

# SITE CLOSURE REQUEST

## "E" LINE NEAR OIL CENTER BOOSTER

UNIT G, SECTION 29, TOWNSHIP 20 SOUTH, RANGE 37 EAST NORTHEAST OF OIL CENTER LEA COUNTY, NEW MEXICO

RP #1472

Prepared for:

**DCP Midstream** 10 Desta Drive, Suite 400 West Midland, Texas 79705



Prepared by:

**NOVA Safety and Environmental** 2057 Commerce Drive Midland, Texas 79703

August 2007

Curt D. Stanley Project Manager Todd K. Choban, P.G.

Vice President, Technical Services

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#### 1.0 INTRODUCTION AND SITE BACKGROUND

On behalf of DCP Midstream (DCP), NOVA Safety and Environmental (NOVA) has prepared this Site Closure Request for the site known as "E" Line Near Oil Center Booster. The site is located in the Unit G, Section 29, Township 20 South, Range 37 East, Lea County, New Mexico and the site is located on property is owned by the Millard Deck Estate.

On May 27, 2007, DCP reported a ten barrel release of condensate from a 8-inch low pressure gas pipeline located approximately 0.75 miles northwest of Oil Center, New Mexico. A vacuum truck recovered less than one barrel of condensate immediately following the discovery of the release, resulting in a net loss of approximately nine barrels of condensate. The resulting surface stain attributed to the release was approximately three hundred feet in length and ninety feet in width. The release was the result of internal corrosion of the 8-inch inch steel pipeline. A site location map is provided as Figure 1. The Initial and Final Release Notification and Corrective Action (Form C-141) are provided as Appendix C.

#### 2.0 NMOCD SITE CLASSIFICATION

On July 12, 2007, three soil borings were advanced at the leak site. Soil boring SB-1 encountered groundwater at a depth of approximately fifty-two (52) feet below ground surface (bgs). This depth to groundwater results in a score of 20 being assigned to this site based on the NMOCD ranking criteria. The distance to the nearest water source exceeds 1,000 feet, resulting in no points being assigned to the site on this ranking criterion. There is no surface water body located with 1,000 feet of the site, resulting in no points being assigned on this ranking criterion.

The NMOCD's Guidelines for Remediation of Leaks, Spills and Releases (NMOCD, 1993), indicates the "E" line Near Oil Center Booster site has a ranking score of 20 points. The soil cleanup levels for a site with a ranking of 20 require benzene concentrations below 10 mg/Kg, total benzene, toluene, ethylbenzene and xylene (BTEX) concentrations below 50 mg/Kg and total petroleum hydrocarbons gasoline range organics / diesel range organics (TPH-GRO/DRO) concentrations below 100 mg/Kg.

#### 3.0 SUMMARY OF FIELD ACTIVITIES

From June 28 through July 5, 2007, approximately 2,800 cubic yards (cy) of hydrocarbon impacted soil was excavated from the site. The excavated soil was stockpiled on site pending final disposition of the excavated soil. A Site and Sample Location map is provided as Figure 2.

On June 28, 2007, a soil sample (F-1) was collected from a depth of approximately fifteen feet bgs beneath the leak source. The analytical results indicated a TPH-GRO/DRO concentration of 6,420 mg/Kg, a benzene concentration of 2.96 mg/Kg and a total BTEX concentration of 196.86 mg/Kg. A summary of Confirmation Soil sample analytical Results is provided as Table 1. Laboratory Reports are provided as Appendix C.

On July 2, 2007, four excavation sidewall (WSW-1, SSW-1, ESW-1 AND NSW-1) and one floor soil sample (F-2) were collected from the main excavation, utilizing standard soil sampling

protocol as stated in the NMOCD guidelines. Analytical results indicated benzene and total BTEX concentrations were below the laboratory method detection limit (MDL) of 0.01 mg/Kg for the four submitted sidewall and one floor soil sample(s). Analytical results indicated TPH-GRO/DRO concentrations were below the MDL for all soil samples, with the exception of floor soil sample (F-2) which exhibited a TPH-GRO/DRO concentration of 141 mg/Kg.

On July 5, 2007, initial excavation activities along the leak flowpath were completed and confirmation soil samples were collected and submitted to the laboratory for analysis. Analytical results indicated soil sample FPF-1 located on the flowpath floor exhibited a TPH-GRO/DRO concentration of 1.25 mg/Kg. Analytical results indicated soil sample FPNW-1 located on the flowpath north sidewall exhibited a TPH-GRO/DRO concentration of 1.24 mg/Kg. Analytical results indicated soil sample FPF-2 located midway along the flowpath exhibited a TPH-DRO concentration of 213 mg/Kg and a TPH-GRO/DRO concentration of less than 250 mg/Kg. Analytical results indicated soil samples FPSW-1 and FPF-3 exhibited TPH-GRO/DRO concentrations below the MDL of 50 mg/Kg. The soil sample exhibiting the highest concentration of Gasoline Range Organics during the sampling event (Soil Sample FPF-2) was analyzed for BTEX constituents using EPA method SW 8446-8021b. Analytical results indicated soil sample FPF-2 exhibited a benzene concentration below the MDL of 0.01 mg/Kg and a total BTEX concentration of 1.9406 mg/Kg.

On July 12, 2007, three soil borings were advanced at the site to evaluate the vertical extent of hydrocarbon impact and determine the depth to groundwater. The locations of the soil borings are illustrated on Figure 2. Soil boring SB-1 was advanced to a total depth fifty-six feet bgs and groundwater was encountered at fifty-two feet bgs. Soil borings SB-2 and SB-3 were advanced to a depth of twenty-five feet bgs. Soil samples were collected at five foot intervals in each of the soil borings and field evaluated. Analytical results of laboratory submitted soil samples indicated concentrations of TPH-GRO/DRO were below the MDL of 50 mg/Kg for all submitted soil samples. The soil sample collected from soil boring SB-1 at a drilling depth of fifty feet bgs was submitted for BTEX analysis. Analytical results indicated benzene concentrations were below the MDL of 0.01 mg/Kg and total BTEX concentrations were 0.0267 mg/Kg. Lithologic boring logs are provided in Appendix A.

On July 18, 2007, additional excavation of soil below soil sampling point F-1 (6,420 mg/Kg total TPH), F-2 (141 mg/Kg TPH) and FPF-2 (213 mg/Kg) was completed. Approximately 1,652 cy of excavated soil was added to the existing soil stockpile during the excavation activity, resulting in an estimated soil stockpile volume of approximately 4,452 cy. Additional confirmation soil samples were collected from the floors of the three newly excavated areas. Analytical results indicated the floor soil samples exhibited TPH-GRO/DRO concentrations below the MDL of 50 mg/Kg. Analytical results indicated soil sample F-1A@25' exhibited a benzene concentration below the MDL of 0.01 mg/Kg and a total BTEX concentration of 0.0495 mg/Kg.

Excavation stockpile samples were collected and submitted to the laboratory for TPH-GRO/DRO, BTEX and chloride analysis. Analytical results indicated TPH-GRO/DRO concentrations ranged from 60.31 to 339.2 mg/Kg. Stockpile soil sample NSP was submitted to the laboratory for BTEX analysis and analytical results indicated benzene concentrations were below the laboratory MDL of 0.01mg/Kg. Stockpile soil sample WSP was submitted to the

laboratory for chloride analysis and analytical results indicated chloride concentrations were below the laboratory MDL of 50 mg/Kg. Based on the analytical results of stockpile soil samples, DCP evaluated available soil remediation strategies and concluded, transporting the hydrocarbon impacted soil to a commercial NMOCD permitted landfarm was the most expeditious remediation option.

On July 24, 2007, NOVA on behalf of DCP requested permission, from the NMOCD Hobbs district office, to backfill the existing excavation with non impacted soil. On July 27, 2007, permission to backfill was approved by the NMOCD Hobbs district office.

On July 29, 2007 through August 7, 2007, approximately 4,452 cy stockpiled soil was transported to the South Monument Surface Waste Facility, L.L.C. (#NM-01-0032) south of Monument, New Mexico. Non-impacted soil purchased from the facility was transported to the site and placed in the excavation in twelve inch lifts and compacted. Soil moisture content was adequate and no additional moisture was required for soil compaction. Following backfilling activities the site was contoured to the surrounding topography. During the fall of 2007 or when favorable conditions for germination exist, the site will be seeded with vegetation acceptable to the landowner.

#### 4.0 SITE CLOSURE REQUEST

In summary, the analytical results (all confirmation soil samples results were below method detection limits) of final confirmation excavation floor soil samples (F1A@25' and F-2A@18'), excavation sidewall soil samples (WSW-1, SSW-1, ESW-1 and NSW-1) and flowpath soil samples (FPF-1, FPF-2A@18' and FPF-3) indicate benzene, total BTEX and TPH concentrations are below the required NMOCD regulatory levels of 10 mg/Kg, 50 mg/Kg and 100 mg/Kg, respectively.

Based on the analytical results of confirmation soil samples NOVA recommends that DCP provide the NMOCD Hobbs district office a copy of this *Site Closure Request* and request the NMOCD grant closure to the "E" Line Near Oil Center release site.

#### 5.0 LIMITATIONS

NOVA has prepared this *Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. NOVA has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA 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. NOVA has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA 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 *Site Closure Request* has been prepared for the benefit of DCP. The information contained in this report including all exhibits and attachments may not be used by any other party without the express written consent of NOVA and/or DCP.

## 6.0 DISTRIBUTION

Copy 1: Larry Johnson

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division (District 1)

1625 French Drive Hobbs, NM 88240

Copy 2: Lynn Ward

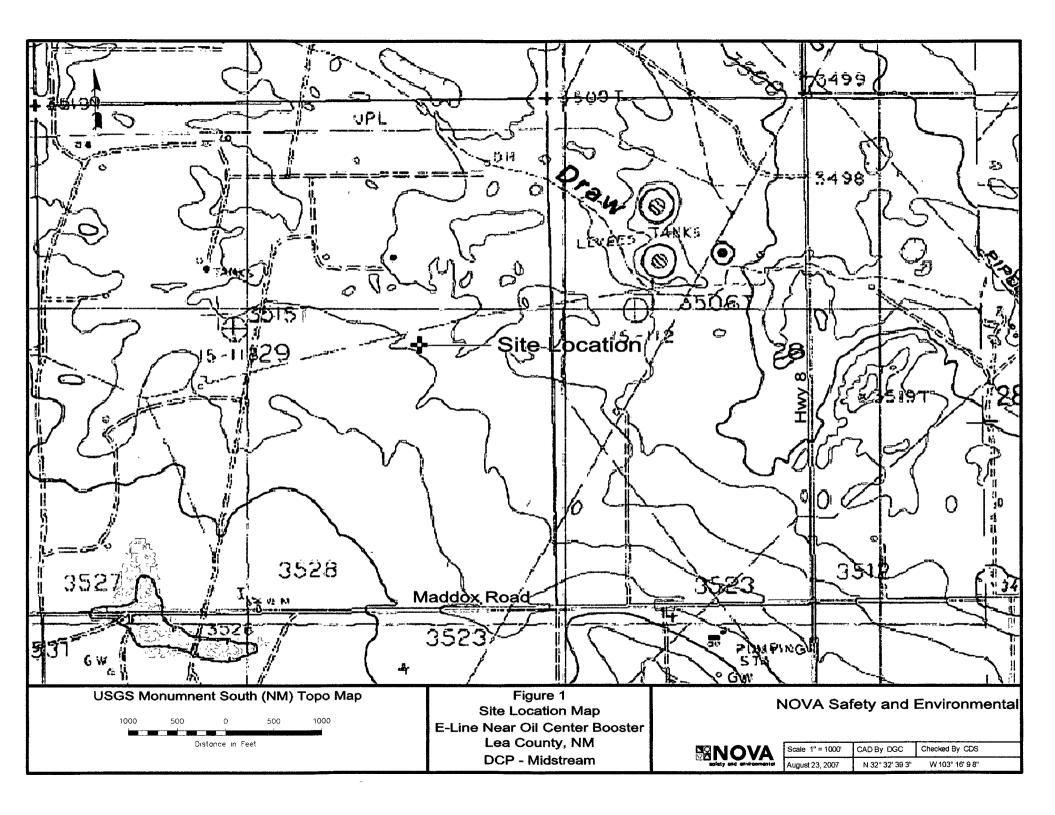
DCP Midstream

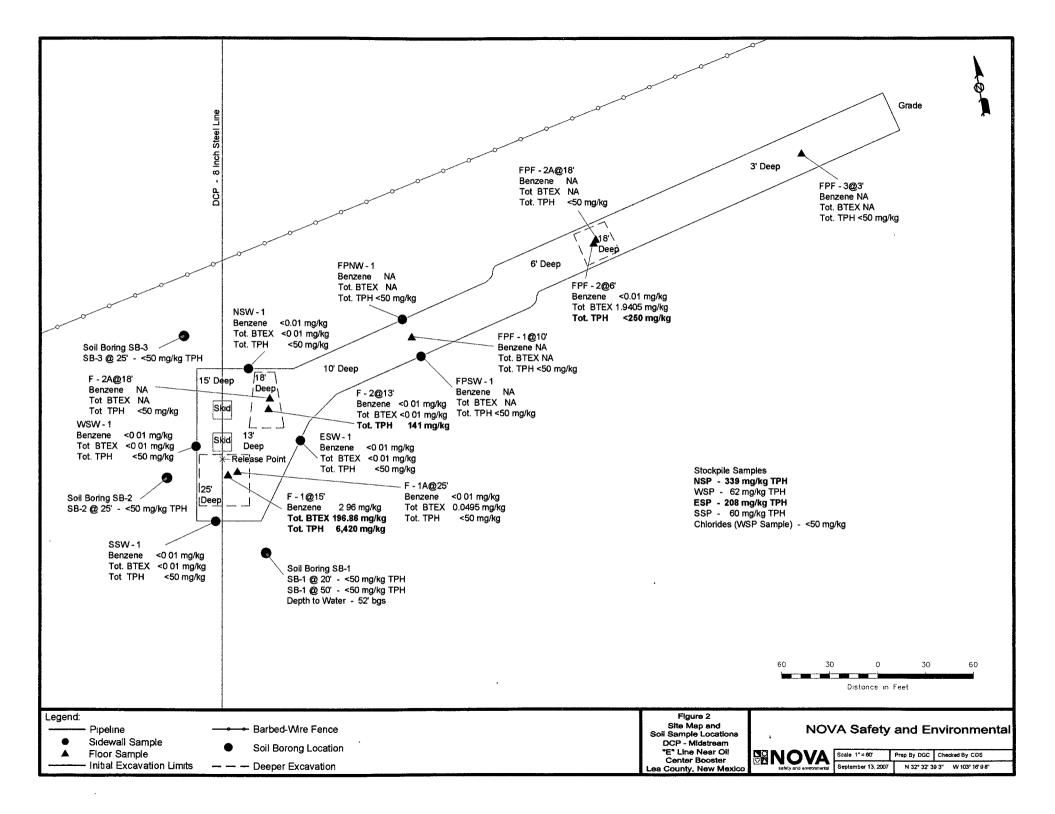
10 Desta Drive, Suite 400 West

Midland, Texas 79705 lcward@dcpmidstream.com

Copy 3: NOVA Safety and Environmental.

2057 Commerce Drive Midland, Texas 79703 cstanley@novatraining.cc Figures





Table

Appendices

# TABLE 1

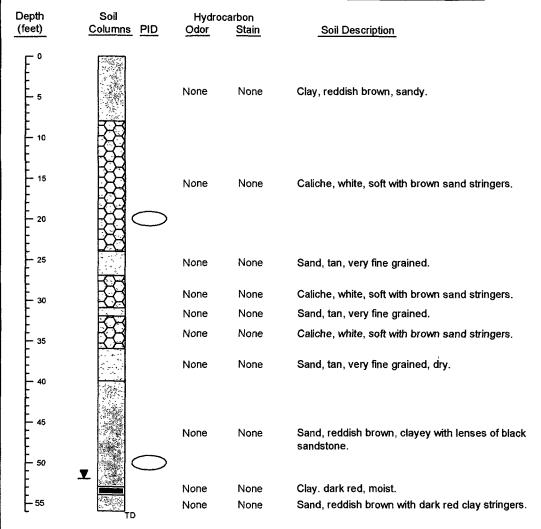
# Confirmation Soil Sample Analysis Results E Line Near Oil Center Booster NW of Oil Center, NM DCP-Midstream

					oratory Analy Method 80	•	SW 846-8021					
SAMPLE DATE	SAMPLE LOCATION	DEPTH	SOIL STATUS	TPH DRO mg/Kg	TPH GRO mg/Kg	Total TPH mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl- Benzene mg/Kg	Xylene mg/Kg	Total BTEX mg/Kg	Chloride mg/Kg
	REGULATORY TANDARD					100	10				50	250
06/28/07	F-1	15'	Excavated	4180	2240	6420	2.96	55.4	37.5	101	196.86	
1 1 1 6 1 6 1 6 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1						羅 / )	30 m/E 4	Salatika. Talian		
07/02/07	WSW-1	14'	In-Situ	<50.0	<1.00	<50	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
07/02/07	SSW-1	12.5'	In-Situ	< 50.0	<1.00	<50	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
07/02/07	ESW-1	12.5'	In-Situ	< 50.0	<1.00	<50	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
07/02/07	NSW-1	14'	In-Situ	< 50.0	<1.00	< 50	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
07/02/07	F-2	13'	Excavated	141	<1.00	141	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Mariai.			il XII dek			1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		# 4.51	film s			\$ \$74°
07/05/07	FPF-1	10'	In-Situ	<50.0	1.25	1.25						
07/05/07	FPNW-1	9'	In-Situ	<50.0	1.24	1.24						
07/05/07	FPSW-1	9'	In-Situ	<50.0	<1.00	<50						
07/05/07	FPF-2	6'	Excavated	<250	213	<250	< 0.01	0.0286	0.422	1.49	1.9406	
07/05/07	FPF-3	3'	In-Situ	< 50.0	<1.00	<50						
					1904 - 1945 1904 - 1966	/	. B. 3		1 <b>(2</b> 1)	4. 3		
07/12/07	SB-1@20'	20'	In-Situ	<50.0	<1.00	< 50						
07/12/07	SB-1@50'	50'	In-Situ	<50.0	<1.00	<50	< 0.01	< 0.01	< 0.01	0.0267	0.0267	
07/12/07	SB-2@25'	25'	In-Situ	<50.0	<1.00	<50						
07/12/07	SB-3@25'	25'	In-Situ	<50.0	<1.00	< 50						
07/12/07	NSP	-	to be hauled	277	62.2	339.2	< 0.01	0.0258	0.104	1.47	1.5998	
07/12/07	WSP	<u>-</u>	to be hauled	53.8	7.94	61.74						<50.0
07/12/07	ESP	_	to be hauled	205	2.9	207.9						
07/12/07	SSP	-	to be hauled	56.9	3.41	60.31						
									81 vi	, <u>(</u> *)	* \$1 BES	A Striller
07/18/07	F-1A@25'	25'	In-Situ	<50.0	<1.00	<50	< 0.01	< 0.01	0.011	0.0385	0.0495	
07/18/07	F-2A@18'	18'	In-Situ	<50.0	<1.00	<50						
07/18/07	FPF-2A@18'	18'	In-Situ	< 50.0	<1.00	< 50						

Bold: Indicates TPH or BTEX concentration above regulatory guidelines

Appendix A: Soil Boring Logs

# Soil Boring SB-01



#### Soil Boring Details

July 12, 2007 Date Drilled\_ Depth of Soil Boring \_\_

Indicates samples selected for laboratory analysis.

