June 20, 2001 G-R #180255

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

CC:

Mr. David Vossler

Gettler-Ryan Inc.

Petaluma, California

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 RE:

Tosco (76) Service Station #4625

3070 Fruitvale Avenue Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1,	June 12, 2001	Groundwater Monitoring and Sampling Report Second Quarter - Event of May 11, 2001

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *July 6*, 2001, this report will be distributed to the following:

cc: Mr. Don Hwang, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Alameda, California 94502

Enclosure

trans/4625-DBD

June 12, 2001 G-R Job #180255

Mr. David B. De Witt Tosco Marketing Company 2000 Crow Canyon Place, Suite 400 San Ramon, California 94583

RE: Second Quarter Event of May 11, 2001

Groundwater Monitoring & Sampling Report

Tosco (76) Service Station #4625

3070 Fruitvale Avenue Oakland, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1, 2 and 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

No. 5577

Sincerely,

Deanna L. Harding Project Coordinator

Stephen J. Carter

Senior Geologist, R.G. No. 5577

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results

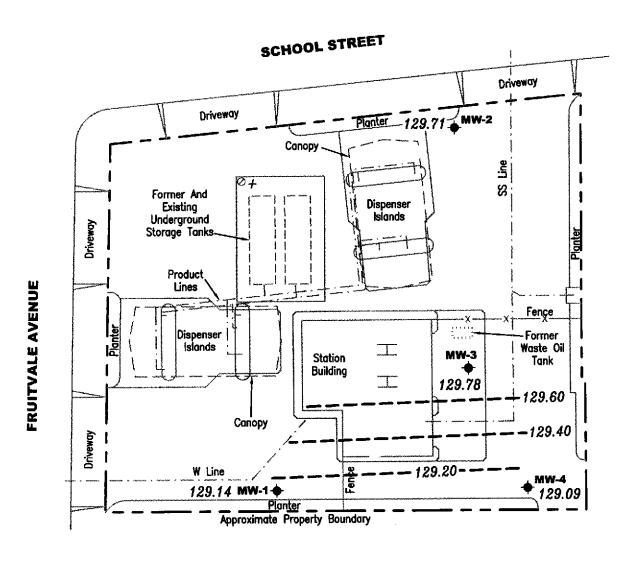
Table 3: Attachments:

Groundwater Analytical Results - Oxygenate Compounds Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

4625.qml



EXPLANATION

Groundwater monitoring well

UST Observation well

Groundwater elevation in feet 99.99 referenced to Mean Sea Level

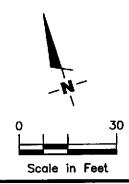
(MSL)

Groundwater elevation contour, dashed where inferred.

TOC not available



Approximate groundwater flow direction at a gradient of 0.02 Ft./Ft.



Source: Figure modified from drawing provided by Unocal.



POTENTIOMETRIC MAP

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

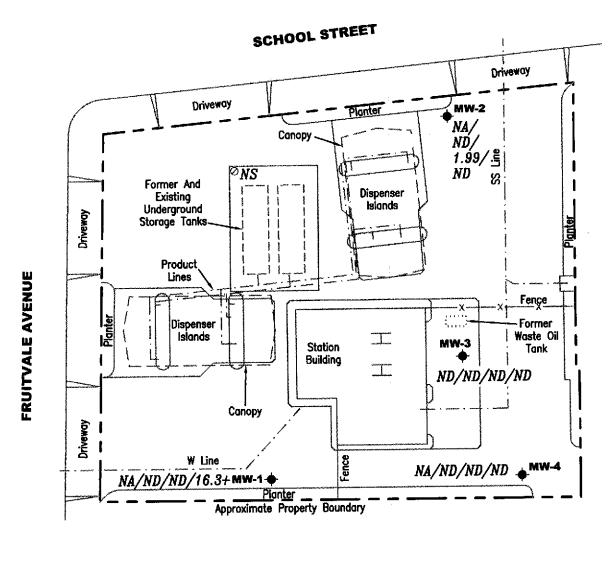
FIGURE

PROJECT NUMBER 180255

REVIEWED BY

DATE May 11, 2001 REVISED DATE

FILE NAME: P:\ENVIRO\TOSCO\4625\OO1-4625.DWG | Layout Tob: Pot2



EXPLANATION

Groundwater monitoring well

UST Observation well

TPH(D) (Total Petroleum A/B/C/DHydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb

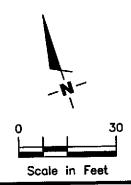
Not Detected ND

Not Analyzed NA

MTBE by EPA Method 8260

NS Not Sampled

REVISED DATE



Source: Figure modified from drawing provided by Unocal.



CONCENTRATION MAP

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

DATE

FIGURE

PROJECT NUMBER 180255

REVIEWED BY

May 11, 2001

FILE NAME: P:\ENVIRO\TOSCO\4625\Q01-4625.DWG | Layout Tob: Con2

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (76) Service Station #4625

osco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

WELL ID/	DATE	DTW	S.I.	GWE	TPH-D	TPH-G	В	T	I)	X	MTBE
TOC*	DAIL	(ft.)	(ft. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
100	<u> </u>	•									
MW-1											2
136.36	05/03/00	11.81	5.0-25.0	124.55		ND	ND	ND	ND	ND	11/142
	07/28/00	7.79		128.57		ND	ND	ND	ND	ND	$21/19^2$
	10/29/00	7.90		128.46		62 ¹	ND	ND	ND	ND	$6.5/3.9^2$
	02/09/01	7.95		128.41		ND	ND	ND	ND	ND	$9.0/9.0^2$
	05/11/01	7.22		129.14		ND	ND	ND	ND	ND	12.7/16.3 ²
MW-2											
138.64	05/03/00	8.59	5.0-25.0	130.05		$2,400^{1}$	53	ND ³	ND ³	240	³ ND/ND ²
130.04	07/28/00	9.95		128.69		2,200 ¹	680	4.1	57	270	24/ND ²
	10/29/00	8.38		130.26		490^{1}	67	ND^3	23	22	ND^3
	02/09/01	8.41		130.23		ND	3.1	ND	0.52	1.1	ND
	05/11/01	8.93		129.71		ND	1.99	ND	ND	ND	ND
	VV . 2 2 · · · · · ·										
MW-3					5			NE	ND	ND	ND/ND4
137.68	05/03/00	7.60	5.0-25.0	130.08	935	ND	ND	ND	ND		ND/ND ⁴
	07/28/00	8.82		128.86	ND^3	ND	ND	ND	ND	ND	
	10/29/00	7.33		130.35	ND	ND	ND	ND	ND	ND	ND
	02/09/01	7.40		130.28	72 ⁶	ND	ND	ND	ND	ND	ND
	05/11/01	7.90		129.78	ND	ND	ND	ND	ND	ND	ND
MW-4											11 2
136.60	05/03/00	6.48	5.0-25.0	130.12		ND	ND	ND	ND	ND	ND/ND ²
	07/28/00	7.55		129.05		ND	ND	ND	ND	ND	ND
	10/29/00	6.12		130.48		ND	ND	ND	ND	ND	ND
	02/09/01	6.14		130.46		ND	ND	ND	ND	ND	ND
	05/11/01	7.51		129.09		ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

WELL ID/	DATE	DTW	S.I.	GWE	TPH-D	TPH-G	В	T	E	X	MTBE
TOC*		(ft.)	(ft. bgs.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ррв)	(ppb)	(ppb)
UST OBSER	RVATION WEL	L									
	05/03/00	8.00									
	07/28/00	9.28									
	10/29/00	7.75						**			
	02/09/01	6.14									
	05/11/01	7.96					•-				
Trip Blank										ND	ND
TB-LB	05/03/00					ND	ND	ND	ND	ND	ND
	07/28/00					ND	ND	ND	ND	ND	ND
	10/29/00					ND	ND	ND	ND	ND	ND
	02/09/01					ND	ND	ND	ND	ND	ND
	05/11/01					ND	ND	ND	ND	ND	ND

2

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

EXPLANATIONS:

TOC = Top of Casing

B = Benzene

(ppb) = Parts per billion

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

-- = Not Measured/Not Analyzed

S.I. = Screen Interval

X = Xylenes

(ft. bgs.) = Feet Below Ground Surface

MTBE = Methyl tertiary butyl ether

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

- TOC elevations were surveyed based on a cut square on School Street, City of Oakland Benchmark No. 3783, (Elevation = 136.99 feet msl).
- Laboratory report indicates gasoline C6-C12.
- 2 MTBE by EPA Method 8260.
- Detection limit raised. Refer to analytical reports.
- MTBE by EPA Method 8240.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- Laboratory report indicates discrete peaks.

Table 2 Groundwater Analytical Results

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

	(ррв)	(ppb)	(ppm)	(ppm)
05/03/00	ND	ND	ND	ND
	ND^1	ND	1.8	ND
	ND	ND	ND	7.0
	ND	ND	0.038	ND
	ND	ND	ND	ND
	05/03/00 07/28/00 10/29/00 02/09/01 05/11/01	07/28/00 ND ¹ 10/29/00 ND 02/09/01 ND	07/28/00 ND¹ ND 10/29/00 ND ND 02/09/01 ND ND	07/28/00 ND 1.8 10/29/00 ND ND ND ND 02/09/01 ND ND 0.038

EXPLANATIONS:

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

TOG = Total Oil and Grease

(ppb) = Parts per billion

(ppm) = Parts per million

ND = Not Detected

ANALYTICAL METHODS:

EPA Method 8240B for VOCs EPA Method 8270B for SVOCs EPA 200 Series Methods for Chromium

All EPA Method 8240 and 8270 constituents were ND, unless noted.

