GETTLER-RYAN INC.

TRANSMITTAL

February 22, 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. 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 20, 2001	Groundwater Monitoring and Sampling Report First Quarter - Event of January 3, 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 ***March 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.

February 20, 2001
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 Event of January 3, 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,

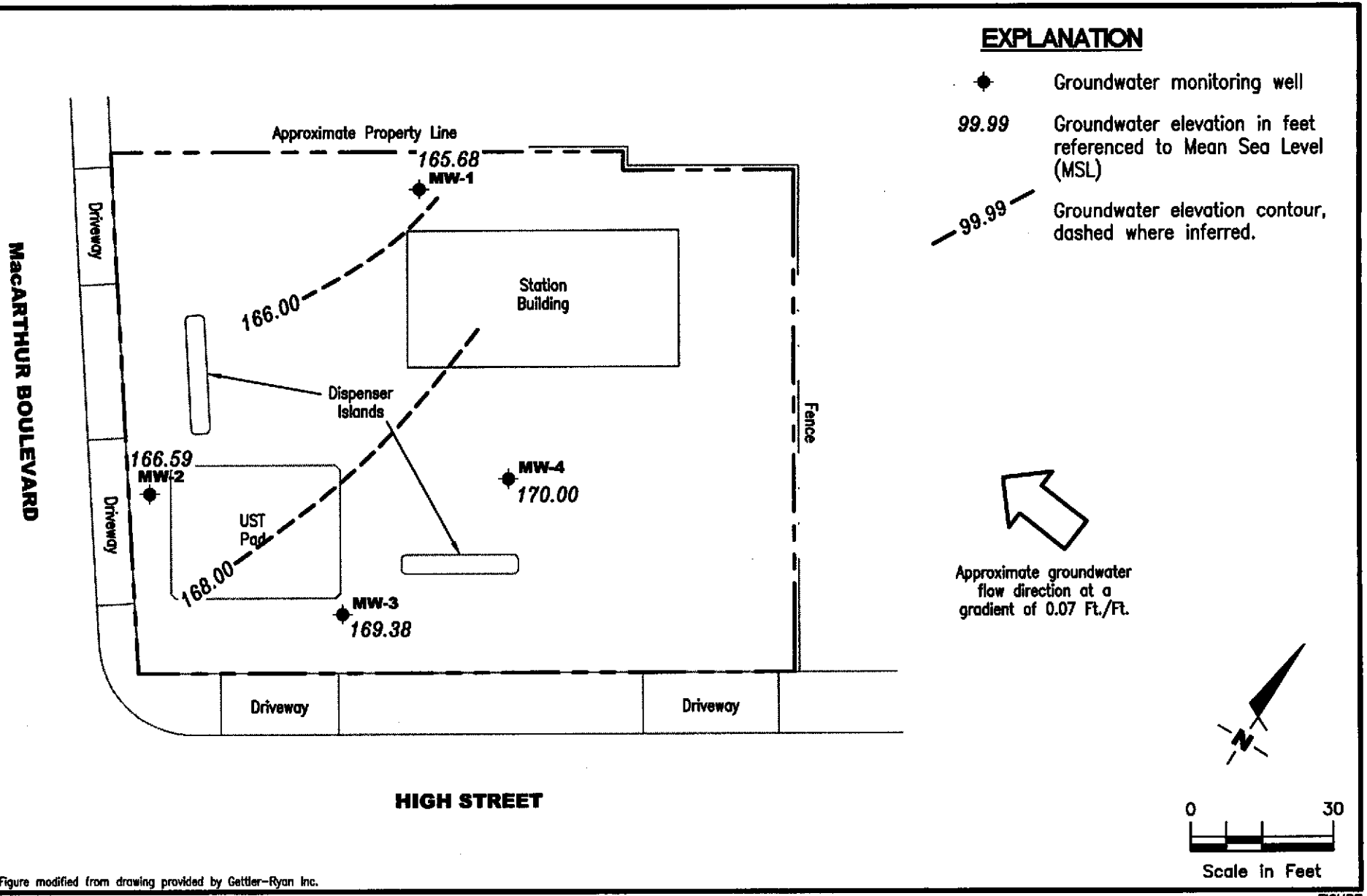
Deanna L. Harding
Project Coordinator

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



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

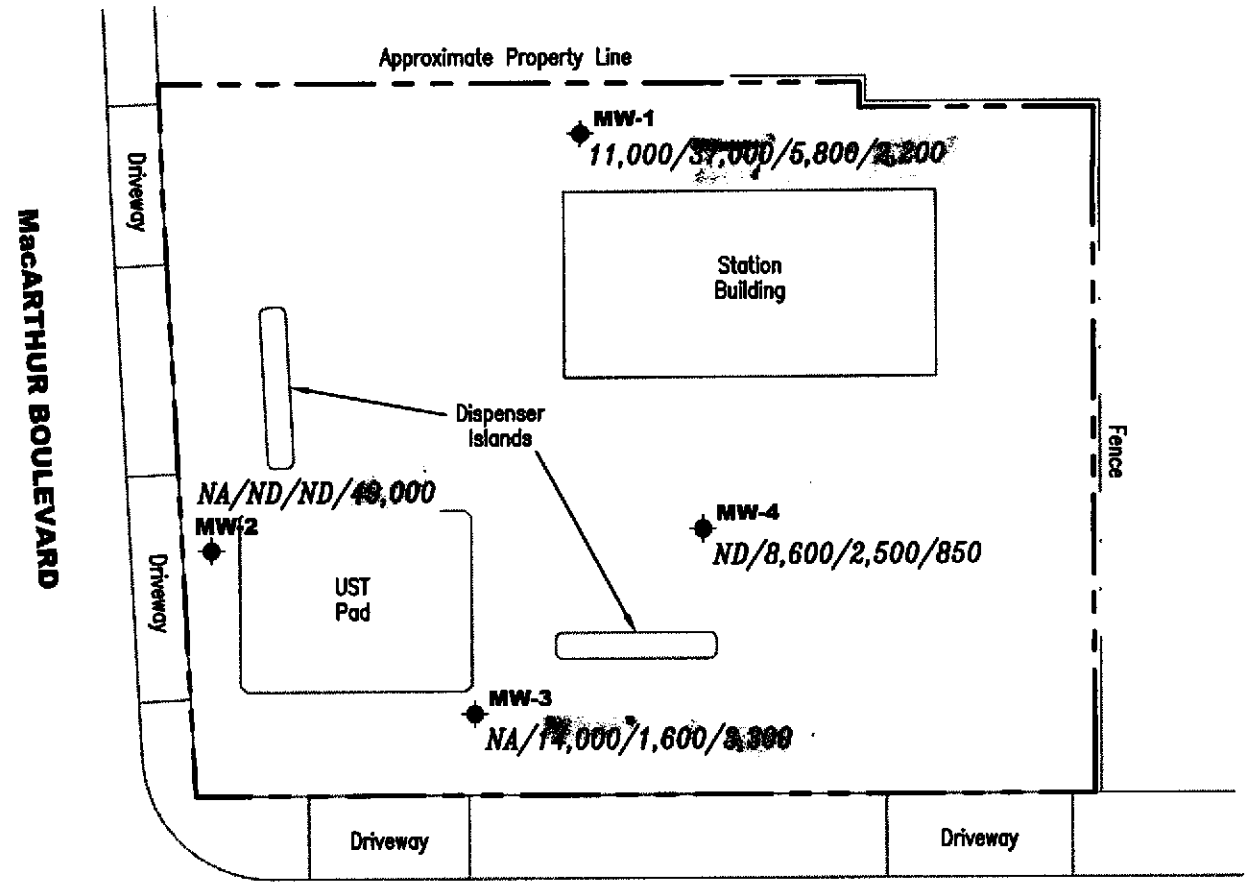
GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

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

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		January 3, 2001	

E NAME: P:\ENVIRO\TOSCO\1156\001-1156.DWG | Layout Tab: Pot1



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

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

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

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180225		January 3, 2001	

NAME: P:\ENVIRO\TOSCO\1156\Q01-1156.DWG | Layout Tab: Con1

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**
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**
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
	10/03/00	9.14		169.30	0.00	--	22,000[6]	1,910	2,020	2,400	2,680	965
	01/03/01	**9.06**		**169.38**	**0.00**	**--**	**14,000[6]**	**1,600**	**1,100**	**2,300**	**1,400**	**3,300**

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-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**
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**

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	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (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]**
MW-2	09/28/99	ND[6]	6,150	ND[6]	ND[6]	ND[6]	--	--
MW-3	09/28/99	ND[6]	288	ND[6]	ND[6]	8.80	--	--
MW-4	09/28/99	ND[6]	459	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.

