October 29, 2002 G-R #180203

TO:

Mr. David B. De Witt

Phillips 66 Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

Mr. Paul Blank CC:

ERI, Inc.

73 Digital Drive, Suite 100

Novato, California 94949

Alameda County

FROM:

Deanna L. Harding

NOV 1 4 2002

RE:

Former Tosco 76 Service Station

#0843

Project Coordinator

6747 Sierra Court, Suite J

Dublin, California 94568

1629 Webster Street Alameda, California

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DATED | DESCRIPTION |
|--------|------------------|--|
| 1 | October 11, 2002 | Groundwater Monitoring and Sampling Report Third Quarter - Event of September 3, 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 *November 8, 2002*, this report will be distributed to the following:

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

Enclosure



October 11, 2002 G-R Job #180203

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

RE: Third Quarter Event of September 3, 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 Groundwater Elevation 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.

No. 6882

Sincerely,

Deanna L. Harding

FOR-

Project Coordinator

Doughs J. Lee

Senior Geologist, R.G. No. 6882

Figure 1: Groundwater Elevation Map

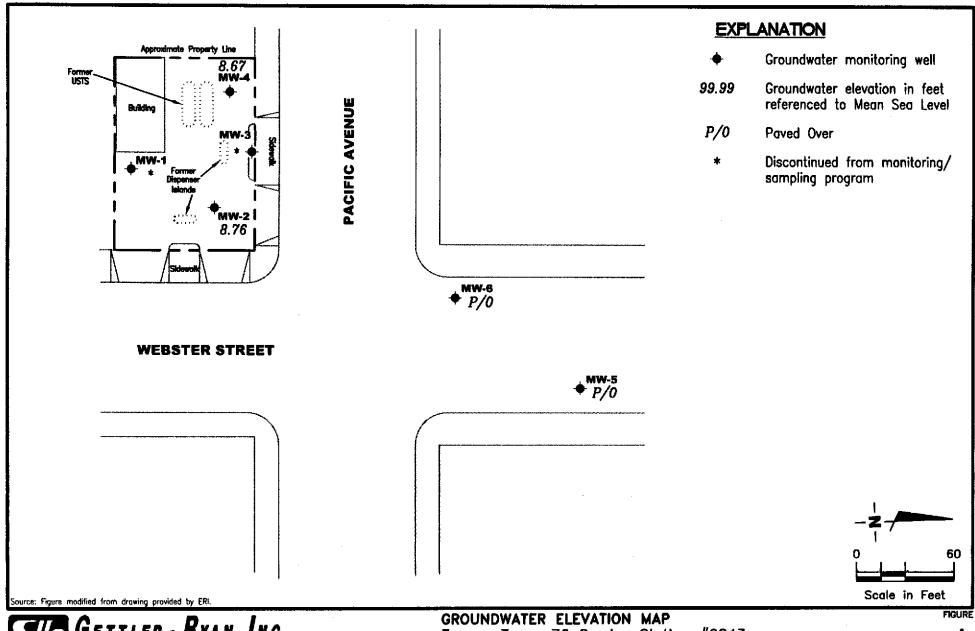
Tramarie Voicau

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

0843.qmi Chain of Custody Document and Laboratory Analytical Reports





Former Tosco 76 Service Station #0843 1629 Webster Street

Alameda, California

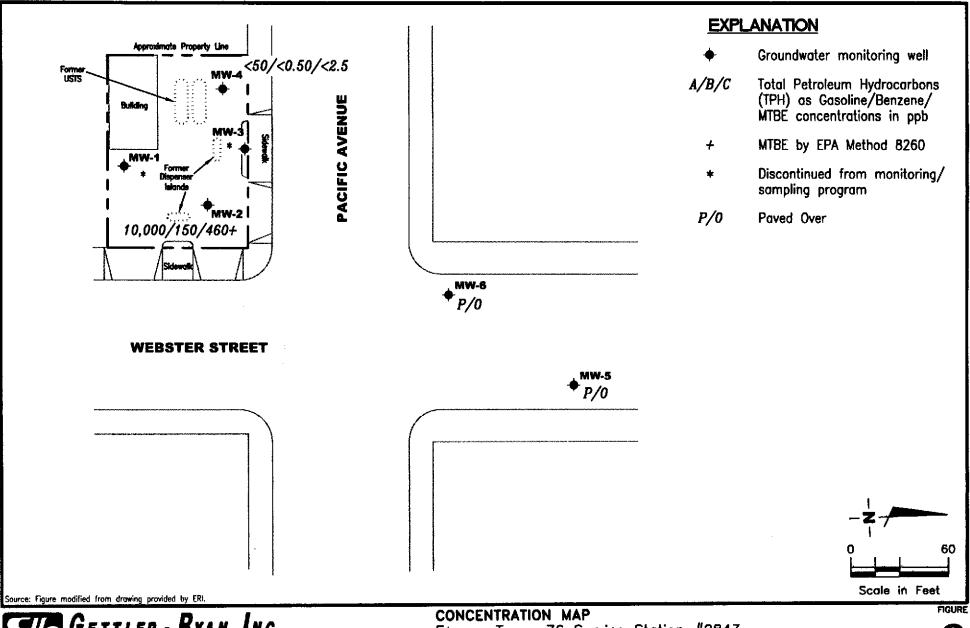
DATE

REVISED DATE

PROJECT NUMBER 180203

REVIEWED BY

September 3, 2002





Former Tosco 76 Service Station #0843 1629 Webster Street

Alameda, California

REVISED DATE

DATE REVIEWED BY September 3, 2002

FILE NAME: P:\ENVIRO\TOSCO\0843\Q02-0843.DWG | Loyout Tob: Con3

PROJECT NUMBER

180203

Table 1
Groundwater Monitoring Data and Analytical Results

| WELL ID/ | DATE | DTW | GWE | TPH-G | В | T | E | X | MTBE |
|-----------|-----------------|------------|-------|---------------------|--------|---------|--------|--------|----------------------------------|
| TOC*(ft.) | | (ft.) | (msl) | (ppb) | (pph) | (pph) | (pph) | (pph) | (pph) |
| MW-1 | | | | | | | | | |
| 16.18 | 03/05/991 | | | 86.6 ³ | ND | 2.04 | ND | 4.06 | 23.9^{2} |
| | 06/03/99 | 6.24 | 9.94 | ND | ND | ND | ND | ND | ND/ND ² |
| | 09/02/99 | 7.19 | 8.99 | ND | ND | ND | ND | ND | ND/ND ² |
| | 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 | NĎ | 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 |
| | NOT MONITOR | ED/SAMPLED | | | | | | | |
| MW-2 | 03/05/991 | | | 34,400 | 2,070 | 7,710 | 2,340 | 8,240 | 8,460 ² |
| 15.57 | 06/03/99 | 5.96 | 9.61 | 51,200 ⁴ | 1,820 | 7,570 | 2,510 | 7,320 | 6,460/8,800 |
