ENVIRONMENTAL RESOLUTIONS, INC.

October 22, 2001
ERI 2023QSR.L19

Mr. Steve Morse
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Tosco Corporation, Quarterly Summary Reports, Third Quarter 2001.

Mr. Morse:

At the request of Tosco Corporation (Tosco), a subsidiary of Phillips Petroleum Company, Environmental Resolutions, Inc. (ERI) is submitting the attached third quarter 2001 summary reports for various Tosco facilities at which ERI is performing ongoing environmental work within the San Francisco Bay Region. Please call me at (415) 382-5994 with any questions.

Sincerely,
Environmental Resolutions, Inc.

Glenn L. Matteucci
Program Manager

Attachments: Third Quarter 2001 Quarterly Summary Reports

cc: Mr. Dave DeWitt, Phillips 66 Company
Mr. Deno Milano, San Mateo County Department of Health Services
Mr. Mamdouh Awwad, City and County of San Francisco Department of Public Health – Environmental Health Section
Mr. Ted Trenholm, Alameda County Water District
Ms. Eva Chu, Alameda County Health Care Services Agency
Mr. Amir Gholami, Alameda County Health Care Services Agency
Mr. Bill Mitchell, City of Berkeley Planning & Economic Development Department – Toxics Management Division
Mr. Geoffrey A. Fiedler, R.G., City of Berkeley Planning & Economic Development Department – Toxics Management Division
Mr. Bradley Mark, San Rafael Fire Department

GETTLER-RYAN INC.

Rw 409

TRANSMITTAL

SEP 1 0 2001

August 23, 2001
G-R #180225

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

CC: Mr. Paul Blank
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	August 9, 2001	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 17, 2001

COMMENTS:

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

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 Court, Suite 300, Hayward, CA 94545

Enclosure

trans/1156-DBD

GETTLER-RYAN INC.

August 9, 2001
G-R Job #180225

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

RE: Third Quarter Event of July 17, 2001
Groundwater Monitoring & Sampling Report
Tosco 76 Service Station #1156
4276 MacArthur Boulevard
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 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

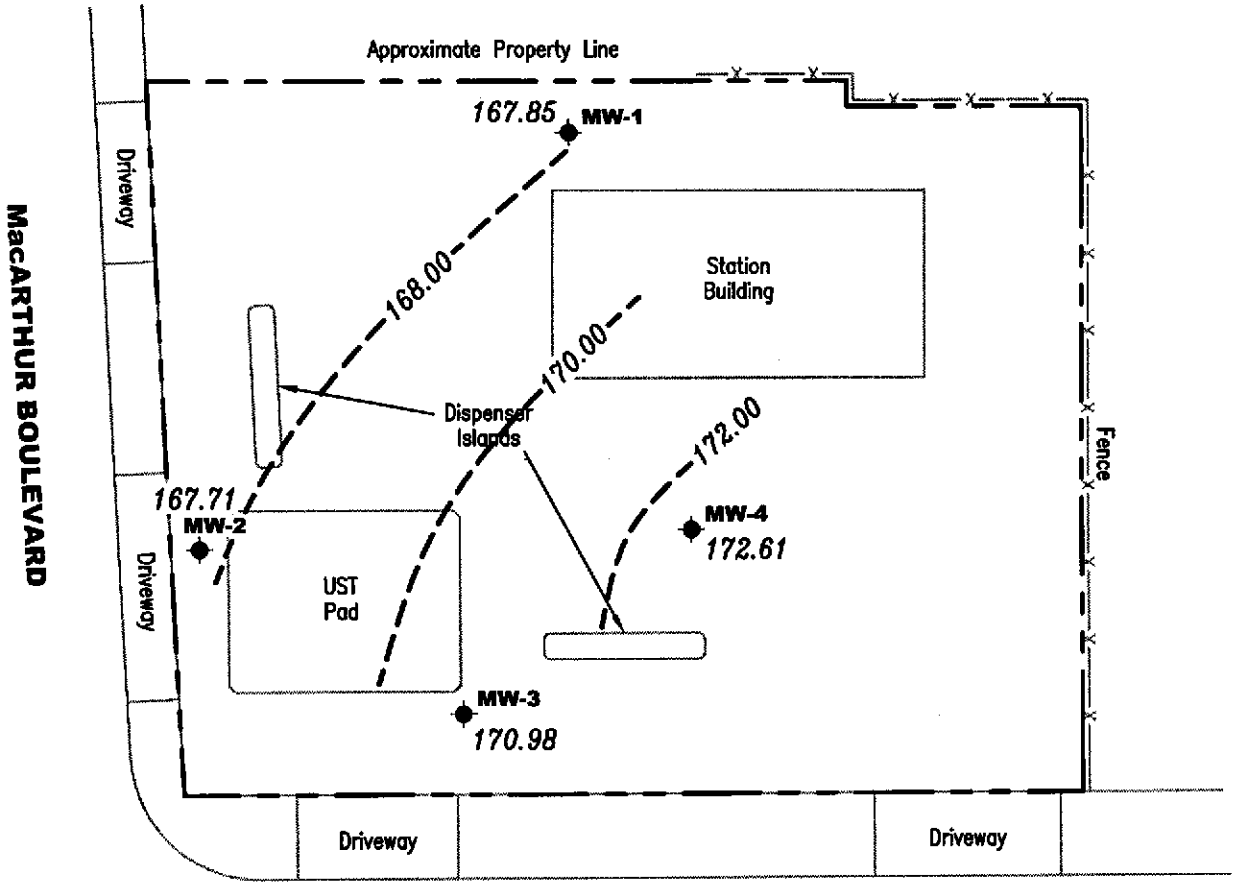
Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

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



EXPLANATION

- Groundwater monitoring well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.08 Ft./Ft.

N

0 30

Scale in Feet

Source: Figure modified from drawing provided by Gettler–Ryan Inc.

