



# GETTLER-RYAN INC.

## TRANSMITTAL

MAY 14 2001

April 26, 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	April 19, 2001	Groundwater Monitoring and Sampling Report First Quarter - Event of March 17, 2001

### COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **May 9, 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

*1st time well MW-6 is getting TPH<sub>5</sub>  
& BTEX and 5 previously ND events -  
is there another source?*

*Wait for next suppl. event to see if  
MW-6 still gets TPH<sub>5</sub>/BTEX*

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## QUARTERLY SUMMARY REPORT

First Quarter 2001  
(January - March)

### FORMER TOSCO 76 SERVICE STATION 0843

1629 Webster Street  
Alameda, California

City/County ID: City of Alameda/Alameda County

Lead Agency: Alameda County Health Care Services Agency

### 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, 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. Performed an underground utility survey and prepared a *Work Plan for Evaluation of Soil and Groundwater*.

### NEXT QUARTER ACTIVITIES

Continue quarterly groundwater monitoring, sampling, and reporting. Submit the Work Plan to the appropriate regulatory agencies.

### 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.



# GETTLER - RYAN INC.

April 19, 2001  
G-R Job #180203

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

**RE: First Quarter Event of March 17, 2001**  
Groundwater Monitoring & Sampling Report  
Former Tosco 76 Service Station #0843  
1629 Webster Street  
Alameda, 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 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

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

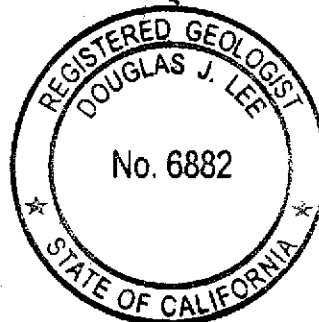
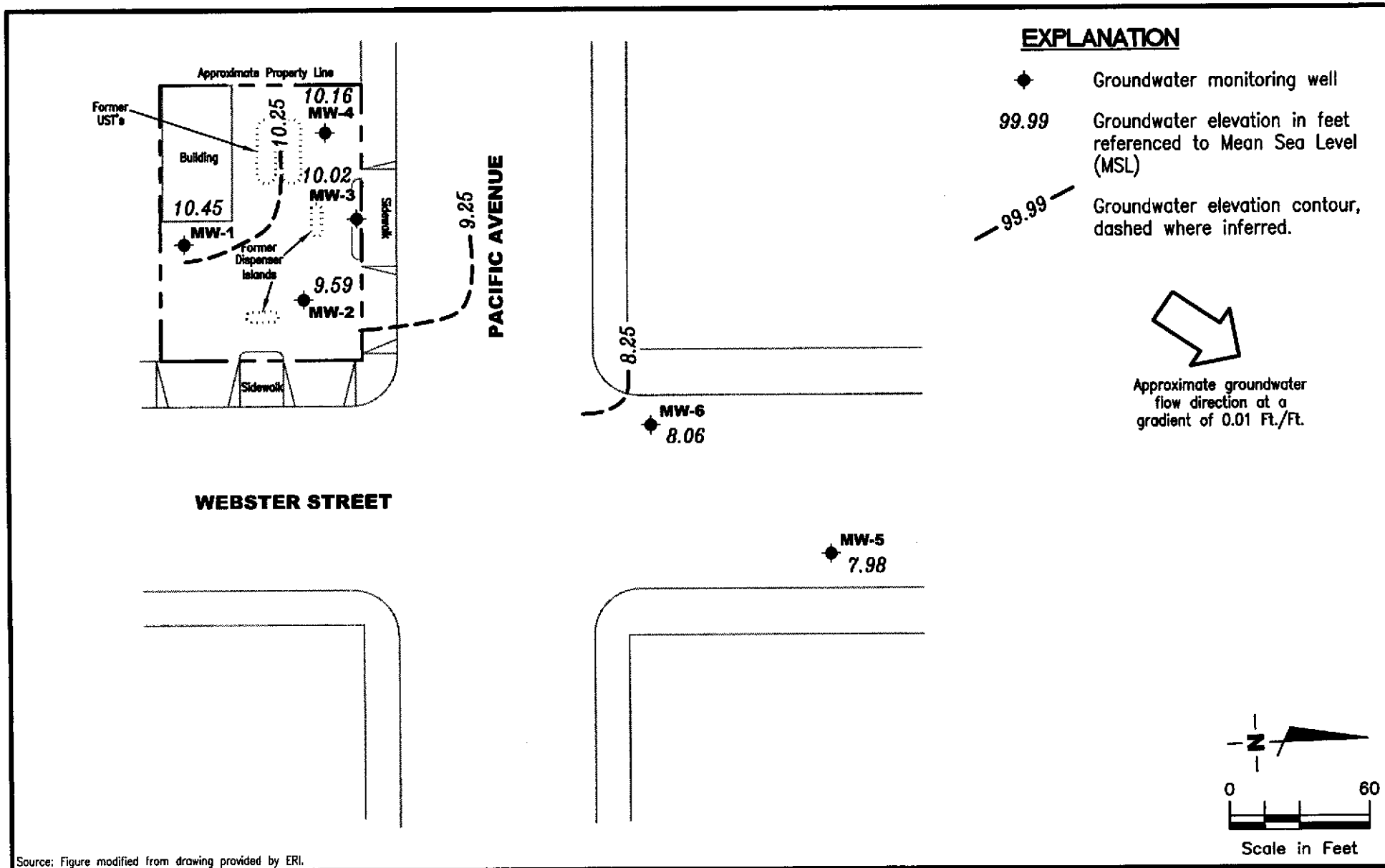


