceptance of a C-141 report deral, state, or local laws and/or regulations.	notifications as the NMOCD mate contamination	ad perform correct arked as "Final Ro	tive actions for rel eport" does not rel cat to ground wate	eases which may endanger ieve the operator of liability r, surface water, human health						
Carlo Zurlah		OIL CONS	SERVATION	DIVISION						
signature: Camille Apu Molos	Approved by	District Supervise	er:							
Title: Remediation Coordinator	A	······································	D	n						
	Approval Dat	ū	Expiration							
mail Address: cjreynolds@paalp.com	Conditions of	Approval:		Attached						
Pate 1/20/05 Phone:505-441-0965	L									
tach Additional Sheets If Necessary										