



# GETTLER-RYAN INC.

## TRANSMITTAL

AUG 07 2002

July 22, 2002  
G-R #180203

TO: Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

CC: Mr. Paul Blank  
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 Service Station  
#0843  
1629 Webster Street  
Alameda, California**

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DATED         | DESCRIPTION  |
|--------|---------------|--|
| 1      | July 18, 2002 | Groundwater Monitoring and Sampling Report<br>Second Quarter - Event of June 7, 2002 |

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 2, 2002**, 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



# GETTLER-RYAN INC.

July 18, 2002  
G-R Job #180203

Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

**RE: Second Quarter Event of June 7, 2002**  
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 and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical report are also attached.

Sincerely,

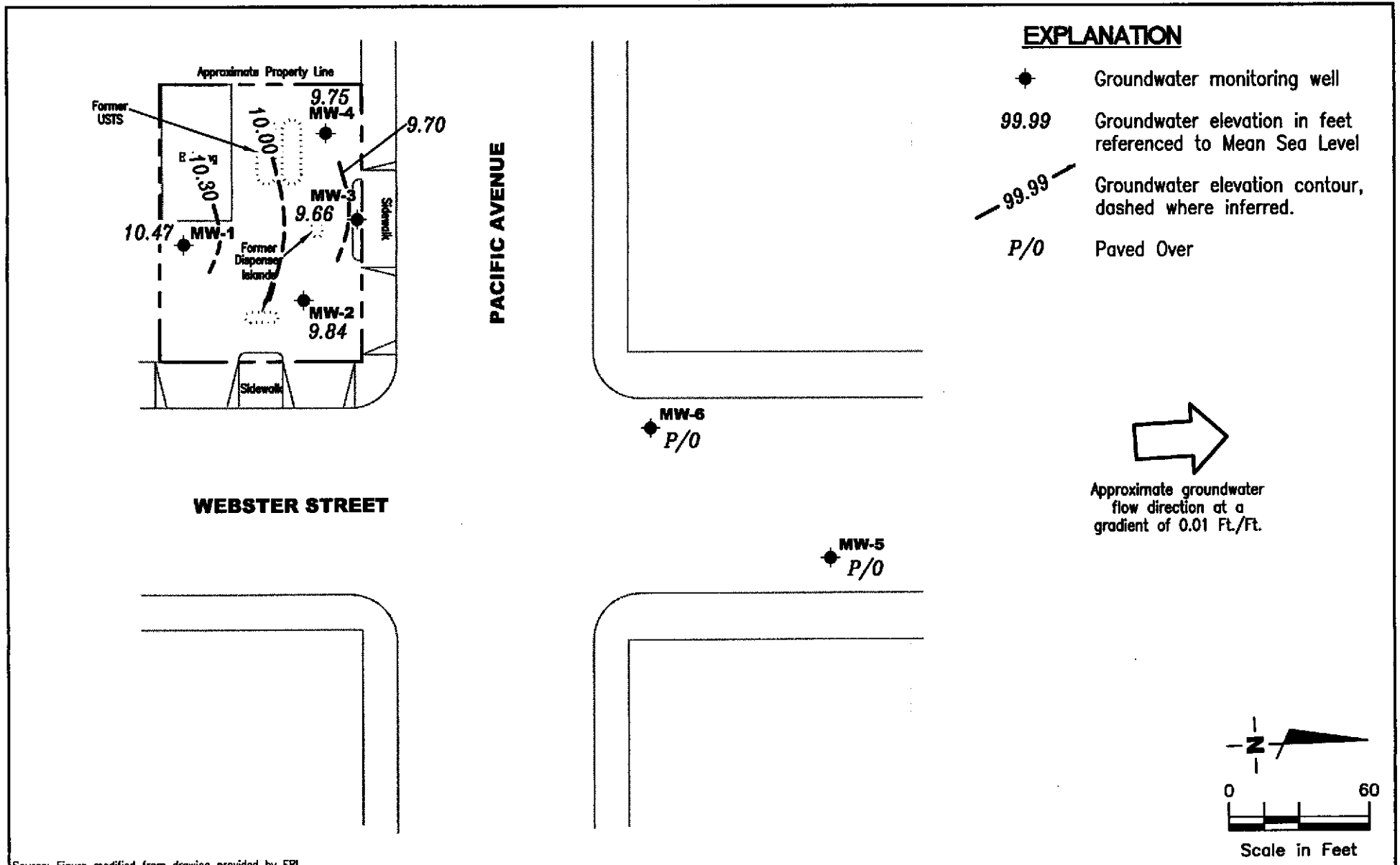
Deanna L. Harding  
Project Coordinator

Hagop Kevork  
P.E. No. C55734



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

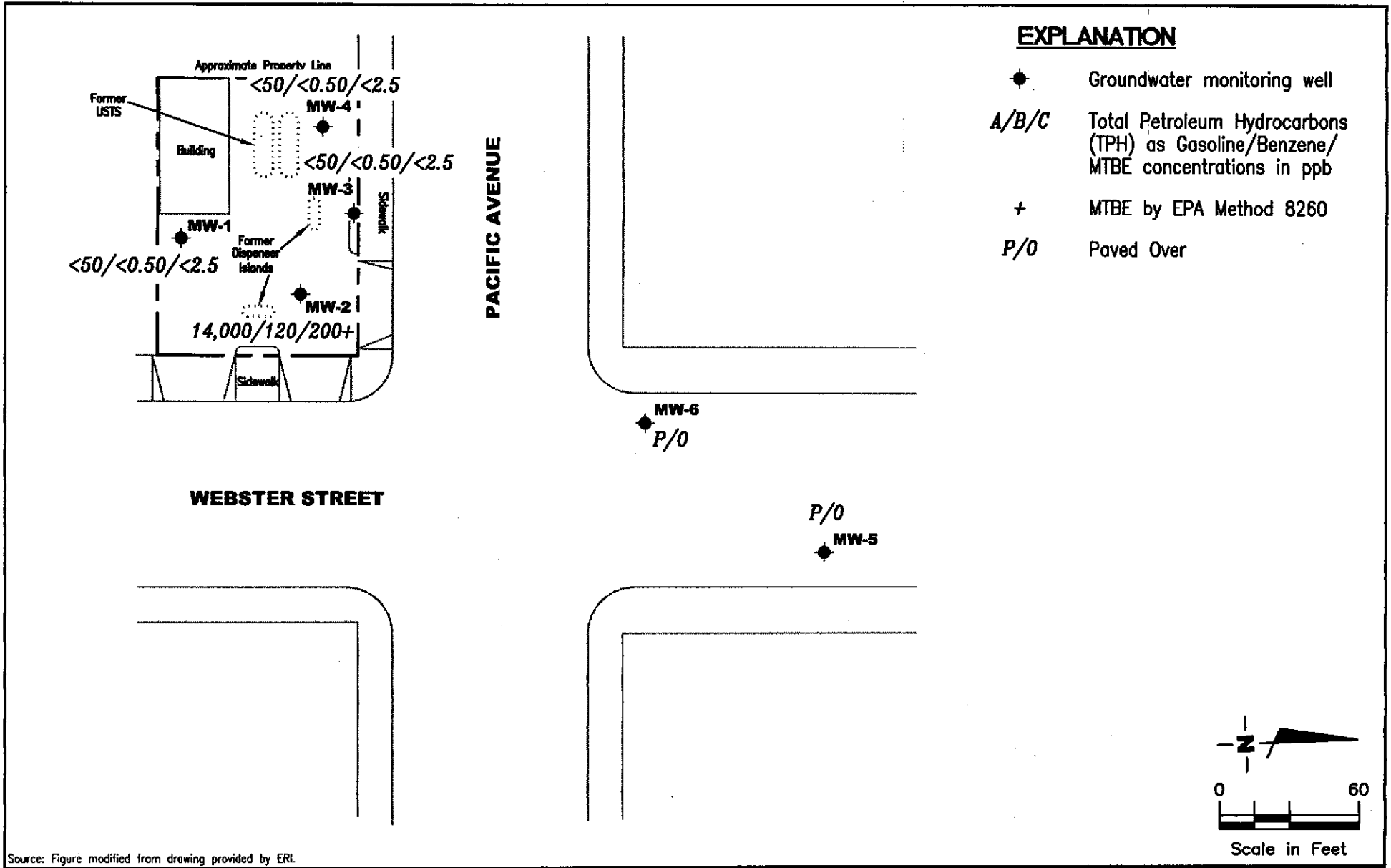
1

PROJECT NUMBER  
 180203

REVIEWED BY

DATE  
 June 7, 2002

REVISED DATE



Source: Figure modified from drawing provided by ERL

**GETTLER - RYAN INC.**  
 6747 Sierra Ct., Suite J  
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**CONCENTRATION MAP**  
 Former Tosco 76 Service Station #0843  
 1629 Webster Street  
 Alameda, California

FIGURE

2

PROJECT NUMBER  
 180203

REVIEWED BY

DATE  
 June 7, 2002

REVISED DATE

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

| WELL ID/<br>TOC*(ft.) | DATE                  | DTW<br>(ft.) | GWE<br>(msl) | TPH-G<br>(ppb)      | B<br>(ppb) | T<br>(ppb) | E<br>(ppb) | X<br>(ppb) | MTBE<br>(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                               |
|                       | 03/17/01              | 5.73         | 10.45        | ND                  | ND         | ND         | ND         | ND         | ND                               |
