



# GETTLER-RYAN INC.

## TRANSMITTAL

February 23, 2001  
G-R #180203

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 94949

FROM: Deanna L. Harding  
Project Coordinator  
Gettler-Ryan Inc.  
6747 Sierra Court, Suite J  
Dublin, California 94568

RE: **Former Tosco 76 SS #0843**  
**1629 Webster Street**  
**Alameda, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	February 2, 2001	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of December 1, 2000

### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **March 7, 2001**, this report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Dept., of Environmental Health, 1131 Harbor Bay Parkway, Alameda, CA 94502

Enclosure

5/13/01 email to D. DeWitt if up for HPs along Webster  
Pacific - will be coming. - DeWitt says he approved up,  
so it should be coming soon

trans/0843.dbd

## QUARTERLY SUMMARY REPORT

Fourth Quarter 2000

(October - December)

### FORMER TOSCO 76 SERVICE STATION 0843

1629 Webster Street

Alameda, California

City/County ID: City of Alameda/Alameda County

Lead Agency: Alameda County Department of Environmental Health Services

### BACKGROUND

In 1998, Tosco Marketing Company (Tosco) removed two 10,000-gallon gasoline underground storage tanks (USTs), one 550-gallon used-oil UST, associated piping and dispensers, and excavated approximately 338 tons of soil and backfill. Laboratory analyses of samples collected during the work detected petroleum hydrocarbons and related constituents in soil and groundwater beneath the site.

During the first quarter 1999, at the request of Tosco, ERI performed a soil and groundwater investigation including the installation of four groundwater monitoring wells. Concentrations of residual benzene (0.0295 ppm) and MTBE (0.561 ppm) were detected in the soil samples collected from boring MW2. The results of the investigation indicated that dissolved petroleum hydrocarbons in groundwater were not delineated.

During fourth quarter 1999, ERI installed two off-site groundwater monitoring wells downgradient of the site. Concentrations of dissolved MTBE were detected in samples collected from newly installed off-site wells MW5 and MW6 at 3.8 ppb and 18,000 ppb, respectively.

### RECENT QUARTER ACTIVITIES

Performed quarterly groundwater monitoring, sampling, and reporting.

### NEXT QUARTER ACTIVITIES

Continue quarterly groundwater monitoring, sampling, and reporting. Submit a work plan to perform an off-site groundwater evaluation in the downgradient direction of groundwater flow from the site.

### CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated?	<u>Yes</u>
Dissolved groundwater delineated?	<u>No</u>
Free Product delineated?	<u>NA</u>
Amount of gw contaminant recovered?	<u>NA</u>
Amount of soil contamination recovered?	<u>338 tons removed</u>
Soil remediation in progress?	<u>No</u>
Dissolved/free product remediation in progress?	<u>No</u>

CONSULTANT: Environmental Resolutions, Inc.

*Work plan for HPS will be submitted in ~ 1 month.*



# GETTLER-RYAN INC.

February 2, 2001  
G-R Job #180203

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

RE: Fourth Quarter 2000 Groundwater Monitoring & Sampling Report  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On December 1, 2000, field personnel monitored and sampled six wells (MW-1 through MW-6) at the above referenced site.

