

PRELIMINARY SITE INVESTIGATION REPORT and REMEDIATION PLAN

PLAINS MARKETING L.P. SAUNDERS 8" # 1 & 3 EMS No. 2004-00142 Lea County, New Mexico UNIT L, Section 24, Township 14 South, Range 33 East 33°, 05', 14.9" North, 103°, 34', 31.2" 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

26 October 2004

Ken Dutton

Basin Environmental Service Technologies, LLC

Plains 34053 acility ID= fPAC 0601919862 incident = nPAC 0601930066

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INTRODUCTION

Allstate Environmental Services, LLC (AES) responded to a pipeline release for Plains Marketing L.P. (Plains), located on the Saunders 8" Pipeline on 30 July 2004. The Saunders 8" Pipeline was clamped and the impacted soils was excavated and stockpiled on a poly liner. Basin Environmental Service Technologies, LLC (Basin), will perform subsequent remediation of the site at the request of Plains.

This site is located in Unit L, Section 24, Township 14 South, Range 33 East, in Lea County, New Mexico (topographic Site Location Map is attached as Figure 1). The latitude is 33°, 05, 14.9° North, and longitude is 103°, 34, 31.2° West. The site is characterized by a right-of-way for the pipeline in a pasture utilized for cattle grazing. The stained area includes the release point and progresses south following an unimproved road covering an area approximately 160 feet by 54 feet. The stained area following the unimproved road is approximately 1200 feet by 8 feet. Approximately 60 barrels of crude oil were released from the Plains pipeline and approximately 23 barrels were recovered. An additional release (Saunders #3) occurred on 9 August 2004 at the original release point, which resulted in approximately 20 barrels of crude oil released and approximately 14 barrels recovered. The second release was contained in the excavation resulting from the initial release.

An Emergency One-Call was initiated 30 July 2004 and all affected companies either cleared or marked their respective lines. Subsequent renewals of the one-call have been accomplished as required.

Mr. Leon Anderson and Ms. Myra Meyers, New Mexico State Land Office, Hobbs Office, were notified 2 August 2004. A Right of Entry (ROE) permit was verbally approved (2 August 2004) by Mr. Cody Morrow, New Mexico State Land Office, Santa Fe, with appropriate protocols adhered to in obtaining a written ROE. Mr. Paul Sheeley, New Mexico Oil Conservation Division, Hobbs District 1 was verbally notified of the release on 30 July 2004.

The lessee, Mr. Norman Hahn, has been out of state for an extended period of time, however; the ranch foreman, Mr. Kenneth Augustine is aware of the release and subsequent remedial actions taken. Contact with Mr. Hahn was accomplished 13 September 2004. Mr. Hahn was informed of all activities that have been accomplished to date and remedial actions that are being considered.

On 16 August 2004, Plains Pipeline initiated the replacement of approximately 1300 feet of the existing 8" steel pipeline with a 6" poly line completing the replacement on 17 August 2004. The 8" steel pipeline was purged of fluid and removed from the existing Plains right-of-way. After removal from the Plains right-of-way the steel pipeline was cut into 30-foot joints and transported to the Plains Pipeline Lovington, New Mexico yard. The 6" poly line will be placed in the existing Plains right-of-way upon completion of remediation of the impacted soil.

SUMMARY OF FIELD ACTIVITIES

On 30 July 2004, AES employee Bobby Blackwood arrived at the Saunders 8" Pipeline release to repair and contain the crude oil pipeline release. After the release had been contained utilizing a pipeline repair clamp, excavation of the impacted soil was initiated. The impacted soil was placed on a poly liner adjacent to the release.

On 2 August 2004, AES employee Ken Dutton began extended excavation of the impacted area. The release point was excavated to approximately 160 feet long by 54 feet wide and 14 feet below ground surface (bgs). The unimproved road area was excavated to approximately 1200 feet long by 8 feet wide and 2 feet bgs. The south pooling area was excavated to approximately 75 feet long by 90 feet wide and 6 feet bgs. All excavated soil was placed on a poly liner for future remedial action.

On 14 September 2004, Basin employee, Ken Dutton, installed 4 boil 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 at the floor of the excavation, 14 feet bgs, the release point, and continued up gradient and down gradient around the excavation. The soil borings ranged in depth from 70 feet bgs to 79 feet bgs (soil boring logs are attached as Appendix C). Each sample was screened with a Photoionization Detector (PID) calibrated 13 September 2004. The selected soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO).

NEW MEXICO OIL CONSERVATION DIVISION (NMOCD) SOIL CLASSIFICATION

A search of the New Mexico State Engineers database revealed no water depth information for that section; however the adjoining sections had water depth information, which was 100 to 125 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 >19 due to the soil boring installed in the excavation floor, which indicated contamination at less than 50 feet bgs to water depth, and 10 - 19 at the pooling area and unimproved road area, therefore the remediation levels for the release point area, the pooled area and unimproved road area are:

Release Point		Pooled Area and Unimproved Road				
Benzene:	10 ppm	Benzene:	10 ppm			
BTEX:	50 ppm	BTEX:	50 ppm			
TPH:	100 ppm	TPH:	1000 ppm			

Distribution of Hydrocarbons in the Unsaturated Zone (Release Point)

The release point area has been excavated to a depth of approximately 14 feet bgs and evidence of crude oil impact still exist on the floor of the excavation. Photoionization Detector (PID) readings reflect elevated concentrations of Volatile Organic Compounds (VOC) remain. A drill rig was utilized to delineate the vertical and horizontal extent of crude oil impacted soil. Four soil borings were installed consisting of one soil boring on the floor of the excavation (release point) and the remaining three soil borings up and down gradient of the excavation. 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 4 soil borings (as indicated on Appendix C) or excavation of the site. PID field screenings were utilized to determine which soil samples were to be submitted to the laboratory for analysis. Soil samples were analyzed for concentrations of BTEX and TPH. Laboratory data sheets and chain-of-custody forms are attached (Appendix B)

Soil Boring 1, as depicted on the Site Map (Figure 2), was installed on the floor of the excavation at 14 feet bgs. Samples collected at the 10, 20, 30, 40, 50 and 65 feet bgs were analyzed. The true bgs of each sample is determined by adding 14 feet to each soil boring depth due to the installation of the soil boring at 14 feet bgs on the floor of the excavation. Analytical results indicated that BTEX and TPH were above NMOCD regulatory standards at 10, 20, and 30 feet bgs. Analytical results indicated that the soil samples were below NMOCD regulatory standards at 40, 50, and 65 feet bgs for BTEX and TPH.

Soil Boring 2, as depicted on the Site Map (Figure 2), was installed up gradient at the northwest corner of the excavation approximately 5 feet from the excavation edge. Soil samples collected at the 5, 15, 45 and 70 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits for the four soil samples.

Soil Boring 3, as depicted on the Site Map (Figure 2), was installed down gradient at the southwest corner of the excavation approximately 5 feet from the excavation edge. Soil samples collected at the 5, 15, 45 and 70 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits for the four soil samples.

Soil Boring 4, as depicted on the Site Map (Figure 2), was installed cross gradient near the east side of the excavation approximately 5 feet from the excavation edge. Soil samples collected at the 5, 15, 45 and 70 feet bgs were analyzed. Analytical results indicated that BTEX and TPH concentrations were not detected above the laboratory method detection limits for the four soil samples.

Distribution of Hydrocarbons in the Unsaturated Zone (Unimproved Road Area and Pooling Area)

Soil samples were collected on 15 September 2004, from the pooling area and the unimproved road area as depicted on the Site Map (Figure 2). The soil sample collected from the pooling area was at a depth of 6.5 feet bgs. Analytical results indicated that BTEX was below laboratory detection limits and TPH exceeded NMOCD regulatory standards at 2060 mg/kg. The soil samples from the unimproved road were at a depth of 2.5 feet bgs. Analytical results indicated that the BTEX was below laboratory detection limits and the TPH exceeded NMOCD regulatory detection limits and the TPH exceeded NMOCD regulatory standards at 7560 mg/kg and 4070 mg/kg. Excavation of these two areas will be necessary to conform to NMOCD regulatory samples. Confirmation soil samples will be collected to determine if NMOCD regulatory samples have been achieved.

RECOMMENDATIONS FOR REMEDIATION

Approximately 6000 cubic yards of impacted soil and caliche rock have been excavated and stockpiled on-site. Approximately 75% of the excavated material consists of caliche rock. Due to the high content of caliche rock, screening of the stockpile is warranted to separate the rock and soil. Upon completion of the screening activities, the caliche rock will be utilized as partial backfill in accordance with standard NMOCD approved practices. The screened soil, estimated to be 1500 cubic vards, will then be stockpiled in bio-mounds of approximately 200 cubic vards. These bio-mounds will be placed on a poly liner and earthen berms will be placed around each individual bio-mound to prevent run-off of impacted soil due to inclement Nutrients will be added during the screening process to enhance the weather. remediation process. Aeration tubing will be installed before the soil is screened to supply the required aeration for enhanced remediation. Approximately 7 bio-mounds will be required to facilitate the 1500 cubic yards. These bio-mounds will be strategically placed around the excavation to limit land damage and the travel distance for backfilling. A header system will be connected to each bio-mound allowing individual aeration of the bio-mound. Initial soil sampling of the bio-mounds will be conducted to document the baseline level of contaminants and the biomounds will be aerated on a monthly basis. Soil sampling will be conducted on a monthly basis and once NMOCD regulatory standards, based on the ranking criteria, have been met, the remediated soil will be backfilled in the excavation. Approximately 10 inches to 1 foot of topsoil will be purchased, placed on the top of the backfilled soil and contoured to the original rangeland surrounding the site and reseeded with approved New Mexico State Land Office (NMSLO) grass seed. A closure report will be submitted to NMOCD upon completion of all tasks with appropriate documentation. Additionally, a Site Restoration Plan will be submitted to NMSLO outlining the procedures for restoring the site to pre-release status.

The unimproved road and pooling areas will require further excavation and soil sampling to adhere to NMOCD regulatory standards. The excavated soils will be placed on poly liner and then screened and treated as described above. Field

screening with a PID will be utilized to determine the depth at which soil samples will be collected to adhere to NMOCD regulatory standards.

The release point has been excavated to an approximate depth of 14 feet bgs. Based on the results of the soil boring and sampling activities, it is estimated that 2700 cubic yards of impacted soil and rock are present beneath the floor of the excavation. An extremely hard layer of sandstone was encountered at the 14 feet bgs and further excavation will be difficult and would not be of significant benefit to the site since soil impacts are present to at least 50 feet bgs and a risk-based closure is proposed. The soil borings indicate that deeper crude oil impact was limited to the immediate vicinity of the release point area. Due to the remote area of this location and lack of receptors it is recommended that the following actions be taken.

 Based on the results of the soil delineation investigation, it is recommended that an impermeable barrier be installed to inhibit vertical migration of contaminates in soil left in place below the cap. Plains proposes to mechanically separate the rock and soil and the rock will be placed back in the excavation over the barrier. The separated (impacted) soil will be sampled and analyzed for concentrations of TPH and BTEX to determine if NMOCD regulatory standards have been met and be utilized as backfill.

CLOSURE PROPOSAL

The estimated 2700 cubic vards of hydrocarbon impacted soil and rock that remains at the site is represented by approximately thirty feet of impacted soil beneath the It is proposed to isolate the remaining source term with an excavation floor. impermeable barrier constructed of a minimum 40-ml poly liner. The barrier will extend a minimum of four feet beyond the edges of soil impacted above the NMOCD remedial thresholds and will be permanently installed to prevent vertical migration. A 6-inch layer of fine sand will be installed beneath and above the 40-ml poly liner to prevent degrading the integrity of the poly liner. Installation of the 40-ml poly barrier at a depth of approximately 14 feet bgs will protect the barrier from erosion and human intrusion for a term sufficient to allow natural biodegradation of contaminants in the soil. After the barrier has been installed the excavation will be backfilled with rock separated from the stockpiled soil (pursuant to standard NMOCD practices). Soil separated from the rock will be sampled for concentrations of TPH and BTEX at a rate of one sample per 250 cubic yards. Soil with TPH concentration less than 100 ppm, benzene concentrations less than 10 ppm and total BTEX concentrations less than 50 ppm will be utilized as backfill. Soil exceeding the site-specific cleanup levels will be aerated as previously described.

QA/QC PROCEDURES

Soil Sampling

Soil samples were delivered to Environmental Lab of Texas, Inc. in Odessa, Texas for BTEX, TPH analyses using the methods described below. Soil samples were analyzed for BTEX, TPH-GRO/DRO within fourteen days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO

Groundwater Sampling

As groundwater was not encountered during the investigation process, no water samples were obtained.

Decontamination Of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox[®] detergent and rinsed with distilled water.

Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chainof-custody form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

LIMITATIONS

Basin Environmental Service Technologies, LLC has prepared this Preliminary Investigation Report and General Remediation 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 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.