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 Date: 1-3-01

City: Oakland, CA 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 9.18 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

15.99 x VF 0.17 = 2.72 X 3 (case volume) = Estimated Purge Volume: 8.5 (gal.)

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

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

Starting Time: 7:09 Weather Conditions: clear

Sampling Time: 7:42 A.M. Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm. Sediment Description: none

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)
7:20	3	6.90	0.85	70.6			
7:22	5	6.92	0.90	70.1			
7:24	8.5	6.94	0.92	69.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	3 VOA	Y	HCL	Sequoia	TPHG, BTEX, MTBE
	2 VOA	"	"	"	HVOC's by 8010
	1 Amb	"	—	"	TPHD
	1 Amb	"	—	"	SVOC's by 2870

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Date: 1-3-01

City: Oakland, CA. 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 +

Depth to Water 6.42 +

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

19.06 x VF 0.17 = 3.24 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: 9:10 Weather Conditions: clear

Sampling Time: 9:35 A.M Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:20	3.5	7.10	2.85	70.7			
9:22	7	6.99	2.80	70.9			
9:24	10	7.16	2.75	71.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 VOA	Y	HCL	Sequoia	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 1156 Job#: 180225

Address: 4276 MacArthur Date: 1-3-01

City: Oakland, CA 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 +

Depth to Water 9.06 +

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

15.97 X VF 0.17 = 2.71 X 3 (case volume) = Estimated Purge Volume: 8.5 (gal.)

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

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

Starting Time: 8:35 Weather Conditions: clear

Sampling Time: 9:00 A.M Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm Sediment Description: none

Did well de-water? Yes If yes; Time: 8:49 Volume: 8.5 (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:45	2.5	6.88	2.85	72.1			
8:47	5.5	6.90	2.75	71.6			
8:49	8.5	6.96	2.85	71.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	3 VOA	Y	HCL	Sequoia	TPHG, BTEX, MTBE

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 115.6 Job#: 180225

Address: 4276 MacArthur Date: 1-3-01

City: Oakland, CA 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: 9.10 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

16.22 X VF 0.17 = 2.76 X 3 (case volume) = Estimated Purge Volume: 8.5 (gal.)

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

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

Starting Time: 8:00 Weather Conditions: clear

Sampling Time: 8:25 A.M. Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm. Sediment Description: none

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

Time	Volume (gal.)	pH	Conductivity (mmhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:10	2.5	7.20	3.67	71.6			
8:12	5	7.30	3.70	71.9			
8:14	8.5	7.26	3.62	72.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 VOA	Y	HCL	Sequoia	TPHG, BTEX, MTBE

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: W101108
Samples Collected by (Name): JOE A JEMIAN
Collection Date: 1-3-01
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix W = Water S = Soil A = Air 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 (8020)	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				DO NOT BILL TB-LB ANALYSIS: Remarks
TB-LB	01A	1 VOA	W	G	—	HCL	Y	✓													
MW-1	02A-G	5 VOA 2AmL	/	/	7:42	/	/	✓	✓							✓	✓				
MW-2	03A-C	3 VOA	/	/	9:35	/	/	✓													
MW-3	04A-C	3 VOA	/	/	9:00	/	/	✓													
MW-4	05A-C	3 VOA	/	/	8:25	/	/	✓													

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	1-3-01			1730 1/3/01
	SEQ	1/4/01		CAL	1-4 1502
	CAL	1-4 1550	Received For Laboratory By (Signature): Michael Gallin		1/4 1544

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia
Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

6 February, 2001

Deanna L. Harding
Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin, CA 94568

RE: Tosco
Sequoia Report: W101108

Enclosed are the results of analyses for samples received by the laboratory on 03-Jan-01 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater
Project Manager

CA ELAP Certificate #1271

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W101108-01	Water	03-Jan-01 00:00	03-Jan-01 13:00
MW-1	W101108-02	Water	03-Jan-01 07:42	03-Jan-01 13:00
MW-2	W101108-03	Water	03-Jan-01 09:35	03-Jan-01 13:00
MW-3	W101108-04	Water	03-Jan-01 09:00	03-Jan-01 13:00
MW-4	W101108-05	Water	03-Jan-01 08:25	03-Jan-01 13:00