Indicates the groundwater level measured on date of initial gauging event.

Head-space reading in ppm obtained with a photo-ionization detector.

#### Completion Notes

- 1. The soil boring was completed on date using air rotary drilling techniques
- 2 The lines between material types shown on the profile log represent approximate boundaries Actual transitions may be gradual
- 3. The depths indicated are referenced from the ground surface

Soil Boring Details

Soil Boring - 01

E Line Near Oil Center Booster

Lea County



**NOVA Safety and Environmental** 

Scale NTS CAD by DGC Checked By CDS

July 31, 2007

DCP - Midstream

# Soil Boring SB-02 Depth Soil Hydrocarbon Columns PID (feet) Odor Soil Description None Clay, brown, sandy. None Soil Boring Details July 12, 2007 Date Drilled\_ Depth of Soil Boring \_\_\_\_\_ None Caliche, white, soft with brown sand stringers. None Indicates samples selected for laboratory analysis Indicates the groundwater level measured on date of initial gauging event. PID Head-space reading in ppm obtained with a photo-ionization detector. **Completion Notes** 1. The soil boring was completed on date using air rotary drilling techniques 2 The lines between material types shown on the profile log represent approximate boundaries Actual transitions may be gradual 3. The depths indicated are referenced from the ground surface. Soil Boring Details **NOVA Safety and Environmental** Soil Boring - 02

DCP - Midstream

E Line Near Oil Center Booster

Lea County

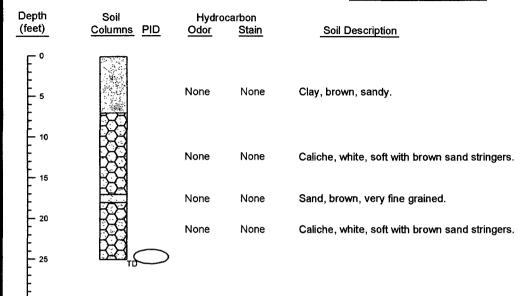


Scale NTS

CAD by DGC | Checked By CDS

July 31, 2007

# Soil Boring SB-03



## Soil Boring Details

July 12, 2007 Date Drilled\_ 25 ft Depth of Soil Boring

Indicates samples selected for laboratory analysis

indicates the groundwater level measured on date of initial gauging event

Head-space reading in ppm obtained with a photo-ionization detector.

#### **Completion Notes**

- 1. The soil boring was completed on date using air rotary drilling techniques
- 2. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3. The depths indicated are referenced from the ground surface.

Soil Boring Details

Soil Boring - 03

E Line Near Oil Center Booster

Lea County



**NOVA Safety and Environmental** 

Scale NTS

CAD by DGC Checked By CDS

July 31, 2007

DCP - Midstream

50

L 55

Appendix B: Laboratory Reports



8701 Aberdaen Avenuel Suria 8 200 East Sunset Road, Suite E 5002 Basin Street, State A1

Lubbook, Texas 79424 El Paso, Texas 79927 Midrand, Texas, 75703 800 \* 378 \* 1296 388 • 578 • 3443

915\*585\*3443 432 • 685 • 6381

F4X 915 • 535 • 494/ FAX 432 • 689 • 6J13

817 • 201 • 5260

6015 Harris Parkway, Suite 110 Ft. Worth Texas 7610Z

E-Mail. ab@traceanalysis.com

# Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 2, 2007

Work Order: 7062903

Project Location: NW of Oil Center, NM "E" Line Oil Booster Project Name: N/A"E" Line Oil Booster Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
$\overline{128775}$	F-1	soil	2007-06-28	15:02	2007-06-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

#### Standard Flags

 ${f B}$  . The sample contains less than ten times the concentration found in the method blank.

Work Order: 7062903 "E" Line Oil Booster Page Number: 2 of 7 NW of Oil Center, NM

# **Analytical Report**

Sample: 128775 - F-1

Analysis: BTEX QC Batch: 38679 Prep Batch: 33478 Analytical Method: S 8021B
Date Analyzed: 2007-07-01
Sample Preparation: 2007-07-01

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		$\mathtt{RL}$			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		2.96	mg/Kg	50	0.0100
Toluene		55.4	$\mathrm{mg}/\mathrm{Kg}$	50	0.0100
Ethylbenzene		37.5	${ m mg/Kg}$	50	0.0100
Xylene		101	mg/Kg	50	0.0100

					Spike	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	$\mathbf{A}\mathbf{mount}$	Recovery	Limits
Trifluorotoluene (TFT)		33.4	mg/Kg	50	50.0	67	39.6 - 116
4-Bromofluorobenzene (4-BFB)		57.3	${ m mg/Kg}$	50	50.0	115	47.3 - 144.2

Sample: 128775 - F-1

Analysis: TPH DRO QC Batch: 38684 Prep Batch: 33482 Analytical Method: Mod. 8015B Date Analyzed: 2007-06-29 Sample Preparation: 2007-06-29

Prep Method: N/A Analyzed By: Prepared By:

		RL			
Parameter	Flag	Result	Units	Dilution	RL
DRO		4180	mg/Kg	1	50.0

	1				Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane	1	497	mg/Kg	1	150	331	32.9 - 167

Sample: 128775 - F-1

Analysis: TPH GRO QC Batch: 38680 Prep Batch: 33478 Analytical Method: S 8015B
Date Analyzed: 2007-07-01
Sample Preparation: 2007-07-01

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		m RL			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	RL
GRO		2240	mg/Kg	50	1.00

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	2	20.7	mg/Kg	50	50.0	41	50.2 - 89.3
4-Bromofluorobenzene (4-BFB)		69.3	${ m mg/Kg}$	50	50.0	139	50.8 - 131.6

<sup>&</sup>lt;sup>1</sup>High surrogate recovery due to peak interference.

<sup>&</sup>lt;sup>2</sup>Surrogate out due to peak interference.

Work Order: 7062903 "E" Line Oil Booster Page Number: 3 of 7 NW of Oil Center, NM

Method Blank (1)

QC Batch: 38679

QC Batch: 38679 Prep Batch: 33478 Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG Prepared By: AG

arameter Flag Result

Parameter	Flag	Result	Units	RL
Benzene		< 0.00110	mg/Kg	0.01
Toluene		< 0.00150	${ m mg/Kg}$	0.01
Ethylbenzene		< 0.00160	${ m mg/Kg}$	0.01
Xylene		< 0.00410	mg/Kg	0.01

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.714	mg/Kg	1	1.00	71	58.2 - 121.3
4-Bromofluorobenzene (4-BFB)		0.690	${ m mg/Kg}$	1	1.00	69	53.1 - 111.6

Method Blank (1)

QC Batch: 38680

QC Batch: 38680 Prep Batch: 33478 Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG

Prepared By: AG

MDL

					$\mathbf{Spike}$	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	$_{ m Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.762	mg/Kg	1	1.00	76	67.8 - 103
4-Bromofluorobenzene (4-BFB)		0.682	${ m mg/Kg}$	1	1.00	68	55.4 - 111.8

Method Blank (1)

QC Batch: 38684

QC Batch: 38684 Prep Batch: 33482 Date Analyzed: 2007-06-29 QC Preparation: 2007-06-29 Analyzed By: Prepared By:

MDL

					$\mathbf{Spike}$	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		108	mg/Kg	1	150	72	44.7 - 133.6

#### Laboratory Control Spike (LCS-1)

QC Batch: 38679 Prep Batch: 33478 Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG Prepared By: AG

Work Order: 7062903 "E" Line Oil Booster

NW of Oil Center, NM

Page Number: 4 of 7

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.01	mg/Kg	1	1.00	< 0.00110	101	71.2 - 119
Toluene	1.02	mg/Kg	1	1.00	< 0.00150	102	76.3 - 116.5
Ethylbenzene	0.977	mg/Kg	1	1.00	< 0.00160	98	77.6 - 114
Xylene	2.95	mg/Kg	1	3.00	< 0.00410	98	78.8 - 113.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	1.04	mg/Kg	1	1.00	< 0.00110	104	71.2 - 119	3	20
Toluene	1.05	mg/Kg	1	1.00	< 0.00150	105	76.3 - 116.5	3	20
Ethylbenzene	1.02	mg/Kg	1	1.00	< 0.00160	102	77.6 - 114	4.	20
Xylene	3.07	mg/Kg	1	3.00	< 0.00410	102	78.8 - 113.9	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.649	0.654	mg/Kg	1	1.00	65	65	56.1 - 107.8
4-Bromofluorobenzene (4-BFB)	0.746	0.745	${ m mg/Kg}$	1	1.00	75	74	56.2 - 118.8

#### Laboratory Control Spike (LCS-1)

QC Batch: 38680 Prep Batch: 33478 Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
GRO	9.40	mg/Kg	1	10.0	< 0.739	94	56 - 105.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		$\operatorname{Rec}$ .		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$	RPD	Limit
GRO	8.52	mg/Kg	1	10.0	< 0.739	85	56 - 105.2	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

~	LCS	LCSD	** **	<b></b>	Spike	LCS	LCSD	Rec.
Surrogate	Result	$\mathbf{Result}$	$_{ m Units}$	Dil.	Amount	$\mathrm{Rec}.$	${ m Rec.}$	Limit
Trifluorotoluene (TFT)	1.03	0.932	mg/Kg	1	1.00	103	93	61.1 - 148.1
4-Bromofluorobenzene (4-BFB)	0.854	0.775	${ m mg/Kg}$	1	1.00	85	78	67.2 - 119.2

#### Laboratory Control Spike (LCS-1)

QC Batch: 38684 Prep Batch: 33482 Date Analyzed: 2007-06-29 QC Preparation: 2007-06-29 Analyzed By: Prepared By:

	LCS			$\mathbf{Spike}$	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	224	mg/Kg	1	250	<14.6	90	47.5 - 144.1

Work Order: 7062903 "E" Line Oil Booster Page Number: 5 of 7 NW of Oil Center, NM

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	$\operatorname{Dil}$ .	Amount	Result	Rec.	Limit	RPD	Limit
DRO	247	mg/Kg	1	250	<14.6	99	47.5 - 144.1	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$\mathbf{Limit}$
n-Triacontane	93.6	99.2	mg/Kg	1	150	62	66	57.3 - 131.6

Matrix Spike (MS-1) Spiked Sample: 128599

QC Batch: 38679 Prep Batch: 33478 Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.980	mg/Kg	1	1.00	< 0.00110	98	65.7 - 119.1
Toluene	1.02	${ m mg/Kg}$	1	1.00	< 0.00150	102	47.7 - 153.8
Ethylbenzene	1.01	mg/Kg	1	1.00	< 0.00160	101	73.5 - 126.3
Xylene	3.06	mg/Kg	1	3.00	< 0.00410	102	73.6 - 125.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	1.03	mg/Kg	1	1.00	< 0.00110	103	65.7 - 119.1	5	20
Toluene	1.07	mg/Kg	1	1.00	< 0.00150	107	47.7 - 153.8	5	20
Ethylbenzene	1.07	mg/Kg	1	1.00	< 0.00160	107	73.5 - 126.3	6	20
Xylene	3.25	mg/Kg	1	3.00	< 0.00410	108	73.6 - 125.9	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	$\mathbf{Dil}$ .	Amount	Rec.	Rec.	$\mathbf{Limit}$
Trifluorotoluene (TFT)	0.642	0.622	mg/Kg	1	1	64	62	51 - 109.6
4-Bromofluorobenzene (4-BFB)	0.803	0.787	mg/Kg	1	1	80	79	60.3 - 124.3

Matrix Spike (MS-1) Spiked Sample: 128584

QC Batch: 38680 Prep Batch: 33478

Date Analyzed: 2007-07-01 QC Preparation: 2007-07-01 Analyzed By: AG Prepared By: AG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	7.63	mg/Kg	1	10.0	2.5	51	10 - 102.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		$\operatorname{Rec}$ .		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	7.45	${ m mg/Kg}$	1	10.0	2.5	50	10 - 102.2	2	20

Work Order: 7062903 "E" Line Oil Booster Page Number: 6 of 7 NW of Oil Center, NM

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		0.569	0.592	mg/Kg	1	1	57	59	47.2 - 84.2
4-Bromofluorobenzene (4-BFB)	3	0.914	0.860	${ m mg/Kg}$	1	1	91	86	58 - 162.6

Matrix Spike (MS-1)

Spiked Sample: 128847

QC Batch: 38684 Prep Batch: 33482

38684

Date Analyzed: 2007-06-29 QC Preparation: 2007-06-29 Analyzed By: Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
DRO	204	m mg/Kg	1	250	<14.6	82	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$	RPD	Limit
DRO	215	mg/Kg	1	250	<14.6	86	11.7 - 152.3	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	129	123	mg/Kg	1	150	86	82	17 - 163.1

## Standard (ICV-1)

QC Batch: 38679

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	$\begin{array}{c} \text{Date} \\ \text{Analyzed} \end{array}$
Benzene		mg/Kg	0.100	0.105	105	85 - 115	2007-07-01
Toluene		mg/Kg	0.100	0.105	105	85 - 115	2007-07-01
Ethylbenzene		mg/Kg	0.100	0.101	101	85 - 115	2007-07-01
Xylene		mg/Kg	0.300	0.306	102	85 - 115	2007-07-01

#### Standard (CCV-1)

QC Batch: 38679

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	$\mathbf{Flag}$	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	$egin{array}{c}  ext{Date} \  ext{Analyzed} \end{array}$
Benzene		mg/Kg	0.100	0.0964	96	85 - 115	2007-07-01
Toluene		${ m mg/Kg}$	0.100	0.0982	98	85 - 115	2007-07-01
Ethylbenzene		mg/Kg	0.100	0.0936	94	85 - 115	2007-07-01
Xylene		mg/Kg	0.300	0.285	95	85 - 115	2007-07-01

<sup>&</sup>lt;sup>3</sup>Surrogate out due to peak interference.