All VOCs by EPA Method 8240 were ND, except for Tertrachloroethene was detected at 2.7 ppb.

Table 3 Groundwater Analytical Results - Oxygenate Compounds

Tosco (76) Service Station #4625 3070 Fruitvale Avenue Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	02/09/01 05/11/01	ND ND	ND ND	9.0 16.3	ND ND	ND ND	ND ND	ND ND	ND ND
MW-3	07/28/00		ND	ND	ND	ND	ND	ND	ND

EXPLANATIONS:

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = Ethylene dibromide or 1,2-Dibromoethane

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

acility #_462			Job#: _	180255	/- -	
	10 Fruitvale	Ave-		<u>5-11-01</u> or: Joe		
ity: <u>Oakl</u>	land CA:		_ Sample	er:	<u> </u>	
				O.k.		*
Well ID	$\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$	Well C	Condition:	U,K,		<u> </u>
ell Diameter	2 in	•	carbon	Amount Ba	*** **	(nel_)
otal Depth	25.06 #	Voluz	ness:		4*	= 0.66
epth to Water	7.22 #		r (VF)	6" = 1.50	12" = 5.80	
cput to viole	17.01		7 0 2	rolume) = Estimated Po	Malanan	9.500
		VF <u>Q-1 /</u> ·		rolume) = Estimated m	nide Aomwer 😁	<u></u>
Purge Equipment:	Disposable Bailer Bailer		Sampling Equipment:	Disposable Ba	iler	2
derhuo	Stack	•		Bailer Pressure Baile	er	
,	Suction Grundfos	-		Grab Sample Other:		
	Other:	<u> </u>		Outer.	-	
Starting Time:	946		Weather Condition	ns: Hot		
Sampling Time:	9:35 Am (9:	35)	Water Color:	clear	Odor_ No	Me
	te:		Sediment Descrip		·	
Did well de-wate	r7		If yes; Time:	Volur	ne:	;
Time '	Volume pH	Cond	uctivity C Tempo	erature D.O. C (mg/L)	ORP (mV)	Allcalimity (ppm)
	(gal.)	<i>μ</i> πιο	5g 73		(,	
$\frac{9!22}{9!24}$	7.48	- - 5.	51 73	.1	- . 	-
	9.5 7.42		54 72	-1		<u></u>
						
						-
		LABOR	RATORY INFORM	ATION		
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		LYSES
	3404	Y	HCL	Sequ	THE, B	TEY, MTBE
mw-1	1	 				
Mw -1	 	i .				
mw -1						
COMMENTS:						· <u>-</u>

Client/ Facility # <u>462</u>	·ś		Job#:	180255	
	o Fruitvale	<u>Àve·</u>	Date:	5-11-01	
City: Oakl	and CA.		Sample	er: Joe	
Well ID		Well C	Condition:	0.k.	
Well Diameter	2 in.	•	carbon	Amount Ba	
Total Depth	24.28	Volum			
Depth to Water	8.93 +	Facto	x (VF)	<i>ଟ =</i> 1 <i>5</i> 0	12" = 5.80
	15.35 x1	r 0.17		olume) = Estimated Pt	irge Volume: Y (cal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos		Sampling Equipment:	Disposable Ba Bailer Pressure Baile Grab Sample	
	Other:			Other:	
Starting Time: Sampling Time:	10:07 Am (10:0	<u>27</u>) 1	Weather Condition Water Color: Sediment Descript	clear	Odor: U Ore
	:: 			Volum	ne:
	olume pH (gal.)	Cond µmh	uctivity (⁷⁾ Tempo sos/cm (* – †	nature D.O. (mg/L)	ORP Alkalinity (mV) (ppm)
9:53 9:55 9:57	2.5 7.95 5.5 7.50 7.43		64 73. 68 73. .67 73.		
			RATORY INFORMA		ANALYSES
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY Seq.	TPHG, BTEX, MTBE
mw-2	YONE	1	1100		
	·				
		<u> </u>	1	1	1
COMMENTS: .		•			<u>. </u>
	-		·		

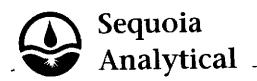
		HELD D	ATA SHEET			
lient/	_		Job#:	180255		
acility # <u>4625</u>		1	- D-104	5-11-01		
ddress: _3070	Fruitvale	Ave:	Date:			
ity: Oakla	ind, CA:		Sampler	: Joe		
				0.k.		<u>.</u>
Well ID -	MW-3	Well Co	ndition:			
Well Diameter	2 in.	Hydroca Thickne		Amount Bail	n: <u>0</u>	<u>(041)</u>
Total Depth .	24.73 #	Volume		3" = 0.38 6" = 1.50	4" : 12" == 5.80	= 0.66
Depth to Water	7.90 4	<u> </u>	·			
	x vi	F <u>0.17</u> =		umel = Estimated Pun	ge Volume:	(9
Purge Equipment:	Disposable Bailer Bailer	•	Sampling Equipment:	Disposable Bail	ier	7
Edmberger:	Stack	-		Pressure Bailer	•	
	Suction	-		Grab Sample		
<				Oran Danie		
Starting Time:	Other:	 .	Veather Conditions	ther:	Odor A	10
Sampling Time:	Grundfas Other:	<u>-</u> - s	Veather Conditions Vater Color:	ther:	Odor: <i>△.c</i>	
Sampling Time:	10:15 10:40 A m (10:4	<u>-</u> - s	Veather Conditions Vater Color:	ther:		
Sampling Time: Purging Flow Rate Did well de-water	Grandfas Other: 10:15 10:40 A·m (10:4) 10:40 A·m (10:4) 10:40 A·m (10:4)	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity (*) Temper	ther:		
Sampling Time: Purging Flow Rate Did well de-water Time V	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4)	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity Compensed Temper os/cm X F	ther:	orp	(gal.
Sampling Time: Purging Flow Rate Did well de water Time Vi	Grandfas Other: 10:15 10:40 A.m (10:4) 10:40 A.m (10:4) 7 Columne pH (gal.) 7 7 7 7 7 7 7 7 7 7 7 7 7	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity Color Temper Colo	ther:	orp	(gal.
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4)	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity Compensed Temper os/cm X F	ther:	orp	Alkalinity
Sampling Time: Purging Flow Rate Did well de water Time Vi	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4) 7 columne pH (gal.) 7 10 10 10 10 10 10 10 10 10 10 10 10 10	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity Color Temper Colo	ther:	orp	(gal.
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4) 7 columne pH (gal.) 7 10 10 10 10 10 10 10 10 10 10 10 10 10	Condu	Veather Conditions Vater Color: Sediment Descripti f yes; Time: scrivity Color Temper Colo	ther:	orp	(gal.
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4) 7 columne pH (gal.) 7 10 10 10 10 10 10 10 10 10 10 10 10 10	Conding miles	Veather Conditions Vater Color: Sediment Descripti f yes; Time: perivity Color Temper ox/cm x F 72. 53 72	ther: If of Clear on: Volume The first of the first	orp	(gal.
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22	Grundfas Other: 10:15 10:40 A.m (10:4) 10:40 A.m (10:4) 7 colume pH (gal.) 7 7 7 7 7 9 7 10	Conding punished a q. q. q	Veather Conditions Vater Color: Sediment Descripti f yes; Time:	ther:	ORP (mV)	(gal.
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4) 7 columne pH (gal.) 7 7.10 9 7.12 9 7.19	Condu Condu µmbc 9.9 9.9 1.8	Veather Conditions Vater Color: Sediment Descripti f yes; Time: perivity 1 72 Temper pos/cm x F 72. 73 72 RATORY INFORMA PRESERV. TYPE	ther: If of Clear On: Volume D.O. (mg/L) S O LABORATORY	ORP (mV)	Alkalinity (ppm)
Sampling Time: Purging Flow Rate Did well de-water Time Vi 10::22 10::26	Grundfas Other: 10:15 10:40 A.m (10:4) 10:40 A.m (10:4) 7 columne pH (gal.) 7 7 7 7 7 7 10 4 7 7 7 7 7 7 7 7 7 7 7 7	Condinguinho	Veather Conditions Vater Color: Sediment Descripti f yes; Time:	ther:	ORP (mV)	Alkalimity (ppm)
Sampling Time: Purging Flow Rate Did well de-water Time Volume 10::22 10::24 10::26 SAMPLE ID	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4)	Conda umbo 9.9. 9. 9. 1. LABOR REFRIG. Y	Veather Conditions Vater Color: Sediment Descripti f yes; Time:	ther: If of Clear On: Volume D.O. (mg/L) O O LABORATORY Seq.	ORP (mV)	Alkalimity (ppm) LYSES TEX, MTBE
Sampling Time: Purging Flow Rate Did well de-water Time Volume 10::22 10::24 13::26 SAMPLE ID	Grundfas Other: 10:15 10:40 A.m (10:4) 10:40 A.m (10:4) 7 colume pH (gal.) 7 7 7 7 10 4 7 7 10 4 7 7 10 10 10 10 10 10 10 10	Condinguinho	Veather Conditions Vater Color: Sediment Descripti f yes; Time:	ther: If of Clear On: Volume Thom (mg/L) S O O O INDO LABORATORY Seq.	ANA TPHG.B VOCS/ SYOCS	Alkalinity (ppm) LYSES TEX, MTB 8 240 / 8270
Sampling Time: Purging Flow Rate Did well de-water Time Volume 10::22 10::24 13::26 SAMPLE ID	Grundfas Other: 10:15 10:40A·m (10:4) 10:40A·m (10:4)	Conda umbo 9.9. 9.9. 1.1 LABOR REFRIG. Y	Veather Conditions Vater Color: Sediment Descripti f yes; Time:	ther: If of Clear On: Volume D.O. (mg/L) S O O INDO LABORATORY Seq.	ANA TPHG. B VOCS TPHI	Alkalimity (ppm) LYSES TEX, MTBE 8 240 / 8270

