March 21, 2002 G-R #180255

TO:

Mr. David B. De Witt

Phillips 66 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	March 18, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of February 6, 2002

### 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 *April 4*, 2002, 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



March 18, 2002 G-R Job #180255

Mr. David B. De Witt Phillips 66 Company 2000 Crow Canyon Place, Suite 400 San Ramon, California 94583

RE: First Quarter Event of February 6, 2002

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.

Sincerely,

Deanna L. Harding Project Coordinator

Hagop Kevork P.E. No. C55734

Figure 1:

Potentiometric Map Figure 2: Concentration Map

Table 1: Groundwater Monitoring Data and Analytical Results

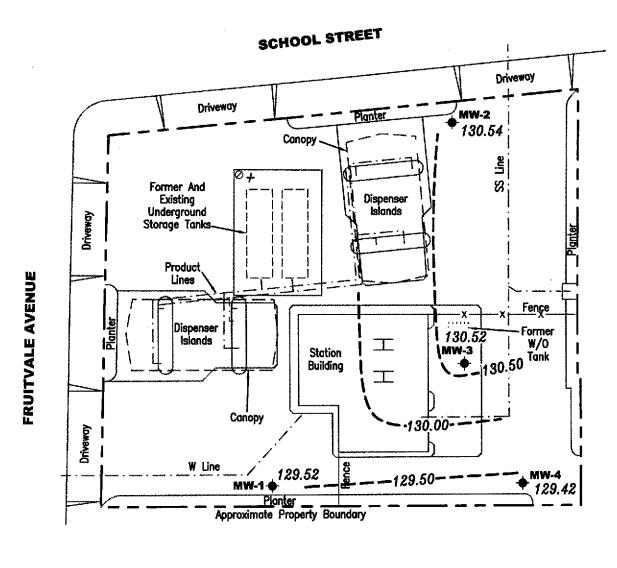
Table 2: Groundwater Analytical Results

Table 3: Groundwater Analytical Results - Oxygenate Compounds Attachments: Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

4625.yml



**EXPLANATION** 

Groundwater monitoring well

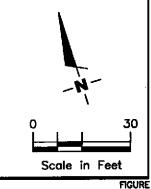
99.99 Groundwater elevation in feet referenced to Mean Sea Level

Groundwater elevation contour, dashed where inferred

+ TOC not available



Approximate groundwater flow direction at a gradient of 0.02 to 0.03 Ft./Ft.



Source: Figure modified from drawing provided by Unocal.



POTENTIOMETRIC MAP

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

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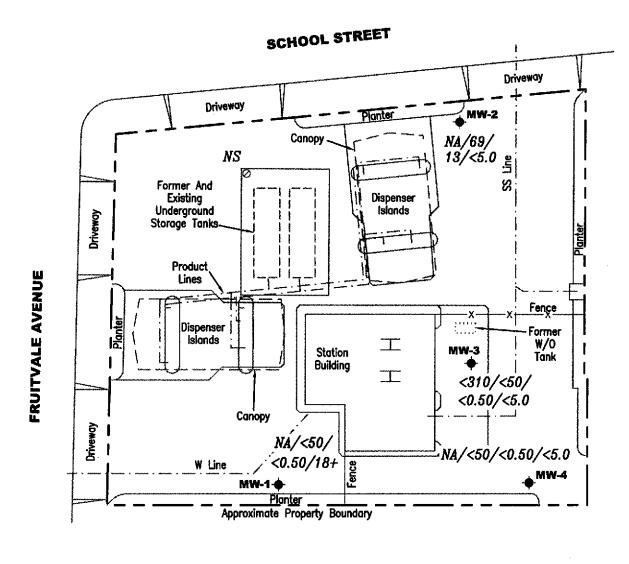
revised date

PROJECT NUMBER 180255

REVIEWED BY

February 6, 2002

DATE



### **EXPLANATION**

Groundwater monitoring well

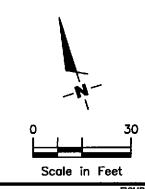
**UST Observation well** 

A/B/C/DTotal Petroleum Hydrocarbons (TPH) as Diesel/TPH as Gasoline/Benzene/MTBE concentrations in ppb

MTBE by EPA Method 8260

NA Not Analyzed

NS Not Sampled



Source: Figure modified from drawing provided by Unocal.



CONCENTRATION MAP

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

REVISED DATE

PROJECT NUMBER 180255

REVIEWED BY

February 6, 2002

FILE NAME: P:\Enviro\TOSCO\4625\Q02-4625.DWG | Layout Tab: Con1

FIGURE

Table 1
Groundwater Monitoring Data and Analytical Results

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

					Oakiaiiu,	Camornia					
WELL ID/	DATE	DTW	S.L.	GWE	TPH-D	TPH-G	В	T	E	X	MTBE
TOC*(ft)		(fL)	(ft.bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(pph)	(ppb)	(ppb)
MW-1											
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	-1111	128.57	<del></del>	ND	ND	ND	ND	ND	$21/19^2$
	10/29/00	7.90		128.46		62 <sup>1</sup>	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 <sup>2</sup>
	08/10/01	8.47		127.89		<50	<0.50	< 0.50	< 0.50	< 0.50	17/19 <sup>7</sup>
	11/07/01	8.10		128.26		<50	<0.50	<0.50	< 0.50	<0.50	22/26 <sup>2</sup>
	02/06/02	6.84		129.52	_	<50	<0.50	<0.50	<0.50	<0.50	14/18 <sup>2</sup>
MW-2								_			
138.64	05/03/00	8.59	5.0-25.0	130.05		2,400 <sup>1</sup>	53	ND <sup>3</sup>	$ND^3$	240	<sup>3</sup> ND/ND <sup>2</sup>
	07/28/00	9.95		128.69		2,200¹	680	4.1	57	270	24/ND <sup>2</sup>
	10/29/00	8.38		130.26		490¹	67	ND <sup>3</sup>	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
	08/10/01	10.68		127.96		96 <sup>1</sup>	20	< 0.50	2.1	9.4	<5.0
	11/07/01	10.01		128.63		480 <sup>1</sup>	110	<1.0	26	42	<10
	02/06/02	8.10		130.54		<b>69</b> <sup>1</sup>	13	<0.50	0.84	4.4	<5.0
MW-3	0.5/00.100	7.60	50050	120.00	93 <sup>5</sup>	ND	ND	ND	ND	ND	ND/ND⁴
137.68	05/03/00	7.60	5.0-25.0	130.08	ND <sup>3</sup>	ND ND	ND ND	ND	ND	ND	ND/ND <sup>4</sup>
	07/28/00	8.82		128.86		ND	ND	ND	ND	ND	ND
	10/29/00	7.33		130.35	ND 72 <sup>6</sup>	ND ND	ND ND	ND	ND	ND	ND
	02/09/01	7.40		130.28		ND ND	ND ND	ND ND	ND ND	ND ND	ND
	05/11/01	7.90		129.78	ND 63 <sup>8</sup>	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	08/10/01	9.09		128.59	88 <sup>8</sup>		<0.50 <0.50	<0.50	<0.50	<0.50	<5.0
	11/07/01	9.03		128.65		<50			<0.50	<0.50	< <b>5.0</b>
	02/06/02	7.16		130.52	<310	<50	<0.50	<0.50	<v.50< td=""><td><b>~0.50</b></td><td>~5.0</td></v.50<>	<b>~0.50</b>	~5.0

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	Т	E	X	MTBE
TOC*(ft)		(ft.)	(ft.bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-4				·							
136.60	05/03/00	6.48	5.0-25.0	130.12		ND	ND	ND	ND	ND	ND/ND <sup>2</sup>
	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
	08/10/01	8.66		127.94		<50	<0.50	< 0.50	<0.50	<0.50	<5.0
	11/07/01	7.92		128.68		<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0
	02/06/02	7.18		129.42		<50	<0.50	<0.50	<0.50	<0.50	<5.0
UST OBSER	VATION WEL	L									
	05/03/00	8.00									
	07/28/00	9.28				<u></u>	 	 			
	10/29/00	7.75						<del></del>		 	
	02/09/01	6.14						<del>-</del>			<b></b>
	05/11/01	7.96									
	08/10/01	9.54				<del></del>					
	11/07/01	9.33									
	02/06/02	8.08				_					
		ž.									
Trip Blank											
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

# 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.)	(ft.bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ррб)	(ppb)	(ppb)	(ppb)
TB-LB	08/10/01					<50	<0.50	<0.50	<0.50	<0.50	<5.0
(cont)	11/07/01					<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0
	02/06/02					<50	<0.50	< 0.50	< 0.50	<0.50	<5.0
					•						

### Table 1

### Groundwater Monitoring Data and Analytical Results

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

### **EXPLANATIONS:**

TOC = Top of Casing

TPH-D = Total Petroleum Hydrocarbons as Diesel

(ppb) = Parts per billion

DTW = Depth to Water

TPH-G = Total Petroleum Hydrocarbons as Gasoline

ND = Not Detected

(ft.) = Feet

B = Benzene

-- = Not Measured/Not Analyzed

S.I. = Screen Interval

T = Toluene

(ft.bgs) = Feet Below Ground Surface

E = Ethylbenzene

GWE = Groundwater Elevation

X = Xylenes

(msl) = Mean sea level

MTBE = Methyl tertiary butyl ether

- \* 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.
- MTBE by EPA Method 8260.
- Detection limit raised. Refer to analytical reports.
- MTBE by EPA Method 8240.
- Laboratory report indicates unidentified hydrocarbons C9-C24.
- 6 Laboratory report indicates discrete peaks.
- MTBE by EPA Method 8260 was analyzed beyond the EPA recommended holding time.
- Laboratory report indicates hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

## Table 2 Groundwater Analytical Results

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

WELL ID	DATE	VOCs by EPA 8240 (ppb)	VOCs by EPA 8021 <i>(ppb)</i>	SVOCs by EPA 8270 (ppb)	Chromium (ppm)	TOG (ppm)
MW-3						
	05/03/00	ND		ND	ND	ND
	07/28/00	ND <sup>1</sup>		ND	1.8	ND
	10/29/00	ND	<del></del>	ND	ND	7.0
	02/09/01	ND		ND	0.038	ND
	05/11/01	ND		ND	ND	ND
	08/10/01	<2.0-<20	<0.50-<5.0	<5.0-<50	< 0.010	<5.0
	11/07/01	<2.0-<20	<0.50-<5.0 <sup>2</sup>	<5.0-<50	< 0.010	<5.0
	02/06/02	<2.0-<20	<0.50-<5.0	<5.0-<50	0.11	<5.0

### **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

-- = Not Analyzed

### ANALYTICAL METHODS:

EPA 200 Series Methods for Chromium EPA Method SM5520 for Total Oil and Grease

NOTE: All EPA Method 8240, 8021 and 8270 constituents were ND, unless noted.