Work Order: 7062903 "E" Line Oil Booster Page Number: 7 of 7 NW of Oil Center, NM

Standard	(ICV-1)

QC Batch: 38680

Date Analyzed: 2007-07-01

Analyzed By: AG

			ICVs	ICVs	ICVs	Percent	_
			$\operatorname{True}$	Found	$\mathbf{Percent}$	$\operatorname{Recovery}$	$\operatorname{Date}$
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.02	102	85 - 115	2007-07-01

#### Standard (CCV-1)

QC Batch: 38680

Date Analyzed: 2007-07-01

Analyzed By: AG

			$\mathrm{CCVs}$	$\operatorname{CCVs}$	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	$\mathbf{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.06	106	85 - 115	2007-07-01

#### Standard (ICV-1)

QC Batch: 38684

Date Analyzed: 2007-06-29

Analyzed By:

			ICVs	ICVs	ICVs	Percent	
			$\operatorname{True}$	$\mathbf{Found}$	$\mathbf{Percent}$	$\operatorname{Recovery}$	Date
Param	$\mathbf{F}$ lag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	215	86	85 - 115	2007-06-29

## Standard (CCV-1)

QC Batch: 38684

Date Analyzed: 2007-06-29

Analyzed By:

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	$\mathbf{Flag}$	$\mathbf{Units}$	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	274	110	85 - 115	2007-06-29

LAB Order ID	# 70629	03
LAB Order ID	# 1067	<b>-</b> -

Page	l	of	
9-			 

TraceAnalysis, Inc	Trace	Ana	lvsis	. Inc
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email: lab@traceanalysis.com

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# Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 5, 2007

Work Order: 

7070305

Project Location: Project Name:

Project Number:

NW of Oil Center, NM "E" Line Oil Booster "E" Line Oil Booster

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
129000	WSW-1	soil	2007-07-02	14:00	2007-07-03
129001	SSW-1	soil	2007-07-02	14:05	2007-07-03
129003	ESW-1	soil	2007-07-02	14:15	2007-07-03
129004	NSW-1	soil	2007-07-02	14:20	2007-07-03
129005	$\mathbf{F}$ -2	soil	2007-07-02	14:25	2007-07-03

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

#### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Work Order: 7070305 "E" Line Oil Booster Page Number: 2 of 11 NW of Oil Center, NM

# **Analytical Report**

Sample: 129000 - WSW-1

Analysis: BTEX QC Batch: 38762 Prep Batch: 33543 Analytical Method: S 8021B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03 Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		$\mathtt{RL}$			
Parameter	$\operatorname{Flag}$	'Result	Units	Dilution	RL
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	m mg/Kg	1	0.0100
Ethylbenzene		< 0.0100	${ m mg/Kg}$	1	0.0100
Xylene		< 0.0100	mg/Kg	1	0.0100

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.723	mg/Kg	1	1.00	72	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.860	${ m mg/Kg}$	1	1.00	86	51.1 - 119.1

Sample: 129000 - WSW-1

Analysis: TPH DRO QC Batch: 38742 Prep Batch: 33529 Analytical Method: Mod. 8015B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03

Mod. 8015B Prep Method: N/A 2007-07-03 Analyzed By: 2007-07-03 Prepared By:

		RL			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	$_{ m RL}$
DRO		< 50.0	mg/Kg	1	50.0

					Spike	$\operatorname{Percent}$	$\operatorname{Recovery}$
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		124	${ m mg/Kg}$	1	150	83	32.9 - 167

Sample: 129000 - WSW-1

Analysis: TPH GRO QC Batch: 38763 Prep Batch: 33543 Analytical Method: S 8015B
Date Analyzed: 2007-07-03
Sample Preparation: 2007-07-03

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		$\mathrm{RL}$			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

G	T21	D16	TT:4-	Dilation	Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	$\operatorname{Limits}$
Trifluorotoluene (TFT)		0.707	mg/Kg	1	1.00	71	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.844	mg/Kg	1	1.00	84	67.5 - 140.3

Work Order: 7070305 "E" Line Oil Booster Page Number: 3 of 11 NW of Oil Center, NM

Sample:	129001 -	SSW-1
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Analysis: BTEX QC Batch: 38762 Prep Batch: 33543 Analytical Method: S 8021B
Date Analyzed: 2007-07-03
Sample Preparation: 2007-07-03

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		$_{ m RL}$			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	mg/Kg	1	0.0100
Ethylbenzene		< 0.0100	mg/Kg	1	0.0100
Xvlene		< 0.0100	mg/Kg	1	0.0100

					$\operatorname{Spike}$	${f Percent}$	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.720	mg/Kg	1	1.00	72	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.867	${ m mg/Kg}$	1	1.00	87	51.1 - 119.1

#### Sample: 129001 - SSW-1

Analysis: TPH DRO QC Batch: 38742 Prep Batch: 33529 Analytical Method: Mod. 8015B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03 Prep Method: N/A Analyzed By: Prepared By:

		m RL			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	$\mathrm{RL}$
DRO		< 50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		117	mg/Kg	1	150	78	32.9 - 167

#### Sample: 129001 - SSW-1

Analysis: TPH GRO QC Batch: 38763 Prep Batch: 33543 Analytical Method: S 8015B
Date Analyzed: 2007-07-03
Sample Preparation: 2007-07-03

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

		RL			
Parameter	Flag	Result	Units	Dilution	RL
GRO		<1.00	${ m mg/Kg}$	1	1.00

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\mathbf{F}$ lag	Result	$\mathbf{U}$ nits	Dilution	$\mathbf{A}$ mount	Recovery	Limits
Trifluorotoluene (TFT)		0.672	mg/Kg	1	1.00	67	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.842	mg/Kg	1	1.00	84	67.5 - 140.3

Work Order: 7070305 "E" Line Oil Booster Page Number: 4 of 11 NW of Oil Center, NM

Sample:	129003 -	ESW-1
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Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	38762	Date Analyzed:	2007-07-03	Analyzed By:	AG
Prep Batch:	33543	Sample Preparation:	2007-07-03	Prepared By:	AG

		m RL			
Parameter	Flag	Result	Units	Dilution	RL
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	$\mathrm{mg}/\mathrm{Kg}$	1	0.0100
Ethylbenzene		< 0.0100	${ m mg/Kg}$	1	0.0100
Xylene		< 0.0100	mg/Kg	1	0.0100

					$\operatorname{Spike}$	Percent	$\operatorname{Recovery}$
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.722	mg/Kg	1	1.00	72	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.862	mg/Kg	1	1.00	86	51.1 - 119.1

## Sample: 129003 - ESW-1

Analysis: TPH DRO Analytical Method: Mod. QC Batch: 38742 Date Analyzed: 2007-0 Sample Preparation: 2007-0	07-03 Analyzed By:
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		RL			,
Parameter	Flag	Result	Units	Dilution	RL
DRO		< 50.0	m mg/Kg	1	50.0
	30				

					$\mathbf{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		123	${ m mg/Kg}$	1	150	82	32.9 - 167

## Sample: 129003 - ESW-1

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38763	Date Analyzed:	2007-07-03	Analyzed By:	$\overline{AG}$
Prep Batch:	33543	Sample Preparation:	2007-07-03	Prepared By:	$\mathbf{AG}$

		${ m RL}$			
Parameter	$\mathbf{Flag}$	Result	Units	Dilution	RL
GRO		<1.00	${ m mg/Kg}$	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.678	mg/Kg	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	1	1.00	84	67.5 - 140.3

Work Order: 7070305 "E" Line Oil Booster

Page Number: 5 of 11 NW of Oil Center, NM

#### Sample: 129004 - NSW-1

Analysis: BTEX QC Batch: 38762Prep Batch: 33543

Analytical Method: S 8021B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03 Prep Method: S 5035 Analyzed By: AGPrepared By: AG

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	$\mathrm{mg}/\mathrm{Kg}$	1	0.0100
Ethylbenzene		< 0.0100	mg/Kg	1	0.0100
Xylene		< 0.0100	mg/Kg	1	0.0100

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.752	mg/Kg	1	1.00	75	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.841	${ m mg/Kg}$	1	1.00	84	51.1 - 119.1

#### Sample: 129004 - NSW-1

Analysis: TPH DRO QC Batch: 38742 Prep Batch: 33529

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-03 Sample Preparation: 2007-07-03

Prep Method: N/A Analyzed By: Prepared By:

RL

Parameter	$\operatorname{Flag}$	Result	Units	Dilution	RL
DRO		< 50.0	mg/Kg	1	50.0

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		128	mg/Kg	1	150	85	32.9 - 167

#### Sample: 129004 - NSW-1

Analysis: TPH GRO QC Batch: 38763 Prep Batch: 33543

Analytical Method: S 8015B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03 Prep Method: S 5035 Analyzed By: AG Prepared By: AG

RL

Parameter	Flag	Result	Units	Dilution	RL
GRO		<1.00	${ m mg/Kg}$	1	1.00

Surrogate	Flag	Result	Units	Dilution	$egin{array}{c}  ext{Spike} \  ext{Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.705	mg/Kg	1	1.00	70	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.811	mg/Kg	1	1.00	81	67.5 - 140.3

Work Order: 7070305 "E" Line Oil Booster

Page Number: 6 of 11 NW of Oil Center, NM

Sample: 129005 - F-2

Analysis: **BTEX** QC Batch: 38762 Prep Batch: 33543

Analytical Method: S 8021B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03

Prep Method: S 5035 Analyzed By: AGPrepared By: AG

		$\mathbf{R}\mathbf{L}$
arameter	Flag	Result
		<0.0100

Flag	Result	Units	Dilution	RL
	< 0.0100	mg/Kg	1	0.0100
	< 0.0100	mg/Kg	1	0.0100
	< 0.0100	mg/Kg	1	0.0100
	< 0.0100	mg/Kg	1	0.0100
	Tiag	<0.0100 <0.0100 <0.0100	<0.0100 mg/Kg <0.0100 mg/Kg <0.0100 mg/Kg	<0.0100

					Spike	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.719	mg/Kg	1	1.00	72	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.829	mg/Kg	1	1.00	83	51.1 - 119.1

Sample: 129005 - F-2

TPH DRO Analysis: 38742 QC Batch: Prep Batch: 33529

Analytical Method: Mod. 8015B Date Analyzed: 2007-07-03 Sample Preparation: 2007-07-03

Prep Method: N/A Analyzed By: Prepared By:

RLUnits Dilution RLResult Parameter Flag  $\overline{\text{DRO}}$ 141 mg/Kg 50.0

					Spike	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	$\mathbf{Units}$	Dilution	Amount	Recovery	Limits
n-Triacontane		172	mg/Kg	1	150	115	32.9 - 167

Sample: 129005 - F-2

TPH GRO Analysis: QC Batch: 38763 Prep Batch: 33543

Analytical Method: S 8015BDate Analyzed: 2007-07-03 Sample Preparation: 2007-07-03

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

RLResult Units Dilution RLParameter Flag <1.00 GRO mg/Kg 1.00

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	$\mathbf{Amount}$	$\operatorname{Recovery}$	$\operatorname{Limits}$
Trifluorotoluene (TFT)		0.692	mg/Kg	1	1.00	69	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.809	${ m mg/Kg}$	1	1.00	81	67.5 - 140.3

Method Blank (1) QC Batch: 38742

QC Batch: 38742 Date Analyzed: 2007-07-03 Analyzed By: 33529 QC Preparation: 2007 - 07 - 03Prep Batch: Prepared By:

Work Order: 7070305 "E" Line Oil Booster Page Number: 7 of 11 NW of Oil Center, NM

Parameter DRO		Flag		MDL Result <14.6		Units mg/Kg	RL 50
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		116	mg/Kg	11	150	77	44.7 - 133.6
Method Blank (	1) QC	Batch: 38762			·		
QC Batch: 3876 Prep Batch: 3354			Date Analys QC Prepara				yzed By: AG ared By: AG

		MDL		
Parameter	Flag	Result	${f Units}$	m RL
Benzene		< 0.00110	mg/Kg	0.01
Toluene		< 0.00150	$\mathrm{mg}/\mathrm{Kg}$	0.01
Ethylbenzene		< 0.00160	mg/Kg	0.01
Xylene		< 0.00410	m mg/Kg	0.01

					Spike	Percent	Recovery
Surrogate	Flag	Result	$\mathbf{Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.706	mg/Kg	1	1.00	71	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.711	mg/Kg	1	1.00	71	53.9 - 125.1

Method Blank (1	) QC	Batch:	38763
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QC Batch:	38763	Date Analyzed:	2007-07-03	Analyzed By:	AG
Prep Batch:	33543	QC Preparation:	2007-07-03	Prepared By:	AG

		$\mathrm{MDL}$		
Parameter	$\operatorname{Flag}$	$\operatorname{Result}$	Units	$\operatorname{RL}$
GRO		0.884	mg/Kg	1

Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	$egin{array}{c} \mathbf{Spike} \ \mathbf{Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.777	${ m mg/Kg}$	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.704	mg/Kg	1	1.00	70	67.5 - 140.3

## Laboratory Control Spike (LCS-1)

QC Batch:	38742	Date Analyzed:	2007-07-03	Analyzed By:
Prep Batch:	33529	QC Preparation:	2007-07-03	Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	215	mg/Kg	1	250	<14.6	86	47.5 - 144.1

Work Order: 7070305 "E" Line Oil Booster Page Number: 8 of 11 NW of Oil Center, NM

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	178	mg/Kg	1	250	<14.6	71	47.5 - 144.1	19	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	120	104	mg/Kg	1	150	80	69	57.3 - 131.6

#### Laboratory Control Spike (LCS-1)

QC Batch: 38762 Prep Batch: 33543 Date Analyzed: 2007-07-03 QC Preparation: 2007-07-03 Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	$_{ m Units}$	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
Benzene	0.960	mg/Kg	1	1.00	< 0.00110	96	68.6 - 123.4
Toluene	0.989	mg/Kg	1	1.00	< 0.00150	99	74.6 - 119.3
Ethylbenzene	0.943	${ m mg/Kg}$	1	1.00	< 0.00160	94	72.3 - 126.2
Xylene	2.85	${ m mg/Kg}$	1	3.00	< 0.00410	95	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.978	mg/Kg	1	1.00	< 0.00110	98	68.6 - 123.4	2	20
Toluene	1.00	mg/Kg	1	1.00	< 0.00150	100	74.6 - 119.3	1	20
Ethylbenzene	0.964	mg/Kg	1	1.00	< 0.00160	96	72.3 - 126.2	<b>2</b>	20
Xylene	2.91	mg/Kg	1	3.00	< 0.00410	97	76.5 - 121.6	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	$_{ m Units}$	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.756	0.752	mg/Kg	1	1.00	76	75	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.756	0.752	${ m mg/Kg}$	1	1.00	76	75	68.7 - 125.8

#### Laboratory Control Spike (LCS-1)

QC Batch: 38763 Prep Batch: 33543 Date Analyzed: 2007-07-03 QC Preparation: 2007-07-03 Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
GRO	8.06	mg/Kg	1	10.0	< 0.739	81	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		$\operatorname{Rec}$ .		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	9.04	mg/Kg	1	10.0	< 0.739	90	57.7 - 102.5	12	20

Work Order: 7070305 "E" Line Oil Booster Page Number: 9 of 11 NW of Oil Center, NM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.04	1.01	mg/Kg	1	1.00	104	101	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.775	0.850	mg/Kg	1	1.00	78	85	70 - 130

Matrix Spike (MS-1) Spiked Sample: 129000

QC Batch: 38742 Prep Batch: 33529 Date Analyzed: 2007-07-03 QC Preparation: 2007-07-03 Analyzed By: Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	191	mg/Kg	1	250	<14.6	76	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	198	mg/Kg	1	250	<14.6	79	11.7 - 152.3	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			$\mathbf{Spike}$	MS	MSD	${ m Rec.}$
Surrogate	Result	Result	$\mathbf{Units}$	Dil.	Amount	Rec.	Rec.	$\mathbf{Limit}$
n-Triacontane	110	115	mg/Kg	1	150	73	77	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 129005

QC Batch: 38762 Prep Batch: 33543 Date Analyzed: 2007-07-03 QC Preparation: 2007-07-03

Analyzed By: AG Prepared By: AG

	MS			Spike	Matrix		${ m Rec.}$
Param	Result	Units	Dil.	Amount	$\mathbf{Result}$	Rec.	Limit
Benzene	1.00	mg/Kg	1	1.00	< 0.00110	100	64.4 - 115.7
Toluene	1.03	${ m mg/Kg}$	1	1.00	< 0.00150	103	57.8 - 124.4
Ethylbenzene	1.02	${ m mg/Kg}$	1	1.00	< 0.00160	102	64.8 - 125.8
Xylene	3.09	${ m mg/Kg}$	1	3.00	< 0.00410	103	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	$\operatorname{Rec}$ .	Limit	RPD	$\mathbf{Limit}$
Benzene	0.992	mg/Kg	1	1.00	< 0.00110	99	64.4 - 115.7	1	20
Toluene	1.02	mg/Kg	1	1.00	< 0.00150	102	57.8 - 124.4	1	20
Ethylbenzene	1.02	mg/Kg	1	1.00	< 0.00160	102	64.8 - 125.8	0	20
Xylene	3.12	mg/Kg	1	3.00	< 0.00410	104	65.2 - 121.8	1	20

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.632	0.656	mg/Kg	1	1	63	66	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.799	0.813	mg/Kg	1	1	80	81	66.7 - 131.9

Work Order: 7070305 "E" Line Oil Booster Page Number: 10 of 11 NW of Oil Center, NM

Matrix Spike (MS-1)

Spiked Sample: 129005

QC Batch: 38763 Prep Batch: 33543 Date Analyzed: 2007-07-03 QC Preparation: 2007-07-03 Analyzed By: AG Prepared By: AG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	7.69	mg/Kg	1	10.0	< 0.739	77	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		$\operatorname{Rec}$ .		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	6.92	mg/Kg	1	10.0	< 0.739	69	10 - 141.5	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MS	MSD			Spike	MS	MSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)		0.588	0.595	mg/Kg	1	1	59	60	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1	0.865	0.872	mg/Kg	1	1	86	87	86.7 - 144.5

## Standard (ICV-1)

QC Batch: 38742

Date Analyzed: 2007-07-03

Analyzed By:

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	226	90	85 - 115	2007-07-03

## Standard (CCV-1)

QC Batch: 38742

Date Analyzed: 2007-07-03

Analyzed By:

		•	CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	$\mathbf{F}$ lag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	221	88	85 - 115	2007-07-03

#### Standard (ICV-1)

QC Batch: 38762

Date Analyzed: 2007-07-03

Analyzed By: AG

•			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0950	95	85 - 115	2007-07-03
Toluene		mg/Kg	0.100	0.0964	96	85 - 115	2007-07-03
Ethylbenzene		${ m mg/Kg}$	0.100	0.0929	93	85 - 115	2007-07-03
Xylene		mg/Kg	0.300	0.281	94	85 - 115	2007-07-03

 $<sup>^1\</sup>mathrm{Surrogate}$  out due to peak interference.