Sequoia Analytical - Walnut Creek

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

Charlie Westwater, Project Manager

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

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

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W101108-01) Water Sampled: 03-Jan-01 00:00 Received: 03-Jan-01 13:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	1A24016	13-Jan-01	13-Jan-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	CC-3
Surrogate: a,a,a-Trifluorotoluene		*99.3 %*		*70-130*	"	"	"	"	
MW-1 (W101108-02) Water Sampled: 03-Jan-01 07:42 Received: 03-Jan-01 13:00									**P-01**
Purgeable Hydrocarbons	**37000**	5000	ug/l	100	1A24016	13-Jan-01	13-Jan-01	EPA 8015M/8020	
Benzene	**5800**	50	"	"	"	"	"	"	
Toluene	**13000**	50	"	"	"	"	"	"	
Ethylbenzene	**1700**	50	"	"	"	"	"	"	
Xylenes (total)	**8100**	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**2200**	250	"	"	"	"	"	"	CC-3
Surrogate: a,a,a-Trifluorotoluene		*104 %*		*70-130*	"	"	"	"	
MW-2 (W101108-03) Water Sampled: 03-Jan-01 09:35 Received: 03-Jan-01 13:00									
Purgeable Hydrocarbons	ND	10000	ug/l	200	1A24016	13-Jan-01	13-Jan-01	EPA 8015M/8020	
Benzene	ND	100	"	"	"	"	"	"	
Toluene	ND	100	"	"	"	"	"	"	
Ethylbenzene	ND	100	"	"	"	"	"	"	
Xylenes (total)	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**49000**	500	"	"	"	"	"	"	CC-3
Surrogate: a,a,a-Trifluorotoluene		*105 %*		*70-130*	"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

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

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W101108-04) Water	**Sampled: 03-Jan-01 09:00**	**Received: 03-Jan-01 13:00**							**P-01**
Purgeable Hydrocarbons	**14000**	5000	ug/l	100	1A24016	13-Jan-01	13-Jan-01	EPA 8015M/8020	
Benzene	**1600**	50	"	"	"	"	"	"	
Toluene	**1100**	50	"	"	"	"	"	"	
Ethylbenzene	**2300**	50	"	"	"	"	"	"	
Xylenes (total)	**1400**	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3300**	250	"	"	"	"	"	"	CC-3
Surrogate: a,a,a-Trifluorotoluene		*104 %*	*70-130*		"	"	"	"	
MW-4 (W101108-05) Water	**Sampled: 03-Jan-01 08:25**	**Received: 03-Jan-01 13:00**							**A-03,P-01**
Purgeable Hydrocarbons	**8600**	2500	ug/l	50	1A30001	30-Jan-01	30-Jan-01	EPA 8015M/8020	
Benzene	**2500**	25	"	"	"	"	"	"	
Toluene	**340**	25	"	"	"	"	"	"	
Ethylbenzene	**480**	25	"	"	"	"	"	"	
Xylenes (total)	**960**	25	"	"	"	"	"	"	
Methyl tert-butyl ether	**850**	130	"	"	"	"	"	"	CC-3
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*70-130*		"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Diesel Hydrocarbons (C9-C24) by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W101108-02) Water	**Sampled: 03-Jan-01 07:42**	**Received: 03-Jan-01 13:00**							
Diesel Range Hydrocarbons	**11000**	250	ug/l	5	1A09021	09-Jan-01	13-Jan-01	EPA 8015M	D-11
Surrogate: n-Pentacosane		*55.0 %*	*50-150*		"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Volatile Organic Compounds by EPA Method 8010B