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and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

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Source: Figure modified from drawing provided by ERI.



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

FIGURE

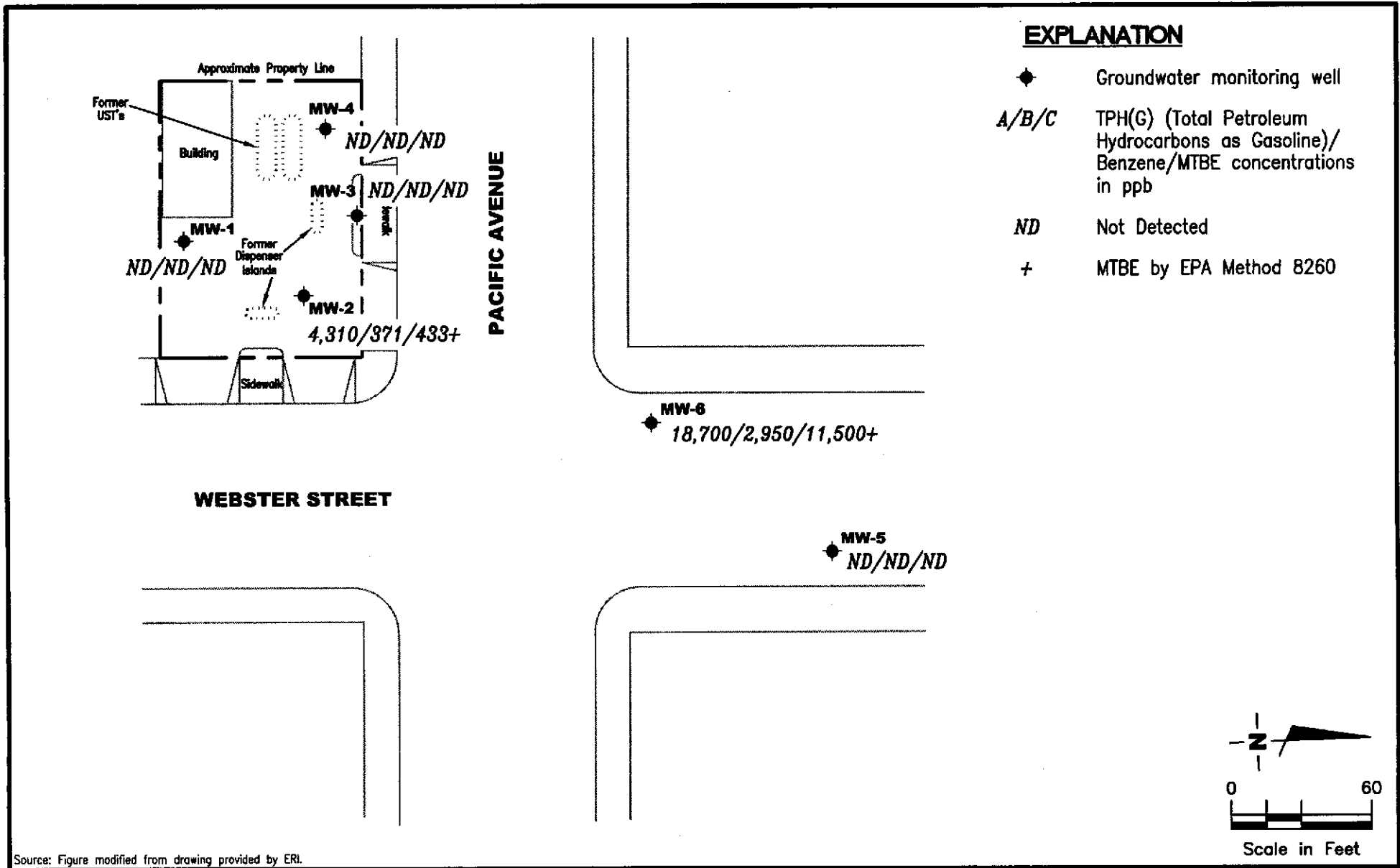
1

PROJECT NUMBER  
 180203

REVIEWED BY

DATE  
 March 17, 2001

REVISED DATE



Source: Figure modified from drawing provided by ERI.

**GETTLER - RYAN INC.**  
 6747 Sierra Ct., Suite J  
 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  
 March 17, 2001

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>03/17/01</b>	<b>5.73</b>	<b>10.45</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
<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>03/17/01</b>	<b>5.98</b>	<b>9.59</b>	<b>4,310<sup>5</sup></b>	<b>371</b>	<b>59.0</b>	<b>280</b>	<b>682</b>	<b>321/433<sup>2</sup></b>
<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
	<b>03/17/01</b>	<b>5.09</b>	<b>10.02</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>

**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)
MW-4	03/05/99 <sup>1</sup>	--	--	ND	ND	ND	ND	2.44	25.2 <sup>2</sup>
15.17	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>
	03/17/01	5.01	10.16	ND	ND	ND	ND	ND	ND
MW-5	12/14/99	6.45	6.89	ND	ND	ND	ND	ND	3.5/3.8 <sup>2</sup>
13.34	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