DISTRIBUTION

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Сору _____

SOIL CHEMISTRY, POOLING AREA, UNIMPROVED ROAD

SOIL CHEMISTRY, POOLING AREA, UNIMPROVED ROAD

PLAINS MARKETING L.P. SAUNDERS 8" # 1 & 3 LEA COUNTY, NEW MEXICO EMS: 2004-00182

SAMPLE	SAMPLE SAMPLE METHOD: EPA SW 846-8021B, 5030 METHOD: 8015M							D: 8015M	TOTAL	
LOCATION	DEPTH	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	O-XYLENE	GRO	DRO	TPH
					BENZENE	XYLENES				
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Pooling Area	6.5'	09/15/04	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	137	1920	2060
North Unimproved										
Road	2.5'	09/15/04	<0.0250	<0.0250	<0.0250	0.073	0.0534	198	7360	7560
South Unimproved										
Road	2.5'	09/15/04	<0.0250	0.03	0.0438	0.162	0.0936	90.7	3980	4070

SOIL CHEMISTRY, SOIL BORINGS

SOIL CHEMISTRY, SOIL BORINGS

PLAINS MARKETING L.P. SAUNDERS 8" # 1 & 3 LEA COUNTY, NEW MEXICO EMS: 2004-00182

SAMPLE	SAMPLE	SAMPLE		METHOD: E	PA SW 846-)	METHO	D: 8015M	TOTAL	
LOCATION	DEPTH	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	O-XYLENE	GRO	DRO	TPH
					BENZENE	XYLENES				
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-1*	10' (24')	09/14/04	0.316	5.12	3.36	14.8	7.56	2210	7210	9420
SB-1*	20' (34')	09/14/04	0.338	5.18	4.97	16.4	8.54	3050	8690	11700
SB-1*	30' (44')	09/14/04	0.135	2.60	2.95	10.9	5.47	2170	7370	9540
SB-1*	40' (54')	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	815	815
SB-1*	50' (64')	09/14/04	<0.025	<0.025	<0.025	0.050	<0.025	19.7	250	270
SB-1*	65' (79')	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	19.1	19.1
SB-2	5'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-2	15'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-2	45'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-2	70'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-3	5'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	· <10	<10
SB-3	15'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-3	45'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-3	70'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-4	5'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-4	15'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-4	45'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10
SB-4	70'	09/14/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	<10	<10

NOTE: * Soil Boring was installed on excavation floor, 14' bgs, bold number indicates true bgs from surface



SOIL CHEMISTRY

PLAINS MARKETING L.P. SAUNDERS 8" # 1 & 3 LEA COUNTY, NEW MEXICO EMS: 2004-00182

SAMPLE	SAMPLE	SAMPLE	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M		TOTAL
LOCATION	DEPTH	DATE	BENZENE	TOLUENE	ETHYL-	M,P-	O-XYLENE	GRO	DRO	TPH
					BENZENE	XYLENES				
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
North Ramp-Exc	7'	11/04/04	<0.025	0.164	0.128	0.399	0.162	42.5	588	680
South Ramp-Exc	7'	11/04/04	<0.025	<0.025	<0.025	<0.025	<0.025	<10	14.7	14.7
Exc Floor-East	14'	11/04/04	1.02	16.1	11.6	41.9	18.0	3770	12200	16000
Exc Floor-West	14'	11/04/04	0.186	2.34	2.15	11.6	5.75	344	1630	1970

FIGURES

FIGURE 1

SITE LOCATION MAP



FIGURE 2

SITE MAP



LABEL	DATE		
Figure 2	10/		
TITLE		DRAWN BY	
Site Map Saunders 8"	#1&3	K. Dutt Basin Environme	

FIGURE 3

INSTALLATION OF 40-ml POLY LINER



APPENDICES

APPENDIX A

NEW MEXICO OFFICE OF THE STATE ENGINEER WATER WELL DATABASE REPORT

Township: 148	Range: 33E	Sections: 14			аланан ал ан ар ар ану ану ану так
NAD27 X:	Y:	Zone:	•	Search Ra	dius:
County:	Basin:	.	Numł	ber:	Suffix:
Owner Name: (First)	(La	e All		∩ Non-Do	omestic C Domesti
Well / Su	face Data Report	A	vg Dept	h to Water I	Report
	Wate	er Column Repo	ort		
	Clear Form	WATERS M	enu	Help	

							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	х	Y	Wells	Min	Max	Avg
L	14S	33E 14				2	100	100	100

Record Count: 2

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Page	1	of	1
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Township: 145	- در استان ومعاصفه درید بیمه ویفند در در بیمه از میشد در در میشد. ۲۰ سند بیم بیمه ویش بیمه	ports and Download Sections: 26	
NAD27 X:	Y: [Zone:	Search Radius:
County: B	asin:	Nur	mber: Suffix:
Owner Name: (First)	(La	ast) • All	⊂ Non-Domestic ⊂ Domesti
Well / Surfa	ice Data Report	Avg De	pth to Water Report
	Wate	er Column Report	
Clear Form		WATERS Menu	Help

		102 21				0,20,20		Water in	Feet)
Bsn Tv L 14	ws Rng 4S 33E		Zone	x	Y	Wells 2	Min 125	Max 125	

Record Count: 2

Page	1	of	1
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wner Name: (First) (Last) C Non-Domestic C Domestic						
Township: 14S Range: 33E Se	ections: 25					
NAD27 X: Y:	Zone: Search Radius:					
County: Basin:	✓ Number: Suffix:					
Owner Name: (First) (Last)	○ Non-Domestic○ Domestic○ All					
Well / Surface Data Report	Avg Depth to Water Report					
Water C	Column Report					
Clear Form	WATERS Menu Help					
AVERAGE DEPTH OF WATER REPORT	10/29/2004					

(Depth Water in Feet) Bsn Tws Rng Sec Zone X Y Wells Min Max Avg No Records found, try again

file://C:\Mv%20Documents\Saunders%208%20#1.3/New Mexico Office of the State Eng... 10/30/2004

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	<i>Office of the State Eng</i> eports and Downloads	
Township: 14S Range: 33E	Sections: 24,13,23	
NAD27 X: Y:	Zone:	Search Radius:
County: Basin:	• Num	iber: Suffix:
Owner Name: (First) (L	.ast)	⊂ Non-Domestic ⊂ Domestic
	• All	
Well / Surface Data Repor	t Avg Dep	th to Water Report
Wa	ter Column Report	
Clear Form	WATERS Menu	Help

AVERAGE DEPTH OF WATER REPORT 10/29/2004

							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	х	Y	Wells	Min	Max	Avg
L	14S	33E 13				1	80	80	80
L	14S	33E 23				2	58	100	79

Record Count: 3

	Township: 14S Range: 33E	Sections: 13	
	NAD27 X: Y:	Zone:	Search Radius:
County:	Basin:	• Num	ber: Suffix:
Owner	Name: (First) (L	ast) • All	⊂ Non-Domestic ⊂ Domestic
	Well / Surface Data Report	Avg Dept	h to Water Report
	Wat	er Column Report	an at de anti-annal de Angele a trabaix de la construction de la construction de la construction de la constru Angele de la construction de la cons Angele de la construction de la const
			1
	Clear Form	WATERS Menu	Help

Record Count: 1

APPENDIX B

ENVIRONMENTAL LABORATORY OF TEXAS ANALYTICAL RESULTS



Analytical Report

Prepared for:

Ken Dutton Basin Environmental Services P.O. Box 301 Lovington, TX 88260

Project: Saunders 8 inch #1 Project Number: 2004-00174 Location: Lea County, NM

Lab Order Number: 4117013

Report: Date: 09/26/04

Basin Environmental Services	Project:	Saunders 8 inch #1	Fax: (505) 396-1429
P.O. Box 301	Project Number:	2004-00174	Reported:
Lovington TX, 88260	Project Manager:	Ken Dutton	09/26/04 11:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pooling Area	4117013-01	Soil	09/15/04 11:10	09/17/04 14:15
North Unimproved Road	4117013-02	Soil	09/15/04 11:45	09/17/04 14:15
South Unimproved Road	4117013-03	Soil	09/15/04 11:20	09/17/04 14:15

Project: Saunders 8 inch #1 Project Number: 2004-00174 Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:

09/26/04 11:03

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pooling Area (4117013-01) Soil									1
Benzene	ND	0.0250	mg/kg dry	25	EI42407	09/22/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	n	n		n			
Ethylbenzene	ND	0.0250	"	19	"	n	"		
Xylene (p/m)	ND	0.0250	"	"	*	n	"	4	
Xylene (o)	ND	0.0250	"	n	"		"	**	
Surrogate: a,a,a-Trifluorotoluene		95.4 %	80	120	н	11	"	"	
Surrogate: 4-Bromofluorobenzene		80.5 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	137	10.0	mg/kg dry	1	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	1920	10.0		•	n	a	"	"	
Total Hydrocarbon C6-C35	2060	10.0	n	a	n		и	"	
Surrogate: 1-Chlorooctane		108 %	70-1	130	n	"	"	"	
Surrogate: 1-Chlorooctadecane		159 %	70	130	"	"	"	"	S-0
North Unimproved Road (4117013-02)	Soil								
Benzene	NÐ	0.0250	mg/kg dry	25	El42407	09/22/04	09/22/04	EPA 8021B	
Tolucne	NÐ	0.0250	"		"	n	"	n	
Ethylbenzene	J [0.0157]	0.0250	n	п	**	"	"	50	
Xylene (p/m)	0.0730	0.0250	n		*		D.	n	
Xylene (o)	0.0534	0.0250	"	u	Ħ		w		
Surrogate: a,a,a-Trifluorotoluene		95.9%	80	120	п	<i>n</i>	"	11	
Surrogate: 4-Bromofluorobenzene		80.4 %	80	120	n	"	"	"	
Gasoline Range Organics C6-C12	198	10.0	mg/kg dry	í	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	7360	10.0	"	"	"			"	
Total Hydrocarbon C6-C35	7560	10.0	11	*	Ħ	н	u		
Surrogate: 1-Chlorooctane		125 %	70-	130	n	"	"	"	
Surrogate: 1-Chlorooctadecane		178 %	70-,	130	"	"	и	"	S-0
South Unimproved Road (4117013-03)	Soil								
Benzene	ND	0.0250	mg/kg dry	23	EI42407	09/22/04	09/22/04	EPA 8021B	
Toluene	0.0257	0.0250	"	"	"	10	11	**	
Ethylbenzene	0.0438	0.0250	n	"	u		*	11	
Xylene (p/m)	0.162	0.0250	"				"	17	
Xylene (o)	0.0936	0.0250	H		n		n	11	
Surrogate: a,a,a-Trifluorotoluene		94.4 %	80	120	*	"	n	"	
Surrogate: 4-Bromofluorobenzene		82.9 %	80	20	н	n	"	"	
Gasoline Range Organics C6-C12	90.7	10.0	mg/kg dry	I.	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	3980	10.0	**		15		11	39	
Total Hydrocarbon C6-C35	4070	10.0	u	н			п	10	

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

Basin Environmental Services	Project: Saunders 8 inch #1	Fax: (505) 396-1429
P.O. Box 301	Project Number: 2004-00174	Reported:
Lovington TX, 88260	Project Manager: Ken Dutton	09/26/04 11:03

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
South Unimproved Road (4117013-03) Soil Surrogate: 1-Chlorooctane		121 %	70-1.	30	E141720	09/20/04	09/21/04	EP.4 8015M	
Surrogate: 1-Chlorooctadecane		146 %	70-1:	30	"	"	"	n	S-04

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Environmental Lab of Texas

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713
General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pooling Area (4117013-01) Soil							-		
% Solids	99.0		%	I	EI42110	09/20/04	09/21/04	% calculation	
North Unimproved Road (4117013-02) Soil				· · · · · · · · · · · · · · · · · · ·					
% Solids	99.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
South Unimproved Road (4117013-03) Soil									
% Solids	99.0		%	t	EI42110	09/20/04	09/21/04	% calculation	

Environmental Lab of Texas

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Basin Environmental Services		F		Fax: (505) 396-142									
P.O. Box 301		-	umber: 200						Repo	rted:			
Lovington TX, 88260		Project Ma	anager: Ken	Dutton					09/26/04 11:03				
	0	rganics by	/ GC - Q	uality Co	ontrol								
		Environ	nental La	ab of Tex	xas								
Analyte	Result	Reporting Limit	Units	Spikc Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes			
Batch E141720 - Solvent Extraction (GC)				<u></u> -			-	,					
Blank (E141720-BLK1)				Prepared: ()9/20/04 Ai	nalyzed: 09	/21/04						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet										
Diesel Range Organics >C12-C35	ND	10.0	11										
Fotal Hydrocarbon C6-C35	ND -	10.0	u										
Surrogate: 1-Chlorooctane	52.1		mg/kg	50.0		104	70-130						
Surrogate: 1-Chlorooctadecane	62.4		"	50.0		125	70-130						
Blank (EI41720-BLK2)				Prepared: ()9/20/04 Ai	nalyzed: 09	/21/04						
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	44.8		mg/kg	50.0		89.6	70-130						
Surrogate: 1-Chlorooctadecane	36.1		"	50.0		72.2	70-130						
LCS (E141720-BS1)				Prepared &	z Analyzed:	09/20/04							
Gasoline Range Organics C6-C12	418	10.0	mg/kg wet	500		83.6	75-125						
Diesel Range Organics >C12-C35	412	10.0	"	500		82.4	75-125						
Fotal Hydrocarbon C6-C35	830	10.0	"	1000		83.0	75-125						
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	70-130	:					
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130						
LCS (EI41720-BS2)				Prepared: 0)9/20/04 Ai	nalyzed: 09	/21/04						
Gasoline Range Organics C6-C12	438	10.0	mg/kg wet	500		87.6	75-125						
Diesel Range Organics >C12-C35	470	10.0	"	500		94.0	75-125						
Fotal Hydrocarbon C6-C35	908	10.0	"	1000		90.8	75-125						
Surrogate: 1-Chlorooctane	49.5		mg/kg	50.0		99.0	70-130						
Surrogate: 1-Chlorooctadecane	35.5		"	50.0		71.0	70-13 0						
Calibration Check (E141720-CCV1)				Prepared &	z Analyzed:	09/20/04							
Gasoline Range Organics C6-C12	455		mg/kg	500		91.0	80-120						
Diesel Range Organics >C12-C35	552		**	500		110	80-120						
Fotal Hydrocarbon C6-C35	1010		"	1000		101	80-120						
Surrogate: 1-Chlorooctane	57.2		"	50.0		114	70-130						
Surrogate: 1-Chlorooctadecane	61.2		**	50.0		122	70-130						