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W101108-02) Water Sampled: 03-Jan-01 07:42 Received: 03-Jan-01 13:00									**R-05**
Chloromethane	ND	100	ug/l	50	1A11015	09-Jan-01	09-Jan-01	EPA 8010B	
Vinyl chloride	ND	50	"	"	"	"	"	"	
Bromomethane	ND	100	"	"	"	"	"	"	
Chloroethane	ND	50	"	"	"	"	"	"	
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	
Freon 113	ND	50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	
Methylene chloride	ND	500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	
Chloroform	ND	50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	
Carbon tetrachloride	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	100	"	"	"	"	"	"	
Trichloroethene	ND	100	"	"	"	"	"	"	
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	
Bromodichloromethane	ND	50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	25	"	"	"	"	"	"	
Tetrachloroethene	ND	50	"	"	"	"	"	"	
Dibromochloromethane	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane	ND	50	"	"	"	"	"	"	
Chlorobenzene	ND	50	"	"	"	"	"	"	
Bromoform	ND	25	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	25	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	25	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
Surrogate: Dibromodifluoromethane		*94.0 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*50-150*		"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W101108-02) Water	**Sampled: 03-Jan-01 07:42**	**Received: 03-Jan-01 13:00**							
Acenaphthene	ND	50	ug/l	10	1A09014	09-Jan-01	17-Jan-01	EPA 8270B	
Acenaphthylene	ND	50	"	"	"	"	"	"	
Aniline	ND	50	"	"	"	"	"	"	
Anthracene	ND	50	"	"	"	"	"	"	
Benzoic acid	ND	100	"	"	"	"	"	"	
Benzo (a) anthracene	ND	50	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	50	"	"	"	"	"	"	
Benzo[a]pyrene	ND	50	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	50	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	50	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	50	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	100	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	50	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	500	"	"	"	"	"	"	
4-Chloroaniline	ND	250	"	"	"	"	"	"	
2-Chloronaphthalene	ND	50	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	50	"	"	"	"	"	"	
2-Chlorophenol	ND	50	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	50	"	"	"	"	"	"	
Chrysene	ND	50	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	100	"	"	"	"	"	"	
Dibenzofuran	ND	50	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	100	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	100	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	50	"	"	"	"	"	"	
Diethyl phthalate	ND	50	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	50	"	"	"	"	"	"	
Dimethyl phthalate	ND	50	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	100	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	100	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W101108-02) Water	**Sampled: 03-Jan-01 07:42**	**Received: 03-Jan-01 13:00**							
Di-n-octyl phthalate	ND	100	ug/l	10	1A09014	09-Jan-01	17-Jan-01	EPA 8270B	
Fluoranthene	ND	50	"	"	"	"	"	"	
Fluorene	ND	50	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	100	"	"	"	"	"	"	
Hexachloroethane	ND	50	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	100	"	"	"	"	"	"	
Isophorone	ND	50	"	"	"	"	"	"	
2-Methylnaphthalene	**180**	50	"	"	"	"	"	"	
2-Methylphenol	ND	50	"	"	"	"	"	"	
4-Methylphenol	ND	50	"	"	"	"	"	"	
Naphthalene	**400**	50	"	"	"	"	"	"	
2-Nitroaniline	ND	100	"	"	"	"	"	"	
3-Nitroaniline	ND	100	"	"	"	"	"	"	
4-Nitroaniline	ND	200	"	"	"	"	"	"	
Nitrobenzene	ND	50	"	"	"	"	"	"	
2-Nitrophenol	ND	50	"	"	"	"	"	"	
4-Nitrophenol	ND	100	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	50	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	50	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	50	"	"	"	"	"	"	
Pentachlorophenol	ND	100	"	"	"	"	"	"	
Phenanthrene	ND	50	"	"	"	"	"	"	
Phenol	ND	50	"	"	"	"	"	"	
Pyrene	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	50	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	100	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	100	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*26.7 %*	*21-110*		"	"	"	"	
Surrogate: Phenol-d6		*23.0 %*	*10-110*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*59.3 %*	*35-114*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*65.2 %*	*43-116*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*57.0 %*	*10-123*		"	"	"	"	
Surrogate: p-Terphenyl-d14		*67.9 %*	*33-141*		"	"	"	"	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE 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 1A24016 - EPA 5030B [P/T]										
Blank (1A24016-BLK1)				Prepared & Analyzed: 13-Jan-01						
Purgeable Hydrocarbons	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*30.1*		"	*30.0*		*100*	*70-130*			
LCS (1A24016-BS1)				Prepared & Analyzed: 13-Jan-01						
Benzene	19.1	0.50	ug/l	20.0		95.5	70-130			
Toluene	20.2	0.50	"	20.0		101	70-130			
Ethylbenzene	21.3	0.50	"	20.0		106	70-130			
Xylenes (total)	64.8	0.50	"	60.0		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*30.3*		"	*30.0*		*101*	*70-130*			
Matrix Spike (1A24016-MS1)		**Source: W101128-03**		Prepared & Analyzed: 13-Jan-01						
Benzene	15.6	0.50	ug/l	20.0	ND	78.0	70-130			
Toluene	16.5	0.50	"	20.0	ND	82.5	70-130			
Ethylbenzene	17.8	0.50	"	20.0	ND	89.0	70-130			
Xylenes (total)	53.5	0.50	"	60.0	ND	89.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	*29.3*		"	*30.0*		*97.7*	*70-130*			
Matrix Spike Dup (1A24016-MSD1)		**Source: W101128-03**		Prepared & Analyzed: 13-Jan-01						
Benzene	16.5	0.50	ug/l	20.0	ND	82.5	70-130	5.61	20	
Toluene	17.1	0.50	"	20.0	ND	85.5	70-130	3.57	20	
Ethylbenzene	18.3	0.50	"	20.0	ND	91.5	70-130	2.77	20	
Xylenes (total)	55.2	0.50	"	60.0	ND	92.0	70-130	3.13	20	
Surrogate: a,a,a-Trifluorotoluene	*30.9*		"	*30.0*		*103*	*70-130*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE 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 1A30001 - EPA 5030B [P/T]										
Blank (1A30001-BLK1)				Prepared & Analyzed: 30-Jan-01						
Purgeable Hydrocarbons	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	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*31.2*		"	*30.0*		*104*	*70-130*			
LCS (1A30001-BS1)				Prepared & Analyzed: 30-Jan-01						
Benzene	18.2	0.50	ug/l	20.0		91.0	70-130			
Toluene	18.9	0.50	"	20.0		94.5	70-130			
Ethylbenzene	20.1	0.50	"	20.0		101	70-130			
Xylenes (total)	59.3	0.50	"	60.0		98.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	*29.6*		"	*30.0*		*98.7*	*70-130*			
Matrix Spike (1A30001-MS1)		Source: W101484-04		Prepared & Analyzed: 30-Jan-01						
Benzene	19.2	0.50	ug/l	20.0	ND	96.0	70-130			
Toluene	20.4	0.50	"	20.0	ND	102	70-130			
Ethylbenzene	21.2	0.50	"	20.0	ND	106	70-130			
Xylenes (total)	63.5	0.50	"	60.0	ND	106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*32.4*		"	*30.0*		*108*	*70-130*			
Matrix Spike Dup (1A30001-MSD1)		Source: W101484-04		Prepared & Analyzed: 30-Jan-01						
Benzene	19.1	0.50	ug/l	20.0	ND	95.5	70-130	0.522	20	
Toluene	20.1	0.50	"	20.0	ND	101	70-130	1.48	20	
Ethylbenzene	21.1	0.50	"	20.0	ND	106	70-130	0.473	20	
Xylenes (total)	63.5	0.50	"	60.0	ND	106	70-130	0	20	
Surrogate: a,a,a-Trifluorotoluene	*32.8*		"	*30.0*		*109*	*70-130*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