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

Douglas J. Lee  
Senior Geologist, R.G. No. 6882

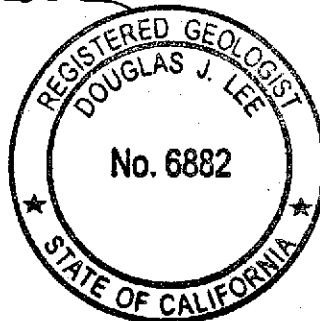
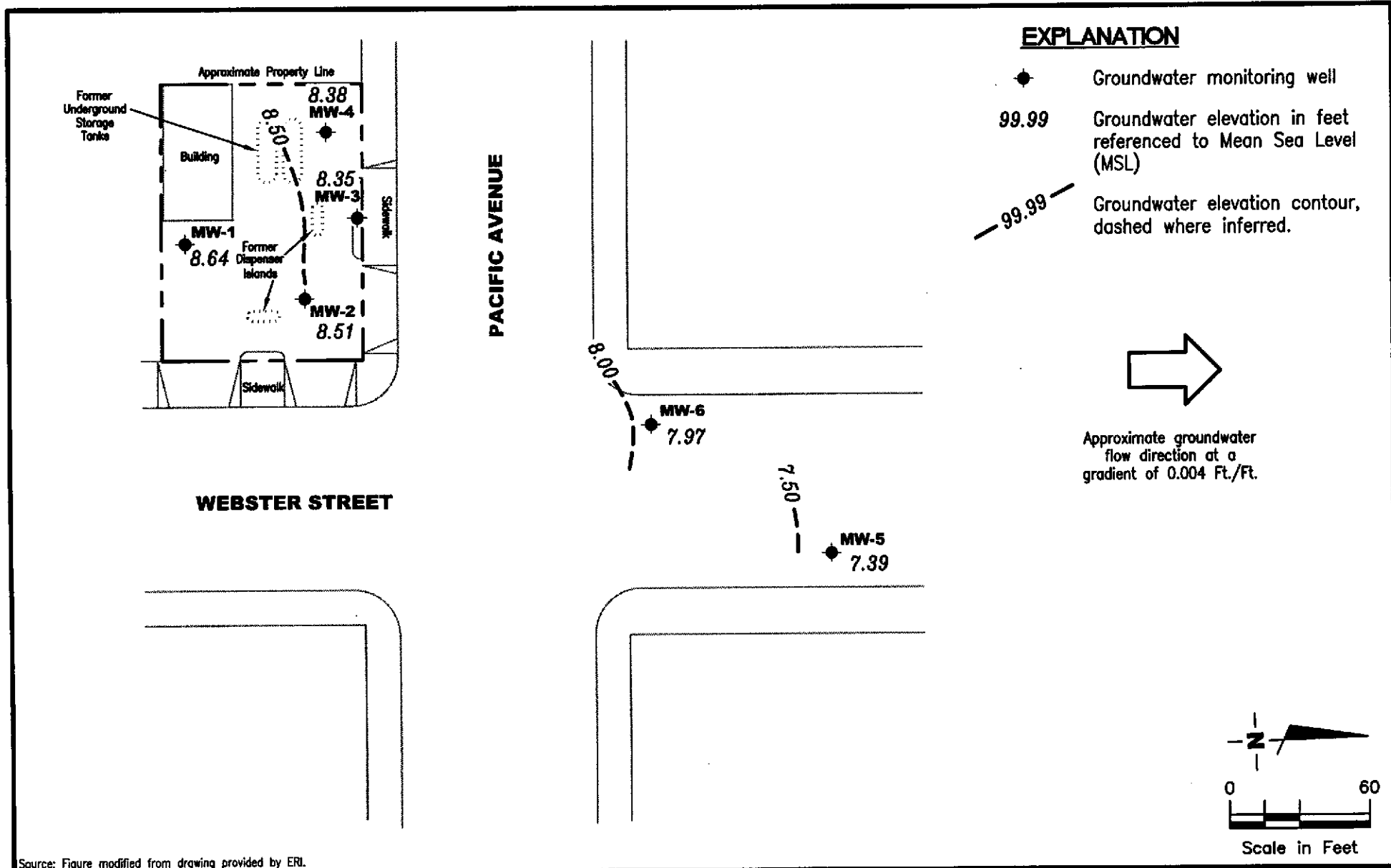


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports

0843.qml



Source: Figure modified from drawing provided by ERI.