|                       | 05/23/01              | 6.43         | 9.75         | ND                  | ND         | ND         | ND         | ND         | ND                               |
|                       | 09/24/01              | 7.12         | 9.06         | <50                 | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                             |
|                       | 12/10/01              | 6.89         | 9.29         | <50                 | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                             |
|                       | 03/11/02              | 5.61         | 10.57        | <50                 | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                             |
|                       | 06/07/02              | 5.71         | 10.47        | <50                 | <0.50      | <0.50      | <0.50      | <0.50      | <2.5                             |
| <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>         |
|                       | 03/17/01              | 5.98         | 9.59         | 4,310 <sup>5</sup>  | 371        | 59.0       | 280        | 682        | 321/433 <sup>2</sup>             |
|                       | 05/23/01              | 6.97         | 8.60         | 45,400 <sup>5</sup> | 374        | 4,490      | 2,790      | 10,900     | <sup>7</sup> ND/406 <sup>2</sup> |
|                       | 09/24/01              | 7.56         | 8.01         | 76,000 <sup>3</sup> | 430        | 13,000     | 4,700      | 18,000     | <2,000/480 <sup>2</sup>          |
|                       | 12/10/01              | 6.52         | 9.05         | 82,000 <sup>3</sup> | 320        | 9,100      | 4,400      | 16,000     | <2,500/270 <sup>2</sup>          |
|                       | 03/11/02              | 5.51         | 10.06        | 14,000 <sup>3</sup> | 75         | 1,400      | 1,100      | 3,600      | <250/150 <sup>2</sup>            |
|                       | 06/07/02              | 5.73         | 9.84         | 14,000              | 120        | 1,200      | 1,400      | 4,700      | 540/200 <sup>2</sup>             |