All VOCs by EPA Method 8240 were ND, except for Tetrachloroethene (PCE) was detected at 2.7 ppb.

All VOCs by EPA Method 8021 were less than the reporting limit, except for Trichloroethane (TCE) was detected at 0.55 ppb.

Table 3
Groundwater Analytical Results - Oxygenate Compounds

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

WELL ID	DATE	ETHANOL	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB
		(ppb)	(ppb)	(ррб)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1	02/09/01	ND	ND	9.0	ND	ND	ND	ND	ND
	05/11/01	ND	ND	16.3	ND	ND	ND	ND	ND
	08/10/01 <sup>1</sup>	<1,000	<100	19	<2.0	<2.0	<2.0	<2.0	<2.0
	11/07/01	<500	<20	26	<1.0	<1.0	<1.0	<1.0	<1.0
	02/06/02	<500	<100	18	<2.0	<2.0	<2.0	<2.0	<2.0
MW-3	07/28/00		ND	ND	ND	ND	ND	ND	ND
	07,20,00		140	, (D	110	ND	ND	ND	טאו

### **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

 $EDB = Ethylene\ dibromide/1, 2-Dibromoethane$ 

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

### ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

Laboratory report indicates sample was analyzed beyond the EPA recommended holding time.

### 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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

Client/ Facility # <u>46</u>	25		Je	ob#:	180255		
	70 Fruitval	Ave.	D	ate:	2-6-02		
	kland, cA.			amnler:	Joe		
City.				ampier.		-	
Well ID	mw-1	We	ell Condition:		0.6.		
Well Diameter	2 <sub>in</sub>	Ну	drocarbon		Amount Ba	ailed	<del></del>
Total Depth	25.08 ft		ickness:	ir	(product/war		(gal_)
Depth to Water	6.84	5	olume 2 actor (VF)	• 0.17 6	3" = 0.38 ' = 1.50	12" = 5.80	= 0.66
	18.24 x	VF _0.1	7 <u>- 3.10</u> x3	case volum	ne) = Estimated Pu	ırga Voluma: _	9.5 (gal.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:		Sampli Equipn	nent:	Disposable Ba Bailer Pressure Baile Grab Sample		· ×
Sampling Time: Purging Flow Rat Did well de-wate	•	2000.	Sediment De	scription:	Volum		
	Volume pH (gal.)	Cor مر	nductivity   < <sup>()</sup> I	•		ORP (mV)	Alkalinity (ppm)
2350	3 7.77	9	166	729			
2:52	6 7.2	2 9	.7 <del>/</del>	73.0			•
2:54	9.5 7.28		.75 <u> </u>	72.5	<del></del>	·	
					· · · · · · · · · · · · · · · · · · ·		-
			RATORY INFO				
SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TY		LABORATORY	<del>, , , , , , , , , , , , , , , , , , , </del>	YSES
mw-1	3404	Y	HCL		Seq.	TPHG, B	rey, mtbe
							· · · · · · · · · · · · · · · · · · ·
							· .
COMMENTS: _							•
	-			<u>-</u>	· · · · · · · · · · · · · · · · · · ·		<del></del>
		-	•		•		

Client/ Facility # 46	25		Job	)#: <u> </u>	80255		
	70 Fruitval	e Ave	Dat	e: _2	2-6-02	<b></b>	<del></del>
	Kland, CA.		-	npler:	Joe		
Well ID	_mw-2	w	ell Condition:	•	0.16.		
Well Diameter	2 in		ydrocarbon	<del>-</del>	Amount Ba	ailed	<del></del>
Total Depth	24.30 4		nickness:C	in	(product/wa		Igel 1
Depth to Water	8 10		Valume 2" = Factor (VF)		3" = 0.38 .50		= 0.66
Purge Saviements	Disposable Bailer	*	17 = 2.76 x 3 (cas				•
Equipment:	Stack Suction Grundfos Other:	-	Equipmer	Bai Pre	posable Ba iler essure Baile ab Sample	•	
Starting Time: Sampling Time: Purging Flow Rat Did well de-water	e:	22)	Weather Conditi Water Color: Sediment Descri If yes; Time: _	c ( <sub>e</sub>	<del> </del>		
	folume pH (g=L)	Con yes	nductivity   C Temp	perature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
4:0%	3 7.67 5.5 7.38 8.5 7.32	- <u>9</u>	151 7 -47 7	1.2			
SAMPLE ID	(#) - CONTAINER	LABO REFRIG.	RATORY INFORM. PRESERV. TYPE		RATORY	441413	ree.
mw-n	3404	Y	HCL	Sea		TPHG, BT	
		<del></del>					
COMMENTS:			1	<u> </u>			<u> </u>
	<del> </del>	•				-	

Client/ Facility #_4	625		lai	b#:	18025	_	
	070 Fruitva	le Avo	-		2-6-0		
	eland CA.						_
City:	ALISNA CA.		Sai	mpler:	<u>Joe</u>		_
		<del></del>			···		_
Well ID	-mw-3	_ ,	Vell Condition:		0,	•	
Well Diameter	2 <sub>i</sub>		ydrocarbon	-	Amount 8	Bailed	
Total Depth	24.72		hickness:		lproduct/w		<u>a.)</u>
-	70	1	Volume 2" = Factor (VF)	0.17 6	3" = 0.3 " = 1.50		1
Depth to Water	7.16 t	<u> </u>				12 ~ 3.80	
	17.56	X VF <u></u>	17 <u>- 2.99</u> x 3 ica	se volum	ne) = Estimated F	Purge Volume:	4.7
Purge Equipment:	Disposable Baile Bailer		Sampling		200	· ·	
rdorbitiatic.	Stack	•	Equipme	at:	Disposable B Bailer	aller ,	
	80ction	•			Pressure Bail		
	Grundfos Other:			Otha	Grab Sample	·	
<del></del>				Oute	••	<del></del>	
Starting Time:	311	5	Weather Conditi		C doud sa		
Sampling Time:	3.45 8 m (1		Water Color:		,		
	te:		Sediment Descri			Odor 1012	_
Did well de-wate						ne:	_
		· <del>;     </del>	m you, mile	•	<b>v</b> oidi	(n)	WT.
	Volume pH (gal.)	Con	nductivity   ( ) Temp			ORP Alkalini	-
212/	<u>-</u>	=	·	F 14	(mg/L)	(mV) (ppm)	İ
3,28	3 7.6/ 6 7.53	<del>-</del>	7.72 7	18	<del> · · · · · · · · · · · · · · · · · ·</del>	·	_
3:30	9 7.46	<del> <u></u></del>	7.69	/ <u>X</u>	- <del></del>	· <u>·</u> ·	_
	<del></del>	<del>-</del>		<u> </u>	-		—
		<del></del>	<del></del>	<del></del>	<u>.</u>	·	—
			<del> </del>		-		_
		1420			·		·
SAMPLE ID	(#) - CONTAINER	REFRIG.	RATORY INFORM. PRESERV. TYPE		BORATORY	ANALYSSS	
MW-3	3404	Y	HCL		eq.	TPHG. BTEX, MTBE	=
	2404	11	11 *	<del>                                     </del>	<del>-+</del>	VOC'S by 8240	$\dashv$
	1 AML	//			Ť1	SVOC'S 54 8270	+
	1 AMS	. 4		1	//	TPHD	┥·
	1 Am6		HCL	1	<i>"</i>	Oil4 Grease	-
COMMENTS: _	1 plastic	1/4	HNO3	<u>.</u>	4	Total Chromium.	_