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

**POTENTIOMETRIC MAP**  
 Former Tosco 76 Service Station #0843  
 1629 Webster Street  
 Alameda, California

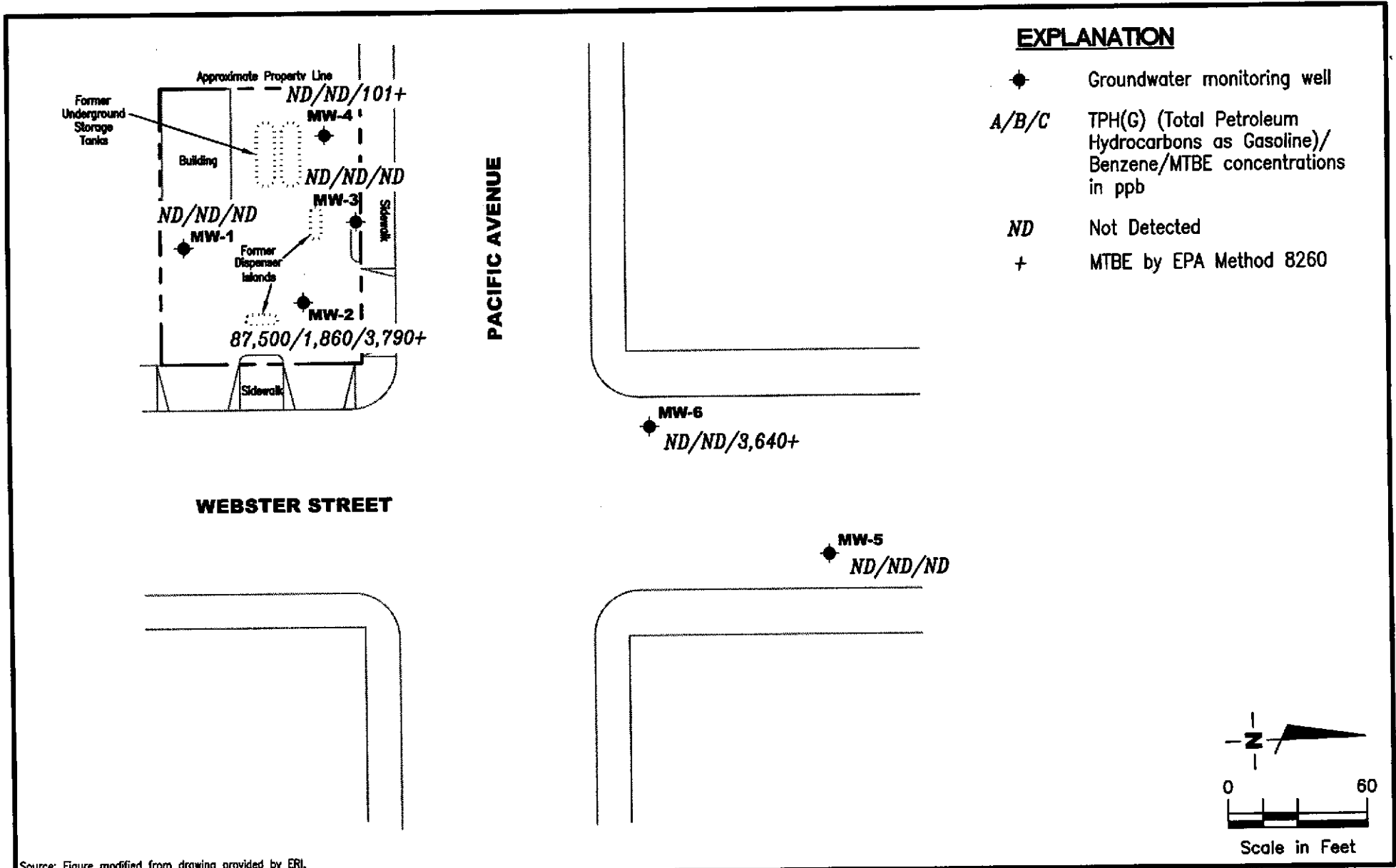
FIGURE  
**1**

PROJECT NUMBER  
 180203

REVIEWED BY

DATE  
 December 1, 2000

REVISED DATE



Source: Figure modified from drawing provided by ERI.

**GETTLER - RYAN INC.**  
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 Dublin, CA 94568 (925) 551-7555

**CONCENTRATION MAP**  
 Former Tosco 76 Service Station #0843  
 1629 Webster Street  
 Alameda, California

FIGURE  
**2**

PROJECT NUMBER  
 180203

REVIEWED BY

DATE  
 December 1, 2000

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>MW-1</b>									
16.18	03/05/99 <sup>1</sup>	--	--	86.6 <sup>3</sup>	ND	2.04	ND	4.06	23.9 <sup>2</sup>
	06/03/99	6.24	9.94	ND	ND	ND	ND	ND	ND/ND <sup>2</sup>
	09/02/99	7.19	8.99	ND	ND	ND	ND	ND	ND/ND <sup>2</sup>
	12/14/99	8.07	8.11	ND	ND	ND	ND	ND	ND
	03/14/00	5.47	10.71	ND	ND	ND	ND	ND	ND
	05/31/00	6.22	9.96	ND	ND	ND	ND	ND	ND
	08/29/00	6.82	9.36	ND	ND	ND	ND	ND	ND
	12/01/00	7.54	8.64	ND	ND	ND	ND	ND	ND
<b>MW-2</b>									
15.57	03/05/99 <sup>1</sup>	--	--	34,400	2,070	7,710	2,340	8,240	8,460 <sup>2</sup>
	06/03/99	5.96	9.61	51,200 <sup>4</sup>	1,820	7,570	2,510	7,320	6,460/8,800 <sup>2</sup>
	09/02/99	6.85	8.72	17,000 <sup>5</sup>	1,000	3,100	1,400	3,700	4,000/3,720 <sup>2</sup>
	12/14/99	7.65	7.92	83,000 <sup>5</sup>	3,000	22,000	4,500	17,000	9,100/11,000 <sup>2</sup>
	03/14/00	5.26	10.31	31,000 <sup>5</sup>	1,600	4,600	2,300	7,300	5,700/8,700 <sup>2</sup>
	05/31/00	5.60	9.97	9,970 <sup>5</sup>	598	1,030	487	2,060	2,500/1,670 <sup>2</sup>
	08/29/00	6.35	9.22	7,900 <sup>5</sup>	390	1,500	280	1,900	1,800/1,300 <sup>2</sup>
	12/01/00	7.06	8.51	87,500 <sup>5</sup>	1,860	17,400	5,590	19,400	6,220/3,790 <sup>2</sup>
<b>MW-3</b>									
15.11	03/05/99 <sup>1</sup>	--	--	135 <sup>3</sup>	ND	ND	ND	4.84	2.46 <sup>2</sup>
	06/03/99	5.57	9.54	ND	ND	ND	ND	ND	5.23/12.7 <sup>2</sup>
	09/02/99	6.50	8.61	ND	ND	ND	ND	ND	13/11.0 <sup>2</sup>
	12/14/99	7.28	7.83	ND	ND	ND	ND	ND	ND
	03/14/00	4.87	10.24	ND	ND	ND	ND	ND	7.2/6.3 <sup>2</sup>
	05/31/00	5.58	9.53	ND	ND	ND	ND	ND	ND
	08/29/00	6.06	9.05	ND	ND	ND	ND	ND	ND
	12/01/00	6.76	8.35	ND	ND	ND	ND	ND	ND