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

| WELL ID/<br>TOC*(ft.) | DATE                  | DTW<br>(ft.) | GWE<br>(mst) | TPH-G<br>(ppb)   | B<br>(ppb) | T<br>(ppb) | E<br>(ppb) | X<br>(ppb) | MTBE<br>(ppb)            |
|-----------------------|-----------------------|--------------|--------------|------------------|------------|------------|------------|------------|--------------------------|
| MW-3                  | 03/05/99 <sup>1</sup> | --           | --           | 135 <sup>3</sup> | ND         | ND         | ND         | 4.84       | 2.46 <sup>2</sup>        |
| 15.11                 | 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                       |
|                       | 03/17/01              | 5.09         | 10.02        | ND               | ND         | ND         | ND         | ND         | ND                       |
|                       | 05/23/01              | 5.72         | 9.39         | ND               | ND         | ND         | ND         | ND         | ND                       |
|                       | 09/24/01              | 6.34         | 8.77         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                     |
|                       | 12/10/01              | 6.31         | 8.80         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                     |
|                       | 03/11/02              | 5.15         | 9.96         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                     |
|                       | 06/07/02              | 5.45         | 9.66         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <2.5                     |
| 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                       |
|                       | 05/23/01              | 5.78         | 9.39         | ND               | ND         | ND         | ND         | ND         | ND                       |
|                       | 09/24/01              | 6.42         | 8.75         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                     |
|                       | 12/10/01              | 6.41         | 8.76         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | 1,700/1,300 <sup>2</sup> |
|                       | 03/11/02              | 5.05         | 10.12        | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <5.0                     |
|                       | 06/07/02              | 5.42         | 9.75         | <50              | <0.50      | <0.50      | <0.50      | <0.50      | <2.5                     |

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

| WELL ID/<br>TOC*(ft.) | DATE                      | DTW<br>(ft.) | GWE<br>(msl) | TPH-G<br>(ppb)      | B<br>(ppb)      | T<br>(ppb)      | E<br>(ppb)      | X<br>(ppb)      | MTBE<br>(ppb)                |
|-----------------------|---------------------------|--------------|--------------|---------------------|-----------------|-----------------|-----------------|-----------------|------------------------------|
| MW-5<br>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                           |
|                       | 03/17/01                  | 5.36         | 7.98         | ND                  | ND              | ND              | ND              | ND              | ND                           |
|                       | 05/23/01                  | 5.09         | 8.25         | ND                  | ND              | ND              | ND              | ND              | ND                           |
|                       | 09/24/01                  | 5.58         | 7.76         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | <5.0                         |
|                       | 12/10/01                  | 5.51         | 7.83         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | <5.0                         |
|                       | 03/11/02                  | 4.70         | 8.64         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | <5.0                         |
| 06/07/02              | INACCESSIBLE - PAVED OVER |              |              | --                  | --              | --              | --              | --              | --                           |
| MW-6<br>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>     |
|                       | 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>   |
|                       | 05/23/01                  | 5.82         | 8.26         | ND <sup>7</sup>     | ND <sup>7</sup> | ND <sup>7</sup> | ND <sup>7</sup> | ND <sup>7</sup> | 4,660 <sup>8</sup>           |
|                       | 09/24/01 <sup>10</sup>    | 6.59         | 7.49         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | 160/190 <sup>9</sup>         |
|                       | 12/10/01                  | 6.50         | 7.58         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | 3,200/2,400 <sup>2</sup>     |
|                       | 03/11/02                  | 4.81         | 9.27         | <50                 | <0.50           | <0.50           | <0.50           | <0.50           | 92/120 <sup>2</sup>          |
| 06/07/02              | INACCESSIBLE - PAVED OVER |              |              | --                  | --              | --              | --              | --              | --                           |
| Trip Blank            | 03/05/99 <sup>1</sup>     | --           | --           | ND                  | ND              | ND              | ND              | ND              | ND <sup>2</sup>              |
| TB-LB                 | 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

| WELL ID/<br>TOC*(ft.) | DATE     | DTW<br>(ft.) | GWE<br>(msl) | TPH-G<br>(ppb) | B<br>(ppb) | T<br>(ppb) | E<br>(ppb) | X<br>(ppb) | MTBE<br>(ppb) |
|-----------------------|----------|--------------|--------------|----------------|------------|------------|------------|------------|---------------|
| TB-LB                 | 08/29/00 | --           | --           | ND             | ND         | ND         | ND         | ND         | ND            |
| (cont)                | 12/01/00 | --           | --           | ND             | ND         | ND         | ND         | ND         | ND            |
|                       | 03/17/01 | --           | --           | ND             | ND         | ND         | ND         | ND         | ND            |
|                       | 05/23/01 | --           | --           | ND             | ND         | ND         | ND         | ND         | ND            |
|                       | 09/24/01 | --           | --           | <50            | <0.50      | <0.50      | <0.50      | <0.50      | <5.0          |
|                       | 12/10/01 | --           | --           | <50            | <0.50      | <0.50      | <0.50      | <0.50      | <5.0          |
|                       | 03/11/02 | --           | --           | <50            | <0.50      | <0.50      | <0.50      | <0.50      | <5.0          |
|                       | 06/07/02 | --           | --           | <50            | <0.50      | <0.50      | <0.50      | <0.50      | <2.5          |



**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

(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

(msl) = Mean sea level

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> 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.

