[MABE] on the increase

February 15, 2000 G-R #:180225

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

CC: Mr. Glen Matteucci

ERI, Inc.

73 Digital Drive, Suite 100

Novato, California

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

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

Tosco 76 Service Station #1156

4276 MacArthur Boulevard

Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 9, 2000	Groundwater Monitoring and Sampling Report First Quarter 2000 - Event of January 7, 2000

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 *February 28*, 2000, this report will be distributed to the following:

Enclosure

cc: Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502 Mr. Bob Hale, Alameda County Public Works Agency, Water Resources Section, 951 Turner CT, Suite 300, Hayward, CA 94545

February 9, 2000 G-R Job #180225

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

RE:

First Quarter 2000 Groundwater Monitoring & Sampling Report

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On January 7, 2000, field personnel monitored and sampled four wells (MW-1 through MW-4) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in one well (MW-1). 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 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

No. 6676

Sincerely,

Deanna L. Harding Project Coordinator

Barbara Sieminski

Project Geologist, R.G. No. 6676

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results

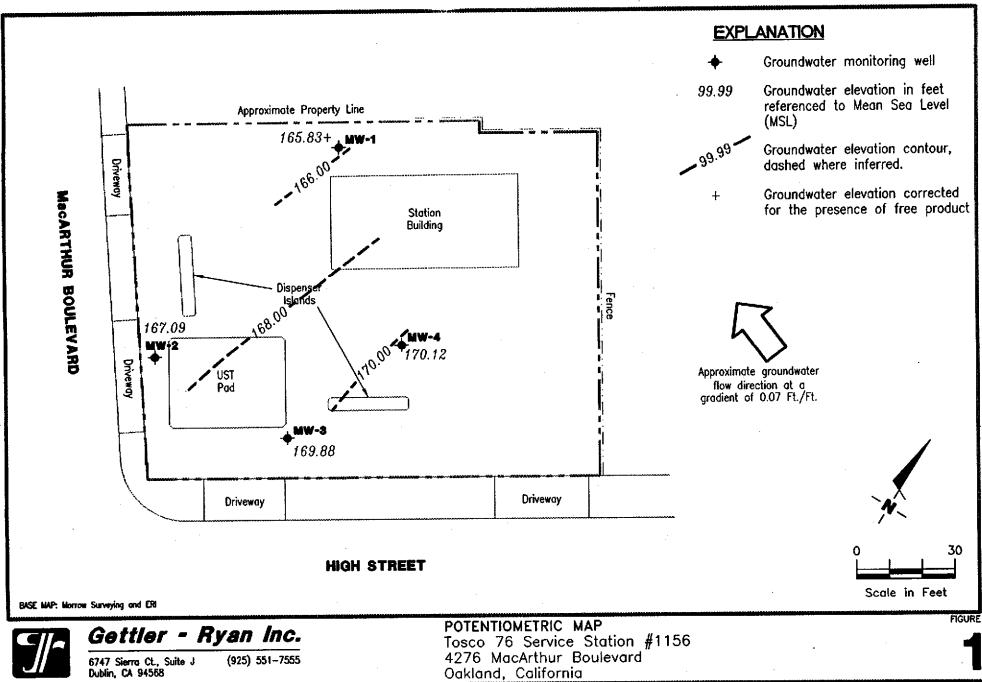
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

1156.qml 6747 Sierra Court, Suite J • Dublin, California 94568 • (925) 551-7555



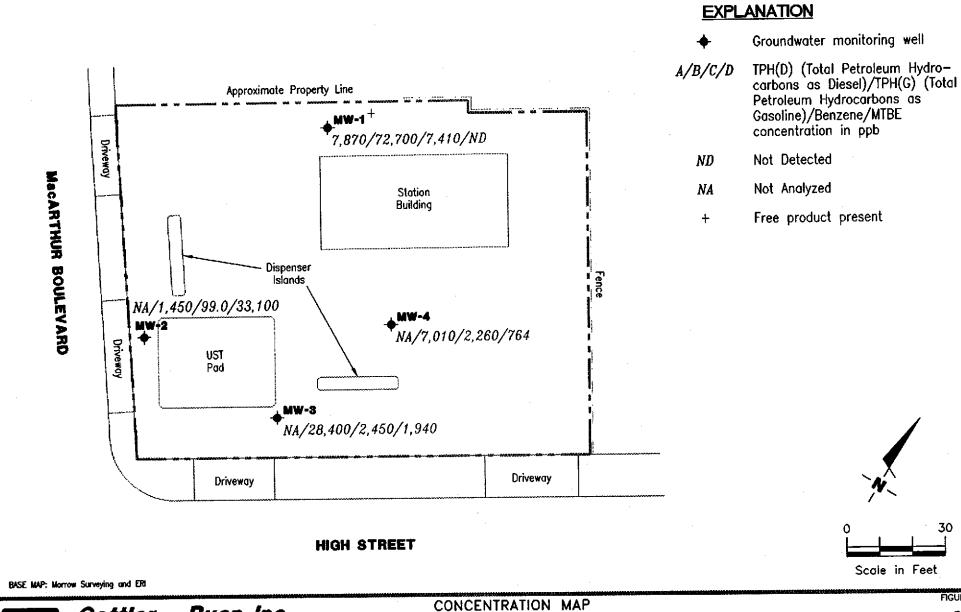
JOB NUMBER 180225

REVIEWED BY

DATE

January 7, 2000

REVISED DATE





Gettler - Ryan Inc.

6747 Sierra Ct., Suite J Bublin, CA 94568

(925) 551-7555

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

DATE

January 7, 2000

JOB NUMBER 180225

REVIEWED BY

REVISED DATE

 $\begin{tabular}{lll} \hline & & \exists e \ 1 \\ \hline & Groundwater \ Monitoring \ Data \ and \ Analytical \ Results \\ \hline \end{tabular}$

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

					Ouldwise,						
Well ID/ TOC*	Date	DTW (fl.)	GWE (msl)	Product Thickness <i>(ppb)</i>	TPH(D) <i>(ppb)</i>	TPH(G) (ppb)	B (ppb)	T <i>(ppb)</i>	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	\$		1/7.2/	•	16,000 ²	120,000	11,000	27,000	3,300	18,000	ND1
174.86	07/20/99 ⁵	7.50	167.36	<0.01	$2,410^2$	6,020 ⁶	1,030	1,040	68.5	412	321/333 ³
	09/28/99	8.75	166.11	0.02	7,870 ^{2,4}	72,700 ⁶	7,410	13,900	2,070	9,620	ND^1
	01/07/00	9.05	165.83**	0.02	1,070	12,100	.,				
MW-2								1	است	ND ¹	4,500/11,000 ^{3,}
173.01	07/20/99	5.40	167.61			ND¹	ND^1	ND ¹	ND ¹	43.1	5,280/6,150 ³
1/3.01	09/28/99	5.60	167.41	0.00		1,390 ⁶	124	ND ¹	62.9	43.1 16.0	33,100
	01/07/00	5.92	167.09	0.00		1,450 ⁶	99.0	ND ¹	23.8	10.0	55,100
MW-3	07/20/00	8.50	169.94			1,000	76	52	79	76	330
178.44	07/20/99	8.31	170.13	0.00		1,860 ⁶	174	95.4	71.8	135	443/288 ³
	09/28/99 01/07/00	8.56	169.88	0.00		28,400 ⁶	2,450	3,090	1,560	3,910	1,940
MW-4			151 50		•	69	2.7	0.77	ND	7.1	100
179,10	07/20/99	7.40	171.70	0.00		4,050 ⁶	1,250	72.0	51.3	133	416/459 ³
	09/28/99	7.19	171.91	0.00 0.00		7,010 ⁶	2,260	167	271	276	764
	01/07/00	8.98	170.12	0.00		7,010	_,;	•		i	
Trip Blank											
TB-LB	07/20/99			·		 ND	ND	ND	ND	ND	ND
	09/28/99					ND	ND ND	ND ND	ND	ND	ND
	01/07/00			-		ND	ND	ND	112	1,2	

Table

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TOC = Top of Casing elevation

B = Benzene

ppb = Parts per billion

DTW = Depth to Water

T = Toluene

ND = Not Detected

(ft.) = Feet

E = Ethylbenzene

-- = Not Measured/Not Analyzed

GWE = Groundwater Elevation

X = Xylenes

(msl) = Referenced relative to mean sea level

MTBE = Methyl tertiary butyl ether

TPH(D) = Total Petroleum Hydrocarbons as Diesel

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

- TOC elevations are based on City of Oakland Benchmark No. 3967, (Elevation = 174.40 feet msl).
- GWE has been corrected due to the presence of free product; Correction factor: [(TOC DTW)+(Product Thickness x 0.77)].
- Detection limit raised. Refer to analytical reports.
- 2 Laboratory report indicates unidentified hydrocarbons C9-C24.
- MTBE by EPA Method 8260.
- Laboratory analyzed sample past EPA recommended holding time.
- 5 Total Recoverable Petroleum Oil was ND.
- б Laboratory report indicates gasoline C6-C12.

Table 2
Groundwater Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

Well ID	Date	Ethanol (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	HVOCs (ppb)	SVOCs (ppb)
MW-1	07/20/99 09/28/99 01/07/00	 	ND ⁶	11,000 ³ 333	 ND ⁶ 	– ND ⁶ –	 ND ⁶ 	ND ¹ ND ⁴ ND ^{7,8}	ND ² ND ⁵ ND ⁹
MW-2	09/28/99		ND ⁶	6,150	ND ⁶	ND^6	ND^6		
MW-3	09/28/99		ND^6	288	$\mathcal{N}D_{e}$	ND^6	8.80		
MW-4	09/28/99		ND^6	459	ND^6	ND ⁶	ND_{ϱ}		-

Ta!