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>MW-4</b>									
15.17	03/05/99 <sup>1</sup>	--	--	ND	ND	ND	ND	2.44	25.2 <sup>2</sup>
	06/03/99	5.45	9.72	ND	ND	ND	ND	ND	ND/3.96 <sup>2</sup>
	09/02/99	6.48	8.69	ND	ND	ND	ND	ND	23/27.0 <sup>2</sup>
	12/14/99	7.27	7.90	ND	ND	ND	ND	ND	200/270 <sup>2</sup>
	03/14/00	4.67	10.50	ND	ND	ND	ND	ND	46/49 <sup>2</sup>
	05/31/00	5.48	9.69	ND	ND	ND	ND	ND	ND
	08/29/00	6.10	9.07	ND	ND	ND	ND	ND	6.1/3.2 <sup>2</sup>
	12/01/00	6.79	8.38	ND	ND	ND	ND	ND	152/101 <sup>2</sup>
<b>MW-5</b>									
13.34	12/14/99	6.45	6.89	ND	ND	ND	ND	ND	3.5/3.8 <sup>2</sup>
	03/14/00	4.46	8.88	ND	ND	ND	ND	ND	ND
	05/31/00	5.18	8.16	ND	ND	ND	ND	ND	ND
	08/29/00	5.46	7.88	ND	ND	ND	ND	ND	ND
	12/01/00	5.95	7.39	ND	ND	ND	ND	ND	ND
<b>MW-6</b>									
14.08	12/14/99	6.64	7.44	ND	ND	ND	ND	ND	11,000/18,000 <sup>2</sup>
	03/14/00	4.72	9.36	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	19,000/21,000 <sup>2,6</sup>
	05/31/00	5.28	8.80	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	ND <sup>7</sup>	13,200
	08/29/00	5.39	8.69	ND	ND	ND	ND	ND	270/400 <sup>2</sup>
	12/01/00	6.11	7.97	ND	ND	ND	ND	ND	6,330/3,640 <sup>2</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>Trip Blank</b>									
TB-LB	03/05/99 <sup>1</sup>	--	--	ND	ND	ND	ND	ND	ND <sup>2</sup>
	06/03/99	--	--	ND	ND	ND	ND	ND	ND
	09/02/99	--	--	ND	ND	ND	ND	ND	ND
	12/14/99	--	--	ND	ND	ND	ND	ND	ND
	03/14/00	--	--	ND	ND	ND	ND	ND	ND
	05/31/00	--	--	ND	ND	ND	ND	ND	ND
	08/29/00	--	--	ND	ND	ND	ND	ND	ND
	12/01/00	--	--	ND	ND	ND	ND	ND	ND



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

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**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to June 3, 1999, were compiled from reports prepared by ERI, Inc.

TOC = Top of Casing	B = Benzene	(ppb) = Parts per billion
(ft.) = Feet	T = Toluene	ND = Not Detected
DTW = Depth to Water	E = Ethylbenzene	-- = Not Measured/Not Analyzed
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	
TPH-G = Total Petroleum Hydrocarbons as Gasoline		

- \* TOC elevations are based on USC&GS Benchmark WEB PAC - 1947 - R 1951; (Elevation = 14.054 feet).
- <sup>1</sup> Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8260A.
- <sup>2</sup> MTBE by EPA Method 8260.
- <sup>3</sup> Laboratory report indicates weathered gasoline C6-C12.
- <sup>4</sup> Laboratory report indicates chromatogram pattern C6-C12.
- <sup>5</sup> Laboratory report indicates gasoline C6-C12.
- <sup>6</sup> Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution was analyzed outside of the EPA recommended holding time.
- <sup>7</sup> Detection limit raised. Refer to analytical reports.

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	09/02/99	ND	ND	ND	ND	ND	ND	--	--
MW-2	09/02/99	ND <sup>1</sup>	ND <sup>1</sup>	3,720	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	--	--
	12/14/99	ND <sup>1</sup>	ND <sup>1</sup>	11,000	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	03/14/00	ND <sup>1</sup>	1,300	8,700	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	05/31/00	ND <sup>1</sup>	ND <sup>1</sup>	1,670	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
	08/29/00	ND	250	1,300	ND	ND	ND	ND	ND
	12/01/00	ND <sup>1</sup>	ND <sup>1</sup>	3,790	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
MW-3	09/02/99	ND	ND	11.0	ND	ND	ND	--	--
	03/14/00	--	--	6.3	--	--	--	--	--
MW-4	09/02/99	ND	ND	27.0	ND	ND	ND	--	--
	12/14/99	--	--	270	--	--	--	--	--
	03/14/00	--	--	49	--	--	--	--	--
	08/29/00	--	--	3.2	--	--	--	--	--
MW-5	12/14/99	--	--	3.8	--	--	--	--	--
MW-6	12/14/99	--	--	18,000	--	--	--	--	--
	03/14/00	--	--	21,000 <sup>2</sup>	--	--	--	--	--
	08/29/00	--	--	400	--	--	--	--	--

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, California

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
MTBE = Methyl tertiary butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tertiary amyl methyl ether  
1,2-DCA = 1,2-Dichloroethane  
EDB = 1,2-Dibromoethane  
(ppb) = Parts per billion  
-- = Not Analyzed  
ND = Not Detected

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

<sup>1</sup> Detection limit raised. Refer to analytical reports.

