

8/31/00

MTBE conc. are decreasing  
in MW-2 and maybe  
in MW-6. Most do well  
still NDF for MTBE + BTEX.



# GETTLER-RYAN INC.

## TRANSMITTAL

July 26, 2000  
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	July 20, 2000	Groundwater Monitoring and Sampling Report Second Quarter 2000 - Event of May 31, 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 **August 7, 2000**, this report will be distributed to the following:

Enclosure

cc: Ms. Eva Chu, Alameda County Dept. of Environmental Health, 1131 Harbor Bay Parkway, Alameda, CA 94501

GOV-09 AM 8:22  
ENVIRONMENTAL  
PROTECTION

trans/0843.dbd

## QUARTERLY SUMMARY REPORT

Second Quarter 2000

(April - June)

### TOSCO 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 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. Concentrations of dissolved TPHg (up to 34,400 ppb), benzene (at 2,070 ppb), and MTBE (up to 8,460 ppb) were detected in groundwater samples collected in well MW1 through MW4.

During fourth quarter 1999, ERI installed two off-site groundwater monitoring wells downgradient of the site. Concentrations of dissolved MTBE were detected the 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.

### 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</u>
Soil remediation in progress?	<u>No</u>
Dissolved/free product remediation in progress?	<u>No</u>

CONSULTANT: Environmental Resolutions, Inc.



# GETTLER - RYAN INC.

July 20, 2000  
G-R Job #180203

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

RE: Second 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 May 31, 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 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 is also attached.

Sincerely,

Deanna L. Harding  
Project Coordinator

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

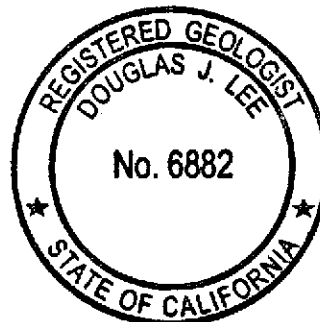
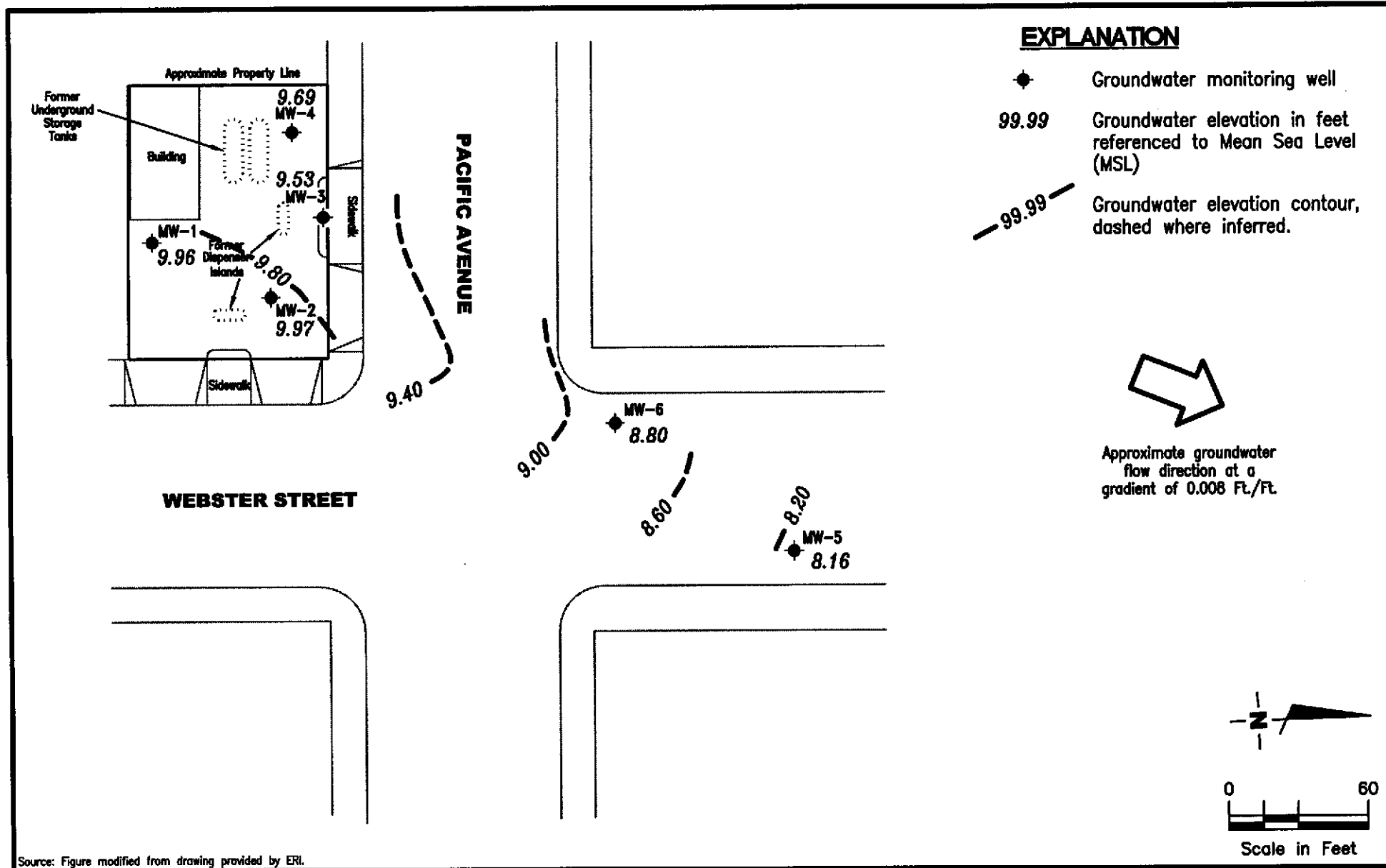