Groundwater A

A Results

Tosco 76 Service.

on #1156

4276 MacArthur Boulevard Oakland, California

EXPLANATIONS:

Groundwater analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TBA = Tertiary Butyl Alcohol

MTBE = Methyl Tertiary Butyl Ether

DIPE = Di-isopropyl Ether

ETBE = Ethyl Tertiary Butyl Ether

TAME = Tertiary Amyl Methyl Ether

EDB = 1,2-Dibromoethane

HVOCs = Halogenated Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

ppb = Parts per billion

-- = Not Analyzed

ND = Not Detected

- All HVOCs were ND except for Chlorobenzene at 12 ppb; 1,2-Dichlorobenzene (1,2-DCB) at 3.9 ppb; 1,1-Dichloroethane (1,1-DCA) at 2.0 ppb; 1,2-Dichloroethane (1,2-DCA) at 20 ppb; cis-1,2-Dichloroethene (cis-1,2-DCE) at 3.6 ppb; and 1,2-Dichloropropane (1,2-DCP) at 0.92 ppb.
- All SVOCs were ND except for Benzyl alcohol at 37 ppb; 2,4-Dimethylphenol at 140 ppb; 2-Methylnaphthalene at 240 ppb; 4-Methylphenol at 27 ppb; and Naphthalene at 600 ppb.
- Laboratory analyzed sample past EPA recommended holding time.
- All HVOCs were ND except for Benzene at 6,130 ppb; Ethylbenzene at 1,590 ppb; Naphthalene at 534 ppb; Toluene at 11,900 ppb;
 - 1,2,4-Trimethylbenzene at 1,240 ppb; 1,3,5-Trimethylbenzene at 318 ppb; and Total Xylenes at 7,360 ppb.
- All SVOCs were ND (with a raised detection limit) except for 2,4-Dimethylphenol at 13.6 ppb; 2-Methylnaphthalene at 87.4 ppb; 2-Methylphenol at 26.4; 4-Methylphenol at 35.6; and Naphthalene at 292 ppb.
- Detection limit raised. Refer to analytical reports.
- All HVOCs were ND (with a raised detection limit) except for Benzene at 8,380 ppb; Ethylbenzene at 2,380 ppb; Naphthalene at 1,050 ppb; n-Propylbenzene at 371 ppb; Toluene at 17,600 ppb; 1,2,4-Trimethylbenzene at 2,210 ppb; 1,3,5-Trimethylbenzene at 597 ppb; and Total Xylenes at 10,800 ppb.
- 8 EPA Method 8260A for HVOCs
- All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 315 ppb and Naphthalene at 615 ppb.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds EPA Method 8010 for HVOCs EPA Method 8270 for SVOCs

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 a MMC flexidip 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 The water 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.

WELL MONITORING/SAMPLING FIELD DATA SHEET

acility #	<u> </u>		 -	80225		
ddress: 42	76 MacArt	tur Bibl.	Date: <u> </u>	17/00		
ity:	akland		Sampler:	varthe	>	
Well ID	<u> MW-1</u>	Well Condition	on: OK	<u></u>		· · · · · · · · · · · · · · · · · · ·
ell Diameter	2 in,	Hydrocarbor Thickness:	\sim	Amount Ba	ailed _ log	(Gallons
otal Depth	75.15 ft.	Volume	2" = 0.17			= 0.66
epth to Water	9.05 tt.	Factor (VF)	6" = 1	1.50	12" = 5.80	
· .	16.10 x	VF 8.17 = 2.73	X 3 (case volume) =	= Estimated Pu	irge Volume: <u></u>	.21 _{Igal.}
Purge quipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	E	Ba Pr G O	isposable Ba ailer ressure Baile rab Sample ther:	er	
Starting Time: Sampling Time: Purging Flow Ra		gpm. Sedime	er Conditions: Color: ent Description:		<u>, , , , , , , , , , , , , , , , , , , </u>	(ga
	Volume pH (gal.) 3 7.63 6 7.52	Conductivity	Temperature	D.O. (mg/L)	ORP (mV)	Alkalinit (ppm)
1:31	8.5 2.49 					
<u>.</u>	8.5 7.49	LABORATORY	INFORMATION	ORATORY	ANALV	SES
SAMPLE ID	(#) - CONTAINER	LABORATORY REFRIG. PRESE	RV. TYPE / LAB	ORATORY	ANALY:	
SAMPLE ID	3 VOA>	LABORATORY	RV. TYPE / LAB		TPH(G)/btex/mi	tbe
SAMPLE ID MW-1 HW-1	3 VOA>	LABORATORY REFRIG. PRESE	RV. TYPE / LAB		TPH(G)/btex/mi	tbe
SAMPLE ID MW-1 HW-1 HW-1	3 VOA> 3 VOA- 1 Aubar	LABORATORY REFRIG. PRESEI Y HC	RV. TYPE / LAB	IA	TPH(G)/btex/mi HVOC>(TPH-D	tbe
SAMPLE ID MW-1 HW-1	3 VOA>	LABORATORY REFRIG. PRESEI Y HC	RV. TYPE / LAB	IA	TPH(G)/btex/mi HVOC>(TPH-D	tbe 8260)

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ 72 Facility <u>#</u> 71	156		_ Job#:	180225		
Address: 4	276 MacArt	Lux Bird.	_ Date:	1/7/00		
City:			_ Sampler:	varthe	د ک	* *
Well ID	HW-2	Well Cond	lition:	K		
Well Diameter	2 in.	Hydrocart Thickness	41)	Amount E		(Gallons)
Total Depth	25.45 n		2" = 0.17	3" = 0.3	8 4	" = 0.66
Depth to Water	5.92 tt	Factor (VF	6	' = 1.50	12" = 5.80	
	<u>19.53</u> ×	VF 8.17 = 3.3	X 3 (case volum	ie) = Estimated P	urge Volume: _	9.96 (asl.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:			Disposable B Bailer Pressure Bail Grab Sample Other:	er	
	(0.1)	<u>apm.</u> Sedin	r Color: nent Description: ; Time:		·· - ·	
Time	Volume pH	Conductivit µmhos/cm 9.31			ORP (mV)	Alkalinity (ppm)
11:45	7 7.40	9.20	<u>67.9</u> 68.2			
11:50	10 1.34			<u> </u>		
SAMPLE ID	(#) - CONTAINER		Y INFORMATION	N ABORATORY	ANAL	YSES
1W-2	3 VOA		 	UOIA	TPH(G)/btex/	mtbe
COMMENTS:						<u>~_</u>
OUTHINEIT O.						

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ /o. Facility # //	sco 56			Job#	~, !•	180225		
	76 MacArl	Lux B	ist.	Date		1/7/00		
City:				Samı		Vaxtka	<u>'S</u>	
Well ID	HW-3	Wel	l Condition	: _	0	k		
Well Diameter	2 in.	•	rocarbon kness:	Þ	Ifon	Amount E		(Gallons)
Total Depth	25.05 ft.	<u> </u>	lume	2 = 0		3" = 0.3		4" = 0.66
Depth to Water	8.56 ft.		ctor (VF)			= 1.50		
	16.49_×	vf 8.17	= <u>Z,80</u> x	3 (case	volume)	= Estimated Pi	urge Volume:	8.40 (gai.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	· ·		npling ipment	!	Disposable B Bailer Pressure Baile Grab Sample Other:	er	
Starting Time:	12:13		Weather C	onditio	ns: ,	da		
Sampling Time:	~1333		Water Col	or:	d	<u> </u>	Odor: Y	
Purging Flow Rat	e:	gpm,	Sediment	Descrip	otion: .			
Did well de-wate	r? r-o		If yes; Ti	me: _		Volun	ne:	(gal.)
	olume pH (gal.) 7.34 6 7.18 8.5 7.22	<u>μ</u> π.	ductivity hos/canx//00 31 48 54	70	17	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
SAMPLE ID	(#) - CONTAINER	LABOR	ATORY IN			BORATORY	ANA	LYSES
MW-3	3 VOA	Y	HCI		SEQUO	DIA	TPH(G)/btex/	mtbe
				',				
		1					<u> </u>	
COMMENTS: _			<u> </u>					· · · · · · · · · · · · · · · · · · ·
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WELL MONITURING/SAMPLING FIELD DATA SHEET

Client/ /o. Facility # //:	sco 56		Job#: _	180225	<u> </u>	
Address: 42	76 MacArt	ur Bird.	Date: _	1/7/00		
City:			Sampler: _	varthe	<u>. </u>	
Well ID	mw-4	Well Condition	on:	OK	,	
Well Diameter	2in.	Hydrocarbor	717	Amount Ba		(Gallons)
Total Depth	25.30 ft.	Thickness: Volume	2" = 0.17	3" = 0.38	4*	= 0.66
Depth to Water	8.98 tt.	Factor (VF)	6* =	= 1.50 	12" = 5.80	
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	E	ampling quipment: <	Disposable Ba Bailer Pressure Baile Grab Sample Other:	ailer er	7.32 (qal.)
Starting Time: Sampling Time: Purging Flow Ra Did well de-wate		Water (r Conditions: Color: nt Description: Time:		Odor: 4	(gal.)
Time \	/olume pH (gal.) 7.30	Conductivity µmhos/cmy/	Temperature	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:50	6 7.19	11.55	3.c f	_		
12:53 -	8.5 7.13		<u>70,0</u>			
						· ·
SAMPLE ID	(#) - CONTAINER	LABORATORY REFRIG. PRESE		I ABORATORY	ANAL	YSES
NW-	3 VoA	Y HC	SEQL	JOIA	TPH(G)/btex/	mtbe
			:	<u></u>		
					<u> </u>	<u> </u>
COMMENTS:			<u> </u>	-		
·						

TOSCO

Taxes Harboding Company 2000 Core Caryon FL, Sta. ACS San Ramon, California 84543

Focility Humber TOSCO (76) SS#1156 /600059	Contact (Hame) MR. DAVID DEW
Feelily Address 4276 MACARTHUR, OAKLAND CA	(Phone) (925) 277-238
Consultant Project Number 180225.85	Laboratory Name Sequois Analytical
Cattler-Ryan Inc. (G-R Inc.)	Laboratory Release Number
6747 Sierra Court, Suite J. Dublin, CA 94568	Samples Collected by (Home) wattas Tas
Project Contact (Hame) Deanna L. Harding	Collection Date 1/7/00
(Phone) 925-551-7555 (Fox Number) 925-551-7888	Signature North Paley
-	Analyses To Be Performed
1 X J J J J J J J J J J J J J J J J J J	

200 Can Cayor San Ramon, Call	pris pesas	F	roject Co	H) taalno	ame) <u>D</u> bana) 93	eanna I ς-551-755	Hardi 55 (Fox	Number	1925	 -551 <i>-</i>	7888	_ ;	iolleation Ignature	Dote_	th)	Hara L	5 \$-					_ _
			- i		non•)_1_		(100]		1	<u> </u>			• Perfoi				T	1	DO NOT BILL TB-LB ANALYS	<u>-</u> T.S.
Sample Number	Lab Sample Number	Number of Containers	Metric S = Soll A = Air W = Water C = Chercoal	Type G = Grab C = Composite D = Discrete	Three	. Sample Preservation	load (Yes or No)	TPH GM+ BTEX WINTSE (8020)	17H Diesel (8015)	Oil and Graces (5520)	Puryechle Halocarbora (8010)	Purgeable Aromothor (8020)	Purpedtle Organica (8240)	Extractable Organica (8270)	(KCP, OF AA)	HVOC, (8260)	5100,(8270)				Remarke	_
TB-LB		1	W	a		Hel	<u> </u>	X					 	<u> </u>	<u> </u>	~	×	· -		-		_
MW-1		8		-	1200	<u>-</u>	4	X	X	ļ			 			X			<u> </u>	 		_
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	rlure)		Org	anization		Dat•/Tim•	R•	oleved F	or Labo	protory (By (Sign	alur•)			Dol	e/Time		į			ontrooted	

1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9600

RECEIVED

February 1, 2000

FEB 0 3 2000

GETTLEK-RYAN INC.