Environmental Lab of Texas

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Project Number: 2004-00174 Project Manager: Ken Dutton

Reported: 09/26/04 11:03

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Апаlyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI41720 - Solvent Extraction (GC)										
Calibration Check (EI41720-CCV2)				Prepared: (09/20/04 A	nalyzed: 09	/21/04			
Gasoline Range Organics C6-C12	436		mg/kg	500		87.2	80-120			
Diesel Range Organics >C12-C35	583		"	500		117	80-120			
Total Hydrocarbon C6-C35	1020			1000		102	80-120			
Surrogate: 1-Chlorooctane	57.7		"	50.0		115	70-130			
Surrogaie: 1-Chlorooctadecane	62.6		"	50.0		125	70-130			
Matrix Spike (EI41720-MS1)	Sour	ce: 4117011	-06	Prepared &	z Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	428	10.0	mg/kg dry	510	ND	83.9	75-125			
Diesel Range Organics >C12-C35	543	10.0	u	510	19.1	103	75-125			
Total Hydrocarbon C6-C35	971	10.0	н	1020	19.1	93.3	75-125			
Surrogate: 1-Chlorooctane	53.7		mg/kg	50.0		107	70-130			
Surrogate: 1-Chlorooctadecane	50. J		"	50.0		100	70-130			
Matrix Spike (E141720-MS2)	Sour	ce: 4117012	-05	Prepared: (9/20/04 A	nalyzed: 09	/21/04			
Gasoline Range Organics C6-C12	466	10.0	mg/kg dry	515	ND	90.5	75-125			
Diesel Range Organics >C12-C35	540	10.0	n	515	6.50	104	75-125			
Total Hydrocarbon C6-C35	1010	10.0	u	1030	ND	98.1	75-125			
Surrogate: 1-Chlorooctane	58.4		mg/kg	50.0		117	70-130			
Surrogate: 1-Chlorooctadecane	43.5		"	50.0		87.0	70-130			
Matrix Spike Dup (EI41720-MSD1)	Sour	ce: 4117011	-06	Prepared &	Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	445	10.0	mg/kg dry	510	ND	87.3	75-125	3.89	20	
Diesel Range Organics >C12-C35	563	10.0	и	510	19.1	107	75-125	3.62	20	
Total Hydrocarbon C6-C35	1010	10.0	и	1020	19.1	97.1	75-125	3.94	20	
Surrogate: 1-Chlorooctane	56.0		mg/kg	50.0		112	70-130	1		
Surrogate: 1-Chlorooctadecane	50.5		"	50.0		101	70-130			
Matrix Spike Dup (E141720-MSD2)	Sour	ce: 4117012	-05	Prepared: ()9/20/04 A	nalyzed: 09	/21/04			
Gasoline Rauge Organics C6-C12	460	10.0	mg/kg dry	515	ND	89.3	75-125	1.30	20	
Diesel Range Organics >C12-C35	540	10.0	"	515	6.50	104	75-125	0.00	20	
Total Hydrocarbon C6-C35	1000	10.0	я	1030	ND	97.1	75-125	0.995	20	
Surrogate: 1-Chlorooctane	58.2		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	43.9		"	50.0		87.8	70-130			

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09/26/04 11:03

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
			Units	Level	Kesun	76KEC			Lunit	notes
Batch EI42407 - EPA 5030C (GC)										
Blank (EI42407-BLK1)				Prepared &	Analyzed:	09/22/04				
Benzcuć	ND	0.0250	mg/kg wet							
Tolucnc	ND	0.0250	u /							
Ethylbenzene	ND	0.0250								
Xylene (p/m)	ND	0.0250								
Xylene (0)	ND	0.0250	н							
Surrogate: a,a,a-Trifluorotoluene	94.9		ug/kg	100		94.9	80-120			
Surrogate: 4-Bromoßuorobenzene	80.4		"	100		80.4	80-120			
LCS (EI42407-BS1)				Prepared &	Analyzed:	09/22/04				
Benzene	105		ug/kg	100		105	80-120			
Toluene	106			100		106	80-120			
Ethylbenzene	101		0	100		101	80-120			
Xylene (p/m)	226		"	200		113	80-120			
Xylene (0)	106		**	100		106	80-120			
Surrogate: a,a,a-Trifluorotoluene	117		"	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	98.0		"	100		98.0	80-120			
Calibration Check (EI42407-CCV1)				Prepared: 0	9/22/04 A	nalyzed: 09	/23/04			
Benzene	105		ug/kg	100		105	80-120			
Toluene	106			100		106	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	224		"	200		112	80-120			
Xylene (0)	104		n	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	116		"	100		116	80-120			
Surrogate: 4-Bromofluorobenzene	93.6		"	100		93.6	80-120			
Matrix Spike (E142407-MS1)	Sou	rce: 4117012-	05	Prepared: 0	9/22/04 A	nalyzed: 09	/23/04			
Benzene	108		ug/kg	100	ND	108	80-120			
Toluene	107		"	100	ND	107	80-120			
Ethylbenzene	103		n	100	ND	103	80-120			
Xylene (p/m)	228			200	ND	114	80-120			
Xylene (0)	108		н	100	ND	108	80-120			
Surrogate: a,a,a-Trifluorotoluene	119		"	100		119	80-120			
Surrogate: 4-Bromofluorobenzene	98.1		"	100		98.1	80-120			

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Fax: (505) 396-1429 Reported:

09/26/04 11:03

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 EI42407 - EPA 5030C (GC)

Matrix Spike Dup (EI42407-MSD1)	Source: 4	Prepared: (09/22/04 A	9/23/04				
Benzene	114	ug/kg	100	ND	114	80-120	5.41	20
Toluene	109	"	100	ND	109	80-120	1.85	20
Ethylbenzene	102	**	100	ND	102	80-120	0.976	20
Xylene (p/m)	237		200	ND	118	80-120	3.45	_ 20
Xylene (0)	105	Ir	100	ND	105	80-120	2.82	20
Surrogate: a,a,a-Trifluorotoluene	117	"	100		117	80-120		
Surrogate: 4-Bromofluorobenzene	95.1	"	100		95.I	80-120		

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Basin Environmental Services	Project: Saunders 8 inch #1	Fax: (505) 396-1429
P.O. Box 301	Project Number: 2004-00174	Reported:
Lovington TX, 88260	Project Manager: Ken Dutton	09/26/04 11:03

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 EI42110 - % Solids										
Blank (EI42110-BLK1)				Prepared: 0	9/20/04 A	alyzed: 09	/21/04			
% Solids	100		%			·				
Duplicate (EI42110-DUP1)	Sour	ce: 4117011-0	3	Prepared: 0	9/20/04 A	nalyzed: 09	/21/04			
% Solids	93.0		%		93.0			0.00	20	

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Basin Environmental Services	Project: Saunders 8 inch #1	Fax: (505) 396-1429
P.O. Box 301	Project Number: 2004-00174	Reported:
Lovington TX, 88260	Project Manager: Ken Dutton	09/26/04 11:03

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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- 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 Kertur Date: 9/26/04

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

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

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Client:	TX1S1	n envi	connente	5.

Date/Time: <u>09-いつ-09 01530</u>

JMA

Order # 411003

nitials:

Sample Receipt Checklist

	Yes]	No	-1.S C
Temperature of container/cooler?	(Yes)	No	
Shipping container/cooler in good condition?	Yes	No	Not present
Custody Seals intact on shipping container/cooler?	Yes	No	(Not present)
Custody Seals intact on sample bottles?	7405	No	
Chain of custody present?	And in case of the local division of the loc	No	
Sample Instructions complete on Chain of Custody?	Hes)	and the second second second	Constanting of the State of the State
Chain of Custody signed when relinquished and received	Tes	No	
Chain of custody agrees with sample label(s)	Yes,	No	
Container labels legible and inlact?	Tres?	No	
Sample Matrix and properties same as on chain of custody?	Hes	No	
Samples in proper container/bottle?	17785	No	
Samples properly preserved?	Tes.	No	
Sample hottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Tes)	No	
Containers documented on Chain of Custody?	Cress	No	
Sufficient sample amount for indicated test?	(Tes)	No	1
All samples received within sufficient hold time?	1892	No	
VOC samples have zero headspace?	Yes	No	Not Applicable
VUV Sdirgras neto korv reserve			n el la completa de dester an de la

Other observations:

Variance Documentation:

Contact Person: -____ Date/Time: _____ Contacted by: _____ Regarding:

Corrective Action Taken:



Analytical Report

Prepared for:

Ken Dutton Basin Environmental Services P.O. Box 301 Lovington, TX 88260

Project: Saunders 8 inch #3 Project Number: 2004-00182 Location: Lea County, NM

Lab Order Number: 4117011

Report Date: 09/26/04

Basin Environmental Services	Project:	Saunders 8 inch #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	2004-00182	Reported:
Lovington TX, 88260	Project Manager:	Ken Dutton	09/26/04 11:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1-10*	4117011-01	Soil	09/14/04 10:16	09/17/04 14:15
SB-1-20'	4117011-02	Soil	09/14/04 10:28	09/17/04 14:15
SB-1-30'	4117011-03	Soil	09/14/04 10:42	09/17/04 14:15
SB-1-40'	4117011-04	Soil	09/14/04 11:00	09/17/04 14:15
SB-1-50	4117011-05	Soil	09/14/04 11:30	09/17/04 14:15
SB-1-65'	4117011-06	Soil	09/14/04 11:58	09/17/04 14:15
SB-2-5'	4117011-07	Soil	09/14/04 12:40	09/17/04 14:15
SB-2-15'	4117011-08	Soil	09/14/04 12:46	09/17/04 14:15
SB-2-45'	4117011-09	Soil	09/14/04 13:14	09/17/04 14:15
SB-2-70'	4117011-10	Soil	09/14/04 13:49	09/17/04 14:15
SB-3-5	4117011-11	Soil	09/14/04 14:02	09/17/04 14:15
SB-3-15'	4117011-12	Soil	09/14/04 14:09	09/17/04 14:15
SB-3-45!	4117011-13	Soil	09/14/04 14:48	09/17/04 14:15
SB-3-70'	4117011-14	Soil	09/14/04 15:30	09/17/04 14:15
SB-4-5'	4117014-15	Soil	09/14/04 15:45	09/17/04 14:15
SB-4-15'	4117011-16	Soil	09/14/04 15:54	09/17/04 14:15
SB-4-45'	4117011-17	Soil	09/14/04 16:46	09/17/04 14:15
SB-4-70'	4117011-18	Soil	09/14/04 17:41	09/17/04 14:15

Project: Saunders 8 inch #3 Project Number: 2004-00182 Project Manager: Ken Dutton

Fax: (505) 396-1429

Reported:

09/26/04 11:01

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1-10' (4117011-01) Soil									
Benzene	0.316	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B	
Toluene	5.12	0.0250	n	"	-	"	"	**	
Ethylbenzene	3.36	0.0250	"	**	*	n		n	
Xylene (p/m)	14.8	0.0250	*	11	13	"	**	"	
Xylene (o)	7.56	0.0250	"	**	Ħ	H	в	"	
Surrogate: a,a,a-Trifluorotoluene		139 %	80-,	120	,	н	n	n	S-0
Surrogate: 4-Bromofluorobenzene		115 %	80-	120	11	"	n	17	
Gasoline Range Organics C6-C12	2210	10.0	mg/kg dry	I	EI41719	09/17/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	7210	10.0	н	11	n			"	
Total Hydrocarbon C6-C35	9420	10.0		в	"	n	'n	n	
Surrogate: 1-Chlorooctane		118 %	70-1	130	"	n	*	21	
Surrogate: I-Chlorooctadecane		127 %	70-1	130	"	n	"	"	
SB-1-20' (4117011-02) Soil									
Benzene	0.338	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B	
Toluene	5.18	0.0250	*		n	"	¥	11	
Ethylbenzene	4.97	0.0250	"		n	*		*	
Xylene (p/m)	16.4	0.0250	n		"			"	
Xylene (0)	8.54	0.0250	H		"	"	"	11	
Surrogate: a,a,a-Trifluorotoluene		132 %	80-1	120	-	"	"	"	S-0-
Surrogate: 4-Bromofluorobenzene		110 %	80-1	20	"	n	"		
Gasoline Range Organics C6-C12	3050	10.0	mg/kg dry	1	E141719	09/17/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	8690	10.0	я				**	"	
Total Hydrocarbon C6-C35	11700	10.0	n	n	"	"	"	"	
Surrogate: 1-Chlorooctane		138 %.	. 70-1	130	n	п	"	"	S-0-
Surrogate: 1-Chlorooctadecane		180 %	70-1	30	n	"	"	n	S-0-
SB-1-30' (4117011-03) Soil									
Венzене	0.135	0.0250	mg/kg d r y	25	E142206	09/21/04	09/21/04	EPA 8021B	
Toluene	2.60	0.0250	"	u	n	14	18	u	
Ethylbenzene	2.95	0.0250	"	"	17	n	"	۳	
Xylene (p/m)	10.9	0.0250	"	"		n	"	м	
Xylene (0)	5.47	0.0250	**	н	и		14	15	
Surrogate: a,a,a-Trifluorotoluene		185 %	80-1	20	n	"	17	"	S-04
Surrogate: 4-Bromofluorobenzene		96.3 %	80-1	20	"	"	**		
Gasoline Range Organics C6-C12	2170	10.0	mg/kg dry	1	EI41720	09/20/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	7370	10.0	IJ	н	n		n	"	
Total Hydrocarbon C6-C35	9540	10.0	11	"	"	н	11	H	
Environmental Lab of Texas			The re	culte in this w	enart annh te	the complex on	abred in accord	mce with the samples	

