



#### RECEIVED

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February 1, 2005

#### FIRE PREVENTION

GA Project No. 157-02-01

Livermore-Pleasanton Fire Department 3560 Nevada Street Pleasanton, CA 94566

Attention:

Mr. John Rigter

Subject:

Report of Vent Area Soil Sampling

533 Exchange Court Livermore, California

#### Ladies and Gentlemen:

Gribi Associates is pleased to submit this report on behalf of Pitcock Petroleum documenting the collection of five soil samples from three shallow borings at 533 Exchange Court in Livermore, California (Figure 1 and Figure 2). The purpose of the soil sampling was to assess soil quality in a landscaped area adjacent to underground storage tank (UST) vent lines at the site.

#### Background

The project site is an operating bulk fueling facility located south of Interstate 580, near the intersection of South Vasco Road and Brisa Street. Five UST vent lines are present adjacent a concrete wall near the perimeter of the site (see site photos on Figure 3). It is our understanding that fuel hydrocarbons were accidently released from the UST vent lines in the recent past during UST filling.

Based on a brief telephone conversation with Mr. John Rigter of Livermore-Pleasanton Fire Department (LPFD), Gribi Associates submitted a brief workplan to LPFD on November 9, 2004 proposing collecting two soil samples each at two locations adjacent to the vent lines using hand augering equipment. The two soils amples collected at each location were to be collected at approximate depths of 0.5 feet and 2.0 feet below grade. This workplan was approved by LPFD, and sampling activities were conducted on December 3, 2004.

#### **Description of Field Activities**

On Friday, December 3, 2004, Mr. Jim Gribi of Gribi Associates conducted the following tasks. During sampling activities, Mr. John Rigter of the LPFD was onsite to observe sampling activities and provide oversight as needed. Note that during sampling activities, it was agreed by Mr. Gribi and Mr. Rigter that sampling would be conducted at three locations, rather than two. All activities were conducted in accordance with the approved workplan and with applicable sampling protocols and guidelines.

Mr. John Rigter Livermore-Pleasanton Fire Department February 1, 2005 Page 2

Task 1 Conduct Sampling Activities. Gribi Associates collect soil samples from three locations, B-1, B-2, and B-3, in the landscaped area next to the concrete wall adjacent to the UST vent lines. The three sample locations are shown on Figure 2. Soil samples were collected at depths ranging from surface to 2.0 feet using either a shovel (shallow samples) or a hand auger (deeper samples). Each soil sample was collected directly from the shovel or auger in a brass sampling tube and sealed with teflon tape and plastic end-caps. The samples were placed in an ice-chilled container and submitted to a California-certified laboratory under chain-of-custody. Hand auger equipment were thoroughly cleaned between each sample location by triple-rinsed first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water.

Task 3 Conduct Laboratory Analyses. Gribi Associates analyze five soil samples for the following parameters

USEPA 8015M Total Petroleum Hydrocarbons as Diesel/Motor Oil (TPH-D/MO) USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G) USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) USEPA 8020/602 Methyl-t-butyl Ether (MTBE)

All analyses were conducted by Sunstar Laboratories, a California-certified analytical laboratory, with standard method turn around on lab results.

#### **Results of Sampling Activities**

Soils encountered during the sampling included landscape materials (bark and leaves) to about three inches in depth, followed by grey clays down to total depths. Apparent hydrocarbon odors were noted in the shallow samples collected from B-1 and B-2. Laboratory analytical results are summarized in Table 1 and on Figure 3B. The laboratory data report record is contained in Appendix A.

	Table 1 SUMMARY OF SOIL ANALYTICAL RESULTS Bay Counties Vent Area Soil Sampling  Constituent (milligrams per kilogram, ppm)											
Sample ID	Sample Depth	72150	TPH-G	Constituen B	t (milligrams p T	er kilogram, ppi E	<i>"</i>	MTBE				
B-1-0.5	0.5 ft	5.2	100	<0.005	0.860	0.660	1.0	<0.020				
B-1-2.0	2.0 ft	17	8.9	<0.005	<0.005	0.017	0.027	<0.020				
B-2-Surf	Surface	41,000	410	<0.005	0.380	3.4	6.2	< 0.020				
B-2-0.5	0.5 ft	6,700	<0.50	<0.005	<0.005	<0.005	<0.005	<0.020				
B-3-1.0	1.0 ft	48	22	<0.005	0.810	<0.005	7.5	<0.020				

Mr. John Rigter Livermore-Pleasanton Fire Department February 1, 2005 Page 3

#### Notes for Table 1

TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene, T = Toluene, E = Ethylbenzene, X = Xylenes
MTBE = Methyl-t-butyl Ether
<0.005 = Not detected above the expressed value.