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

RE: Tosco(4)/L001054

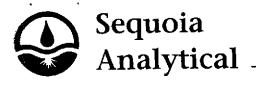
Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on January 7, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

For Wayne Stevenson Project Manager

CA ELAP Certificate Number I-2360



RECEIVED

FEB 0 3 2000

February 1, 2000

GETTLER-RYAN INC.

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

RE: Tosco(4)/L001054

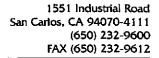
Dear Deanna Harding:

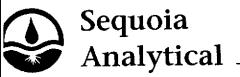
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Sincerely,

િ Wayne Stevenson ાoject Manager

CA ELAP Certificate Number I-2360





Settler-Ryan/Geostrategies(1) 747 Sierra Court, Suite D Jublin, CA 94568 Project: Tosco(4)

Project Number: Tosco SS#1156 Project Manager: Deanna Harding Sampled: 1/7/00 Received: 1/7/00

Reported: 2/1/00

ANALYTICAL REPORT FOR L001054

ample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L001054-01	Water	1/7/00
∕W-1	L001054-02	Water	1/7/00
∕IW-2	L001054-03	Water	1/7/00
MW-3	L001054-04	Water	1/7/00
MW-4	L001054-05	Water	1/7/00

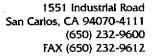


Gettler-Ryan/Geostrategies(1)
Project: Tosco(4)
6747 Sierra Court, Suite D
Project Number: Tosco SS#1156
Dublin, CA 94568
Project Manager: Deanna Harding

Sampled: 1/7/00 Received: 1/7/00 Reported: 2/1/00

Sample Description: Laboratory Sample Number: TB-LB L001054-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
		Seque	oia Analytica	l - San Carlos				
Total Purgeable Hydrocarbons (C6-C	12), BTEX ar	d MTBE by	DHS LUFT					
Purgeable Hydrocarbons as Gasoline	0010097	1/19/00	1/20/00		50.0	ND	ug/l	
Benzene	11	H	11		0.500	ND	н	
=		17	H		0.500	ND	**	
Toluene	n	11 -			0.500	ND	"	
Ethylbenzene	"	11	**		0.500	ND	17	
Xylenes (total)	11						. 10	
Methyl tert-butyl ether	"	11	# 		5.00	ND		
Surrogate: a,a,a-Trifluorotoluene	rt .	ff .	<i>"</i>	70.0-130		101	%	





Gettler-Ryan/Geostrategies(1)
Project: Tosco(4)
Sampled: 1/7/00
6747 Sierra Court, Suite D
Project Number: Tosco SS#1156
Received: 1/7/00
Dublin, CA 94568
Project Manager: Deanna Harding
Reported: 2/1/00

Sample Description: Laboratory Sample Number: MW-1 L001054-02

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
E TO STATE OF THE		<u> </u>						
		Sequo	ia Analytical	l - San Carlos				
Total Purgeable Hydrocarbons (C6-C1	2), BTEX an							
Purgeable Hydrocarbons as Gasoline	0010104	1/20/00	1/20/00		10000	72700	ug/l	3
Benzene	n	11			100	7410	"	
Toluene	**	H	91		100	13900	11	
Ethylbenzene	**	н	h		100	2070	n	
Xylenes (total)	11	11	11		100	9620	#1	
Methyl tert-butyl ether	11	n	11		1000	ND	11	
Surrogate: a,a,a-Trifluorotoluene	II	"	rr ·	70.0-130		94.2	%	
·					-			
Volatile Organic Compounds by EPA	Method 8260	<u>A</u>						
Benzene	0010074	1/14/00	1/14/00		250	8380	ug/l	
Bromobenzene	11	İŦ	н		250	ND	u	
Bromochloromethane	11	It	н		250	ND	ir	
Bromodichloromethane	17	17	11		250	ND	**	
Bromoform	11	17	•		250	ND	er e	
Bromomethane	10	n	It		625	ND	11	
n-Butylbenzene	н .	**	11		250	ND	11	
sec-Butylbenzene	11	**	17		250	ND	17	
tert-Butylbenzene	H	#	n		250	ND	11	
Carbon tetrachloride		11	n		250	ND	11	
Chlorobenzene	n	u	ŧI		250	ND	11	
Chloroethane	H	11	**		625	ND	**	
Chloroform	**	11	11	•	250	ND	n	
Chloromethane	19 1	t)	11		625	ND	11	
2-Chlorotoluene	11	11	II.		250	ND	n ,	
4-Chlorotoluene	11	H	11		250	ND	**	
Dibromochloromethane	11	n	11		250	ND	n	
1,2-Dibromoethane	it	H	11		250	ND	и	
Dibromomethane	11	11	11		250	ND	11	
1,2-Dibromo-3-chloropropane	11	"	11		625	ND	#	
1,2-Dichlorobenzene	11	**	m ,		250	ND	,	
1,3-Dichlorobenzene	n i	n	1)		250	ND	н	•
1.4-Dichlorobenzene	tt	H	n		250	ND	11	
Dichlorodifluoromethane	H .	II	H		625	ND	H	
1,1-Dichloroethane	n	II.	**		250	ND	н	
1,2-Dichloroethane	n	19	II		250	ND	H	
1,1-Dichloroethene	11	u .	н		250	ND	н	
cis-1,2-Dichloroethene	n	14	н .		250	ND	11	
trans-1,2-Dichloroethene	11	P	н		250	ND	11	
1,2-Dichloropropane	II.	ĮP.	N		250	ND	н	
1,3-Dichloropropane	н	**	и		250	ND	n	
1,3-Dichioropropane	••		-		230	MD		

Sequoia Analytical - San Carlos



Gettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00 6747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00 Dublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

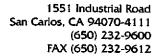
Sample Description:

Laboratory Sample Number:

MW-1 L001054-02

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
					_			
Volatile Organic Compounds by EPA						3.773	A	
2,2-Dichloropropane	0010074	1/14/00	1/14/00		250	ND	ug/l	
1,1-Dichloropropene	19	H +	•		250	ND	"	
Ethylbenzene	11	Ħ	.**		250	2380		
Hexachlorobutadiene	11	n	11		250	ND		
Isopropylbenzene	17	R	. "		250	ND	 H	
p-Isopropyltoluene	11	н	11		250	ND	"	
Methylene chloride	Ħ	11	n		625	ND	11	
Naphthalene	17	11	н		625	1050	"	
n-Propylbenzene	••	"	Ħ		250	371	"	
Styrene	•	"	11		250	ND		
1,1,1,2-Tetrachloroethane	11	n	17		250	ND	17	
1,1,2,2-Tetrachloroethane	11	11	P .		250	ND		
Tetrachloroethene	H	**	"		250	ND	"	
Toluene	11	Ħ	*1		250	17600		
1 2 3-Trichlorobenzene	TI	R	#		250	ND	H	
orobenzene	11	17	17		250	ND	Ħ	
-Horoethane	1)	**	H		250	ND	Ħ	
.,,,,,-1 richloroethane	16	11	u,		250	ND	**	
Trichloroethene	n	n	н		250	ND	11	
Trichlorofluoromethane	и	н	•		625	ND	it.	
1,2,3-Trichloropropane	O .	11	H		250	ND	n	
1,2,4-Trimethylbenzene	n	н	11		250	2210	n	
1,3,5-Trimethylbenzene	,,	11	Ħ		250	597	н	
Vinyl chloride	11	"	#1		250	ND	#	
	11	•	н		250	10800	97.	
Total Xylenes Surrogate: 1,2-Dichloroethane-d4	"	n	п	76.0-114		108	%	
Surrogate: Toluene-d8	"	n	*	88.0-110		100	*	
	Ħ	*	"	86.0-115		100	"	
Surrogate: 4-BFB				34.2 110				
Diesel Hydrocarbons (C9-C24) by D	HS LUFT							
Diesel Range Hydrocarbons	0A27032	1/27/00	1/29/00	DHS LUFT	250	7870	ug/l	1,4
Surrogate: n-Pentacosane	"	11	"	50-150		163	%	2
5,177 5,510.								
Semivolatile Organic Compounds by	EPA Method	8270B						
Acenaphthene	0010375	1/14/00	1/20/00	EPA 8270B	25.0	ND	ug/l	
Acenaphthylene	Ħ	**	11	EPA 8270B	25.0	ND	n	
Anthracene	н	H	н .	EPA 8270B	25.0	ND	#	
Benzoic acid	Ħ	n	*	EPA 8270B	50.0	ND	If	
Benzo (a) anthracene	10	11	u	EPA 8270B	25.0	ND	Ħ	
Benzo (b) fluoranthene	н	Ħ	17	EPA 8270B	25.0	ND	Ħ	
Benzo (k) fluoranthene	H.	H	IF	EPA 8270B	25.0	ND	19	
(ii) iiioimiliini								11000