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 2 of 20

Basin Environmental Services P.O. Box 301 Lovington TX, 88260	Project: Saunders 8 inch #3 Project Number: 2004-00182 Project Manager: Ken Dutton								396-1429 ted: 11:01
	· · · · · · · · · · · · · · · · · · ·	O	rganics b	y GC				······································	
		Environ	mental L	ab of Te	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB-1-30' (4117011-03) Soil		<u>.</u>						, • , •• •	
Surrogate: 1-Chlorooctane		156 %	70	130	E141720	09/20/04	09/20/04	EPA 8015M	S-0
Surrogate: 1-Chlorooctadecane		143 %	70-2	130	#	"	n	"	S-0
SB-1-40' (4117011-04) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B	
Toluene	ND	0.0250	"	11		и	**	70	
Ethylbenzene	ND	0.0250	"	"	"	14	*1	18	
Xylene (p/m)	ND	0.0250	יי	n					
Xylene (o)	ND	0.0250	"	**	n	18	в	**	
Surrogate: a,a,a-Trifluorotoluene		95.0 %	80-1	120	"	"···	"	"	
Surrogate: 4-Bromofluorobenzene		82.9 %	80-1	120	n	u –	n	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	815	10.0	19	"			••	n	
Fotal Hydrocarbon C6-C35	815	10.0			"		*	"	
Surrogate: 1-Chlorooctane		116%	70-1	130	7	"	"	"	
Surrogate: 1-Chlorooctadecane		125 %	70-1	130	м	"	7	"	
SB-1-50' (4117011-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B	
Foluene	ND	0.0250	*	"	"	"	"	H.	
Ethylbenzene	ND	0.0250	*	н		n	"	17	
Xylene (p/m)	0.0503	0.0250	*	н	4	u		"	
Xylene (o)	ND	0.0250	11	"	н	"	и	M	
Surrogate: a,a,a-Trifluorotoluene	_	102 %	80-1	20	"	H	"	p	
Surrogate: 4-Bromofluorobenzene		83.7 %	80-1	20	"	n	"	17	
Gasoline Range Organics C6-C12	19.7	10.0	mg/kg dry	1	EI41720	09/20/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	250	10.0	Ħ	9	"	n	"	"	
Total Hydrocarbon C6-C35	270	10.0	u	"	· 11	н	и	"	
Surrogate: 1-Chlorooctane	·····	100 %	70-1	130	n	n	11	11	
Surrogate: 1-Chlorooctadecane		114%	70-1	30	n	"	"	"	

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Reported:

09/26/04 11:01

Organics by GC

Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SB-1-65' (4117011-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	E142206	09/21/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	n	•	н	13	u	20	
Ethylbenzene	ND	0.0250	"		"	n	"	"	
Xylene (p/m)	ND	0.0250	n	"	"	n		"	
Xylene (o)	ND	0.0250	53	n	"	"	n	"	
Surrogate: a,a,a-Trifluorotoluene		98.3 %	80	120	"	н	"	n	
Surrogate: 4-Bromofluorobenzene		83.8 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	E141720	09/20/04	09/20/04	EPA 8015M	
Dicsel Range Organics >C12-C35	19.1	10.0	"	"	n	11	и	"	
Total Hydrocarbon C6-C35	19.1	10.0	"	.,	17	n	*	99	
Surrogate: 1-Chlorooctane		102 %	70-	130	n	"	п	Π	
Surrogate: 1-Chlorooctadecane		103 %	70	130	n	"	"	"	
SB-2-5' (4117011-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	E142206	09/21/04	09/21/04	EPA 8021B	
Tolucne	ND	0.0250	w			n		н	
Ethylbenzene	ND	0.0250	*	n	н	"		**	
Xylene (p/m)	ND	0.0250	"			n	"	**	
Xylene (o)	ND	0.0250	19		*	n	18	17	
Surrogate: a,a,a-Trifluorotoluene		98.7 %	80-1	120	π	n	"	"	
Surrogate: 4-Bromofluorobenzene		80.5 %	80-1	120	*	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/22/04	EPA 8015M	
Diesel Range Organics >C12-C35	J [9.17]	10.0		"	n	*	•		
Total Hydrocarbon C6-C35	ND	10.0	"	19	•	Ħ		u	
Surrogate: 1-Chlorooctane		112%	70-1	30	n	u	**	17	
Surrogate: 1-Chlorooctadecane		125 %	70-1	130	"	n	**	77	
SB-2-15' (4117011-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B	
Toluene	ND	0.0250	n	"	**	*	"	*	
Ethylbenzene	ND	0.0250	n	"		"	"		
Xylene (p/m)	ND	0.0250	*	"	n	n	"	H	
Xylene (o)	ND	0.0250	15	"	**	"	и	u	
Surrogate: a,a,a-Trifluorotoluene		99.4 %	80-1	120	π	n	"	n	
Surrogate: 4-Bromofluorobenzene		82.3 %	80-1	120	,	н	п	17	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	n	"	n		**	
Total Hydrocarbon C6-C35	ND	10.0	и	"	"	11	11	11	
Environmental Lab of Texas			The re.	sults in this r	eport apply to	the samples an	alyzed in accord	ance with the samples	

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Basin Environmental Services P.O. Box 301			Project: Sau lumber: 200		h #3			Fax: (505) 396-1429 Reported:		
Lovington TX, 88260			anager: Ke					09/26/04 11:01		
		O	rganics b	y GC						
		Environ	mental L	ab of Te	exas					
Anałyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
SB-2-15' (4117011-08) Soil										
Surrogate: 1-Chlorooctane		94.4 %	70-1	130	E141720	09/20/04	09/20/04	EP.4 8015M		
Surrogate: 1-Chlorooctadecane		73.2 %	70-1	130	N	н	*	17		
SB-2-45' (4117011-09) Soil										
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B		
Toluene	ND	0.0250	н	н	н	и		18		
Ethylbenzene	ND	0.0250	11		"	"	н	17		
Xylenc (p/m)	ND	0.0250		*	н		"	U.		
Xylene (o)	ND	0.0250	n	*	"	"	н	*		
Surrogate: a,a,a-Trifluorotoluene		101 %	80-1	20	"	n	"	"		
Surrogate: 4-Bromofluorobenzene		82.7 %	80-1	20	n	"	"	,,		
Gasolinc Range Organics C6-C12	ND	10.0	mg/kg dry	1 -	EI41720	09/20/04	09/22/04	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	14	"	n	n	и			
Total Hydrocarbon C6-C35	ND	10.0	n			Ħ	и			
Surrogate: 1-Chlorooctane		115%	70-1	30	"	"	"	n		
Surrogate: 1-Chlorooctadecane		128 %	70-1	30	*	"	"	n		
5B-2-70' (4117011-10) Soil										
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/21/04	EPA 8021B		
Foluene	ND	0.0250	н	59	"	Ħ	II			
Ethylbenzene	ND	0.0250	н	71	"	n	-11			
Xylene (p/m)	ND	0.0250	"	"	"	n	н	"		
Xylene (o)	ND	0.0250	*	в	"	n	п	u		
Surrogate: a,a,a-Trifluorotoluene		101 %	80-1	20	и	"	"	"		
Surrogate: 4-Bromofluorobenzene		81.6 %	80-1	20	"	n	"	"		
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	۱	EI41720	09/20/04	09/20/04	EPA 8015M		
Diesel Range Organics >C12-C35	ND	10.0	n			"	"			
Fotal Hydrocarbon C6-C35	ND	10.0	**	н	"	15	16	"		
Surrogate: 1-Chlorooctane		95.6 %	70-1	30	н	n	"	"		
Surrogate: 1-Chlorooctadecane		71.2%	70-1		"	и	"			

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Organics by GC

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
SB-3-5' (4117011-11) Soil									
Benzene	ND	0.0250	mg/kg dry	25	E142206	09/21/04	09/21/04	EPA 8021B	
Foluene	ND	0.0250	n	"	"	и	"		
Ethylbenzene	ND	0.0250	"	*	"	n		н	
Xylene (p/m)	ND	0.0250	n	19		н	"	н	
Xylene (o)	ND	0.0250		"		*		"	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-	120	*	n	"	n	
Surrogate: 4-Bromofluorobenzene		82.0 %	80-	120	п	"	n	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/20/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0		"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0		"	"		"	th.	
Surrogate: 1-Chlorooctane		103 %	70-	130	Ħ	"	"	"	
Surrogate: 1-Chlorooctadecane		72.6 %	70-	130	"	u	**	17	
SB-3-15' (4117011-12) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	н	14	n	n	"	H	
Ethylbenzene	ND	0.0250	н	"	"	-		u.	
Xylene (p/m)	ND	0.0250	н	*	*	"			
Xylene (0)	ND	0.0250	•		"	19	8	"	
Surrogate: a,a,a-Trifluorotoluene		99.3 %	80-	120	и	H	"	"	
Surrogate: 4-Bromofluorobenzene		80.4 %	80-	120	-	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	t	EI41720	09/20/04	09/22/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	n	n	"	"	
Total Hydrocarbon C6-C35	ND	10.0	n	"		n	*		
Surrogate: 1-Chlorooctane		103 %	70-	130	n	ri	"	13	
Surrogate: 1-Chlorooctadecane		126 %	70-	130	"	11	"		
SB-3-45' (4117011-13) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250		11		n	"		
Ethylbenzene	ND	0.0250		n	11	n	*		
Xylene (p/m)	ND	0.0250	**	n	п	"	и	11	
Xylene (0)	ND	0.0250	10	"	**	11	•	u	
Surrogate: a,a,a-Trifluorotoluene		99.4 %	80-	120	*	"	"	я	
Surrogate: 4-Bromofluorobenzene		80.7 %	80-	120		u	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/22/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	n	н	"	н	"	8	
Total Hydrocarbon C6-C35	ND	10.0	и	".	Ħ	n		t)	

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Basin Environmental Services P.O. Box 301 Lovington TX, 88260	Project: Saunders 8 inch #3 Project Number: 2004-00182 Project Manager: Ken Dutton								396-1429 ted: 11:01
		O	rganics b	y GC	•				
		Environ	mental L	ab of Te	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-3-45' (4117011-13) Soil					***	_ · _ · ·			
Surrogate: 1-Chlorooctane		94.4 %	70-1	30	EI41720	09/20/04	09/22/04	EP.4 8015M	
Surrogate: 1-Chlorooctadecane		101 %	70-1	30	8	11	rt.	"	
8B-3-70' (4117011-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42206	09/21/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	۳		n	34	н		
Ethylbenzene	ND	0.0250	11	н	н	n	u	u	
Xylenc (p/m)	ND	0.0250	"	n		н	"		
Xylene (o)	ND	0.0250	11	"	"	n	"	t r	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-1	20	N	u	"	"	
Surrogate: 4-Bromofluorobenzene		81.3 %	80-1	20	"	"	*	"	
Gasolinc Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/22/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	n	*	"	n	"		
Total Hydrocarbon C6-C35	ND	10.0	*	n	**	14	и	**	
Surrogate: 1-Chlorooctane		102 %	70-1	30		u	"	#	
Surrogate: 1-Chlorooctadecane		110 %	70-1	30	n	"	"	11	
8 B-4-5' (411701 1-15) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI42407	09/22/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	"		11	. 11	"		
Ethylbenzene	ND	0.0250	14	н		19	"	10	
Xylene (p/m)	ND	0.0250	۳	-	**	"	υ	**	
Xylene (o)	ND	0.0250	11	"	"	17	н	"	
Surrogate: a,a,a-Trifluorotoluene		88.8 %	80-1	20	н	"	"	n	
Surrogate: 4-Bromofluorobenzene		80.7 %	80-1	20	n	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	н	"	н	и	
Total Hydrocarbon C6-C35	NÐ	10.0	"	"	*	*	14		
Surrogate: 1-Chlorooctane		97. 6 %	70-,	130	n	"	"	"	
- Surrogate: 1-Chlorooctadecane		75.2 %	70-1	30	"	п	"	"	

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Project: Saunders 8 inch #3 Project Number: 2004-00182 Project Manager: Ken Dutton