Work Order: 7070305 "E" Line Oil Booster Page Number: 11 of 11 NW of Oil Center, NM

Standard (	(CCV-1)

$\Omega$ C	Batch:	38762
$\omega$	Datten:	30104

Date Analyzed: 2007-07-03

Analyzed By: AG

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0979	98	85 - 115	2007-07-03
Toluene		mg/Kg	0.100	0.101	101	85 - 115	2007-07-03
Ethylbenzene		${ m mg/Kg}$	0.100	0.0955	96	85 - 115	2007-07-03
Xylene		${ m mg/Kg}$	0.300	0.291	97	85 - 115	2007-07-03

# Standard (ICV-1)

QC Batch: 38763

Date Analyzed: 2007-07-03

Analyzed By: AG

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	0.983	98	85 - 115	2007-07-03

# Standard (CCV-1)

QC Batch: 38763

Date Analyzed: 2007-07-03

Analyzed By: AG

			CCVs	CCVs	$\mathrm{CCVs}$	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
$\overline{\text{GRO}}$		mg/Kg	1.00	0.876	88	85 - 115	2007-07-03

LAB Order ID# 7070305

TraceAnalysis, Inc.

email: lab@traceanalysis.com

FENVIRON/MENTAL 72-

Street, City, Zip)

npany Name

OMMINERAL MICHANIO

6701 Aberdeen Avenue, Suite 9 Lubbock, Taxas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296

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20 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443

Circle or Specify Method No. ANALYSIS REQUEST

6015 Harris Pkwy., Suite 110 Ft. Worth, Texas 76132 Tel (817) 201-5260 Phone #: 432-520-7

Moisture Content Hq ,2ST ,008 Pesticides 8081A / 608 PCB's 8082 / 608 8270C / 625 GC/MS Semi. Vol. 3C/W2 API 8560B / 654 RCI TCLP Pesticides TCLP Semi Volatiles TCLP Volatiles TCLP Metals Ag As Ba Cd Cr Pb Se Hg Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 GRO / DRO TVHC STUB HAT TPH 418.1 / TX1005 / TX1005 Ext(C35) BTEX (8021B) 602 / 8260B / 624 80218 / 602 / 82608 / 624 MTBE F.10 イス 4:00 L'O ILIS ILIS SAMPLING **TIME** -S70-110 1 Proper

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# Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 11, 2007

Work Order: 

7070608

Project Location: NW of Oil Center, NM "E" Line Oil Booster Project Name: "E" Line Oil Booster Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
129158	FPF-1	soil	2007-07-05	11:00	2007-07-06
129159	FPNW-1	soil	2007-07-05	11:05	2007-07-06
129160	FPSW-1	soil	2007-07-05	11:10	2007-07-06
129161	FPF-2	soil	2007-07-05	11:25	2007-07-06
129162	FPF-3	soil	2007-07-05	11:30	2007-07-06

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Michael alm

#### Standard Flags

 ${f B}$  - The sample contains less than ten times the concentration found in the method blank.

Work Order: 7070608 "E" Line Oil Booster Page Number: 2 of 11 NW of Oil Center, NM

# **Analytical Report**

Sample: 129158 - FPF-1

Analysis: TPH DRO QC Batch: 38930 Prep Batch: 33694 Analytical Method: Mod. 8015B Date Analyzed: 2007-07-11 Sample Preparation: 2007-07-10

Prep Method: N/A Analyzed By: TG Prepared By: TG

RL rameter Flag Result

					Spike	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		225	mg/Kg	1	150	150	62.5 - 164

Sample: 129158 - FPF-1

Analysis: TPH GRO QC Batch: 38854 Prep Batch: 33628  $\begin{array}{lll} Analytical \ Method: & S \ 8015B \\ Date \ Analyzed: & 2007-07-06 \\ Sample \ Preparation: & 2007-07-06 \end{array}$ 

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

					$\mathbf{Spike}$	Percent	Recovery
Surrogate	Flag	Result	$\mathbf{Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.681	${ m mg/Kg}$	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.923	${ m mg/Kg}$	1	1.00	92	67.5 - 140.3

Sample: 129159 - FPNW-1

Analysis: TPH DRO QC Batch: 38930 Prep Batch: 33694 Analytical Method: Mod. 8015B
Date Analyzed: 2007-07-11
Sample Preparation: 2007-07-10

Prep Method: N/A
Analyzed By: TG
Prepared By: TG

			*		Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	${f Amount}$	Recovery	Limits
n-Triacontane		221	${ m mg/Kg}$	1	150	147	62.5 - 164

Sample: 129159 - FPNW-1

Analysis: TPH GRO QC Batch: 38854 Prep Batch: 33628

Analytical Method: S 8015B
Date Analyzed: 2007-07-06
Sample Preparation: 2007-07-06

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

Work Order: 7070608 "E" Line Oil Booster Page Number: 3 of 11 NW of Oil Center, NM

Parameter	Flag		$rac{ ext{RL}}{ ext{Result}}$		Units	,	Dilution	RL
GRO	11005		1.24		mg/Kg		1	1.00
					<u> </u>			
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue			0.689	mg/Kg	1	1.00	69	52.4 - 123.7
4-Bromofluor	obenzene (4-BFB)		0.835	mg/Kg	1	1.00	84	67.5 - 140.3
Sample: 129	9160 - FPSW-1							
Analysis:	TPH DRO		Analytica	l Method:	Mod. 8015	B	Pren N	Method: N/A
QC Batch:	38930		Date Ana		2007-07-11			zed By: TG
Prep Batch:	33694			reparation:				red By: TG
	<del>-</del> -1		RL		***		7011 - 4	<b>7.1</b>
Parameter	Flag		Result		Units		Dilution	RL
DRO			< 50.0		mg/Kg		1	50.0
						Spike	Percent	Recovery
Surrogate	$\mathbf{F}$ lag	Result	Units	Di	lution	Amount	Recovery	Limits
n-Triacontane		217	mg/Kg		1	150	145	62.5 - 164
QC Batch: Prep Batch:	33628		C 1 - D	*				d By: AG
	,		_	reparation:	2007-07-06		Prepared	•
Parameter	Flag		RL Result	reparation:	2007-07-06 Units		Prepared Dilution	•
Parameter GRO	Flag		RL	reparation:			-	d By: AG
GRO	Flag	Flag	RL Result	reparation:  Units	Units	Spike Amount	Dilution	d By: AG
		Flag	RL Result <1.00		Units mg/Kg	Spike	Dilution 1 Percent	d By: AG  RL  1.00  Recovery
GRO Surrogate Trifluorotolue		Flag	RL Result <1.00	Units	Units mg/Kg Dilution	Spike Amount	Dilution  1  Percent Recovery	d By: AG  RL  1.00  Recovery Limits
GRO Surrogate Trifluorotolue 4-Bromofluor	ene (TFT)	Flag	RL Result <1.00 Result 0.687	Units mg/Kg	Units mg/Kg Dilution	Spike Amount 1.00	Dilution 1 Percent Recovery 69	RL 1.00  Recovery Limits 52.4 - 123.7
Surrogate Trifluorotoluc 4-Bromofluor Sample: 12	ene (TFT) robenzene (4-BFB)	Flag	RL Result <1.00  Result 0.687 0.866	Units mg/Kg mg/Kg	Units mg/Kg Dilution	Spike Amount 1.00	Dilution  1  Percent Recovery  69 87	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3
Surrogate Trifluorotoluc 4-Bromofluor  Sample: 12 Analysis:	ene (TFT) robenzene (4-BFB) 29161 - FPF-2 BTEX	Flag	RL Result <1.00  Result 0.687 0.866  Analytical	Units mg/Kg mg/Kg	Units mg/Kg  Dilution 1	Spike Amount 1.00	Dilution  1  Percent Recovery  69 87	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3
Surrogate Trifluorotoluc 4-Bromofluor Sample: 12	ene (TFT) robenzene (4-BFB) 29161 - FPF-2	Flag	RL Result <1.00  Result 0.687 0.866	Units mg/Kg mg/Kg	Units mg/Kg  Dilution 1 1 S 8021B	Spike Amount 1.00	Dilution  1  Percent Recovery  69 87	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 dd By: MT
Surrogate Trifluorotolue 4-Bromofluor  Sample: 12 Analysis: QC Batch: Prep Batch:	ene (TFT) robenzene (4-BFB)  29161 - FPF-2  BTEX 38913 33679		RL Result <1.00  Result 0.687 0.866  Analytical Date Analy Sample Pre	Units mg/Kg mg/Kg Method: zed: paration:	Units mg/Kg Dilution 1 1 S 8021B 2007-07-10 2007-07-10	Spike Amount 1.00	Dilution  1  Percent Recovery 69 87  Prep Me Analyze Prepare	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 dd By: MT dd By: MT
Surrogate Trifluorotolue 4-Bromofluor  Sample: 12 Analysis: QC Batch: Prep Batch:	ene (TFT) robenzene (4-BFB)  29161 - FPF-2 BTEX 38913		RL Result <1.00  Result 0.687 0.866  Analytical Date Analy Sample Pre	Units mg/Kg mg/Kg Method: zed: paration:	Units mg/Kg  Dilution 1 1 1  S 8021B 2007-07-10 2007-07-10	Spike Amount 1.00	Dilution  1 Percent Recovery 69 87  Prep Me Analyze Prepare	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 dd By: MT d By: MT
Surrogate Trifluorotolue 4-Bromofluor  Sample: 12 Analysis: QC Batch: Prep Batch: Parameter Benzene	ene (TFT) robenzene (4-BFB)  29161 - FPF-2  BTEX 38913 33679		RL Result <1.00  Result 0.687 0.866  Analytical 1 Date Analy Sample Pre R1 Result <0.010	Units mg/Kg mg/Kg mg/Kg	Units mg/Kg  Dilution 1 1 1  S 8021B 2007-07-10 2007-07-10  Units mg/Kg	Spike Amount 1.00	Dilution  1 Percent Recovery 69 87  Prep Me Analyze Prepare	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 dd By: MT d By: MT  RL 0.0100
Surrogate Trifluorotolue 4-Bromofluor  Sample: 12 Analysis: QC Batch: Prep Batch:	ene (TFT) robenzene (4-BFB)  29161 - FPF-2 BTEX 38913 33679 Flag		RL Result <1.00  Result 0.687 0.866  Analytical Date Analy Sample Pre	Units mg/Kg mg/Kg Method: zed: paration: t 0 6	Units mg/Kg  Dilution 1 1 1  S 8021B 2007-07-10 2007-07-10	Spike Amount 1.00	Dilution  1 Percent Recovery 69 87  Prep Me Analyze Prepare	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 dd By: MT d By: MT

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Surrogate		Flag	Result	Units	Dilutio	Spike n Amoun	Percent Recovery	Recovery Limits
Trifluorotoluene (T	ጉጉጥ)	1 105	0.871	mg/Kg	1	1.00	87	70 - 130
4-Bromofluorobenz		1	1.50	mg/Kg	1	1.00	150	70 - 130
Sample: 129161	- FPF-2							
-	I DRO		Analytical	Method:	Mod. 801	5B	Prep N	fethod: N/A
QC Batch: 3893			Date Anal		2007-07-1	1	Analyz	
Prep Batch: 3369	94		Sample P	reparation:	2007-07-1	0	Prepar	ed By: TG
<b>.</b>	<b>1</b> 73		RL		TT */.		D'1 - 1' -	DI
Parameter	Flag		Result		Units		Dilution 5	RL
DRO			<250		mg/Kg		9	50.0
Surrogate	Flag	Result	Units	Dilı	ution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	2	454	mg/Kg		5	150	303	62.5 - 164
Sample: 129161	- FPF-2							
Amalasia. TDI	H GRO		Analytical	Mothod	S 8015B		Prep Me	thod: S 5035
Analysis: TPI QC Batch: 3885			Date Anal		2007-07-0	7	Analyze	
Prep Batch: 3362	_			eparation:	2007-07-0		Prepared	
•			•	-			-	·
			RL					
Parameter	Flag		Result		Units		Dilution	RL
GRO			213		mg/Kg		10	1.00
<b>a</b>		E)	D li	TT	Dilection	Spike	Percent	Recovery
Surrogate Trifluorotoluene (	rem)	Flag	Result 7.16	Units mg/Kg	Dilution 10	Amount 10.0	Recovery 72	Limits 52.4 - 123.7
4-Bromofluoroben			$\frac{7.10}{12.0}$	mg/Kg mg/Kg	10	10.0	120	67.5 - 140.3
Sample: 129162		,		<u> </u>	,			
_	H DRO		Analytica	l Method:	Mod. 801	.5B	Prep I	Method: N/A
QC Batch: 389			Date Ana		2007-07-1			zed By: TG
Prep Batch: 336	94		Sample P	reparation:	2007-07-1	0		red By: TG
			RL					
Parameter	Flag		Result		Units		Dilution	RI
DRO			< 50.0		mg/Kg		11	50.
						Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result 214	Units		ution	Amount 150	Recovery	Limits
n-Triacontane			m mg/Kg		1		143	62.5 - 16

<sup>&</sup>lt;sup>1</sup>High surrogate recovery due to peak interference. <sup>2</sup>High surrogate recovery due to peak interference.

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Sample: 129162 - FPF-3

Analysis: TPH GRO QC Batch: 38855 Prep Batch: 33629 Analytical Method: S 8015B
Date Analyzed: 2007-07-07
Sample Preparation: 2007-07-07

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

RL Popult

Parameter	$\operatorname{Flag}$	Result	$\mathbf{U}\mathbf{nits}$	Dilution	RL
GRO		<1.00	${ m mg/Kg}$	1	1.00

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.706	mg/Kg	1	1.00	71	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.864	mg/Kg	1	1.00	86	67.5 - 140.3

Method Blank (1) QC Batch: 38854

QC Batch: 38854 Prep Batch: 33628 Date Analyzed: 2007-07-06 QC Preparation: 2007-07-06 Analyzed By: AG Prepared By: AG

MDL Parameter Flag Result

 $\begin{array}{c|ccccc} Parameter & Flag & Result & Units & RL \\ \hline GRO & <0.739 & mg/Kg & 1 \\ \end{array}$ 

Surrogate	Flag	Result	Units	Dilution	$egin{array}{c} \mathbf{Spike} \ \mathbf{Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.764	mg/Kg	1	1.00	76	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.714	mg/Kg	1	1.00	71	67.5 - 140.3

Method Blank (1) QC Batch: 38855

QC Batch: 38855 Prep Batch: 33629 Date Analyzed: 2007-07-07 QC Preparation: 2007-07-07

Analyzed By: AG Prepared By: AG

MDL Brameter Flag Result

					$_{ m Spike}$	Percent	Recovery
Surrogate	Flag	$\operatorname{Result}$	$\mathbf{Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.776	mg/Kg	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.765	mg/Kg	1	1.00	76	67.5 - 140.3

Method Blank (1) QC Batch: 38913

QC Batch: 38913 Prep Batch: 33679 Date Analyzed: 2007-07-10 QC Preparation: 2007-07-10

Analyzed By: MT Prepared By: MT

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		$\mathrm{MDL}$		
Parameter	Flag	Result	Units	RL
Benzene		< 0.000860	mg/Kg	0.01
Toluene		< 0.00210	mg/Kg	0.01
Ethylbenzene		< 0.00988	${ m mg/Kg}$	0.01
Xylene		< 0.00163	mg/Kg	0.01

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.845	mg/Kg	1	1.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)		0.783	$_{ m mg/Kg}$	1	1.00	<b>7</b> 8	70 - 130

Method Blank (1)

QC Batch: 38930

QC Batch: 38930 Prep Batch: 33694 Date Analyzed:

2007-07-11

Analyzed By: TG

QC Preparation: 2007-07-10

Prepared By: TG

	M	IDL
	-	• •

					Spike	Percent	Recovery
Surrogate	$\operatorname{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		204	mg/Kg	1	150	136	62.5 - 164

#### Laboratory Control Spike (LCS-1)

QC Batch: 38854 Prep Batch: 33628 Date Analyzed: 2007-07-06 QC Preparation: 2007-07-06 Analyzed By: AG Prepared By: AG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	8.17	mg/Kg	1	10.0	< 0.739	82	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	8.53	mg/Kg	1	10.0	< 0.739	85	57.7 - 102.5	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$\operatorname{Limit}$
Trifluorotoluene (TFT)	1.03	0.919	mg/Kg	1	1.00	103	92	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.808	0.807	mg/Kg	1	1.00	81	81	70 - 130

#### Laboratory Control Spike (LCS-1)

QC Batch: 38855 Prep Batch: 33629 Date Analyzed: 2007-07-07 QC Preparation: 2007-07-07

Analyzed By: AG Prepared By: AG

Work Order: 7070608 "E" Line Oil Booster Page Number: 7 of 11 NW of Oil Center, NM

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
GRO	9.67	mg/Kg	1	10.0	< 0.739	97	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		${ m Rec.}$		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	8.49	mg/Kg	1	10.0	< 0.739	85	57.7 - 102.5	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			$\operatorname{Spike}$	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.03	0.940	mg/Kg	1	1.00	103	94	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.872	0.777	${ m mg/Kg}$	1	1.00	87	78	70 - 130

# Laboratory Control Spike (LCS-1)

QC Batch: 38913 Prep Batch: 33679 Date Analyzed: 2007-07-10 QC Preparation: 2007-07-10

Analyzed By: MT Prepared By: MT

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.876	mg/Kg	1	1.00	< 0.000860	88	76.9 - 114.7
Toluene	0.859	${ m mg/Kg}$	1	1.00	< 0.00211	86	77.3 - 113.7
Ethylbenzene	0.833	mg/Kg	1	1.00	< 0.000988	83	79.5 - 112.5
Xylene	2.48	mg/Kg	1	3.00	< 0.00163	83	81.8 - 111.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.914	mg/Kg	1	1.00	< 0.000860	91	76.9 - 114.7	4	20
Toluene	0.893	${ m mg/Kg}$	1	1.00	< 0.00211	89	77.3 - 113.7	4	20
Ethylbenzene	0.870	mg/Kg	1	1.00	< 0.000988	87	79.5 - 112.5	4	20
Xylene	2.61	mg/Kg	1	3.00	< 0.00163	87	81.8 - 111.8	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	$egin{array}{c}  ext{LCS} \  ext{Result} \end{array}$	$\begin{array}{c}  ext{LCSD} \\  ext{Result} \end{array}$	Units	Dil:	$egin{array}{c}  ext{Spike} \  ext{Amount} \end{array}$	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.898	0.859	mg/Kg	1	1.00	90	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.822	0.861	mg/Kg	1	1.00	82	86	70 - 130

#### Laboratory Control Spike (LCS-1)

QC Batch: 38930 Prep Batch: 33694 Date Analyzed: 2007-07-11 QC Preparation: 2007-07-10