Client/ Facility # <u>462</u>	25		Job#:	180255		
_	o Fruitvale	Ave ·	Date: Sample	5-11-01 er: <u>Joe</u>		
Well ID	mw-4	Well C	Condition:	0.k.	·	
Well Diameter Total Depth	2 in 24.65 tr	Thick	carbon ness: 2° = 0.1	Amount Ba in (product/wat	er):	- 0.66
Depth to Water	7.51 #	<u> </u>	κ (VF)	6" = 1.50	12" = 5.80	
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	F <u>0.17</u>	Sampling Equipment:	Disposable Ba Bailer Pressure Baile Grab Sample	iler	/
	8:35 A.m (8: e:	<u> </u>		_	Odor:ue	v C (gal.)
7:40 8:42 8:44	Volume pH (gal.) 3 7.56 7.50 9 7.41	المسر <u>ان ا</u> ان ا	33 71. 51 71. 2.58 72	(mg/L)	ORP (mV)	Alkalinity (ppm)
SAMPLE ID	(#) - CONTAINER	LABOF	ZATORY INFORMA PRESERV. TYPE	LABORATORY	ANAL	
mu-4	3404	Υ	HCL	Seq.	TPHG.BT	EX,MTBE
	·			·		
COMMENTS: .						

Well ID Well Diameter Total Depth Depth to Water Purge Equipment: Bailer Stack Suction Grundt	Observation we will be in the Third of the Color of the C	Vell Condition ydrocarbon hickness: Volume Factor (VF) 7 Sa Ed Weather Water C Sediment If yes;	2° = 0.17 X 3 (cese volumenting quipment: (Amount Bail in toroduct/water 3" = 0.38 6" = 1.50 Disposable Bailer Pressure Baile Grab Sample ther:	12" = 5.80 12" = 5.80 rge Volume:	(Qsl.)
Well ID Well Diameter Total Depth Depth to Water Purge Dispose Equipment: Bailer Stack Suction Grundt Other: Starting Time: Sampling Time: Purging Flow Rate: Did well de-water? Time Volume	Observation we will will be with the will be w	Vell Condition ydrocarbon hickness: Volume Factor (VF) 7 Sa Ed Weather Water C Sediment If yes;	2° = 0.17 X 3 (case volumnting quipment: (Or Conditions: Color: (Ont	Amount Bai in. (product/wate 3" = 0.38 6" = 1.50 Disposable Bai Bailer Pressure Baile Grab Sample ther:	12" = 5.80 12" = 5.80 rge Volume:	(Onl.)
Well ID Vell Diameter Total Depth Depth to Water Purge Equipment: Bailer Stack Suction Grundi Other: Starting Time: Purging Flow Rate: Did well de-water? Time Volume	in Hy in Hy 71 76 X VF 0-1 able Bailer fos	Vell Condition ydrocarbon hickness: Volume Factor (VF) 7 Sa En Weather Water C Sediment If yes;	2° = 0.17 X 3 (cese volumenting quipment: (Amount Bai in. (product/water 3" = 0.38 6" = 1.50 The product of	12" = 5.80 12" = 5.80 rge Volume:	0.66 (gal.)
Vell Diameter Total Depth Depth to Water Purge Equipment: Bailer Stack Suction Grundt Other: Starting Time: Purging Flow Rate: Did well de-water? Time Volume	y v v o.i	Volume Factor (VF) 7 Sa Eq Weather Water C Sediment If yes;	X 3 (case volumnting quipment: (Disposable Bailer Pressure Baile Grab Sample ther:	12" = 5.80 12" = 5.80 rge Volume:	0.66 (onl.)
Purge Dispose Equipment: Bailer Stack Suction Grunds Other: Starting Time: Sampling Time: Purging Flow Rate: Did well de-water?	x vF 0.1	Volume Factor (VF) 7 Sa Eq Weather Water C Sediment If yes;	X 3 (case volumnting quipment: (Disposable Bailer Pressure Baile Grab Sample ther:	12" = 5.80 rge Volume:	(onl.)
Purge Dispose Equipment: Bailer Stack Suction Grundt Other: Starting Time: Sampling Time: Purging Flow Rate: Did well de-water? Time Volume	able Bailer fos	Weather Water C Sedimer	or Conditions:	Disposable Bailer Pressure Baile Grab Sample ther:	eler s	
Starting Time: Sampling Time: Purging Flow Rate: Did well de-water? Volume	fos	Weather Water C Sedimer	Or Conditions:	Bailer Pressure Baile Grab Sample ther: to t	Odor:	
Sampling Time: Purging Flow Rate: Did well de-water? Time Volume		Water C Sediment If yes;	color: nt Description	clear		
Time Volume	pH		- HILLER	Volum	ne:	للموئ
	-	Conductivity	L'O Temper		ORP (mV)	All clinity (ppm)
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SAMPLE TO (F) -		RIG. PRES	ERV. TYPE	ABORATORT	ANAC	
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June 01, 2001

Deanna Harding Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 RE: Tosco(1) / L105108

Enclosed are the results of analyses for samples received by the laboratory on 05/11/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt

Project Manager

CA ELAP Certificate Number 2360

Jonya K. Pett

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Reported: 06/01/01 12:01

Project Manager: Deanna Harding

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L105108-01	Water	05/11/01 00:00	05/11/01 16:00
MW-1	L105108-02	Water	05/11/01 09:35	05/11/01 16:00
MW-2	L105108-03	Water	05/11/01 10:07	05/11/01 16:00
MW-3.	L105108-04	Water	05/11/01 10:40	05/11/01 16:00
MW-4	L105108-05	Water	05/11/01 08:55	05/11/01 16:00

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
TB-LB (L105108-01) Water	Sampled: 05/11/01 00:00	Received:	05/11/01	16:00					
Purgeable Hydrocarbons as Ga	asoline ND	50.0	ug/l	1	1050100	05/23/01	05/23/01	DHS LUFT	
Benzene	ND	0.500	**	"		-	77		
Toluene	ND	0.500	10	*	11	n	н		
Ethylbenzene	ND	0.500	77	•	11	Ħ	Ħ	# 	
Xylenes (total)	ND	0.500	11	**		"	"		
Methyl tert-butyl ether	ND	5.00		#				· · · · · · · · · · · · · · · · · · ·	
Surrogate: a,a,a-Trifluorotolu	iene	95.8 %	70-	130	"	*	r	"	
MW-1 (L105108-02) Water	Sampled: 05/11/01 09:35	Received:	05/11/01	16:00					
Purgeable Hydrocarbons as G	asoline ND	50.0	ug/l	1	1050099	05/23/01	05/23/01	DHS LUFT	
Benzene	ND	0,500	n	"	**	•		*	
Toluene	ND	0.500	n	*	u	11	-		
Ethylbenzene	ND	0.500	Ħ	n	π	п	**	"	
Xylenes (total)	ND	0.500	**	11	ıt	"	Ħ	"	
Methyl tert-butyl ether	12.7	5.00				**)t	
Surrogate: a,a,a-Trifluorotoli	iene	96.0 %	70	-130	"	*	Ħ	n	
MW-2 (L105108-03) Water	Sampled: 05/11/01 10:0'	7 Received:	05/11/01	16:00					
Purgeable Hydrocarbons as G	asoline ND	50.0	ug/l	1	1050099	05/23/01	05/23/01	DHS LUFT	
Benzene	1.99	0.500	#1	*	n	n		7	
Toluene	ND	0.500	**	"	н	Ħ	Ħ	я	
Ethylbenzene	ND	0.500	**	п	•	н	*	"	
Xylenes (total)	ND	0.500			'n	**		77	
Methyl tert-butyl ether	ND	5.00	Ħ		#				
Surrogate: a,a,a-Trifluorotol	uene	86.6 %	70	-130	n	"	*	"	

Project: Tosco(1)

6747 Sierra Court, Suite J

Dublin CA, 94568

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water Sampled	: 05/11/01 10:40	Received: 0	5/11/01 1	6:00					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1050099	05/23/01	05/23/01	DHS LUFT	
Benzene	ND	0.500	н	"	**		tr .	11	
Toluene	ND	0.500	#		. **	II .	17	11	
Ethylbenzene	ND	0.500	н	71	11	**	**	Ħ	
Xylenes (total)	ND	0.500	н	"	n	n	41	"	
Methyl tert-butyl ether	ND	5.00	Ħ	11	"	11	"		
Surrogate: a,a,a-Trifluorotoluene		78.7 %	70-	130	"	n	H	π	
MW-4 (L105108-05) Water Sampled	l: 05/11/01 08:5 5	Received: 0	5/11/01 1	16:00					
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1050099	05/23/01	05/23/01	DHS LUFT	
Benzene	ND	0.500	ñ	Ħ	п	•		11	
Toluene	ND	0.500	•	**	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	н	**	11	
Ethylbenzene	ND	0.500	**	Ħ	n	n	#	11	
Xylenes (total)	ND	0.500	11	Ħ	н	Ħ	11	Ħ	
Methyl tert-butyl ether	ND	5.00	*1	Ħ		H	н	#	
Surrogate: a,a,a-Trifluorotoluene		94.6 %	70-	130	"	n	#	n	