Organics by GC

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		Reporting							_
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
SB-4-15' (4117011-16) Soil									· ···
Benzene	ND	0.0250	mg/kg dry	25	E142407	09/22/04	09/22/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	n	a	*	
Ethylbenzene	ND	0.0250	n	"	*	u	"		
Xylene (p/m)	ND	0.0250	n	19	"	"		"	
Xylene (o)	ND	0.0250	н	"		м	11	"	
Surrogate: a,a,a-Trifluorotoluene		92.2 %	80-1	20	n	a	tt	"	
Surrogate: 4-Bromofluorobenzene		81.4%	80-1	20		a	. "	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	n	*		n	"	н	
Fotal Hydrocarbon C6-C35	ND	10.0	n		*	n	n	n	
Surrogate: 1-Chlorooctane		102 %	70-1	30	R	"	"	π	
Surrogate: 1-Chlorooctadecane		71.8 %	70-1	30	"	u	"	π	
SB-4-45' (4117011-17) Soil									
Benzene	ND	0.0250	mg/kg d r y	25	EI42407	09/22/04	09/22/04	EPA 8021B	
Coluene	ND	0.0250	14	n	14	'n	"	"	
Ethylbenzene	ND	0.0250	н	*	n	17			
Xylene (p/m)	ND	0.0250	8		"			"	
(ylene (o)	ND	0.0250	59	•	n	17	u	"	
Surrogate: a,a,a-Trifluorotoluene		93.2 %	80-1	20	n	"	"	#	
Surrogate: 4-Bromofluorobenzene		80.7 %	80-1	20	"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	*	17	ų	15	"	"	
Total Hydrocarbon C6-C35	ND	10.0	n	"		P	н	*	
Surrogate: 1-Chlorooctane		101 %	70-1	30	#	n	"	*	
Surrogate: 1-Chlorooctadecane		70.2 %	70-1	30	'n	п	"	Π	
5B-4-70' (4117011-18) Soil									
Benzene	ND	0.0250	mg/kg dry	25	E142407	09/22/04	09/22/04	EPA 8021B	
Coluene	ND	0.0250		n	11	и	u	"	
Ethylbenzene	ND	0.0250	"	н	H	*	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	н	"	
Cylene (o)	ND	0.0250	ห	н	¥	11	u 		
Surrogate: a,a,a-Trifluorotoluene		99.7%	80-1	20	"	4	n	<i>n</i>	
Surrogate: 4-Bromofluorobenzene		81.1 %	80-1	20	w	u	7	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EI41720	09/20/04	09/21/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	8	19	۳	**	11	H.	
fotal Hydrocarbon C6-C35	ND	10.0	19	n	N	**	"	17	
Environmental Lab of Texas			The res	ults in this r	eport apply to	the samples an	alvzed in accorde	mce with the same	oles

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Basin Environmental Services P.O. Box 301 Lovington TX, 88260		Project Nu	umber: 2	Saunders 8 inch 2004-00182 Ken Dutton	n #3			Fax: (505) Repor 09/26/04	ted:
			-	by GC Lab of Te	xas				
Anałyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

 Surrogate: 1-Chlorooctane
 100 %
 70-130
 E141720
 09/20/04
 09/21/04
 EP.4 8015M

 Surrogate: 1-Chlorooctadecane
 70.6 %
 70-130
 " " " " "

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General Chemistry Parameters by EPA / Standard Methods

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Br.1-10' (4117011-01) Soli Solids 92.0 % 1 E42110 09/2004 09/21/04 % calculation SB-1-20' (4117011-02) Soli 95.0 % 1 E42110 09/2004 09/21/04 % calculation SB-1-30' (4117011-02) Soli 95.0 % 1 E42110 09/2004 09/21/04 % calculation SB-1-40' (4117011-03) Soli 93.0 % 1 E42110 09/2004 09/21/04 % calculation SB-1-50' (4117011-05) Soli Scalds 09/20/04 09/21/04 % calculation SB-1-65' (4117011-05) Soli Scalds 09/20/04 09/21/04 % calculation SB-1-65' (4117011-06) Soli Scalds 09/20/04 09/21/04 % calculation SB-2-5' (4117011-06) Soli Scalds 09/20/04 09/21/04 % calculation SB-2-5' (4117011-06) Soli<	Analyte	Result	Reporting Limit	Units						
% Solids 92.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-1-20* (d17011-02) Soil 95.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-1-30* (d17011-02) Soil 93.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-1-30* (d117011-04) Soil 93.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-40* (d117011-04) Soil 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-65* (d117011-05) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-65* (d117011-05) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-5* (d117011-07) Soil % Solids 98.0 % <th></th> <th></th> <th></th> <th>Units</th> <th>Dilution</th> <th>Batch</th> <th>Prepared</th> <th>Analyzed</th> <th>Method</th> <th>Notes</th>				Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-1-20' (417011-02) Soil 95.0 % 1 E42110 09/20/04 09/21/04 % calculation SB-1-30' (417011-03) Soil ** 1 E42110 09/20/04 09/21/04 % calculation SB-1-40' (417011-04) Soil ** 1 E42110 09/20/04 09/21/04 % calculation SB-1-69' (417011-04) Soil ** 1 E142110 09/20/04 09/21/04 % calculation SB-1-69' (417011-05) Soil ** 1 E142110 09/20/04 09/21/04 % calculation SB-1-69' (417011-05) Soil ** 1 E142110 09/20/04 09/21/04 % calculation SB-1-65' (417011-07) Soil ** 1 E142110 09/20/04 09/21/04 % calculation SB-2-5' (417011-07) Soil ** 1 E142110 09/20/04 09/21/04 % calculation SB-2-5' (417011-07) Soil ** ** E142110 09/20/04 09/21/04 % calculation SB-2-15' (417011-08) Soil ** ** E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil **	SB-1-10' (4117011-01) Soil									
% Solids 95.0 % I El42110 09/20/04 09/21/04 % calculation SB-1-30' (417011-03) Soil % I El42110 09/20/04 09/21/04 % calculation % Solids 93.0 % I El42110 09/20/04 09/21/04 % calculation SB-1-40' (4117011-05) Soil El42110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil 83.0 % I El42110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil % calculation <th>% Solids</th> <th>92.0</th> <th></th> <th>%</th> <th>1</th> <th>EI42110</th> <th>09/20/04</th> <th>09/21/04</th> <th>% calculation</th> <th></th>	% Solids	92.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-1-30' (4117011-03) Soil % Solids 93.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-40' (4117011-04) Soil 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-05) Soil % Solids 93.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-05) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil <	SB-1-20' (4117011-02) Soil									
% Solids 93.0 % i E142110 09/20/04 09/21/04 % calculation SB-1-40' (4117011-04) Soli ** i E142110 09/20/04 09/21/04 % calculation % Solids 98.0 % i E142110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil ** i E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-05) Soil ** i E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-06) Soil ** * E142110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil ** * E142110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil ** * E142110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-09) Soil ** ** E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil ** ** ** ** ** ** % Solids 98.0 % 1 E1	% Solids	95.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-1-40' (4117011-04) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil 83.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-06) Soil % calculation SB-1-65' (4117011-06) Soil % calculation SB-2-5' (4117011-07) Soil	SB-1-30' (4I17011-03) Soil									
% Solids 98.0 % I E142110 09/20/04 09/21/04 % calculation SB-1-50' (4117011-05) Soil % I E142110 09/20/04 09/21/04 % calculation % Solids 83.0 % I E142110 09/20/04 09/21/04 % calculation % Solids 98.0 % I E142110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-06) Soil E142110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil E142110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-08) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-08) Soil % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-10) Soil	% Solids	93.0		%	i	EI42110	09/20/04	09/21/04	% calculation	
SB-1-50' (4117011-05) Soil Solids 83.0 % I E142110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-06) Soil	SB-1-40' (4117011-04) Soil									
% Solids 83.0 % I EI42110 09/20/04 09/21/04 % calculation SB-1-65' (4117011-06) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-10) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation	% Solids	98.0		%	. 1	EI42110	09/20/04	09/21/04	% calculation	
SB-1-65' (4117011-06) Soil % Solids 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-07) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-5' (4117011-08) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-10) Soil 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation	SB-1-50' (4117011-05) Soil									
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SB-2-5' (4117011-07) Soil 99,0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil 98,0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98,0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98,0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 99,0 % 1 E142110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-11) Soil 99.0 % 1 E142110 09/20/04 09/21/04 % calculation	SB-1-65' (4117011-06) Soil			<u>.</u>						
% Solids 99.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-2-15' (4117011-08) Soil 98.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 98.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil 99.0 % 1 E/42110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-11) Soil 1 E/42110 09/20/04 09/21/04 % calculation	% Solids	98.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-2-15' (4117011-08) Soil % Solids 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil	SB-2-5' (4117011-07) Soii									
% Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-45' (4117011-09) Soil 98.0 % 1 E142110 09/20/04 09/21/04 % calculation % Solids 98.0 % 1 E142110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil	% Solids	99.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-2-45' (4117011-09) Soil % Solids 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil	SB-2-15' (4117011-08) Soil									
% Solids 98.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-2-70' (4117011-10) Soil	% Solids	98.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-2-70' (4117011-10) Soil % Solids 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-11) Soil	SB-2-45' (4117011-09) Soil									
% Solids 99.0 % 1 EI42110 09/20/04 09/21/04 % calculation SB-3-5' (4117011-11) Soil	% Solids	98.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-3-5' (4I17011-11) Soil	SB-2-70' (4117011-10) Soil									
	% Solids	99.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
% Solids 99.0 % 1 E(42)10 09/20/04 09/21/04 % calculation	SB-3-5' (4117011-11) Soil									
	% Solids	99.0		%	1	EI42110	09/20/04	09/21/04	% calculation	

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General Chemistry Parameters by EPA / Standard Methods

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		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-3-15' (4117011-12) Soil									
% Solids	99.0		%	ł	EI42110	09/20/04	09/21/04	% calculation	
SB-3-45' (4117011-13) Soil					<u></u>				
% Solids	98.0		%	1	EI42110	09/20/04	09/21/04	% calculation	
SB-3-70' (4117011-14) Soil					<u> </u>	<u></u>			
% Solids	97.0		%	t	EI42110	09/20/04	09/21/04	% calculation	
SB-4-5' (4117011-15) Soil	·						·····	····	
% Solids	99.0		%	I	EI42110	09/20/04	09/21/04	% calculation	
SB-4-15' (4117011-16) Soil		,							
% Solids	100		%	i	EI42110	09/20/04	09/21/04	% calculation	
SB-4-45' (4117011-17) Soil								; -	
% Solids	98.0		⁸ ⁄0	1	EI42110	09/20/04	09/21/04	% calculation	
SB-4-70' (4117011-18) Soil									
% Solids	98.0		%	t	EI42110	09/20/04	09/21/04	% calculation	

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Basin Environmental Services			roject: Sau		n #3				Fax: (505)				
P.O. Box 301			umber: 200						Repo				
Lovington TX, 88260		Project Ma	nager: Ken	Dutton					09/26/04	4 11:01			
	0	rganics by	GC - Q	uality Co	ontrol								
		Environr	nental La	ab of Tex	xas								
Analyte	Result	Reporting Limit	Units	Spikc Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes			
Batch EI41719 - Solvent Extraction (GC)													
Blank (E141719-BLK1)				Prepared: 0	09/17/04 A	nalyzed: 09	/19/04						
Gasoline 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	44.2		mg/kg	50.0		88.4	70-130						
Surrogate: 1-Chlorooctadecane	41.8		"	50.0		83.6	70-130						
Blank (EI41719-BLK2)	Prepared: 09/17/04 Analyzed: 09/19/04												
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet										
Diesel Range Organics >C12-C35	ND	10.0	14										
Fotal Hydrocarbon C6-C35	ND	10.0	"										
Surrogute: 1-Chlorooctane	48.3		mg/kg	50.0		96.6	70-130						
Surrogate: 1-Chlorooctadecane	36.3		"	50.0		72.6	70-130						
LCS (E141719-BS1)				Prepared: 0	09/17/04 A	nalyzed: 09	/19/04						
Sasoline Range Organics C6-C12	426	10.0	mg/kg wet	500		85.2	75-125						
Diesel Range Organics >C12-C35	498	10.0	н	500		99.6	75-125						
Fotal Hydrocarbon C6-C35	924	10.0	n	1000		92.4	75-125						
Surrogate: 1-Chlorooctane	51.3		mg/kg	50.0		103	70-130						
Surrogate: 1-Chlorooctadecane	56.4		"	50.0		113	70-130						
LCS (EI41719-BS2)				Prepared: 0)9/17/04 A	nalyzed: 09	/19/04						
Gasoline Range Organics C6-C12	415	10.0	mg/kg wet	500		83.0	75-125						
Diesel Range Organics >C12-C35	505	10.0	н	500		101	75-125						
Fotal Hydrocarbon C6-C35	920	10.0	n	1000		92.0	75-125						
Surrogate: 1-Chlorooctane	54.0		mg/kg	50.0		108	70-130						
Surrogate: 1-Chlorooctadecane	<i>44.3</i>		"	50.0		88. 6	70-130						
Calibration Check (E141719-CCV1)				Prepared: ()9/17/04 A	nalyzed: 09	/19/04						
Gasoline Range Organics C6-C12	425		mg/kg	500		85.0	80-120						
Diesel Range Organics >C12-C35	520		"	500		104	80-120						
Fotal Hydrocarbon C6-C35	945		"	1000		94.5	80-120						
Surrogate: 1-Chlorooctane	52.0		"	50.0		104	70-130						
Surrogate: 1-Chlorooctadecane	47.9		"	50.0		95.8	70-130						

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Organics by GC - Quality Control