	03/17/01	5.36	7.98	ND	ND	ND	ND	ND	ND
MW-6	12/14/99	6.64	7.44	ND	ND	ND	ND	ND	11,000/18,000 <sup>2</sup>
14.08	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>
	03/17/01	6.02	8.06	18,700 <sup>5</sup>	2,950	989	1,040	3,000	10,200/11,500 <sup>2</sup>

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

<b>WELL ID/ TOC* (fl.)</b>	<b>DATE</b>	<b>DTW (ft.)</b>	<b>GWE (msl)</b>	<b>TPH-G (ppb)</b>	<b>B (ppb)</b>	<b>T (ppb)</b>	<b>E (ppb)</b>	<b>X (ppb)</b>	<b>MTBE (ppb)</b>
<b>Trip Blank</b>	03/05/99 <sup>1</sup>	--	--	ND	ND	ND	ND	ND	ND <sup>2</sup>
<b>TB-LB</b>	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
	<b>03/17/01</b>	--	--	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>



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

**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> B,T,E,X by EPA Method 8260.

<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>
	03/17/01	ND <sup>1</sup>	ND <sup>1</sup>	433	14.8	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	--	--	--	--	--
	03/17/01	ND <sup>1</sup>	ND <sup>1</sup>	11,500	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	219	ND <sup>1</sup>

**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 # 0843  
Address: 1629 Webster St.  
City: Alameda, CA.

Job#: 180203  
Date: 3-17-01  
Sampler: Joe

Well ID: MW-1  
Well Diameter: 2 in.  
Total Depth: 20.05 ft.  
Depth to Water: 5.73 ft.