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lettler-Ryan/Geostrategies(1) 747 Sierra Court, Suite D Jublin, CA 94568

Project: Tosco(4)

Project Manager:

Project Number: Tosco SS#1156 Deanna Harding Sampled: 1/7/00

Received: 1/7/00 Reported: 2/1/00

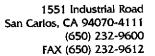
Sample Description:

aboratory Sample Number:

MW-1 L001054-02

	Batch	Date	Date	Specific Method/	Reporting			
\talyte \tag{1}	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
\					-			
Semivolatile Organic Compounds					* = -	* ***	-	
Benzo (ghi) perylene	0010375	1/14/00	1/20/00	EPA 8270B	25.0	ND	ug/l	
Benzo[a]pyrene	17	11	#	EPA 8270B	25.0	ND	11	
Benzyl alcohol	**		n 	EPA 8270B	25.0	ND	"	
3is(2-chloroethoxy)methane	. #		**	EPA 8270B	25.0	ND	H	
3is(2-chloroethyl)ether	**		H	EPA 8270B	25.0	ND	H	
3is(2-chloroisopropyl)ether	H	**	H	EPA 8270B	25.0	ND	17	
3is(2-ethylhexyl)phthalate	n	0	H	EPA 8270B	50.0	ND	17	
l-Bromophenyl phenyl ether	II .	#	н	EPA 8270B	25.0	ND	***	
3utyl benzyl phthalate	11	17	н	EPA 8270B	25.0	. ND	97	
1-Chloroaniline	H	11	ii.	EPA 8270B	50.0	ND	11	
?-Chloronaphthalene	11	17	tr	EPA 8270B	25.0	ND	н	
I-Chloro-3-methylphenol	10	n	Ħ	EPA 8270B	25.0	ND	#1	
2-Chlorophenol	••	n	H	EPA 8270B	25.0	ND	Ħ	
1-Chlorophenyl phenyl ether	n	h	H	EPA 8270B	25.0	ND	Ħ	
Chrysene	H	H	H	EPA 8270B	25.0	ND	11	
Dibenz (a,h) anthracene	•	"		EPA 8270B	25.0	ND	**	
Dibenzofuran	n	. #	H	EPA 8270B	25.0	ND	**	
Di-n-butyl phthalate	Ħ	И	н	EPA 8270B	50.0	ND	H	
1,2-Dichlorobenzene	п	"	П	EPA 8270B	25.0	ND		
1,3-Dichlorobenzene	11		n	EPA 8270B	25.0	ND	H	
l,4-Dichlorobenzene	H	te	Ħ	EPA 8270B	25.0	ND	H	
3,3'-Dichlorobenzidine	11	н	Я	EPA 8270B	50.0	ND	11	
2,4-Dichlorophenol	11	Ħ	11	EPA 8270B	25.0	ND	11	
Diethyl phthalate	tt	11	11	EPA 8270B	25.0	ND	н	
2,4-Dimethylphenol	11	II	Ħ	EPA 8270B	25.0	ND	H	
Dimethyl phthalate	11	н	11	EPA 8270B	25.0	ND	H	
1,6-Dinitro-2-methylphenol	н	II	17	EPA 8270B	50.0	ND	H	
2,4-Dinitrophenol	н	."	tr.	EPA 8270B	50.0	ND	17	
2,4-Dinitrotoluene		ıı ,	11	EPA 8270B	25.0	ND	11	
2,6-Dinitrotoluene	10	17	0	EPA 8270B	25.0	ND	47	-
Di-n-octyl phthalate	10	17	**	EPA 8270B	25.0	ND	11	
Fluoranthene		•	11	EPA 8270B	25.0	ND	11	
Fluorene	n	17	17	EPA 8270B	25.0	ND	11	
Hexachlorobenzene	•	17	11	EPA 8270B	25.0	ND	#	
Hexachlorobutadiene	n	tt	0	EPA 8270B	25.0	ND	er	
Hexachlorocyclopentadiene	H	19	10	EPA 8270B	50.0	ND	н	
Hexachloroethane	н	10	н	EPA 8270B	25.0	ND	н	
Indeno (1,2,3-cd) pyrene	Ħ	11	**	EPA 8270B	25.0	ND	10	
sophorone	n	н	11	EPA 8270B EPA 8270B	25.0	ND		
2-Methylnaphthalene	н	11	n	EPA 8270B EPA 8270B	25.0 25.0	315	H	
2-Methylphenol	el	н	H	EPA 8270B	25.0 25.0	ND	H	
			•	PIV 071AD	2J.V	MD		

Sequoia Analytical - San Carlos





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

Dublin, CA 94568

Project: Tosco(4)

Project Number: Tosco SS#1156 Project Manager: Deanna Harding

Sampled: 1/7/00 Received: 1/7/00

2/1/00 Reported:

Sample Description: **Laboratory Sample Number:** MW-1 L001054-02

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
Semivolatile Organic Compounds by	EPA Method 2	8270B (conti	nued)					
4-Methylphenol	0010375	1/14/00	1/20/00	EPA 8270B	25.0	ND	ug/l	
Naphthalene	11	11	н	EPA 8270B	25.0	615	H	
2-Nitroaniline	11	11		EPA 8270B	50.0	ND	17	
3-Nitroaniline	**	H	•	EPA 8270B	50.0	ND	H	
4-Nitroaniline	11		u	EPA 8270B	50.0	ND	**	
Nitrobenzene	11	11	. 11	EPA 8270B	25.0	ND	*1	
2-Nitrophenol	11	u	17	EPA 8270B	25.0	ND	11	
4-Nitrophenol	**	11-	н	EPA 8270B	50.0	ND	11	
N-Nitrosodiphenylamine	m	"	n	EPA 8270B	25.0	ND	11	
N-Nitrosodi-n-propylamine	*	**	**	EPA 8270B	25.0	ND	ir .	
	n		11	EPA 8270B	50.0	ND		
Pentachlorophenol Phenanthrene	11	11	11	EPA 8270B	25.0	ND	14	
 	n	11	"	EPA 8270B	25.0	ND	11	
Phenol	IT	tt.	н	EPA 8270B	25.0	ND	11	
Pyrene	71	н	•	EPA 8270B	25.0	ND	11	
1,2,4-Trichlorobenzene	11	17	**	EPA 8270B	50.0	ND	11	
2,4,5-Trichlorophenol	11	11	11	EPA 8270B	25.0	ND	tt	
2,4,6-Trichlorophenol		n n	<i>H</i>	21-110		48.4	%	
Surrogate: 2-Fluorophenol		rr .	#	10-110		37.0	"	
Surrogate: Phenol-d6	 #		,,	35-114		88.0	<i>#</i>	
Surrogate: Nitrobenzene-d5	n.	,,		43-116		100	rt .	
rogate: 2-Fluorobiphenyl	n n	"	" #			87.5	n	
Surrogate: 2,4,6-Tribromophenol		"	"	10-123	•	115	w	
Surrogate: p-Terphenyl-d14	"	•		33-141		113		



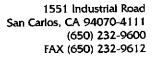
Gettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00
6747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00
Dublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

Sample Description:

Laboratory Sample Number:

MW-2 L001054-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
		Seque	oia Analytica	- San Carlos				
Total Purgeable Hydrocarbons (C6-C1	2), BTEX an	d MTBE by	DHS LUFT					
Purgeable Hydrocarbons as Gasoline	0010106	1/20/00	1/20/00		500	1450	ug/l	3
Benzene	н	n	14		5.00	99.0	**	
Toluene	19	н	17		5.00	ND	71	
Ethylbenzene	н		n		5.00	23.8	Ħ	
Xylenes (total)	17	#	17		5.00	16.0	n	
Methyl tert-butyl ether	0010104	H	H		2500	33100	•	
Surrogate: a,a,a-Trifluorotoluene	0010106	"	"	70.0-130		75.8	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Project:

Tosco(4)

Sampled: 1/7/00

Dublin, CA 94568

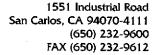
Project Number: Project Manager: Tosco SS#1156 Deanna Harding Received: 1/7/00 Reported: 2/1/00

Sample Description:

Laboratory Sample Number:

MW-3 L001054-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
		Seque	oia Analytica	l - San Carlos				
Total Purgeable Hydrocarbons (C6-C1	2), BTEX ar	d MTBE by	DHS LUFT	•				
Purgeable Hydrocarbons as Gasoline	0010104	1/20/00	1/20/00		10000	28400	ug/l	3
Benzene	H	n	. н		100	2450	41	
)1	11	**		100	3090	11	
Toluene	11		*		100	1560	н	
Ethylbenzene			. 11		100	3910	,,,	
Xylenes (total)	**	11					19	
Methyl tert-butyl ether	11		11		1000	1940		
Surrogate: a,a,a-Trifluorotoluene	. 11	n	Ħ	70.0-130		97.2	%	





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

Project:

Tosco(4)

Project Number: Tosco SS#1156 Project Manager: Deanna Harding Sampled: 1/7/00

Reported: 2/1/00

Received: 1/7/00

Dublin, CA 94568

Sample Description: **Laboratory Sample Number:** MW-4 L001054-05

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
		Seque	oia Analytica	I - San Carlos				
Total Purgeable Hydrocarbons (C6-C1	2), BTEX ar	id MTBE by	DHS LUFT					
Purgeable Hydrocarbons as Gasoline	0010104	1/20/00	1/20/00		2000	7010	ug/l	3
Benzene	11	#1	H		20.0	2260	ń	
Toluene	u	*1	Ħ		20.0	167	H	
Ethylbenzene	Ħ	Ħ	tt		20.0	271	17	
Xylenes (total)	O O	и	n		20.0	276		
Methyl tert-butyl ether	11	"	"		200	764	10	
Surrogate: a,a,a-Trifluorotoluene	п	"	n	70.0-130		99.9	%	

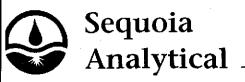


Gettler-Ryan/Geostrategies(1)	Project: Tosco(4)	Sampled: 1/7/00
6747 Sierra Court, Suite D	Project Number: Tosco SS#1156	Received: 1/7/00
Dublin, CA 94568	Project Manager: Deanna Harding	Reported: 2/1/00