| 10.07 | 09/02/99 | 6.85 | 8.72 | 17,0005 | 1,000 | 3,100 | 1,400 | 3,700 | 4,000/3,720 |
| | 12/14/99 | 7.65 | 7.92 | 83,000 ⁵ | 3,000 | 22,000 | 4,500 | 17,000 | 9,100/11,000 |
| | 03/14/00 | 5.26 | 10.31 | 31,0005 | 1,600 | 4,600 | 2,300 | 7,300 | 5,700/8,700 |
| | 05/31/00 | 5.60 | 9.97 | 9,9705 | 598 | 1,030 | 487 | 2,060 | 2,500/1,670 |
| | 08/29/00 | 6.35 | 9.22 | 7,900 ⁵ | 39Ô | 1,500 | 280 | 1,900 | 1,800/1,300 |
| | 12/01/00 | 7.06 | 8.51 | 87,500 ⁵ | 1,860 | 17,400 | 5,590 | 19,400 | 6,220/3,790 |
| | 03/17/01 | 5.98 | 9.59 | 4,310 ⁵ | 371 | 59.0 | 280 | 682 | 321/433 ² |
| | 05/23/01 | 6.97 | 8.60 | 45,400 ⁵ | 374 | 4,490 | 2,790 | 10,900 | ⁷ ND/406 ² |
| | 09/24/01 | 7.56 | 8.01 | 76,000 ³ | 430 | 13,000 | 4,700 | 18,000 | <2,000/480 |
| | <i>U714</i> 701 | 7.50 | 0.01 | 82,000 ³ | 7,77 | 1,24000 | 7,700 | 10,000 | <2,500/270 |

Table 1
Groundwater Monitoring Data and Analytical Results

| WELL ID/ | DATE | DTW | GWE | TPH-G | B | T | E | X | MTBE |
|-----------|-------------|---------------------|---------------------|--------------------------------|-------------------|----------------|---------------------|-----------------------|----------------------------------|
| TOC*(ft.) | | (ft.) | (msl) | (pph) | (pph) | (pph) | (ppb) | (ppb) | (pph) |
| MW-2 | 03/11/02 | 5.51 | 10.00 | 14,0003 | 76 | 1.400 | 1 100 | 2.600 | <250/150 ² |
| (cont) | 06/07/02 | 5.73 | 10.06 9.84 | 14,000 | 75 120 | 1,400 | 1,100 | 3,600 | <250/150 540/200 ² |
| (cont) | 09/03/02 | 5.73 6.81 | 9.84 8.76 | 14,000 10,000 ¹¹ | 120 150 | 1,200 1,200 | 1,400 610 | 4,700 2,800 | 540/200 510/460 ² |
| | 17711,9112 | 0.01 | 0.70 | 10,000 | 150 | 1,2111 | 010 | 2,890 | 311/400 |
| MW-3 | 03/05/991 | | | 135 ³ | ND | ND | ND | 4.84 | 2.46 ² |
| 15.11 | 06/03/99 | 5.57 | 9.54 | ND | ND | ND | ND | ND | 5.23/12.72 |
| | 09/02/99 | 6.50 | 8.61 | ND | ND | ND | ND | ND | 13/11.0 ² |
| | 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 ² |
| | 05/31/00 | 5.58 | 9.53 | ND | ND | ND | ND | NĐ | 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 |
| | NOT MONITOR | ED/SAMPLEĎ | | | | | | | |
| | | | | | | | • | | |
| MW-4 | 03/05/991 | | | ND | NĎ | ND | ND | 2.44 | 25.2 ² |
| 15.17 | 06/03/99 | 5.45 | 9.72 | ND | ND | ND | ND | NĐ | ND/3.96 ² |
| | 09/02/99 | 6.48 | 8.69 | ND | ND | · ND | NĎ | ND | $23/27.0^2$ |
| | 12/14/99 | 7.27 | 7.90 | ND | ND | ND | ND | ND | 200/270 ² |
| | 03/14/00 | 4.67 | 10.50 | - ND | ND | ND | ND | ΝĎ | 46/49 ² |
| | 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 ² |
| | 12/01/00 | 6.79 | 8.38 | NĎ | ND | ND | ND | ND | 152/101 ² |
| | 03/17/01 | 5.01 | 10.16 | NĎ | NĎ | ND | NĎ | ND | ND |
| | 05/23/01 | 5.78 | 9.39 | ND | ND | ND | ND | ND | ND |