<sup>8</sup> Laboratory did not perform analysis for MTBE by EPA Method 8260 as requested on the Chain of Custody for 8020 MTBE hits.

<sup>9</sup> MTBE by EPA Method 8260 was analyzed past the EPA recommended holding time.

<sup>10</sup> Due to laboratory error, MW-6 was not analyzed within the EPA recommended holding time.

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

| WELL ID  | DATE     | ETHANOL<br>(ppb) | TBA<br>(ppb)    | MTBE<br>(ppb) | DIPE<br>(ppb)   | ETBE<br>(ppb)   | TAME<br>(ppb)   | 1,2-DCA<br>(ppb) | EDB<br>(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> |
|          | 05/23/01 | ND <sup>1</sup>  | ND <sup>1</sup> | 406           | ND <sup>1</sup> | ND <sup>1</sup> | ND <sup>1</sup> | ND <sup>1</sup>  | ND <sup>1</sup> |
|          | 09/24/01 | <50,000          | <5,000          | 480           | <100            | <100            | <100            | <100             | <100            |
|          | 12/10/01 | <12,000          | <500            | 270           | <25             | <25             | <25             | <25              | <25             |
|          | 03/11/02 | <5,000           | <1,000          | 150           | <20             | <20             | <20             | <20              | <20             |
| 06/07/02 | <2,000   | <1,000           | 200             | <25           | <25             | <25             | <25             | <25              |                 |
| 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           | --              | --              | --              | --               | --              |
|          | 12/10/01 | <7,100           | <290            | 1,300         | <14             | <14             | <14             | <14              | <14             |
| MW-5     | 12/14/99 | --               | --              | 3.8           | --              | --              | --              | --               | --              |

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

| WELL ID | DATE                  | ETHANOL<br>(ppb) | TBA<br>(ppb)    | MTBE<br>(ppb)       | DIPE<br>(ppb)   | ETBE<br>(ppb)   | TAME<br>(ppb)   | 1,2-DCA<br>(ppb) | EDB<br>(ppb)    |
|---------|-----------------------|------------------|-----------------|---------------------|-----------------|-----------------|-----------------|------------------|-----------------|
| 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> |
|         | 05/23/01 <sup>3</sup> | --               | --              | --                  | --              | --              | --              | --               | --              |
|         | 09/24/01 <sup>4</sup> | <1,000           | <100            | 190                 | <2.0            | <2.0            | <2.0            | <2.0             | <2.0            |
|         | 12/10/01              | <12,000          | <500            | 2,400               | <25             | <25             | <25             | <25              | <25             |
|         | 03/11/02              | <500             | <100            | 120                 | <2.0            | <2.0            | <2.0            | <2.0             | <2.0            |

**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.
- <sup>3</sup> Laboratory did not perform analysis for oxygenates as requested on the Chain of Custody, on all 8020 MTBE hits.
- <sup>4</sup> Laboratory report indicates sample was analyzed past 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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

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

Job#: 180203  
Date: 6-7-02  
Sampler: Joe

Well ID: MW-1  
Well Diameter: 2 in.  
Total Depth: 20.05 ft.  
Depth to Water: 5.71 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" = 5.80

14.34 x VF 0.17 = 2.44 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: 9:16 Weather Conditions: Hot  
Sampling Time: 9:41 AM (0941) 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 (µmhos/cm K) | Temperature (°F) | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|-------------|---------------|-------------|---------------------------|------------------|-------------|----------|------------------|
| <u>9:30</u> | <u>2.5</u>    | <u>7.20</u> | <u>10.10</u>              | <u>73.6</u>      |             |          |                  |
| <u>9:32</u> | <u>5</u>      | <u>7.19</u> | <u>10.66</u>              | <u>74.0</u>      |             |          |                  |
| <u>9:34</u> | <u>7.5</u>    | <u>7.15</u> | <u>10.72</u>              | <u>74.1</u>      |             |          |                  |
|             |               |             |                           |                  |             |          |                  |
|             |               |             |                           |                  |             |          |                  |

**LABORATORY INFORMATION**

| SAMPLE ID   | (#) - CONTAINER | REFRIG.  | PRESERV. TYPE | LABORATORY  | ANALYSES                |
|-------------|-----------------|----------|---------------|-------------|-------------------------|
| <u>MW-1</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: 6-7-02  
Sampler: Joc

Well ID: MW-2  
Well Diameter: 2 in.  
Total Depth: 20.24 ft.  
Depth to Water: 5.73 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" = 5.80 |           |

14.51 x VF 0.17 = 2.47 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  
Sampling Time: 11:04 A.M. (1104)  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

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

| Time         | Volume (gal.) | pH          | Conductivity (µmhos/cm X) | Temperature (F) | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|--------------|---------------|-------------|---------------------------|-----------------|-------------|----------|------------------|
| <u>10:46</u> | <u>2.5</u>    | <u>7.59</u> | <u>7.08</u>               | <u>73.1</u>     |             |          |                  |
| <u>10:49</u> | <u>5</u>      | <u>7.63</u> | <u>5.76</u>               | <u>73.8</u>     |             |          |                  |
| <u>10:51</u> | <u>7.5</u>    | <u>7.67</u> | <u>5.71</u>               | <u>74.0</u>     |             |          |                  |
|              |               |             |                           |                 |             |          |                  |