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8240B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-3 (L105108-04) Water S	ampled: 05/11/01 10:40	Received: 05	5/11/01	16:00					
Acetone	ND	20.0	ug/l	ì	1050096	05/22/01	05/22/01	EPA Method 8240	
		2.00	*		91		н	*	
Benzene	ND	2.00	,,	н	Ħ	я	•	n	
Bromodichloromethane	ND	2.00		n		н	Ħ	H	
Bromoform	ND	2.00	н	,	Ħ	•	**	n	
Bromomethane	ND	2.00	11	**	н	n	Ħ	•	
2-Butanone	ND	20.0			•	**	**	H	
Carbon disulfide	ND	2.00	**	11	π	"	•	H	
Carbon tetrachloride	ND	2.00	 H	,	*	n	Ħ	**	
Chlorobenzene	ND	2.00		,, 11	*	-	n	**	
Chloroethane	ND	2.00	***	.,		n	n	u	
2-Chloroethylvinyl ether	ND	20.0	"	" "	,	11	TT	"	
Chloroform	ND	2.00	**	"	и	"		11	
Chloromethane	ND	2.00	**	"	"	ır	**	H	
Dibromochloromethane	ND	2.00	17		"	#1	н	•	
1,1-Dichloroethane	ND	2.00	"	"	" **		Ħ	Ħ	
1,2-Dichloroethane	ND	2.00	**	"	"		**	н	
1,1-Dichloroethene	ND	2.00	n	н	,	 N		**	
cis-1,2-Dichloroethene	ND	2.00	m	H		"	#	n	
trans-1,2-Dichloroethene	ND	2.00	Ħ	77	*	. 11		**	
1,2-Dichloropropane	ND	2.00	, "	n	H	. "		n	
cis-1,3-Dichloropropene	ND	2.00	Ħ	*	#	"	 n	н	
trans-1,3-Dichloropropene	ND	2.00	H	ęı	#		" #	*	
-	ND	2.00	•	**		#	"	n	
Ethylbenzene	ND	20.0	17	Ħ	41	n			
2-Hexanone	ND	5.00	•		•	*			
Methylene chloride	ND	20.0		#	**	"	н		
4-Methyl-2-pentanone	ND	2.00		D	n	11	#	-	
Styrene	ND	2.00		**	**	**	**		
1,1,2,2-Tetrachloroethane	ND	2.00		н	H	#	"	"	
Tetrachloroethene	ND	2.00			*		**	H	
Toluene		2.00		н	Ħ	Ħ	**	Ħ	
1,1,1-Trichloroethane	ND	2.00		**		Ħ	Ħ	19	
1,1,2-Trichloroethane	ND			н	**	н	π	17	
Trichloroethene	ND	2.00		17	n		Ħ	u	
Trichlorofluoromethane	ND	2.00	,		#	71	•	n	
Vinyl acetate	ND	5.00	,	**		11	u	Ħ	
Vinyl chloride	ND	2.00	,		41	**	,,	и	
Total Xylenes	ND	2.00	<u> </u>						
Surrogate: 1,2-Dichloroethan	e-d4	103 %	6	76-114		,,	 n	"	
Surrogate: Toluene-d8	*	98.8 9	6	88-110	"	"			

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8240B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water	Sampled: 05/11/01 10:40	Received: 0	5/11/01	16:00					
Surrogate: 4-BFB		98.8 %	86-	115	1050096	05/22/01	05/22/01	EPA Method 8240	

6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-3 (L105108-04) Water S	ampled: 05/11/01 10:40	Received: 05	5/11/01	16:00					
Bromodichloromethane	ND	0.500	ug/l	1	1050034	05/15/01	05/15/01	EPA 8021B	
	ND	0.500	н	•	**	11	"		
Bromoform	ND	1.00		Ħ	Į1	H	"	 H	
Bromomethane	ND	0.500	n	**	M	"	"	" "	
Carbon tetrachloride	ND	0.500	11	**	"	**			
Chlorobenzene	ND	1.00	Ħ	n	н	11	11	" -	
Chloroethane	ND ND	0.500	n	•	**	Ħ	n	"	
Chloroform	ND ND	1.00	**	M	**	Ħ	11		
Chloromethane	ND	0.500	Ħ	*	-	Ħ	11	n	
Dibromochloromethane	ND ND	0.500		11	41	rt	**	*	
1,3-Dichlorobenzene		0.500	н	**	10	н	11	n	
1,4-Dichlorobenzene	ND	0.500	**	н	11		**	Ħ	
1,2-Dichlorobenzene	ND	0.500	#			11	#	"	
1,1-Dichloroethane	ND	0.500	11	a	11	n	17	H	
1,2-Dichloroethane	ND	0.500	**	n	n	11	u	**	
1,1-Dichloroethene	ND	0.500	и		**	**		11	
cis-1,2-Dichloroethene	ND		11	н	n		**	**	
trans-1,2-Dichloroethene	ND	0.500	н	,	п	Ħ	"	11	
1,2-Dichloropropane	ND	0.500	11	#1		77	, π	IF	
cis-1,3-Dichloropropene	ND	0.500	n	-	. 41	Ħ	n	• •	
trans-1,3-Dichloropropene	ND	0.500		ri .	n	*	•	*	
Methylene chloride	ND	5.00		**	#	n	Ħ	**	
1,1,2,2-Tetrachloroethane	ND	0.500		p	,,		-	Ħ	
Tetrachloroethene	ND	0.500			**	Ħ	Ħ	•	
1,1,1-Trichloroethane	ND	0.500	•••	n .	,		11	Ħ	
1,1,2-Trichloroethane	ND	0.500			#	n	tt	**	
Trichloroethene	ND	0.500		н	,			n	
Trichlorofluoromethane	ND	0.500		, , , , , , , , , , , , , , , , , , ,		**	11	H	
Vinyl chloride	ND_	1.00							
Surrogate: 1-Chloro-2-fluorob	enzene	92.7 %	;	70-130	н				

Surrogate: 1-Chloro-2-fluorobenzene

6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Reported:

Project Manager: Deanna Harding

06/01/01 12:01

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L105108-02) Water	Sampled: 05/11/01 09:35	Received: 0	5/11/01	16:00					
Ethan al	ND	1000	ug/l		1050101	05/24/01	05/24/01	EPA 8260B	
Ethanol	ND	2.00	π	п	"	-	Ħ	Ħ	
1,2-Dibromoethane		2.00	19		₩	и ,	n	**	
1,2-Dichloroethane	ND		n	н	п	Ħ	11		
Di-isopropyl ether	ND	2.00			**		**		
Ethyl tert-butyl ether	ND	2.00	**			#		11	
Methyl tert-butyl ether	16.3	2.00	n	**	**			**	
Tert-amyl methyl ether	ND	2.00	n	11	41	Ħ	*		
Tert-butyl alcohol	ND	100		n	#				
Surrogate: 1,2-Dichloroethan	no_d4	100 %	70	6-114	"	"	n	"	
Surrogate: Toluene-d8	16√-36 T	106 %	. 8	8-110	"	H	Ħ	"	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported:

06/01/01 12:01

Diesel Hydrocarbons (C9-C24) by DHS LUFT Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water	Sampled: 05/11/01 10:40	Received: 0	5/11/01	16:00					
Diesel Range Hydrocarbons	ND	50.0	ug/l	1	1E22016	05/22/01	05/24/01	DHS LUFT	
Surrogate: n-Pentacosane		78.2 %	50-	-150	*	"	ø	H	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Metals by EPA 200 Series Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water	Sampled: 05/11/01 10:40	Received: 0	5/11/01	16:00				<u> </u>	
Chromium	ND	0.0100	mg/l	1	IE18013	05/18/01	05/25/01	EPA 200.7	

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco SS#4625, Oakland, CA

Dublin CA, 94568

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Morgan Hill

									i i
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water	Sampled: 05/11/01 10:40	Received: 0	5/11/01	16:00				G) 6 5500D	
Oil & Grease	ND	6.25	mg/l	1	1E24001	05/24/01	05/24/01	SM 5520B	