Address: 3070 Fruitvale Ave. Date: 2-6-02  City: Oakland, CA Sampler: Joe  Well ID MW-4 Well Condition: O C  Well Diameter 2 in Hydrocarbon Thickness: In (product/water): U (pst)  Total Depth 24.65 in (volume 2*=0.17 3*=0.38 4*=0.66  Depth to Water 7.18 in (product/water): U (pst)  Factor (VF) 6*=1.50 12*=5.80  Purge Disposable Bailer Equipment: Disposable Bailer Stack Bailer Fressure Bailer Grab Sample Other: Grab Sample Other: U (pst)  Starting Time: 2:28 fm (1425) Weather Conditions: C (pst) 4 (pst)  Purging Flow Rate: / gpm. Sediment Description: If yes; Time: Volume: Volume: 1 (pst)	Client/ Facility #_46	25	<u>.</u>		Job#:	180255		
Well ID    MW - 4			e Ave	<u>.                                    </u>	Date:	2-6-0	<u></u>	
Well Diarmeter	City: Oa	Kland, CA.		· · · · · · · · · · · · · · · · · · ·	Sampler	. Joe		
Total Depth  24.65 ft  Purple Disposable Bailer  Stack  Bailer  Stack  Brighton  Grundfos  Other:  Starting Time:  22.66	Well ID	<del></del>		/ell Condition	n:	01/6		
Total Depth	Well Diameter	2 in.		-	0	_		-
Depth to Water 7.18 fr. Factor (VF) 6° = 1.50 12° = 5.80    17,47	Total Depth		Г		2" = 0.17			(gel.)
Purge Bailer Bailer Bailer Bailer Bailer Bailer Bailer Bailer Stack Bailer Pressure Bailer Pressure Bailer Grundfos Other: Other	Depth to Water	7.18		Factor (VF)				- 0.50
Equipment: Bailer Stack Bailer Stack Bailer Pressure Bailer Pressure Bailer Grundfos Other: O		17.47	۲ VF <u>. گرا</u>	17-2.97	X 3 (case volu	me) = Estimated P	urge Volume; _	9 ton1.1
Stack  Builer Pressure Bailer	_	,	٠.			Diametric B		•
Grundfos Other: Other:  Starting Time:  Starting Time:  Sampling Time:  Sampling Time:  Sampling Time:  Sampling Time:  Sequent Color:  Sequent Description:  If yes; Time:  Volume:  (gal.)  Sequent Description:  Frequent Description:  (gal.)  Sequent Description:  Frequent Description:  (gal.)  Sequent Description:  Frequent Description:  Frequent Description:  Frequent Description:  Sequent Description:  Frequent Description:  Freq	Edorbinetie: "	Stack		· .	sipment:	Bailer		7
Starting Time: 2:00 Weather Conditions: Cloud Y  Sampling Time: 2:25 fm (1425) Water Color: Clear Odor: 00 00 00 00 00 00 00 00 00 00 00 00 00			•				er	
Sampling Time: 2.25 f.m (1425)  Water Color: Clear Odor: 1012  Purging Flow Rate: / gpm. Sediment Description:  Did well de-water?   If yes; Time: Volume: (gal)  Time   Volume   pH   Conductivity   Temperature   D.O.   ORP   Alkalinity   (gal)   pmhos/cm X   F   (mg/L)   (mV)   (ppm)    2.08   3   7.10   8.58   71.6    2.10   4   7.16   8.70   71.9    2.13   01   7.21   8.67   71.2    LABORATORY INFORMATION  SAMPLE ID (17 - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES		Other:	<del></del>		Oth	er:	-	
Time Volume pH Conductivity P Temperature D.O. ORP Alkalinity (gal.) (myl.) (myl.) (myl.) (ppm)  2.cy 3 7.10 8.58 71.6  2.co c 7.16 8.70 71.9  2.n3 cq 7.21 8.67 71.2  LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	Sampling Time: Purging Flow Rat	2 <u>.25 P.m. (14</u> e: /s	25)	Water Col	or: Description:	clear	<del></del>	
Cal.	Did Well de-Water		<del>-</del> -		•		ne:	(gal )
2:10 6 7.16 8.70 71.9 2:13 cq 7.21 8.67 71.2  LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES		(gal.)	عبر	upos/cm X	4	(mg/L)		Alkalinity (ppm)
LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	· · · · · · · · · · · · · · · · · · ·	7 - 7				<u> </u>	· <del></del>	
LABORATORY INFORMATION  SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES		$\frac{6}{9}$ $\frac{7.21}{7.21}$	_ <del>_</del>		<del></del>		• • • • • • • • • • • • • • • • • • • •	<u> </u>
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES								
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES						<del></del>		
SAMPLE ID (#) - CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES			LABO	RATORY IN	FORMATION	———— N		-
MW-4 3404 Y HCL Seq. TPHG.BTEX, MTBE		<del></del>	REFRIG.	PRESERV.	TYPE t	ABORATORY	ANALY	rses
	mw-4	3404	<u>Y</u>	HCL		Seq.	TPHG.BT	EX,MTBE
	[				<del></del>	· · · · · · · · · · · · · · · · · · ·		
COMMENTS:	COMMENTS:		•		•			
				-			•	

Client/ Facility # 46	25		Job#:	180255	_	
	70 Fruitva	le Àve.		2-6-0		
			Date:			
City:	Kland, CA.	· ·	Sampler:	Joe		
Well ID	<u>namo US</u>	T observation we Well Conditi	e / / ion:	0 ·  c		
Well Diameter		. Hydrocarbo	n a	Amount E	Bailed	
Total Depth	- B #	Thickness:	2" = 0.17	1. (product/w) 3" = 0.3		<u> </u>
Depth to Water	8.08	Factor (VF)		' = 1.50	12" = 5.80	0.00
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:	E	Sampling Equipment:	Disposable Bailer Pressure Baile Grab Sample	alter .	(onl.)
		Water C	color: nt Description:		Odor	
	olume pH gal.)		Time:	market and a second	ORP (mV)	(ppm)
				-		<u>.</u>
· ·						
	<u> </u>					
SAMPLE ID	(#) - CONTAINER	LABORATORY I		BORATORY	ANALYSES	
SAMPLE ID	18) - CONTAINER		V. TYPE LA	BORATORY	ANALYSES TPHG. BTEX	
,		REFRIG. PRESERY	V. TYPE LA			
,		REFRIG. PRESERY	V. TYPE LA			
,	340A	REFRIG. PRESERY	V. TYPE LA			

GLOBAL ID# T0600102156 <u>Chain-of-Custody-Record</u> Foolity Humber\_TOSCO #4625 Conlact (Name) \_\_MR. Dave DeWitt Facility Address 3070 Fruitvale Ave., Oakland, CA (Phone) 925-277-2384 Consultant Project Number 180255 TOSCO Laberatory Name Sequola Analytical Consultant Name Gettler-Ryan Inc. (G-R Inc.) Address. 6747 SIERRA COURT, SUITE J. DUBLIN. CA 94568 Leberatory Referent Number \_\_\_\_ Thick Michigan Coopers
The Coper Pi, Sa, 400
Ser Renew, Colombia \$4543 Samples Collected by (Home) DOE AJEMIAN Project Contact (Hame) Deanna L. Harding. Collection Date 2-6-02 (Phone)(925) 551±7555 [Fox Humber, 925=551-7899] Signolure Analyses To Be Performed Grad Composite Discrete <u> ។</u>ស្វ័ DO NOT BILL Argestie Holoograam (8010) 8270 TB-LB ANALYSIS Purpeoble Aromatic (8020) I ι **∢**υ Estractoble Organica (8270) Purpeoble Organica (82.40) Of and Green (5520) Number of b 1 : 1 Srocisa 174 Co.(5) 004 Run 8 Oxy's by 8260 on all 8021 MTBE hits. TB-LB Yok 01 W HCL 73 A WW-1503 **√** 7 YO A 03 MW-21622 , 1 1 S VOA MW-3 04 1 1 1545 , 1 mw-21 JOA 1 1425 1 (efred By (Signature) Omanization Dote/Time 14505 Received By (Signalupe) Creantzellen Dologium (S) Turn Around Time (Circle Cholos) G-R Inc. 2-6-02 24 Hre. (estultanç Organization Date/Time Received By (Signature) Organization Date/Time 45 Hrs. 5 Осут Organization Date/Time 10 Days Redeved for Inhamstone the (countries) A. . . . .





19 February, 2002

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

RE: Tosco(1)

Sequoia Report: L202049



FEE 12 2002

GETTLEK-KYAN INC.

Enclosed are the results of analyses for samples received by the laboratory on 02/06/02 18:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson Project Manager

CA ELAP Certificate #2360



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project Tosco(1)
Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L202049-01	Water	02/06/02 00:00	02/06/02 18:05
MW-1	L202049-02	Water	02/06/02 15:03	02/06/02 18:05
MW-2	L202049-03	Water	02/06/02 16:22	02/06/02 18:05
MW-3	L202049-04	Water	02/06/02 15:45	02/06/02 18:05
MW-4	L202049-05	Water	02/06/02 14:25	02/06/02 18:05

Sequoia Analytical - San Carlos

Stevenson

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.

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

# Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B Sequoia Analytical - San Carlos

	-	Donostina					<del></del> -		<u>-                                      </u>
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L202049-01) Water San	npled: 02/06/02 00:00	Received:	02/06/02	18:05					-
Purgeable Hydrocarbons as Gasoline	e ND	50	ug/l	1	2020051	02/14/02	02/15/02	EPA 8021B	-
Benzene	ND	0.50	п	"	н	n	"	11	
Toluene	ND	0.50	II .	**	**	н	"	41	
Ethylbenzene	ND	0.50	п	н	Ħ	n	**	**	
Xylenes (total)	ND	0.50	11	п	11	u	11		
Methyl tert-butyl ether	ND	5.0	**		11	II .	n	**	•
Surrogate: a,a,a-Trifluorotoluene		94.7 %	70-	-130	п	"	rr	rr .	
MW-1 (L202049-02) Water Sam	pled: 02/06/02 15:03	Received: 0	2/06/02	18:05					
Purgeable Hydrocarbons as Gasoline	nD ND	50	ug/l	1	2020051	02/14/02	02/15/02	EPA 8021B	
Benzene	ND	0.50	li	н	"	н	**	n	
Toluene	ND	0.50	11	Ħ	n	н	TT	**	
Ethylbenzene	ND	0.50	••	•	Ħ	н	Ħ	11	
Xylenes (total)	ND	0.50	**		n	II .	п	**	
Methyl tert-butyl ether	14	5.0	91	tt	н	II.	Ħ	* <b>#</b>	
Surrogate: a,a,a-Trifluorotoluene		91.0%	70-	130	"	"	11	tr	
MW-2 (L202049-03) Water Sam	pled: 02/06/02 16:22	Received: 0	2/06/02	18:05					
Purgeable Hydrocarbons as Gasoli	ne 69	50	ug/l	1	2020051	02/14/02	02/15/02	EPA 8021B	P-01
Вепzеле	13	0.50	**	и	*1	u u	•	"	
Toluene	ND	0.50	**		**	II .	••	•	
Ethylbenzene	0.84	0.50	Ħ	**	11	u	"	•	
Xylenes (total)	4.4	0.50	**	n	11	II	,,	"	
Methyl tert-butyl ether	ND	5.0	**	+1	"	u u	n	н	
Surrogate: a,a,a-Trifluorotoluene		94.4 %	70-	130	"	"	"	ıı	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

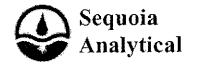
**Dublin CA**, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

## Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water Sample	ed: 02/06/02 15:45	Received: 0	2/06/02	18:05					
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020051	02/14/02	02/15/02	EPA 8021B	
Benzene	ND	0.50	**	n	Ħ	н	11	**	
Toluene	ND	0.50	**	II .	н	N	11	u u	
Ethylbenzene	ND	0.50	ŧŧ	n	н	R	IJ	*	
Xylenes (total)	ND	0.50	н	11	Ħ	**		11	
Methyl tert-butyl ether	ND	5.0	+1	*1	Ħ	**	II	11	
Surrogate: a,a,a-Trifluorotoluene		91.6%	70-	130	"	n	"	"	
MW-4 (L202049-05) Water Sample	ed: 02/06/02 14:25	Received: 0	2/06/02	18:05					
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020051	02/14/02	02/15/02	EPA 8021B	
Benzene	ND	0.50	H	"	Ħ	н	tt	. 11	
Toluene	ND	0.50	n	a	"	**	••	H	
Ethylbenzene	ND	0.50	u		11	**	**	81	
Xylenes (total)	ND	0.50	ш	11	H	**	ŧτ	n	
Methyl tert-butyl ether	ND	5.0	п	#	**	n	Ħ	. "	
Surrogate: a,a,a-Trifluorotoluene		97.6%	70-	130	tr	"	н	tr .	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received:	02/06/02 1	18:05		<u>-</u>			
Acetone	ND	20	ug/l	1	2020024	02/07/02	02/07/02	EPA Method 8240	
Benzene	ND	2.0	**	н	п	1I	Ħ	н	
Bromodichloromethane	ND	2.0	"	**	u	11	**		
Bromoform	ND	2.0	**	**	II .	II	**	"	
Bromomethane	ND	2.0	н	**	tt	u	Ŧŧ	11	
2-Butanone	ND	20	**	n	Ħ	н	11	**	
Carbon disulfide	ND	2.0	••	n	**	••	*1	**	
Carbon tetrachloride	ND	2.0	••	**	**	н	ti .	11	
Chlorobenzene	ND	2.0	**	••	#	tτ	11	н	
Chloroethane	ND	2.0	**	11	n	••	u	rt.	
2-Chloroethylvinyl ether	ND	20	**	11	11	n	H	n	
Chloroform	ND	2.0	"	11	"	n	"	e	
Chloromethane	ND	2.0	**	11	n	ш			
Dibromochloromethane	ND	2.0	71	11	"	щ	11	₩	
1,1-Dichloroethane	ND	2.0	**	п	11	Ħ	**	**	
1,2-Dichloroethane	ND	2.0	**	11	п	**	**	11	
1,1-Dichloroethene	ND	2.0	11	n	n	*1	**		
cis-1,2-Dichloroethene	ND	2.0	•	11	ш	11	11	11	
trans-1,2-Dichloroethene	ND	2.0	71	п	u	**	II	н	
1,2-Dichloropropane	ND	2.0	11	11	u	**	li	п	
cis-1,3-Dichloropropene	ND	2.0	11	ш	n	11	н	и	
trans-1,3-Dichloropropene	ND	2.0	π	tt	11	11	**	**	
Ethylbenzene	ND	2.0	**	н	**	u	**		
2-Hexanone	ND	20	*1	tt	41	н	Ħ	н	
Methylene chloride	ND	5.0	11	**	**	**	#	IT	
4-Methyl-2-pentanone	ND	20	**	*	,,	••	•	**	
Styrene	ND	2.0	••	н		••	**	11	
1,1,2,2-Tetrachloroethane	ND	2.0	н	п	**		,	11	÷
Tetrachloroethene	ND	2.0			TT	••		**	
Toluene	ND	2.0	п	11	••	**	*	19	
1,1,1-Trichloroethane	ND	2.0	n		**	н	*1	<b>11</b>	
1,1,2-Trichloroethane	ND	2.0	11	11	91	**	**	11	
Trichloroethene	ND	2.0	**	п	**	"	11	п	
Trichlorofluoromethane	ND	2.0	**	11	**	**	п	п	
Vinyl acetate	ND	5.0	**	11	**	11	и	ŧŧ	
Vinyl acctate Vinyl chloride	ND	2.0	**	11	**	II.	n	n	
Total Xylenes	ND	2.0	**	11	**	п	Ħ	**	
			75	114	,,	,,	n	m .	
Surrogate: 1,2-Dichloroethane	~u7	103 %		114	"	"	n		
Surrogate: Toluene-d8		93.8 %	0 <b>0</b> -	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.



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

## **Volatile Organic Compounds by EPA Method 8240B**

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received: 0	2/06/02 1	8:05					
Surrogate: 4-BFB		95.8 %	86-	115	2020024	02/07/02	02/07/02	EPA Method	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

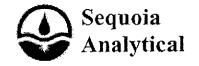
Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received: (	2/06/02 1	18:05					
Freon 113	ND	1.0	ug/l	1	2020016	02/07/02	02/08/02	EPA 8021B	
Bromodichloromethane	ND	0.50	11	ш	Ħ	11	**	*	
Bromoform	ND	0.50	•	n	**	11	**	"	
Bromomethane	ND	1.0	*	11	н	11	11	n	
Carbon tetrachloride	ND	0.50	11	,,	н	II	n	H	
Chlorobenzene	ND	0.50	11	"	н	и	11	••	
Chloroethane	ND	1.0	**	•	n	ц	Ħ	*1	
Chloroform	ND	0.50			Ħ	fi	**	n	
Chloromethane	ND .	1.0	**	**	п	н	**	**	
Dibromochloromethane	ND	0.50		11	н	п		**	
1,2-Dibromoethane (EDB)	ND	0.50	li	#	n	R	11	n	
1,3-Dichlorobenzene	ND	0.50	11	41	N	11	11	**	
1,4-Dichlorobenzene	ND	0.50	*1	**	n		11	n	
1,2-Dichlorobenzene	ND	0.50	•	**	п	H	<b>51</b>	**	
1,1-Dichloroethane	ND	0.50	**	**	н	**	11	n	
1,2-Dichloroethane	ND	0.50	**	**	Ħ		II	11	
1,1-Dichloroethene	ND	0.50	77		н	<b>\$1</b>	II	11	
cis-1,2-Dichloroethene	ND	0.50	н	н	н	**	п	11	
trans-1,2-Dichloroethene	ND	0.50	**	n	п	**	II	11	
1,2-Dichloropropane	ND	0.50	Ħ	u	u	**	II	11	
cis-1,3-Dichloropropene	ND	0.50	u	п	h	11	II	п	
trans-1,3-Dichloropropene	ND	0.50	)1	п	11	11	Ħ	п	
Methylene chloride	ND	5.0	п	n	Ħ	tt	н	Ħ	
1,1,2,2-Tetrachloroethane	ND	0.50	11	п	Ħ	"	**	"	
Tetrachloroethene	ND	0.50	*1	п	II .	**	,,	**	
1,1,1-Trichloroethane	ND	0.50		н	н	**	11	H	
1,1,2-Trichloroethane	ND	0.50		11	n	**	**	"	
Trichloroethene	ND	0.50	н	**	н	••	и	**	
Trichlorofluoromethane	ND	0.50	fr	***	n	н	н	н	
Vinyl chloride	ND ND	1.0	ц	••	t1	π	н	ti.	
Surrogate: 1-Chloro-2-fluorobe	enzene	98.5 %	70-1	130	"	"	"	"	



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported:

02/19/02 14:23

## 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 (L202049-02) Water	Sampled: 02/06/02 15:03	Received: 0	2/06/02 1	8:05					
Ethanol	ND	500	ug/l	1	2020054	02/19/02	02/19/02	EPA 8260B	
1,2-Dibromoethane	ND	2.0	**	**	п	41	•	11	
1,2-Dichloroethane	ND	2.0	11	11	u	11	11	n	
Di-isopropyl ether	ND	2.0	n	#1	u	li	n	"	
Ethyl tert-butyl ether	ND	2.0	**	п	n	II	II	*1	
Methyl tert-butyl ether	18	2.0	11	н	н	н	u	11	
Tert-amyl methyl ether	ND	2.0	11	**	**	"	H	ш	
Tert-butyl alcohol	ND	100	**	**	**	11	"	н	
Surrogate: 1,2-Dichloroethan	e-d4	108 %	70-1	30	rr	"	н	н	
Surrogate: Toluene-d8		96.8 %	70-1	130	"	"	*	"	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

## Diesel Hydrocarbons (C10-C23) by DHS LUFT

Sequoia Analytical - Walnut Creek

			J						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water Sampled: 0.	2/06/02 15:45	Received: (	2/06/02	18:05		_			<u> </u>
Diesel Range Hydrocarbons (C10-C28)	ND	310	ug/i	1	2B12006	02/12/02	02/12/02	EPA 8015M	
Surrogate: n-Octacosane		71%	50-	150	"	tr	,,	n	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)
Project Number: Tosco #4625

Project Manager: Deanna Harding

Reported: 02/19/02 14:23

### Total Metals by EPA 200 Series Methods Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received: 0	2/06/02	18:05					
Chromium	0.11	0.010	mg/l	1	2B11005	02/11/02	02/12/02	EPA 200.7	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