**LABORATORY INFORMATION**

| SAMPLE ID   | (#) - CONTAINER | REFRIG.  | PRESERV. TYPE | LABORATORY  | ANALYSES                |
|-------------|-----------------|----------|---------------|-------------|-------------------------|
| <u>MW-2</u> | <u>3V04</u>     | <u>Y</u> | <u>HCL</u>    | <u>Seq.</u> | <u>TPHG, BTEX, MTBE</u> |
|             | <u>2V0A</u>     | <u>N</u> | <u>"</u>      | <u>"</u>    | <u>(8) oxys by 8260</u> |
|             |                 |          |               |             |                         |

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

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

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

Job#: 180203  
Date: 6-7-02  
Sampler: Joe

Well ID: MW-3  
Well Diameter: 2 in.  
Total Depth: 19.91 ft.  
Depth to Water: 5.45 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" = 5.80

14.46 x VF 0.17 = 2.46 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: 8:45  
Sampling Time: 9:07 AM (0907)  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

Weather Conditions: Hot  
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>8:53</u> | <u>2.5</u>    | <u>7.46</u> | <u>10.67</u>                                 | <u>74.1</u>   | _____       | _____    | _____            |
| <u>8:55</u> | <u>5</u>      | <u>7.40</u> | <u>10.62</u>                                 | <u>74.5</u>   | _____       | _____    | _____            |
| <u>8:58</u> | <u>7.5</u>    | <u>7.45</u> | <u>10.65</u>                                 | <u>74.3</u>   | _____       | _____    | _____            |
| _____       | _____         | _____       | _____  | _____         | _____       | _____    | _____            |

**LABORATORY INFORMATION**

| SAMPLE ID   | (#) - CONTAINER | REFRIG.  | PRESERV. TYPE | LABORATORY  | ANALYSES                |
|-------------|-----------------|----------|---------------|-------------|-------------------------|
| <u>MW-3</u> | <u>3V04</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: 6-7-02  
Sampler: Joe

Well ID: MW-4  
Well Diameter: 2 in.  
Total Depth: 19.78 ft.  
Depth to Water: 5.42 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" = 5.80 |           |

14.36 x VF 0.17 = 2.44 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: 7:58  
Sampling Time: 8:30 AM (0830)  
Purging Flow Rate: 1 gpm  
Did well de-water? \_\_\_\_\_

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

| Time        | Volume (gal) | pH          | Conductivity $\mu\text{mhos/cm} \times K$ | Temperature F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|-------------|--------------|-------------|---|---------------|-------------|----------|------------------|
| <u>8:10</u> | <u>2.5</u>   | <u>7.80</u> | <u>9.55</u>                               | <u>74.2</u>   | _____       | _____    | _____            |
| <u>8:12</u> | <u>5</u>     | <u>7.18</u> | <u>9.50</u>                               | <u>74.1</u>   | _____       | _____    | _____            |
| <u>8:14</u> | <u>7.5</u>   | <u>7.26</u> | <u>9.47</u>                               | <u>74.2</u>   | _____       | _____    | _____            |
| _____       | _____        | _____       | _____                                     | _____         | _____       | _____    | _____            |

### LABORATORY INFORMATION

| SAMPLE ID   | (#) - CONTAINER | REFRIG.  | PRESERV. TYPE | LABORATORY  | ANALYSES                |
|-------------|-----------------|----------|---------------|-------------|-------------------------|
| <u>MW-4</u> | <u>3Y04</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: 6-7-02  
Sampler: Joe

Well ID: MW-5  
Well Diameter: 2 in.  
Total Depth: 20.23 ft.  
Depth to Water: \_\_\_\_\_ ft.

Well Condition: OK  
Hydrocarbon Thickness: \_\_\_\_\_ in. Amount Bailed (product/water): \_\_\_\_\_ (gal.)  
Volume Factor (VF):  

|           |            |           |
|-----------|------------|-----------|
| 2" = 0.17 | 3" = 0.38  | 4" = 0.66 |
| 6" = 1.50 | 12" = 5.80 |           |

\_\_\_\_\_ X VF 0.17 = \_\_\_\_\_ X 3 (case volume) = Estimated Purge Volume: \_\_\_\_\_ (gal.)

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

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

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

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

| Time | Volume (gal.) | pH | Conductivity (µmhos/cm) | Temperature (°F) | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|------|---------------|----|-------------------------|------------------|-------------|----------|------------------|
|      |               |    |                         |                  |             |          |                  |
|      |               |    |                         |                  |             |          |                  |
|      |               |    |                         |                  |             |          |                  |
|      |               |    |                         |                  |             |          |                  |
|      |               |    |                         |                  |             |          |                  |

**LABORATORY INFORMATION**

| SAMPLE ID   | (#) - CONTAINER | REFRIG.  | PRESERV. TYPE | LABORATORY  | ANALYSES                |
|-------------|-----------------|----------|---------------|-------------|-------------------------|
| <u>MW-5</u> | <u>3Y04</u>     | <u>Y</u> | <u>HCL</u>    | <u>Seq.</u> | <u>TPHG, BTEX, MTBE</u> |
|             |                 |          |               |             |                         |
|             |                 |          |               |             |                         |

COMMENTS: passed over.

**WELL MONITORING/SAMPLING  
FIELD DATA SHEET**

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

Job#: 180203  
Date: 6-7-02  
Sampler: Joc

Well ID MW-6  
Well Diameter 2 in.  
Total Depth 20.16 ft.  
Depth to Water \_\_\_\_\_ ft.