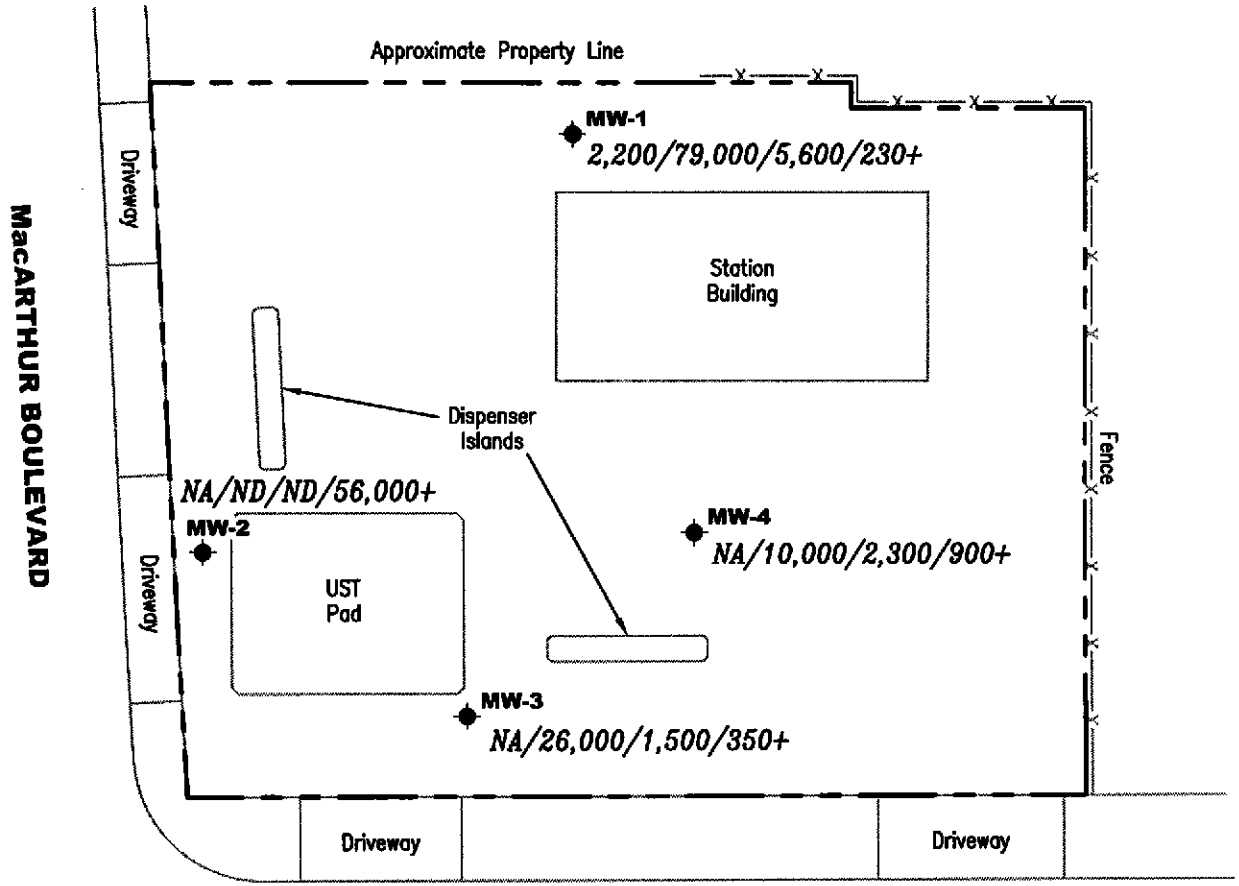
GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551–7555

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

FIGURE 1

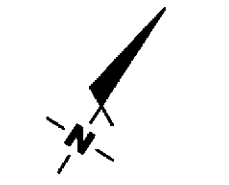
PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		July 17, 2001	

FILE NAME: P:\ENVIRO\TOSCO\1156\Q01-1156.DWG | Layout Tab: Pot3



EXPLANATION

◆	Groundwater monitoring well
A/B/C/D	TPH(D) (Total Petroleum Hydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
ND	Not Detected
NA	Not Analyzed
+	MTBE by EPA Method 8260



Source: Figure modified from drawing provided by Gettler-Ryan Inc.

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

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		July 17, 2001	

FILE NAME: P:\ENVIRO\TOSCO\1156\001-1156.DWG | Layout Tab: Con3

Table 1

Groundwater Monitoring Data and Analytical Results

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

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1												
174.86	07/20/99[5]	7.50	5.0-25.0	167.36	--	16,000[2]	120,000	11,000	27,000	3,300	18,000	ND[1]
	09/28/99	8.75		166.11	<0.01	2,410[2]	6,020[6]	1,030	1,040	68.5	412	321/333[3]
	01/07/00	9.05		165.83**	0.02	7,870[2,4]	72,700[6]	7,410	13,900	2,070	9,620	ND[1]
	03/31/00	7.18		167.68	0.00	3,600[2]	92,000[6]	10,000	23,000	3,200	14,000	ND[1]
	07/14/00	7.68		167.18	0.00	8,580[2]	108,000[6]	8,250	18,700	3,750	17,800	ND[1]
	10/03/00	7.99		166.87	0.00	9,260[2]	96,000[6]	8,760	20,000	3,350	15,600	ND[1]
	01/03/01	9.18		165.68	0.00	11,000[8]	37,000[6]	5,800	13,000	1,700	8,100	2,200
	04/04/01	8.05		166.81	0.00	14,000[8]	86,900[6]	7,780	18,500	2,470	11,800	[1]ND/481[3]
	07/17/01	**7.01**		**167.85**	**0.00**	**2,200[8]**	**79,000[6]**	**5,600**	**11,000**	**2,800**	**12,000**	**[1]ND/230[3]**
MW-2												
173.01	07/20/99	5.40	5.0-25.0	167.61	--	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	4,500/11,000[3,4]
	09/28/99	5.60		167.41	0.00	--	1,390[6]	124	ND[1]	62.9	43.1	5,280/6,150[3]
	01/07/00	5.92		167.09	0.00	--	1,450[6]	99.0	ND[1]	23.8	16.0	33,100
	03/31/00	5.23		167.78	0.00	--	ND[1]	42	ND[1]	ND[1]	ND[1]	17,000
	07/14/00	5.52		167.49	0.00	--	ND[1]	44.7	ND[1]	ND[1]	ND[1]	66,500
	10/03/00	6.04		166.97	0.00	--	ND[1]	56.7	ND[1]	ND[1]	ND[1]	57,500
	01/03/01	6.42		166.59	0.00	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	49,000
	04/04/01	6.14		166.87	0.00	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	38,700/37,800[3]
	07/17/01	**5.30**		**167.71**	**0.00**	**--**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**ND[1]**	**65,000/56,000[3]**
MW-3												
178.44	07/20/99	8.50	5.0-25.0	169.94	--	--	1,000	76	52	79	76	330
	09/28/99	8.31		170.13	0.00	--	1,860[6]	174	95.4	71.8	135	443/288[3]
	01/07/00	8.56		169.88	0.00	--	28,400[6]	2,450	3,090	1,560	3,910	1,940
	03/31/00	8.42		170.02	0.00	--	26,000[6]	1,300	2,900	2,600	3,500	2,800
	07/14/00	8.61		169.83	0.00	--	24,500[6]	1,850	2,630	2,750	3,900	548