Figure 1: Potentiometric Map  
Figure 2: Concentration Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and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

0843.qml



**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

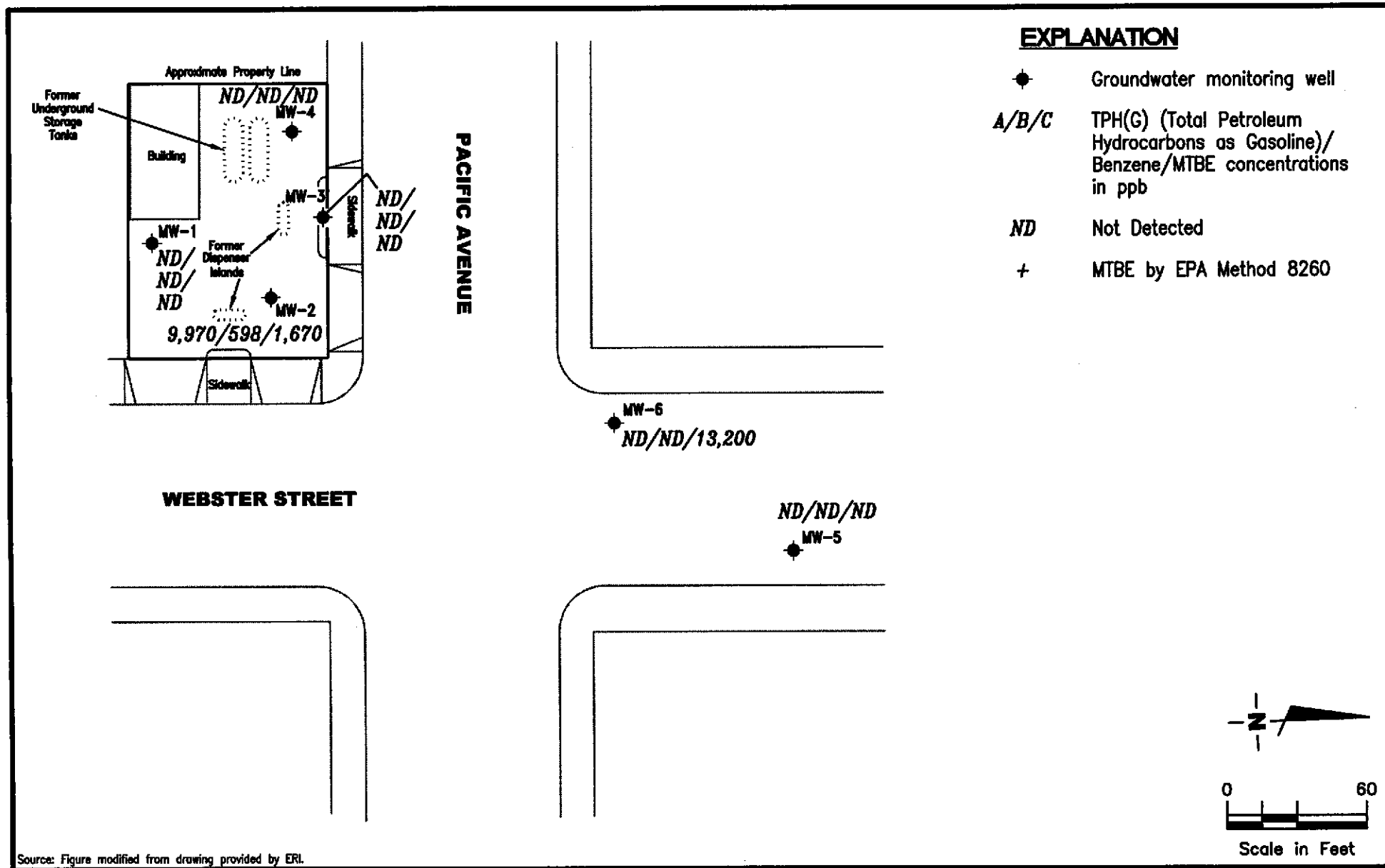
FIGURE  
**1**

JOB NUMBER  
**180203**

REVIEWED BY

DATE  
**May 31, 2000**

REVISED DATE



**Gertler - 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

JOB NUMBER  
180203

REVIEWED BY

DATE  
May 31, 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*	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
<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>
<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
<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>

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

WELL ID/ TOC*	DATE	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4 (cont)	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
MW-5 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
MW-6 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
Trip Blank 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

**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

DTW = Depth to Water

(ft.) = Feet

GWE = Groundwater Elevation

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 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 8260A.

<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>
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	--	--	--	--	--
MW-5	12/14/99	--	--	3.8	--	--	--	--	--
MW-6	12/14/99	--	--	18,000	--	--	--	--	--
	03/14/00	--	--	21,000 <sup>2</sup>	--	--	--	--	--

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

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**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 = Ethylene dibromide  
ppb = Parts per billion  
ND = Not Detected  
-- = Not Analyzed

**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: 5-31-00  
Sampler: Joe