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

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% N	Votes*
Batch: 0010097	Date Prepa		<u>)0</u>		Extraction Method: EPA 5030B [P/T]					
Blank	0010097-BI	LK1								
Purgeable Hydrocarbons as Gasoline	1/19/00			ND	ug/l	50.0				
Benzene	11			ND	H	0.500				
Toluene	19			ND	н .	0.500				
Ethylbenzene				ND	**	0.500	•			
Xylenes (total)	er .			ND	11	0.500				
Methyl tert-butyl ether	π	•		ND	17	5.00				
Surrogate: a,a,a-Trifluorotoluene	n	10.0		9.29	"	70.0-130	92.9			
<u>LCS</u>	0010097-B	<u>S1</u>								
Benzene	1/19/00	10.0		8.76	ug/l	70.0-130	87.6			
Toluene	**	10.0		8.34	н	70.0-130	83.4			
Ethylbenzene	11	10.0		8.44	#	70.0-130				
Xylenes (total)	11	30.0		26.0	19	70.0-130			·	
Surrogate: a,a,a-Trifluorotoluene	ri .	10.0		9.61	IT	70.0-130	96.1			
<u>LCS</u>	0010097-B									
Purgeable Hydrocarbons as Gasoline	1/19/00	250_		229	ug/l	70.0-130			 	
Surrogate: a,a,a-Trifluorotoluene	n	10.0		9.91	H	70.0-130	99.1			
geatrí x Spike	0010097-M	<u> IS1 L</u>	.001065-34							
Benzene	1/19/00	10.0	ND	7.87	ug/l	60.0-140				
Toluene	97	10.0	ND	7.49	**	60.0-140				
Ethylbenzene	ti	10.0	ND	7.48	10	60.0-140				
Xylenes (total)		30.0	ND	22.5	#	60.0-140				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.14	н	70.0-130	91.4			
Matrix Spike Dup	0010097-N	<u> 1SD1 I</u>	<u>.001065-34</u>			-				
Benzene	1/19/00	10.0	ND	9.20	ug/l	60.0-140		25.0	15.6	
Toluene	11	10.0	ND	8.44	H	60.0-140		25.0	11.9	
Ethylbenzene	n	10.0	ND	8.54	"	60.0-140	85.4	25.0	13.2	
Xylenes (total)	н	30.0	ND	25.8	М	60.0-140		25.0	13.7	
Surrogate: a,a,a-Trifluorotoluene	n	10.0		8.79	H	70.0-130	87.9			
Batch: 0010104	Date Prep	ared: 1/20	<u>/00</u>		<u>Extra</u>	ction Method: El	A 5030B	[P/T]		
Blank	0010104-E									
Purgeable Hydrocarbons as Gasoline	1/20/00			ND	ug/l	50.0				
Benzene	11			ND	n	0.500				
Toluene	**			ND	#	0.500				
Ethylbenzene	H			ND	11	0.500				
Xylenes (total)	н			ND	H	0.500)			
* * *										

Sequoia Analytical - San Carlos



iettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00 747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00 lublin, CA 94568 Reported: 2/1/00 Project Manager: Deanna Harding

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

	Date	Spike	Sample	QC	<u></u>	Reporting Limit	Recov.	RPD	RPD	
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Harle (acadiana D	6046464									
Slank (continued)	0010104-BI	<u>.K1</u>		»IT»	. 0	= 00				
1ethyl tert-butyl ether	1/20/00	10.0		ND	ug/l	5.00	00.0			
urrogate: a,a,a-Trifluorotoluene	"	10.0		8.58	"	70.0-130	85.8			
<u>.cs</u>	0010104-BS	<u> </u>								
lenzene	1/20/00	10.0		8.08	ug/l	70.0-130	80.8			
'oluene	10	10.0		7.70	"	70.0-130	77.0			
thylbenzene	IT	10.0		7.86	n	70.0-130	78.6			
(ylenes (total)	"	30.0		24.2	n	70.0-130	80.7			
urrogate: a,a,a-Trifluorotoluene	"	10.0		8.09	"	70.0-130	80.9	. =		
<u>.CS</u>	0010104-B5	52								
urgeable Hydrocarbons as Gasoline	1/20/00	250		228	ug/l	70.0-130	91.2			
urrogate: a,a,a-Trifluorotoluene	"	10.0	·	8.42	"	70.0-130	84.2			
Antoir Cailes	0010104.35	O1 7.	01108 04							
1atrix Spike	0010104-M		001105-04	225		(0.0.110				
urgeable Hydrocarbons as Gasoline	1/20/00	250	ND	227	ug/l	60.0-140	90.8			
'urrogate: a,a,a-Trifluorotoluene	M	10.0		9.14	"	70.0-130	91.4			
1strix Spike Dup	<u>0010104-M</u>	<u>SDI LO</u>	001105-04							
'urgeable Hydrocarbons as Gasoline	1/20/00	250	ND	226	ug/l	60.0-140	90.4	25.0	0.442	
'urrogate: a,a,a-Trifluorotoluene	n	10.0		8.39	n	70.0-130	83.9			
Batch: 0010106	Date Prepa	red: 1/20/0	0		Extrac	tion Method: EP	4 5030B	[P/T]		
Blank	0010106-BI									
'urgeable Hydrocarbons as Gasoline	1/20/00			ND	ug/i	50.0				
Benzene	17			ND	"	0.500				
'oluene	17			ND	11	0.500				
ithylbenzene	. 17			ND	и	0.500				
	11									
(ylenes (total)				ND	91	0.500				
	n			ND ND	11	0.500 5.00				
(ylenes (total) Methyl tert-butyl ether iurrogate: a,a,a-Trifluorotoluene		10.0					105			
Activate the view of the view	# #			NĐ	11	5.00	105			
Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene CS	" " 0010106-Bs	<u> </u>		ND 10.5	15 FF	5.00 70.0-130				-
Aethyl tert-butyl ether	# #	<u>S1</u> 10.0		ND 10.5	11	5.00 70.0-130 70.0-130	97.9			
Activation of the state of the	0010106-BS	<u>61</u> 10.0 10.0		ND 10.5 9.79 9.38	" ug/l	70.0-130 70.0-130 70.0-130 70.0-130	97.9 93.8			
Aethyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene CS Benzene Coluene Ethylbenzene	0010106-BS	10.0 10.0 10.0		9.79 9.38 9.27	ug/l	70.0-130 70.0-130 70.0-130 70.0-130 70.0-130	97.9 93.8 92.7			
Aethyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene CS Senzene Coluene Cthylbenzene (ylenes (total)	0010106-BS	<u>61</u> 10.0 10.0		ND 10.5 9.79 9.38	" ug/l	70.0-130 70.0-130 70.0-130 70.0-130	97.9 93.8			
Aethyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene CS Benzene	0010106-Bs	10.0 10.0 10.0 10.0 30.0		9.79 9.38 9.27 28.0	ug/l	70.0-130 70.0-130 70.0-130 70.0-130 70.0-130	97.9 93.8 92.7 93.3			

equoia Analytical - San Carlos



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

Project: Tosco(4)

Project Manager: Deanna Harding

Project Number: Tosco SS#1156

1/7/00 Sampled:

Received: 1/7/00 2/1/00

Reported:

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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov.	RPD Limit	RPD % No	tes*
LCS (continued)	0010106-BS	-	<u>-</u>	13.3		70.0-130	122	<u>.</u> .		
Surrogate: a,a,a-Trifluorotoluene	1/20/00	10.0		12.2	ug/l	70.0-130	122			
Matrix Spike	0010106-M	<u>S1 L</u>	001105-01						•	
Purgeable Hydrocarbons as Gasoline	1/20/00	250	ND	262	ug/l	60.0-140	105			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		12.6	μ	70.0-130	126			
Matrix Spike Dup	<u>0010106-M</u>	SD1 L	00110 5-01							
Purgeable Hydrocarbons as Gasoline	1/20/00	250	ND	260	ug/l	60.0-140	104	25.0	0.957	
Surrogate: a,a,a-Trifluorotoluene	*	10.0		12.4	H	70.0-130	124			



Sampled: 1/7/00 ttler-Ryan/Geostrategies(1) Project: Tosco(4) Project Number: Tosco SS#1156 47 Sierra Court, Suite D Received: 1/7/00 Reported: 2/1/00 ıblin, CA 94568 Project Manager: Deanna Harding

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
<u>itch: 0010074</u>	Date Prepa	red: 1/13/0	10		Extrac	ction Method: EP.	A 5030B	[P/T]		
ank	0010074-BI		-							
nzene	1/13/00			ND	ug/l	2.00				
omobenzene	H			ND	, ~	2.00				
omochloromethane	n			ND	11	2.00				
omodichloromethane	₩			ND	H	2.00				
omoform	П			ND	H .	2.00				
omomethane	п			ND	19	5.00				
Butylbenzene	11			ND	n	2.00				
c-Butylbenzene	n			ND	H	2.00				
:t-Butylbenzene	Ħ			ND		2.00				
arbon tetrachloride	**			ND	"	2.00				
ilorobenzene	11			ND		2.00				
iloroethane	11			ND	IT.	5.00				
aloroform	н			ND		2.00				
nioromethane	н			ND	10	5.00				
Chlorotoluene	10			ND		2.00				
Chlorotoluene	н			ND	n	2.00				
ibromochloromethane	н			ND	#	2.00				
2-Dibromoethane	Ħ			ND	#	2.00				
ibromomethane	Ħ			ND	44	2.00				
2-Dibromo-3-chloropropane	π			ND	41	5.00				
2-Dichlorobenzene	er .			ND	#1	2.00				
3-Dichlorobenzene	11			ND	11	2.00				
4-Dichlorobenzene	Ħ			ND	11	2.00				
ichlorodifluoromethane	H			ND	#	5.00				
1-Dichloroethane	Ħ			ND	**	2.00				
2-Dichloroethane	m '			ND	**	2.00				
1-Dichloroethene				ND		2.00				
s-1,2-Dichloroethene	n	•		ND	11	2.00				
ans-1,2-Dichloroethene	*			ND	17	2.00				
2-Dichloropropane	11			ND	**	2.00				
3-Dichloropropane	n			ND	**	2.00				
2-Dichloropropane	н			ND	Ħ	2.00				
1-Dichloropropene	**			ND	**	2.00				
thylbenzene	Ħ			ND	Ħ	2.00				
exachlorobutadiene	n			ND	n	2.00				
opropylbenzene	n			ND	Ħ	2.00				
Isopropyltoluene				ND	H	2.00				
lethylene chloride	10			ND	17	5.00				
aphthalene	H			ND	Ħ	5.00				
Propylbenzene	н			ND	17	2.00				

equoia Analytical - San Carlos





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

Project Manager:

Tosco(4)

Tosco SS#1156 Deanna Harding Sampled: 1/7/00 Received: 1/7/00

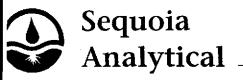
Received: 1/7/00 Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Allalyte	Allalyzzu	LOCYCI	resure			· 			
Blank (continued)	0010074-BI	LK1							
Styrene	1/13/00			ND	ug/l	2.00			
1,1,1,2-Tetrachloroethane	71			ND	**	2.00			
1,1,2,2-Tetrachloroethane	"			ND	*	2.00			
Tetrachloroethene	H			ND	H	2.00			
Toluene	π.			ND	н.	2.00			
1,2,3-Trichlorobenzene	H .		-	ND	91	2.00			
1,2,4-Trichlorobenzene	स			ND	11	2.00			
1,1,1-Trichloroethane	17			ND	11	2.00			
1,1,2-Trichioroethane	10			ND	11	2.00			
Trichloroethene	Ħ			ND	11	2.00			
Trichlorofluoromethane	п			ND	n	5.00			
2.3-Trichloropropane	II .			ND	10	2.00			
4-Trimethylbenzene	n			ND	•	2.00			
3,5-Trimethylbenzene	H			ND	•	2.00			
Vinyl chloride	P .			ND	11	2.00			
Total Xylenes	171			ND	H	2.00			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.3	n	76.0-114	109		
Surrogate: Toluene-d8	n	50.0		54.7	r#	88.0-110	109		
Surrogate: 4-BFB	n	50.0		54.5	#	86.0-115	109		
San San , 2. 2									
<u>Blank</u>	0010074-B	<u>LK2</u>			•				
Benzene	1/14/00			ND	ug/l	2.00			
Bromobenzene	n			ND	**	2.00			٠
Bromochloromethane	17			ND	н	2.00			
Bromodichloromethane	¥			ND	11	2.00			
Bromoform	n			ND	11	2.00			
Bromomethane	11			ND	"	5.00			
n-Butylbenzene	n			ND	11	2.00			
sec-Butylbenzene	n			ND	17	2.00			•
tert-Butylbenzene	Ħ			ND	н	2.00			
Carbon tetrachloride	**			ND	10	2.00			
Chlorobenzene	11			ND	n	2.00			
Chloroethane	н			ND	#1	5.00	ı		
Chloroform	н			ND	11	2.00	I		
Chloromethane	**			ND	17	5.00	l		
2-Chlorotoluene	n			ND	t!	2.00	ŧ		
4-Chlorotoluene	n e			ND	11	2.00	1		
Dibromochloromethane	и			ND	н	2.00	+		
1,2-Dibromoethane	#1			ND	н	2.00			
Dibromomethane	tt .			ND	11	2.00			
1,2-Dibromo-3-chloropropane	Ħ			ND		5.00			
1,2-Distorio-3-cinoroptoparie									

Sequoia Analytical - San Carlos





ettler-Ryan/Geostrategies(1) 47 Sierra Court, Suite D ablin, CA 94568 Project: Tosco(4)
Project Number: Tosco SS#1156
Project Manager: Deanna Harding

Sampled: 1/7/00 Received: 1/7/00 Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% 1	Notes*
ank (continued)	<u>0010074-BI</u>	LK2								
2-Dichlorobenzene	1/14/00			ND	ug/l	2.00				
3-Dichlorobenzene	н			ND	н	2.00				
4-Dichlorobenzene	н			ND	H	2.00				
ichlorodifluoromethane	н			ND	н	5.00				
1-Dichloroethane	и .			ND	н	2.00				
2-Dichloroethane	R			ND		2.00				
1-Dichloroethene	"			ND		2.00				
3-1,2-Dichloroethene	rr ·			ND	B	2.00				
ıns-1,2-Dichloroethene	Ħ			ND	Ħ	2.00		•		
2-Dichloropropane	**			ND	11	2.00				
3-Dichloropropane	17			ND	H	2.00				
2-Dichloropropane	17			ND	н	2.00				
1-Dichloropropene	17			ND	n	2.00				
hylbenzene	17			ND	17	2.00				
exachlorobutadiene	17			ND	11	2.00				
opropylbenzene	11			ND	n	2.00				
Isopropyltoluene	11			ND	11	2.00				
ethylene chloride	17			ND	**	5.00				
aphthalene	H			ND	10	5.00				
Propylbenzene	n			ND	19	2.00				
yrene	н			ND	17	2.00				
1,1,2-Tetrachloroethane				ND	11	2.00				
1,2,2-Tetrachloroethane	IT			ND	11	2.00				
atrachloroethene	п			ND	**	2.00				
oluene	n			ND	**	2.00				
2,3-Trichlorobenzene	н.			ND	97	2.00				
2,4-Trichlorobenzene	п .			ND	ir	2.00				
1,1-Trichloroethane	#			ND	н .	2.00				
1,2-Trichloroethane	н .			ND	**	2.00				
richloroethene	π,			ND	44	2.00				
richlorofluoromethane	N			ND	Ħ	5.00				
2,3-Trichloropropane	#			ND	71	2.00				
2,4-Trimethylbenzene	Ħ			ND	**	2.00				
3,5-Trimethylbenzene	н			ND		2.00				
inyl chloride	н			ND	m	2.00				
otal Xylenes	я			ND	11	2.00				
ırrogate: 1,2-Dichloroethane-d4	n	50.0	· · · · · · · · · · · · · · · · · · ·	54.0	"	76.0-114	108			
ırrogate: Toluene-d8	n	50.0		54.6	H	88.0-110	109			
urrogate: 4-BFB	H	50.0		54.2	*	86.0-115	108			
, -				- 712		3010-110				

equoia Analytical - San Carlos



Gettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00 6747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00 Dublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	_]
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*

Blank	<u>0010074-BI</u>	<u>LK3</u>								
Benzene	1/18/00			ND	ug/l	2.00				
Bromobenzene	Ħ			ND	•	2.00				
Bromochloromethane	Ħ			ND	11	2.00				
Bromodichloromethane	Ħ			ND	n	2.00				
Bromoform	II .			ND	#	2.00				
Bromomethane	n			ND	H	5.00				
n-Butylbenzene	п		•	ND	11	2.00				
sec-Butylbenzene	17			ND	н	2.00				
tert-Butylbenzene	n			ND	H	2.00				
Carbon tetrachloride	19			ND	Ħ	2.00				
Chlorobenzene	tt			ND	11	2.00				
Chloroethane	11			ND	н	5.00				
Chloroform	H			ND	17	2.00				
Chloromethane	n			ND	27	5.00				
2-Chlorotoluene	ir			ND	н	2.00				
1 Oberotoluene	10			ND	**	2.00				
horomethane	19			ND	17	2.00				
a om oethane	u			ND	n	2.00				
Dipromomethane	11			ND	n -	2.00				
1,2-Dibromo-3-chloropropane	H			ND	11	5.00				
1,2-Dichlorobenzene	n			ND	**	2.00				
1,3-Dichlorobenzene	п :			ND	11	2.00	ı			
1,4-Dichlorobenzene	н			ND	Ħ	2.00				
Dichlorodifluoromethane	. #			ND	n	5.00				
1,1-Dichloroethane	**			ND	н	2.00				
1,2-Dichloroethane	н			ND	11	2.00				
1,1-Dichloroethene	ч			ND	u	2.00				
cis-1,2-Dichloroethene	11			ND	**	2.00)			
trans-1,2-Dichloroethene	n			ND	11	2.00				
1,2-Dichloropropane	10			ND	H	2.00				
1,3-Dichloropropane	*1			ND	н	2.00	1			
2,2-Dichloropropane	11			ND	**	2.00				
1,1-Dichloropropene	Ħ			ND	61	2.00)			
Ethylbenzene	n			ND	#	2.00)			
Hexachlorobutadiene	n			ND	н	2.00				
Isopropylbenzene	11			ND	и	2.00				
p-Isopropyltoluene	н			ND	W	2.00)			
Methylene chloride	**		•	ND	**	5.00)			
Naphthalene	н			ND	Ħ	5.00)			
n-Propylbenzene	w			ND	H	2.00)			
Styrene	#			ND	Ħ	2.00)			
Styrate										

Sequoia Analytical - San Carlos





lettler-Ryan/Geostrategies(1) 747 Sierra Court, Suite D Jublin, CA 94568

Project: Tosco(4) Project Number: Tosco SS#1156

Project Manager:

Deanna Harding

Sampled: 1/7/00 Received: 1/7/00 Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	į
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
3iank (continued)	0010074-BI	LK3								
,1,1,2-Tetrachloroethane	1/18/00			ND	ug/l	2.00				
,1,2,2-Tetrachloroethane	н			ND	н	2.00				,
l'etrachloroethene	н			ND	n	2.00				
Coluene	н			ND	н	2.00				
1,2,3-Trichlorobenzene	H			ND		2.00				
1,2,4-Trichlorobenzene	**			ND	77	2.00				
1,1,1-Trichloroethane	111			ND	77	2.00				
1,1,2-Trichloroethane	11			ND	m	2.00				
frichloroethene	17			ND	•	2.00				
Frichlorofluoromethane	**			ND	н	5.00				
1,2,3-Trichloropropane	**			ND	11	2.00				
1,2,4-Trimethylbenzene	H			ND	11	2.00				
1,3,5-Trimethylbenzene	11			ND	Ħ	2.00				
Vinyl chloride	n			ND	11	2.00				
Total Xylenes	71			ND	н	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0	·	45.9	n	76.0-114	91.8			
Surrogate: Toluene-d8	n	50.0		46.9	n	88.0-110	93.8			
Surrogate: 4-BFB	н .	50.0		45.3	"	86.0-115	90.6			
Blank	0010074-B	LK4								
Benzene	1/19/00			ND	ug/l	2.00				
Bromobenzene	n			ND	11	2.00				
Bromochloromethane	#1			ND	H.	2.00				
Bromodichloromethane	Ħ			ND	i H	2,00				
Bromoform	11			ND	19	2.00				
Bromomethane	. n			ND	H	5.00				
n-Butylbenzene	n			ND	17	2.00				
sec-Butylbenzene	H			ND	н .	2.00				
tert-Butylbenzene	и ,			ND	11	2.00				
Carbon tetrachloride	H			ND	17	2.00				
Chlorobenzene	н			ND	п	2.00				
Chloroethane	п			ND	н	5.00				
Chloroform	π			ND	п	2.00				
Chloromethane	**			ND	н	5.00				
2-Chlorotoluene	Ħ			ND	н	2.00				
4-Chlorotoluene	11			ND	н	2.00				
Dibromochloromethane				ND	Ħ	2.00				
1,2-Dibromoethane	n			ND	н	2.00				
Dibromomethane	m			ND		2.00				
1,2-Dibromo-3-chloropropane	#			ND	91	5.00				
1,2-Dichlorobenzene						2.00				