Table 1

Groundwater Monitoring Data and Analytical Results

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

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	10/03/00	9.14	5.0-25.0	169.30	0.00	--	22,000[6]	1,910	2,020	2,400	2,680	965
(cont)	01/03/01	9.06		169.38	0.00	--	14,000[6]	1,600	1,100	2,300	1,400	3,300
	04/04/01	8.98		169.46	0.00	--	19,600[6]	1,150	1,470	2,100	1,820	1,050/450[3]
	07/17/01	**7.46**		**170.98**	**0.00**	--	**26,000[6]**	**1,500**	**2,100**	**2,100**	**3,400**	**[1]ND/350[3]**
MW-4												
179.10	07/20/99	7.40	5.0-25.0	171.70	--	--	69	2.7	0.77	ND	7.1	100
	09/28/99	7.19		171.91	0.00	--	4,050[6]	1,250	72.0	51.3	133	416/459[3]
	01/07/00	8.98		170.12	0.00	--	7,010[6]	2,260	167	271	276	764
	03/31/00	7.26		171.84	0.00	--	5,500[6]	1,800	230	330	400	1,000
	07/14/00	7.67		171.43	0.00	--	7,940[6]	2,810	332	450	247	1,530
	10/03/00	8.12		170.98	0.00	--	11,400[6]	3,110	437	519	816	1,040
	01/03/01[7]	9.10		170.00	0.00	--	8,600[6]	2,500	340	480	960	850
	04/04/01	8.63		170.47	0.00	--	9,950[6]	2,380	126	416	725	1,140/819[3]
	07/17/01	**6.49**		**172.61**	**0.00**	--	**10,000[6]**	**2,300**	**110**	**410**	**800**	**1,200/900[3]**
Trip Blank												
TB-LB	07/20/99	--	--	--	--	--	--	--	--	--	--	--
	09/28/99	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/07/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	03/31/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/14/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	10/03/00	--		--	--	--	ND	ND	ND	ND	ND	ND
	01/03/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	04/04/01	--		--	--	--	ND	ND	ND	ND	ND	ND
	07/17/01	**--**		**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

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
DTW = Depth to Water
(ft.) = Feet
S.I. = Screen Interval
(ft. bgs) = Feet Below Ground Surface
GWE = Groundwater Elevation
(msl) = Mean sea level

TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed

* 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)].

[1] Detection limit raised. Refer to analytical reports.

[2] Laboratory report indicates unidentified hydrocarbons C9-C24.

[3] MTBE by EPA Method 8260.

[4] Laboratory analyzed sample past EPA recommended holding time.

[5] Total Recoverable Petroleum Oil was ND.

[6] Laboratory report indicates gasoline C6-C12.

[7] This sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

[8] Laboratory report indicates unidentified hydrocarbons <C16.

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)	1,2-DCA (ppb)	EDB (ppb)	HVOCs (ppb)	SVOCs (ppb)
MW-1	07/20/99	--	--	11,000[3]	--	--	--	--	--	ND[1]	ND[2]
	09/28/99	--	ND[6]	333	ND[6]	ND[6]	ND[6]	--	--	ND[4]	ND[5]
	01/07/00	--	--	--	--	--	--	--	--	ND[7,8]	ND[9]
	03/31/00	--	--	--	--	--	--	--	--	--[11]	ND[10]
	07/14/00	--	--	--	--	--	--	--	--	ND[12]	ND[13]
	10/03/00	--	--	--	--	--	--	--	--	ND[15]	ND[14]
	01/03/01	--	--	--	--	--	--	--	--	ND[15]	ND[16]
	04/04/01	ND[6]	ND[6]	481	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	ND[17]	ND[18]
	07/17/01	**ND[6]**	**ND[6]**	**230**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[20]**	**ND[19]**
MW-2	09/28/99	--	ND[6]	6,150	ND[6]	ND[6]	ND[6]	--	--	--	--
	04/04/01	ND[6]	ND[6]	37,800	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	**ND[6]**	**ND[6]**	**56,000**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**--**	**--**
MW-3	09/28/99	--	ND[6]	288	ND[6]	ND[6]	8.80	--	--	--	--
	04/04/01	ND[6]	ND[6]	450	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	**ND[6]**	**ND[6]**	**350**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**--**	**--**
MW-4	09/28/99	--	ND[6]	459	ND[6]	ND[6]	ND[6]	--	--	--	--
	04/04/01	ND[6]	ND[6]	819	ND[6]	ND[6]	ND[6]	ND[6]	ND[6]	--	--
	07/17/01	**ND[6]**	**ND[6]**	**900**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**ND[6]**	**--**	**--**

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156

4276 MacArthur Boulevard

Oakland, California

EXPLANATIONS:

Groundwater laboratory 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
ND = Not Detected
-- = Not Analyzed

1 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.

2 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.

3 Laboratory analyzed sample past EPA recommended holding time.

4 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.

5 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.

6 Detection limit raised. Refer to analytical reports.

7 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 8260 for HVOCs.

9 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 315 ppb and Naphthalene at 615 ppb.

10 All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 10 ppb; 1,2-DCB at 6.2 ppb; 2-Methylnaphthalene at 73 ppb; 2-Methylphenol at 31 ppb; 4-Methylphenol at 18 ppb and Naphthalene at 140 ppb. Laboratory report indicates all SVOCs were analyzed outside the EPA recommended holding time.

11 Laboratory did not analyze for HVOCs.

12 All HVOCs were ND (with a raised detection limit) except for Tetrachloroethene at 334 ppb.

13 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 300 ppb and Naphthalene at 690 ppb.

14 All SVOCs were ND (with a raised detection limit) except for Benzoic acid at 362 ppb; Bis(2-ethylhexyl)phthalate at 51.6 ppb; 2-Methylnaphthalene at 98.1 ppb; 4-Methylphenol at 28.9 ppb and Naphthalene at 361 ppb.

15 All HVOCs were ND (with a raised detection limit).

16 All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 180 ppb and Naphthalene at 400 ppb.

17 All HVOCs were ND except for cis-1,2-DCA at 3.4 ppb; 1,2-DCA at 5.7 ppb; Chlorobenzene at 5.6 ppb and 1,2-DCB at 4.6 ppb.