Well Condition: \_\_\_\_\_  
Hydrocarbon Thickness: \_\_\_\_\_ in. Amount Bailed (product/water): \_\_\_\_\_ (gal.)  
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66  
6" = 1.50 12" = 5.80

\_\_\_\_\_ X VF \_\_\_\_\_ = \_\_\_\_\_ X 3 (case volume) = Estimated Purge Volume: \_\_\_\_\_ (gal.)

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

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

Starting Time: \_\_\_\_\_  
Sampling Time: \_\_\_\_\_  
Purging Flow Rate: \_\_\_\_\_ gpm.  
Did well de-water? \_\_\_\_\_

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

| Time | Volume (gal.) | pH | Conductivity $\mu$ smhos/cm. $\times$ | Temperature $^{\circ}$ F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|------|---------------|----|---------------------------------------|--------------------------|-------------|----------|------------------|
|      |               |    |                                       |                          |             |          |                  |
|      |               |    |                                       |                          |             |          |                  |
|      |               |    |                                       |                          |             |          |                  |
|      |               |    |                                       |                          |             |          |                  |
|      |               |    |                                       |                          |             |          |                  |

**LABORATORY INFORMATION**

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES         |
|-----------|-----------------|---------|---------------|------------|------------------|
|           | 3Yot            | Y       | HCL           | Seq.       | TPHG, BTEX, MTBE |
|           |                 |         |               |            |                  |
|           |                 |         |               |            |                  |

COMMENTS: passed over.





**Sequoia  
Analytical**

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FAX (408) 782-6308  
www.sequoialabs.com

24 June, 2002

Deanna Harding  
Gettler Ryan/Geostrategies - Tosco/Unocal  
6747 Sierra Ct, Suite J  
Dublin, CA 94568

RECEIVED

JUN 4 2002

GETTLER-RYAN  
GENERAL CONTRACTORS

RE: Tosco SS #0843, Alameda, Ca  
Sequoia Work Order: MLF0221

Enclosed are the results of analyses for samples received by the laboratory on 06/07/02 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley  
Project Manager

CA ELAP Certificate #1210



Gettler Ryan/Geostrategies - Tosco/Unocal  
6747 Sierra Ct, Suite J  
Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

**Reported:**  
06/24/02 09:17

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| TB-LB     | MLF0221-01    | Water  | 06/07/02 00:00 | 06/07/02 16:30 |
| MW-1      | MLF0221-02    | Water  | 06/07/02 09:41 | 06/07/02 16:30 |
| MW-2      | MLF0221-03    | Water  | 06/07/02 11:04 | 06/07/02 16:30 |
| MW-3      | MLF0221-04    | Water  | 06/07/02 09:07 | 06/07/02 16:30 |
| MW-4      | MLF0221-05    | Water  | 06/07/02 08:30 | 06/07/02 16:30 |

Sequoia Analytical - Morgan Hill

James Hartley, Project Manager

*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 - Tosco/Unocal  
6747 Sierra Ct, Suite J  
Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

Reported:  
06/24/02 09:17

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B**  
**Sequoia Analytical - Morgan Hill**

| Analyte  | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method       | Notes |
|--|--------|-----------------|-------|----------|---------|----------|----------|--------------|-------|
| <b>TB-LB (MLF0221-01) Water</b> Sampled: 06/07/02 00:00 Received: 06/07/02 16:30 |        |                 |       |          |         |          |          |              |       |
| Gasoline Range Organics (C6-C10)   | ND     | 50              | ug/l  | 1        | 2F17007 | 06/17/02 | 06/17/02 | 8015Bm/8021B |       |
| Benzene  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Toluene  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Ethylbenzene   | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Xylenes (total)  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Methyl tert-butyl ether  | ND     | 2.5             | "     | "        | "       | "        | "        | "            | "     |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>   |        | 94.7 %          |       | 70-130   | "       | "        | "        | "            | "     |
| <b>MW-1 (MLF0221-02) Water</b> Sampled: 06/07/02 09:41 Received: 06/07/02 16:30  |        |                 |       |          |         |          |          |              |       |
| Gasoline Range Organics (C6-C10)   | ND     | 50              | ug/l  | 1        | 2F17007 | 06/17/02 | 06/17/02 | 8015Bm/8021B |       |
| Benzene  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Toluene  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Ethylbenzene   | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Xylenes (total)  | ND     | 0.50            | "     | "        | "       | "        | "        | "            | "     |
| Methyl tert-butyl ether  | ND     | 2.5             | "     | "        | "       | "        | "        | "            | "     |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>   |        | 94.0 %          |       | 70-130   | "       | "        | "        | "            | "     |
| <b>MW-2 (MLF0221-03) Water</b> Sampled: 06/07/02 11:04 Received: 06/07/02 16:30  |        |                 |       |          |         |          |          |              |       |
| Gasoline Range Organics (C6-C10)   | 14000  | 2500            | ug/l  | 50       | 2F17007 | 06/17/02 | 06/17/02 | 8015Bm/8021B |       |
| Benzene  | 120    | 25              | "     | "        | "       | "        | "        | "            | "     |
| Toluene  | 1200   | 25              | "     | "        | "       | "        | "        | "            | "     |
| Ethylbenzene   | 1400   | 25              | "     | "        | "       | "        | "        | "            | "     |
| Xylenes (total)  | 4700   | 25              | "     | "        | "       | "        | "        | "            | "     |
| Methyl tert-butyl ether  | 540    | 120             | "     | "        | "       | "        | "        | "            | "     |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>   |        | 96.9 %          |       | 70-130   | "       | "        | "        | "            | "     |