<sup>2</sup> Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution was analyzed outside of the EPA recommended holding time.

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

As requested by 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: Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Varkes

Well ID: MW-1 Well Condition: OK  
 Well Diameter: 2 in. Hydrocarbon Thickness: 0.00 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth: 20.05 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water: 7.54 ft. Factor (VF) 6" = 1.50 12" = 5.80

12.51 X VF 0.17 = 2.12 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment: Bailer Disposable Bailer  
 Stack Suction Sampling Equipment: Disposable Bailer  
 Grundfos Bailer  
 Other: \_\_\_\_\_ Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 11:35 Weather Conditions: cldy  
 Sampling Time: 11:55 Water Color: brn Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: slt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:37</u>	<u>2</u>	<u>7.92</u>	<u>743</u>	<u>63.3</u>	_____	_____	_____
<u>11:39</u>	<u>4</u>	<u>7.75</u>	<u>756</u>	<u>63.9</u>	_____	_____	_____
<u>11:42</u>	<u>6.5</u>	<u>7.68</u>	<u>761</u>	<u>64.5</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPHGas/Btex/Mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Vastken

Well ID MW-2 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 (feet) Amount Bailed (product/water): φ (Gallons)  
 Total Depth 20.25 ft. Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 7.06 ft. 6" = 1.50 12" = 5.80

13.19 X VF 0.17 = 2.24 X 3 (case volume) = Estimated Purge Volume: 7.0 (gal.)

Purge Equipment: Bailer Disposable Bailer Sampling Equipment: Disposable Bailer  
 Stack Suction Bailer  
 Grundfos Pressure Bailer  
 Other: \_\_\_\_\_ Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 2:35 Weather Conditions: cldy  
 Sampling Time: 2:50 Water Color: grayish Odor: Y  
 Purging Flow Rate: 1 gpm. Sediment Description: Silt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>2:37</u>	<u>2</u>	<u>7.21</u>	<u>867</u>	<u>67.3</u>			
<u>2:40</u>	<u>4.5</u>	<u>7.05</u>	<u>859</u>	<u>66.1</u>			
<u>2:42</u>	<u>7</u>	<u>6.98</u>	<u>858</u>	<u>66.2</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>5 No A</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH Gas/Btex/Mtbe</u> <u>(6) oxy's + 1,2 DCA + EDR</u>

COMMENTS: \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Vartke

Well ID MW-3 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 19.90 ft. Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 6.76 ft. 6" = 1.50 12" = 5.80

13.14 x VF 0.17 = 2.23 x 3 (case volume) = Estimated Purge Volume: 7.0 (gal.)

Purge Equipment: Bailer Disposable Bailer Stack Suction Grundfos Other: \_\_\_\_\_  
 Sampling Equipment: Disposable Bailer Bailer Pressure Bailer Grab Sample Other: \_\_\_\_\_

Starting Time: 12:08 Weather Conditions: ddy  
 Sampling Time: 12:23 Water Color: clear Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:10</u>	<u>2</u>	<u>7.93</u>	<u>678</u>	<u>64.7</u>			
<u>12:13</u>	<u>4.5</u>	<u>7.83</u>	<u>685</u>	<u>65.2</u>			
<u>12:15</u>	<u>7</u>	<u>7.76</u>	<u>690</u>	<u>65.4</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPHGas/Btex/Mtbe</u>

COMMENTS: \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Vasthes

Well ID MW-4 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 19.80 ft. 

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

  
 Depth to Water 6.79 ft.

13.01 x VF 0.17 = 2.21 x 3 (case volume) = Estimated Purge Volume: 7.0 (gal.)

Purge Equipment: Bailer Disposable Bailer  
 Sampling Equipment: Disposable Bailer  
 Stack Suction Bailer  
 Grundfos Pressure Bailer  
 Other: \_\_\_\_\_ Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 1:20 Weather Conditions: cldy  
 Sampling Time: 1:35 Water Color: clear Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? to If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:22</u>	<u>2</u>	<u>7.96</u>	<u>1105</u>	<u>66.2</u>	_____	_____	_____
<u>1:25</u>	<u>4.5</u>	<u>7.87</u>	<u>1093</u>	<u>65.2</u>	_____	_____	_____
<u>1:27</u>	<u>7</u>	<u>7.76</u>	<u>1086</u>	<u>65.7</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH Gas/Btex/Mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Vastka

Well ID MW-5 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Thickness: 0.00 (feet) Amount Bailed (product/water): 0 (Gallons)  
 Total Depth 20.22 ft. Volume 2" = 0.17 3" = 0.38 4" = 0.66  
 Depth to Water 5.95 ft. Factor (VF) 6" = 1.50 12" = 5.80

$14.27 \times VF_{0.17} = 2.42 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 7.5 \text{ (gal.)}$

Purge Equipment: Bailer Disposable Bailer Stack Suction Grundfos Other: \_\_\_\_\_  
 Sampling Equipment: Disposable Bailer Bailer Pressure Bailer Grab Sample Other: \_\_\_\_\_