#### **Conclusions**

Soil analytical results indicate that some releases of gasoline and diesel range hydrocarbons have affected shallow, near surface soils in the landscaped area adjacent to the vent lines. However, these releases appear to be limited in depth, and do not appear to extend significantly below about one foot in depth. These results indicate that the volume of petroleum hydrocarbons released relative to the vent lines is small. Also, the detected gasoline-range hydrocarbons appear to be old and weathered, as evidenced by the lack of detectable MTBE and Benzene in any of the samples.

While it would seem that this release is small and not "actionable", it may be advisable, from a housekeeping standpoint, to remove the top six inches of soil in the sampled area. This could easily be accomplished using hand tools, and soil could be placed in sealed five-gallon metal pails for offsite disposal.

We appreciate the opportunity to present this report for your review. Please call if you have questions or require additional information. We look forward to working with you on this important

project.

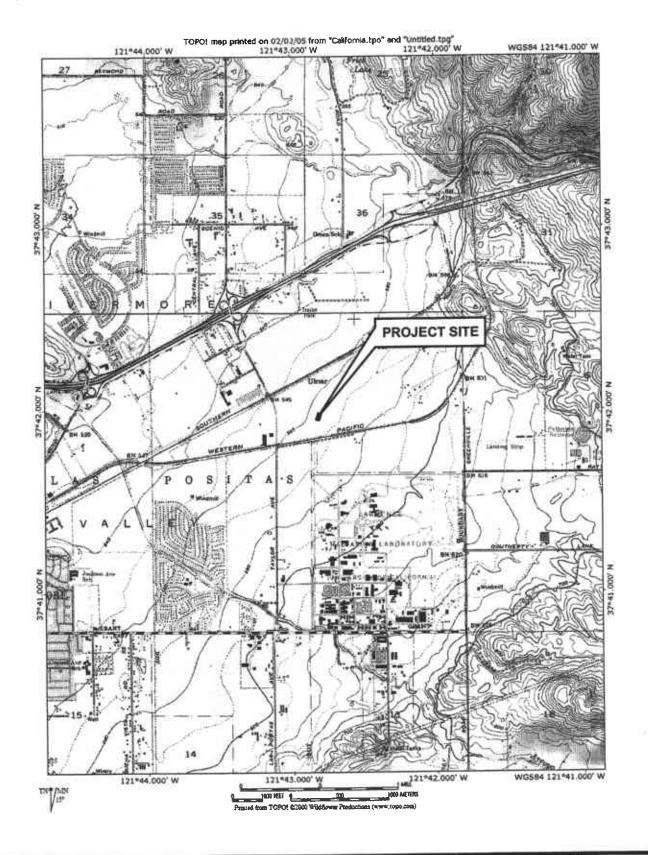
Very truly yours

James E. Gribi Registered Geologist California No. 5843

JEG:ct

Jeff Pitcock, Pitcock Petroleum

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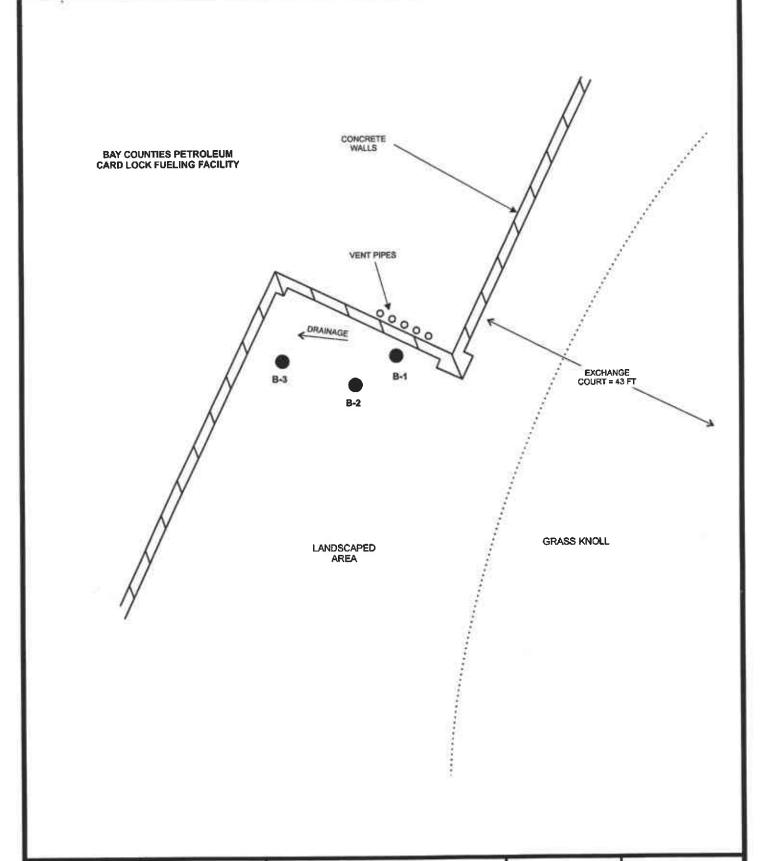