Gettler Ryan/Geostrategies - Tosco/Unocal  
6747 Sierra Ct, Suite J  
Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

Reported:  
06/24/02 09:17

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B**  
**Sequoia Analytical - Morgan Hill**

| Analyte   | Result | Reporting Limit | Units  | Dilution | Batch   | Prepared | Analyzed | Method       | Notes |
|---|--------|-----------------|--------|----------|---------|----------|----------|--------------|-------|
| <b>MW-3 (MLF0221-04) Water</b> Sampled: 06/07/02 09:07 Received: 06/07/02 16:30 |        |                 |        |          |         |          |          |              |       |
| Gasoline Range Organics (C6-C10)  | ND     | 50              | ug/l   | 1        | 2F17007 | 06/17/02 | 06/17/02 | 8015Bm/8021B |       |
| Benzene   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Toluene   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Ethylbenzene  | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Xylenes (total)   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Methyl tert-butyl ether   | ND     | 2.5             | "      | "        | "       | "        | "        | "            |       |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>  |        | 94.7 %          | 70-130 |          | "       | "        | "        | "            |       |
| <b>MW-4 (MLF0221-05) Water</b> Sampled: 06/07/02 08:30 Received: 06/07/02 16:30 |        |                 |        |          |         |          |          |              |       |
| Gasoline Range Organics (C6-C10)  | ND     | 50              | ug/l   | 1        | 2F17007 | 06/17/02 | 06/17/02 | 8015Bm/8021B |       |
| Benzene   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Toluene   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Ethylbenzene  | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Xylenes (total)   | ND     | 0.50            | "      | "        | "       | "        | "        | "            |       |
| Methyl tert-butyl ether   | ND     | 2.5             | "      | "        | "       | "        | "        | "            |       |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>  |        | 91.4 %          | 70-130 |          | "       | "        | "        | "            |       |





Gettler Ryan/Geostrategies - Tosco/Unocal  
6747 Sierra Ct, Suite J  
Dublin CA, 94568

Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

**Reported:**  
06/24/02 09:17

**Volatile Organic Compounds by EPA Method 8260B  
Sequoia Analytical - Morgan Hill**

| Analyte   | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>MW-2 (MLF0221-03) Water Sampled: 06/07/02 11:04 Received: 06/07/02 16:30</b> |        |                    |       |          |         |          |          |           |       |
| Ethanol   | ND     | 2000               | ug/l  | 50       | 2F20014 | 06/20/02 | 06/20/02 | EPA 8260B |       |
| tert-Butyl alcohol  | ND     | 1000               | "     | "        | "       | "        | "        | "         |       |
| Methyl tert-butyl ether   | 200    | 25                 | "     | "        | "       | "        | "        | "         |       |
| Di-isopropyl ether  | ND     | 25                 | "     | "        | "       | "        | "        | "         |       |
| Ethyl tert-butyl ether  | ND     | 25                 | "     | "        | "       | "        | "        | "         |       |
| tert-Amyl methyl ether  | ND     | 25                 | "     | "        | "       | "        | "        | "         |       |
| 1,2-Dichloroethane  | ND     | 25                 | "     | "        | "       | "        | "        | "         |       |
| Ethylene dibromide  | ND     | 25                 | "     | "        | "       | "        | "        | "         |       |
| <i>Surrogate: 1,2-Dichloroethane-d4</i>   |        | 98.2 %             |       | 60-140   | "       | "        | "        | "         |       |



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6747 Sierra Ct, Suite J  
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Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

Reported:  
06/24/02 09:17

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 2F17007 - EPA 5030B [P/T]**

**Blank (2F17007-BLK1)**

Prepared & Analyzed: 06/17/02

|                                  |    |      |      |  |  |  |  |  |  |  |
|----------------------------------|----|------|------|--|--|--|--|--|--|--|
| Gasoline Range Organics (C6-C10) | ND | 50   | ug/l |  |  |  |  |  |  |  |
| Benzene                          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Toluene                          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Ethylbenzene                     | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Xylenes (total)                  | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Methyl tert-butyl ether          | ND | 2.5  | "    |  |  |  |  |  |  |  |

Surrogate: a,a,a-Trifluorotoluene 10.4 " 10.0 104 70-130

**LCS (2F17007-BS1)**

Prepared & Analyzed: 06/17/02

|                 |      |      |      |      |  |      |        |  |  |  |
|-----------------|------|------|------|------|--|------|--------|--|--|--|
| Benzene         | 10.1 | 0.50 | ug/l | 10.0 |  | 101  | 70-130 |  |  |  |
| Toluene         | 10.2 | 0.50 | "    | 10.0 |  | 102  | 70-130 |  |  |  |
| Ethylbenzene    | 9.76 | 0.50 | "    | 10.0 |  | 97.6 | 70-130 |  |  |  |
| Xylenes (total) | 30.8 | 0.50 | "    | 30.0 |  | 103  | 70-130 |  |  |  |

Surrogate: a,a,a-Trifluorotoluene 9.46 " 10.0 94.6 70-130

**LCS (2F17007-BS2)**

Prepared & Analyzed: 06/17/02

|                                  |     |    |      |     |  |      |        |  |  |  |
|----------------------------------|-----|----|------|-----|--|------|--------|--|--|--|
| Gasoline Range Organics (C6-C10) | 238 | 50 | ug/l | 250 |  | 95.2 | 70-130 |  |  |  |
|----------------------------------|-----|----|------|-----|--|------|--------|--|--|--|