Starting Time: 12:44 Weather Conditions: cldy  
 Sampling Time: 1:05 Water Color: brn Odor: no  
 Purging Flow Rate: 1 gpm. Sediment Description: silt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:46</u>	<u>2.5</u>	<u>8.03</u>	<u>647</u>	<u>66.4</u>	_____	_____	_____
<u>12:49</u>	<u>5</u>	<u>7.87</u>	<u>660</u>	<u>65.3</u>	_____	_____	_____
<u>12:52</u>	<u>7.5</u>	<u>7.81</u>	<u>667</u>	<u>65.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3</u> <u>VOA</u>	<u>Y</u>	<u>HCl</u>	<u>SEQUOIA</u>	<u>TPH Gas/Btex/Mtbe</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/ Facility Former Tosco #0843 Job#: 180203  
 Address: 1629 Webster St. Date: 12/1/00  
 City: Alameda, CA Sampler: Vartley

Well ID MW-6 Well Condition: OK  
 Well Diameter 2 in. Hydrocarbon Amount Bailed  
 Thickness: 0.00 (feet) (product/water): 0 (Gallons)  
 Total Depth 20.15 ft.  
 Depth to Water 6.11 ft.

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

14.04 x VF 0.17 = 2.38 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

Purge Equipment: Bailer Disposable Bailer  
 Stack  
Suction  
 Grundfos  
 Other: \_\_\_\_\_

Sampling Equipment: Disposable Bailer  
 Bailer  
 Pressure Bailer  
 Grab Sample  
 Other: \_\_\_\_\_

Starting Time: 1:55 Weather Conditions: cldy  
 Sampling Time: 2:15 Water Color: brn Odor: YMR (HTBE)  
 Purging Flow Rate: 1 gpm. Sediment Description: silt  
 Did well de-water? no If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:57</u>	<u>2.5</u>	<u>7.74</u>	<u>744</u>	<u>66.8</u>			
<u>2:00</u>	<u>5</u>	<u>7.56</u>	<u>730</u>	<u>66.0</u>			
<u>2:03</u>	<u>7.5</u>	<u>7.57</u>	<u>733</u>	<u>66.2</u>			

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3 VOA</u>	<u>Y</u>	<u>HC</u>	<u>SEQUOIA</u>	<u>TPHGas/Btex/Mtbe</u>

COMMENTS: \_\_\_\_\_

# Chain-of-Custody-Record



Tosco Marketing Company  
2003 Cape Canyon Pl., Ste. 400  
San Ramon, California 94583

Facility Number Tosco (Former 76) SS# 0843  
 Facility Address 1629 Webster St., Alameda, Ca  
 Consultant Project Number 180203.85  
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)  
 Address 6747 Sierra Court, Suite J, Dublin, CA 94568  
 Project Contact (Name) Deanna L. Harding  
 (Phone) 915-551-7555 (Fax Number) 915-551-7888

Contact (Name) Mr. David De Witt  
 (Phone) (916) 774-2910  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) Vaztkas Tashjian  
 Collection Date 12/1/00  
 Signature David De Witt

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	A = Air C = Composite D = Discrete	Time	Sample Preservation	Iod (Yes or No)	Analytes To Be Performed										DO NOT BILL TB-LB ANALYSIS						
								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)	(6) Oxy's (8260)	1,2 DCA + EDB		Remarks					
602005																								
TB-LB	01	1	W	B		HCl	Y	X															Confirm MTBE Hits by 8260.	
MW-1	02	3	"	"	11:55 A	"	"	X																
MW-2	03	5	"	"	2:30 P	"	"	X																
MW-3	04	3	"	"	12:30 P	"	"	X																
MW-4	05	3	"	"	1:35 P	"	"	X																
MW-5	06	3	"	"	1:05 P	"	"	X																
MW-6	07	3	"	"	2:15 P	"	"	X																

Relinquished By (Signature) <u>David De Witt</u>	Organization G-R Inc.	Date/Time 12/1/00 4:00 PM	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time 12/1/00	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
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	



# Sequoia Analytical

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

December 22, 2000

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

RE: Tosco(4)/L012005

Dear Deanna Harding

Enclosed are the results of analyses for sample(s) received by the laboratory on December 1, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate Number I2360





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

Project: Tosco(4)  
Project Number: Tosco (Former 76) SS#0843  
Project Manager: Deanna Harding

Sampled: 12/1/00  
Received: 12/1/00  
Reported: 12/22/00

**ANALYTICAL REPORT FOR L012005**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L012005-01	Water	12/1/00
MW-1	L012005-02	Water	12/1/00
MW-2	L012005-03	Water	12/1/00
MW-3	L012005-04	Water	12/1/00
MW-4	L012005-05	Water	12/1/00
MW-5	L012005-06	Water	12/1/00
MW-6	L012005-07	Water	12/1/00