 Table 1

 Groundwater Monitoring Data and Analytical Results

| WELL ID/ | DATE | DTW | GWE | TPH-G | В | T | E | X | MTBE |
|-----------|-------------|--------------|---------------|---------------------|-----------------|-----------------|--------|-----------------|------------------------------|
| TOC*(ft.) | | (ft.) | (msl) | (ppb) | (ppb) | (pph) | (pph) | (pph) | (pph) |
| MW-4 | 09/24/01 | 6.42 | 8.75 | <50 | <0.50 | < 0.50 | <0.50 | < 0.50 | <5.0 |
| (cont) | 12/10/01 | 6.41 | 8.76 | <50 | <0.50 | < 0.50 | < 0.50 | <0.50 | 1,700/1,300 ² |
| | 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 |
| | 09/03/02 | 6.50 | 8.67 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 |
| MW-5 | 12/14/99 | 6.45 | 6.89 | ND | ND | ND | ND | ND | 3.5/3.8 ² |
| 13.34 | 03/14/00 | 4.46 | 8.88 | ND | ND - | ND | ND | ND | ND |
| | 05/31/00 | 5.18 | 8.16 | ND | ND | ND | ND | ND | ND |
| | 08/29/00 | 5,46 | 7.88 | ND | ND | ND | ND | ND | ND |
| | 12/01/00 | 5.95 | 7.39 | ND | ND | ND | ND | ND | ND |
| | 03/17/01 | 5.36 | 7.98 | ND | ND | ND | ND | ND | ND |
| | 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 | Į. | | | | •• | |
| | 09/03/02 | INACCESSIBL | E - PAVED OVE | Ŕ | | | | | |
| MW-6 | 12/14/99 | 6.64 | 7.44 | ND | ND | ND | ND | ND | 11,000/18,000 ² |
| 14.08 | 03/14/00 | 4.72 | 9.36 | ND ⁷ | ND^7 | ND ⁷ | ND^7 | ND^7 | 19,000/21,000 ^{2,0} |
| | 05/31/00 | 5.28 | 8.80 | ND ⁷ | ND ⁷ | ND^7 | ND^7 | ND ⁷ | 13,200 |
| | 08/29/00 | 5.39 | 8.69 | ND | ND | ND | NĎ | ND | 270/400 ² |
| | 12/01/00 | 6.11 | 7.97 | NĎ | ND | ND | ND | ND | 6,330/3,640 ² |
| | 03/17/01 | 6.02 | 8.06 | 18,700 ⁵ | 2,950 | 989 | 1,040 | 3,000 | 10,200/11,500 ² |
| | 05/23/01 | 5.82 | 8.26 | ND^7 | ND ⁷ | ND^7 | ND^7 | ND^7 | 4,660 ⁸ |
| | 09/24/01 to | 6.59 | 7.49 | <50 | < 0.50 | <0.50 | < 0.50 | < 0.50 | 160/190 ⁹ |
| | 12/10/01 | 6.50 | 7.58 | <50 | < 0.50 | <0.50 | < 0.50 | < 0.50 | $3,200/2,400^2$ |

Table 1
Groundwater Monitoring Data and Analytical Results

| WELL ID/ | DATE | DTW | GWE | TPH-G | В | Т | E | X | MTBE |
|------------|----------|--------------|---------------|-------|--------|--------|--------|--------|---------------------|
| TOC*(ft.) | * | (ft.) | (msl) | (pph) | (pph) | (թրհ) | (ppb) | (pph) | (pph) |
| MW-6 | 03/11/02 | 4.81 | 9.27 | <50 | <0.50 | <0.50 | <0.50 | < 0.50 | 92/120 ² |
| (cont) | 06/07/02 | INACCESSIBLE | - PAVED OVER | | | | | | |
| | 09/03/02 | INACCESSIBLE | E - PAVED OVE | R | | | | ** | •• |
| Trip Blank | 03/05/99 | | | ND | ND | NĐ | ND | ND | ND² |
| 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 |
| | 08/29/00 | L - | | ND | ND | ND | ND | ND | NĎ |
| | 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 |
| QA | 09/03/02 | | | <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