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI41719 - Solvent Extraction (GC)										
Calibration Check (EI41719-CCV2)				Prepared: (09/17/04 A	nalyzed: 09	/19/04			
Gasoline Range Organics C6-C12	427		mg/kg	500		85.4	80-120		· · · · · · · · · · · · · · · · · · ·	
Dicsel Range Organics >C12-C35	483		"	500		96.6	80-120			
Total Hydrocarbon C6-C35	910		11	1000		91.0	80-120			
Surrogate: 1-Chlorooctane	51.6		"	50.0		103	70-130			···· ··
Surrogate: 1-Chlorooctadecane	47.0		"	50.0		94.0	70-130			
Matrix Spike (EI41719-MS1)	Sour	ce: 4116003-	-01	Prepared: (9/17/04 A	nalyzcd: 09	/19/04			
Gasoline Range Organics C6-C12	469	10.0	mg/kg dry	521	ND	90.0	75-125			
Diesel Range Organics >C12-C35	555	10.0		521	ND	107	75-125			
Total Hydrocarbon C6-C35	1020	10.0	11	1040	ND	98.1	75-125			
Surrogate: 1-Chlorooctane	55.9		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	52.5		"	50.0		105	70-130			
Matrix Spike (EI41719-MS2)	Sour	ce: 4117004	-13	Prepared: (09/17/04 A	nalyzed: 09	/19/04			
Gasoline Range Organics C6-C12	506	10.0	mg/kg dry	549	ND	92.2	75-125			
Diesel Range Organics >C12-C35	627	10.0		549	15.3	111	75-125			
Total Hydrocarbon C6-C35	1130	10.0	"	1100	15.3	101	75-125			
Surrogate: 1-Chlorooctane	55. I		mg/kg	50.0		110	70-130			
Surrogate: 1-Chlorooctadecane	54.7		"	50,0		109	70-130			
Matrix Spike Dup (EI41719-MSD1)	Sour	ce: 4116003	-01	Prepared: (09/17/04 A	nalyzed: 09	/19/04			
Gasoline Range Organics C6-C12	478	10.0	mg/kg dry	521	ND	91.7	75-125	1.90	20	
Diesel Range Organics >C12-C35	577	10.0	"	521	ND	111	75-125	3.89	20	
Total Hydrocarbon C6-C35	1060	10.0		1040	ND	102	75-125	3.85	20	
Surrogate: 1-Chlorooctane	57.5		mg/kg	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	53.8		"	50.0		108	70-130			
Matrix Spike Dup (EI41719-MSD2)	Sour	ce: 4117004	-13	Prepared: (09/17/04 A	nalyzed: 09	0/19/04			
Gasoline Range Organics C6-C12	522	10.0	mg/kg dry	549	ND	95.1	75-125	3.11	20	,
Diesel Range Organics >C12-C35	630	10.0		549	15.3	112	75-125	0.477	20	
Total Hydrocarbon C6-C35	1150	10.0		1100	15.3	103	75-125	1.75	20	
Surrogate: 1-Chlorooctane	57.0		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	57.5		"	50.0		115	70-130			

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Organics by GC - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI41720 - Solvent Extraction (GC)									· · · · · · · · · · · · · · · · · · ·	
Blank (E141720-BLK1)				Prepared: ()9/20/04 Ar	alyzed: 09	/21/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Dicsel Range Organics >C12-C35	ND	10.0								
Total Hydrocarbon C6-C35	ND	10.0								
Surrogate: 1-Chlorooctane	52.1		mg/kg	50.0		104	70-130		··	
Surrogate: 1-Chlorooctadecane	62.4			50.0		125	70-130			
Blank (EI41720-BLK2)				Prepared: ()9/20/04 Ar	alyzed: 09	/21/04			
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	44.8		mg/kg	50.0		89.6	70-130			
Surrogate: 1-Chlorooctadecane	36.1		*	50.0		72.2	70-130			
LCS (E141720-BS1)				Prepared &	Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	418	10.0	mg/kg wet	500		83.6	75-125			· · · · · · · · · · · · · · · · · · ·
Diesel Range Organics >C12-C35	412	10.0	"	500		82.4	75-125			
Total Hydrocarbon C6-C35	830	10.0		1000		83.0	75-125			
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	70-130			
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130			
LCS (EI41720-BS2)				Prepared: 0	9/20/04 An	alyzcd: 09	/21/04			
Gasoline Range Organics C6-C12	438	10.0	mg/kg wet	500		87.6	75-125	<u> </u>		
Diesel Range Organics >C12-C35	470	10.0	0	500		94.0	75-125			
Total Hydrocarbon C6-C35	908	10.0		1000		90.8	75-125			
Surrogate: 1-Chlorooctane	49.5		mg/kg	50.0		99.0	70-130			
Surrogate: 1-Chlorooctadecane	35.5		"	50.0		71.0	70-130			
Calibration Check (El41720-CCV1)				Prepared &	Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	455		mg/kg	500		91.0	80-120			
Diesel Range Organics >C12-C35	552			500		110	80-120			
Total Hydrocarbon C6-C35	1010			1000		101	80-120			
Surrogate: 1-Chlorooctane	57.2		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	61.2		"	50.0		122	70-130			

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Organics by GC - Quality Control

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI41720 - Solvent Extraction (GC)						· · · · ·				
Calibration Check (EI41720-CCV2)				Prepared: (09/20/04 A	nalyzed: 09	/21/04			
Gasoline Range Organics C6-C12	436		mg/kg	500		87.2	80-120			
Diesel Range Organics >C12-C35	583		"	500		117	80-120			
Total Hydrocarbon C6-C35	1020		н	1000		102	80-120			·
Surrogate: 1-Chlorooctane	57.7		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	62.6		"	50.0		125	70-130			
Matrix Spike (EI41720-MS1)	Sourc	e: 4117011	-06	Prepared &	Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	428	10.0	mg/kg dry	510	ND	83.9	75-125			
Diesel Range Organics >C12-C35	543	10.0	н	510	19.1	103	75-125			
Total Hydrocarbon C6-C35	971	10.0	н	1020	19.1	93.3	75-125			
Surrogate: 1-Chlorooctane	53.7		mg/kg	50.0		107	70-130			
Surrogate: 1-Chlorooctadecane	50.1		"	50.0		100	70-130			
Matrix Spike (EI41720-MS2)	Sourc	e: 4117012	-05	Prepared: 0	9/20/04 A	nalyzed: 09	/21/04			
Gasoline Range Organics C6-C12	466	10.0	mg/kg dry	515	ND	90.5	75-125			
Diesel Range Organics >C12-C35	540	10.0	n	515	6.50	104	75-125			
Total Hydrocarbon C6-C35	1010	10.0	11	1030	ND	98.1	75-125			
Surrogate: 1-Chlorooctane	58.4		mg/kg	50.0		117	70-130		· · · ·	
Surrogate: 1-Chlorooctadecane	43.5		"	50.0		87.0	70-130			
Matrix Spike Dup (EI41720-MSD1)	Sourc	æ: 4117011-	-06	Prepared &	Analyzed:	09/20/04				
Gasoline Range Organics C6-C12	445	10.0	mg/kg dry	510	ND	87.3	75-125	3.89	20	
Diesel Range Organics >C12-C35	563	10.0		510	19.1	107	75-125	3.62	20	
Total Hydrocarbon C6-C35	1010	10.0	11	1020	19.1	97.1	75-125	3.94	20	
Surrogate: 1-Chlorooctane	56.0		mg/kg	50.0		112	70-130		· · · ·	
Surrogate: 1-Chlorooctadecane	50.5		"	50.0		101	70-130			
Matrix Spike Dup (EI41720-MSD2)	Sourc	e: 4117012	-05	Prepared: ()9/20/04 A	nalyzed: 09	/21/04			
Gasoline Range Organics C6-C12	460	10.0	mg/kg dry	515	ND	89.3	75-125	1.30	20	
Diesel Range Organics >C12-C35	540	10.0	н	515	6.50	104	75-125	0.00	20	
Total Hydrocarbon C6-C35	1000	10.0	h	1030	ND	97.1	75-125	0.995	20	
Surrogate: 1-Chlorooctane	58.2		mg/kg	50.0		116	70-130			
Surrogate: 1-Chlorooctadecane	43.9		"	50.0		87.8	70-130			

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Fax: (505) 396-1429

Reported:

09/26/04 11:01

Organics by GC - Quality Control

Environmental Lab of Texas

	. .	Reporting		Spike	Source	WREG	%REC	DDD	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EI42206 - EPA 5030C (GC)		<u></u>								
Blank (E142206-BLK1)				Prepared &	Analyzed:	09/21/04				
Benzene	ND	0.0250	mg/kg wet							
Tolucne	ND	0.0250								
Ethylbenzene	ND	0.0250	•							
Xylene (p/m)	ND	0.0250								
Xylene (0)	ND	0.0250								
Surrogate: a,a,a-Trifluorotoluene	95.1		ug/kg	100		95.1	80-120			
Surrogate: 4-Bromofluorobenzene	88.0		"	100		88.0	80-120			
LCS (EI42206-BS1)				Prepared &	Analyzed:	09/21/04				
Benzene	97.6		ug/kg	100		97.6	80-120			
Toluene	100		"	100		100	80-120			
Ethylbenzene	97.7		۳	100		97.7	80-120			
Xylene (p/m)	219		"	200		110	80-120			
Xylene (0)	104			100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	111		"	100		111	80-120		-	
Surrogate: 4-Bromofluorobenzene	95.1		"	100		95.1	80-120			
Calibration Check (EI42206-CCV1)				Prepared &	Analyzed:	09/21/04				
Benzene	108		ug/kg	100		108	80-120			
Toluene	107			100		107	80-120			
Ethylbenzene	94.1			100		94.1	80-120			
Xylene (p/m)	208		н	200		104	80-120			
Xylene (0)	99.5		"	100		99.5	80-120			
Surrogate: a,a,a-Trifluorotohuene	- 118		7	100		118	80-120			
Surrogate: 4-Bromofluorobenzene	85.5		"	100		85.5	80-120			
Matrix Spike (E142206-MS1)	Sou	rce: 4117011-	12	Prepared: 0	9/21/04 A	nalyzed: 09	/22/04			
Benzene	100		ug/kg	100	ND	100	80-120			
Toluene	103			100	ND	103	80-120			
Ethylbenzene	101			100	ND	101	80-120			
Xylene (p/m)	226		*	200	ND	113	80-120			
Xylene (0)	107			100	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	120		"	100		120	80-120			
Surrogate: 4-Bromofluorobenzene	96.9		"	100		96.9	80-120			

Environmental Lab of Texas

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Reported:

09/26/04 11:01

Organics by GC - Quality Control

Environmental Lab of Texas

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

Batch EI42206 - EPA 5030C (GC)

Matrix Spike Dup (E142206-MSD1)	Source: 4	117011-12	Prepared: (09/21/04 A	nalyzed: 0	9/22/04		
Benzene	99.5	ug/kg	100	ND	99.5	80-120	0.501	20
Tolucne	100	"	100	ND	100	80-120	2.96	20
Ethylbenzene	98.0	н	100	ND	98.0	80-120	3.02	20
Xylene (p/m)	221		200	ND	110	80-120	2.69	20
Xylene (0)	105	н	100	ND	105	80-120	1.89	20
Surrogate: a,a,a-Trifluorotoluene	115	"	100		115	80-120		
Surrogate: 4-Bromofluorobenzene	93.5	"	100		93.5	80-120		

Batch EI42407 - EPA 5030C (GC)

Blank (EI42407-BLK1)				Prepared & Ana	lyzed: 09/22/04		
Benzene	ND	0.0250	mg/kg wct		<u> </u>		· · · · · · · · · · · · · · · · · · ·
Toluene	ND	0.0250	н				
Ethylbenzene	ND	0.0250	"				
Xylene (p/m)	ND	0.0250	"				
Xylene (0)	ND	0.0250	и				
Surrogate: a,a,a-Trifluorotoluene	94.9		ug/kg	100	94.9	80-120	
Surrogate: 4-Bromofluorobenzene	80.4		"	100	80.4	80-120	
LCS (EI42407-BS1)				Prepared & Ana	lyzed: 09/22/04		
Benzene	105		ug/kg	100	105	80-120	
Toluene	106			100	106	80-120	
Ethylbenzene	101			100	101	80-120	
Xylene (p/m)	226			200	113	80-120	
Xylene (o)	106		н	100	106	80-120	
Surrogate: a,a,a-Trifluorotoluene	117		"	100	117	80-120	
Surrogate: 4-Bromofluorobenzene	98.0		"	100	98.0	80-120	

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Reported:

09/26/04 11:01

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 E142407 - EPA 5030C (GC)										
Calibration Check (EI42407-CCV1)				Prepared: 0	19/22/04 A	nalyzed: 09	/23/04			
Benzene	105		ug/kġ	100	·····	105	80-120			
Toluche	106			100		106	80-120			
Ethylbenzene	101		**	100		101	80-120			
Xylene (p/m)	224		р	200		112	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,q-Trifluorotoluene	116		"	100		116	80-120			
Surrogate: 4-Bromofluorobenzene	93.6		"	100		93.6	80-120			
Matrix Spike (EI42407-MS1)	Sou	rce: 4117012-05		Prepared: 0	19/22/04 A	nalyzed: 09	/23/04			
Benzene	108		ug/kg	100	ND	108	80-120			
Toluene	107			100	ND	107	80-120			
Ethylbenzene	103		"	100	ND	103	80-120			
Xylene (p/m)	228		"	200	ND	114	80-120			
Xylene (0)	108		н	100	ND	108	80-120			
Surrogate: a,a,a-Trifluorotoluene	119		н	100	• • • •	119	80-120			
Surrogate: 4-Bromofluorobenzene	98.1		"	100		98.1	80-120			
Matrix Spike Dup (E142407-MSD1)	Sou	rce: 4117012-05		Prepared: 0	9/22/04 Ai	nalyzed: 09	/23/04			
Benzene	114	·····	ug/kg	100	NÐ	114	80-120	5.41	20	
Toluene	109		"	100	ND	109	80-120	1.85	20	
Ethylbenzene	102		H	100	ND	102	80-120	0.976	20	
Xylene (p/m)	237		"	200	ND	118	80-120	3.45	20	
Xylene (o)	105		и	100	ND	105	80-120	2.82	20	
Surrogate: a,a,q-Trifluorotoluene	117		н	100		117	80-120			
Surrogate: 4-Bromofluorobenzene	95.1		~	100		95.1	80-120			

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Page 18 of 20

Basin Environmental Services	Project:	Saunders 8 inch #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	2004-00182	Reported:
Lovington TX, 88260	Project Manager:	Ken Dutton	09/26/04 11:01