DESIGNED BY:	CHECKED BY:
DRAWN BY: JG	SCALE:
PROJECT NO: 157-02	-01

### SITE VICINITY MAP

BAY COUNTIES PETROLEUM 533 EXCHANGE COURT LIVERMORE, CALIFORNIA DATE: 02/01/05 FIGURE: 1

**GRIBI** Associates



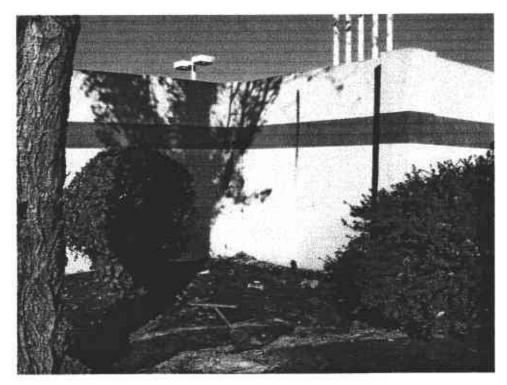
DESIGNED BY:	CHECKED BY:
DRAWN BY: JG	SCALE:
PROJECT NO: 157-02	-01

SITE PLAN

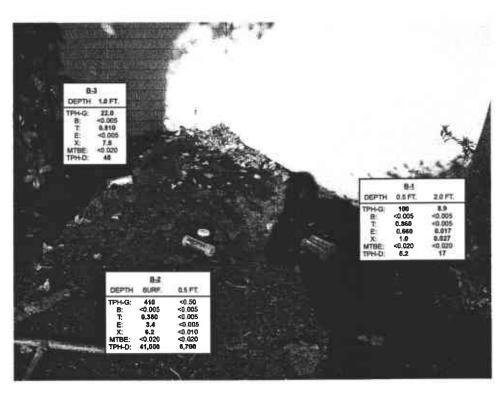
BAY COUNTIES PETROLEUM 533 EXCHANGE COURT LIVERMORE, CALIFORNIA DATE: 02/01/05

2

**GRIBI** Associates



3A: View of sampling area showing collected samples. Vent pipes are on upper right side of photo.



3B: View of collected soil samples, along with analyte concentrations in milligrams per kilogram (ppm).

DESIGNED BY:	CHECKED BY:	SITE PHOTOGRAPHS	DATE: 02/01/05	3	
DRAWN BY: JG	SCALE:	BAY COUNTIES PETROLEUM			
PROJECT NO: 157-02-01		533 EXCHANGE COURT LIVERMORE, CALIFORNIA	GRIBI A	ssociates	

### APPENDIX A

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

#### 09 December 2004

Jim Gribi Gribi Associates 1090 Adam Street, Suite K Benicia, CA 94510

RE: Pitcock Oil

Enclosed are the results of analyses for samples received by the laboratory on 12/04/04 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ben Beauchaine For Dennis Dorning

Project Manager

## **Chain of Custody Record**

SunStar Laboratories, Inc. 3002 Dow Ave., Ste. 212 Tustin, CA 92780 1-800-781-6777