Well Condition: o.k.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.32 x VF 0.17 = 2.43 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

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

Starting Time: 9:25  
Sampling Time: 9:48 AM  
Purging Flow Rate: 1 gpm.  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear  
Water Color: clear Odor: none  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^3$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>9:32</u>	<u>2.5</u>	<u>7.67</u>	<u>13.22</u>	<u>71.2</u>	_____	_____	_____
<u>9:34</u>	<u>5</u>	<u>7.60</u>	<u>12.95</u>	<u>71.5</u>	_____	_____	_____
<u>9:36</u>	<u>7.5</u>	<u>7.59</u>	<u>12.96</u>	<u>71.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3VOL</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 0843  
Address: 1629 Webster St.  
City: Alameda, CA.

Job#: 180203  
Date: 3-17-01  
Sampler: Joe

Well ID: MW-2  
Well Diameter: 2 in.  
Total Depth: 20.25 ft.  
Depth to Water: 5.98 ft.

Well Condition: O.K.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17 6" = 1.50	3" = 0.38 12" = 5.80	4" = 0.66

14.27 x VF 0.17 = 2.43 x 3 (case volume) = Estimated Purge Volume: 7.3 (gal.)

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

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

Starting Time: 11:48  
Sampling Time: 12:10 p.m.  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: Clear  
Water Color: Clear Odor: Yes  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:55</u>	<u>2.5</u>	<u>6.90</u>	<u>2.67</u>	<u>70.2</u>	_____	_____	_____
<u>11:57</u>	<u>5</u>	<u>6.88</u>	<u>2.66</u>	<u>70.5</u>	_____	_____	_____
<u>11:59</u>	<u>7.5</u>	<u>6.85</u>	<u>2.70</u>	<u>70.7</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>2 vol</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(6)oxy, 1,2 DCA/EDA</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 0843  
Address: 1629 Webster St.  
City: Alameda, CA.

Job#: 180203  
Date: 3-17-01  
Sampler: Joe

Well ID: MW-3  
Well Diameter: 2 in  
Total Depth: 19.90 ft  
Depth to Water: 5.09 ft

Well Condition: o.k.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.81 x VF 0.17 = 2.52 x 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 10:10  
Sampling Time: 10:30 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: Clear  
Water Color: Clear Odor: none  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:10</u>	<u>2.5</u>	<u>7.42</u>	<u>9.38</u>	<u>71.9</u>	_____	_____	_____
<u>10:12</u>	<u>5.5</u>	<u>7.40</u>	<u>9.48</u>	<u>72.0</u>	_____	_____	_____
<u>10:14</u>	<u>8</u>	<u>7.44</u>	<u>9.46</u>	<u>71.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 Vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # 0843 Job#: 180203  
 Address: 1629 Webster St. Date: 3-17-01  
 City: Alameda, 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: 19.80 ft.  
 Depth to Water: 5.01 ft.

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

14.79 x VF 0.17 = 2.51 x 3 (case volume) = Estimated Purge Volume: 7.5 gal.

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

Starting Time: 10:37 Weather Conditions: clear  
 Sampling Time: 10:58 AM Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:45</u>	<u>2.5</u>	<u>7.77</u>	<u>10.16</u>	<u>72.2</u>	_____	_____	_____
<u>10:47</u>	<u>5</u>	<u>7.67</u>	<u>10.18</u>	<u>73.0</u>	_____	_____	_____
<u>10:49</u>	<u>7.5</u>	<u>7.59</u>	<u>10.19</u>	<u>72.1</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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



## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/  
Facility # 0843  
Address: 1629 Webster st.  
City: Alameda, CA.

Job#: 180203  
Date: 3-17-01  
Sampler: Joe

Well ID: MW-5  
Well Diameter: 2 in.  
Total Depth: 20.22 ft.  
Depth to Water: 5.36 ft.

Well Condition: O.K.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.86 x VF 0.17 = 2.53 x 3 (case volume) = Estimated Purge Volume: 8 (gal.)