Analyzed By: TG Prepared By: TG

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\operatorname{Limit}$
DRO	274	${ m mg/Kg}$	1	250	<10.7	110	64.1 - 124

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Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.		ec. mit	RPD	RPD Limit
DRO		275	mg/Kg	1	250	<10.7	110	64.1	- 124	0	20
Percent recovery is based	on the sp	ike result. I	RPD is b	ased on	the spike a	and spike du	plicate	result.			
	LCS	LCSD		-		Spike	$_{ m LC}$	C	LCSD		Rec.
Surrogate	Result	Result	Ŧ ſ-	nits	Dil.	Amount	Red		Rec.		Rec. Limit
n-Triacontane	212	214		Kg/Kg	1	150	14:		143		5 - 164
II- IIIacontaire		211		5/ **8		100			110		.0 101
Matrix Spike (MS-1)	Spiked	Sample: 129	9124								
QC Batch: 38854			Date An	alyzed:	2007-07-	06			Anal	yzed By	: AG
Prep Batch: 33628			QC Prep	-	2007-07-	06				ared By	
•											
		MS				Spike	Ma	trix			Rec.
Param		Resul	t (	Units	Dil.	Amount		sult	Rec.		Limit
GRO		8.17	m	ıg/Kg	1	10.0	4.	52	36		- 141.5
Percent recovery is based	on the sr	ike result. l	RPD is b	ased on	the spike	and spike du	plicate	result.			
· ·	•						-		,		~~~
D		MSD	T T : 4	D:I	Spike	Matrix	D.,,		ec.	DDD	RPD
Param GRO		Result 8.38	Units mg/Kg	$\frac{\text{Dil.}}{1}$	Amount 10.0	Result 4.52	Rec. 39		mit 141.5	$\frac{\text{RPD}}{2}$	Limit
	.,					·		··			20
Percent recovery is based	on the sp	oike result. I	RPD is b	ased on	the spike	and spike di	iplicate	result.			
		MS	MS	D		Spi	ke	MS	MSD	I	Rec.
Surrogate		Result	Rest	ult <b>U</b>	Units I	Oil. Amo	unt	Rec.	Rec.	L	imit
Trifluorotoluene (TFT)		0.593	0.54	43 m	ıg/Kg	1 1		59	54	40 -	125.3
4-Bromofluorobenzene (4-	·BFB)	1.09	1.0	3 m	ıg/Kg	1 1		109	103	86.7	- 144.5
Matrix Spike (MS-1)	Spiked	Commiss 19									
OC Batch: 38855	•	Sample: 129		alvzed:	2007-07-	.07			Anal	wad R	AC
QC Batch: 38855 Prep Batch: 33629	•	-	Date An	•	2007-07- 2007-07-					lyzed By ared By	
QC Batch: 38855 Prep Batch: 33629	•	-		•						lyzed By pared By	
-	•	-	Date An	•		-07	Mo	.+ni			: AG
Prep Batch: 33629	•	MS	Date An QC Prep	paration:	2007-07-	Spike	_	trix sult	Prep	ared By	Rec.
Prep Batch: 33629 Param		MS Resul	Date An QC Prep	paration: Units	2007-07- Dil.	Spike Amount	Re	sult	Prep Rec.	ared By	Rec.
Prep Batch: 33629  Param GRO	-	MS Resul 7.46	Date An QC Prep	Oaration: Units	2007-07- Dil.	Spike Amount 10.0	Re	sult .739	Prep Rec. 75	ared By	Rec.
Prep Batch: 33629 Param	-	MS Resul 7.46 bike result.	Date An QC Prep	Units	2007-07- Dil.  1 the spike	Spike Amount 10.0 and spike du	Re	sult .739	Prep Rec. 75	ared By	: AG  Rec.  Limit - 141.5
Prep Batch: 33629  Param  GRO  Percent recovery is based	-	MS Resul 7.46 Dike result.	Date An QC Prep	Units ng/Kg pased on	Dil.  1 the spike	Spike Amount 10.0 and spike do Matrix	Re <0 uplicate	sult .739 result R	Prep Rec. 75	ared By	Rec. Limit - 141.5
Prep Batch: 33629  Param  GRO  Percent recovery is based  Param	-	MS Result 7.46 pike result. MSD Result	Date An QC Preport It	Units ng/Kg pased on Dil.	Dil.  1 the spike Spike Amount	Spike Amount 10.0 and spike do Matrix Result	Re <0 uplicate	sult .739 result R Li	Rec. 75 .ec. mit	ared By	Rec. Limit - 141.5
Prep Batch: 33629  Param GRO  Percent recovery is based  Param GRO	on the sp	MS Result 7.46 bike result. MSD Result 7.52	Date An QC Preport of the Units Transfer of	Units ng/Kg pased on Dil.	Dil.  1 the spike Spike Amount 10.0	Spike Amount 10.0 and spike do Matrix Result <0.739	Re   <0	sult .739 result. R Li 10 -	Rec. 75 .ec. mit 141.5	ared By	Rec. Limit - 141.5
Prep Batch: 33629  Param  GRO  Percent recovery is based  Param	on the sp	MS Result 7.46 bike result. MSD Result 7.52	Date An QC Preport of the Units Transfer of	Units ng/Kg pased on Dil.	Dil.  1 the spike Spike Amount 10.0	Spike Amount 10.0 and spike do Matrix Result <0.739	Re   <0	sult .739 result. R Li 10 -	Rec. 75 .ec. mit 141.5	ared By	Rec. Limit - 141.5
Prep Batch: 33629  Param GRO  Percent recovery is based  Param GRO	on the sp	MS Result 7.46  Dike result.  MSD Result 7.52  Dike result.	Date An QC Preport of the Units The Manager of the Units The	Units ng/Kg pased on Dil. 1 pased on	Dil.  1 the spike Spike Amount 10.0	Spike Amount 10.0 and spike de Matrix Result <0.739 and spike de	Rec. $75$	result.  R Li 10 -	Rec. 75 .ec. mit 141.5	ared By  10  RPD	Rec. Limit - 141.5  RPD Limit 20
Prep Batch: 33629  Param GRO Percent recovery is based  Param GRO Percent recovery is based	on the sp	MS Result 7.46 bike result. MSD Result 7.52 bike result. MS	Date An QC Preport of the Units mg/Kg RPD is the MS	Units ng/Kg pased on Dil. 1 pased on	Dil.  1 the spike Spike Amount 10.0 the spike	Spike Amount 10.0 and spike du Matrix Result <0.739 and spike du Spi	Rec. 75 Iplicate	result.  R Li 10 - result.  MS	Rec. 75 .ec. mit 141.5 .MSD	ared By	Rec. Limit - 141.5  RPD Limit 20
Prep Batch: 33629  Param GRO Percent recovery is based  Param GRO	on the sp	MS Result 7.46  Dike result.  MSD Result 7.52  Dike result.	Date An QC Preport of the Units of the MS RPD is the MS to Res	Units  ng/Kg  pased on  Dil.  1  pased on  SD  ult	Dil.  1 the spike Spike Amount 10.0 the spike	Spike Amount 10.0 and spike de Matrix Result <0.739 and spike de	Rec. 75 uplicate	result.  R Li 10 -	Rec. 75 .ec. mit 141.5	ared By  10  RPD  1	Rec. Limit - 141.5  RPD Limit 20

<sup>&</sup>lt;sup>3</sup>Surrogate out due to peak interference.

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Spiked Sample: 129346 Matrix Spike (MS-1)

QC Batch: 38913 Prep Batch: 33679 Date Analyzed: 2007-07-10 QC Preparation: 2007-07-10 Analyzed By: MT Prepared By: MT

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	$\operatorname{Rec}$ .	$\operatorname{Limit}$
Benzene	0.711	mg/Kg	1	1.00	< 0.000860	71	55.7 - 117
Toluene	0.717	${ m mg/Kg}$	1	1.00	< 0.000211	72	58.3 - 134
Ethylbenzene	0.738	${ m mg/Kg}$	1	1.00	< 0.000988	74	58.8 - 146
Xylene	2.25	mg/Kg	1	3.00	< 0.00163	75	59.3 - 148

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		${ m Rec.}$		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.674	mg/Kg	1	1.00	< 0.000860	67	55.7 - 117	5	20
Toluene	0.676	${ m mg/Kg}$	1	1.00	< 0.000211	68	58.3 - 134	6	20
Ethylbenzene	0.716	${ m mg/Kg}$	1	1.00	< 0.000988	72	58.8 - 146	3	20
Xylene	2.18	mg/Kg	1	<b>3</b> .00	< 0.00163	73	59.3 - 148	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	$\mathbf{Units}$	Dil.	Amount	Rec.	Rec.	$\mathbf{Limit}$
Trifluorotoluene (TFT)	0.900	0.802	mg/Kg	1	1	90	80	70 - 130
4-Bromofluorobenzene (4-BFB)	0.977	0.899	${ m mg/Kg}$	1	1	98	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 129159

QC Batch: Prep Batch: 33694

38930

Date Analyzed:

2007-07-11 QC Preparation: 2007-07-10

Analyzed By: TG Prepared By: TG

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\operatorname{Limit}$
DRO	248	mg/Kg	1	250	<10.7	99	47.5 - 127

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	233	mg/Kg	1	250	<10.7	93	47.5 - 127	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$\operatorname{Limit}$
n-Triacontane	215	214	${ m mg/Kg}$	1	150	143	143	62.5 - 164

Standard (ICV-1)

QC Batch: 38854

Date Analyzed: 2007-07-06

Analyzed By: AG

Work Order: 7070608 "E" Line Oil Booster Page Number: 10 of 11 NW of Oil Center, NM

Analyzed By: MT

			TOT!	TOT.	TCT!	<b>.</b>		
			ICVs	ICVs	ICVs Percent	Percent	D /	
D	T31	TT!	True	Found		Recovery	Date	
Param	Flag	Units	Conc. 1.00	Conc. 0.884	Recovery 88	Limits 85 - 115	Analyzed 2007-07-06	
GRO		mg/Kg	1.00	0.004	00	09 - 119	2007-07-00	
Standard (	(CCV-1)							
QC Batch:	38854		Date Anal	Date Analyzed: 2007-07-06			yzed By: AG	
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
GRO		${ m mg/Kg}$	1.00	1.06	106	85 - 115	2007-07-06	
Standard (	(ICV-1)							
QC Batch: 38855			Date Anal	lyzed: 2007-07	Analyzed By: AG			
			ICVs	ICVs	ICVs	Danasant		
			True	Found	Percent	Percent	D. t.	
D	Flag	Units	Conc.	Conc.	Recovery	Recovery Limits	Date Analyzed	
Param GRO	Flag	mg/Kg	1.00	1.05	105	85 - 115	2007-07-07	
	(							
Standard	`	)	<b></b>		0.7		15 16	
QC Batch:	38855		Date Anal	lyzed: 2007-07	-07	Analyzed By: AG		
			CCVs	CCVs	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	$\operatorname{Flag}$	$\mathbf{U}\mathbf{nits}$	Conc.	Conc.	Recovery	Limits	Analyzed	
GRO		mg/Kg	1.00	0.894	89	85 - 115	2007-07-07	
Standard	(ICV-1)							
QC Batch:	38913		Date Anal	lyzed: 2007-07	Analyzed By: MT			
			ICVs	ICVs	ICVs	Percent		
			True	Found	Percent	Recovery	Date	
Param		Flag Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Benzene		mg/Kg		0.0907	91	85 - 115	2007-07-10	
Toluene		mg/Kg		0.0887	89	85 - 115	2007-07-10	
Ethylbenzer	ne	mg/Kg		0.0872	87	85 - 115	2007-07-10	
Xylene		mg/Kg	0.300	0.262	87	85 - 115	2007-07-10	

Standard (CCV-1)

QC Batch: 38913

Date Analyzed: 2007-07-10

Work Order: 7070608 "E" Line Oil Booster Page Number: 11 of 11 NW of Oil Center, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0906	91	85 - 115	2007-07-10
Toluene		mg/Kg	0.100	0.0882	88	85 - 115	2007-07-10
Ethylbenzene		mg/Kg	0.100	0.0867	87	85 - 115	2007-07-10
Xylene		mg/Kg	0.300	0.259	86	85 - 115	2007-07-10

# Standard (ICV-1)

QC Batch: 38930

Date Analyzed: 2007-07-11

Analyzed By: TG

			ICVs	ICVs	ICVs	Percent	
			$\operatorname{True}$	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	285	114	85 - 115	2007-07-11

# Standard (CCV-1)

QC Batch: 38930

Date Analyzed: 2007-07-11

Analyzed By: TG

Param	Flor	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date
Param	${f Flag}$	Omts	Conc.	Conc.	necovery	Limits	Analyzed
DRO		mg/Kg	250	245	98	85 - 115	2007-07-11

		LAB Order ID #	10608	Page_	of
TraceAnaly email: lab@tracea	,	6701 Aberdeen Avenue, Suite 9 <b>Lubbock, Texas 79424</b> Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296	5002 Basin Street, Suite A1 Midland, Texas 79703 Vel (432) 689-6301 Sex (432) 689-6313	200 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443	6015 Harris Pkwy., Suite 110 <b>Ft. Worth, Texas 76132</b> Tel (817) 201-5260
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AB#: FIELD CODE	# CONTAINERS Volume / Amount WATER SOIL AIR SLUDGE XIALWM	2001	MTBE 8021B / 602 / 8260B / 624	TCLP Pesticides RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 82700 PCB's 8082 / 608 Pesticides 8081A / 608 BOD, TSS, pH Moisture Content	Turn Around Time if different from standard
B USE) NEX	# CONTA Volume / WATER SOIL AIR SLUDGE HCI	HNO3 H <sub>2</sub> SO <sub>4</sub> NGC NONE DATE	MTBE 80 BTEX 802 TPH 418.1 TPH 6015 PAH 82700 Total Metals TCLP Metals TCLP Vola	TCLP F RCI GC/MS GC/MS PCB's P Pesticic BOD, T	Turn Ar
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E-Mail lab@traceunalysis.com

# Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 19, 2007

Work Order: 7071325 

NW of Oil Center, NM Project Location: E Line Oil Booster Project Name: E Line Oil Booster Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
129912	SB-1 @ 20'	soil	2007-07-12	09:50	2007-07-13
129918	SB-1 @ 50'	soil	2007-07-12	10:20	2007-07-13
129924	SB-2 @ 25'	soil -	2007-07-12	11:45	2007-07-13
129929	SB-3 @ 25'	soil	2007-07-12	13:25	2007-07-13
129930	NSP	soil	2007-07-12	14:00	2007-07-13
129931	WSP	soil	2007-07-12	14:05	2007-07-13
129932	ESP	soil	2007-07-12	14:10	2007-07-13
129933	SSP	soil	2007-07-12	14:15	2007-07-13

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 13 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

#### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Work Örder: 7071325 E Line Oil Booster

Page Number: 2 of 13 NW of Oil Center, NM

# **Analytical Report**

Sample: 129912 - SB-1 @ 20'

33871

Analysis: TPH DRO QC Batch: 39131

Prep Batch:

Analytical Method: Date Analyzed:

Sample Preparation:

Mod. 8015B 2007-07-17 2007-07-17

Prep Method: N/A Analyzed By: Prepared By:

RL

Parameter Flag Result Units Dilution RL<50.0 mg/Kg 50.0DRO

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		187	mg/Kg	1	<b>15</b> 0	125	61.7 - 143.2

Sample: 129912 - SB-1 @ 20'

TPH GRO Analysis: QC Batch: 39142 Prep Batch: 33877

Analytical Method: S 8015B Date Analyzed: 2007-07-16 Sample Preparation: 2007-07-16 Prep Method: S 5035 Analyzed By: Prepared By:

RLParameter Flag Result

Units Dilution RL<1.00 mg/Kg 1.00 GRO

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	$\mathbf{Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.679	mg/Kg	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.796	${ m mg/Kg}$	1	1.00	80	67.5 - 140.3

Sample: 129918 - SB-1 @ 50'

Analysis: BTEX QC Batch: 39140 Prep Batch: 33877

Analytical Method: S 8021B Date Analyzed: 2007-07-16 Sample Preparation: 2007-07-16

Prep Method: S 5035 Analyzed By:

Prepared By:

RLParameter Flag Result Units Dilution RLBenzene < 0.0100 mg/Kg 1 0.0100 Toluene < 0.0100 mg/Kg 1 0.0100Ethylbenzene < 0.0100 mg/Kg 1 0.0100Xylene 0.0267mg/Kg 1 0.0100

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	$\operatorname{Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.12	mg/Kg	1	1.00	112	26 - 117.8
4-Bromofluorobenzene (4-BFB)		1.18	mg/Kg	1	1.00	118	51.1 - 119.1

Work Order: 7071325 E Line Oil Booster

Page Number: 3 of 13 NW of Oil Center, NM

Sample: 129918 - SB-1 @ 50'

TPH DRO Analysis: QC Batch: 39131 Prep Batch: 33871

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-17 Sample Preparation: 2007-07-17

Prep Method: N/A Analyzed By: Prepared By:

RL

Parameter	Flag	Result	Units	Dilution	RL
DRO		< 50.0	${ m mg/Kg}$	1	50.0

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		169	${ m mg/Kg}$	1	150	113	61.7 - 143.2

Sample: 129918 - SB-1 @ 50'

Analysis: QC Batch:

TPH GRO 39142 Prep Batch: 33877

Analytical Method:

S 8015B Date Analyzed: 2007-07-16 Sample Preparation: 2007-07-16 Prep Method: S 5035

Analyzed By: Prepared By:

RL

Parameter	Flag	Result	Units	Dilution	RL
GRO		<1.00	m mg/Kg	1	1.00

					Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	${ m Units}$	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.657	mg/Kg	1	1.00	66	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.804	mg/Kg	1	1.00	80	67.5 - 140.3