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

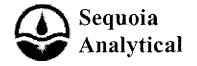
Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received:	02/06/02	18:05					J
Acenaphthene	ND	5.0	ug/l	1	2B06016	02/11/02	02/12/02	EPA 8270C	
Acenaphthylene	ND	5.0	ıı	п	п	н	ŧI	H	
Aniline	ND	5.0	п	u	н	tt	**	**	
Anthracene	ND	5.0	li	н	н	*	"	11	
Benzoic acid	ND	10	11	IF	Ħ	**	**	••	
Велzo (a) anthracene	ND	5.0	IJ	н	**	**	n	n	
Benzo (b) fluoranthene	ND	5.0	n	**	**	π	μ	11	
Велzo (k) fluoranthene	ND	5.0	II	H	91	91	н	w	
Benzo (ghi) perylene	ND	5.0	n	**	н	**	н	11	
Вепго[а]рутепе	ND	5.0	11	Ħ	11	**	**	11	
Benzyl alcohol	ND	5.0	#1	ŧŧ	н	ii		п	
Bis(2-chloroethoxy)methane	ND	5.0	**	"	"	п	Ħ	N	
Bis(2-chloroethyl)ether	ND	5.0	**	**	**	n	**	,,	
Bis(2-chloroisopropyl)ether	ND	5.0	**	**	**	н			
Bis(2-ethylhexyl)phthalate	ND	10	•	н	11	н	**	n	
4-Bromophenyl phenyl ether	מא	5.0	**	**	11	**	11	H	
Butyl benzyl phthalate	ND	50		Ħ	11	*	n n	**	
4-Chloroaniline	ND	25	H	H	11	n	II	**	
2-Chloronaphthalene	ND	5.0	**	**	n	н	"	11	
4-Chloro-3-methylphenol	ND	5.0	π	*1	п	π	н	11	
2-Chlorophenol	ND	5.0	Ħ	**	п	**	н	d	
4-Chlorophenyl phenyl ether	ND	5.0	•	**	u	11	**	u	
Chrysene	ND	5.0	**	*1	п	н	*	Ħ	
Dibenz (a,h) anthracene	ND	10	**	**	Ħ	n	**	**	
Dibenzofuran	ND	5.0	"	11	**	li .	"	**	
Di-n-butyl phthalate	ND	10	**	17	"	ц	*11	**	
1,2-Dichlorobenzene	ND	5.0	**	tt		tt	11	**	
1,3-Dichlorobenzene	ND	5.0	**	44	**	#	11	n	
1,4-Dichlorobenzene	ND	10	11	**	n	fi	11	**	
3,3'-Dichlorobenzidine	ND	10	II .	н	н	п	11	n	
2,4-Dichlorophenol	ND	5.0	Ħ	**	"	Ħ	п	**	
Diethyl phthalate	ND	5.0	II	**	n	**	п		
2,4-Dimethylphenol	ND	5.0	**	н	н	**	II	41	
Dimethyl phthalate	ND	5.0	**	u	H	**	II	u	
4,6-Dinitro-2-methylphenol	ND	10	••	п		11	Ħ	11	
2,4-Dinitrophenol	ND	10	ŧŧ	Ħ	* .	н	R	II.	
2,4-Dinitrotoluene	ND	10	tt	н	**	**	•	n	
2,6-Dinitrotoluene	ND	10	n	**	**	**	**	н	
Di-n-octyl phthalate	ND	10	17	н	**	**	11	n	
Fluoranthene	ND	5.0	Ħ	11	H	**	•	п	

Sequoia Analytical - San Carlos

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Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received: (	02/06/02	18:05			···		
Fluorene	ND	5.0	ug/l	]	2B06016	02/11/02	02/12/02	EPA 8270C	
Hexachlorobenzene	ND	10	11	U	(I	Ħ	**	u	
Hexachlorobutadiene	ND	10	11	11	II	Ħ	**	п	
Hexachlorocyclopentadiene	ND	10	**	**	н	Ħ	**	н	
Hexachloroethane	ND	5.0	H	*1	Ш	*	**	H	
Indeno (1,2,3-cd) pyrene	ND	10	ш	**	Ш	**	**	H	
Isophorone	ND	5.0	II	**	Н	**	11	n	
2-Methylnaphthalene	ND	5.0	11	**	Ħ	*	11	**	
2-Methylphenol	ND	5.0	II .	H	Ш	H	11	н	
4-Methylphenol	ND	5.0	*1	н	II	11	11	Ħ	
Naphthalene	ND	5.0	•	н	u	11	11	11	
2-Nitroaniline	ND	10	*	17	H	H	II	**	
3-Nitroaniline	ND	10	77	**	Ħ	ч	н	11	
4-Nitroaniline	ND	20	**	**	H	li	п		
Nitrobenzene	ND	5.0	•	**	rt	II .	н	**	
2-Nitrophenol	ND	5.0	R	"	u	U	ri .	11	
4-Nitrophenol	ND	10	н	**	tt .	u	łt.	11	
N-Nitrosodimethylamine	ND	5.0	ш	н	II .	n	**	11	
N-Nitrosodiphenylamine	ND	5.0	п	ţI	и	н	IT	11	
N-Nitrosodi-n-propylamine	ND	5.0	#1	11	Ш	tt	n	1)	
Pentachlorophenol	ND	10	**	п	11	н	**	11	
Phenanthrene	ND	5.0	"	II	u	н	**	11	
Phenol	ND	5.0	#	П	H	**	11	II	
Pyrene	ND	5.0	11	II	H	"	11	II .	
1,2,4-Trichlorobenzene	ND	5.0	"	n	μ	**	11	н	
2,4,5-Trichlorophenol	ND	10	11	11	ti .	47	Ħ	Ħ	
2,4,6-Trichlorophenol	ND	10	н	11	II	**	П	н	
Surrogate: 2-Fluorophenol		36 %	21-	110	#	n	п	H	
Surrogate: Phenol-d6		24 %	10-	110	"	n	n	*	
Surrogate: Nitrobenzene-d5		60 %	35-	114	"	"	n	"	
Surrogate: 2-Fluorobiphenyl		64 %	43-	116	"	H	"	"	
Surrogate: 2,4,6-Tribromopher	nol	61 %	10-	123	fr	н	"	"	
Surrogate: p-Terphenyl-d14		58 %	<i>33</i> -	141	"	"	"	"	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

### Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (L202049-04) Water	Sampled: 02/06/02 15:45	Received: 0	12/06/02	18:05				-	
Oil & Grease	ND	5.0	mg/l	1	2B11012	02/11/02	02/12/02	SM 5520B	



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

# Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 2020051 - EPA 5030B (P/T)			-	···						
Blank (2020051-BLK1)				Prepared	& Analyz	ed: 02/14/0	02			
Purgeable Hydrocarbons as Gasoline	ND	50	ug/i							-
Benzene	ND	0.50	11							
Toluene	ND	0.50	11							
Ethylbenzene	ND	0.50	<b>91</b>							
Xylenes (total)	ND	0.50	11							
Methyl tert-butyl ether	ND	5.0	11							
Surrogate: a,a,a-Trifluorotoluene	7.44		"	10.0	·	74.4	70-130			
LCS (2020051-BS1)				Prepared	& Analyz	ed: 02/14/	02			
Велгене	9.62	0.50	ug/l	10.0		96.2	70-130			_
Toluene	9.54	0.50	**	10.0		95.4	70-130			
Ethylbenzene	9.37	0.50	**	10.0		93.7	70-130			
Xylenes (total)	29.6	0.50	н	30.0		98.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.26	<del>-                                    </del>	"	10.0	<u> </u>	82.6	70-130			
LCS (2020051-BS2)				Prepared .	& Analyz	ed: 02/14/	02			
Purgeable Hydrocarbons as Gasoline	213	50	ug/l	250		85.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.09		#	10.0		90.9	70-130			
Matrix Spike (2020051-MS1)	Sou	urce: L20206	8-12	Prepared:	02/14/02	Analyzed	1: 02/15/02			
Purgeable Hydrocarbons as Gasoline	25 I	50	ug/l	250	ND	100	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.89		п	10.0		98.9	70-130			
Matrix Spike Dup (2020051-MSD1)	Sou	arce: L20206	8-12	Prepared:	02/14/02	Analyzed	1: 02/15/02			
Purgeable Hydrocarbons as Gasoline	247	50	ug/l	250	ND	98.8	60-140	1.61	25	
Surrogate: a,a,a-Trifluorotoluene	9.78		,,	10.0		97.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.78		,,	10.0		97.8	70-130			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020024 - EPA 5030B [P/T]									_	
Blank (2020024-BLK1)				Prepared	& Analyze	ed: 02/07/0	02			
Acetone	ND	20	ug/l						V	
Benzene	ND	2.0	lı .							
Bromodichloromethane	ND	2.0	Ji							
Bromoform	ND	2.0	n							
Bromomethane	ND	2.0	**							
2-Butanone	ND	20	"							
Carbon disulfide	ND	2.0	**							
Carbon tetrachloride	ND	2.0	**							
Chlorobenzene	ND	2.0	44							
Chloroethane	ND	2.0	**							
2-Chloroethylvinyl ether	ND	20	ш							
Chloroform	ND	2.0	и						•	
Chloromethane	ND	2.0	11							
Dibromochloromethane	ND	2.0	•1							
1,1-Dichloroethane	ND	2.0								
1,2-Dichloroethane	ND	2.0	**							
1,1-Dichloroethene	ND	2.0	"							
cis-1,2-Dichloroethene	ND	2.0	n							
trans-1,2-Dichloroethene	ND	2.0	#							
1,2-Dichloropropane	ND	2.0	II							
cis-1,3-Dichloropropene	ND	2.0	n							
rans-1,3-Dichloropropene	ND	2.0	11							
Ethylbenzene	ND	2.0	**							
2-Hexanone	ND	20	"							
Methylene chloride	ND	5.0	**							
I-Methyl-2-pentanone	ND	20	H							
Styrene	ND	2.0	11							
,1,2,2-Tetrachloroethane	ND	2.0	**							
l'etrachioroethene	ND	2.0	tr							
l'oluene	ND	2.0	**							
,1,1-Trichloroethane	ND	2.0	*1							
,1,2-Trichloroethane	ND	2.0	**							
richloroethene	ND	2.0	l#							
richlorofluoromethane	ND	2.0	11							
/inyl acetate	ND	5.0	**							
/inyl chloride	ND	2.0	**							



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020024 - EPA 5030B [P/T]										-
Blank (2020024-BLK1)				Prepared a	& Analyz	ed: 02/07/0	02			
Total Xylenes	ND	2.0	ug/l		· · · · · · · · · · · · · · · · · · ·					
Surrogate: 1,2-Dichloroethane-d4	48.7		"	50.0	uno.	97.4	76-114			
Surrogate: Toluene-d8	48.4		"	50.0		96.8	88-110			
Surrogate: 4-BFB	48.5		"	50.0		97.0	86-115			
Blank (2020024-BLK2)				Prepared a	& Analyz	ed: 02/07/0	)2			
Acetone	ND	20	ug/l							
Benzene	ND	2.0	11							
Bromodichloromethane	ND	2.0	Ħ							
Bromoform	ND	2.0	11							
Bromomethane	ND	2.0	**							
2-Butanone	ND	20	"							
Carbon disulfide	ND	2.0	**							
Carbon tetrachloride	ND	2.0	R.							
Chlorobenzene	ND	2.0	н							
Chloroethane	ND	2.0	u							
2-Chloroethylvinyl ether	ND	20	п							
Chloroform	ND	2.0	n							
Chloromethane	ND	2.0	n							
Dibromochloromethane	ND	2.0	11							
1,1-Dichloroethane	ND	2.0	11							
1,2-Dichloroethane	ND	2.0	<b>1</b> 1							
1,1-Dichloroethene	ND	2.0	•							
cis-1,2-Dichloroethene	ND	2.0	Ħ							
trans-1,2-Dichloroethene	ND	2.0	н							
1,2-Dichloropropane	ND	2.0	"							
cis-1,3-Dichloropropene	ND	2.0	n							
trans-1,3-Dichloropropene	ND	2.0	11							
Ethylbenzene	ND	2.0	**							
2-Hexanone	ND	20	**							
Methylene chloride	ND	5.0	11							
4-Methyl-2-pentanone	ND	20	<b>1</b> 1							
Styrene	ND	2.0	P1							
1,1,2,2-Tetrachloroethane	ND	2.0	**							
Tetrachloroethene	ND	2.0	н							
Toluene	ND	2.0	11							
1,1,1-Trichloroethane	ND	2.0	н							