B = Benzene

(ft.) = Feet

T = Toluene

DTW = Depth to Water

E = Ethylbenzene

GWE = Groundwater Elevation

X = Xylenes

(msl) = Mean sea level

MTBE = Methyl tertiary butyl ether

TPH-G = Total Petroleum Hydrocarbons as Gasoline

- TOC elevations are based on USC&GS Benchmark WEB PAC 1947 R 1951; (Elevation = 14,054 feet),
- B,T,E,X by EPA Method 8260.
- MTBE by EPA Method 8260.
- Laboratory report indicates weathered gasoline C6-C12.
- Laboratory report indicates chromatogram pattern C6-C12.
- Laboratory report indicates gasoline C6-C12.
- 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.
- Detection limit raised. Refer to analytical reports.
- Laboratory did not perform analysis for MTBE by EPA Method 8260 as requested on the Chain of Custody for 8020 MTBE hits.
- MTBE by EPA Method 8260 was analyzed past the EPA recommended holding time.
- Due to laboratory error, MW-6 was not analyzed within the EPA recommended holding time.
- Laboratory report indicates gasoline C6-C10.

(ppb) = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

QA = Quality Assurance

Table 2
Groundwater Analytical Results - Oxygenate Compounds

| WELL ID | DATE | ETHANOL | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB |
|---------|----------|-----------------|-----------------|--------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | (pph) | (pph) | (ppb) | (ppb) | (pph) | (ppb) | (pph) | (pph) |
| fW-1 | 09/02/99 | ND | ND | ND | ND | ND | ND | | |
| MW-2 | 09/02/99 | ND ¹ | ND¹ | 3,720 | ND ¹ | ND ¹ | ND ¹ | | |
| | 12/14/99 | ND^1 | ND ¹ | 11,000 | ND' | ND ¹ | ND^1 | ND^1 | ND ¹ |
| | 03/14/00 | ND^1 | 1,300 | 8,700 | ND¹ | ND ¹ | ND^1 | ND^1 | ND^1 |
| | 05/31/00 | ND^1 | ND^1 | 1,670 | ND' | ND' | ND^1 | ND^1 | ND ¹ |
| | 08/29/00 | ND | 250 | 1,300 | ND | ND | ND | ND | ND |
| | 12/01/00 | ND^1 | ND ¹ | 3,790 | ND ¹ | ND' | ND^1 | ND^1 | ND ¹ |
| | 03/17/01 | ND ¹ | ND' | 433 | 14.8 | ND ¹ | ND¹ | ND ¹ | ND^1 |
| | 05/23/01 | ND ¹ | ND' | 406 | ND ^t | ND^1 | ND¹ | ND ¹ | ND^1 |
| | 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 |
| | 09/03/02 | <5,000 | <1,000 | 460 | <20 | <20 | <20 | <20 | <20 |
| MW-3 | 09/02/99 | ND | ND | 11.0 | ND | ND | ND | | |
| | 03/14/00 | | | 6.3 | | | | ** | |
| MW-4 | 09/02/99 | NĎ | ND | 27.0 | ND | ND | NĎ | | |
| | 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 | | <u></u> | | | |

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Former Tosco 76 Service Station #0843

| WELL ID | DATE | ETHANOL | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB |
|-----------|-----------|---------|-----------------|------------|-----------------|---------|-------|---------|-----------------|
| | | (ppb) | (ppb) | (pph) | (pph) | (pph) | (ppb) | (pph) | (pph) |
| MW-6 | 12/14/99 | | | | | | | | |
| MI AA -10 | | | | 18,000 | ** | | | | |
| | 03/14/00 | | • | $21,000^2$ | | | | | |
| | 08/29/00 | | | 400 | | | | | |
| | 03/17/01 | ND | ND ¹ | 11,500 | ND ¹ | ND^1 | ND' | 219 | ND ¹ |
| | 05/23/013 | | | | | | | | |
| | 09/24/014 | <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

 $\dot{E}DB = 1,2-Dibromoethane$

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

Detection limit raised. Refer to analytical reports.

Laboratory did not perform analyzsis for oxygenates as requested on the Chain of Custody, on all 8020 MTBE hits.