Well ID MW-1  
Well Diameter 2 in  
Total Depth 20.05 ft  
Depth to Water 6.22 ft

Well Condition: O.K.

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

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

13.83 x VF 0.17 = 2.35 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: 8:42  
Sampling Time: 9:05 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

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

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^0$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:50</u>	<u>2.5</u>	<u>7.40</u>	<u>10.46</u>	<u>71.2</u>	_____	_____	_____
<u>8:51</u>	<u>5</u>	<u>7.28</u>	<u>10.44</u>	<u>72.8</u>	_____	_____	_____
<u>8:53</u>	<u>7.5</u>	<u>7.39</u>	<u>10.45</u>	<u>73.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

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

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

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

Job#: 180203  
Date: 5-31-00  
Sampler: Joe

Well ID MW-2  
Well Diameter 2 in  
Total Depth 20.25 ft  
Depth to Water 5.60 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" = 5.50	

$14.65 \times VF 0.17 = 2.49 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 7.5 \text{ (gal.)}$

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

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

Starting Time: 11:00  
Sampling Time: 11:22 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/hot  
Water Color: clear Odor: Some  
Sediment Description: None  
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>11:10</u>	<u>2.5</u>	<u>7.07</u>	<u>4.35</u>	<u>71.8</u>	_____	_____	_____
<u>11:11</u>	<u>5</u>	<u>7.04</u>	<u>4.89</u>	<u>73.6</u>	_____	_____	_____
<u>11:12</u>	<u>7.5</u>	<u>7.14</u>	<u>4.92</u>	<u>73.2</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPHG, BTEX, MTBE</u>
	<u>2VCA</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(6) Oxy's, 12 DCA/EDS, 8260</u>