Client: GIL	Asso	~ AT	<u>C.</u>		_		i	Date	·	12	15,	<u> 100</u>	4			P	'age:	<u> </u>	Of _	$\_/$	
Address:					_			Proje	ect N	Name	$= \frac{f_j^2}{2}$	400	ock		<u>L. 1</u>	1. 1	MICH	<u></u>			
Phone:	7	Fax:		-	_		I	Colle	ector	r:						CI	lient Pr	oject #:_			
Project Manager:	61.1	·			_			Bato	h #:							Pı	oposa	l #:			
Sample ID  B-1-0-5  B-1-2-0  B-2-5-1-2-0  B-3-1-0	Date Sampled	Time 1.4.20 1.7.5 1.7.5 1.7.5 1.7.6	Sample Type	Container Type	EPA 8010	XXXXXEPA 8020 STANDER C	EPA 8260	EPA 8270		X X X EPA 8015M (gasoline)	K.K.K.K. EFA OU DW (diesel)	EPA 6010/7000 Title 22 Metals					BAIRA I AGE		Comments	5	Total # of containers
Relinquished by: (signature)	Date / Ti	1,6		y: (signature)			Date	/Tim	ie	, c	 hain			# of co					Notes	3	
Relinquished by: (signature)	Date / Ti	me	Received by	/: (signature)		•	Date	/ Tim	ie					intact?		_		. : /		, .	
Relinquished by: (signature)	Date / Ti	ne	Received by	/: (signature)			Date	/ Tim	ne	+				condit					· • • • • • • • • • • • • • • • • • • •		
Sample disposal Instructions: Dis	മറടമി (മി \$2 നി മ	ach	Return to	n client		Pick				Tı	urn a	roun	d tim	ıe:	970		. L <u> </u>	<u> /                                   </u>	<u> </u>		 

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510

Project: Pitcock Oil Project Number: [none] Project Manager: Jim Gribi

Reported: 12/09/04 17:21

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-0.5	T401441-01	Soil	12/03/04 09:20	12/04/04 09:30
B-1-2.0	T401441-02	Soil	12/03/04 09:35	12/04/04 09:30
B-2-Surf	T401441-03	Soil	12/03/04 09:45	12/04/04 09:30
B-2-0.5	T401441-04	Soil	12/03/04 09:55	12/04/04 09:30
B-3-1.0	T401441-05	Soil	12/03/04 10:00	12/04/04 09:30

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K Benicia CA, 94510 Project: Pitcock Oil

Project Number: [none]
Project Manager: Jim Gribi

Reported: 12/09/04 17:21

B-1-0.5 T401441-01 (Soil)

			-	-					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Purgeable Petroleum Hydrocarbons	by EPA 8015m								D-12
C6-C12 (GRO)	100000	4000	ug/kg	8	4120410	12/04/04	12/06/04	EPA 8015m	
Surrogate: 4-Bromofluorobenzene		115%	65-	135	"	н	"	"	
Extractable Petroleum Hydrocarbon	s by 8015								
Diesel Range Hydrocarbons	5200	10	mg/kg	1	4120411	12/04/04	12/08/04	EPA 8015m	· · · · · · · · · · · · · · · · · · ·
Volatile Organic Compounds by EPA	Method 8021B								
Methyl tert-butyl ether	ND	20	ug/kg	1	4120410	12/04/04	12/06/04	EPA 8021B	
Benzene	ND	5.0	n	•	tl.	**	н	Ħ	
Toluene	860	5.0	**	17	4	n	н	11	
Ethylbenzene	660	40	17	8	e	н	н	u	
m,p-Xylene	390	80	R	"	Nr.	"		u	
o-Xylene	610	40	n		N	**	•	. "	
Surrogate: 4-Bromofluorobenzene		110%	65-	135	μ	ji .	"	#	

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K

Project: Pitcock Oil

Project Number: [none]

Reported: 12/09/04 17:21

Benicia CA, 94510

Project Manager: Jim Gribi

#### B-1-2.0 T401441-02 (Soil)

								<del></del>	
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aboratorie	s, Inc.					
Purgeable Petroleum Hydrocarbons	by EPA 8015m								D-12
C6-C12 (GRO)	8900	500	ug/kg	1	4120410	12/04/04	12/04/04	EPA 8015m	
Surrogate: 4-Bromofluorobenzene		94.4 %	65-13	:5	"	n	"	"	
Extractable Petroleum Hydrocarbons	s by 8015								
Diesel Range Hydrocarbons	17	10	mg/kg	l	4120411	12/04/04	12/08/04	EPA 8015m	_
Volatile Organic Compounds by EPA	Method 8021B								
Methyl tert-butyl ether	ND	20	ug/kg	1	4120410	12/04/04	12/04/04	EPA 8021B	
Benzene	ND	5.0	N	"	н		W	*1	
Toluene	ND	5.0	н	н	11	н	Ħ	H	
Ethylbenzene	17	5.0	п	Ħ	n	17	*1	п	
m,p-Xylene	11	10	н	"	II .	**	π	ч	
o-Xylene	16	5.0	и	Ħ	н	#	p	#	
Surrogate: 4-Bromofluorobenzene		96.0 %	65-13	5	n	"	"	"	