Sample: 129924 - SB-2 @ 25'

Analysis: TPH DRO QC Batch: 39131 Prep Batch: 33871

Analytical Method: Date Analyzed: Sample Preparation:

Mod. 8015B 2007-07-17 2007-07-17

Prep Method: N/A Analyzed By:

Prepared By:

RLResult Units Parameter Flag Dilution RL< 50.0 DRO mg/Kg 50.0

					$\mathbf{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		188	mg/Kg	1	150	125	61.7 - 143.2

Sample: 129924 - SB-2 @ 25'

33877

Analysis: QC Batch: Prep Batch: TPH GRO 39142

Analytical Method: Date Analyzed:

S 8015B 2007-07-16 Sample Preparation: 2007-07-16 Prep Method: S 5035

Analyzed By: Prepared By:

Work Order: 7071325 E Line Oil Booster

Page Number: 4 of 13 NW of Oil Center, NM

				RL					
Parameter		Flag		Result		Units		Dilution	RL
GRO				<1.00	1 1 1	mg/Kg		1	1.00
									_
							Spike	Percent	Recovery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue				0.667	mg/Kg	1	1.00	67	52.4 - 123.7
4-Bromofluor	obenzene (4-	BFB)		0.792	mg/Kg	1	1.00	79	67.5 - 140.3
Sample: 129	9929 - SB-3	@ 25	,						
Analysis:	TPH DRO			Analytica	l Method:	Mod. 8015E	3	Prep M	Method: N/A
QC Batch:	39131			Date Ana		2007-07-17		_	zed By:
Prep Batch:	33871				reparation:	2007-07-17			ed By:
				RL					
Parameter		Flag		Result		$\mathbf{U}_{\mathbf{nits}}$		Dilution	RL
DRO				< 50.0		${ m mg/Kg}$		1	50.0
							Spike	Percent	Recovery
Surrogate	Flag	r	Result	Units	Dilu		mount	Recovery	Limits
Duriogate		<u> </u>	167	mg/Kg		1	150	111	61.7 - 143.2
n-Triacontan	9929 - SB-3	3 @ 25							
n-Triacontan		3 @ 25		Analytica Date Ana	l Method:	S 8015B 2007-07-16 2007-07-16		Prep Me Analyzec Preparec	d By:
n-Triacontan Sample: 12 Analysis: QC Batch:	9929 - SB-3 TPH GRO 39142	3 @ 25		Analytica Date Ana Sample P	l Method: lyzed:	2007-07-16		Analyze	d By:
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142			Analytica Date Ana Sample P RL	l Method: lyzed:	2007-07-16 2007-07-16		Analyzeo Prepareo	d By: d By:
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142	3 @ 25		Analytica Date Ana Sample P	l Method: lyzed:	2007-07-16 2007-07-16 Units		Analyze	d By:
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142			Analytica Date Ana Sample P RL Result	l Method: lyzed:	2007-07-16 2007-07-16		Analyzed Prepared Dilution	d By: d By: RL 1.00
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO	9929 - SB-3 TPH GRO 39142		,	Analytica Date Ana Sample P  RL Result  <1.00	l Method: lyzed: reparation:	2007-07-16 2007-07-16 Units mg/Kg	Spike	Analyzed Prepared Dilution 1	d By: d By: RL 1.00 Recovery
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate	9929 - SB-3 TPH GRO 39142 33877			Analytica Date Ana Sample P  RL Result <1.00	l Method: lyzed: reparation: Units	2007-07-16 2007-07-16 Units mg/Kg	Amount	Analyzed Prepared Dilution  I Percent Recovery	d By: d By: RL 1.00 Recovery Limits
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu	9929 - SB-3 TPH GRO 39142 33877 ene (TFT)	Flag	,	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676	l Method: lyzed: reparation: Units mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution	Amount 1.00	Analyzed Prepared Dilution I Percent Recovery 68	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu	9929 - SB-3 TPH GRO 39142 33877	Flag	,	Analytica Date Ana Sample P  RL Result <1.00	l Method: lyzed: reparation: Units	2007-07-16 2007-07-16 Units mg/Kg	Amount	Analyzed Prepared Dilution  I Percent Recovery	d By: d By: RL 1.00 Recovery Limits
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu	9929 - SB-3 TPH GRO 39142 33877 ene (TFT) robenzene (4-	Flag -BFB)	,	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676	l Method: lyzed: reparation: Units mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution	Amount 1.00	Analyzed Prepared Dilution I Percent Recovery 68	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7
n-Triacontan	9929 - SB-3 TPH GRO 39142 33877 ene (TFT) robenzene (4-	Flag -BFB)	,	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676	l Method: lyzed: reparation:  Units mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution	Amount 1.00	Analyzed Prepared Dilution I Percent Recovery 68	RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3
n-Triacontan	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4-	Flag -BFB)	,	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793	l Method: lyzed: reparation:  Units mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution	Amount 1.00	Analyzed Prepared  Dilution  1  Percent Recovery  68  79	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3
n-Triacontan	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4-	Flag -BFB)	,	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I	l Method: lyzed: reparation:  Units mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1	Amount 1.00	Analyzed Prepared  Dilution  1  Percent Recovery  68  79	d By: d By: RL 1.00 Recovery Limits 52.4 - 123.7 67.5 - 140.3 ethod: S 5035 d By:
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu- 4-Bromofluor  Sample: 12  Analysis: QC Batch:	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4- 29930 - NSF BTEX 39140	Flag	Flag	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I Date Analy Sample Pre	Units mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1 S 8021B 2007-07-16	Amount 1.00	Analyzed Prepared  Dilution  I  Percent Recovery  68  79  Prep Me Analyzed Prepared	d By: d By: RL 1.00 Recovery Limits 52.4 - 123.7 67.5 - 140.3 ethod: S 5035 d By:
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu 4-Bromofluor  Sample: 12  Analysis: QC Batch: Prep Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4- 29930 - NSF BTEX 39140	Flag -BFB)	Flag	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I Date Analy Sample Pre  RI Result	l Method: lyzed: reparation:  Units mg/Kg mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1 S 8021B 2007-07-16 2007-07-16	Amount 1.00	Analyzed Prepared  Dilution  I  Percent Recovery  68  79  Prep Me Analyzed Prepared	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 d By: d By: RL
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter  GRO  Surrogate Trifluorotolu 4-Bromofluor  Sample: 12  Analysis: QC Batch: Prep Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4- 29930 - NSF BTEX 39140	Flag	Flag	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I Date Analy Sample Pre  RI Result <0.0100	Units mg/Kg mg/Kg mg/Kg	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1 S 8021B 2007-07-16 2007-07-16	Amount 1.00	Analyzed Prepared  Dilution  1  Percent Recovery  68  79  Prep Me Analyzed Prepared  Dilution  1	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 d By: d By: RL 0.0100
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter GRO  Surrogate Trifluorotolu 4-Bromofluor  Sample: 12  Analysis: QC Batch: Prep Batch: Prep Batch: Prop Batch: Prop Batch: Parameter Benzene Toluene	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4- 29930 - NSF BTEX 39140 33877	Flag	Flag	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I Date Analy Sample Pre  RI Result <0.0100 0.0258	Units mg/Kg mg/Kg Method: zed: paration:	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1 S 8021B 2007-07-16 2007-07-16 Units mg/Kg mg/Kg	Amount 1.00	Analyzed Prepared  Dilution  1  Percent Recovery  68  79  Prep Me Analyzed Prepared  Dilution  1  1	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 d By: d By: RL 0.0100 0.0100
n-Triacontan  Sample: 12  Analysis: QC Batch: Prep Batch:  Parameter  GRO  Surrogate Trifluorotolu 4-Bromofluor  Sample: 12  Analysis: QC Batch: Prep Batch: Prep Batch:	9929 - SB-3 TPH GRO 39142 33877  ene (TFT) robenzene (4- 29930 - NSF BTEX 39140 33877	Flag	Flag	Analytica Date Ana Sample P  RL Result <1.00  Result 0.676 0.793  Analytical I Date Analy Sample Pre  RI Result <0.0100	Units mg/Kg mg/Kg Method: zed: paration:	2007-07-16 2007-07-16 Units mg/Kg Dilution 1 1 S 8021B 2007-07-16 2007-07-16	Amount 1.00	Analyzed Prepared  Dilution  1  Percent Recovery  68  79  Prep Me Analyzed Prepared  Dilution  1	d By: d By:  RL 1.00  Recovery Limits 52.4 - 123.7 67.5 - 140.3  ethod: S 5035 d By: d By: RL 0.0100

Report Date: July 19, 2007

E Line Oil Booster

Work Order: 7071325 E Line Oil Booster

Page Number: 5 of 13 NW of Oil Center, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.868	${ m mg/Kg}$	1	1.00	87	26 - 117.8
4-Bromofluorobenzene (4-BFB)	1	1.54	${ m mg/Kg}$	1	1.00	154	51.1 - 119.1

Sample: 129930 - NSP

Analysis: QC Batch:

TPH DRO 39131 33871 Prep Batch:

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-17 Sample Preparation: 2007-07-17

Prep Method: N/A

Analyzed By: Prepared By:

RL

Parameter	Flag	Result	Units	Dilution	RL
DRO		277	mg/Kg	1	50.0

					Spike	Percent	Recovery
Surrogate	$\mathbf{F}$ lag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		198	mg/Kg	1	150	132	61.7 - 143.2

Sample: 129930 - NSP

Analysis: QC Batch: TPH GRO 39142

Analytical Method: Date Analyzed:

S 8015B 2007-07-16 Prep Method: S 5035

Analyzed By:

Prep Batch: 33877 Sample Preparation:

2007-07-16

Prepared By:

RL

Result Dilution Parameter Flag Units RLGRO 62.2mg/Kg 1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.571	mg/Kg	1	1.00	57	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	2	3.08	mg/Kg	1	1.00	308	67.5 - 140.3

Sample: 129931 - WSP

33847

Analysis: QC Batch: Prep Batch: Chloride (Titration) 39105

Analytical Method: Date Analyzed:

SM 4500-Cl B 2007-07-16

Prep Method: N/A

Sample Preparation:

Analyzed By: AR Prepared By: AR

RT

Parameter	Flag	Result	Units	Dilution	RL
Chloride		< 50.0	${ m mg/Kg}$	25	2.00

Sample: 129931 - WSP

Analysis: QC Batch: Prep Batch:

TPH DRO 39131

33871

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-17 Sample Preparation: 2007-07-17

Prep Method: N/A

Analyzed By: Prepared By:

<sup>&</sup>lt;sup>1</sup>High surrogate recovery due to peak interference.

<sup>&</sup>lt;sup>2</sup>High surrogate recovery due to peak interference.

Work Order: 7071325 E Line Oil Booster Page Number: 6 of 13 NW of Oil Center, NM

continued ...

	-		RL					
Parameter	Flag	5	Result		Units		Dilution	RL
DRO			53.8		mg/Kg		1	50.0
_		<b></b>	** **	Dil .		Spike	Percent	Recovery
Surrogate	Flag	Result 196	Units	Dilut		mount 150	Recovery 131	Limits 61.7 - 143.2
n-Triacontane	2	190	mg/Kg	1	Ç	100	191	01.7 - 143.2
Sample: 12	9931 - WSP							
Analysis: QC Batch:	TPH GRO 39142		Analytica Date Ana		S 8015B 2007-07-16		Prep Me Analyze	
Prep Batch:	33877			reparation:	2007-07-16		Prepared	
Parameter	$\mathbf{Fla}_{i}$		RL Result		Units		Dilution	RL
GRO		2	7.94		mg/Kg		1	1.00
<b>a</b>		171	D 1	TT 11.		Spike	Percent	Recovery
Surrogate Trifluorotolue	ome (TET)	Flag	Result 0.665	Units mg/Kg	Dilution 1	Amount 1.00	Recovery 66	$\frac{\text{Limits}}{52.4 - 123.7}$
	obenzene (4-BFB	)	0.837	mg/Kg	1	1.00	84	67.5 - 140.3
QC Batch: Prep Batch:	39131 33871		_	lyzed: reparation:	2007-07-17 2007-07-17			zed By: red By:
Parameter	Fla	σ	$rac{ ext{RL}}{ ext{Result}}$		Units		Dilution	RL
DRO	110	5	205		mg/Kg		1	50.0
						Spike	Percent	Recovery
Surrogate .	Flag	Result 190	Units	Dilu 1		Amount 150	Recovery 127	Limits 61.7 - 143.2
n-irracontan	<u>e</u>	190	mg/Kg			130	121	01.7 - 143.2
Sample: 12	9932 - ESP							
Analysis:	TPH GRO			l Method:	S 8015B		Prep Me	
QC Batch:	39142 $33877$		Date Ana	lyzed: reparation:	2007-07-16 2007-07-16		Analyze	
Prep Batch:	JJ011		Sample F	rebaramon:	2001-01-10		Prepare	u by:
Parameter	Fla	g	Result		Units		Dilution	RL
GRO			2.90		mg/Kg		1	1.00
α		ni.	D . 1	<b>T</b> T*.	D.1	Spike	Percent	Recovery
Surrogate Trifluorotolu	one (TET)	Flag	Result 0.678	Units mg/Kg	Dilution	Amount 1.00	Recovery	Limits
Trinuorotolu	ene (ILI)		0.078	mg/ <b>n</b> g	1	1.00	68	52.4 - 123.7

Work Order: 7071325 E Line Oil Booster Page Number: 7 of 13 NW of Oil Center, NM

sample continued Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		0.941	mg/Kg	1	1.00	94	67.5 - 140.3

Sample: 129933 - SSP

Analysis: TPH DRO QC Batch: 39131 Prep Batch: 33871 Analytical Method: Mod. 8015B Date Analyzed: 2007-07-17 Sample Preparation: 2007-07-17

Prep Method: N/A Analyzed By: Prepared By:

 RL

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 DRO
 56.9
 mg/Kg
 1
 50.0

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution .	Amount	Recovery	Limits
n-Triacontane		127	mg/Kg	1	150	85	61.7 - 143.2

Sample: 129933 - SSP

Analysis: TPH GRO QC Batch: 39142

Analytical Method: S 8015B
Date Analyzed: 2007-07-16
Sample Proposition: 2007-07-16

Prep Method: S 5035 Analyzed By:

Prep Batch: 33877 Sample Preparation: 2007-07-16 Prepared By:

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 GRO
 3.41
 mg/Kg
 1
 1.00

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	$\mathbf{F}\mathbf{lag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.661	mg/Kg	1	1.00	66	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.955	mg/Kg	1	1.00	96	67.5 - 140.3

Method Blank (1) QC Batch: 39105

QC Batch: 39105 Prep Batch: 33847 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16

Analyzed By: AR Prepared By: AR

Method Blank (1) QC Batch: 39131

QC Batch: 39131 Prep Batch: 33871 Date Analyzed: 2007-07-17 QC Preparation: 2007-07-17

Analyzed By: Prepared By:

Work Order: 7071325 E Line Oil Booster Page Number: 8 of 13 NW of Oil Center, NM

Parameter	Flag	$egin{array}{c}  ext{MDL} \  ext{Result} \end{array}$		Units	m RL
DRO		<13.4		mg/Kg	50
			Cn:l-o	Domoont	D

					Spike	Percent	$\operatorname{Recovery}$
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		186	mg/Kg	1	150	124	61.7 - 143.2

Method Blank (1)

QC Batch: 39140

QC Batch: 39140 Prep Batch: 33877 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16 Analyzed By: Prepared By:

		$\operatorname{MDL}$		
Parameter	Flag	Result	Units	RL
Benzene		< 0.00110	mg/Kg	0.01
Toluene ·		< 0.00150	${ m mg/Kg}$	0.01
Ethylbenzene		< 0.00160	${ m mg/Kg}$	0.01
Xylene		< 0.00410	m mg/Kg	0.01

				-	Spike	Percent	Recovery
Surrogate	$\mathbf{Flag}$	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.08	mg/Kg	1	1.00	108	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		1.04	${ m mg/Kg}$	1	1.00	104	53.9 - 125.1

Method Blank (1)

QC Batch: 39142

QC Batch: 39142 Prep Batch: 33877 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16

Analyzed By: Prepared By:

					Spike	Percent	Recovery
Surrogate	$\mathbf{F}$ lag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.754	${ m mg/Kg}$	1	1.00	75	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.700	${ m mg/Kg}$	1	1.00	70	67.5 - 140.3

#### Laboratory Control Spike (LCS-1)

QC Batch: 39105 Prep Batch: 33847 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16 Analyzed By: AR Prepared By: AR

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
Chloride	101	mg/Kg	1	100	< 0.500	101	85 - 115

Work Order: 7071325 E Line Oil Booster Page Number: 9 of 13 NW of Oil Center, NM

•	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	102	mg/Kg	1	100	< 0.500	102	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch: 39131 Prep Batch: 33871 Date Analyzed: 2007-07-17 QC Preparation: 2007-07-17 Analyzed By: Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	221	${ m mg/Kg}$	1	250	<13.4	88	62.5 - 135.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			$\operatorname{Spike}$	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	$\mathbf{Limit}$
DRO	210	mg/Kg	1	250	<13.4	84	62.5 - 135.4	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	${ m Rec.}$
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$_{ m Limit}$
n-Triacontane	162	200	mg/Kg	1	150	108	133	66.6 - 140.9

# Laboratory Control Spike (LCS-1)

QC Batch: 39140 Prep Batch: 33877 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16 Analyzed By: Prepared By:

Param	LCS Result	Units	Dil.	$\begin{array}{c} \text{Spike} \\ \text{Amount} \end{array}$	Matrix Result	Rec.	Rec. Limit
Benzene	1.02	mg/Kg	1	1.00	< 0.00110	102	68.6 - 123.4
Toluene	1.03	mg/Kg	1	1.00	< 0.00150	103	74.6 - 119.3
Ethylbenzene	1.03	mg/Kg	1	1.00	< 0.00160	103	72.3 - 126.2
Xylene	3.09	mg/Kg	1	3.00	< 0.00410	103	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	$_{ m LCSD}$			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$	RPD	Limit
Benzene	1.03	mg/Kg	1	1.00	< 0.00110	103	68.6 - 123.4	1	20
Toluene	1.04	mg/Kg	1	1.00	< 0.00150	104	74.6 - 119.3	1	<b>2</b> 0
Ethylbenzene	1.04	${ m mg/Kg}$	1	1.00	< 0.00160	104	72.3 - 126.2	1	20
Xylene	3.13	mg/Kg	1	3.00	< 0.00410	104	76.5 - 121.6	1	20

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$\mathbf{Limit}$
Trifluorotoluene (TFT)	0.976	0.948	mg/Kg	1	1.00	98	95	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	1.08	1.08	mg/Kg	1	1.00	108	108	68.7 - 125.8

Work Order: 7071325 E Line Oil Booster Page Number: 10 of 13 NW of Oil Center, NM

#### Laboratory Control Spike (LCS-1)

QC Batch: 39142 Prep Batch: 33877 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16 Analyzed By: Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	8.47	${ m mg/Kg}$	1	10.0	< 0.739	85	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	8.10	mg/Kg	1	10.0	< 0.739	81	57.7 - 102.5	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			$\mathbf{S}_{\mathbf{p}ike}$	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.968	0.952	mg/Kg	1	1.00	97	95	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.842	0.817	${ m mg/Kg}$	1	1.00	84	82	70 - 130

Matrix Spike (MS-1) Spiked Sample: 129936

QC Batch: 39105 Prep Batch: 33847 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16

Analyzed By: AR
Prepared By: AR

	MS			Spike	Matrix		Rec.
Param	Result	$\mathbf{Units}$	$\mathbf{Dil}.$	Amount	Result	Rec.	$\operatorname{Limit}$
Chloride	6130	mg/Kg	25	2500	3440.83	108	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	${ m Result}_{\_}$	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	6150	mg/Kg	25	2500	3440.83	108	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 129918

QC Batch: 39131 Prep Batch: 33871 Date Analyzed: 2007-07-17 QC Preparation: 2007-07-17

Analyzed By: Prepared By:

	MS			Spike	Matrix		$\operatorname{Rec}$ .
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	202	${ m mg/Kg}$	1	250	<13.4	81	29.7 - 168.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	244	${ m mg/Kg}$	1	250	<13.4	98	29.7 - 168.6	19	20

Work Order: 7071325 E Line Oil Booster

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	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	$_{ m Units}$	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	193	183	mg/Kg	1	150	129	122	43.4 - 193.9

Spiked Sample: 129776 Matrix Spike (MS-1)

QC Batch: 39140 Prep Batch: 33877 Date Analyzed: 2007-07-16 QC Preparation: 2007-07-16 Analyzed By: Prepared By:

		MS			Spike	Matrix		Rec.
Param		Result	$_{ m Units}$	Dil.	Amount	Result	Rec.	Limit
Benzene	3	1.68	mg/Kg	<u> </u>	1.00	< 0.00110	168	64.4 - 115.7
Toluene	4	1.69	mg/Kg	1	1.00	< 0.00150	169	57.8 - 124.4
Ethylbenzene	5	1.76	mg/Kg	1	1.00	< 0.00160	176	64.8 - 125.8
Xylene	6	5.29	${ m mg/Kg}$	1	3.00	0.0087	176	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	$\mathbf{U}\mathbf{nits}$	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	7	1.69	mg/Kg	1	1.00	< 0.00110	169	64.4 - 115.7	1	20
Toluene	8	1.72	mg/Kg	1	1.00	< 0.00150	172	57.8 - 124.4	2	20
Ethylbenzene	9	1.81	mg/Kg	1	1.00	< 0.00160	181	64.8 - 125.8	3	20
Xylene	10	5.44	mg/Kg	1	3.00	0.0087	181	65.2 - 121.8	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			$\operatorname{Spike}$	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	${ m Rec.}$	Limit
Trifluorotoluene (TFT)	0.973	0.968	mg/Kg	1	1	97	97	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	1.15	1.13	mg/Kg	1	1	115	113	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 129912

QC Batch: 39142 Prep Batch: 33877 Date Analyzed: QC Preparation: 2007-07-16

2007-07-16

Analyzed By: Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	${f Limit}$
GRO	6.49	${ m mg/Kg}$	1	10.0	< 0.739	65	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.  $continued \dots$ 

<sup>3</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>5</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>6</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>8</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>9</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control. <sup>10</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Work Order: 7071325 E Line Oil Booster Page Number: 12 of 13 NW of Oil Center, NM

2007-07-17

matrix spike	es continued						
Donom		MS Res		Spik Dil. Amou		Rec. Limit	RPD RPD Limit
Param		Ties	dit Ollits	Dir. Amou	nt result	Itec. Dimit	THE DIMI
		MS		Spik		Rec.	RPD
Param		Res		Dil. Amou		Rec. Limit	RPD Limit
GRO		11 14	0, 0	1 10.0		149 10 - 141	.5 79 20
Percent reco	overy is based	on the spike res	sult. RPD is b	ased on the spil	e and spike du	plicate result.	
			MS MS	SD	Spi	ke MS M	ISD Rec.
Surrogate			Result Res	sult Units	Dil. Amo	ount Rec. I	Rec. Limit
Trifluorotol	uene (TFT)		0.553 0.4	53 mg/Kg	1 1	55	45 40 - 125.3
4-Bromofluo	orobenzene (4-	BFB) <sup>12</sup>	0.840 0.9	mg/Kg	1 1	84	92 86.7 - 144.5
Standard (	(ICV-1)						
QC Batch:	39105		Date Ana	alyzed: 2007-0	7-16		Analyzed By: AR
			ICVs	ICVs	ICVs	Percent	
			$\operatorname{True}$	Found	Percent	Recovery	Date
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	97.4	97	85 - 115	2007-07-16
QC Batch:	39105		Date Ana	alyzed: 2007-0	7-16		Analyzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2007-07-16
Standard	(ICV-1)						
QC Batch:	39131		Date A	nalyzed: 2007	-07-17		Analyzed By:
		•	ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	224	90	85 - 115	2007-07-1
Standard	(CCV-1)						
QC Batch:	39131		Date A	nalyzed: 2007	-07-17		Analyzed By:
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DDO	<u>_</u>	ma m /T/ m	250	250	109	05 115	2007 07 12

<sup>&</sup>lt;sup>11</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

258

103

85 - 115

250

mg/Kg

DRO

<sup>&</sup>lt;sup>12</sup>Surrogate out due to peak interference.

Work Order: 7071325 E Line Oil Booster Page Number: 13 of 13 NW of Oil Center, NM

Standard	(CCV-2)
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QC I	Batch:	39131
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Date Analyzed: 2007-07-17

Analyzed By:

			$\mathrm{CCVs}$	$\mathrm{CCVs}$	$\mathrm{CCVs}$	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	255	102	85 - 115	2007-07-17

#### Standard (ICV-1)

QC Batch: 39140

Date Analyzed: 2007-07-16

Analyzed By:

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.102	102	85 - 115	2007-07-16
Toluene		${ m mg/Kg}$	0.100	0.102	102	85 - 115	2007-07-16
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2007-07-16
Xylene		mg/Kg	0.300	0.305	102	85 - 115	2007-07-16

# Standard (CCV-1)

QC Batch: 39140

Date Analyzed: 2007-07-16

Analyzed By:

			$\mathrm{CCVs}$	$\mathrm{CCVs}$	$\mathrm{CCVs}$	Percent	
			$\operatorname{True}$	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0997	100	85 - 115	2007-07-16
Toluene		mg/Kg	0.100	0.0999	100	85 - 115	2007-07-16
Ethylbenzene		mg/Kg	0.100	0.0982	98	85 - 115	2007-07-16
Xylene		mg/Kg	0.300	0.293	98	85 - 115	2007-07-16

# Standard (ICV-1)

QC Batch: 39142

Date Analyzed: 2007-07-16

Analyzed By:

			ICVs True	ICVs Found	${f ICVs} \ {f Percent}$	Percent Recovery	Date
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.05	105	85 - 115	2007-07-16

#### Standard (CCV-1)

QC Batch: 39142

Date Analyzed: 2007-07-16

Analyzed By:

			$\mathrm{CCVs}$	$\operatorname{CCVs}$	$\mathrm{CCVs}$	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.07	107	85 - 115	2007-07-16

\* Con Gottb anhighest GRO Cont \* Roy Bozzb anh shat SB-X GRO 6015 Harns Pkwy., Suite 110 Ft. Worth, Texas 76132 Tel (817) 201-5260 Turn Around Time if different from standard CONTRACTOR ESP XXX SSP ST NSP 7-18-2 tradel or specify Method No. LATE - Willem Check If Special Reporting TRRP Report Required ANALYSIS REQUEST Moisture Content 00 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 BOD, TSS, pH Pesticides 8081A / 608 PCB's 8082 / 608 GC/MS Semi. Vol. 8270C / 625 8260B / 624 CC/NS AN BCI TCLP Pesticides 200 3 TCLP Semi Volatiles 0 2 2 0 TCLP Volatiles 5002 Basin Street, Suite A1 Midland, Texas 79703 Tel (432) 689-6301 Fax (432) 689-6313 N/ d Carris TCLP Metals Ag As Ba Cd Cr Pb Se Hg Ŷ LAB USE Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 ONLY 8270C Log-in-Review × TPH 8015 SRO / DRO / TVHC Headspace Carrier # TPH 418,17 TX1005 / TX1005 Ext(C: LAB Order ID # 707 1325 Intact Tenno BIEX 8021B 902 / 8260B / 624 **8**72 KOOKED DOMETIZANDE 8021B | 602 | 8260B | 624 **BBTM** 19:55 0:05 9:35 क्र.स्व 19:43 4:50 O:00 0.18 0.70 נס;ום 6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 Tel (306) 794-1296 Fax (806) 794-1298 1 (600) 378-1296 (0,5 Fax#: 422-520-710/ SAMPLING TIME 1004 712 Phone #: 142520-7 5.5 **BTA**d Time: NONE METHOD ICE Submittal of samples constitutes agreement to Terms and Conditions listed  $\phi^{\rm h}$  reverse side of C. O 15/07 NaOH Date: Date: DS2H Pspject Name: HNO<sup>3</sup> HCI La∯oratory by COLOINA STUDGE AFFELD & FULL COUNCIDERS MATRIX **ENTER** AIR Frace Analysis, Inc. MIDORY ころいまか SOIL **A3TAW** email: lab@traceanalysis.com Received by Received by Received at <u>₹</u> 707 Volume / Amount # CONTAINERS 13.2 ENTER Time: Time: JW ME GOF NEAR 113/07 58-1045 FIELD CODE SB-16-45 30-100 0 XX G N 5BJ 6 10 1 G 56-1625 SB-1@38 SB-1030 Date: If different from above) びろし 以 2 7 1787 った IL IL Relinquished by: Relinquished by 9 129909 LAB USEN 3 nvoice to: LAB#

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7-071325 LAB Order ID #

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296

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6015 Harris Pkwy., Suite 110 Ft. Worth, Texas 76132 Tel (817) 201-5260 200 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443

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TraceAnalysis, Inc.

email: [ab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 Tel (806) 7941296 Fax (806) 794-1298 1 (800) 378-1296

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**ANALYSIS REQUEST** 

Turn Around Time if different from standard Circle or Specify Method No.) Moisture Content Hq ,22T ,008 Pesticides 8081A \ 608 PCB's 8082 / 608 A91: 8270C / 625 GC/MS Semi GC/MS AOI: 8260B / 624 ВCI TCLP Pesticides TCLP Semi Volatiles TCLP Volatiles TCLP Metals Ag As Ba Cd Cr Pb Se Hg Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7

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email: lab@traceanalysis.com

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5701 Aberdeen Avenue Bulla 9 200 East Sunset Road, Strite E 5002 Bas'n Street, Suite A1

El Paso, Texas 79937 Mid and Texas 79703 6015 Harris Parsway, Guite 100 Ft. Worth Texas 7611:2

888 • 588 • 3443 915\*685\*5443 43? • 685 • 6301

FAX.915 \* E35 \* 4944 ^AX 432 • 689 • 6313

817 - 201 - 5290

E-Mail ab@traceunalysis.com

# Analytical and Quality Control Report

Julie Koonce Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

Report Date: July 23, 2007

Work Order: 7071833 

Project Location: NW of Oil Center, NM Project Name: E Line Oil Booster E Line Oil Booster Project Number:

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	1 ime	Date
Sample	Description	Matrix	Taken	Taken	Received
130329	F-1A @ 25'	soil	2007-07-18	11:00	2007-07-18
130330	F-2A @ 18'	soil	2007-07-18	11:45	2007-07-18
130331	FPF-2A @ 18'	soil	2007-07-18	12:21	2007-07-18

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

### Standard Flags

 $\, B \,$  -  $\,$  The sample contains less than ten times the concentration found in the method blank.

Work Order: 7071833 E Line Oil Booster

Page Number: 2 of 9 NW of Oil Center, NM

# **Analytical Report**

Sample: 130329 - F-1A @ 25'

Analysis: BTEX 39262 QC Batch: Prep Batch: 33985

Analytical Method: Date Analyzed:

S 8021B 2007-07-19 Sample Preparation: 2007-07-19 Prep Method: S 5035 Analyzed By:

Prepared By:

		RL			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	RL
Benzene		< 0.0100	mg/Kg	1	0.0100
Toluene		< 0.0100	mg/Kg	1	0.0100
Ethylbenzene		0.0110	mg/Kg	1	0.0100
Xylene		0.0385	${ m mg/Kg}$	1	0.0100

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		1.12	mg/Kg	1	1.00	112	26 - 117.8
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	1.00	119	51.1 - 119.1

Sample: 130329 - F-1A @ 25'

Analysis: TPH DRO QC Batch: 39226 Prep Batch: 33947

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-19 Sample Preparation: 2007-07-19

Prep Method: N/A Analyzed By: Prepared By:

		RL			
Parameter	Flag	Result	Units	Dilution	RL
DRO		< 50.0	mg/Kg	1	50.0

					Spike	$\mathbf{Percent}$	$\operatorname{Recovery}$
Surrogate	$\operatorname{Flag}$	$\operatorname{Result}$	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		148	mg/Kg	1	150	99	32.9 - 167

Sample: 130329 - F-1A @ 25'

TPH GRO Analysis: QC Batch: 39265Prep Batch: 33985

Analytical Method: Date Analyzed:

S 8015B2007 - 07 - 19Sample Preparation: 2007-07-19 Prep Method: S 5035

Analyzed By: Prepared By:

		$\operatorname{RL}$			
Parameter	$\operatorname{Flag}$	Result	Units	Dilution	RL
GRO		<1.00	m mg/Kg	1	1.00

					$\operatorname{Spike}$	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.704	${ m mg/Kg}$	1	1.00	70	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.836	mg/Kg	1	1.00	84	67.5 - 140.3

Work Order: 7071833 E Line Oil Booster

Page Number: 3 of 9 NW of Oil Center, NM

Sample: 130330 - F-2A @ 18'

Analysis: QC Batch:

TPH DRO 39226 Prep Batch: 33947

Analytical Method: Date Analyzed:

Mod. 8015B 2007-07-19 Sample Preparation: 2007-07-19

Prep Method: N/A Analyzed By: Prepared By:

RL

Parameter	Flag	Result	Units	Dilution	RL
DRO		< 50.0	${ m mg/Kg}$	1	50.0

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane		153	mg/Kg	1	150	102	32.9 - 167

Sample: 130330 - F-2A @ 18'

Analysis: QC Batch:

Prep Batch:

TPH GRO 39265 33985

Analytical Method: Date Analyzed:

S 8015B 2007-07-19 Sample Preparation: 2007-07-19 Prep Method: S 5035 Analyzed By: Prepared By:

RL

Parameter	$\mathbf{Flag}$	Result	Units	Dilution	RL
GRO		<1.00	${ m mg/Kg}$	1	1.00

Surrogate	Flag	Result	Units	Dilution	$\begin{array}{c} {\rm Spike} \\ {\rm Amount} \end{array}$	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.694	mg/Kg	1	1.00	69	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.793	mg/Kg	1	1.00	79	67.5 - 140.3

Sample: 130331 - FPF-2A @ 18'

TPH DRO Analysis: QC Batch: 39226 Prep Batch: 33947

DRO

Analytical Method: Mod. 8015B Date Analyzed: 2007-07-19 Sample Preparation: 2007-07-19

Prep Method: N/A Analyzed By: Prepared By:

Parameter Flag

Result Units < 50.0 mg/Kg

RL

Dilution RL50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		142	mg/Kg	1	150	95	32.9 - 167

Sample: 130331 - FPF-2A @ 18'

Analysis: TPH GRO QC Batch: 39265

Prep Batch:

Analytical Method: Date Analyzed: 33985

S 8015B 2007-07-19 Prep Method: S 5035

Analyzed By: Sample Preparation: 2007-07-19 Prepared By:

Work Order: 7071833 E Line Oil Booster

RL

Page Number: 4 of 9 NW of Oil Center, NM

RL

Units

mg/Kg

			KL					
Parameter	Flag	S	Result		Units	-	Dilution	RL
GRO			<1.00		mg/Kg		1	1.00
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution		Recovery	
$\Gamma$ rifluorotoluene ( $\Gamma$ F			0.696	mg/Kg	1	1.00	70	52.4 - 123.7
4-Bromofluorobenze	ne (4-BFB	)	0.800	mg/Kg	1	1.00	80	67.5 - 140.3
Method Blank (1)	QC:	Batch: 39226						
OC D. 4.1. 20096			Data A	nolmand.	2007-07-19			Amalamad Day
QC Batch: 39226				nalyzed:	2007-07-19			Analyzed By:
Prep Batch: 33947			QC FIE	eparation:	2007-07-19			Prepared By:
				MD	L		•	
Parameter		Flag		Resul		Uı	nits	RL
DRO		<u>ÿ</u>		<14.			/Kg	50
							, 0	
						Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dil	ution	Amount	Recovery	Limits
n-Triacontane	•	135	mg/Kg		1	150	90	44.7 - 133.6
QC Batch: 39262 Prep Batch: 33985				nalyzed: eparation:	2007-07-19 2007-07-19			Analyzed By: Prepared By:
					IDL			
Parameter		Flag			sult		nits	RL
Benzene				< 0.00			g/Kg	0.01
Toluene				< 0.00			g/Kg	0.01
Ethylbenzene				< 0.00			g/Kg	0.01
Xylene				<0.00	9410	m	g/Kg	0.01
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution		Recovery	
Trifluorotoluene (Tl	FT)	0	1.05	mg/Kg	1	1.00	105	62.6 - 117.6
4-Bromofluorobenze		3)	0.947	mg/Kg	1	1.00	95	53.9 - 125.1
Method Blank (1 QC Batch: 39265	,	Batch: 39265		nalyzed:	2007-07-19			Analyzed By:
Prep Batch: 33985	i		QC Pre	eparation: MD	2007-07-19			Prepared By:
<b>.</b>		ID1		מזא	1.	T.7	• ,	T. T.