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/Facility # 0843 Job#: 180203  
 Address: 1629 Webster St. Date: 5-31-00  
 City: Alameda, CA Sampler: Joe

Well ID MW-3 Well Condition: O.K.  
 Well Diameter 2 in Hydrocarbon Thickness: Ø in Amount Bailed (product/water): Ø (gal.)  
 Total Depth 19.90 ft  
 Depth to Water 5.58 ft

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

$14.32 \times VF \ 0.17 = 2.43 \times 3 \text{ (case volume)} = \text{Estimated Purge Volume: } 7.5 \text{ (gal.)}$

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

Starting Time: 9:12 Weather Conditions: clear/hot  
 Sampling Time: 9:30 AM Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: None  
 Did well de-water? \_\_\_\_\_ 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>9:20</u>	<u>2.5</u>	<u>7.76</u>	<u>8.35</u>	<u>74.1</u>			
<u>9:21</u>	<u>5</u>	<u>7.53</u>	<u>7.49</u>	<u>73.8</u>			
<u>9:22</u>	<u>7.5</u>	<u>7.42</u>	<u>7.52</u>	<u>73.9</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 VSA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</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: 5-31-00  
Sampler: Joe

Well ID MW-4  
Well Diameter 2 in  
Total Depth 19.80 ft  
Depth to Water 5.48 ft

Well Condition: O.K.

Hydrocarbon Thickness:	<u>Ø</u> in.	Amount Bailed (product/water):	<u>Ø</u> (gal)
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.50	

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: 9:40  
Sampling Time: 10:06 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear/hot  
Water Color: clear Odor: none  
Sediment Description: none  
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>9:51</u>	<u>2.5</u>	<u>7.66</u>	<u>9.46</u>	<u>73.3</u>	_____	_____	_____
<u>9:53</u>	<u>5</u>	<u>7.39</u>	<u>9.52</u>	<u>73.5</u>	_____	_____	_____
<u>9:54</u>	<u>7.5</u>	<u>7.28</u>	<u>9.55</u>	<u>73.4</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

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

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

Client/ Facility # 0843 Job#: 180203  
 Address: 1629 Webster St. Date: 5-31-00  
 City: Alameda, CA Sampler: Joe

Well ID MW-5 Well Condition: O.K.  
 Well Diameter 2 in Hydrocarbon Amount Bailed  
 Thickness: 0 in (product/water): 0 (gal.)  
 Total Depth 20.22 ft  
 Depth to Water 5.18 ft

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

15.04 x VF 0.17 = 2.56 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: 7:55 Weather Conditions: clear/hot  
 Sampling Time: 8:20 A.M. Water Color: clear Odor: none  
 Purging Flow Rate: 1 gpm Sediment Description: None  
 Did well de-water? \_\_\_\_\_ If yes; Time: \_\_\_\_\_ Volume: \_\_\_\_\_ (gal)

Time	Volume (gal)	pH	Conductivity $10^3$ $\mu$ mhos/cm	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:08</u>	<u>3</u>	<u>7.37</u>	<u>10.51</u>	<u>73.2</u>			
<u>8:10</u>	<u>5</u>	<u>7.27</u>	<u>10.48</u>	<u>73.8</u>			
<u>8:12</u>	<u>8</u>	<u>7.26</u>	<u>10.49</u>	<u>74.1</u>			

**LABORATORY INFORMATION**

SAMPLE ID	(?) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3VCA</u>	<u>Y</u>	<u>HCL</u>	<u>Sequoia</u>	<u>TPH, BTEX, MTBE</u>

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



**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

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

Job#: 180203  
Date: 5-31-00  
Sampler: Joe

Well ID: MW-6  
Well Diameter: 2 in  
Total Depth: 20.15 +  
Depth to Water: 5.28 +