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

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

Starting Time: 8:39  
Sampling Time: 9:07 AM  
Purging Flow Rate: \_\_\_\_\_ gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear  
Water Color: clear Odor: none  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{hos/cm K}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:50</u>	<u>3</u>	<u>7.92</u>	<u>867</u>	<u>71.9</u>	_____	_____	_____
<u>8:52</u>	<u>5</u>	<u>7.47</u>	<u>9.08</u>	<u>72.0</u>	_____	_____	_____
<u>8:54</u>	<u>8</u>	<u>7.52</u>	<u>9.15</u>	<u>72.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3YOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/  
Facility # 0843  
Address: 1629 Webster st.  
City: Alameda, CA.

Job#: 180203  
Date: 3-17-01  
Sampler: Joe

Well ID MW-6  
Well Diameter 2 in.  
Total Depth 20.15 ft.  
Depth to Water 6.02 ft.

Well Condition: O.K.

Hydrocarbon Thickness:	<u>0</u> in.	Amount Bailed (product/water):	<u>0</u> (gal.)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

14.13 x VF 0.17 = 2.40 x 3 (case volume) = Estimated Purge Volume: 7.5 (gal.)

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

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

Starting Time: 11:15  
Sampling Time: 11:40 am  
Purging Flow Rate: 1 gpm.  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear  
Water Color: clear Odor: mild  
Sediment Description: \_\_\_\_\_  
If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu$ mhos/cm $\times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:27</u>	<u>2.5</u>	<u>7.40</u>	<u>5.78</u>	<u>72.5</u>	_____	_____	_____
<u>11:29</u>	<u>5</u>	<u>7.31</u>	<u>5.76</u>	<u>72.6</u>	_____	_____	_____
<u>11:32</u>	<u>7.5</u>	<u>7.29</u>	<u>5.79</u>	<u>72.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>3Y0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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



Tosco Marketing Company  
2020 Crow Canyon Pl., Ste. 400  
San Ramon, California 94583

Facility Number: TOSCO (Former 76) SS #0843  
 Facility Address: 1629 Webster Street, ALAMEDA CA  
 Consultant Project Number: 180003.85  
 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. Ed Ralston  
 (Phone): (916) 774-2910  
 Laboratory Name: Sequoia Analytical  
 Laboratory Release Number: \_\_\_\_\_  
 Samples Collected by (Name): JOE ASEMIAN  
 Collection Date: 3-17-01  
 Signature: \_\_\_\_\_

DO NOT BILL  
TB-LB ANALYSIS

Run 8260 - 6 Oxy's  
+1,2-DCA & EDB  
on ALL 8020 Mtb  
hits. Thank you.

U03121

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type C = Grab G = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed																		
								TPH G + STEX + M/TBE (8016)	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)											
TB-LB	01	1	W	G	-	HCl	Y	✓																		
MW-1	02	3	Soil	-	9:48	/	/	✓																		
MW-2	03	3	Soil	-	12:10	/	/	✓																		
MW-3	04	3	Soil	-	10:30	/	/	✓																		
MW-4	05	3	Soil	-	10:58	/	/	✓																		
MW-5	06	3	Soil	-	9:07	/	/	✓																		
MW-6	07	3	Soil	-	11:40	/	/	✓																		

Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)  
 (6 oxy's, 1/2 mtbe) by 8760

Requested By (Signature) <i>Joe Asemian</i>	Organization G-R Inc.	Date/Time 3-19-01	Received By (Signature) <i>Ed Ralston</i>	Organization	Date/Time 3/19/01
Requested By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Requested By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)	Organization	Date/Time

Turn Around Time (Circle Choice)

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



# Sequoia Analytical

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

March 30 , 2001

Deanna Harding  
Gettler-Ryan/Geostrategies(1)  
6747 Sierra Court, Suite J  
Dublin, CA 94568  
RE: Tosco(1) / L103121

Enclosed are the results of analyses for samples received by the laboratory on 03/19/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate Number 2360