Laboratory report indicates sample was analyzed past the EPA recommended holding time.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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 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 #: | Tosco #0843 | <u>'</u> | | Job Number: | 180203 | |
|---|---|--|---|--|-------------------|--------------------------------------|
| ite Address: | 1629 Webste | r Street | | Event Date: | 9.3- | 02 |
| City: | Alameda, CA | | | Sampler: | Jue | |
| Well ID | MW- 2 | * | Well Condition: | Ć | 0,14 | |
| Well Diameter | 2 in. | | Hydrocarbon | | Amount Bail | ed |
| Fotal Depth | 20.24 th. | | Thickness: | f1. | (product/wate | er): <u>Ø</u> gal. |
| Depth to Water | 6.81 ft. | | Volume | 3/4"= 0.02 | | °= 0.17 3°= 0.38 |
| | 13.43 x | | 7 Pactor (VI | · | | = 1.50 12"= 5.80 |
| | x\ | /F <u>e -\</u> | 1 = 128 x | 3 (case volume) = E | stimated Purge Vo | lume: gal. |
| Purge | Disposable Baile | er | | Sampling | Disposable Ba | iler 🗸 |
| Equipment: | Stainless Steel B | _ | | Equipment: | Pressure Baile | |
| | Stack Pump | _ | | | Discrete Baile | r |
| | Suction Pump | | | | Other: | |
| | Grundlos | _ | | | | |
| | Other: | | | · | | |
| Purging Flow Ra | ate: <u>/3 4 / / 9</u> ate: <u>ø_</u> gpm. | 3-22 Sedim | nent Description: | Clee | <u>/</u> 0 | odor: yes |
| Sample Time/Da | ate: <u>/3 4 / / 9</u> ate: <u>ø_</u> gpm. | 3-22 Sedim | Water Color: | Clee | <u>/</u> 0 | ORP (mV) |
| Sample Time/Da Purging Flow Ra Did well de-wate Time (2400 hr.) 1330 | volume (gal.) | Sedim If yes, Tin pH 7.10 7.15 7.16 | Water Color: nent Description: me: Conductivity (umhos/cm) / 4.25 4.25 4.29 | Volume: | gal. | ORP (mV) |
| Sample Time/Da Purging Flow Ra Did well de-wate Time (2400 hr.) 1330 1334 1339 | volume (gal.) 2.5 7 | Sedim If yes, Tin pH 7.10 7.15 7.16 | Water Color: nent Description: me: Conductivity (umhos/cm) 4.25 | Volume: Temperature (CAP) (S.) (S.) (S.9.) | gal. D.O. (mg/L) | ORP (mV) |
| Sample Time/Da Purging Flow Ra Did well de-wate Time (2400 hr.) 1330 1330 | volume (gal.) | 3-22 Sedim If yes, Tin pH 7.10 7.15 7.16 | Water Color: nent Description: me: Conductivity (umhos/cm) 4.25 4.25 4.29 | Volume: Temperature (CAE) (S.) (G.) (G | gal. D.O. (mg/L) | ORP (mV) |
| Sample Time/Da Purging Flow Ra Did well de-wate (2400 hr.) 1330 1339 1339 | volume (gal.) (#) CONTAINER | 3-22 Sedim If yes, Til pH 7.10 7.15 7.16 LA REFRIG. | Water Color: nent Description: me: Conductivity (umhos/cm) / 4.25 4.26 4.29 BORATORY INFO | Volume: Temperature (CAE) 69.0 69.1 ORMATION LABORATOR | gal. D.O. (mg/L) | ORP (mV) ANALYSES //BTEX/MTBE(8021) |
| Sample Time/Da Purging Flow Ra Did well de-wate (2400 hr.) 1330 1339 1339 | volume (gal.) (#) CONTAINER (*) x voe viel | Sedim If yes, Til pH 7.10 7.15 7.16 REFRIG. YES | Water Color: nent Description: me: Conductivity (umhos/cm) / 4.25 4.25 4.29 BORATORY INFO | Volume: Temperature (CAE) (S.) (G.) (G | gal. D.O. (mg/L) | ORP (mV) ANALYSES //BTEX/MTBE(8021) |
| Sample Time/Da Purging Flow Ra Did well de-wate (2400 hr.) 1330 1339 1339 | volume (gal.) (#) CONTAINER (*) x voe viel | Sedim If yes, Til pH 7.10 7.15 7.16 REFRIG. YES | Water Color: nent Description: me: Conductivity (umhos/cm) / 4.25 4.25 4.29 BORATORY INFO | Volume: Temperature (CAE) (S.) (G.) (G | gal. D.O. (mg/L) | ORP (mV) ANALYSES //BTEX/MTBE(8021) |