Sequoia Analytical - San Carlos

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

Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPÐ Limit	Notes
Batch 2020024 - EPA 5030B [P/T]								7		
Blank (2020024-BLK2)				Prepared	& Analyze	:d: 02/07/0	02	•		
1,1,2-Trichloroethane	ND	2.0	ug/l	-						
Trichloroethene	ND	2.0	#							
Trichlorofluoromethane	ND	2.0	"							
Vinyl acetate	ND	5.0	**							
Vinyl chloride	ND	2.0	*							
Total Xylenes	ND	2.0	Ħ							
Surrogate: 1,2-Dichloroethane-d4	53.3		"	50.0		107	76-114			
Surrogate: Toluene-d8	48.6		H	50.0		97.2	88-110			
Surrogate: 4-BFB	47.4		"	50.0		94.8	86-115			
LCS (2020024-BS1)				Prepared	& Analyze	ed: 02/07/0	02			
Вепгепе	19.4	2.0	ug/l	20.0	<del> </del>	97.0	65-135			
Chlorobenzene	19.9	2.0	*1	20.0		99.5	70-130			
1,1-Dichloroethene	20.5	2.0	**	20.0		102	70-130			
Toluene	19.6	2.0	*	20.0		98.0	70-130			
Trichloroethene	19.3	2.0	**	20.0		96.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	52.1		rr	50.0		104	76-114			
Surrogate: Toluene-d8	51.3		n	50.0		103	88-110			
Surrogate: 4-BFB	50.3		n	50.0		101	86-115			
LCS (2020024-BS2)				Prepared	& Analyzo	ed: 02/07/	02			
Benzene	19.2	2.0	ug/I	20.0		96.0	65-135			
Chlorobenzene	19.5	2.0	н	20.0		97.5	70-130			
1,1-Dichloroethene	19.3	2.0	п	20.0		96.5	70-130			
Toluene	19.6	2.0	II .	20.0		98.0	70-130			
Trichloroethene	19.6	2.0	11	20.0		98.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	52.0		tt .	50.0		104	76-114		-	
Surrogate: Toluene-d8	51.8		"	50.0		104	88-110			
Surrogate: 4-BFB	50.1		rr	50.0		100	86-115			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020024 - EPA 5030B [P/T]										
Matrix Spike (2020024-MS1)	So	urce: L20201	9-01	Prepared	& Analyze	ed: 02/07/0	)2			<u> </u>
Benzene	19.0	2.0	ug/l	20.0	ND	95.0	60-140			
Chlorobenzene	19.1	2.0	11	20.0	ND	95.5	60-140			
1,1-Dichloroethene	18.8	2.0	**	20.0	ND	94.0	60-140			
Toluene	19.4	2.0	*1	20.0	ND	97.0	60-140			
Trichloroethene	18.5	2.0	**	20.0	ND	92.5	60-140			
Surrogate: 1,2-Dichloroethane-d4	49.8		"	50.0		99.6	76-114			
Surrogate: Toluene-d8	51.1		"	50.0		102	88-110			
Surrogate: 4-BFB	49.6		fr	50.0		99.2	86-115			
Matrix Spike Dup (2020024-MSD1)	Sou	urce: L20201	9-01	Prepared	& Analyz	ed: 02/07/0	02			
Benzene	21,1	2.0	ug/l	20.0	ND	106	60-140	10.5	25	
Chlorobenzene	21.2	2.0	н	20.0	ND	106	60-140	10.4	25	
1,1-Dichloroethene	20.7	2.0	n	20.0	ND	104	60-140	9.62	25	
Toluene	21.0	2.0	н	20.0	ND	105	60-140	7.92	25	
Trichloroethene	20.6	2.0	н	20.0	ND	103	60-140	10.7	25	
Surrogate: 1,2-Dichloroethane-d4	54.3	VIII 11 11 11 11 11 11 11 11 11 11 11 11	,,	50.0	···	109	76-114			
Surrogate: Toluene-d8	50.4		"	50.0		101	88-110			
Surrogate: 4-BFB	51.9		"	50.0		104	86-115			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

## 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 2020016 - EPA 5030B (P/T)		- -		<u> </u>						
Blank (2020016-BLK1)				Prepared	& Analyze	ed: 02/06/0	02			
Freon 113	ND	1.0	ug/l	<u> </u>						
Bromodichloromethane	ND	0.50	н							
Bromoform	ND	0.50	n .							
Bromomethane	ND	1.0	и							
Carbon tetrachloride	ND	0.50	*							
Chlorobenzene	ND	0.50	н							
Chloroethane	ND	1.0	₩							
Chloroform	ND	0,50	н							
Chloromethane	ND	1.0	n							
Dibromochloromethane	ND	0.50	11							
,2-Dibromoethane (EDB)	ND	0.50	11							
,3-Dichlorobenzene	ND	0.50	**							
,4-Dichlorobenzene	ND	0.50	n							
,2-Dichlorobenzene	ND	0.50	"							
,1-Dichloroethane	ND	0.50	н							
,2-Dichloroethane	ND	0.50	n							
,1-Dichloroethene	ND	0.50	**							
is-1,2-Dichloroethene	ND	0.50	*							
rans-1,2-Dichloroethene	ND	0.50	π							
,2-Dichloropropane	ND	0.50	*							
is-1,3-Dichloropropene	ND	0.50	н							
ans-1,3-Dichloropropene	ND	0.50								
fethylene chloride	ND	5.0	11							
,1,2,2-Tetrachloroethane	ND	0.50								
etrachloroethene	ND	0.50	*1							
,1,1-Trichloroethane	ND	0.50	н							
1,2-Trichloroethane	ND	0.50	II .							
richloroethene	ND	0.50	**							
richlorofluoromethane	ND	0.50	n							
inyl chloride	ND	1.0								
enzene	ND	0.50	п							
hylbenzene	ND	0.50								
bluene	ND	0.50	11							
otal Xylenes	ND	0.50	H							
urrogate: 1-Chloro-2-fluorobenzene	9.15		n	10.0	-	91.5	70-130			



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

#### 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 2020016 - EPA 5030B (P/T)										
Blank (2020016-BLK3)				Prepared	& Analyzo	ed: 02/07/	02			
Freon 113	ND	1.0	ug/l				****			
Bromodichloromethane	ND	0.50	77							
Bromoform	ND	0.50	**							
Bromomethane	ND	1.0	н							
Carbon tetrachloride	ND	0.50	ŧI							
Chlorobenzene	ND	0.50	11							
Chloroethane	ND	1.0	Ħ							
Chloroform	ND	0.50	Ħ							
Chloromethane	ND	1.0	Ħ							
Dibromochloromethane	ND	0.50	11							
1,2-Dibromoethane (EDB)	ND	0.50	π							
1,3-Dichlorobenzene	ND	0.50	ŧI							
1,4-Dichlorobenzene	ND	0.50	Ħ						•	
1,2-Dichlorobenzene	ND	0.50	Ħ							
1,1-Dichloroethane	ND	0.50	**							
1,2-Dichloroethane	ND	0.50	•							
1,1-Dichloroethene	ND	0.50	11							
cis-1,2-Dichloroethene	ND	0.50	H							
trans-1,2-Dichloroethene	ND	0.50	**							
1,2-Dichloropropane	ND	0.50			•					
cis-1,3-Dichloropropene	ND	0.50	**							
trans-1,3-Dichloropropene	ND	0.50	н							
Methylene chloride	ND	5.0	rt							
1,1,2,2-Tetrachloroethane	ND	0.50	н							
Tetrachloroethene	ND	0.50	)1							
1,1,1-Trichloroethane	ND	0.50	"							
1,1,2-Trichloroethane	ND	0.50	*							
Trichloroethene	ND	0.50	H							
Frichlorofluoromethane	ND	0.50	41							
Vinyl chloride	ND	1.0	\$1							
Велхепе	ND	0.50	"							
Ethylbenzene	ND	0.50	*							
Foluene	ND	0.50	**							
Total Xylenes	ND	0.50	H							
Surrogate: 1-Chloro-2-fluorobenzene	9.96		"	10.0		99.6	70-130			

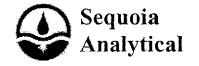
Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

### 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 2020016 - EPA 5030B (P/T)										
LCS (2020016-BS1)				Prepared	& Analyze	ed: 02/06/0	02			
Chlorobenzene	9.44	0.50	ug/l	10.0	_	94.4	70-130	•	_	
1,1-Dichloroethene	9.67	0.50	н	10.0		96.7	70-130			
Trichloroethene	8.88	0.50	ц	10.0		88.8	70-130			
Toluene	9.89	0.50	п	10.0		98.9	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	10.1		"	10.0		101	70-130		•	
LCS (2020016-BS3)				Prepared	& Analyz	ed: 02/07/	02			
Chlorobenzene	10.8	0.50	ug/l	10.0		108	70-130		<del>,</del>	
1,1-Dichloroethene	8.52	0.50	"	10.0		85.2	70-130			
Trichloroethene	8.87	0.50	n	10.0		88.7	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	9.92		п	10.0		99.2	70-130			
Matrix Spike (2020016-MS1)	Sou	rce: L20113	4-10	Prepared a	& Analyz	ed: 02/06/	02			
Chlorobenzene	11.8	0.50	ug/l	10.0	ND	118	60-140			· · · · · · · · · · · · · · · · · · ·
1,1-Dichloroethene	11.2	0.50	**	10.0	ND	112	60-140			
Trichloroethene	11.2	0.50	П	10.0	ND	112	60-140			
Surrogate: 1-Chloro-2-fluorobenzene	9.49		**	10.0		94.9	70-130	,		- 10
Matrix Spike Dup (2020016-MSD1)	Sou	rce: L20113	4-10	Prepared a	& Analyz	ed: 02/06/	02			
Chlorobenzene	11.2	0.50	ug/l	10.0	ND	112	60-140	5.22	25	·
,1-Dichloroethene	11.3	0.50	**	10.0	ND	113	60-140	0.889	25	
Trichloroethene	11.0	0.50	H	10.0	ND	110	60-140	1.80	25	
Surrogate: I-Chloro-2-fluorobenzene	9.45		rr	10.0	<del></del>	94.5	70-130			