18 All SVOCs were ND except for Benzoic acid at 28 ppb; Bis(2-ethylhexyl)phthalate at 55 ppb; 2-Methylnaphthalene at 78 ppb and Naphthalene at 490 ppb.

EXPLANATIONS: (cont)

[19] All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 400 ppb; 1,2-DCB at 18 ppb; 2,4-Dimethylphenol at 16 ppb; 2-Methylnaphthalene at 290 ppb; 2-Methylphenol at 47 ppb; 4-Methylphenol at 25 ppb; Naphthalene at 740 ppb and N-Nitrosodimethylamine at 7.7 ppb.

[20] Volatile Organic Compounds (VOCs) by EPA Method 8021B were ND with a raised detection limit.

ANALYTICAL METHODS:

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 an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

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

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

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

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

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

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 7-17-01

City: Oakland Sampler: Joe

Well ID MW-1 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.17 ft.

Depth to Water 7.01 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

18.16 X VF 0.17 = 3.09 X 3 (case volume) = Estimated Purge Volume: 9.5 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other: _____

Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 1135 ~~Military~~ Weather Conditions: Foggy

Sampling Time: 2:20 p.m. (1420) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (x 1000) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
2:05	3	7.25	1.35	71.9			
2:07	6	7.21	1.36	72.2			
2:09	9.5	7.24	1.37	71.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	~~2 VOA~~	"	"	"	~~(6) Oxys 1,2 DCA / EDB by 8260~~
	2 VOA	"	"	"	HVOC's by 8010
	1 Amb.	"	—	"	TPHD
	1 Amb.	"	—	"	SVOC's by 8270
	2 VOA	"	HCL	"	(6) Oxys 1,2 DCA EDB by 8260

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 7-17-01

City: Oakland Sampler: Joe

Well ID MW-2 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.48 ft.

Depth to Water 5.30 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

20.18 X VF 0.17 = 3.43 X 3 (case volume) = Estimated Purge Volume: 10.5 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / (Suction) / Grundfos / Other:

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 1:15 Weather Conditions: Foggy

Sampling Time: 1:35 p.m (1335) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1:22	3.5	7.31	3.18	73.1			
1:24	7	7.26	3.10	72.8			
1:26	10.5	7.22	3.12	72.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	~~2 VOA~~	"	"	"	~~(6) Oxy's 1,2 DCA/EDB by 8260~~
	2 VOA	"	HCL	"	(6) Oxy's 1,2 DCA/EDB by 8260

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 7-17-01

City: Oakland Sampler: Joe

Well ID MW-3 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.03 ft.

Depth to Water 7.46 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

17.57 X VF 0.17 = 2.99 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; Suction; Grundfos; Other:

Sampling Equipment: Disposable Bailer; Bailer; Pressure Bailer; Grab Sample; Other:

Starting Time: 12:40 Weather Conditions: Foggy

Sampling Time: 1:04 p.m (1304) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm. Sediment Description:

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:50	3	6.76	1.50	73.3			
12:52	6	6.80	1.46	72.8			
12:54	9	6.82	1.42	72.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	~~2 VOA~~	~~"~~	~~"~~	"	~~(6) Oxy's 1,2 DCA/EDB by 8260~~
	2 VOA	"	"	"	(6) Oxy's 1,2 DCA/EDB by 8260

COMMENTS:

3/97-fieldst.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Blvd. Date: 7-17-01

City: Oakland Sampler: Joe

Well ID MW-4 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 25.32 ft.

Depth to Water 6.49 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

18.83 X VF 0.17 = 3.20 X 3 (case volume) = Estimated Purge Volume: 10 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / Grundfos / Other: _____

Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 12:00 Weather Conditions: Foggy

Sampling Time: 12:30 A.M. (1230) Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:10	3.5	7.37	3.88	73.1			
12:12	7.5	7.32	3.96	73.6			
12:14	10	7.29	4.04	73.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 VOA	Y	HCL	Seq.	TPHG, BTEX, MTBE
	~~2 VOA~~	"	"	"	(6) Oxys, 1,2 DCA/EDB by 8260
	2 VOA	"	"	"	(6) Oxys, 1,2 DCA/EDB by 8260

COMMENTS: _____

Chain of Custody Record

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: TOSCO (76) SS#1156
Facility Address: 4276 MACARTHUR, OAKLAND CA
Consultant Project Number: 180225.85
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone): 925-551-7555 (Fax Number): 925-551-7888

Contact (Name): MR. DAVID DEWITT
(Phone): (925) 277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): JOE AJEMIAN
Collection Date: 7-17-01
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	HVOC's by 8010	SVOC's by 8270	(8010's,11,12 DCA EDB by 8260			DO NOT BILL TB-LB ANALYSIS Remarks
L107143																					
TB-LB	01	3 VOA	W	C	-	HCL	Y	✓													
MW-1	02	3 VOA 2 AmbL			1420			✓	✓							✓	✓	✓			
MW-2	03	3 VOA 1 AmbL			1335			✓										✓			
MW-3	04	3 VOA 1 AmbL			1304			✓										✓			
MW-4	05	3 VOA 1 AmbL			1230		X	✓										✓			

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7-17-01 1800			7/17/01
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)

24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612
www.sequoialabs.com

August 01 , 2001

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568
RE: Tosco(1) / L107143

Enclosed are the results of analyses for samples received by the laboratory on 07/17/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Atonya K. Pelt

atonya Pelt
roject Manager

CA ELAP Certificate Number 2360

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L107143-01	Water	07/17/01 00:00	07/17/01 18:00
MW-1	L107143-02	Water	07/17/01 14:20	07/17/01 18:00
MW-2	L107143-03	Water	07/17/01 13:35	07/17/01 18:00
MW-3	L107143-04	Water	07/17/01 13:04	07/17/01 18:00
MW-4	L107143-05	Water	07/17/01 12:30	07/17/01 18:00

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	**Reported:** 08/01/01 14:30