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
Batch EI42110 - % Solids						<u>.</u>				
Blank (EI42110-BLK1)				Prepared: 0	9/20/04 A	nalyzed: 09	/21/04			
% Solids	100		%							
Duplicate (EI42110-DUP1)	Sour	ce: 4117011-0	3	Prepared: 0	19/20/04 A	nalyzed: 09	/21/04			
% Solids	93.0		%		93.0			0.00	20	

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Page 19 of 20

Basin Environmental Services	Project:	Saunders 8 inch #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	2004-00182	Reported:
Lovington TX, 88260	Project Manager:	Ken Dutton	09/26/04 11:01

Notes and Definitions

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 Klinds Date:

9/26/04

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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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 20 of 20

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

Client:	Basin	Environme	Hal
and the second sec			

Date/Time: <u>C9-17-04@1530</u>

JMM

Order #: ____ IIION

Initials:

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-1.5 C
Shipping container/cooler in good condition?	Nes	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?	(Yes)	No	and the second
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)	Tes	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	and the second
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	ar philosophic and the second seco
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	(Yes)	No	n (1997) - Anna ann an Aonaichte ann an Ao
All samples received within sufficient hold time?	Yes	No	renin and the second
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person:	Date/Time:	Contacted by:
Regarding:		
and the second secon	<u>an hain an hain da baran kana kana kana kana kana kana kana </u>	
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Analytical Report

Prepared for:

Ken Dutton Basin Environmental Services P.O. Box 301 Lovington, NM 88260

Project: Saunders 8 inch #1 & #3 Project Number: EMS: 2004-00182 Location: Lea County, NM

Lab Order Number: 4K05016

Report Date: 11/11/04

Basin Environmental Services	Project: Saunders 8 inch #1 & #3	Fax: (505) 396-1429
P.O. Box 301	Project Number: EMS: 2004-00182	Reported:
Lovington NM, 88260	Project Manager: Ken Dutton	11/11/04 10:23

• • • •

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Ramp-Exc	4K05016-01	Solid	11/04/04 14:45	11/05/04 15:27
South Ramp-Exc	4K05016-02	Solid	11/04/04 14:50	11/05/04 15:27
Exc. Floor-East	4K05016-03	Solid	11/04/04 15:00	11/05/04 15:27
Exc. Floor-West	4K0 5016-04	Solid	11/04/04 14:55	11/05/04 15:27

Basin Environmental Services	Project:	Saunders 8 inch #1 & #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	EMS: 2004-00182	Reported:
Lovington NM, 88260	Project Manager:	Ken Dutton	11/11/04 10:23

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
North Ramp-Exc (4K05016-01) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EK41003	11/09/04	11/10/04	EPA 8021B	
Toluene	0.164	0.0250		*1			81	н	
Ethylbenzene	0.128	0.0250		"	"	*	u	H	
Xylene (p/m)	0.399	0.0250	"	"	н	Ħ		84	
Xylene (0)	0.162	0.0250	4	10	μ	"	14	*1	
Surrogate: a,a,a-Trifluorotoluene		91.1 %	80-,	20	п	"	п	11	
Surrogate: 4-Bromofluorobenzene		90.5 %	80-1	20		#	"	#	
Gasoline Range Organics C6-C12	42.5	10.0	mg/kg dry	1	EK40508	11/05/04	11/06/04	EPA 8015M	
Diesel Range Organics >C12-C35	588	10.0		11		•		"	
Total Hydrocarbon C6-C35	630	10.0		"		н	н		
Surrogate: 1-Chlorooctane		108 %	70-	30	н	"	"	n	
Surrogate: I-Chlorooctadecane		124 %	70-,	130	r	H	#	n	
South Ramp-Exc (4K05016-02) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EK41003	11/ 09/04	11/10/04	EPA 8021B	
Toluene	ND	0.0250	"	*	•	"	"	14	
Ethylbenzene	ND	0.0250	P	*	"	•	*	**	
Xylene (p/m)	ND	0.0250		71		۳		**	
Xylene (o)	ND	0.0250	"	**		**	4	**	
Surrogate: a,a,a-Trifluorotoluene		86.1 %	80-1	20	"	17	#	Ħ	
Surrogate: 4-Bromofluorobenzene		99.5 %	80-1	20	"	n	n	n	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EK40508	11/05/04	11/06/04	EPA 8015M	
Diesel Range Organics >C12-C35	14.7	10.0	14	*1	u	*	4	"	
Total Hydrocarbon C6-C35	14.7	10.0	v	*	n	n	*	19	
Surrogate: 1-Chlorooctane		99.4 %	70-,	30	п	"	"	n	
Surrogate: 1-Chlorooctadecane		105 %	70-,	130	и	"	"	"	
Exc. Floor-East (4K05016-03) Solid									
Benzene	1.02	0.100	mg/kg dry	100	EK41003	11/09/04	11/10/04	EPA 8021B	
Toluene	16.1	0.100		"	M	u	"	н	
Ethylbenzene	11.6	0.100	"	•	**	4	"	W	
Xylene (p/m)	41.9	0.100	"	"	н	*	н	"	
Xylene (0)	18.0	0.100	#	11	μ	11	u	17	
Surrogate: a,a,a-Trifluorotoluene		224 %	80	20	"	"	"	#	S-0
Surrogate: 4-Bromofluorobenzene		148 %	80	20	"	"	"	*	S-0
Gasoline Range Organics C6-C12	3770	10.0	mg/kg dry	1	EK40508	11/05/04	11/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	12200	10.0	P	"				н	
Total Hydrocarbon C6-C35	16000	10.0			"			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.
Basin Environmental Services			Project: Sau					Fax: (505) 3			
P.O. Box 301		-	umber: EM		0182			Report			
Lovington NM, 88260		Project M	anager: Ke	Dutton			·····	11/11/04	10:23		
		Or	rganics b	y GC							
		Environ	mental L	ab of Te	exas						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
Exc. Floor-East (4K05016-03) Solid		·									
Surrogate: 1-Chlorooctane		39.0 %	70-1	30	EK40508	11/05/04	11/09/04	EPA 8015M	S-0		
Surrogate: 1-Chlorooctadecane		35.8 %	70-1	30	"	"	"	#	S-0		
Exc. Floor-West (4K05016-04) Solid											
Benzene	0.186	0.0250	mg/kg dry	25	EK41003	11/09/04	11/10/04	EPA 8021B			
Toluene	2.34	0.0250	"	*	н		"				
Ethylbenzene	2.15	0.0250	۳	**	u		"	*			
Xylene (p/m)	11.6	0.0250	n	ų		۹	u				
Xylene (o)	5.75	0.0250	P			*	v	n			
Surrogate: a,a,a-Trifluorotoluene		221 %	80-1	20	n	n	"	17	S-0		
Surrogate: 4-Bromofluorobenzene		116%	80-1	20	"	"	"	*			
Gasoline Range Organics C6-C12	344	10.0	mg/kg dry	I	EK40508	11/05/04	11/06/04	EPA 8015M			
Diesel Range Organics >C12-C35	1630	10.0	"		R						
Total Hydrocarbon C6-C35	1970	10.0	n	"	10	64		10			
Surrogate: 1-Chlorooctane		111 %	70-1	30	"	n	11	n			
Surrogate: 1-Chlorooctadecane		104 %	70-1	30	"	"	"	<i>n</i>			

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

	· · · · · · · · · · · · · · · · · · ·								
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
North Ramp-Exc (4K05016-01) Solid	· · · · · · · · · · · · · · · · · · ·								
% Moisture	10.0		%	1	EK40804	11/08/04	11/08/04	% calculation	
South Ramp-Exc (4K05016-02) Solid									
% Moisture	12.0		%	1	EK40804	11/08/04	11/08/04	% calculation	
Exc. Floor-East (4K05016-03) Solid									
% Moisture	13.0		%	1	EK40804	11/08/04	11/08/04	% calculation	
Exc. Floor-West (4K05016-04) Solid									
% Moisture	13.0		%	1	EK40804	11/08/04	11/08/04	% calculation	

Environmental Lab of Texas

Basin Environmental Services		P	roject: Sau	nders 8 inch	#1 & #3				Fax: (505)	396-1429
P.O. Box 301		Project N	umber: EMS	S: 2004-00	182				Repo	rted:
Lovington NM, 88260		Project Ma	nager: Ken	Dutton					11/11/0	4 10:23
	Or	ganics by	GC - Q	uality Co	ontrol					
		Environr	nental La	b of Te	kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK40508 - Solvent Extraction (GC)										
Blank (EK40508-BLK1)				Prepared &	Analyzed:	11/05/04				
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	14							
Fotal Hydrocarbon C6-C35	ND	10.0								
Surrogate: 1-Chlorooctane	42.8		mg/kg	50.0		85.6	70-130			
Surrogate: 1-Chlorooctadecane	52.7		"	50.0		105	70-130			
Blank (EK40508-BLK2)				Prepared: 1	1/05/04 A	nalyzed: 11	/06/04			
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	u							
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0		89.8	70-130			1
Surrogate: 1-Chlorooctadecane	52.4		"	50.0		105	70-130			
LCS (EK40508-BS1)				Prepared &	Analyzed:	11/05/04				
Gasoline Range Organics C6-C12	446	10.0	mg/kg wet	500		89.2	75-125			
Diesel Range Organics >C12-C35	477	10.0	. 4	500		95.4	75-125			
Fotal Hydrocarbon C6-C35	923	10.0	н	1000		92.3	75-125			
Surrogate: 1-Chlorooctane	52.2		mg/kg	50.0	• • • • • • • • • • • • • • • • • • •	104	70-130			
Surrogate: 1-Chlorooctadecane	50.9		"	50.0		102	70-130			
LCS (EK40508-BS2)				Prepared: 1	1/05/04 A	nalyzed: 11	/06/04			
Gasoline Range Organics C6-C12	430	10.0	mg/kg wet	500		86.0	75-125			
Diesel Range Organics >C12-C35	502	10.0		500		100	75-125			
Fotal Hydrocarbon C6-C35	932	10.0	*	1000		93.2	75-125			
Surrogate: 1-Chlorooctane	53.0		mg/kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			
LCS Dup (EK40508-BSD1)				Prepared &	z Analyzed:	11/05/04				
Gasoline Range Organics C6-C12	437	10.0	mg/kg wet	500		87.4	75-125	2.04	20	
Diesel Range Organics >C12-C35	477	10.0		500		95.4	75-125	0.00	20	
Fotal Hydrocarbon C6-C35	914	10.0		1000		91.4	75-125	0.980	20	
Surrogate: 1-Chlorooctane	50.1		mg/kg	50.0		100	70-130		i	
Surrogate: 1-Chlorooctadecane	53.3		"	50.0		107	70-130			

Environmental Lab of Texas

Basin Environmental Services		F	roject: Sau	inders 8 inch	#1 & #3				Fax: (505)	396-1429
P.O. Box 301			2	S: 2004-00					Repo	rted:
Lovington NM, 88260		Project Ma	anager: Kei	n Dutton					11/11/0	
,	Org	ganics by	GC - Q	uality Co	ontrol					
	I	Environ	nental L	ab of Te	kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Natas
Anaryte	Kesun	Linit	Units	Level	Kesuit	76KEC	Limits	KPD		Notes
Batch EK40508 - Solvent Extraction (GC)										
Calibration Check (EK40508-CCV1)				Prepared &	Analyzed:					
Gasoline Range Organics C6-C12	503		mg/kg	500		101	80-120			
Diesel Range Organics >C12-C35	551 " 1050 "					110	80-120			
Total Hydrocarbon C6-C35	1000			105	80-120					
Surrogate: 1-Chlorooctane	55.5 "		50.0		111	70-130				
Surrogate: 1-Chlorooctadecane	53.2		"	50.0		106	70-130			
Calibration Check (EK40508-CCV2)				Prepared: 1	1/05/04 A	nalyzed: 1	1/06/04			
Gasoline Range Organics C6-C12	493		mg/kg	500		98.6	80-120			
Diesel Range Organics >C12-C35	567		n	500		113	80-120			
Fotal Hydrocarbon C6-C35	1060		61	1000		106	80-120			
Surrogate: 1-Chlorooctane	55.6		"	50.0		111	70-130		·····	
Surrogate: 1-Chlorooctadecane	54.5		"	50.0		109	70-130			
Matrix Spike (EK40508-MS2)	Sourc	e: 4K05013	3-14	Prepared: 1	1/05/04 A	nałyzed: 1	1/06/04			
Gasoline Range Organics C6-C12	567	10.0	mg/kg dry	521	ND	109	75-125			
Diesel Range Organics >C12-C35	593	10.0		521	ND	114	75-125			
Total Hydrocarbon C6-C35	1160	10.0	N	1040	ND	112	75-125			
Surrogate: 1-Chlorooctane	58.8		mg/kg	50.0		118	70-130			······
Surrogate: 1-Chlorooctadecane	56.0		"	50.0		112	70-130			
Matrix Spike Dup (EK40508-MSD2)	Source: 4K05013-14 F				1/05/04 A	nalyzed: 1	1/06/04			
Gasoline Range Organics C6-C12	594	10.0	mg/kg dry	521	ND	114	75-125	4.65	20	
Diesel Range Organics >C12-C35	604	10.0	н	521	ND	116	75-125	1.84	20	
Total Hydrocarbon C6-C35	1200	10.0	u	1040	ND	115	75-125	3.39	20	
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	53.1		"	50.0		106	70-130			