Sequoia Analytical - San Carlos



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

Project:

Project Manager:

Tosco(4)

Project Number: Tosco SS#1156 Deanna Harding

Sampled: Received:

1/7/00 Reported: 2/1/00

1/7/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC	<u>.</u>	Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% No	otes*
Blank (continued)	0010074-BJ	<u>LK4</u>		MIN	/1	2.00				
1.3-Dichlorobenzene	1/19/00			ND	ug/l	2.00				
hlorobenzene	**			ND		5.00				
fluoromethane	n			ND	17	2.00				
i,i-Dienioroethane				ND	и	2.00			•	
1,2-Dichloroethane	•			ND .	"	2.00				
1,1-Dichloroethene	Ħ			ND	**	2.00				
cis-1,2-Dichloroethene	17			ND	**					
trans-1,2-Dichloroethene)T			ND	17	2.00				
1,2-Dichloropropane	n			ND		2.00				
1,3-Dichloropropane	н			ND		2.00				
2,2-Dichloropropane	11			ND	11	2.00				
1,1-Dichloropropene	H*			ND	H	2.00				
Ethylbenzene	•			ND	11	2.00				
Hexachlorobutadiene	1f			ND	"	2.00				
Isopropylbenzene	π			ND	17	2.00				
p-Isopropyltoluene	H			ND	71	2.00				
Methylene chloride	н			ND	н	5.00				
Naphthalene	11			ND	17	5.00				
n-Propylbenzene	"			ND	"	2.00				
Styrene	n			ND	41	2.00				
1.1.1.2-Tetrachloroethane	#1			ND	#1	2.00				
2-Tetrachloroethane				ND	17	2.00				
un achloroethene	IF			ND	17	2.00				
Toluene	м			ND	Ħ	2.00				
1,2,3-Trichlorobenzene	"			ND	11	2.00				
1,2,4-Trichlorobenzene	H			ND	17	2.00				
1,1,1-Trichloroethane	н			ND	H	2.00				
1,1,2-Trichloroethane	11			ND	"	2.00				
Trichloroethene	11			ND	11	2.00				
Trichlorofluoromethane	п			ND	13	5.00				
1,2,3-Trichloropropane	#			ND	н	2.00				
1,2,4-Trimethylbenzene	n			ND	11	2.00				
1,3,5-Trimethylbenzene	IF			ND	**	2.00				
Vinyl chloride	Ħ			ND	#	2.00				
	17			ND	11	2.00				
Total Xylenes Surrogate: 1,2-Dichloroethane-d4	и -	50.0	,	47.4	W	76.0-114	94.8			
Surrogate: 1,2-Dictioroethane-u4 Surrogate: Toluene-d8	rt	50.0		46.3	"	88.0-110	92.6			
	"	50.0		46.8	п	86.0-115	93.6			
Surrogate: 4-BFB		50.0								
<u>LCS</u>	0010074-	<u>BS1</u>								
Benzene	1/13/00	50.0		42.5	ug/l	70.0-130	85.0			
									110	

Sequoia Analytical - San Carlos





ettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00
747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00
ublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	-
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
CS (00400=4.70	~-								
CS (continued)	0010074-B5			44.0	*	70.0.100	00.4			
hlorobenzene	1/13/00	50.0		44.2	ug/l	70.0-130	88.4			
.1-Dichloroethene		50.0		39.5	" H	70.0-130	79.0			
oluene	" #	50.0		44.4	n	70.0-130	88.8			
richloroethene		50.0		44.4		70.0-130	88.8			
urrogate: 1,2-Dichloroethane-d4	#	50.0		42.8		76.0-114	85.6		-	
urrogate: Toluene-d8	n	50.0		50.0	M	88.0-110	100			
urrogate: 4-BFB	Ħ	50.0		46.5	#	86.0-115	93.0			
<u>CS</u>	0010074-B	<u>S2</u>								
enzene	1/14/00	50.0		43.7	ug/l	70.0-130	87.4		-	
hlorobenzene	и	50.0		45.6	"	70.0-130	91.2			
,1-Dichloroethene	ij	50.0		43.3	H	70.0-130	86.6			
oluene	ıı	50.0		45.1	n	70.0-130	90.2			
richloroethene	н	50.0		46.7	11	70.0-130	93.4			
urrogate: 1,2-Dichloroethane-d4	n	50.0		50.7	η	76.0-114	101			
urrogate: Toluene-d8	n	50.0		49.7	n	88.0-110	99.4			
urrogate: 4-BFB	п	50.0		49.4	n	86.0-115	98.8			
<u>CS</u>	0010074-B	S 3								
enzene	1/18/00	50.0		41,4	ug/l	70.0-130	82.8			
hlorobenzene	11	50.0		42.8	"	70.0-130	85.6			
,1-Dichloroethene	11	50.0		41.9	11	70.0-130	83.8			
oluene	IT	50.0		42.0	11	70.0-130	84.0			
richloroethene		50.0		44.2	tt ·	70.0-130	88.4			
urrogate: 1,2-Dichloroethane-d4	"	50.0		48.6	n	76.0-114	97.2	···		
urrogate: Toluene-d8	п	50.0		46.1	п .	88.0-110	92.2			
urrogate: 4-BFB	н	50.0		44.6	H	86.0-115	89.2			
<u>.cs</u>	0010074-B	8 <i>4</i>								
enzene	1/19/00	50.0		41.9	ug/l	70.0-130	83.8			
hlorobenzene	1/13/00	50.0		42.3	ug∕i	70.0-130	84.6			
.l-Dichloroethene	11	50.0		40.9	11	70.0-130	81.8			
oluene	et .	50.0		41.7	11	70.0-130	83.4			
richloroethene	tt .	50.0		44.2	11	70.0-130	88.4			
urrogate: 1,2-Dichloroethane-d4	,,	50.0	••	46.3	.,,	76.0-114				
urrogate: Toluene-d8	n	50.0 50.0		40.3 46.3	,,	70.0-114 88.0-110	92.6 92.6			
urrogate: 4-BFB	n	50.0 50.0		40.3 45.9	"	86.0-115	92.0 91.8			
latrix Spike	0010074-M	(C1 T	001075-01							
enzene	1/14/00	50.0		44 N	n	£0.0 140	02.0			
Inlorobenzene	1/14/00		ND ND	46.0	ug/l	60,0-140	92.0			
MINI OPOUSCHE		50.0	ND	45.4	-	60.0-140	90.8			

equoia Analytical - San Carlos





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite D Dublin, CA 94568 Project: Tosco(4)

Project Number: Tosco SS#1156
Project Manager: Deanna Harding

Sampled: 1/7/00

Received: 1/7/00 Reported: 2/1/00

Volatile Organic Compounds by EPA Method 8260A/Quality Control Sequoia Analytical – San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov.	RPD Limit	RPD %	Notes*
Matrix Spike (continued)	0010074-MS	<u> 1</u>	001075 <u>-01</u>							
1,1-Dichloroethene	1/14/00	50.0	3.05	49.5	ug/l	60.0-140	92.9			
Toluene	п	50.0	ND	45.2	H	60.0-140	90.4			
Trichloroethene	Ħ	50.0	153	194	**	60.0-140	82.0			
Surrogate: 1,2-Dichloroethane-d4	H .	50.0		54.8	н	76.0-114	110			
Surrogate: Toluene-d8	<i>n</i>	50.0		50.3	H	88.0-110	101			
Surrogate: 4-BFB	H	50.0		47.9	"	86.0-115	95.8			
Matrix Spike Dup	0010074-MS	<u>SD1 L</u>	001075-01							
1 mane	1/14/00	50.0	ND	44.2	ug/l	60.0-140	88.4	25.0	3.99	
en zene	11	50.0	ND	44.9	TF	60.0-140	89.8	25.0	1.11	
Dichloroethene	n	50.0	3.05	46.8	n	60.0-140	87.5	25.0	5.99	
Toluene	Ħ	50.0	ND	44.5	н	60.0-140	89.0	25.0	1.56	
Trichloroethene	III	50.0	153	198	n	60.0-140	90.0	25.0	9.30	
Surrogate: 1,2-Dichloroethane-d4	· · · · · ·	50.0		50.7	#	76.0-114	101			
Surrogate: Toluene-d8	n	50.0		50.3	Ħ	88.0-110	101			
Surrogate: 4-BFB	n	50.0		46.5	H	86.0-115	93.0			



ettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00
747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00
ublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

Diesel Hydrocarbons (C9-C24) by DHS LUFT/Quality Control Sequois Analytical – Morgan Hill