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Walnut Creek

	n 14	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Analyte	Result				- Latell			· · · · · · · · · · · · · · · · · · ·	
MW-3 (L105108-04) Water	····						0.710-101	ED 4 80000	
Acenaphthene	ND	5.0	ug/l	1	1E16006	05/16/01	05/31/01	EPA 8270C	
Acenaphthylene	ND	5.0	It			n	"		
Aniline	ND	5.0	**	**	**		" "		
Anthracene	ND	5.0	n	11	н		"	,,	
Benzoic acid	ND	10	н	n	n		" "	"	
Benzo (a) anthracene	ND	5.0	*	n	,,	4	π H		
Benzo (b) fluoranthene	ND	5.0	**	**	77	"			
Benzo (k) fluoranthene	ND	5.0	"	"	Ħ	-		<u>"</u>	
Benzo (ghi) perylene	ND	5.0	Ħ	P	#	n		-	
Benzo[a]pyrene	ND	5.0	n	•	H	11	11		
Benzyl alcohol	ND	5.0	*	*		n	11	#	
Bis(2-chloroethoxy)methane	ND	5.0	**	"	#1	n	"	**	
Bis(2-chloroethyl)ether	ND	5.0	Ħ	11	Ħ	n	-	"	
Bis(2-chloroisopropyl)ether	ND	5.0		"	н	n	•	**	
Bis(2-ethylhexyl)phthalate	ND	10	**	**	Ħ	Ħ	н	n	
4-Bromophenyl phenyl ether	ND	5.0	#	tt		n	**	#1	
Butyl benzyl phthalate	ND	50	*	п	н	n	m m	**	
4-Chloroaniline	ND	25	**	P	n	-	₩.	n	
2-Chloronaphthalene	ND	5.0	**		**	н	Ħ	#	
4-Chloro-3-methylphenol	ND	5.0	#1	•	u	. 41	н	Ħ	
2-Chlorophenol	ND	5.0	Ħ	n	н	Ħ	11	н	
4-Chlorophenyl phenyl ether	ND	5.0	n	π	11	n	H	Ħ	
Chrysene	ND	5.0	**	H		•	**	41	
Dibenz (a,h) anthracene	ND	10	11	**	**	Ħ	**	tt	
Dibenzofuran	ND	5.0	Ħ	u	Ħ	n	tt	11	
Di-n-butyl phthalate	ND	10		#	#1	n	n		
1,2-Dichlorobenzene	ND	5.0		n		•	H	**	
1,3-Dichlorobenzene	ND	5.0	11	*	-	•	w	**	
1,4-Dichlorobenzene	ND	10	**		н	Ħ	Ħ	**	
3,3'-Dichlorobenzidine	ND	10	IT	#	**	Ħ	11	Ħ	
2,4-Dichlorophenol	ND ND	5.0	•	H	"		**	n	
	ND ND	5.0	. 11	*	•	п	II.		
Diethyl phthalate	ND ND	5.0	,,	11	**	**	*	TÌ	
2,4-Dimethylphenol	ND ND	5.0		н	**	n	н	н	
Dimethyl phthalate	ND ND	10	**	u		n.	11	Ħ	
4,6-Dinitro-2-methylphenol	ND ND	10	**	**		•	u	u	
2,4-Dinitrophenol		10	п	11	"	ır	. •	π	
2,4-Dinitrotoluene	ND			н	19	11		•	
2,6-Dinitrotoluene	ND	10	 Ti				*	н	
Di-n-octyl phthalate	ND	10	"	 H		Ħ	Ħ	#	
Fluoranthene	ND	5.0	"	•	•				

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Semivolatile Organic Compounds by EPA Method 8270C

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L105108-04) Water	Sampled: 05/11/01 10:40	Received: 0	5/11/01 1	16:00					
Fluorene	ND	5.0	ug/l	1	1E16006	05/16/01	05/31/01	EPA 8270C	
Hexachlorobenzene	ND	10	*1	Ħ	**	π			
Hexachlorobutadiene	ND	10	n		"	" "	**	**	
Hexachlorocyclopentadiene	ND	10	n	**	n	n	" "	11	
Hexachloroethane	ND	5.0	**	"		,,			
Indeno (1,2,3-cd) pyrene	ND	10	Ħ	H		"	" "	H	
Isophorone	ND	5.0))	*	#	"	"	n	
2-Methylnaphthalene	ND	5.0	-		"	"	,,	"	
2-Methylphenol	ND	5.0	Ħ	n	11	#	" "		
4-Methylphenol	ND	5.0	Ħ	'n	#	**		H	
Naphthalene	ND	5.0			"	**	"	71	
2-Nitroaniline	ND	10	**	t 1	**	**	"	"	
3-Nitroaniline	ND	10	#	#	11	"		Ħ	
4-Nitroaniline	ND	20	Ħ	11	#	H 17		n	
Nitrobenzene	ND	5.0		"	"	#* ***	#		
2-Nitrophenol	ND	5.0	**	# ··	"	"	 Pr	n	
4-Nitrophenol	ND	10	H		"	**		Ħ	
N-Nitrosodimethylamine	ND	5.0	. •				#	н	
N-Nitrosodiphenylamine	ND	5.0	"	m 		. "	" #	#	
N-Nitrosodi-n-propylamine	ND	5.0	PT	n 	"	**	"	п	
Pentachlorophenol	ND	10	**	#	"	" **	#	n	
Phenanthrene	ND	5.0	Ħ	п	**	"			
Phenol	ND	5.0			# #	,,		"	
Pyrene	ND	5.0	**	**	**		**	n	
1,2,4-Trichlorobenzene	ND	5.0	Ħ	#		#	" #		
2,4,5-Trichlorophenol	ND	10	H	*	**	n n	**	11	
2,4,6-Trichlorophenol	ND_ND	10		н					
Surrogate: 2-Fluorophenol		38.8 %	_	1-110		"	H T	и	
Surrogate: Phenol-d6		23.2 %		0-110	#	,,	π	 n	
Surrogate: Nitrobenzene-d5		75.4 %		5-114	n	n 		"	
Surrogate: 2-Fluorobiphenyl		80.1 %		13-116	*	# ··	,,	,	
Surrogate: 2,4,6-Tribromoph		70.7 %		0-123	#	"	"	n	
Surrogate: p-Terphenyl-d14		59.9 %	3	33-141	n	н	n	я	

Project: Tosco(1)

6747 Sierra Court, Suite J **Dublin CA, 94568**

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - San Carlos

Aba.	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	- NCOUL	Lank							 	
Batch 1050099 - EPA 5030B (P/T)										
Blank (1050099-BLK1)				Prepared	& Analyze	ed: 05/23/0)1			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	H							
Toluene	ND	0.500	R							
Ethylbenzene	ND	0.500	**							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	5.00	Ħ	_						•
Surrogate: a,a,a-Trifluorotoluene	7.36		"	10.0		73.6	70-130			
LCS (1050099-BS1)				Prepared	& Analyz	ed: 05/23/				
Benzene	9.74	0.500	ug/l	10.0		97.4	70-130			
Toluene	10.1	0.500		10.0		101	70-130			
Ethylbenzene	10.6	0.500	-	10.0		106	70-130			
Xylenes (total)	31.6	0.500	11	30.0		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.21		н	10.0		92.1	70-130			
LCS (1050099-BS2)				Prepared	& Analyz	zed: 05/23/				
Purgeable Hydrocarbons as Gasoline	244	50.0	ug/l	250		97.6	70-130	A-11-7-		
Surrogate: a,a,a-Trifluorotoluene	8.06		п	10.0		80.6	70-130			
Matrix Spike (1050099-MS1)	Sou	ırce: L1051(9-04	Prepared	& Analyz	zed: 05/23/				
Benzene	8.88	0.500	ug/i	10.0	ND	88.8	60-140			
Toluene	8.96	0.500	Ħ	10.0	ND	89.6	60-140			
Ethylbenzene	8.87	0.500	n	10.0	ND	88.7	60-140			
Xylenes (total)	26.8	0.500	*	30.0	ND	89.3	60-140			
Surrogate: a,a,a-Trifluorotoluene	8.69		"	10.0		86.9	70-130			
Matrix Spike Dup (1050099-MSD1)	So	urce: L1051(09-04	Prepared	& Analy:	zed: 05/23.	/01			
Benzene	8.97	0.500	ug/l	10.0	ND	89.7	60-140	1.01	25	
Toluene	8.98	0.500	**	10.0	ND	89.8	60-140	0.223	25	
Ethylbenzene	8.92	0.500	Ħ	10.0	ND	89.2	60-140	0.562	25	
Xylenes (total)	26.9	0.500	"	30.0	ND	89.7	60-140	0.372	25	
Surrogate: a,a,a-Trifluorotoluene	8.62			10.0		86.2	70-130	<u> </u>		

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - San Carlos

			-				%REC		RPD	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD_	Limit	Notes
Batch 1050100 - EPA 5030B (P/T)						. 05/02/0	<u> </u>			 -
Blank (1050100-BLK1)				Prepared &	Analyze	d: 05/23/0	<u> </u>			
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	n							
	ND	0.500	*							
Ethylbenzene	ND	0.500	n							
(ylenes (total)	ND	0.500	**							
Methyl tert-butyl ether	ND	5.00	н							
Surrogate: a,a,a-Trifluorotoluene	9.12		"	10.0		91.2	70-130			
_				Prepared	& Analyz	ed: 05/23/0)1			
LCS (1050100-BS1)	9.67	0.500	ug/l	10.0		96.7	70-130			
Benzene	9.67 10.1	0.500		10.0		101	70-130			
Toluene	10.1	0.500	n	10.0		109	70-130			
Ethylbenzene		0.500		30.0		109	70-130			
Xylenes (total)	32.6		n			99.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.93		"	10.0						
LCS (1050100-BS2)					& Analy	zed: 05/23/ 94.8	70-130			
Purgeable Hydrocarbons as Gasoline	237	50.0	ug/l	250						
Surrogate: a,a,a-Trifluorotoluene	10.0	<u> </u>	н	10.0		100	70-130			
•	So	urce: L1051	15-01	Prepared	: 05/23/0	1 Analyze	d: 05/24/01			
Matrix Spike (1050100-MS1)	8.55	0.500	ug/l	10.0	ND	85.5	60-140			
Benzene	8.42	0.500	n	10.0	ND	84.2	60-140			
Toluene	8.63	0.500	*	10.0	ND	86.3	60-140			
Ethylbenzene	25.7	0.500		30.0	ND	85.7	60-140			
Xylenes (total)				10.0		85.9	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.59						1. 05/04/01			
Matrix Spike Dup (1050100-MSD1)	So	ource: L1051					d: 05/24/01 60-140	3.21	- 25	
Benzene	8.28	0.500		10.0	ND	82.8	60-140	2.89	25	
Toluene	8.18	0.500	ŢÎ.	10.0	ND	81.8		2.94	25	
Ethylbenzene	8.38	0.500		10.0	ND	83.8	60-140	3.16	25	
Xylenes (total)	24.9	0.500	. "	30.0	ND	83.0	60-140	3.10	2.3	
	8.39		n	10.0		83.9	70-130			
Surrogate: a,a,a-Trifluorotoluene	0.37									