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
TB-LB (L107143-01) Water Sampled: 07/17/01 00:00 Received: 07/17/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.5 %*		*70-130*	"	"	"	"	
MW-1 (L107143-02) Water Sampled: 07/17/01 14:20 Received: 07/17/01 18:00									
Purgeable Hydrocarbons as Gasoline	**79000**	20000	ug/l	400	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	**5600**	200	"	"	"	"	"	"	
Toluene	**11000**	200	"	"	"	"	"	"	
Ethylbenzene	**2800**	200	"	"	"	"	"	"	
Xylenes (total)	**12000**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2000	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.1 %*		*70-130*	"	"	"	"	
MW-2 (L107143-03) Water Sampled: 07/17/01 13:35 Received: 07/17/01 18:00									
Purgeable Hydrocarbons as Gasoline	ND	5000	ug/l	100	1070132	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**65000**	2500	"	500	"	"	"	"	M-04
Surrogate: a,a,a-Trifluorotoluene		*96.5 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 (L107143-04) Water Sampled: 07/17/01 13:04 Received: 07/17/01 18:00									
Purgeable Hydrocarbons as Gasoline	**26000**	10000	ug/l	200	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	**1500**	100	"	"	"	"	"	"	
Toluene	**2100**	100	"	"	"	"	"	"	
Ethylbenzene	**2100**	100	"	"	"	"	"	"	
Xylenes (total)	**3400**	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*96.8 %*		*70-130*	"	"	"	"	
MW-4 (L107143-05) Water Sampled: 07/17/01 12:30 Received: 07/17/01 18:00									
Purgeable Hydrocarbons as Gasoline	**10000**	2500	ug/l	50	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	**2300**	25	"	"	"	"	"	"	
Toluene	**110**	25	"	"	"	"	"	"	
Ethylbenzene	**410**	25	"	"	"	"	"	"	
Xylenes (total)	**800**	25	"	"	"	"	"	"	
Methyl tert-butyl ether	**1200**	250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.0 %*		*70-130*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

Volatile Organic Compounds by EPA Method 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water Sampled: 07/17/01 14:20 Received: 07/17/01 18:00									
Freon 113	ND	500	ug/l	500	1070124	07/26/01	07/27/01	EPA 8021B	
Bromodichloromethane	ND	250	"	"	"	"	"	"	
Bromoform	ND	250	"	"	"	"	"	"	
Bromomethane	ND	500	"	"	"	"	"	"	
Carbon tetrachloride	ND	250	"	"	"	"	"	"	
Chlorobenzene	ND	250	"	"	"	"	"	"	
Chloroethane	ND	500	"	"	"	"	"	"	
Chloroform	ND	250	"	"	"	"	"	"	
Chloromethane	ND	500	"	"	"	"	"	"	
Dibromochloromethane	ND	250	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	250	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	250	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	250	"	"	"	"	"	"	
1,1-Dichloroethane	ND	250	"	"	"	"	"	"	
1,2-Dichloroethane	ND	250	"	"	"	"	"	"	
1,1-Dichloroethene	ND	250	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	250	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	250	"	"	"	"	"	"	
1,2-Dichloropropane	ND	250	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	250	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	250	"	"	"	"	"	"	
Methylene chloride	ND	2500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	250	"	"	"	"	"	"	
Tetrachloroethene	ND	250	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	250	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	250	"	"	"	"	"	"	
Trichloroethene	ND	250	"	"	"	"	"	"	
Trichlorofluoromethane	ND	250	"	"	"	"	"	"	
Vinyl chloride	ND	500	"	"	"	"	"	"	
Surrogate: 1-Chloro-2-fluorobenzene		*84.5 %*		*70-130*		"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 (L107143-02) Water Sampled: 07/17/01 14:20 Received: 07/17/01 18:00									
Ethanol	ND	100000	ug/l	100	1070085	07/19/01	07/20/01	EPA 8260B	
1,2-Dibromoethane	ND	200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**230**	200	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	200	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*94.2 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*99.4 %*	*88-110*		"	"	"	"	
MW-2 (L107143-03) Water Sampled: 07/17/01 13:35 Received: 07/17/01 18:00									
Ethanol	ND	500000	ug/l	500	1070085	07/19/01	07/20/01	EPA 8260B	
1,2-Dibromoethane	ND	1000	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	**56000**	1000	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1000	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*88-110*		"	"	"	"	
MW-3 (L107143-04) Water Sampled: 07/17/01 13:04 Received: 07/17/01 18:00									
Ethanol	ND	25000	ug/l	25	1070104	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**350**	50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	2500	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*91.6 %*	*76-114*		"	"	"	"	
Surrogate: Toluene-d8		*93.4 %*	*88-110*		"	"	"	"	

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Tosco (76) SS#1156, Oakland, CA	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	08/01/01 14:30

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-4 (L107143-05) Water	**Sampled: 07/17/01 12:30**	**Received: 07/17/01 18:00**							
Ethanol	ND	33000	ug/l	33.33	1070104	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	67	"	"	"	"	"	"	
1,2-Dichloroethane	ND	67	"	"	"	"	"	"	
Di-isopropyl ether	ND	67	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	67	"	"	"	"	"	"	
Methyl tert-butyl ether	**900**	67	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	67	"	"	"	"	"	"	
Tert-butyl alcohol	ND	3300	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.0 %*		*76-114*		"	"	"	
Surrogate: Toluene-d8		*106 %*		*88-110*		"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	**Reported:** 08/01/01 14:30