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 1A09021 - EPA 3510B										
Blank (1A09021-BLK1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	*28.0*		"	*33.3*		*84.1*	*50-150*			
LCS (1A09021-BS1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Diesel Range Hydrocarbons	377	50	ug/l	500		75.4	60-140			
Surrogate: n-Pentacosane	*24.7*		"	*33.3*		*74.2*	*50-150*			
LCS Dup (1A09021-BSD1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Diesel Range Hydrocarbons	468	50	ug/l	500		93.6	60-140	21.5	50	
Surrogate: n-Pentacosane	*28.3*		"	*33.3*		*85.0*	*50-150*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Volatile Organic Compounds by EPA Method 8010B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A11015 - EPA 5030B [P/T]										
Blank (1A11015-BLK1)			Prepared & Analyzed: 09-Jan-01							
Chloromethane	ND	2.0	ug/l							
Vinyl chloride	ND	1.0	"							
Bromomethane	ND	2.0	"							
Chloroethane	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Freon 113	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
Methylene chloride	ND	10	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
Chloroform	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
1,2-Dichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
1,1,2-Trichloroethane	ND	0.50	"							
Tetrachloroethene	ND	1.0	"							
Dibromochloromethane	ND	0.50	"							
1,2-Dibromoethane	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Bromoform	ND	0.50	"							
1,2,3-Trichloropropane	ND	0.50	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
Surrogate: Dibromodifluoromethane	*8.90*		"	*10.0*		*89.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*9.40*		"	*10.0*		*94.0*	*50-150*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Volatile Organic Compounds by EPA Method 8010B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A11015 - EPA 5030B [P/T]										
Blank (1A11015-BLK2)				Prepared & Analyzed: 10-Jan-01						
Chloromethane	ND	2.0	ug/l							
Vinyl chloride	ND	1.0	"							
Bromomethane	ND	2.0	"							
Chloroethane	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Freon 113	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
Methylene chloride	ND	10	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
Chloroform	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
1,2-Dichloroethane	ND	2.0	"							
Trichloroethene	ND	2.0	"							
1,2-Dichloropropane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
1,1,2-Trichloroethane	ND	0.50	"							
Tetrachloroethene	ND	1.0	"							
Dibromochloromethane	ND	0.50	"							
1,2-Dibromoethane	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Bromoform	ND	0.50	"							
1,2,3-Trichloropropane	ND	0.50	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	2.0	"							
1,2-Dichlorobenzene	ND	2.0	"							
Surrogate: Dibromodifluoromethane	*8.40*		"	*10.0*		*84.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*8.70*		"	*10.0*		*87.0*	*50-150*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Volatile Organic Compounds by EPA Method 8010B - Quality Control
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A11015 - EPA 5030B [P/T]										
LCS (1A11015-BS1)				Prepared & Analyzed: 09-Jan-01						
1,1-Dichloroethene	25.0	1.0	ug/l	28.0		89.3	65-135			
Trichloroethene	22.0	2.0	"	20.0		110	70-130			
Chlorobenzene	21.0	1.0	"	20.0		105	70-130			
Surrogate: Dibromodifluoromethane	*8.70*		"	*10.0*		*87.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*12.0*		"	*10.0*		*120*	*50-150*			
LCS (1A11015-BS2)				Prepared & Analyzed: 10-Jan-01						
1,1-Dichloroethene	23.0	1.0	ug/l	28.0		82.1	65-135			
Trichloroethene	21.0	2.0	"	20.0		105	70-130			
Chlorobenzene	20.0	1.0	"	20.0		100	70-130			
Surrogate: Dibromodifluoromethane	*8.30*		"	*10.0*		*83.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*10.0*		"	*10.0*		*100*	*50-150*			
Matrix Spike (1A11015-MS1)		**Source: W101011-01**		Prepared & Analyzed: 11-Jan-01						
1,1-Dichloroethene	28.0	1.0	ug/l	28.0	ND	100	60-140			
Trichloroethene	24.0	2.0	"	20.0	ND	120	60-140			
Chlorobenzene	23.0	1.0	"	20.0	ND	115	60-140			
Surrogate: Dibromodifluoromethane	*10.0*		"	*10.0*		*100*	*50-150*			
Surrogate: 1-Chloro-2-fluorobenzene	*11.0*		"	*10.0*		*110*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*11.0*		"	*10.0*		*110*	*50-150*			
Matrix Spike Dup (1A11015-MSD1)		**Source: W101011-01**		Prepared & Analyzed: 11-Jan-01						
1,1-Dichloroethene	28.0	1.0	ug/l	28.0	ND	100	60-140	0	25	
Trichloroethene	26.0	2.0	"	20.0	ND	130	60-140	8.00	25	
Chlorobenzene	24.0	1.0	"	20.0	ND	120	60-140	4.26	25	
Surrogate: Dibromodifluoromethane	*9.30*		"	*10.0*		*93.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*12.0*		"	*10.0*		*120*	*50-150*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A09014 - EPA 3510B										
Blank (1A09014-BLK1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-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	"							