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco \$\$#4625, Oakland, CA

Reported: 06/01/01 12:01

Dublin CA, 94568

Project Manager: Deanna Harding

Volatile Organic Compounds by EPA Method 8240B - Quality Control Sequoia Analytical - San Carlos

	D,b	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Lunc	VIII II	2010			-			
Batch 1050096 - EPA 5030B [P/T]							_		 	
Blank (1050096-BLK1)				Prepared	& Analyz	ed: 05/22/0)1			
Acetone	ND	20.0	ug/l							
Benzene	ND	2.00	#							
Bromodichloromethane	ND	2.00	Ħ							
Bromoform	ND	2.00	Ħ							
Bromomethane	ND	2.00	11							
2-Butanone	ND	20.0								
Carbon disulfide	ND	2.00								
Carbon tetrachloride	ND	2.00	н							
Chlorobenzene	ND	2.00	#							
Chloroethane	ND	2.00								
2-Chloroethylvinyl ether	ND	20.0	-							
Chloroform	ND	2.00	**							
Chloromethane	ND	2.00	#							
Dibromochloromethane	ND	2.00	*							
1,1-Dichloroethane	ND	2.00	77							
1,2-Dichloroethane	ND	2.00	11							
1,1-Dichloroethene	ND	2.00	H				•			
cis-1,2-Dichloroethene	ND	2.00	н							
trans-1,2-Dichloroethene	ND	2.00	**							
1,2-Dichloropropane	ND	2.00	11							
cis-1,3-Dichloropropene	ND	2.00	п							
trans-1,3-Dichloropropene	ND	2.00	n							
Ethylbenzene	ND	2.00	**							
2-Hexanone	ND	20.0	"							
Methylene chloride	ND	5.00	n							
4-Methyl-2-pentanone	ND	20.0	10							
Styrene	ND	2.00	**							
1,1,2,2-Tetrachloroethane	ND	2.00	н							
Tetrachloroethene	ND	2.00	π							
Toluene	ND	2.00								
1,1,1-Trichloroethane	ND	2.00								
1,1,2-Trichloroethane	ND	2.00	н							
Trichloroethene	ND	2.00	tr							
Trichlorofluoromethane	ND	2.00	Ħ							
Vinyl acetate	ND	5.00	**							
Vinyl chloride	ND	2.00	**							

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Project: Tosco(1)

Project Number: Tosco \$\$#4625, Oakland, CA

Reported: 06/01/01 12:01

Dublin CA, 94568

Project Manager: Deanna Harding

Volatile Organic Compounds by EPA Method 8240B - Quality Control Sequoia Analytical - San Carlos

	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte FDA 5020D (D/T)										
Batch 1050096 - EPA 5030B [P/T]	 -			Prepared &	& Analyz	ed: 05/22/0	1			
Blank (1050096-BLK1)	ND	2.00	ug/i		<u> </u>					
otal Xylenes				50.0		102	76-114			
burrogate: 1,2-Dichloroethane-d4	50.8		,,	50.0		98.4	88-110			
urrogate: Toluene-d8	49.2		н	50.0		98.6	86-115			
urrogate: 4-BFB	49.3					-				
LCS (1050096-BS1)				Prepared	& Analyz	ed: 05/22/0	01			
Benzene	20.2	2.00	ug/l	20.0		101	65-135			
Chlorobenzene	20.2	2.00		20.0		101	70-130			
1-Dichloroethene	19.9	2.00	**	20.0		99.5	70-130			
Foluene	19.4	2.00	**	20.0		97.0	70-130			
Trichloroethene	20.0	2.00	"	20.0		100	70-130			
	51.6		"	50.0		103	76-114			
Surrogate: 1,2-Dichloroethane-d4	50.3		п	50.0		101	88-110			
Surrogate: Toluene-d8	48.6		n	50.0		97.2	86-115			
Surrogate: 4-BFB				_		1. AE 1997	n1			
Matrix Spike (1050096-MS1)		urce: L1051			& Analy	zed: 05/22/	60-140	· -		
Benzene	20.9	2.00	ug/l	20.0	ND	106	60-140			
Chlorobenzene	21.2	2.00	# -	20.0	ND ND	105	60-140			
1,1-Dichloroethene	21.0	2.00		20.0	ND	99.5	60-140			
Toluene	19.9	2.00	#	20.0	ND ND	102	60-140			
Trichloroethene	20.4	2.00		20.0						
Surrogate: 1,2-Dichloroethane-d4	51.9		н	50.0		104	76-114			
Surrogate: Toluene-d8	49.3		"	50.0		98.6	88-110			
Surrogate: 4-BFB	50.1		,,	50.0		100	86-115			
	Δ.	ource: L105	108_04	Prenare	d & Anal	yzed: 05/22	2/01			
Matrix Spike Dup (1050096-MSD1)	18.9	2.00		20.0	ND	94.5	60-140	10.1	25	
Benzene		2.00	•	20.0	ND	96.5	60-140	9.38	25	
Chlorobenzene	19.3	2.00		20.0	ND	93.0	60-140	12.1	25	
1,1-Dichloroethene	18.6	2.00		20.0	ND	92.0	60-140	7.83	25	
Toluene	18.4		,	20.0	ND		60-140	6.06	25	
Trichloroethene	19.2	2.00	<u></u>			100	76-114			
Surrogate: 1,2-Dichloroethane-d4	50.2			50.0		97.4	88-110			
Surrogate: Toluene-d8	48.7			50.0		100	86-115			
Surrogate: 4-BFB	50.1		"	50.0		100	00-110			

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8021B - Quality Control Sequoia Analytical - San Carlos

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

Blank (1050034-BLK3)				Prepared & Analyz	zed: 05/	11/0
Bromodichloromethane	ND	0.500	ug/l			
Bromoform	ND	0.500				
Bromomethane	ND	1.00	17			
Carbon tetrachloride	ND	0.500				
Chlorobenzene	ND	0.500	**			
Chioroethane	ND	1.00	Ħ			
Chloroform	ND	0.500	#1			
Chloromethane	ND	1.00	#1			
Dibromochloromethane	ND	0.500	н			
1,3-Dichlorobenzene	ND	0.500	#			
1,4-Dichlorobenzene	ND	0.500	**			
1,2-Dichlorobenzene	ND	0.500	н			
1,1-Dichloroethane	ND	0.500				
1,2-Dichloroethane	ND	0.500	н			
1,1-Dichloroethene	ND	0.500	Ħ			
cis-1,2-Dichloroethene	ND	0.500	n			
rans-1,2-Dichloroethene	ND	0.500	41			
1,2-Dichloropropane	ND	0.500	11			
sis-1,3-Dichloropropene	ND	0.500	**			
rans-1,3-Dichloropropene	ND	0.500				
Methylene chloride	NĎ	5.00	10			
,1,2,2-Tetrachloroethane	ND	0.500	**			
l'etrachloroethene	ND	0.500				
1,1,1-Trichloroethane	ND	0.500	**			
1,1,2-Trichloroethane	ND	0.500	**			
Crichloroethene	ND	0.500	11			
Trichlorofluoromethane	ND	0.500	н			
Vinyl chloride	ND	1.00	11			
Benzene	ND	0.500	m			
Ethylbenzene	ND	0.500	11			
-	ND	0.500	n			
Toluene	1412					
Toluene Total Xylenes	ND	0.500	W			

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8021B - Quality Control Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1050034 - EPA 5030B (P/T)									<u></u> .	
Blank (1050034-BLK5)				Prepared	& Analyz	ed: 05/15/0	<u> </u>			
1,2-Dibromoethane	ND	0.500	ug/l							
Bromodichloromethane	ND	0.500	11			•				
Bromoform	ND	0.500	"							
Bromomethane	ND	1.00	11							
Carbon tetrachloride	ND	0.500	n							
Chlorobenzene	ND	0.500	**							
Chloroethane	ND	1.00	**							
Chloroform	ND	0.500	-							
Chloromethane	ND	1.00	Ħ							
Dibromochloromethane	ND	0.500	*							
1,3-Dichlorobenzene	ND	0.500	**							
1,4-Dichlorobenzene	ND	0.500	n							
1,2-Dichlorobenzene	ND	0.500	"							
1,1-Dichloroethane	ND	0.500	H							
1,2-Dichloroethane	ND	0.500	н							
1.1-Dichloroethene	ND	0.500	*			•				
cis-1,2-Dichloroethene	ND	0.500	н							
trans-1,2-Dichloroethene	ND	0.500	Ħ							
1,2-Dichloropropane	ND	0.500	. "							
cis-1,3-Dichloropropene	ND	0.500								
trans-1,3-Dichloropropene	ND	0.500	#							
Methylene chloride	ND	5.00								
1,1,2,2-Tetrachloroethane	ND	0.500	#							
Tetrachloroethene	ND	0.500	*							
1,1,1-Trichloroethane	ND	0.500	Ħ							
1,1,2-Trichloroethane	ND	0.500	**							
Trichloroethene	ND	0.500	Ħ							
Trichlorofluoromethane	ND	0.500	*							
Vinyl chloride	ND	1.00	11							
Benzene	ND	0.500								
Ethylbenzene	ND	0.500	"							
Toluene	ND	0.500	"							
Total Xylenes	ND	0.500) "		_					
Surrogate: 1-Chloro-2-fluorobenzene	9.42			10.0	0	94.2	70-13	10		