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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L103121-01	Water	03/17/01 00:00	03/19/01 17:00
MW-1	L103121-02	Water	03/17/01 09:48	03/19/01 17:00
MW-2	L103121-03	Water	03/17/01 12:10	03/19/01 17:00
MW-3	L103121-04	Water	03/17/01 10:30	03/19/01 17:00
MW-4	L103121-05	Water	03/17/01 10:58	03/19/01 17:00
MW-5	L103121-06	Water	03/17/01 09:07	03/19/01 17:00
MW-6	L103121-07	Water	03/17/01 11:40	03/19/01 17:00

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>TB-LB (L103121-01) Water Sampled: 03/17/01 00:00 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030090	03/27/01	03/27/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	70-130		"	"	"	"	
<b>MW-1 (L103121-02) Water Sampled: 03/17/01 09:48 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030090	03/27/01	03/27/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	70-130		"	"	"	"	
<b>MW-2 (L103121-03) Water Sampled: 03/17/01 12:10 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	4310	1250	ug/l	25	1030090	03/27/01	03/27/01	DHS LUFT	P-01
Benzene	371	12.5	"	"	"	"	"	"	
Toluene	59.0	12.5	"	"	"	"	"	"	
Ethylbenzene	280	12.5	"	"	"	"	"	"	
Xylenes (total)	682	12.5	"	"	"	"	"	"	
Methyl tert-butyl ether	321	125	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94.2 %	70-130		"	"	"	"	

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (L103121-04) Water Sampled: 03/17/01 10:30 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030089	03/27/01	03/27/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.2 %		70-130	"	"	"	"	
<b>MW-4 (L103121-05) Water Sampled: 03/17/01 10:58 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030089	03/27/01	03/27/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.7 %		70-130	"	"	"	"	
<b>MW-5 (L103121-06) Water Sampled: 03/17/01 09:07 Received: 03/19/01 17:00</b>									
Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l	1	1030089	03/27/01	03/27/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		94.6 %		70-130	"	"	"	"	

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (L103121-07) Water</b> <b>Sampled: 03/17/01 11:40</b> <b>Received: 03/19/01 17:00</b>									
<b>Purgeable Hydrocarbons as Gasoline</b>	<b>18700</b>	<b>5000</b>	<b>ug/l</b>	<b>100</b>	<b>1030090</b>	<b>03/27/01</b>	<b>03/27/01</b>	<b>DHS LUFT</b>	<b>P-01</b>
<b>Benzene</b>	<b>2950</b>	<b>50.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>Toluene</b>	<b>989</b>	<b>50.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>Ethylbenzene</b>	<b>1040</b>	<b>50.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>Xylenes (total)</b>	<b>3000</b>	<b>50.0</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>Methyl tert-butyl ether</b>	<b>10200</b>	<b>500</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<b>92.4 %</b>	<b>70-130</b>		<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	



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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (L103121-03) Water</b> Sampled: 03/17/01 12:10 Received: 03/19/01 17:00									
Ethanol	ND	5000	ug/l	5	1030066	03/20/01	03/20/01	EPA 8260B	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
Di-isopropyl ether	14.8	10.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Methyl tert-butyl ether	433	10.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	10.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	500	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		104 %		76-114	"	"	"	"	
Surrogate: Toluene-d8		96.0 %		88-110	"	"	"	"	
<b>MW-6 (L103121-07) Water</b> Sampled: 03/17/01 11:40 Received: 03/19/01 17:00									
Ethanol	ND	71400	ug/l	71.43	1030093	03/30/01	03/30/01	EPA 8260B	
1,2-Dibromoethane	ND	143	"	"	"	"	"	"	
1,2-Dichloroethane	219	143	"	"	"	"	"	"	
Di-isopropyl ether	ND	143	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	143	"	"	"	"	"	"	
Methyl tert-butyl ether	11500	143	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	143	"	"	"	"	"	"	
Tert-butyl alcohol	ND	7140	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.2 %		76-114	"	"	"	"	
Surrogate: Toluene-d8		100 %		88-110	"	"	"	"	

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

Project: Tosco(1)  
 Project Number: Tosco (76) SS#0843  
 Project Manager: Deanna Harding

Reported:  
 03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030089 - EPA 5030B (P/T)**

**Blank (1030089-BLK1)**

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
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	7.88		"	10.0		78.8	70-130			