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
atch: 0A27032	Date Prepa	red: 1/27/	<u>00</u>		Extrac	tion Method: EPA	4 3510B			
<u>lank</u>	0A27032-B	LK1								
iesel Range Hydrocarbons	1/28/00			ND	mg/l	0.0500				
ırrogate: n-Pentacosane	· _ #	0.100		0.109	n	50-150	109			
<u>CS</u>	0A27032-B	<u>.</u> S1	•			•			,	
iesel Range Hydrocarbons	1/28/00	1.00		0.833	mg/l	60-140	83.3			
ırrogate: n-Pentacosane	"	0.100	· · · · · · · · · · · · · · · · · · ·	0.113	H	50-150	113			
CS Dup	0A27032-B	SD1	•							
iesel Range Hydrocarbons	1/28/00	1.00		0.907	mg/l	60-140	90.7	50	8.51	
arrogate: n-Pentacosane	n	0.100	***	0.112	"	50-150	112		***	
-										



				1/5/00	
Gettler-Ryan/Geostrategies(1)	Project:	Tosco(4)	Sampled:	1/7/00	
	•	• •	Received:	1/7/00	
6747 Sierra Court, Suite D	Project Number:				
Dublin, CA 94568	Project Manager:	Deanna Harding	Reported:	2/1/00	

Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Morgan Hill

· · · · · · · · · · · · · · · · · · ·	Date	Spike	Sample	QC	<u> </u>	Reporting Limit		RPD	RPD	
Алаlyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
						BE AL. J. WIR	A 2610P			
Batch: 0010375	Date Prepa		<u>00</u>		Extrac	tion Method: EP	A JOIUB			
Blank	<u>0010375-Bl</u>	<u>LK1</u>			_	500				
Acenaphthene	1/19/00			ND	ug/l	5.00				
Acenaphthylene	π			ND	H	5.00				
Anthracene	н .			ND	Ħ	5.00				
Benzoic acid	ч			ND	ti	10.0				
Benzo (a) anthracene	Ħ			ND	11	5.00				
Benzo (b) fluoranthene				ND	10	5.00				
Benzo (k) fluoranthene	, н			ND	H	5.00				
Benzo (ghi) perylene	Ħ			ND	11	5.00				
Benzo[a]pyrene	11			ND	**	5.00				
Benzyl alcohol	н			ND	17	5.00				
Bis(2-chloroethoxy)methane	11			ND	Ħ	5.00				
Bis(2-chloroethyl)ether	**	•		ND	"	5.00				
Bis(2-chloroisopropyl)ether	H			ND	*	5.00				
Bis(2-ethylhexyl)phthalate	11			ND	H	10.0				
4-Bromophenyl phenyl ether	H			ND	Ħ	5.00				
Butyl benzyl phthalate	11			ND	II.	5.00				
4-Chloroaniline	W			ND	11	10.0				
Maronaphthalene	Ħ			ND	19 .	5.00				
methylphenol	II .			ND	II .	5.00				
- ophenol	m			ND	11	5.00				
4-Chlorophenyl phenyl ether	II.			ND	p	5.00		•		
Chrysene	†I			ND	16	5.00)			
Dibenz (a,h) anthracene	u			ND	#	5.00)			
Dibenzofuran	Ħ			ND	u	5.00)			
Di-n-butyl phthalate	tt .			ND	17	10.0	1			
1,2-Dichlorobenzene	н			ND	11	5.00	1			
1,3-Dichlorobenzene	n			ND		5.00				
1,4-Dichlorobenzene	n			ND	**	5.00)			
3.3'-Dichlorobenzidine	ч			ND	f †	10.0				
2,4-Dichlorophenol	Ħ			ND	11	5.00)			
Diethyl phthalate	11			ND	H	5.00)			
2,4-Dimethylphenol				ND	14	5.00	}			
Dimethyl phthalate	11			ND	11	5.00)			
4,6-Dinitro-2-methylphenol	11			ND	n	10.0)			
2,4-Dinitrophenol	и.			ND	19	10.0)		•	
2,4-Dinitrotoluene				ND	н	5.00)			
2,4-Dinitrotoluene	п		•	ND		5.00)			
	**			ND	11	5.00				
Di-n-octyl phthalate	11			ND	11	5.00)			
Fluoranthene				ND	"	5.00				
Fluorene				1.42						

Sequoia Analytical - San Carlos





ettler-Ryan/Geostrategies(1) Project: Tosco(4) Sampled: 1/7/00
747 Sierra Court, Suite D Project Number: Tosco SS#1156 Received: 1/7/00
ublin, CA 94568 Project Manager: Deanna Harding Reported: 2/1/00

Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Morgan Hill

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
nalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
lank (continued)	0010275 D	1 12-1								
exachlorobenzene	<u>0010375-B)</u> 1/19/00	<u>LKI</u>		ND	/1	5.00				
exachlorobutadiene	1/19/00				ug/l "	5.00				
exachlorocyclopentadiene	11			ND						
exacthorocyclopentagiene exactloroethane	 H			ND	Ħ	10.0				
deno (1,2,3-cd) pyrene	11			ND	#	5.00				
				ND	"	5.00				
ophorone	"			ND	"	5.00				
Methylnaphthalene	77			ND	#	5.00				
Methylphenol				ND		5.00				
Methylphenol	17			ND	11	5.00				
aphthalene				ND	П	5.00				
Nitroaniline	11			ND	11	10.0				
Nitroaniline	11			ND	"	10.0				
Nitroaniline	**			ND	**	10.0				
itrobenzene	11			ND	н	5.00				
Nitrophenol	11			ND	H	5.00				
Nitrophenol	17			ND	н	10.0				
-Nitrosodiphenylamine	n			ND	"	5.00				
-Nitrosodi-n-propylamine	Ħ			ND	n	5.00				
entachlorophenol	n			ND	н	10.0				
nenanthrene	H			ND	"	5.00				
henol	H			ND	"	5.00				
yrene	Ħ			ND	н	5.00				
2,4-Trichlorobenzene	**			ND	ц	5.00				
4,5-Trichlorophenol	•			ND		10.0				
4,6-Trichlorophenol	P			ND	n	5.00				
ırrogate: 2-Fluorophenol	"	200		88.6	p	21-110	44.3			
ırrogate: Phenol-d6	H	200		69.6	#	10-110	34.8			
urrogate: Nitrobenzene-d5	#	200		162	"	35-114	81.0			
arrogate: 2-Fluorobiphenyl	<i>n</i> .	200		184	#	43-116	92.0			
urrogate: 2,4,6-Tribromophenol	n ·	200		180	#	10-123	90.0		-	
rrogate: p-Terphenyl-d14	n	200		216	*	33-141	108			
<u>CS</u>	0010375-B	S1								
cenaphthene	1/19/00	200		167	ug/l	46-118	83.5			
-Chloro-3-methylphenol	1713700	200		156	H H	23-97	78.0			
-Chlorophenol	n	200		140	n	27-123	70.0			
4-Dichlorobenzene	11	200		142	н	36-97	71.0			
4-Dinitrotoluene	. н	200		159	#1	24 - 96	79.5			
Nitrophenol	я	200		95.6	**	10-80	47.8			
-Nitrosodi-n-propylamine	11	200		176	11	41-116	88.0			
entachlorophenol	11	200			11		67.0			
- maomoropienoi		200		134	**	9-103	07.0			

equoia Analytical - San Carlos



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

Project:

Project Manager:

Tosco(4)

Project Number: Tosco SS#1156 Deanna Harding Sampled: 1/7/00

Received: 1/7/00 Reported: 2/1/00

Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Morgan Hill Semivolatile Organic Compounds by EPA Method 8270B/Quality Control

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
										-
LCS (continued)	0010375-BS				_		40.0			
Phenol	1/19/00	200		97.9	ug/l	12-110				
Pyrene	n	200		168	n	26-127	84.0			
1,2,4-Trichlorobenzene	m	200		154		39-98	77.0			
Surrogate: 2-Fluorophenol	п	200		110	#	21-110	55.0			
Surrogate: Phenol-d6	n	200		97.9	#	10-110	49.0			
Surrogate: Nitrobenzene-d5	tt	200		155	"	35-114	77.5			
Surrogate: 2-Fluorobiphenyl	er .	200		169	H	43-116	84.5			
Surrogate: 2,4,6-Tribromophenol	. "	200		172	n	10-123	86.0			
Surrogate: p-Terphenyl-d14	n	200		191	n	33-141	95.5			
LCS Dup	0010375-B	<u>SD1</u>								
Scenaphthene	1/19/00	200		193	ug/l	46-118		30	14.4	
aloro-3-methylphenol	••	200		191	11	23-97		30	20.2	
2-Chlorophenol	n	200		163	11	27-123		30	15.2	
1.4-Dichlorobenzene	*1	200		166	10	36-97		30	15.6	
2,4-Dinitrotoluene	17	200		184	H	24-96		30	14.6	
4-Nitrophenol		200		106	"	10-80		30	10.3	
V-Nitrosodi-n-propylamine	11	200		203	71	41-116		30	14.2	
Pentachlorophenol	**	200		148	ef .	9-103		30	9.93	
Phenol	11	200		88.6	11	12-110		30	9.97	
Pyrene	10	200		182	**	26-127	91.0	30	8.00	
1,2,4-Trichlorobenzene	Ħ	200		191	н	39-98		30	21.4	
Surrogate: 2-Fluorophenol	n	200		107	"	21-110				
Surrogate: Phenol-d6	"	200		<i>83.1</i>	n	10-110	41.5			
Surrogate: Nitrobenzene-d5	"	200		185	**	35-114	92.5			
Surrogate: 2-Fluorobiphenyl	Ħ	200		189	"	43-116	94.5			
Surrogate: 2,4,6-Tribromophenol	π	200		191	"	10-123	95.5			
Surrogate: p-Terphenyl-d14	"	200		206	et	33-141	103			



ettler-Ryan/Geostrategies(1) 747 Sierra Court, Suite D ublin, CA 94568

Project:

Tosco(4)

Sampled:

1/7/00

Project Number: Project Manager:

Tosco SS#1156 Deanna Harding Received:

1/7/00

Reported: 2/1/00

Notes and Definitions

Note

Chromatogram Pattern: Unidentified Hydrocarbons C9-C24

The surrogate recovery for this sample is above established control limits available due to sample dilution required from high analyte concentration and/or matrix interferences.

Chromatogram Pattern: Gasoline C6-C12

Sample was extracted and analyzed past EPA recommended holding time.

ET Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit

Not Reported

Sample results reported on a dry weight basis

Recovery ecov.

ID

IR

τу

PD

Relative Percent Difference

11:01MB F- 8AM 00