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic Compounds by EPA Method 8021B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source	%REC	%REC Limits	RPD	Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Linus			
Batch 1050034 - EPA 5030B (P/T)										
LCS (1050034-BS3)				Prepared o	& Analyze				1.	
Chlorobenzene	10.7	0.500	ug/l	10.0		107	70-130			
,l-Dichloroethene	10.5	0.500	"	10.0		105	70-130			
Frichloroethene	9.87	0.500	H	10.0		98.7	70-130			
Benzene	10.1	0.500	*	10.0		101	70-130			
l'oluene	10.1	0.500	*	10.0		101	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	10.9	<u> </u>	"	10.0		109	70-130			
LCS (1050034-BS5)				Prepared	& Analyz	ed: 05/15/				
Chlorobenzene	8.88	0.500	ug/l	10.0		88.8	70-130			
1,1-Dichloroethene	9.90	0.500	н	10.0		99.0	70-130			
Prichloroethene	9.45	0.500	н	10.0		94.5	70-130			
Benzene	9.85	0.500	11	10.0		98.5	70-130			
Foluene Foluene	9.84	0.500	"	10.0		98.4	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	11.7		#	10.0		117	70-130			
Matrix Spike (1050034-MS1)	Sou	arce: L10509	5-01	Prepared	& Analyz	ed: 05/11/	01			
Chlorobenzene	9.25	0.500	ug/l	10.0	ND	92.5				
1,1-Dichloroethene	9.34	0.500	u	10.0	ND	93.4	60-140			
Trichloroethene	8.83	0.500	н	10.0	ND	88.3	60-140			
Benzene	9.40	0.500		10.0	ND	94.0	60-140			
Toluene	9.56	0.500	u	10.0	ND	95.6	60-140			
Surrogate: I-Chloro-2-fluorobenzene	8.94		"	10.0		89.4	70-130			
Matrix Spike Dup (1050034-MSD1)	So	urce: L10509	95-01	Prepared	& Analyz	zed: 05/11.	/ 01			
Chlorobenzene	9.51	0.500	ug/l	10.0	ND	95.1	60-140	2.77	25	
1,1-Dichloroethene	9.77	0.500	-	10.0	ND	97.7	60-140	4.50	25	
Trichloroethene	8.68	0.500	#	10.0	ND	86.8	60-140	1.71	25	
Benzene	9.72	0.500	Ħ	10.0	ND	97.2	60-140	3.35	25	
Toluene	9.86	0.500	n	10.0	ND	98.6	60-140	3.09	25	
	9.14		"	10.0		91.4	70-130			

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	70KEC				
Batch 1050101 - EPA 5030B [P/T]	-						<u> </u>			
Blank (1050101-BLK1)				Prepared of	& Analyz	ed: 05/23/0	<u> </u>			
Ethanol	ND	1000	ug/l							
,2-Dibromoethane	ND	2.00	n							
,2-Dichloroethane	ND	2.00	н							
Di-isopropyl ether	ND	2.00	**							
Ethyl tert-butyl ether	ND	2.00	fi							
Methyl tert-butyl ether	ND	2.00	n							
Tert-amyl methyl ether	ND	2.00	**							
Tert-butyl alcohol	ND	100	#							
Surrogate: 1,2-Dichloroethane-d4	48.1		7	50.0		96.2	76-114			
Surrogate: Toluene-d8	50.9		"	50.0		102	88-110			
Blank (1050101-BLK2)				Prepared	& Analyz	zed: 05/24/0	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00	Ħ							
1,2-Dichloroethane	ND	2.00	Ħ							
Di-isopropyl ether	ND	2.00	н							
Ethyl tert-butyl ether	ND	2.00								
Methyl tert-butyl ether	ND	2.00	-							
Tert-amyl methyl ether	ND	2.00	н							
Tert-butyl alcohol	ND	100	"							
	46.6			50.0		93.2	76-114			
Surrogate: 1,2-Dichloroethane-d4	51.7		н	50.0		103	88-110			
Surrogate: Toluene-d8	J.,,			_		4. 05/05	/O.1			
Blank (1050101-BLK3)				Ргераге	d & Analy	zed: 05/25/				_
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.00								
1,2-Dichloroethane	ND	2.00	Ħ							
Di-isopropyl ether	ND	2.00								
Ethyl tert-butyl ether	ND	2.00				•				
Methyl tert-butyl ether	ND	2.00								
Tert-amyl methyl ether	ND	2.00								
Tert-butyl alcohol	ND	100	***					 -		
Surrogate: 1,2-Dichloroethane-d4	46.6		п	50.0		93.2	76-114			
Surrogate: Toluene-d8	53.1		*	50.0		106	88-110			

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1050101 - EPA 5030B [P/T]										
LCS (1050101-BS1)				Prepared	& Analyze	ed: 05/23/	01	***	*****	
Methyl tert-butyl ether	45.9	2.00	ug/l	50.0		91.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	48.2		77	50.0		96.4	76-114			
Surrogate: Toluene-d8	49.3		**	50.0		98.6	88-110			
LCS (1050101-BS2)				Prepared	& Analyze	ed: 05/24/	01			
Methyl tert-butyl ether	47.5	2.00	ug/l	50.0		95.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	47.8		į,	50.0	~	95.6	76-114			
Surrogate: Toluene-d8	51.2		"	50.0		102	88-110			
LCS (1050101-BS3)				Prepared	& Analyz	ed: 05/25/	01		·•	
Methyl tert-butyl ether	48.6	2.00	ug/l	50.0		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.5		,	50.0		99.0	76-114			
Surrogate: Toluene-d8	51.8		"	50.0		104	88-110			
Matrix Spike (1050101-MS1)	Sou	rce: L10514	6-06	Prepared	& Analyz	ed: 05/23/	01			
Methyl tert-butyl ether	46.5	2.00	ug/l	50.0	ND	93.0	60-140			
Surrogate: 1,2-Dichloroethane-d4	51.0			50.0		102	76-114			
Surrogate: Toluene-d8	50.6		n	50.0		101	88-110			
Matrix Spike Dup (1050101-MSD1)	Sou	rce: L10514	16-06	Prepared	& Analyz	ed: 05/23	/ 01			
Methyl tert-butyl ether	49.0	2.00	ug/l	50.0	ND	98.0	60-140	5.24	25	
Surrogate: 1,2-Dichloroethane-d4	50.1		"	50.0		100	76-114			
Surrogate: Toluene-d8	50.5		"	50.0		101	88-110			

Project: Tosco(1)

Project Manager: Deanna Harding

Project Number: Tosco SS#4625, Oakland, CA

Reported: 06/01/01 12:01

Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E22016 - EPA 3510B										
Blank (1E22016-BLK1)	_			Prepared:	05/22/01	Analyzed	: 05/24/01			
Diesel Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: n-Pentacosane	74.4		n	100	-	74.4	50-150			
				Prepared:	05/22/01	Analyzed	: 05/24/01			
LCS (1E22016-BS1) Diesel Range Hydrocarbons	727	50.0	ug/l	1000		72.7	60-140			
Surrogate: n-Pentacosane	81.0	.	<u>"</u>	100		81.0	50-150	-		
Matrix Spike (1E22016-MS1)	Sou	rce: MKE0	330-01	Prepared:	05/22/01	Analyzeo	1: 05/24/01			
Diesel Range Hydrocarbons	736	50.0	ug/l	1000	ND	73.6	50-150			
Surrogate: n-Peniacosane	78.4			100		78.4	50-150			
Matrix Spike Dup (1E22016-MSD1)	Soi	arce: MKE0	330-01	Prepared	: 05/22/01	Analyze	d: 05/24/01			
Diesel Range Hydrocarbons	777	50.0	ug/l	1000	ND	77.7	50-150	5.42	50	
Surrogate: n-Pentacosane	81.4		"	100		81.4	50-150			

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Total Metals by EPA 200 Series Methods - Quality Control Sequoia Analytical - Morgan Hill

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1E18013 - EPA 3005A						.				
Blank (1E18013-BLK1)				Prepared	& Analyz	ed: 05/18/	01			
Chromium	ND	0.0100	mg/l							
LCS (1E18013-BS1)				Prepared	& Analyz	ed: 05/18/	01		·	
Chromium	1.08	0.0100	mg/l	1.00		108	80-120			
Matrix Spike (1E18013-MS1)	Sou	rce: MKE0	403-01	Prepared	& Analyz	ed: 05/18/	01			
Chromium	1.04	0.0100	mg/l	1.00	ND	104	80-120			
Matrix Spike Dup (1E18013-MSD1)	Sou	rce: MKE0	403-01	Prepared	& Analyz	ed: 05/18/	01			
Chromium	1.04	0.0100	mg/l	1.00	ND	104	80-120	0	20	