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" = 5.50	

14.87 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: 10:20  
Sampling Time: 10:33 AM  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: clear  
Water Color: clear Odor: none  
Sediment Description: none  
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>10:30</u>	<u>3</u>	<u>7.40</u>	<u>5.55</u>	<u>73.9</u>	_____	_____	_____
<u>10:31</u>	<u>5</u>	<u>7.30</u>	<u>5.68</u>	<u>74.1</u>	_____	_____	_____
<u>10:33</u>	<u>8</u>	<u>7.24</u>	<u>5.72</u>	<u>73.6</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**LABORATORY INFORMATION**

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

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

L005211



Tosco Marketing Company  
8000 Crow Canyon Pl., Box 400  
San Ramon, California 94583

Facility Number TOSCO (Former 76) SS #0843  
 Facility Address 1629 Webster Street, ALAMEDA CA  
 Consultant Project Number 180023.85  
 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 David Ch. White  
 (Phone) (916) 774-2910  
 Laboratory Name Sequoia Analytical  
 Laboratory Release Number \_\_\_\_\_  
 Samples Collected by (Name) JOE ASEMIAN  
 Collection Date 5-31-00  
 Signature [Signature]

DO NOT BILL  
TB-LB ANALYSIS

Analyses To Be Performed

Remarks

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed												Remarks				
								TPH Gas + BTEX w/MTBE (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		1 VoA	W	G	-	ICC	Y	✓																
MW-1		3 VoA			9:05			✓																
MW-2		5 VoA			11:22			✓																
MW-3		3 VoA			9:30			✓																
MW-4		"			10:06			✓																
MW-5		"			8:20			✓																
MW-6		"			10:43			✓																

6) Oxy's 12 Oct  
EBS by 8260

Shipped By (Signature) \_\_\_\_\_  
 Received By (Signature) \_\_\_\_\_  
 Shipped By (Signature) \_\_\_\_\_  
 Received By (Signature) \_\_\_\_\_  
 Shipped By (Signature) \_\_\_\_\_  
 Received For Laboratory By (Signature) \_\_\_\_\_

Organization G-R Inc. Date/Time 2:30  
5-31-00 5:00  
 Received By (Signature) [Signature]  
 Organization \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Organization \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received For Laboratory By (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Turn Around Time (Circle Choice)  
 24 Hrs.  
 48 Hrs.  
 6 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)

June 15, 2000

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

RE: Tosco(1)/L005211

Dear Deanna Harding:

Enclosed are the results of analyses for sample(s) received by the laboratory on May 31, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson  
Project Manager

CA ELAP Certificate Number I-2360





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

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

Sampled: 5/31/00  
Received: 5/31/00  
Reported: 6/15/00

**ANALYTICAL REPORT FOR L005211**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
TB-LB	L005211-01	Water	5/31/00
MW-1	L005211-02	Water	5/31/00
MW-2	L005211-03	Water	5/31/00
MW-3	L005211-04	Water	5/31/00
MW-4	L005211-05	Water	5/31/00
MW-5	L005211-06	Water	5/31/00
MW-6	L005211-07	Water	5/31/00





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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**Sample Description:** TB-LB  
**Laboratory Sample Number:** L005211-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0060014	6/5/00	6/5/00		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: <i>a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		97.7	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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Sample Description: MW-1  
Laboratory Sample Number: L005211-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0060013	6/5/00	6/5/00		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: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		105	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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Sample Description: MW-2  
Laboratory Sample Number: L005211-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Purgeable Hydrocarbons as Gasoline	0060022	6/6/00	6/7/00		1250	9970	ug/l	1
Benzene	"	"	"		12.5	598	"	
Toluene	"	"	"		12.5	1030	"	
Ethylbenzene	"	"	"		12.5	487	"	
Xylenes (total)	"	"	"		12.5	2060	"	
Methyl tert-butyl ether	"	"	"		125	2500	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		86.1	%	

**Volatile Organic Compounds by EPA Method 8260A**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Ethanol	0060010	6/5/00	6/5/00		20000	ND	ug/l	
1,2-Dibromoethane	"	"	"		40.0	ND	"	
1,2-Dichloroethane	"	"	"		40.0	ND	"	
Di-isopropyl ether	"	"	"		40.0	ND	"	
Ethyl tert-butyl ether	"	"	"		40.0	ND	"	
Methyl tert-butyl ether	"	"	"		40.0	1670	"	
Tert-amyl methyl ether	"	"	"		40.0	ND	"	
Tert-butyl alcohol	"	"	"		2000	ND	"	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	76.0-114		96.6	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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Sample Description: MW-3  
Laboratory Sample Number: L005211-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - San Carlos