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K Benicia CA, 94510 Project: Pitcock Oil

Project Number: [none] Project Manager: Jim Gribi

Reported: 12/09/04 17:21

B-2-Surf

		T4014	41-03 (S	oil)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.		•			
Purgeable Petroleum Hydrocarbons	by EPA 8015m								D-12
C6-C12 (GRO)	410000	4000	ug/kg	8	4120410	12/04/04	12/06/04	EPA 8015m	
Surrogate: 4-Bromofluorobenzene		278 %	65-	135	11	п	п	n	М
Extractable Petroleum Hydrocarbon	s by 8015								
Diesel Range Hydrocarbons	41000	100	mg/kg	01	4120411	12/04/04	12/08/04	EPA 8015m	
Volatile Organic Compounds by EPA	Method 8021B								-
Methyl tert-butyl ether	ND	20	ug/kg	1	4120410	12/04/04	12/06/04	EPA 8021B	
Benzene	ND	5.0	"		"	11	*	n	
Toluene	380	20	FI	4	11	н		п	
Ethylbenzene	3400	20	"	н	н	11	•	н	
m,p-Xylene	4700	40	н	п	II	"	н	**	
o-Xylene	1500	20	"	11	11	n	н		
Surrogate: 4-Bromofluorobenzene		162 %	65-	135	,,	n	"	"	М

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K Benicia CA, 94510

Project: Pitcock Oil

Project Number: [none] Project Manager: Jim Gribi

Reported: 12/09/04 17:21

#### B-2-0.5 T401441-04 (Soil)

				·					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Purgeable Petroleum Hydrocarbons	by EPA 8015m								D-1
C6-C12 (GRO)	ND	500	ug/kg	1	4120410	12/04/04	12/04/04	EPA 8015m	
Surrogate: 4-Bromofluorobenzene		67.1 %	65-	135	п	u	"	u	
Extractable Petroleum Hydrocarbon	s by 8015								
Diesel Range Hydrocarbons	6700	10	mg/kg	1	4120411	12/04/04	12/08/04	EPA 8015m	
Volatile Organic Compounds by EPA	Method 8021B			_					
Methyl tert-butyl ether	ND	20	ug/kg	1	4120410	12/04/04	12/04/04	EPA 8021B	
Benzene	ND	5.0	Ħ	ft	. "	#	,	H	
Toluene	ND	5.0	Ħ	u	**	Ħ	Ħ	n	
Ethylbenzene	ND	5.0	Ħ	"	11	u		m	
m,p-Xylene	ND	10	11	**	II	11	"	Ħ	
o-Xylene	ND	5.0	**	**	II .	n	11	N	
Surrogate: 4-Bromofluorobenzene	<u> </u>	72.3 %	65-	-135	rr	11	*	#	

SunStar Laboratories, Inc.

1090 Adam Street, Suite K Benicia CA, 94510 Project: Pitcock Oil

Project Number: [none] Project Manager: Jim Gribi

Reported: 12/09/04 17:21

B-3-1.0 T401441-05 (Soil)

1401441-03 (3011)													
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes				
		SunStar L	aboratori	es, Inc.									
Purgeable Petroleum Hydrocarbons I	by EPA 8015m			•					D-12				
C6-C12 (GRO)	22000	4000	ug/kg	8	4120410	12/04/04	12/06/04	EPA 8015m	D-12				
Surrogate: 4-Bromofluorobenzene		88.0 %	65-1	35	"	"	11/00/04	# #					
Extractable Petroleum Hydrocarbons	by 8015	00.075	03-1	J.J					٠				
Diesel Range Hydrocarbons	48	10	mg/kg	1	4120411	12/04/04	12/08/04	EPA 8015m					
Volatile Organic Compounds by EPA	Method 8021B		-0-8			12.01/04	12/00/07	El A 6015III					
Methyl tert-butyl ether	ND	20	ug/kg	1	4120410	12/04/04	12/06/04	EPA 8021B					
Benzene	ND	5.0	H	n	1120110	12/04/04	12/00/04	EFA 6021D					
Toluene	810	5.0	11	11	ır	**	11						
Ethylbenzene	ND	5.0	n	**	11	н	n						
m,p-Xylene	3200	10			11	н		 If					
o-Xylene	4300	5.0	H	11	**			n					
Surrogate: 4-Bromofluorobenzene		100 %	65-13	35	u	ff .	<u>-</u>	W					