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING **FIELD DATA SHEET**

| Client/Facility #: | Tosco #0843 | | Job Number: | 180203 | |
|---|--|---|---|--|-------------|
| Site Address: | 1629 Webster Stree | et | Event Date: | 9-3-02 | |
| City: | Alameda, CA | | Sampler: | Jue | |
| | | | | 10 | |
| Well ID | <u>MW-4</u> | Well Condition: | | ·/C- | |
| Well Diameter | 2 in. | Hydrocarbon | سبحد | Amount Bailed | |
| Total Depth | 19.78 tt. | Thickness: | | (product/water): | gal. |
| Depth to Water | 6-50 tt. | Volume | 3/4"= 0.02 F) 4"= 0.66 | 1*= 0.04 2*= 0.17 | |
| | 13.28 xVF 0. | 7 7 Pactor (V | | 5°= 1.02 6°= 1.50 stirnated Purge Volume: | |
| | xvr <u>&</u> | = | X3 (case volume) = E: | simated Purge Volume: | gal. |
| Purge | Disposable Bailer | ~ | Sampli ng | Disposable Bailer | ✓ |
| Equipment: | Stainless Steel Bailer | | Equipment: | Pressure Bailer | |
| | Stack Pump | | | Discrete Bailer | |
| | Suction Pump | | | Other: | |
| | Grundlos | | | | |
| | Other: | | | | |
| | | eather Conditions: Water Color: | | / Odor: | uon 4 |
| Sample Time/Do Purging Flow Ra Did well de-water Time | ate: 13 16 19-3-00 ate: 0.(gpm. Sed of per? If yes, 7 | Water Color: iment Description: Time:Conductivity | Volume: | gal. | ORP (mV) |
| Sample Time/Do Purging Flow Ra Did well de-wate | ate: 13 16 19-3-00 ate: 0.(gpm. Sed er? If yes, | Water Color: iment Description: Time:Conductivity (umhos/cm) | Volume: | gal. | |
| Sample Time/Do Purging Flow Re Did well de-wate Time (2400 hr.) | ate: 13.16 19-3-00 ate: 0.(gpm. Sed er? If yes, 7 Volume (gel.) pH 2.5 7.45 | Water Color: iment Description: Time:Conductivity (umhos/cm) 4.56 4.92 | Volume: | gal. | ORP |
| Sample Time/Di Purging Flow Ra Did well de-wate Time (2400 hr.) | ate: 13 16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time:Conductivity (umhos/cm) 4.56 4.92 | Volume: | gal. | ORP |
| Sample Time/Di Purging Flow Re Did well de-wate Time (2400 hr.) 1308 | ate: 13.16 19-3-00 ate: 0.(gpm. Sed er? If yes, 7 Volume (gel.) pH 2.5 7.45 | Water Color: iment Description: Time:Conductivity (umhos/cm) 4.56 4.92 | Volume: | gal. | ORP |
| Sample Time/Di Purging Flow Re Did well de-wate Time (2400 hr.) 1306 | ate: 13.16 19-3-00 ate: 0.(gpm. Sed er? If yes, 7 Volume (gel.) pH 2.5 7.45 | Water Color: iment Description: Time:Conductivity (umhos/cm) 4.56 4.92 | Volume: | gal. | ORP |
| Sample Time/Di Purging Flow Re Did well de-wate Time (2400 hr.) 1306 | te: 316 19-3-00 te: 0.(gpm. Sed te: 0.(gpm. Sed te: 7.45 7.45 | Water Color: iment Description: Time:Conductivity (umhos/cm) 4.56 4.92 | Volume: | gal. | ORP |
| Sample Time/Di Purging Flow Re Did well de-wate (2400 hr.) 1306 1306 | ate: 3 16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY | gal. D.O. (mg/L) | ORP (mV) |
| Sample Time/Di Purging Flow Re Did well de-wate (2400 hr.) 1303 1306 1309 | ate: 3.16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO HCL | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) ANAL TPH-G(8015)/BTEX/ | ORP (mV) |
| Sample Time/Di Purging Flow Re Did well de-wate (2400 hr.) 1306 1306 | ate: 3 16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY | gal. D.O. (mg/L) | ORP (mV) |
| Sample Time/Di Purging Flow Re Did well de-wate (2400 hr.) 1306 1306 | ate: 3.16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO HCL | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) ANAL TPH-G(8015)/BTEX/ | ORP (mV) |
| Sample Time/Dir Purging Flow Re Did well de-wate Time (2400 hr.) 1308 1306 1309 | ate: 3.16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO HCL | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) ANAL TPH-G(8015)/BTEX/ | ORP (mV) |
| Sample Time/Dir Purging Flow Re Did well de-wate Time (2400 hr.) 1308 1306 1309 | ate: 3.16 19-3-00 ate: 0.(gpm. Sed ate: | Water Color: iment Description: Time: Conductivity (umhos/cm) 6.56 6.92 7.04 ABORATORY INFO HCL | Volume: Volume: (C/E) (7.2) (8.5) (8.9) CRMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) ANAL TPH-G(8015)/BTEX/ | ORP (mV) |