**LCS (1030089-BS1)**

Prepared & Analyzed: 03/27/01

Benzene	7.77	0.500	ug/l	10.0		77.7	70-130			
Toluene	7.87	0.500	"	10.0		78.7	70-130			
Ethylbenzene	7.85	0.500	"	10.0		78.5	70-130			
Xylenes (total)	23.9	0.500	"	30.0		79.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	8.40		"	10.0		84.0	70-130			

**LCS (1030089-BS2)**

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	286	50.0	ug/l	250		114	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.61		"	10.0		96.1	70-130			

**Matrix Spike (1030089-MS1)**

Source: L103105-08

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	261	50.0	ug/l	250	ND	104	60-140			
Surrogate: a,a,a-Trifluorotoluene	8.94		"	10.0		89.4	70-130			

**Matrix Spike Dup (1030089-MSD1)**

Source: L103105-08

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	250	50.0	ug/l	250	ND	100	60-140	4.31	25	
Surrogate: a,a,a-Trifluorotoluene	9.48		"	10.0		94.8	70-130			

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030090 - EPA 5030B (P/T)**

**Blank (1030090-BLK1)**

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	ND	50.0	ug/l							
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	10.2		"	10.0		102	70-130			

**LCS (1030090-BS1)**

Prepared & Analyzed: 03/27/01

Benzene	9.51	0.500	ug/l	10.0		95.1	70-130			
Toluene	9.42	0.500	"	10.0		94.2	70-130			
Ethylbenzene	9.63	0.500	"	10.0		96.3	70-130			
Xylenes (total)	28.9	0.500	"	30.0		96.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.0		"	10.0		100	70-130			

**LCS (1030090-BS2)**

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	245	50.0	ug/l	250		98.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.8		"	10.0		108	70-130			

**Matrix Spike (1030090-MS1)**

Source: L103105-12

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	232	50.0	ug/l	250	ND	92.8	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.85		"	10.0		98.5	70-130			

**Matrix Spike Dup (1030090-MSD1)**

Source: L103105-12

Prepared & Analyzed: 03/27/01

Purgeable Hydrocarbons as Gasoline	222	50.0	ug/l	250	ND	88.8	60-140	4.41	25	
Surrogate: a,a,a-Trifluorotoluene	9.37		"	10.0		93.7	70-130			

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030066 - EPA 5030B [P/T]**

**Blank (1030066-BLK1)**

Prepared & Analyzed: 03/19/01

Ethanol	ND	1000	ug/l							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.3		"	50.0		98.6	76-114			
<i>Surrogate: Toluene-d8</i>	50.7		"	50.0		101	88-110			

**Blank (1030066-BLK2)**

Prepared & Analyzed: 03/20/01

Ethanol	ND	1000	ug/l							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.2		"	50.0		98.4	76-114			
<i>Surrogate: Toluene-d8</i>	49.6		"	50.0		99.2	88-110			

**Blank (1030066-BLK3)**

Prepared & Analyzed: 03/21/01

Ethanol	ND	1000	ug/l							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.6		"	50.0		99.2	76-114			
<i>Surrogate: Toluene-d8</i>	51.7		"	50.0		103	88-110			

Sequoia Analytical - San Carlos

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

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030066 - EPA 5030B [P/T]**

Prepared & Analyzed: 03/19/01										
<b>LCS (1030066-BS1)</b>										
Methyl tert-butyl ether	52.8	2.00	ug/l	50.0		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.6		"	50.0		99.2	76-114			
Surrogate: Toluene-d8	50.2		"	50.0		100	88-110			

Prepared & Analyzed: 03/20/01										
<b>LCS (1030066-BS2)</b>										
Methyl tert-butyl ether	52.1	2.00	ug/l	50.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	50.6		"	50.0		101	76-114			
Surrogate: Toluene-d8	48.5		"	50.0		97.0	88-110			

Prepared & Analyzed: 03/21/01										
<b>LCS (1030066-BS3)</b>										
Methyl tert-butyl ether	50.3	2.00	ug/l	50.0		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	51.4		"	50.0		103	76-114			
Surrogate: Toluene-d8	50.6		"	50.0		101	88-110			