Environmental Lab of Texas

Basin Environmental Services				unders 8 inch					Fax: (505)	396-142				
P.O. Box 301		Project Nu	umber: EN	IS: 2004-00	182				Repo	rted:				
Lovington NM, 88260		Project Ma	nager: Ke	n Dutton					11/11/0	4 10:23				
	0	rganics by	GC - Q	uality Co	ontrol									
		Environn	nental L	ab of Te	kas									
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Note				
Batch EK41003 - EPA 5030C (GC)														
Blank (EK41003-BLK1)				Prepared &	Analyzed	: 11/09/04								
Benzene	ND	0.0250	mg/kg wct		•				• ··• ···· ··· ··· ···················					
foluene	ND	0.0250	u											
Ethylbenzene	ND	0.0250	"											
Kylene (p/m)	ND	0.0250												
(ylene (o)	ND	0.0250												
Surrogate: a,a,a-Trifluorotoluene	88.3		ug/kg	100		88.3	80-120							
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120							
LCS (EK41003-BS1)		Prepared & Analyzed: 11/09/04												
Benzene	88.8		ug/kg	100		88.8	80-120							
Toluene	98.0		82	100		98.0	80-120							
Sthylbenzene	98.8			100		98.8	80-120							
(ylene (p/m)	220		**	200		110	80-120							
(ylene (o)	102		"	100		102	80-120							
Surrogate: a,a,a-Trifluorotoluene	102		"	100		102	80-120							
Surrogate: 4-Bromofluorobenzene	117		"	100		117	80-120							
Calibration Check (EK41003-CCV1)				Prepared:	11/09/04 A	nalyzed: 11	/10/04							
Benzene	88.4		ug/kg	100		88.4	80-120							
foluene	9 8.0			100	,	98.0	80-120							
Ethylbenzene	92.2		n	100		92.2	80-120							
Kylene (p/m)	199			200		99.5	80-120							
Kylene (o)	95.5			100		95.5	80-120							
Surrogate: a,a,a-Trifluorotoluene	105		11	100		105	80-120							
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120							
Matrix Spike (EK41003-MS1)	Sou	rce: 4K08003	-01	Prepared:	11/09/04 A	nalyzed: 11	/10/04							
Benzene	87.9		ug/kg	100	ND	87.9	80-120							
Toluene	98.0		n	100	ND	98.0	80-120							
Ethylbenzene	103		н	100	ND	103	80-120							
Kylene (p/m)	225		"	200	ND	112	80-120							
Kylene (o)	106		H	100	ND	106	80-120							
Surrogate: a,a,a-Trifluorotoluene	106		"	100		106	80-120							

Basin Environmental Services	Project:	Saunders 8 inch #1 & #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	EMS: 2004-00182	Reported:
Lovington NM, 88260	Project Manager:	Ken Dutton	11/11/04 10:23

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 EK41003 - EPA 5030C (GC)

Matrix Spike Dup (EK41003-MSD1)	Source: 4	Prepared: 1	1/09/04 A						
Benzene	90.9	ug/kg	100	ND	90.9	80-120	3.36	20	
Toluene	103		100	ND	103	80-120	4.98	20	
Ethylbenzene	106		100	ND	106	80-120	2.87	20	
Xylene (p/m)	235		200	ND	118	80-120	5.22	20	
Xylene (o)	110		100	ND	110	80-120	3.70	20	
Surrogate: a,a,a-Trifluorotoluene	110	"	100		110	80-120			
Surrogate: 4-Bromofluorobenzene	116	"	100		116	80-120			

Environmental Lab of Texas

Basin Environmental Services	Project:	Saunders 8 inch #1 & #3	Fax: (505) 396-1429
P.O. Box 301	Project Number:	EMS: 2004-00182	Reported:
Lovington NM, 88260	Project Manager:	Ken Dutton	11/11/04 10:23

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Result Limit I		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK40804 - General Preparati	on (Prep)									
Blank (EK40804-BLK1)				Prepared &	Analyzed:	11/08/04				
% Moisture	0.0		%						· .	
Duplicate (EK40804-DUP1)	Sourc	e: 4K05006-	: 4K05006-01		Analyzed:	11/08/04				
% Moisture	20.0	20.0			20.0			0.00	20	

Environmental Lab of Texas

Basin En	nvironmental Services	Project:	Saunders 8 inch #1 & #3	Fax: (505) 396-1429				
P.O. Box	x 301	Project Number:	EMS: 2004-00182	Reported:				
Lovingto	on NM, 88260	Project Manager:	Ken Dutton	11/11/04 10:23				
	Notes and Definitions							
S-06	The recovery of this surrogate is outsid matrix interference's.	e control limits due to sample di	ution required from high analyte concentrat	ion and/or				
S-04	matrix interference's.							
DET	Analyte DETECTED	ence's.						
ND	Analyte NOT DETECTED at or above the r	eporting limit						
NR	Not Reported							
dry	Sample results reported on a dry weight bas	is						
RPD	Relative Percent Difference							
LCS	Laboratory Control Spike							

- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Raland K Junto Date:

11/11/2004

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.

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

Environmental Lab of Texas

Odessa, Texas 797																_	_				. 4	1		-	
Project N	lanager: <u>KEN DUTTON</u>						······						Proje	ect N	ame:	<u>S</u>	<u>4</u> 1	ND.	EK	<u>'S</u>	8	<u>`</u> <u></u>	14	.3	
Compar	ny Name_ <u>BES</u>			······							<u> </u>			Proje	ict₿:	E	нg		2ø	Ø4	<u></u>	ØØ	18	2	
Company A	ddress: <u>P. O. Box 30</u>	1											Pr	oject	Loc:	1	EA	ec	341	<u>u 7 '</u>	<u>, 1</u>	NM	<u>.</u>		
	aterZip: LOVINGTON, N		826	5 Ø																	,				
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HKOSOIL			te Sa	Se Se	0		5	E g	2	לג ג (צו	Water Skudge		Other (specify)	- 418. One (C	D B	/ ESP	als: As	Volatiles	BTEX 80218/5		N.O.R.M.	A			SH TJ
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-02	SOUTH RAMP- EXC		+	1450	++	╢┼	┿		┼╌┨		+-	┼╫┦	_	++-	+-		┝─╋		+	+	╀╌┨	┝─╄		┝╼╋╸	
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

	\sim	
Clicate	- Francia	Environmental

Date/Time: 11-05-04@ 1600

Order #: 4K 05016

Initials: <u>JMM</u>

Sample Receipt Checklist

Temperature of container/cooler?	Yes No	1.0 C.
Shipping container/cooler in gcod 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?	FTES NO	
Sample Instructions complete on Chain of Custody?	(YES) NO	
Chain of Custody signed when relinquished and received?	Tes 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?	Yas No	
Samples in proper container/bottle?	Vas No	
Samples properly preserved?	YES NO	
Sample bottles intact?	Tes 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?	YES NO	
VOC samples have zero headspace?	Yes No	Not Applicable

Other observations:

Variance Documentation:

_____ •

Contact Person:	-
Regarding:	

Date/Time: _____ Contacted by:

Corrective Action Taken:

APPENDIX C

SOIL BORING LOGS









TITLE	DESCRIPTION	
Saunders 8" # 1 & 3	Soil Boring 4	
DRAWN BY K. DUTTON	DATE	
	10/10/2004	

APPENDIX D

NMOCD FORM C-141

·)

	2 Dr., Hobbs, NM 88240			New Mex				_	Form C	
	Avenue, Artesia, NM 88210				l Resources				vised October 10	
	os Road, Aztec, NM 87410			vation Div				District	Copies to appro Office in accor	dance
	ncis Dr., Santa Fe, NM 87505			n St. Franc e, NM 875				W	ith Rule 116 or side of	ı back f form
						otion	annaranan sas			
		Release Notific	alioi			CHOH				
NomeofC	ampany Diaina Mankatina	. 1 D		OPERA Contact Car	nille Reynolds		x Initia	al Report	Final	Report
	ompany Plains Marketing 305 East Hwy. 80, Midlan			the second s	No. 505-441-09	65				
	ume Saunders 8" #1				e 8"Steel Pipeli	· · · · · · · · · · · · · · · · · ·				
Surface Ov	vner State Of New Mexic	o Mineral O	wner				Lease N	le.		
		LOCA	mai	N OF REI	FASE				- <u></u>	
Unit Letter	Section Township I	Range Feet from the		South Line	Feet from the	East/W	est Line	County		
L.	24 145	33E						Lea		
					102024221 22	L				
	Latitud	e_33°05'14.9"			<u>103°34'31.2"</u>					
	a 1 011	NAT	URE	OF RELI		· · · · · ·			<u></u>	
	ease Crude Oil elease 8" Steel Pipeline	<u></u>			Release 60 barre			lecovered 2 Hour of Dis	The second s	
	-			7-30-04 @			7-30-04 @			
Was Immed	iate Notice Given?	Yes 🗌 No 🗌 Not Re	quired	If YES, To Paul Sheel						
By Whom?	Camille Reynolds			1	- lour 7-30-04 @ 3	3:30				
	rcourse Reached?	Yes 🛛 No		If YES. Vo	lume Impacting t	the Water	course.			
<u></u>					·····					
If a Waterco	ourse was Impacted, Describe	e Fully.*								
	use of Problem and Remedia									
	in 8 inch steel transmission p gravity of the sweet crude oil						ne pressu	re on the lin	e varies from 2	3-30
				<u>-</u>		- rr				
· .										
1										
scribe Ar	ea Affected and Cleanup Ac	tion Taken.* The impacted	d soil w	vas excavated	and stockpiled or	n plastic.	Aerial ex	tent of surfa	ce impact was	·····
,854 ft ² .					. 1	1			··· •	
t N										
reby cert	tify that the information give	en above is true and compl	ete to t	he hest of my	knowledge and u	understan	d that ours	mant to NM	OCD rules and	 }
ulations a	all operators are required to	report and/or file certain re	elease n	notifications a	nd perform correc	ctive action	ons for rel	eases which	may endanger	•
	h or the environment. The a operations have failed to ad									
the enviro	onment. In addition, NMOC	D acceptance of a C-141	report d	loes not reliev	e the operator of	responsil	oility for c	ompliques r	with any other	am
deral, state	e, or local laws and/or regula	ations.				anny	<u>/ Nie</u>		<u>/>></u>	
1) and			<u>OIL CON</u>	SERV	ATTON O	DIVISIC	<u>2N</u>	
gnature:	arnille +	permando					ેટે જાણ પ્			
inted Nam	e: Camille Reynolds			Approved by	District Supervis			2 13.		
1	diation Coordinator			Approval Da	le:		xpiration	Date:	, ,	
1	, approximation - approximation (a factor factor) and a set of the set which the second set $N^{(1)}$, a second set if the boson			Conditions o		(_^				
1	ress: cjreynolds@paalp.com			CAMINGU3 ()	er abbroxar			Attached		
he: 🖂	GIRE	Phone:505-441-0965	1					1		

District III 1000 Rio Brazos Road, Aztec, NM 87410 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropria District Office in accordan Strict Office in accordin Strict Office in accord Strict Office in accord Strict Office i
OPERATOR x Initial Report Final Rep Name of Company Plains Marketing, LP Contact Camille Reynolds
Name of Company Plains Marketing, LP Contact Camille Reynolds Contact Camille Reynold Release Reynowite Revenue And Contact Reynold Release Reven
Address 5805 East Hwy. 80, Midland, TX 79706 Telephone No. 505-441-0965 Construction Facility Name Saunders 8" #3 Facility Type 8"Steel Pipeline Surface Owner State Of New Mexico Mineral Owner Lease No. Loccation OF RELEASE Lease No. Item 24 Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County Lease 14S 33E Feet from the North/South Line Feet from the Longitude_103°34'31.2" NATURE OF RELEASE Type of Release Crude Oil Volume of Release 20 barrels Volume Recovered 14barrels Source of Release 8" Steel Pipeline Date and Hour of Occurrence Date and Hour of Discovery
Facility Type 8"Steel Pipeline Surface Owner State Of New Mexico Mineral Owner Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County L 24 14S 33E Feet from the North/South Line Feet from the East/West Line County Latitude_33°05'14.9" Longitude_103°34'31.2" NATURE OF RELEASE NATURE OF RELEASE Type of Release Crude Oil Volume of Release 20 barrels Volume Recovered 14barrels Source of Release 8" Steel Pipeline Date and Hour of Occurrence Date and Hour of Discovery
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Type of Release Crude OilVolume of Release 20 barrelsVolume Recovered 14barrelsSource of Release 8" Steel PipelineDate and Hour of OccurrenceDate and Hour of Discovery
8-9-04 @ 06:00 8-9-04 @ 08:00
Was Immediate Notice Given? If YES, To Whom?
Yes No Not Required Larry Johnson By Whom? Camille Reynolds Date and Hour 8-9-04 @ 13:15
Was a Watercourse Reached? If YES, Volume Impacting the Watercourse.
If a Watercourse was Impacted, Describe Fully.*
Describe Cause of Problem and Remedial Action Taken.* External corrosion of the 8" steel pipeline. A line clamp was installed to mitigate the release.
The line is an 8 inch steel transmission pipeline that produces approximately 1,400 barrels of crude per day. The pressure on the line varies from 25 to 30
psi and the gravity of the sweet crude oil is 38-42. The sweet crude has an H_2S content of less than 10 ppm
Describe Area Affected and Cleanup Action Taken.* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was 2,500 ft ² .
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
OIL CONSERVATION DIVISION
Signature Complex Kunolds
Printed Name: Camille Reynolds Approved by District Supervisor:
Title: Remediation Coordinator Approval Date: Expiration Date:
E-mail Address: cjreynolds@paalp.com Conditions of Approval: Attached
Date: 8-16-04 Phone:505-441-0965 * Attach Additional Sheets If Necessary