WELL MONITORING/SAMPLING FIELD DATA SHEET

| Client/Facility #: | Tosco #0843 | | | Job Number: | 180203 | |
|---|---|----------------------|--|---|---------------------|--|
| ite Address: | 1629 Webste | r Street | | Event Date: | 9-3. | 02 |
| City: | Alameda, CA | | | Sampler: | 50 c | |
| Vell ID | | | Well Condition: | Se | e note | ······································ |
| Well Diameter | 2 in. | | Hydrocarbon | | Amount Bailer | |
| Total Depth | ft. | | Thickness: | ft. | (product/water) | |
| Depth to Water | ft. | | Volume | 3/4"= 0.02 | 1'= 0.04 2'= | 0.17 3°= 0.38 |
| | | | Factor (V | | | 1.50 12°= 5.80 |
| | xv | 'F | = | x3 (case volume) = Es | stimated Purge Volu | me: gal. |
|)a | Diamosoble Beile | - | | Sampli ng | Disposable Baile | e r |
| Purg e Equipme nt: | Disposable Baile Stainless Steel B | _ | | | Pressure Bailer | |
| | Stack Pump | | | | Discrete Bailer | |
| | Suction Pump | _ | | | | |
| | Grundios | | ···- | | | |
| • | Other: | | | | | |
| | ite:/_ | | Water Color: | | | lor: |
| Purging Flow Ra | te: gpm. ? Volume | If yes, Tir | ent Description: ne: Conductivity | Volume: | gal. | ORP |
| Purging Flow Ra Did well de-wate | te: gpm. r? | | ent Description ne: | Volume: | gal. | |
| Purging Flow Ra Did well de-wate Time (2400 hr.) | te: gpm. Yolume (gal.) | If yes, Tir | ent Description: ne: Conductivity | Volume: Temperature (C/F) | gal. D.O. (mg/L) | ORP |
| Purging Flow Ra Did well de-wate Time | te: gpm. ? Volume | If yes, Tir | ent Description: ne: Conductivity (umhos/cm) | Volume: Temperature (C/F) ORMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) | ORP (mV) |
| Purging Flow Ra Did well de-water Time (2400 hr.) | te: gpm. Yolume (gal.) (#) CONTAINER | pH LA | ent Description: ne: Conductivity (umhos/cm) BORATORY INF | Volume: Temperature (C/F) ORMATION LABORATORY | gal. D.O. (mg/L) | ORP (mV) |
| Purging Flow Ra Did well de-water Time (2400 hr.) | te: gpm. r? Volume (gal.) (#) CONTAINER x voa vial | pH LA REFRIG. YES | ent Description: ne: Conductivity (umhos/cm) BORATORY INF PRESERV. TYPE HCL | Volume: Temperature (C/F) ORMATION LABORATORY SEQUOIA | gal. D.O. (mg/L) | ORP (mV) |



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING **FIELD DATA SHEET**

| Client/Facility #: | Tosco #084 | 3 | | Job Number: | 180203 | |
|-----------------------------------|-------------------------------------|------------|--|----------------------------|-------------------|---------------------------------------|
| Site Address: | 1629 Webst | er Stree | t | Event Date: | 9-3 | - 0 2 |
| City: | Alameda, Ca | Δ | | Sampler: | 50 | <u></u> |
| | 1414/ | | | | · O | |
| Well ID | <u>MW-6</u> | - | Well Condition: | : <u> </u> | | |
| Well Diameter | | • | Hydrocarbon | • | Amount Bai | , |
| Total Depth | ti. | • | Thickness: | ft. | (product/wate | er): gal. |
| Depth to Water | ft. | _ | Volume Factor (V | 3/4"= 0.02 "F) 4"= 0.66 | | "= 0.17 3"= 0.38 "= 1.50 12"= 5.80 |
| | x | VF | F | x3 (case volume) = E | stimated Purge Vo | olume: gal. |
| Purge | Dienosable Peil | | | Sampling | Diamonth D | |
| Equipment: | Disposable Baile Stainless Steel | | · · · · · · · · · · · · · · · · · · · | Equipment: | Pressure Baile | ailer |
| | Stack Pump | Lanei - | | | Discrete Baile | |
| | Suction Pump | - | | | | r |
| | Grundfos | _ | | | | |
| | Other: | | | | | |
| Did well de-water Time (2400 hr.) | volume (gal.) | | nent Description: ime: Conductivity (umhos/cm) | | | ORP (mV) |
| SAMPLE ID | (#) CONTAINER | REFRIG. | ABORATORY INFO | LABORATORY | | ANALYSES |
| MW- | laiv sov x | YES YES | HCL HCL | SEQUOIA SEQUOIA | | BTEX/MTBE(8021) |
| | X VOG VI21 | 125 | FICE | SECOUIA | 8 Oxy's(8260) | |
| COMMENTS: | Pared o | Ne/ | well | | | |
| Add/Replace | d Lock: | | A | dd/Replaced P | lug: | Size: |