 $\mathbf{Result}$ 

< 0.739

Flag

Parameter

 $\overline{\text{GRO}}$ 

Work Order: 7071833 E Line Oil Booster

Page Number: 5 of 9 NW of Oil Center, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.776	mg/Kg	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.696	${ m mg/Kg}$	1	1.00	70	67.5 - 140.3

# Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 33947

39226

Date Analyzed:

2007-07-19 QC Preparation: 2007-07-19 Analyzed By: Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	177	mg/Kg	1	250	<14.6	71	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	180	mg/Kg	1	250	<14.6	72	47.5 - 144.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	$\mathbf{Dil}.$	Amount	Rec.	Rec.	Limit
n-Triacontane	113	121	mg/Kg	1	150	75	81	57.3 - 131.6

#### Laboratory Control Spike (LCS-1)

QC Batch:

39262Prep Batch: 33985 Date Analyzed:

2007-07-19 QC Preparation: 2007-07-19 Analyzed By: Prepared By:

Param	$rac{ ext{LCS}}{ ext{Result}}$	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.01	mg/Kg	1	1.00	< 0.00110	101	68.6 - 123.4
Toluene	1.00	mg/Kg	1	1.00	< 0.00150	100	74.6 - 119.3
Ethylbenzene	1.01	mg/Kg	1	1.00	< 0.00160	101	72.3 - 126.2
Xylene	3.01	mg/Kg	1	3.00	< 0.00410	100	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.993	${ m mg/Kg}$	1	1.00	< 0.00110	99	68.6 - 123.4	2	20
Toluene	1.00	${ m mg/Kg}$	1	1.00	< 0.00150	100	74.6 - 119.3	0	20
Ethylbenzene	0.995	${ m mg/Kg}$	1	1.00	< 0.00160	100	72.3 - 126.2	<b>2</b>	<b>2</b> 0
Xylene	2.99	mg/Kg	1	3.00	< 0.00410	100	76.5 - 121.6	1	20

	LCS	LCSD	TY 1.	<b>7</b> 5.13	Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	${ m Units}$	Dil.	Amount	${ m Rec.}$	${ m Rec.}$	$\operatorname{Limit}$
Trifluorotoluene (TFT)	0.974	0.911	mg/Kg	1	1.00	97	91	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	1.02	1.02	mg/Kg	1	1.00	102	102	68.7 - 125.8

E Line Oil Booster

Work Order: 7071833 E Line Oil Booster

Page Number: 6 of 9 NW of Oil Center, NM

#### Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 33985

39265

Date Analyzed:

2007-07-19

QC Preparation: 2007-07-19

Analyzed By: Prepared By:

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	8.75	mg/Kg	1	10.0	< 0.739	88	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	8.73	${ m mg/Kg}$	1	10.0	< 0.739	87	57.7 - 102.5	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			$_{ m Spike}$	LCS	LCSD	$\operatorname{Rec}$ .
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.16	1.01	mg/Kg	1	1.00	116	101	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.803	0.814	$\mathrm{mg}/\mathrm{Kg}$	1	1.00	80	81	70 - 130

Matrix Spike (MS-1)

Spiked Sample: 130329

QC Batch: 39226 Prep Batch: 33947

Date Analyzed: QC Preparation: 2007-07-19

2007-07-19

Analyzed By: Prepared By:

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	$\mathbf{Result}$	Rec.	$\mathbf{Limit}$
DRO	153	mg/Kg	1	250	<14.6	61	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	$\mathbf{Dil}$ .	Amount	Result	Rec.	Limit	RPD	Limit
DRO	186	mg/Kg	1	250	<14.6	74	11.7 - 152.3	20	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Triacontane	135	136	mg/Kg	1	150	90	91	17 - 163.1

Matrix Spike (MS-1)

Spiked Sample: 130329

QC Batch: Prep Batch: 33985

39262

Date Analyzed: QC Preparation: 2007-07-19

2007-07-19

Analyzed By: Prepared By:

		MS			Spike	Matrix		Rec.
Param		Result	$\mathbf{U}\mathbf{nits}$	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
Benzene	1	2.06	mg/Kg	1	1.00	< 0.00110	206	64.4 - 115.7

continued ...

<sup>&</sup>lt;sup>1</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Work Order: 7071833 E Line Oil Booster Page Number: 7 of 9 NW of Oil Center, NM

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		MS			$\operatorname{Spike}$	Matrix		Rec.
Param		Result	$_{ m Units}$	Dil.	Amount	Result	Rec.	Limit
Toluene	2	2.12	mg/Kg	1	1.00	< 0.00150	212	57.8 - 124.4
Ethylbenzene	3	2.22	${ m mg/Kg}$	1	1.00	< 0.00160	222	64.8 - 125.8
Xylene	4	6.70	mg/Kg	1	3.00	< 0.00410	223	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			$_{ m Spike}$	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	5	1.64	mg/Kg	1	1.00	< 0.00110	164	64.4 - 115.7	23	20
Toluene	6	1.70	$\mathrm{mg}/\mathrm{Kg}$	1	1.00	< 0.00150	170	57.8 - 124.4	22	20
Ethylbenzene	7	1.79	mg/Kg	1	1.00	< 0.00160	179	64.8 - 125.8	21	20
Xylene	8	5.42	mg/Kg	1	3.00	< 0.00410	181	65.2 - 121.8	21	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.910	0.959	mg/Kg	1	1	91	96	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	1.14	1.10	${ m mg/Kg}$	1	1	114	110	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 130329

QC Batch: 39265 Date Analyzed: 2007-07-19 Analyzed By: Prep Batch: 33985 QC Preparation: 2007-07-19 Prepared By:

		MS			Spike	Matrix		${ m Rec.}$
Param		Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{Limit}$
GRO	9	18.4	mg/Kg	1	10.0	< 0.739	184	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			Spike	Matrix		Rec.		RPD	
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
GRO	10	6.89	mg/Kg	1	10.0	< 0.739	69	10 - 141.5	91	20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MS	MSD			Spike	MS	MSD	Rec.
Surrogate		Result	Result	Units	Dil.	Amount	Rec.	Rec.	${f Limit}$
Trifluorotoluene (TFT)		0.532	0.589	mg/Kg	1	1	53	59	40 - 125.3
4-Bromofluorobenzene (4-BFB)	11	0.999	0.830	${ m mg/Kg}$	1	1	100	83	86.7 - 144.5

<sup>&</sup>lt;sup>2</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>11</sup>Surrogate out due to peak interference.

<sup>&</sup>lt;sup>3</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>4</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>5</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>6</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>7</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control. 
<sup>8</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>9</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>&</sup>lt;sup>10</sup>RPD out of control limits due to extraction process. Use LCS/LCSD to demonstrate method is under control. •

Work Order: 7071833 E Line Oil Booster Page Number: 8 of 9 NW of Oil Center, NM

#### Analyzed By:

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	240	96	85 - 115	2007-07-19

# Standard (CCV-1)

QC Batch: 39226

Date Analyzed: 2007-07-19

Analyzed By:

		•	$\mathrm{CCVs}$	CCVs	$\mathrm{CCVs}$	Percent	
			True	Found	Percent	Recovery	Date
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	229	92	85 - 115	2007-07-19

#### Standard (ICV-1)

QC Batch: 39262

Date Analyzed: 2007-07-19

Analyzed By:

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.110	110	85 - 115	2007-07-19
Toluene		mg/Kg	0.100	0.111	111	85 - 115	2007-07-19
Ethylbenzene		mg/Kg	0.100	0.113	113	85 - 115	2007-07-19
Xylene		mg/Kg	0.300	0.341	114	85 - 115	2007-07-19

# Standard (CCV-1)

QC Batch: 39262

Date Analyzed: 2007-07-19

Analyzed By:

			CCVs	CCVs	CCVs	Percent	ъ.
			$\operatorname{True}$	$\mathbf{Found}$	Percent	$\operatorname{Recovery}$	$\operatorname{Date}$
Param	$\operatorname{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0993	99	85 - 115	2007-07-19
Toluene		${ m mg/Kg}$	0.100	0.0995	100	85 - 115	2007-07-19
Ethylbenzene		${ m mg/Kg}$	0.100	0.0983	98	85 - 115	2007-07-19
Xylene		mg/Kg	0.300	0.294	98	85 - 115	2007-07-19

### Standard (ICV-1)

QC Batch: 39265

 $Date\ Analyzed:\ \ 2007\text{-}07\text{-}19$ 

Analyzed By:

			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.10	110	85 - 115	2007-07-19

Work Order: 7071833 E Line Oil Booster Page Number: 9 of 9 NW of Oil Center, NM

Standard (CCV-1)

QC Batch: 39265

Date Analyzed: 2007-07-19

Analyzed By:

			$\mathrm{CCVs}$	$\mathrm{CCVs}$	CCVs	Percent	
			$\operatorname{True}$	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.06	106	85 - 115	2007-07-19

LAB Order ID#	707	1833_

Pageof	Page	J	of _	
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# TraceAnalysis, Inc.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 5002 Basin Street, Suite A1 Midland, Texas 79703 Tel (432) 589-6301 Fax (432) 689-6313 200 East Sunset Rd., Suite E El Paso, Texas 79922 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443

6015 Harris Pkwy , Suite 110 Ft. Worth, Texas 76132 Tel (817) 201-5260

	email: lab@traceanalysis.com 1 (800) 378											ax (432	Ž Ž	-0313			1 (8	388)	588-	3443	•						_]	
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AB USE) ONLY		00 #	Volume	SOIL AIR	SLUDGE	E S	H <sub>2</sub> SO <sub>4</sub>	ICE ICE	NONE	DATE	TIME	MTBE	HE C	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Volatiles	TCLP Semi Volatiles	2	GC/MS Vol. 8260B / 624	GC/MS Semi.	Pesticides 8081A / 608	BOD,	Moisture				Turn Around Time if different from standard	
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Appendix C:
Release Notification and Corrective Action
Form C-141

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

# State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

			Rele	ase Not	ificatio	on and C	orrective A	ction					
						OPERATOR x Initial Report  Final R							
Name of Co			/lidstream			Contact: Lynn Ward							
Address:	10 E	esta Dr. Sui											
Facility Na	me	"E"-Lir	e Near O	il Center Bo	oster	Facility Ty	be: 8 Inch	Steel P	ipeline	····			
Surface Ow		Iillard Deck	Estate	Miner	al Owner	Lease No.							
				LO	CATIO	ON OF RE	LEASE						
Unit Letter G	Section 29	Township 20S	Range 37E	Feet from ti	ne Nort	th/South Line	Feet from the	East/V	Vest Line	County Lea			
			Latituo	le 32 degre	es, 32° 39	0.3" Longitud	le 103 degrees,	16' 09.8	3"				
Latitude 32 degrees, 32' 39.3" Longitude 103 degrees, 16' 09.8"  NATURE OF RELEASE													
Type of Rele	ase:	Condensat	e			Volume o	Release: 10 BB	L	Volume I	Recovered <1	BBL		
Source of Re		8" Steel Pipe	line			3	Hour of Occurrence	ce		Hour of Discove			
Was Immedi	ate Notice (	Given?			<del> </del>	Unknov If YES, To			May 27, 2	2007 / 13:19 ho	urs		
	<b>\</b>	Y	es 🗌 N	No Not I	Required		ık (NMOCD Hob	bs Distri	ict Office)				
By Whom?	Doug Lo						Hour May 27, 20						
Was a Water	course Read	ched?	Yes 🛭	] No		If YES, Volume Impacting the Watercourse.							
If a Waterco	If a Watercourse was Impacted, Describe Fully.*												
		em and Reme			8 inch pipe	eline. The pipe	line was shut-in, c	lamped	and any re	coverable hydro	carbons were		
Describe Are The affected	ea Affected area is appr	and Cleanup and Cleanup and Cleanup and Cleanup and Cleanup and continuately 30	Action Tak 0 feet in le	ten.*	west) and	approximately	90 feet wide (nort	h to sou	th) at its w	idest extent. A v	vater well		
groundwater vertical delin	will require leation of si	e soil clean up te is pending.	levels not	to exceed 10	0 mg/Kg T	ГРН, 10 mg/Kg	groundwater in the benzene and total	I BTEX	not to exce	eed 50 mg/Kg. ]	Horizontal and		
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.										endanger of liability human health			
Signature:	Tyn	~/1/h	f,			OIL CONSERVATION DIVISION							
Printed Nam	/	nn Ward	[			Approved by District Supervisor:							
Title:	inv.	Specia	clist			Approval Da	e: 6.29.07	7 E	Expiration I	Date: C	٠٥٦		
E-mail Address: lcward@dcpmidstream.com						Conditions of Approval:  620-4207  Attached							
Date: June 1	1. 2007		Pho	ne: (432) <i>(</i>	20-4207	and the	- + 100x	( - \	41	1			

\* Attach Additional Sheets If Necessary

w DOCUMENTATION

RP#1472

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

State of New Mexico
Energy Minerals and Natural Resources

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

e Notification and Correction

Form C-141 Revised October 10, 2003 SEP 2007 Submiss Copies to appropriate District Office in accordance With Rule 116 on back side of form

			Rele	ease Notif	ticatio			e Act	tion		160
		<del></del>			1	OPER.			687031	Jaiga	Report   Final Report
Name of Co			Iidstream		<b>50505</b>	Contact:		3,71111			
Address:				Midland, TX		Telephone 1		32-620-			
Facility Nar	ne	"E"-Lin	e Near O	il Center Boo	oster	Facility Typ	e: 8	Inch St	teel Pipeli	ne	
Surface Ow		Iillard Deck	Estate	Minera	l Owner				Le	ase N	0.
	·			LOC	CATIO	N OF RE	EASE				
Unit Letter	Section	Township	Range	Feet from the		/South Line	Feet from	the F	East/West I	Line	County
G	29	20S	37E	1 000 11 0111 1110	110111	Doum Line	1 COL ITOIL		addi W est 1		Lea
Latitude 32 degrees, 32' 39.3" Longitude 103 degrees, 16' 09.8"  NATURE OF RELEASE											
Type of Rele	ase:	Condensat	2			Volume of		10 BBL	Vol	ume R	ecovered <1 BBL
Source of Re		8" Steel Pipe				Date and H Unknow	our of Occ		Date	e and I	Hour of Discovery 007 / 13:19 hours
Was Immedia	ate Notice	Given?				If YES, To			1 1:10)	, =,, =	00., 13.13 110410
	equired	Gary Wir	k (NMOCI	D Hobbs	District Of	ffice)					
By Whom?	Doug Lo	wrie				Date and I					
Was a Water		If YES, Volume Impacting the Watercourse.									
If a Watercou	ırse was Im	pacted, Descr	be Fully.*								
	he result o				inch pipe	line. The pipel	ine was shu	ıt-in, clan	mped and a	ny rec	overable hydrocarbons were
The affected borings were soil clean up delineated thi	area is appradvanced a levels not to the area area area area area area area ar	and groundwar o exceed 100 a dvancement o	) feet in let er was end mg/Kg TP f soil borin	ngth (east to w countered at a c H, 10 mg/Kg t	depth of a benzene are cavation of	pproximately: nd total BTEX f impacted soil	52 feet belo not to exce	w ground ed 50 mg	d surface. T	The dep	dest extent. A total of three soil of the groundwater required as vertically and horizontally NMOCD licensed landfarm. A
regulations al public health should their of or the environ	I operators or the envious longerations In a ment. In a	are required to ronment. The nave failed to a	o report an acceptance	d/or file certai e of a C-141 re investigate an	in release in release in report by the interior in the interio	notifications a ne NMOCD m te contaminati	nd perform arked as "F on that pos	correctivinal Reportant	ve actions f ort" does n t to ground	or rele ot relie water,	ant to NMOCD rules and ases which may endanger eve the operator of liability surface water, human health impliance with any other
Signature:	type	Ware							Ca	ION	DIVISION
Printed Name	./ Ly	nn Ward				Approved by	District Su	pervisor:	ENVIRO	NINAE	NTAL ENGINEED
Title: É	W. S	p.				Approval Dat	e: 9.7			ation [	THE ENGINEER
E-mail Addre	ess: le	ward@dcpmid	stream.coi	n		Conditions of	Approval:				Attached

(432) 620-4207

Phone:

Date: August 27, 2007