Diesel Hydrocarbons (C9-C24) by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water	**Sampled: 07/17/01 14:20**	**Received: 07/17/01 18:00**							
Diesel Range Hydrocarbons	**2200**	50	ug/l	1	1G25004	07/25/01	07/25/01	EPA 8015M	D-11
Surrogate: n-Pentacosane		*75.1 %*		*50-150*	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water Sampled: 07/17/01 14:20 Received: 07/17/01 18:00									
Acenaphthene	ND	5.0	ug/l	1	1G24007	07/24/01	07/25/01	EPA 8270C	
Acenaphthylene	ND	5.0	"	"	"	"	"	"	
Aniline	ND	5.0	"	"	"	"	"	"	
Anthracene	ND	5.0	"	"	"	"	"	"	
Benzoic acid	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	5.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.0	"	"	"	"	"	"	
Benzo[a]pyrene	ND	5.0	"	"	"	"	"	"	
Benzyl alcohol	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	**400**	100	"	10	"	"	07/26/01	"	
4-Bromophenyl phenyl ether	ND	5.0	"	1	"	"	07/25/01	"	
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	"	"	"	"	"	"	
Chrysene	ND	5.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	5.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10	"	"	"	"	"	"	
1,2-Dichlorobenzene	**18**	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	10	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	5.0	"	"	"	"	"	"	
Diethyl phthalate	ND	5.0	"	"	"	"	"	"	
2,4-Dimethylphenol	**16**	5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	5.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	10	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 1070124 - EPA 5030B (P/T)										
LCS (1070124-BS1)				Prepared & Analyzed: 07/26/01						
Chlorobenzene	22.7	0.50	ug/l	20.0		114	70-130			
1,1-Dichloroethene	25.3	0.50	"	20.0		126	70-130			
Trichloroethene	21.5	0.50	"	20.0		108	70-130			
Benzene	22.3	0.50	"	20.0		112	70-130			
Toluene	23.0	0.50	"	20.0		115	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	*8.73*		"	*10.0*		*87.3*	*70-130*			
Matrix Spike (1070124-MS1)		**Source: L107225-02**		Prepared: 07/26/01 Analyzed: 07/27/01						
Chlorobenzene	22.8	0.50	ug/l	20.0	ND	114	60-140			
1,1-Dichloroethene	22.6	0.50	"	20.0	ND	113	60-140			
Trichloroethene	21.1	0.50	"	20.0	ND	106	60-140			
Benzene	22.0	0.50	"	20.0	ND	110	60-140			
Toluene	22.6	0.50	"	20.0	ND	113	60-140			
Surrogate: 1-Chloro-2-fluorobenzene	*8.91*		"	*10.0*		*89.1*	*70-130*			
Matrix Spike Dup (1070124-MSD1)		**Source: L107225-02**		Prepared: 07/26/01 Analyzed: 07/27/01						
Chlorobenzene	21.5	0.50	ug/l	20.0	ND	108	60-140	5.87	25	
1,1-Dichloroethene	22.9	0.50	"	20.0	ND	114	60-140	1.32	25	
Trichloroethene	20.7	0.50	"	20.0	ND	104	60-140	1.91	25	
Benzene	20.8	0.50	"	20.0	ND	104	60-140	5.61	25	
Toluene	21.5	0.50	"	20.0	ND	108	60-140	4.99	25	
Surrogate: 1-Chloro-2-fluorobenzene	*8.61*		"	*10.0*		*86.1*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 1070085 - EPA 5030B [P/T]										
Blank (1070085-BLK2)				Prepared & Analyzed: 07/19/01						
Ethanol	ND	1000	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	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*44.5*		"	*50.0*		*89.0*	*76-114*			
Surrogate: Toluene-d8	*49.8*		"	*50.0*		*99.6*	*88-110*			
LCS (1070085-BS2)				Prepared & Analyzed: 07/19/01						
Methyl tert-butyl ether	42.7	2.0	ug/l	50.0		85.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*44.4*		"	*50.0*		*88.8*	*76-114*			
Surrogate: Toluene-d8	*49.4*		"	*50.0*		*98.8*	*88-110*			
Matrix Spike (1070085-MS1)				Prepared & Analyzed: 07/19/01						
Methyl tert-butyl ether	48.0	2.0	ug/l	50.0		96.0	60-140			
Surrogate: 1,2-Dichloroethane-d4	*46.9*		"	*50.0*		*93.8*	*76-114*			
Surrogate: Toluene-d8	*49.7*		"	*50.0*		*99.4*	*88-110*			
Matrix Spike Dup (1070085-MSD1)				Prepared & Analyzed: 07/19/01						
Methyl tert-butyl ether	46.0	2.0	ug/l	50.0		92.0	60-140	4.26	25	
Surrogate: 1,2-Dichloroethane-d4	*45.1*		"	*50.0*		*90.2*	*76-114*			
Surrogate: Toluene-d8	*50.0*		"	*50.0*		*100*	*88-110*			
Batch 1070104 - EPA 5030B [P/T]										
Blank (1070104-BLK1)				Prepared & Analyzed: 07/23/01						
Ethanol	ND	1000	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	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 1070124 - EPA 5030B (P/T)										
Blank (1070124-BLK1)				Prepared & Analyzed: 07/26/01						
Freon 113	ND	1.0	ug/l							
Bromodichloromethane	ND	0.50	"							
Bromoform	ND	0.50	"							
Bromomethane	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	0.50	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	0.50	"							
Chloromethane	ND	1.0	"							
Dibromochloromethane	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	0.50	"							
1,2-Dichlorobenzene	ND	0.50	"							
1,1-Dichloroethane	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	0.50	"							
cis-1,2-Dichloroethene	ND	0.50	"							
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	"							
Methylene chloride	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	0.50	"							
Tetrachloroethene	ND	0.50	"							
1,1,1-Trichloroethane	ND	0.50	"							
1,1,2-Trichloroethane	ND	0.50	"							
Trichloroethene	ND	0.50	"							
Trichlorofluoromethane	ND	0.50	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Toluene	ND	0.50	"							
Total Xylenes	ND	0.50	"							
Surrogate: 1-Chloro-2-fluorobenzene	*8.53*		"	*10.0*		*85.3*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070132 - EPA 5030B (P/T)										
Blank (1070132-BLK1)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*11.2*		"	*10.0*		*112*	*70-130*			
LCS (1070132-BS1)				Prepared & Analyzed: 07/29/01						
Benzene	11.3	0.50	ug/l	10.0		113	70-130			
Toluene	11.3	0.50	"	10.0		113	70-130			
Ethylbenzene	11.6	0.50	"	10.0		116	70-130			
Xylenes (total)	35.6	0.50	"	30.0		119	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.9*		"	*10.0*		*109*	*70-130*			
LCS (1070132-BS2)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	266	50	ug/l	250		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.4*		"	*10.0*		*104*	*70-130*			
Matrix Spike (1070132-MS1)		**Source: L107139-01**		Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	266	50	ug/l	250	ND	106	60-140			
Surrogate: a,a,a-Trifluorotoluene	*10.0*		"	*10.0*		*100*	*70-130*			
Matrix Spike Dup (1070132-MSD1)		**Source: L107139-01**		Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	282	50	ug/l	250	ND	113	60-140	5.84	25	
Surrogate: a,a,a-Trifluorotoluene	*11.0*		"	*10.0*		*110*	*70-130*			

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Semivolatile Organic Compounds by EPA Method 8270C