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Reported: 06/01/01 12:01

Project Manager: Deanna Harding

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E24001 - General Prep								 -		
				Prepared	& Analyz	ed: 05/24/0	01			
Blank (1E24001-BLK1) Oil & Grease	ND	5.00	mg/l	,*						
* CC (1E24801 PC1)				Prepared	& Analyz	ed: 05/24/	01			
LCS (1E24001-BS1) Oil & Grease	19.1	5.00	mg/l	20.0		95.5	70-130			
LCC D (1E24001 RSD1)				Prepared	& Analyz	ed: 05/24/	01			<u>-</u> -
LCS Dup (1E24001-BSD1) Oil & Grease	20.9	5.00	mg/l	20.0		104	70-130	9.00	30	

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

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

Blank (1E16006-BLK1)				Prepared: 05/16/01 Analyzed: 05/25/01
Acenaphthene	ND	5.0	ug/l	
Acenaphthylene	ND	5.0	*	
Aniline	ND	5.0	n	
Anthracene	ND	5.0	Ħ	
Benzoic acid	ND	10	Ħ	,
Benzo (a) anthracene	ND	5.0	11	
Benzo (b) fluoranthene	ND	5.0	11	
Benzo (k) fluoranthene	ND	5.0	#	
Benzo (ghi) perylene	ND	5.0		
Benzo[a]pyrene	ND	5.0	n	
Benzyl alcohol	ND	5.0	"	
Bis(2-chloroethoxy)methane	ND	5.0	m	
Bis(2-chloroethyl)ether	ND	5.0	n	
Bis(2-chloroisopropyl)ether	ND	5.0	Ħ	
Bis(2-ethylhexyl)phthalate	ND	10		
-Bromophenyl phenyl ether	ND	5.0	#	•• •
Butyl benzyl phthalate	ND	50	#	
-Chloroaniline	ND	25	"	
-Chloronaphthalene	ND	5.0		
-Chloro-3-methylphenol	ND	5.0	"	
2-Chlorophenol	ND	5.0	Ħ	
-Chlorophenyl phenyl ether	ND	5.0		·
Chrysene	ND	5.0	**	
Dibenz (a,h) anthracene	ND	10	Ħ	
Dibenzofuran	ND	5.0	11	
Di-n-butyl phthalate	ND	10	**	
,2-Dichlorobenzene	ND	5.0	n	
,3-Dichlorobenzene	ND	5.0	n	
1,4-Dichlorobenzene	ND	10	*	
3,3'-Dichlorobenzidine	ND	10	**	
2,4-Dichlorophenol	ND	5.0	*	
Diethyl phthalate	ND	5.0	n	
2,4-Dimethylphenol	ND	5.0	*	
Dimethyl phthalate	ND	5.0	#	
4,6-Dinitro-2-methylphenol	ND	10	п	
2,4-Dinitrophenol	ND	10	n	

Sequoia Analytical - San Carlos

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Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

		Reporting	TT-14	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Limit	Units	TEASI	- ANDREA					
Batch 1E16006 - EPA 3510B Sep Funnel							05/05/01			
Blank (1E16006-BLK1)				Prepared:	05/16/01	Analyzed:	05/25/01			
2,4-Dinitrotoluene	ND	10	ug/l							
2,6-Dinitrotoluene	ND	10	H							
Di-n-octyl phthalate	ND	10	+							
Fluoranthene	ND	5.0	_							
Fluorene	ND	5.0	π							
Hexachlorobenzene	ND	10	"							
Hexachlorobutadiene	ND	10	"							
Hexachlorocyclopentadiene	ND	10	n -							
Hexachloroethane	ND	5.0								
Indeno (1,2,3-cd) pyrene	ND	10								
Isophorone	ND	5.0	*							
2-Methylnaphthalene	ND	5.0	"							
2-Methylphenol	ND	5.0	"							
4-Methylphenol	ND	5.0								
Naphthalene	ND	5.0	**							
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10	7							
4-Nitroaniline	ND	20	#							
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0	#	-						
4-Nitrophenol	ND	10	n							
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
Pentachlorophenol	ND	10								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10) "							
Surrogate: 2-Fluorophenol	37.0		. "	150		24.7				
Surrogate: Phenol-d6	21.6		n	150		14.4				
Surrogate: Phenoi-ao Surrogate: Nitrobenzene-d5	49.8		*	100	7	49.8				
Surrogate: Nitrobenzene-as Surrogate: 2-Fluorobiphenyl	49.8		"	100	7	49.8	43-116)		
Surrogate: 2-r tuorooipnenyt	77.0									

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Project: Tosco(1)

6747 Sierra Court, Suite J

Project Number: Tosco SS#4625, Oakland, CA Project Manager: Deanna Harding Reported: 06/01/01 12:01

RPD

%REC

Dublin CA, 94568

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

Reporting

Analyte	Result	Limit	Units	Level	Result %REC	Limits	RPD	Limit	Notes
Batch 1E16006 - EPA 3510B Sep I	unnel								
Blank (1E16006-BLK1)				Prepared:	05/16/01 Апаlуzес	1: 05/25/01			
Surrogate: 2,4,6-Tribromophenol	68.6		ug/l	150	45.7	10-123		-	
Surrogate: p-Terphenyl-d14	50.3		Ħ	100	50.3	33-141			
LCS (1E16006-BS1)			_	Prepared:	05/16/01 Analyze	1: 05/25/01			
Acenaphthene	53.0	5.0	ug/l	100	53.0	46-118			
4-Chloro-3-methylphenol	80.3	5.0	Ħ	150	53.5	23-97			
2-Chlorophenol	74.0	5.0	н	150	49.3	27-123			
1,4-Dichlorobenzene	49.1	10	н	100	49.1	36-97			
2,4-Dinitrotoluene	54.9	10	77	100	54.9	24 -9 6			
4-Nitrophenol	22.8	10	**	150	15.2	10-80			
N-Nitrosodi-n-propylamine	59.5	5.0	**	100	59.5	41-116			
Pentachlorophenol	77.7	10	п	150	51.8	9-103			
Phenol	30.1	5.0	n	150	20.1	12-110			
Pyrene	54.8	5.0	Ħ	100	54.8	26-127			
1,2,4-Trichlorobenzene	52.6	5.0		100	52.6	39-98			
Surrogate: 2-Fluorophenol	48.4		77	150	32.3	21-110			**
Surrogate: Phenol-d6	29.2			150	19.5	10-110			
Surrogate: Nitrobenzene-d5	58.0		#	100	58.0	35-114			
Surrogate: 2-Fluorobiphenyl	55.3		"	100	55.3	43-116			
Surrogate: 2,4,6-Tribromophenol	84.5		**	150	56.3	10-123			
Surrogate: p-Terphenyl-d14	53.2		н	100	53.2	33-141			
LCS Dup (1E16006-BSD1)				Prepared:	: 05/16/01 Analyze	d: 05/25/01			
Acenaphthene	50.6	5.0	ug/l	100	50.6	46-118	4.63	30	
4-Chloro-3-methylphenol	69.8	5.0	H	150	46.5	23-97	14.0	30	
2-Chlorophenol	63.7	5.0	#	150	42.5	27-123	15.0	30	
1,4-Dichlorobenzene	46.3	10		100	46.3	36-97	5.87	30	
2,4-Dinitrotohuene	51.4	10	Ħ	100	51.4	24-96	6.59	30	
4-Nitrophenol	13.8	10	**	150	9.20	10-80	49.2	30	Q-01,Q-07
N-Nitrosodi-n-propylamine	56.1	5.0	**	100	56.1	41-116	5.88	30	
Pentachlorophenol	74.7	10	**	150	49.8	9-103	3.94	30	
Phenol	19.9	5.0	11	150	13.3	12-110	40.8	30	Q-07
Pyrene	52.9	5.0	"	100	52.9	26-127	3.53	30	•
1,2,4-Trichlorobenzene	49.9	5.0	**	100	49.9	39-98	5.27	30	
Surrogate: 2-Fluorophenol	35.0		#	150	23.3	21-110			
Surrogate: Phenol-d6	19.1		#	150	12.7	10-110			

Sequoia Analytical - San Carlos

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6747 Sierra Court, Suite J Dublin CA, 94568

Analyte

Project: Tosco(1)

Project Number: Tosco SS#4625, Oakland, CA

Project Manager: Deanna Harding

Reported: 06/01/01 12:01

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

_								
Reporting		Spike	Source		%REC		RPD	
Keporing		42				DDD	Limit	Notes
Result Limit	Units	Level	Result	%REC	Limits	RPD	Lillia	Notes

Batch 1E16006 - EPA 3510B Sep	atch 1E16006	- EPA 35	510B Se	n Funnel
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LCS Dup (1E16006-BSD1)	Prepared: 05/16/01 Analyzed: 05/25/01						
Surrogate: Nitrobenzene-d5	55.2	ug/l	100	55.2	35-114		
Surrogate: 2-Fluorobiphenyl	55.2	п	100	55.2	43-116		
Surrogate: 2,4,6-Tribromophenol	80.8	r	150	53.9	10-123		
Surrogate: p-Terphenyl-d14	53.8	"	100	53.8	33-141		

Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Project Number: Tosco (1)
Project Number: Tosco SS#4625, Oakland, CA
Project Manager: Deanna Harding

O6/01/01 12:01

Notes and Definitions

Q-01	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
Q-07	The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
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