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A09014 - EPA 3510B										
Blank (1A09014-BLK1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
4,6-Dinitro-2-methylphenol	ND	10	ug/l							
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	"							
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	10	"							
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	*50.6*		"	*150*		*33.7*	*21-110*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A09014 - EPA 3510B										
Blank (1A09014-BLK1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Surrogate: Phenol-d6	*31.0*		*ug/l*	*150*		*20.7*	*10-110*			
Surrogate: Nitrobenzene-d5	*70.3*		*"*	*100*		*70.3*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*62.7*		*"*	*100*		*62.7*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*89.8*		*"*	*150*		*59.9*	*10-123*			
Surrogate: p-Terphenyl-d14	*69.6*		*"*	*100*		*69.6*	*33-141*			
LCS (1A09014-BS1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Acenaphthene	84.2	5.0	ug/l	100		84.2	46-118			
4-Chloro-3-methylphenol	133	5.0	"	150		88.7	23-97			
2-Chlorophenol	115	5.0	"	150		76.7	27-123			
1,4-Dichlorobenzene	62.8	10	"	100		62.8	36-97			
2,4-Dinitrotoluene	88.6	10	"	100		88.6	24-96			
4-Nitrophenol	63.4	10	"	150		42.3	10-80			
N-Nitrosodi-n-propylamine	99.4	5.0	"	100		99.4	41-116			
Pentachlorophenol	23.6	10	"	150		15.7	9-103			
Phenol	49.4	5.0	"	150		32.9	12-110			
Pyrene	82.4	5.0	"	100		82.4	26-127			
1,2,4-Trichlorobenzene	73.1	5.0	"	100		73.1	39-98			
Surrogate: 2-Fluorophenol	*54.6*		*"*	*150*		*36.4*	*21-110*			
Surrogate: Phenol-d6	*35.5*		*"*	*150*		*23.7*	*10-110*			
Surrogate: Nitrobenzene-d5	*74.3*		*"*	*100*		*74.3*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*64.0*		*"*	*100*		*64.0*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*92.0*		*"*	*150*		*61.3*	*10-123*			
Surrogate: p-Terphenyl-d14	*63.8*		*"*	*100*		*63.8*	*33-141*			
LCS Dup (1A09014-BSD1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
Acenaphthene	94.2	5.0	ug/l	100		94.2	46-118	11.2	30	
4-Chloro-3-methylphenol	151	5.0	"	150		101	23-97	12.7	30	Q-01
2-Chlorophenol	128	5.0	"	150		85.3	27-123	10.7	30	
1,4-Dichlorobenzene	70.3	10	"	100		70.3	36-97	11.3	30	
2,4-Dinitrotoluene	98.5	10	"	100		98.5	24-96	10.6	30	Q-01
4-Nitrophenol	64.4	10	"	150		42.9	10-80	1.56	30	
N-Nitrosodi-n-propylamine	109	5.0	"	100		109	41-116	9.21	30	
Pentachlorophenol	24.0	10	"	150		16.0	9-103	1.68	30	
Phenol	52.5	5.0	"	150		35.0	12-110	6.08	30	
Pyrene	94.4	5.0	"	100		94.4	26-127	13.6	30	