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water Sampled: 07/17/01 14:20 Received: 07/17/01 18:00									
Fluorene	ND	5.0	ug/l	1	1G24007	07/24/01	07/25/01	EPA 8270C	
Hexachlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	5.0	"	"	"	"	"	"	
2-Methylnaphthalene	**290**	50	"	10	"	"	07/26/01	"	
2-Methylphenol	**47**	5.0	"	1	"	"	07/25/01	"	
4-Methylphenol	**25**	5.0	"	"	"	"	"	"	
Naphthalene	**740**	50	"	10	"	"	07/26/01	"	
2-Nitroaniline	ND	10	"	1	"	"	07/25/01	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	5.0	"	"	"	"	"	"	
2-Nitrophenol	ND	5.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodimethylamine	**7.7**	5.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	5.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Phenanthrene	ND	5.0	"	"	"	"	"	"	
Phenol	ND	5.0	"	"	"	"	"	"	
Pyrene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol	*48.3 %*	*21-110*		"	"	"	"		*S-04*
Surrogate: Phenol-d6	*30.5 %*	*10-110*		"	"	"	"		
Surrogate: Nitrobenzene-d5	*66.3 %*	*35-114*		"	"	"	"		
Surrogate: 2-Fluorobiphenyl	*82.6 %*	*43-116*		"	"	"	"		
Surrogate: 2,4,6-Tribromophenol	*74.7 %*	*10-123*		"	"	"	"		
Surrogate: p-Terphenyl-d14	*98.0 %*	*33-141*		"	"	"	"		

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

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1070131 - EPA 5030B (P/T)										
Blank (1070131-BLK1)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: a,a,a-Trifluorotoluene	*9.77*		"	*10.0*		*97.7*	*70-130*			
LCS (1070131-BS1)				Prepared & Analyzed: 07/29/01						
Benzene	10.6	0.50	ug/l	10.0		106	70-130			
Toluene	10.3	0.50	"	10.0		103	70-130			
Ethylbenzene	10.5	0.50	"	10.0		105	70-130			
Xylenes (total)	30.9	0.50	"	30.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.85*		"	*10.0*		*98.5*	*70-130*			
LCS (1070131-BS2)				Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.87*		"	*10.0*		*98.7*	*70-130*			
Matrix Spike (1070131-MS1)	Source: L107135-03			Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	*9.43*		"	*10.0*		*94.3*	*70-130*			
Matrix Spike Dup (1070131-MSD1)	Source: L107135-03			Prepared & Analyzed: 07/29/01						
Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250	ND	110	60-140	8.33	25	
Surrogate: a,a,a-Trifluorotoluene	*9.76*		"	*10.0*		*97.6*	*70-130*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 1070104 - EPA 5030B [P/T]										
Blank (1070104-BLK1)				Prepared & Analyzed: 07/23/01						
Surrogate: 1,2-Dichloroethane-d4	*42.4*		*ug/l*	*50.0*		*84.8*	*76-114*			
Surrogate: Toluene-d8	*48.0*		*"*	*50.0*		*96.0*	*88-110*			
Blank (1070104-BLK2)				Prepared & Analyzed: 07/23/01						
Ethanol	ND	1000	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	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*44.4*		*"*	*50.0*		*88.8*	*76-114*			
Surrogate: Toluene-d8	*48.2*		*"*	*50.0*		*96.4*	*88-110*			
LCS (1070104-BS1)				Prepared & Analyzed: 07/23/01						
Methyl tert-butyl ether	45.7	2.0	ug/l	50.0		91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*44.7*		*"*	*50.0*		*89.4*	*76-114*			
Surrogate: Toluene-d8	*46.4*		*"*	*50.0*		*92.8*	*88-110*			
LCS (1070104-BS2)				Prepared & Analyzed: 07/23/01						
Methyl tert-butyl ether	44.2	2.0	ug/l	50.0		88.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*44.4*		*"*	*50.0*		*88.8*	*76-114*			
Surrogate: Toluene-d8	*48.8*		*"*	*50.0*		*97.6*	*88-110*			
Matrix Spike (1070104-MS1)	Source: L107154-01			Prepared & Analyzed: 07/23/01						
Methyl tert-butyl ether	48.3	2.0	ug/l	50.0	ND	96.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.8*		*"*	*50.0*		*95.6*	*76-114*			
Surrogate: Toluene-d8	*48.4*		*"*	*50.0*		*96.8*	*88-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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 1070104 - EPA 5030B [P/T]										
Matrix Spike Dup (1070104-MSD1)	**Source: L107154-01**			Prepared & Analyzed: 07/23/01						
Methyl tert-butyl ether	46.3	2.0	ug/l	50.0	ND	92.6	60-140	4.23	25	
Surrogate: 1,2-Dichloroethane-d4	*47.4*		"	*50.0*		*94.8*	*76-114*			
Surrogate: Toluene-d8	*48.6*		"	*50.0*		*97.2*	*88-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	**Reported:** 08/01/01 14:30

Diesel Hydrocarbons (C9-C24) 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 1G25004 - EPA 3510B										
Blank (1G25004-BLK1)				Prepared & Analyzed: 07/25/01						
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	*27.3*		"	*33.3*		*82.0*	*50-150*			
LCS (1G25004-BS1)				Prepared & Analyzed: 07/25/01						
Diesel Range Hydrocarbons	351	50	ug/l	500		70.2	60-140			
Surrogate: n-Pentacosane	*30.7*		"	*33.3*		*92.2*	*50-150*			
LCS Dup (1G25004-BSD1)				Prepared & Analyzed: 07/25/01						
Diesel Range Hydrocarbons	332	50	ug/l	500		66.4	60-140	5.56	50	
Surrogate: n-Pentacosane	*27.3*		"	*33.3*		*82.0*	*50-150*			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Tosco (76) SS#1156, Oakland, CA	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G24007 - EPA 3510B Sep Funnel										
Blank (1G24007-BLK1)				Prepared: 07/24/01 Analyzed: 07/25/01						
Acenaphthene	ND	5.0	ug/l							
Acenaphthylene	ND	5.0	"							
Aniline	ND	5.0	"							
Anthracene	ND	5.0	"							
Benzoic acid	ND	10	"							
Benzo (a) anthracene	ND	5.0	"							
Benzo (b) fluoranthene	ND	5.0	"							
Benzo (k) fluoranthene	ND	5.0	"							
Benzo (ghi) perylene	ND	5.0	"							
Benzo[a]pyrene	ND	5.0	"							
Benzyl alcohol	ND	5.0	"							
Bis(2-chloroethoxy)methane	ND	5.0	"							
Bis(2-chloroethyl)ether	ND	5.0	"							
Bis(2-chloroisopropyl)ether	ND	5.0	"							
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	"							
Chrysene	ND	5.0	"							
Dibenz (a,h) anthracene	ND	10	"							
Dibenzofuran	ND	5.0	"							
Di-n-butyl phthalate	ND	10	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	10	"							
3,3'-Dichlorobenzidine	ND	10	"							
2,4-Dichlorophenol	ND	5.0	"							
Diethyl phthalate	ND	5.0	"							
2,4-Dimethylphenol	ND	5.0	"							
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 (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G24007 - EPA 3510B Sep Funnel										
Blank (1G24007-BLK1)				Prepared: 07/24/01 Analyzed: 07/25/01						
2,4-Dinitrotoluene	ND	10	ug/l							
2,6-Dinitrotoluene	ND	10	"							
Di-n-octyl phthalate	ND	10	"							
Fluoranthene	ND	5.0	"							
Fluorene	ND	5.0	"							
Hexachlorobenzene	ND	10	"							
Hexachlorobutadiene	ND	10	"							
Hexachlorocyclopentadiene	ND	10	"							
Hexachloroethane	ND	5.0	"							
Indeno (1,2,3-cd) pyrene	ND	10	"							
Isophorone	ND	5.0	"							
2-Methylnaphthalene	ND	5.0	"							
2-Methylphenol	ND	5.0	"							
4-Methylphenol	ND	5.0	"							
Naphthalene	ND	5.0	"							
2-Nitroaniline	ND	10	"							
3-Nitroaniline	ND	10	"							
4-Nitroaniline	ND	20	"							
Nitrobenzene	ND	5.0	"							
2-Nitrophenol	ND	5.0	"							
4-Nitrophenol	ND	10	"							
N-Nitrosodimethylamine	ND	5.0	"							
N-Nitrosodiphenylamine	ND	5.0	"							
N-Nitrosodi-n-propylamine	ND	5.0	"							
Pentachlorophenol	ND	10	"							
Phenanthrene	ND	5.0	"							
Phenol	ND	5.0	"							
Pyrene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
2,4,5-Trichlorophenol	ND	10	"							
2,4,6-Trichlorophenol	ND	10	"							
Surrogate: 2-Fluorophenol	*75.2*		"	*150*		*50.1*	*21-110*			
Surrogate: Phenol-d6	*52.4*		"	*150*		*34.9*	*10-110*			
Surrogate: Nitrobenzene-d5	*69.9*		"	*100*		*69.9*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*82.2*		"	*100*		*82.2*	*43-116*			