Surrogate: a,a,a-Trifluorotoluene 9.82 " 10.0 98.2 70-130

**Matrix Spike (2F17007-MS1)**

Source: MLF0221-04

Prepared: 06/17/02 Analyzed: 06/18/02

|                                  |      |      |      |      |    |      |        |  |  |  |
|----------------------------------|------|------|------|------|----|------|--------|--|--|--|
| Gasoline Range Organics (C6-C10) | 485  | 50   | ug/l | 550  | ND | 88.2 | 60-140 |  |  |  |
| Benzene                          | 9.25 | 0.50 | "    | 6.60 | ND | 140  | 60-140 |  |  |  |
| Toluene                          | 47.2 | 0.50 | "    | 39.7 | ND | 119  | 60-140 |  |  |  |
| Ethylbenzene                     | 11.4 | 0.50 | "    | 9.20 | ND | 123  | 60-140 |  |  |  |
| Xylenes (total)                  | 57.9 | 0.50 | "    | 46.1 | ND | 126  | 60-140 |  |  |  |

Surrogate: a,a,a-Trifluorotoluene 13.8 " 10.0 138 70-130

QM-07

**Matrix Spike Dup (2F17007-MSD1)**

Source: MLF0221-04

Prepared: 06/17/02 Analyzed: 06/18/02

|                                  |      |      |      |      |    |      |        |      |    |  |
|----------------------------------|------|------|------|------|----|------|--------|------|----|--|
| Gasoline Range Organics (C6-C10) | 477  | 50   | ug/l | 550  | ND | 86.7 | 60-140 | 1.66 | 25 |  |
| Benzene                          | 8.91 | 0.50 | "    | 6.60 | ND | 135  | 60-140 | 3.74 | 25 |  |

Gettler Ryan/Geostrategies - Tosco/Unocal  
 6747 Sierra Ct, Suite J  
 Dublin CA, 94568

 Project: Tosco SS #0843, Alameda, Ca  
 Project Number: #0843, Alameda, Ca  
 Project Manager: Deanna Harding

**Reported:**  
 06/24/02 09:17

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control  
 Sequoia Analytical - Morgan Hill**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 2F17007 - EPA 5030B [P/T]**

| Matrix Spike Dup (2F17007-MSD1)           | Source: MLF0221-04 |      |      | Prepared: 06/17/02 |    | Analyzed: 06/18/02 |        |       |    |  |
|---|--------------------|------|------|--------------------|----|--------------------|--------|-------|----|--|
| Toluene                                   | 45.8               | 0.50 | ug/l | 39.7               | ND | 115                | 60-140 | 3.01  | 25 |  |
| Ethylbenzene                              | 11.3               | 0.50 | "    | 9.20               | ND | 122                | 60-140 | 0.881 | 25 |  |
| Xylenes (total)                           | 59.0               | 0.50 | "    | 46.1               | ND | 128                | 60-140 | 1.88  | 25 |  |
| Surrogate: <i>a,a,a</i> -Trifluorotoluene | 11.7               |      | "    | 10.0               |    | 117                | 70-130 |       |    |  |



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Project Manager: Deanna Harding

Reported:  
06/24/02 09:17

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 2F20014 - EPA 5030B P/T**

**Blank (2F20014-BLK1)**

Prepared & Analyzed: 06/20/02

|                         |    |      |      |  |  |  |  |  |  |  |
|-------------------------|----|------|------|--|--|--|--|--|--|--|
| Ethanol                 | ND | 40   | ug/l |  |  |  |  |  |  |  |
| tert-Butyl alcohol      | ND | 20   | "    |  |  |  |  |  |  |  |
| Methyl tert-butyl ether | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Di-isopropyl ether      | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Ethyl tert-butyl ether  | ND | 0.50 | "    |  |  |  |  |  |  |  |
| tert-Amyl methyl ether  | ND | 0.50 | "    |  |  |  |  |  |  |  |
| 1,2-Dichloroethane      | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Ethylene dibromide      | ND | 0.50 | "    |  |  |  |  |  |  |  |

*Surrogate: 1,2-Dichloroethane-d4*      4.96      "      5.00      99.2      60-140

**LCS (2F20014-BS1)**

Prepared & Analyzed: 06/20/02

|                         |      |      |      |      |  |     |        |  |  |  |
|-------------------------|------|------|------|------|--|-----|--------|--|--|--|
| Methyl tert-butyl ether | 10.0 | 0.50 | ug/l | 10.0 |  | 100 | 70-130 |  |  |  |
|-------------------------|------|------|------|------|--|-----|--------|--|--|--|

*Surrogate: 1,2-Dichloroethane-d4*      4.95      "      5.00      99.0      60-140

**LCS (2F20014-BS2)**

Prepared & Analyzed: 06/20/02

|                         |      |      |      |      |  |      |        |  |  |  |
|-------------------------|------|------|------|------|--|------|--------|--|--|--|
| Methyl tert-butyl ether | 8.23 | 0.50 | ug/l | 8.40 |  | 98.0 | 70-130 |  |  |  |
|-------------------------|------|------|------|------|--|------|--------|--|--|--|

*Surrogate: 1,2-Dichloroethane-d4*      4.73      "      5.00      94.6      60-140



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Project: Tosco SS #0843, Alameda, Ca  
Project Number: #0843, Alameda, Ca  
Project Manager: Deanna Harding

**Reported:**  
06/24/02 09:17

### Notes and Definitions

- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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