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Semivolatile Organic Compounds by EPA Method 8270B - Quality Control

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1A09014 - EPA 3510B										
LCS Dup (1A09014-BSD1)				Prepared: 09-Jan-01 Analyzed: 10-Jan-01						
1,2,4-Trichlorobenzene	83.5	5.0	ug/l	100		83.5	39-98	13.3	30	
Surrogate: 2-Fluorophenol	*55.2*		"	*150*		*36.8*	*21-110*			
Surrogate: Phenol-d6	*35.5*		"	*150*		*23.7*	*10-110*			
Surrogate: Nitrobenzene-d5	*77.9*		"	*100*		*77.9*	*35-114*			
Surrogate: 2-Fluorobiphenyl	*69.4*		"	*100*		*69.4*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*92.9*		"	*150*		*61.9*	*10-123*			
Surrogate: p-Terphenyl-d14	*71.9*		"	*100*		*71.9*	*33-141*			

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

MAR 0 9 2001

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 1156	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	06-Feb-01 07:29

Notes and Definitions

A-03	This sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
CC-3	Continuing Calibration indicates that the quantitative result for this analyte includes a greater than 15% degree of uncertainty. The value as reported is within method acceptance.
D-11	Chromatogram Pattern: Unidentified Hydrocarbons < C16
P-01	Chromatogram Pattern: Gasoline C6-C12
Q-01	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
R-05	The reporting limit(s) for this sample have been raised due to high levels of non-target compounds.
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