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
Sequoia Analytical - San Carlos**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>TB-LB</b>				<b>L012005-01</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120069	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		83.9	%	
<b>MW-1</b>				<b>L012005-02</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120069	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		79.0	%	
<b>MW-2</b>				<b>L012005-03</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120070	12/15/00	12/15/00		20000	87500	ug/l	1
Benzene	"	"	"		200	1860	"	
Toluene	"	"	"		200	17400	"	
Ethylbenzene	"	"	"		200	5590	"	
Xylenes (total)	"	"	"		200	19400	"	
Methyl tert-butyl ether	"	"	"		2000	6220	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		119	%	
<b>MW-3</b>				<b>L012005-04</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120070	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		116	%	
<b>MW-4</b>				<b>L012005-05</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120070	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
Sequoia Analytical - San Carlos**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>MW-4 (continued)</b>				<b>L012005-05</b>			<b>Water</b>	
Methyl tert-butyl ether	0120070	12/15/00	12/15/00		5.00	152	ug/l	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		105	%	
<b>MW-5</b>				<b>L012005-06</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120070	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		114	%	
<b>MW-6</b>				<b>L012005-07</b>			<b>Water</b>	
Purgeable Hydrocarbons as Gasoline	0120070	12/15/00	12/15/00		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		250	6330	"	2
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		118	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**MTBE Confirmation by EPA Method 8260B  
Sequoia Analytical - San Carlos**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>MW-4</b>				<b><u>L012005-05</u></b>			<b><u>Water</u></b>	
Methyl tert-butyl ether	0120088	12/20/00	12/20/00		4.00	101	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		94.4	%	
<b>MW-6</b>				<b><u>L012005-07</u></b>			<b><u>Water</u></b>	
Methyl tert-butyl ether	0120088	12/20/00	12/20/00		200	3640	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		95.2	%	







Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4)	Sampled: 12/1/00
	Project Number: Tosco (Former 76) SS#0843	Received: 12/1/00
	Project Manager: Deanna Harding	Reported: 12/22/00

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

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>MW-2</b>				<b>L012005-03</b>				<b>Water</b>
Ethanol	0120032	12/7/00	12/7/00		50000	ND	ug/l	
1,2-Dibromoethane	"	"	"		100	ND	"	
1,2-Dichloroethane	"	"	"		100	ND	"	
Di-isopropyl ether	"	"	"		100	ND	"	
Ethyl tert-butyl ether	"	"	"		100	ND	"	
Methyl tert-butyl ether	"	"	"		100	3790	"	
Tert-amyl methyl ether	"	"	"		100	ND	"	
Tert-butyl alcohol	"	"	"		5000	ND	"	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		93.6	%	
Surrogate: Toluene-d8	"	"	"	88.0-110		100	"	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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<b>Batch: 0120069</b>	<b>Date Prepared: 12/15/00</b>		<b>Extraction Method: EPA 5030B [P/T]</b>							
<b>Blank</b>	<b>0120069-BLK1</b>									
Purgeable Hydrocarbons as Gasoline	12/15/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			

<b>LCS</b>	<b>0120069-BS1</b>									
Benzene	12/15/00	10.0		9.72	ug/l	70.0-130	97.2			
Toluene	"	10.0		10.0	"	70.0-130	100			
Ethylbenzene	"	10.0		10.5	"	70.0-130	105			
Xylenes (total)	"	30.0		31.4	"	70.0-130	105			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	"	70.0-130	101			

<b>LCS</b>	<b>0120069-BS2</b>									
Purgeable Hydrocarbons as Gasoline	12/15/00	250		235	ug/l	70.0-130	94.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.49	"	70.0-130	94.9			

<b>Matrix Spike</b>	<b>0120069-MS1</b>	<b>L012005-02</b>								
Purgeable Hydrocarbons as Gasoline	12/15/00	250	ND	246	ug/l	60.0-140	98.4			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.00	"	70.0-130	80.0			

<b>Matrix Spike Dup</b>	<b>0120069-MSD1</b>	<b>L012005-02</b>								
Purgeable Hydrocarbons as Gasoline	12/15/00	250	ND	221	ug/l	60.0-140	88.4	25.0	10.7	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.64	"	70.0-130	86.4			

<b>Batch: 0120070</b>	<b>Date Prepared: 12/15/00</b>		<b>Extraction Method: EPA 5030B [P/T]</b>							
<b>Blank</b>	<b>0120070-BLK1</b>									
Purgeable Hydrocarbons as Gasoline	12/15/00			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	5.00				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.2	"	70.0-130	112			

<b>LCS</b>	<b>0120070-BS1</b>									
Purgeable Hydrocarbons as Gasoline	12/15/00			103	ug/l	70.0-130				
Benzene	"	10.0		10.9	"	70.0-130	109			



Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>LCS (continued)</b>										
	<b>0120070-BS1</b>									
Toluene	12/15/00	10.0		10.5	ug/l	70.0-130	105			
Ethylbenzene	"	10.0		10.3	"	70.0-130	103			
Xylenes (total)	"	30.0		30.8	"	70.0-130	103			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		12.2	"	70.0-130	122			
<b>LCS</b>										
	<b>0120070-BS2</b>									
Purgeable Hydrocarbons as Gasoline	12/15/00	250		176	ug/l	70.0-130	70.4			
Benzene	"			4.36	"	70.0-130				
Toluene	"			13.9	"	70.0-130				
Ethylbenzene	"			3.60	"	70.0-130				
Xylenes (total)	"			17.5	"	70.0-130				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		7.84	"	70.0-130	78.4			
<b>Matrix Spike</b>										
	<b>0120070-MS1</b>		<b>L012005-04</b>							
Purgeable Hydrocarbons as Gasoline	12/16/00	250	ND	275	ug/l	60.0-140	110			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.6	"	70.0-130	116			
<b>Matrix Spike Dup</b>										
	<b>0120070-MSD1</b>		<b>L012005-04</b>							
Purgeable Hydrocarbons as Gasoline	12/16/00	250	ND	278	ug/l	60.0-140	111	25.0	0.905	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.4	"	70.0-130	114			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**MTBE Confirmation by EPA Method 8260B/Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0120088</b>		<b>Date Prepared: 12/19/00</b>		<b>Extraction Method: EPA 5030B (P/T)</b>						
<b>Blank</b>		<b>0120088-BLK1</b>								
Methyl tert-butyl ether	12/18/00			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.1	"	76.0-114	98.2			
<b>Blank</b>		<b>0120088-BLK2</b>								
Methyl tert-butyl ether	12/19/00			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		47.5	"	76.0-114	95.0			
<b>Blank</b>		<b>0120088-BLK3</b>								
Methyl tert-butyl ether	12/20/00			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.4	"	76.0-114	98.8			
<b>LCS</b>		<b>0120088-BS1</b>								
Methyl tert-butyl ether	12/18/00	50.0		35.5	ug/l	70.0-130	71.0			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		48.9	"	76.0-114	97.8			
<b>LCS</b>		<b>0120088-BS2</b>								
Methyl tert-butyl ether	12/19/00	50.0		43.8	ug/l	70.0-130	87.6			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.9	"	76.0-114	99.8			
<b>LCS</b>		<b>0120088-BS3</b>								
Methyl tert-butyl ether	12/20/00	50.0		44.4	ug/l	70.0-130	88.8			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		51.5	"	76.0-114	103			
<b>Matrix Spike</b>		<b>0120088-MS1</b>		<b>L012120-11</b>						
Methyl tert-butyl ether	12/19/00	50.0	3.99	48.7	ug/l	60.0-140	89.4			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		50.6	"	76.0-114	101			
<b>Matrix Spike Dup</b>		<b>0120088-MSD1</b>		<b>L012120-11</b>						
Methyl tert-butyl ether	12/19/00	50.0	3.99	46.7	ug/l	60.0-140	85.4	25.0	4.58	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		52.8	"	76.0-114	106			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4)	Sampled: 12/1/00
	Project Number: Tosco (Former 76) SS#0843	Received: 12/1/00
	Project Manager: Deanna Harding	Reported: 12/22/00

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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0120032</b>		<b>Date Prepared: 12/7/00</b>			<b>Extraction Method: EPA 5030B (P/T)</b>					
<b>Blank</b>		<b>0120032-BLK1</b>								
Ethanol	12/7/00			ND	ug/l	1000				
1,2-Dibromoethane	"			ND	"	2.00				
1,2-Dichloroethane	"			ND	"	2.00				
Di-isopropyl ether	"			ND	"	2.00				
Ethyl tert-butyl ether	"			ND	"	2.00				
Methyl tert-butyl ether	"			ND	"	2.00				
Tert-amyl methyl ether	"			ND	"	2.00				
Tert-butyl alcohol	"			ND	"	100				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		53.4	"	76.0-114	107			
Surrogate: Toluene-d8	"	50.0		50.0	"	88.0-110	100			
<b>LCS</b>		<b>0120032-BS1</b>								
Methyl tert-butyl ether	12/7/00	50.0		51.4	ug/l	70.0-130	103			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		50.4	"	76.0-114	101			
Surrogate: Toluene-d8	"	50.0		50.7	"	88.0-110	101			
<b>Matrix Spike</b>		<b>0120032-MS1</b>		<b>L012006-08</b>						
Methyl tert-butyl ether	12/7/00	50.0	18.4	61.5	ug/l	60.0-140	86.2			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.3	"	76.0-114	90.6			
Surrogate: Toluene-d8	"	50.0		48.2	"	88.0-110	96.4			
<b>Matrix Spike Dup</b>		<b>0120032-MSD1</b>		<b>L012006-08</b>						
Methyl tert-butyl ether	12/7/00	50.0	18.4	55.2	ug/l	60.0-140	73.6	25.0	15.8	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		44.7	"	76.0-114	89.4			
Surrogate: Toluene-d8	"	50.0		49.9	"	88.0-110	99.8			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(4) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 12/1/00 Received: 12/1/00 Reported: 12/22/00
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**Notes and Definitions**

#	Note
1	Chromatogram Pattern: Gasoline C6-C12
2	MTBE was reported from second analysis.
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
Recov.	Recovery
RPD	Relative Percent Difference

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