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K Benicia CA, 94510 Project: Pitcock Oil

Project Number: [none]

Reported: 12/09/04 17:21

Project Manager: Jim Gribi

# Purgeable Petroleum Hydrocarbons by EPA 8015m - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120410 - EPA 5030 GC										•
Blank (4120410-BLK1)				Prepared a	& Analyze	d: 12/04/0	)4			
C6-C12 (GRO)	ND	500	ug/kg	*						
Surrogate: 4-Bromofluorobenzene	108		"	125		86.4	65-135			
LCS (4120410-BS1)		•		Prepared:	12/04/04	Analyzed	: 12/05/04			D-12
C6-C12 (GRO)	15500	500	ug/kg	13800		112	75-125			
Surrogate: 4-Bromofluorobenzene	108		"	125		86.4	65-135			
LCS Dup (4120410-BSD1)				Prepared:	12/04/04	Analyzed:	: 12/07/04			D-12
C6-C12 (GRO)	13900	500	ug/kg	13800		101	75-125	10.9	20	
Surrogate: 4-Bromofluorobenzene	107	·	"	125		85.6	65-135			

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K

Project: Pitcock Oil

Project Number: [none] Project Manager: Jim Gribi

Reported: 12/09/04 17:21

Benicia CA, 94510

# Extractable Petroleum Hydrocarbons by 8015 - Quality Control SunStar Laboratories, Inc.

4										
Analyte	D14	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 4120411 - EPA 3550B GC										
Blank (4120411-BLK1)				Prepared:	12/04/04	Analyzed	: 12/08/04		1-1-	
Diesel Range Hydrocarbons	ND	10	mg/kg							
LCS (4120411-BS1)				Prepared:	12/04/04	Analyzed	: 12/08/04			
Diesel Range Hydrocarbons	490	10	mg/kg	500	-	98.0	75-125			
Matrix Spike (4120411-MS1)	Source: T401440-01			Prepared: 12/04/04 Analyzed: 12/08/04						
Diesel Range Hydrocarbons	600	10	mg/kg	500	ND	120	75-125			<u> </u>
Matrix Spike Dup (4120411-MSD1)	Source: T401440-01			Prepared:	12/04/04		•			
Diesel Range Hydrocarbons	600	10	mg/kg	500	ND	120	75-125	0.00	20	

SunStar Laboratories, Inc.

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1090 Adam Street, Suite K Benicia CA, 94510 Project: Pitcock Oil

Project Number: [none]
Project Manager: Jim Gribi

Reported:

12/09/04 17:21

# Volatile Organic Compounds by EPA Method 8021B - Quality Control

#### SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120410 - EPA 5030 GC										
Blank (4120410-BLK1)	Prepared & Analyzed: 12/04/04									
Methyl tert-butyl ether	ND	20	ug/kg							
Benzene	ND	5.0	н							
Toluene	ND	5.0	**							
Ethylbenzene	ND	5.0	н							
m,p-Xylene	ND	10	н							
o-Xylene	ND	5.0	u							
Surrogate: 4-Bromofluorobenzene	118		"	125		94.4	65-135			
LCS (4120410-BS1)				Prepared:	12/04/04	Analyzed	: 12/05/04	_		
Benzene	229	5.0	ug/kg	200		114	70-130			
Toluene	1080	5.0	10	998		108	70-130			
Ethylbenzene	249	5.0	"	235		106	70-130			
m,p-Xylene	877	10		818		107	70-130			
o-Xylene	340	5.0	**	325		105	70-130			
Surrogate: 4-Bromofluorobenzene	128		"	125		102	65-135			
LCS Dup (4120410-BSD1)				Prepared:	12/04/04	Analyzed	: 12/07/04			
Benzene	230	5.0	ug/kg	200		115	70-130	0.436	20	
Toluene	1060	5.0	, ,	998		106	70-130	1.87	20	
Ethylbenzene	244	5.0	n	235		104	70-130	2.03	20	
m,p-Xylene	862	10	4	818		105	70-130	1.73	20	•
o-Xylene	336	5.0	и	325		103	70-130	1.18	20	
Surrogate: 4-Bromofluorobenzene	123		"	125		98.4	65-135			

SunStar Laboratories, Inc.

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Project: Pitcock Oil

1090 Adam Street, Suite K

Project Number: [none]

Reported: 12/09/04 17:21

Benicia CA, 94510

Project Manager: Jim Gribi

Notes and Definitions

D-12 Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.

М

A matrix effect was present.

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

SunStar Laboratories, Inc.