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020054 - EPA 5030B [P/T]	<del></del>	<u> </u>				<u> </u>				
Blank (2020054-BLK1)		<del></del>		Prepared	& Analyze	d: 02/15/0	)2		_	
Ethanol	ND	500	ug/l	•						
1,2-Dibromoethane	ND	2.0	**							
1,2-Dichloroethane	ND	2.0	•							
Di-isopropyl ether	ND	2.0	**							
Ethyl tert-butyl ether	ND	2.0	#							
Methyl tert-butyl ether	ND	2.0	TI							
Tert-amyl methyl ether	ND	2.0	11							
Tert-butyl alcohol	ND	100	11							
Surrogate: 1,2-Dichloroethane-d4	54.9		"	50.0		110	70-130			
Surrogate: Toluene-d8	49.7		н	50.0		99.4	70-130			
Blank (2020054-BLK2)				Prepared	& Analyze	ed: 02/19/0	02			
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	2.0	Ħ							
1,2-Dichloroethane	ND	2.0	II .							
Di-isopropyl ether	ND	2.0	1)							
Ethyl tert-butyl ether	ND	2.0	п							
Methyl tert-butyl ether	ND	2.0	11							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	n							
Surrogate: 1,2-Dichloroethane-d4	53.0	,,	#	50.0		106	70-130			
Surrogate: Toluene-d8	47.9		"	50.0		95.8	70-130			
LCS (2020054-BS1)				Prepared	& Analyz	ed: 02/15/	02			
Methyl tert-butyl ether	47.8	2.0	ug/l	50.0		95.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	59.7		H	50.0		119	70-130		•	
Surrogate: Toluene-d8	48.3		#	50.0		96.6	70-130			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported; 02/19/02 14:23

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020054 - EPA 5030B [P/T]										
LCS (2020054-BS2)				Prepared	& Analyz	ed: 02/19/	02			
Methyl tert-butyl ether	49.3	2.0	սք/1	50.0		98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	53.3		"	50.0		107	70-130			
Surrogate: Toluene-d8	45.8		tf	50.0		91.6	70-130			
Matrix Spike (2020054-MS1)	So	urce: L20207	8-12	Prepared	& Analyz	ed: 02/15/	02			
Methyl tert-butyl ether	50.3	2.0	ug/l	50.0	2.5	95.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	60.0		"	50.0		120	70-130			-
Surrogate: Toluene-d8	48.2		H	50.0		96.4	70-130			
Matrix Spike Dup (2020054-MSD1)	Sou	urce: L20207	8-12	Prepared	& Analyz	ed: 02/15/	02			
Methyl tert-butyl ether	51.0	2.0	ug/l	50.0	2.5	97.0	60-140	1.38	25	
Surrogate: 1,2-Dichloroethane-d4	59.7		"	50.0		119	70-130			
Surrogate: Toluene-d8	47.1		#	50.0		94.2	70-130			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)
Project Number: Tosco #4625
Project Manager: Deanna Harding

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#### Diesel Hydrocarbons (C10-C23) by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B12006 - EPA 3510B										
Blank (2B12006-BLK1)				Prepared	& Analyze	ed: 02/12/0	)2			
Diesel Range Hydrocarbons (C10-C28)	ND	310	ug/l							
Surrogate: n-Octacosane	80.7	1	н	100		81	50-150			-11-
LCS (2B12006-BS1)				Prepared	& Analyze	ed: 02/12/0	02			
Diesel Range Hydrocarbons (C10-C28)	620	50	ug/l	500		124	60-140			
Surrogate: n-Octacosane	79.0		"	100		79	50-150			
LCS Dup (2B12006-BSD1)				Prepared	& Analyzo	ed: 02/12/0	02			
Diesel Range Hydrocarbons (C10-C28)	599	50	ug/l	500	-	120	60-140	3	50	
Surrogate: n-Octacosane	76.3		"	100		76	50-150			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

#### Total Metals by EPA 200 Series Methods - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B11005 - 200.7	<u> </u>									THORES
Blank (2B11005-BLK1)				Prenared	02/11/02	Analyzed	1: 02/12/02			
Chromium	ND	0.010	mg/l	r repared.	OZ/11/OZ	rinaryzec	1. 02/12/02			
LCS (2B11005-BS1)				Prepared:	02/11/02	Analyzed	1: 02/12/02			
Chromium	1.02	0.010	mg/l	1.00		102	80-120			<del></del>
LCS Dup (2B11005-BSD1)				Prepared:	02/11/02	Analyzed	1: 02/12/02			
Chromium	1.00	0.010	mg/l	1.00		100	80-120	2	20	
Matrix Spike (2B11005-MS1)	Sou	rce: W2020	88-01	Prepared:	02/11/02	Analyzed	1: 02/12/02			
Chromium	1.01	0.010	mg/l	1.00	0.015	100	80-120			
Matrix Spike Dup (2B11005-MSD1)	Sou	rce: W2020	88-01	Prepared:	02/11/02	Analyzed	1: 02/12/02			
Chromium	1.02	0.010	mg/l	1.00	0.015	100	80-120	ī	20	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J

1) Project: Tosco(1)
Project Number: Tosco #4625
Project Manager: Deanna Harding

Reported: 02/19/02 14:23

Dublin CA, 94568

		Reporting		Spike	Source		%REC		RPD		1
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Blank (2B06016-BLK1)				Prepared: 02/06/02 Analyzed: 02/11/02
Acenaphthene	ND	5.0	ug/l	
Acenaphthylene	ND	5.0	11	
Aniline	ND	5.0	11	
Anthracene	ND .	5.0	п	
Benzoic acid	ND	10	11	
Benzo (a) anthracene	ND	5.0	11	
Benzo (b) fluoranthene	ND	5.0	11	
Benzo (k) fluoranthene	ND	5.0	11	
Benzo (ghi) perylene	ND	5.0	11	
Benzo[a]pyrene	ND	5.0	*1	
Benzyl alcohol	ND	5.0	11	
Bis(2-chloroethoxy)methane	ND	5.0	11	
Bis(2-chloroethyl)ether	ND	5.0	11	
Bis(2-chloroisopropyl)ether	ND	5.0	11	
Bis(2-ethylhexyl)phthalate	ND	10	**	
4-Bromophenyl phenyl ether	ND	5.0	**	
Butyl benzyl phthalate	ND	50	**	
4-Chloroaniline	ND	25	**	
2-Chloronaphthalene	ND	5.0		
4-Chloro-3-methylphenol	ND	5.0		
2-Chlorophenol	ND	5.0	**	
4-Chlorophenyl phenyl ether	' ND	5.0	17	
Chrysene	ND	5.0	**	
Dibenz (a,h) anthracene	ND	10	n	
Dibenzofuran	ND	5.0	**	
Di-n-butyl phthalate	ND	10	**	
1,2-Dichlorobenzene	ND	5.0	Ħ	
1,3-Dichlorobenzene	ND	5.0	u	
1,4-Dichlorobenzene	ND	10	11	
3,3'-Dichlorobenzidine	ND	10	1)	
2,4-Dichlorophenol	ND	5.0	11	
Diethyl phthalate	ND	5.0	11	
2,4-Dimethylphenol	ND	5.0	11	
Dimethyl phthalate	ND	5.0	**	
4,6-Dinitro-2-methylphenol	ND	10		
2,4-Dinitrophenol	ND	10	••	



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B06016 - EPA 3510B Sep	Funnel									
Blank (2B06016-BLK1)				Prepared:	02/06/02	Analyzed	: 02/11/02			
2,4-Dinitrotoluene	ND	10	ug/l		·					
2,6-Dinitrotoluene	ND	10	H							
Di-n-octyl phthalate	ND	10	P							
Fluoranthene	ND	5.0	*1							
Fluorene	ND	5.0	r							
Hexachlorobenzene	ND	10	Ħ							
Hexachlorobutadiene	ND	10	**							
Hexachlorocyclopentadiene	ND	10	**							
Hexachloroethane	ND	5.0								
ndeno (1,2,3-cd) pyrene	ND	10	**							-
sophorone	ND	5.0	77						-	
2-Methylnaphthalene	ND	5.0	**							
2-Methylphenol	ND	5.0	"							
l-Methylphenol	ND	5.0								
Naphthalene	ND	5.0	•							
2-Nitroaniline	ND	10	н							
3-Nitroaniline	ND	10	**							
4-Nitroaniline	ND	20	**							
Nitrobenzene	ND	5.0	**							
2-Nitrophenol	ND	5.0	**							
1-Nitrophenol	ND	10	"							
N-Nitrosodimethylamine	ИD	5.0	•							
N-Nitrosodiphenylamine	ND	5.0	"							
N-Nitrosodi-n-propylamine	ND	5.0	••							
Pentachlorophenol	ND	10	n							
Phenanthrene	ND	5.0	**							
Phenol	ND	5.0	"							
Pyrene	ND	5.0	*							
,2,4-Trichlorobenzene	ND	5.0	Ħ							
2,4,5-Trichlorophenol	ND	10	n							
2,4,6-Trichlorophenol	ND	10	rr							
Surrogate: 2-Fluorophenol	67.5	··· <del>·</del>	H	150		45	21-110			
Surrogate: Phenol-d6	46.6		,,	150		31	10-110			
Surrogate: Nitrobenzene-d5	84.4		"	100		84	35-114			
Surrogate: 2-Fluorobiphenyl	82.6		"	100		83	43-116			
Surrogate: 2,4,6-Tribromophenol	115		н	150		77	10-123			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding

Reported: 02/19/02 14:23

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B06016 - EPA 3510B Se	p Funnel									
Blank (2B06016-BLK1)				Prepared:	02/06/02	Analyzed	: 02/11/02			
Surrogate: p-Terphenyl-d14	72.9		ug/l	100		73	33-141			<del>-</del>
Blank (2B06016-BLK2)				Prepared .	& Analyz	ed: 02/11/0	02			
Acenaphthene	ND	5.0	ug/I	,				·	-	···
Acenaphthylene	ND	5.0	11							•
Aniline	ND	5.0	11							
Anthracene	ND	5.0	11							
Benzoic acid	ND	10	17							
Benzo (a) anthracene	ND	5.0	TT.							
Benzo (b) fluoranthene	ND	5.0	11							
Benzo (k) fluoranthene	ND	5.0	н							
Benzo (ghi) perylene	מא	5.0	н							
Benzo[a]pyrene	ND	5.0	11							
Benzyl alcohol	ND	5.0	ij							
Bis(2-chloroethoxy)methane	ND	5.0	н							
Bis(2-chloroethyl)ether	ND	5.0	π							
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	10	**							
4-Bromophenyl phenyl ether	ND	5.0	п							
Butyl benzyl phthalate	ND	50	11							
4-Chloroaniline	ND	25	11							
2-Chloronaphthalene	ND	5.0	.,							
4-Chloro-3-methylphenol	ND	5.0	**							
2-Chlorophenol	ND	5.0	••							
4-Chlorophenyl phenyl ether	ND	5.0	16							
Chrysene	ND	5.0	11							
Dibenz (a,h) anthracene	ND	10	**							
Dibenzofuran	ND	5.0								
Di-n-butyl phthalate	ND	10	н							
,2-Dichlorobenzene	ND	5.0	11							
,3-Dichlorobenzene	ND	5.0	**							
,4-Dichlorobenzene	ND	10	**							
3,3'-Dichlorobenzidine	ND	10	,,							
4,4-Dichlorophenol	ND	5.0	tr							
Diethyl phthalate	ND	5.0	н							
,4-Dimethylphenol	ND	5.0								

Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2B06016 - EPA 3510B Se	p Funnel									
Blank (2B06016-BLK2)				Prepared	& Analyze	d: 02/11/0	 )2			
Dimethyl phthalate	ND	5.0	ug/l							•
4,6-Dinitro-2-methylphenol	ND	10	•							
2,4-Dinitrophenol	ND	10	**							
2,4-Dinitrotoluene	ND	10	Ħ							
2,6-Dinitrotoluene	ND	10	"							
Di-n-octyl phthalate	ND	10	u							
Fluoranthene	ND	5.0	II.							
Fluorene	ND	5.0	U							
Hexachlorobenzene	ND	10	II .							
Hexachlorobutadiene	ND	10	II							
Hexachlorocyclopentadiene	ND	10	и							
Hexachloroethane	ND	5.0	*							
Indeno (1,2,3-cd) pyrene	ND	10	**							
sophorone	ND	5.0	"							
2-Methylnaphthalene	ND	5.0	p							
2-Methylphenol	ND	5.0	п							
-Methylphenol	ND	5.0	**							
Naphthalene	ND	5.0	47							
2-Nitroaniline	ND	10	**							
3-Nitroaniline	ND	10	**							
I-Nîtroanîline	ND	20								
Vitrobenzene	ND	5.0	**							
!-Nitrophenol	ND	5.0	n							
l-Nitrophenol	ND	10	н							
V-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0	"							
N-Nitrosodi-n-propylamine	ND	5.0	11							
Pentachlorophenol	ND	10	FI							
Phenanthrene	ND	5.0								
Phenol	ND	5.0	•							
yrene	ND	5.0	H							
,2,4-Trichlorobenzene	ND	5.0	н							
,4,5-Trichlorophenol	ND	10	п							
,4,6-Trichlorophenol	ND	10	n							
urrogate: 2-Fluorophenol	55.2		"	150		37	21-110			
urrogate: 2-r tuorophenoi urrogate: Phenol-d6	39.1		"	150 150		26	21-110 10-110			



Gettler-Ryan/Geostrategies(1)

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

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

		Reporting		Spike	Source	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result %REC	Limits	RPD	Limit	Notes
Batch 2B06016 - EPA 3510B Sep	Funnel	<del></del> -							
Blank (2B06016-BLK2)				Prepared	& Analyzed: 02/11.	/02			
Surrogate: Nitrobenzene-d5	62.1		ug/l	100	62	35-114			
Surrogate: 2-Fluorobiphenyl	64.1		"	100	64	43-116			
Surrogate: 2,4,6-Tribromophenol	104		"	150	69	10-123			
Surrogate: p-Terphenyl-d14	70.9		*	100	71	33-141			
LCS (2B06016-BS1)				Prepared:	02/06/02 Analyze	d: 02/11/02			
Acenaphthene	80.5	5.0	ug/l	100	80	46-118			
4-Chloro-3-methylphenol	103	5.0	**	150	69	23-97			
2-Chlorophenol	89.5	5.0	"	150	60	27-123			
1,4-Dichlorobenzene	79.4	10	11	100	79	36-97			
2,4-Dinitrotoluene	84.6	10	11	100	85	24-96			
4-Nitrophenol	33.4	10	11	150	22	10-80			
N-Nitrosodi-n-propylamine	84.3	5.0	11	100	84	41-116			
Pentachlorophenol	133	10	11	150	89	9-103			
Phenol	28.8	5.0	11	150	19	12-110			
Pyrene	80.9	5.0	••	100	81	26-127			
1,2,4-Trichlorobenzene	83.4	5.0	**	100	83	39-98			
Surrogate: 2-Fluorophenol	75.6		*	150	50	21-110		, ,	
Surrogate: Phenol-d6	49.5		*	150	. 33	10-110			
Surrogate: Nitrobenzene-d5	90.4		"	100	90	35-114			
Surrogate: 2-Fluorobiphenyl	85.3		*	100	85	43-116			
Surrogate: 2,4,6-Tribromophenol	124		"	150	83	10-123			
Surrogate: p-Terphenyl-d14	66.7		"	100	67	33-141			
_CS (2B06016-BS2)				Prepared	& Analyzed: 02/11	/02			
Acenaphthene	68.0	5.0	ug/l	100	68	46-118			
4-Chloro-3-methylphenol	104	5.0	19	150	69	23-97			
-Chloropheлol	83.7	5.0	,,	150	56	27-123			
,4-Dichlorobenzene	50.8	10	**	100	51	36-97			
2,4-Dinitrotoluene	73.6	10	n	100	74	24-96			
-Nitrophenol	43.4	10	II.	150	29	10-80			
N-Nitrosodi-n-propylamine	73.0	5.0	н	100	.73	41-116			
Pentachlorophenol	112	10	п	150	75	9-103			
Phenol	40.3	5.0	u	150	27	12-110			
Pyrene	78.4	5.0	п	100	78	26-127			
,2,4-Trichlorobenzene	58.4	5.0	II .	100	58	39-98			
Surrogate: 2-Fluorophenol	55.1		"	150	37	21-110			
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Project: Tosco(1)

Project Number: Tosco #4625 Project Manager: Deanna Harding Reported: 02/19/02 14:23

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch 2B06016 - EPA 3510B Sep	Funnel	<u></u> .									
LCS (2B06016-BS2)		Prepared & Analyzed: 02/11/02									
Surrogate: Phenol-d6	34.6		ug/l	150		23	10-110				
Surrogate: Nitrobenzene-d5	71.2		"	100		71	35-114				
Surrogate: 2-Fluorobiphenyl	70.2		"	100		70	43-116				
Surrogate: 2,4,6-Tribromophenol	108		ff	150		72	10-123				
Surrogate: p-Terphenyl-d14	83.9		"	100		84	33-141				
LCS Dup (2B06016-BSD1)				Prepared:	02/06/02	Analyzed	: 02/11/02				
Acenaphthene	63.7	5.0	นg/ใ	100		64	46-118	23	30		
4-Chloro-3-methylphenol	93.2	5.0	11	150		62	23-97	10	30		
2-Chlorophenol	80.7	5.0	<b>#1</b>	150		54	27-123	10	30		
1,4-Dichlorobenzene	61.4	10	*1	100		61	36-97	26	30		
2,4-Dinitrotoluene	64.3	10	"	100		64	24-96	27	30		
4-Nitrophenol	50.1	10	#	150		33	10-80	40	30	QR-0	
N-Nitrosodi-n-propylamine	65.4	5.0	,,	100		65	41-116	25	30	4	
Pentachlorophenol	101	10	*	150		67	9-103	27	30		
Phenol	42.3	5.0	п	150		28	12-110	38	30	QR-0	
Рутепе	59.0	5.0	11	100		59	26-127	31	30	QR-0	
1,2,4-Trichlorobenzene	65.0	5.0		100		65	39-98	25	30	4	
Surrogate: 2-Fluorophenol	58.9		rr	150		39	21-110		<del></del>		
Surrogate: Phenol-d6	36.6		"	150		24	10-110				
Surrogate: Nitrobenzene-d5	67.7		#	100		68	35-114				
Surrogate: 2-Fluorobiphenyl	66.0		n	100		66	43-116				
Surrogate: 2,4,6-Tribromophenol	98.6		"	150		66	10-123				
Surrogate: p-Terphenyl-d14	<i>58.0</i>		"	100		58	33-141				



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Project Number: Tosco #4625

Project Manager: Deanna Harding

Reported:

02/19/02 14:23

#### Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch 2B11012 - EPA 3510B SepFunne	<u> </u>											
Blank (2B11012-BLK1)				Prepared: 02/11/02 Analyzed: 02/12/02								
Oil & Grease	ND	5.0	mg/l	_								
LCS (2B11012-BS1)				Prepared: 02/11/02 Analyzed: 02/12/02								
Oil & Grease	96.5	5.0	mg/l	100		96	70-130					
LCS Dup (2B11012-BSD1)	Prepared: 02/11/02 Analyzed: 02/12/02											
Oil & Grease	94.8	5.0	mg/l	100		95	70-130	2	30			



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#### Notes and Definitions

P-01 Chromatogram Pattern: Gasoline C6-C12

QR-02 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch

were accepted based on percent recoveries and completeness of QC data.

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