Gettler-Ryan/Geostrategies(1)	Project: Tosco(1)	
6747 Sierra Court, Suite J	Project Number: Tosco (76) SS#1156, Oakland, CA	Reported:
Dublin CA, 94568	Project Manager: Deanna Harding	08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G24007 - EPA 3510B Sep Funnel										
Blank (1G24007-BLK1)				Prepared: 07/24/01 Analyzed: 07/25/01						
Surrogate: 2,4,6-Tribromophenol	*93.2*		*ug/l*	*150*		*62.1*	*10-123*			
Surrogate: p-Terphenyl-d14	*101*		*"*	*100*		*101*	*33-141*			
LCS (1G24007-BS1)				Prepared: 07/24/01 Analyzed: 07/25/01						
Acenaphthene	84.2	5.0	ug/l	100		84.2	46-118			
4-Chloro-3-methylphenol	120	5.0	"	150		80.0	23-97			
2-Chlorophenol	112	5.0	"	150		74.7	27-123			
1,4-Dichlorobenzene	68.6	10	"	100		68.6	36-97			
2,4-Dinitrotoluene	77.6	10	"	100		77.6	24-96			
4-Nitrophenol	25.5	10	"	150		17.0	10-80			
N-Nitrosodi-n-propylamine	92.8	5.0	"	100		92.8	41-116			
Pentachlorophenol	120	10	"	150		80.0	9-103			
Phenol	47.6	5.0	"	150		31.7	12-110			
Pyrene	105	5.0	"	100		105	26-127			
1,2,4-Trichlorobenzene	77.3	5.0	"	100		77.3	39-98			
Surrogate: 2-Fluorophenol	*76.5*		*"*	*150*		*51.0*	*21-110*			
Surrogate: Phenol-d6	*48.5*		*"*	*150*		*32.3*	*10-110*			
Surrogate: Nitrobenzene-d5	*76.7*		*"*	*100*		*76.7*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*83.7*		*"*	*100*		*83.7*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*102*		*"*	*150*		*68.0*	*10-123*			
Surrogate: p-Terphenyl-d14	*105*		*"*	*100*		*105*	*33-141*			
LCS Dup (1G24007-BSD1)				Prepared: 07/24/01 Analyzed: 07/25/01						
Acenaphthene	82.8	5.0	ug/l	100		82.8	46-118	1.68	30	
4-Chloro-3-methylphenol	120	5.0	"	150		80.0	23-97	0.00	30	
2-Chlorophenol	112	5.0	"	150		74.7	27-123	0.00	30	
1,4-Dichlorobenzene	66.5	10	"	100		66.5	36-97	3.11	30	
2,4-Dinitrotoluene	78.5	10	"	100		78.5	24-96	1.15	30	
4-Nitrophenol	32.0	10	"	150		21.3	10-80	22.6	30	
N-Nitrosodi-n-propylamine	92.7	5.0	"	100		92.7	41-116	0.108	30	
Pentachlorophenol	119	10	"	150		79.3	9-103	0.837	30	
Phenol	51.9	5.0	"	150		34.6	12-110	8.64	30	
Pyrene	97.3	5.0	"	100		97.3	26-127	7.61	30	
1,2,4-Trichlorobenzene	74.4	5.0	"	100		74.4	39-98	3.82	30	
Surrogate: 2-Fluorophenol	*79.5*		*"*	*150*		*53.0*	*21-110*			
Surrogate: Phenol-d6	*51.8*		*"*	*150*		*34.5*	*10-110*			

Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin CA, 94568	Project: Tosco(1) Project Number: Tosco (76) SS#1156, Oakland, CA Project Manager: Deanna Harding	Reported: 08/01/01 14:30

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G24007 - EPA 3510B Sep Funnel										
LCS Dup (1G24007-BSD1)				Prepared: 07/24/01 Analyzed: 07/25/01						
Surrogate: Nitrobenzene-d5	*74.2*		*ug/l*	*100*		*74.2*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*78.4*		*"*	*100*		*78.4*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*104*		*"*	*150*		*69.3*	*10-123*			
Surrogate: p-Terphenyl-d14	*97.8*		*"*	*100*		*97.8*	*33-141*			

Notes and Definitions

D-11	Chromatogram Pattern: Unidentified Hydrocarbons < C16
M-04	MTBE was reported from second analysis.
P-01	Chromatogram Pattern: Gasoline C6-C12
S-04	The surrogate recovery for this sample is outside control limits due to interference from the sample matrix.
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