Source: L103105-04 Prepared & Analyzed: 03/19/01										
<b>Matrix Spike (1030066-MS1)</b>										
Methyl tert-butyl ether	50.9	2.00	ug/l	50.0	ND	102	60-140			
Surrogate: 1,2-Dichloroethane-d4	48.9		"	50.0		97.8	76-114			
Surrogate: Toluene-d8	50.5		"	50.0		101	88-110			

Source: L103105-04 Prepared & Analyzed: 03/19/01										
<b>Matrix Spike Dup (1030066-MSD1)</b>										
Methyl tert-butyl ether	53.1	2.00	ug/l	50.0	ND	106	60-140	4.23	25	
Surrogate: 1,2-Dichloroethane-d4	50.5		"	50.0		101	76-114			
Surrogate: Toluene-d8	49.2		"	50.0		98.4	88-110			

**Batch 1030093 - EPA 5030B [P/T]**

Prepared & Analyzed: 03/28/01										
<b>Blank (1030093-BLK2)</b>										
Methyl tert-butyl ether	ND	2.00	ug/l							
Surrogate: 1,2-Dichloroethane-d4	53.4		"	50.0		107	76-114			
Surrogate: Toluene-d8	52.4		"	50.0		105	88-110			

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030093 - EPA 5030B [P/T]**

**Blank (1030093-BLK3)**

Prepared & Analyzed: 03/30/01

Ethanol	ND	1000	ug/l							
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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.4		"	50.0		98.8	76-114			
<i>Surrogate: Toluene-d8</i>	51.3		"	50.0		103	88-110			

**LCS (1030093-BS2)**

Prepared & Analyzed: 03/28/01

Ethanol	4220	1000	ug/l	5000		84.4	0-200			
1,2-Dibromoethane	50.6	2.00	"	50.0		101	0-200			
1,2-Dichloroethane	47.8	2.00	"	50.0		95.6	0-200			
Di-isopropyl ether	52.0	2.00	"	50.0		104	0-200			
Ethyl tert-butyl ether	53.2	2.00	"				0-200			
Methyl tert-butyl ether	52.8	2.00	"	50.0		106	70-130			
Tert-amyl methyl ether	53.8	2.00	"	50.0		108	0-200			
Tert-butyl alcohol	511	100	"	500		102	0-200			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.7		"	50.0		107	76-114			
<i>Surrogate: Toluene-d8</i>	53.2		"	50.0		106	88-110			

**LCS (1030093-BS3)**

Prepared & Analyzed: 03/30/01

Methyl tert-butyl ether	53.3	2.00	ug/l	50.0		107	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.0		"	50.0		100	76-114			
<i>Surrogate: Toluene-d8</i>	50.9		"	50.0		102	88-110			

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

Project: Tosco(1)  
 Project Number: Tosco (76) SS#0843  
 Project Manager: Deanna Harding

Reported:  
 03/30/01 14:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1030093 - EPA 5030B [P/T]**

<b>Matrix Spike (1030093-MS1)</b>		<b>Source: L103153-07</b>			<b>Prepared &amp; Analyzed: 03/28/01</b>					
Methyl tert-butyl ether	51.2	2.00	ug/l	50.0	ND	102	60-140			
Surrogate: 1,2-Dichloroethane-d4	55.6		"	50.0		111	76-114			
Surrogate: Toluene-d8	52.8		"	50.0		106	88-110			
<b>Matrix Spike Dup (1030093-MSD1)</b>		<b>Source: L103153-07</b>			<b>Prepared &amp; Analyzed: 03/28/01</b>					
Methyl tert-butyl ether	57.4	2.00	ug/l	50.0	ND	115	60-140	11.4	25	
Surrogate: 1,2-Dichloroethane-d4	54.8		"	50.0		110	76-114			
Surrogate: Toluene-d8	51.2		"	50.0		102	88-110			

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

Project: Tosco(1)  
Project Number: Tosco (76) SS#0843  
Project Manager: Deanna Harding

Reported:  
03/30/01 14:08

#### Notes and Definitions

P-01 Chromatogram Pattern: Gasoline C6-C12  
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