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

Purgeable Hydrocarbons as Gasoline	0060013	6/5/00	6/5/00		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: <i>a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		99.9	%	







Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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**Sample Description:** MW-4  
**Laboratory Sample Number:** L005211-05

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0060013	6/5/00	6/5/00		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	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	70.0-130		97.3	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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Sample Description: MW-5  
Laboratory Sample Number: L005211-06

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>Sequoia Analytical - San Carlos</b>								
<b>Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT</b>								
Purgeable Hydrocarbons as Gasoline	0060022	6/6/00	6/6/00		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: <i>a,a,a</i> -Trifluorotoluene	"	"	"	70.0-130		101	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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Sample Description: **MW-6**  
Laboratory Sample Number: **L005211-07**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

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

Purgeable Hydrocarbons as Gasoline	0060022	6/6/00	6/6/00		500	ND	ug/l	
Benzene	"	"	"		5.00	ND	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	ND	"	
Methyl tert-butyl ether	"	"	6/7/00		500	13200	"	2
Surrogate: a,a-Trifluorotoluene	"	"	6/6/00	70.0-130		90.5	%	





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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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>Batch: 0060013</b>			<b>Date Prepared: 6/5/00</b>			<b>Extraction Method: EPA 5030B [P/T]</b>				
<b>Blank</b>			<b>0060013-BLK1</b>							
Purgeable Hydrocarbons as Gasoline	6/5/00			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		9.98	"	70.0-130	99.8			
<b>LCS</b>			<b>0060013-BS1</b>							
Benzene	6/5/00	10.0		9.16	ug/l	70.0-130	91.6			
Toluene	"	10.0		8.49	"	70.0-130	84.9			
Ethylbenzene	"	10.0		8.55	"	70.0-130	85.5			
Xylenes (total)	"	30.0		25.9	"	70.0-130	86.3			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.13	"	70.0-130	91.3			
<b>LCS</b>			<b>0060013-BS2</b>							
Purgeable Hydrocarbons as Gasoline	6/5/00	250		229	ug/l	70.0-130	91.6			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.2	"	70.0-130	102			
<b>Matrix Spike</b>			<b>0060013-MS1 L005212-10</b>							
Purgeable Hydrocarbons as Gasoline	6/5/00	250	ND	225	ug/l	60.0-140	90.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.77	"	70.0-130	97.7			
<b>Matrix Spike Dup</b>			<b>0060013-MSD1 L005212-10</b>							
Purgeable Hydrocarbons as Gasoline	6/5/00	250	ND	211	ug/l	60.0-140	84.4	25.0	6.42	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.88	"	70.0-130	98.8			
<b>Batch: 0060014</b>			<b>Date Prepared: 6/5/00</b>			<b>Extraction Method: EPA 5030B [P/T]</b>				
<b>Blank</b>			<b>0060014-BLK1</b>							
Purgeable Hydrocarbons as Gasoline	6/5/00			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		9.71	"	70.0-130	97.1			
<b>LCS</b>			<b>0060014-BS1</b>							
Benzene	6/5/00	10.0		9.20	ug/l	70.0-130	92.0			
Toluene	"	10.0		8.88	"	70.0-130	88.8			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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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) 0060014-BS1</b>										
Ethylbenzene	6/5/00	10.0		8.69	ug/l	70.0-130	86.9			
Xylenes (total)	"	30.0		26.6	"	70.0-130	88.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.4	"	70.0-130	104			
<b>LCS 0060014-BS2</b>										
Purgeable Hydrocarbons as Gasoline	6/5/00	250		224	ug/l	70.0-130	89.6			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.37	"	70.0-130	93.7			
<b>Matrix Spike 0060014-MS1 L005212-05</b>										
Purgeable Hydrocarbons as Gasoline	6/5/00	250	ND	233	ug/l	60.0-140	93.2			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.88	"	70.0-130	98.8			
<b>Matrix Spike Dup 0060014-MSD1 L005212-05</b>										
Purgeable Hydrocarbons as Gasoline	6/5/00	250	ND	228	ug/l	60.0-140	91.2	25.0	2.17	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.96	"	70.0-130	99.6			
<b>Batch: 0060022 Date Prepared: 6/6/00 Extraction Method: EPA 5030B [P/T]</b>										
<b>Blank 0060022-BLK1</b>										
Purgeable Hydrocarbons as Gasoline	6/6/00			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 0060022-BS1</b>										
Benzene	6/6/00	10.0		8.03	ug/l	70.0-130	80.3			
Toluene	"	10.0		7.68	"	70.0-130	76.8			
Ethylbenzene	"	10.0		7.34	"	70.0-130	73.4			
Xylenes (total)	"	30.0		22.4	"	70.0-130	74.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.38	"	70.0-130	93.8			
<b>LCS 0060022-BS2</b>										
Purgeable Hydrocarbons as Gasoline	6/6/00	250		220	ug/l	70.0-130	88.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.69	"	70.0-130	96.9			
<b>Matrix Spike 0060022-MS1 L005211-06</b>										
Benzene	6/6/00	10.0	ND	10.0	ug/l	60.0-140	100			
Toluene	"	10.0	ND	9.72	"	60.0-140	97.2			
Ethylbenzene	"	10.0	ND	9.43	"	60.0-140	94.3			





Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568	Project: Tosco(1) Project Number: Tosco (Former 76) SS#0843 Project Manager: Deanna Harding	Sampled: 5/31/00 Received: 5/31/00 Reported: 6/15/00
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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>Matrix Spike (continued)</b>										
	<u>0060022-MS1</u>		<u>L005211-06</u>							
Xylenes (total)	6/6/00	30.0	ND	28.1	ug/l	60.0-140	93.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.3	"	70.0-130	103			
<b>Matrix Spike Dup</b>										
	<u>0060022-MSD1</u>		<u>L005211-06</u>							
Benzene	6/6/00	10.0	ND	10.4	ug/l	60.0-140	104	25.0	3.92	
Toluene	"	10.0	ND	10.2	"	60.0-140	102	25.0	4.82	
Ethylbenzene	"	10.0	ND	9.45	"	60.0-140	94.5	25.0	0.212	
Xylenes (total)	"	30.0	ND	28.7	"	60.0-140	95.7	25.0	2.11	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.61	"	70.0-130	96.1			





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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0060010</b>			<b>Date Prepared: 6/2/00</b>			<b>Extraction Method: EPA 5030B [P/T]</b>				
<b>Blank</b>			<b>0060010-BLK1</b>							
Ethanol	6/2/00			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				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		52.9	"	76.0-114	106			
<b>Blank</b>			<b>0060010-BLK2</b>							
Ethanol	6/5/00			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				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		48.7	"	76.0-114	97.4			
<b>LCS</b>			<b>0060010-BS1</b>							
Methyl tert-butyl ether	6/2/00	50.0		37.1	ug/l	70.0-130	74.2			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		52.7	"	76.0-114	105			
<b>LCS</b>			<b>0060010-BS2</b>							
Methyl tert-butyl ether	6/5/00	50.0		44.0	ug/l	70.0-130	88.0			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		49.8	"	76.0-114	99.6			
<b>Matrix Spike</b>			<b>0060010-MS1</b>		<b>L006009-03</b>					
Methyl tert-butyl ether	6/5/00	50.0	ND	44.3	ug/l	60.0-140	88.6			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		48.9	"	76.0-114	97.8			
<b>Matrix Spike Dup</b>			<b>0060010-MSD1</b>		<b>L006009-03</b>					
Methyl tert-butyl ether	6/5/00	50.0	ND	45.6	ug/l	60.0-140	91.2	25.0	2.89	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	"	50.0		49.2	"	76.0-114	98.4			





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**Notes and Definitions**

#	Note
1	Chromatogram Pattern: Gasoline C6-C12
2	MTBE reported from a second run dilution.
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