Gettler-Ryan Inc., Chain-of-Custody Leboratory Name . SEQUOTA 10843 Facility Humber DEANNA L. HARBING GETTLER-RYAN, INC. 1629 WEBSTER STREET, ALAMEDA, CA Consultant -Tosco Corp./ Facility Address 6747 SIERRA CT., SUITE J. BUBLIN CA 94568 Phillips 66 Co. 180203,80 T0600102263 Mdress. Project Global ID . (925) 551-7899 2000 Crow Conyon Place (925) 551-7555 UR. DAVID B. DEWITT Suite 400 Client Contoct ... Samples Collected by JOE ASEMIAN Son Roman, CA 94583 (925) 277-2384 Phone Remarks EPA 6280 Dots/Time (2400 Hrs) IPH—CAS/BREX/AMBE EPA 9260 \$ 5 TPH-CAS/BTEX/MTBE GPA 8015/80218 NATRATE/SULFATE/ BPA 300 SERIES HNOC'S (8010) EPA 90213 VOCTS (8240) EPA 5250 < ₽ HLIDIO8 TPH-01556. EPA 8015 SACC'S EPA 8270 TPH-OESEL EPA 8015 TOTAL OF USA METHANOL EPA 8015 200 AND 6PA 8015 METALS SA, CP. 9-3-56 4 BA ucc W Run 8 Oxy's by 1345 8260 on all 8021 5 IN MW-2 MTDB hits. 1316 \$ MW.4 DEYGENATES 8280 1 - MIDE 2 - TBA 3 - TAME 4 - DIPE 5 - ETBE 6 - 1,2-0CA 7 - EDB 8 - ETHANOL Turn Around Time (Circle Choice) Date/Finge 1630 Teed Y/N Organization Reculyed By (Signature) 24 Hrs. Date/Time 1630 9/3/02 Organization Refinquished by (Signature) 48 Hz. 9-3-02 1/3/2-800 Iced Y/H 72 Hrs. Organization Received by (Signature) Date/Time 800 5 Ddys Organization Refingulaheit/By (Stonotyre) to boyn ked Y/H Reclared, For Laboratory By (Signature) As Contracted Relinquished By (Signature) W

: Programment - Commonstators, star and the star and the



16 September, 2002

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

RE: Tosco SS #0843, Alameda, Ca

Sequoia Work Order: MLI0108

Enclosed are the results of analyses for samples received by the laboratory on 09/03/02 16:30. If you have any questions concerning this report, please feel free to contact me.

The a Factor of Francisco

Sincerely,

James Hartley Project Manager

CA ELAP Certificate #1210

James Hartlet



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

ML10108 Reported:

09/16/02 19:11

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| QA | ML10108-01 | Water | 09/03/02 00:00 | 09/03/02 16:30 |
| MW-2 | ML10108-02 | Water | 09/03/02 13:45 | 09/03/02 16:30 |
| MW-4 | ML10108-03 | Water | 09/03/02 13:16 | 09/03/02 16:30 |



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 MLI0108 Reported: 09/16/02 19:11

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 |
|--------------------------------|------------------------|--------------------|----------|------------|---------|----------|----------|--------------|-------|
| QA (ML10108-01) Water S | ampled: 09/03/02 00:00 | Received: 09/ | 03/02 16 | :30 | | | | | |
| Gasoline Range Organics (C6- | C10) ND | 50 | ug/l | 1 | 2111002 | 09/11/02 | 09/11/02 | 8015Bm/8021B | |
| Benzene | ND | 0.50 | P | H | ** | ,, | | ** | |
| Toluene | ND | 0.50 | ii. | н | 11 | ** | * | • | |
| Ethylbenzene | ND | 0.50 | ** | ** | 11 | ** | ** | 11 | |
| Xylenes (total) | ND | 0.50 | Ħ | 8 4 | p | ** | " | H | |
| Methyl tert-butyl ether | ND | 2.5 | н | 1) | e . | li . | | ** | |
| Surrogate: a,a,a-Trifluorotolu | ene | 92.6 % | 70- | 130 | •• | " | * | r | |
| MW-2 (ML10108-02) Water | | 45 Received: | 09/03/02 | 16:30 | | | | | |
| Gasoline Range Organics (Co | 6-C10) 10000 | 1000 | ug/l | 20 | 2109001 | 09/09/02 | 09/09/02 | 8015Bm/8021B | HC-21 |
| Benzene | 150 | 10 | E+ | *** | 97 | ** | * | t) | |
| Toluene | 1200 | 10 | ** | 10 | 11 | li | Ħ | * | |
| Ethylbenzene | 610 | 10 | * | 11 | н | II | н | •• | |
| Xylenes (total) | 2800 | 10 | ** | h | H | * | ** | ** | |
| Methyl tert-butyl ether | 510 | 50 | 1* | н | ** | | H | ** | |
| Surrogate: a,a,a-Trifluorotolu | ene | 78.4 % | 70 | -130 | " | * | • | " | |
| MW-4 (ML10108-03) Water | Sampled: 09/03/02 13: | 16 Received: | 09/03/02 | 16:30 | | | | | |
| Gasoline Range Organics (C6- | C10) ND | 50 | ug/l | 1 | 2109001 | 09/09/02 | 09/09/02 | 8015Bm/8021B | |
| Benzene | ND | 0.50 | ** | • | H | tı. | ti | De . | |
| Toluene | ND | 0.50 | 11 | ** | " | 41 | н | , " | |
| Ethylbenzene | ND | 0.50 | 11 | ** | H | * . | ,, | ** | |
| Xylenes (total) | ND | 0.50 | h | 41 | 11 | ** | 17 | ** | |
| Methyl tert-butyl ether | ND | 2.5 | H | łı | *1 | | | 11 | |
| Surrogate: a,a,a-Trifluorotolu | ene | 94.8 % | 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 MLI0108 Reported: 09/16/02 19:11

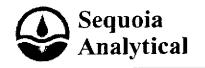
Volatile Organic Compounds by EPA Method 8260B Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|-------------------------|--------------------|----------|------------|---------|----------|----------|-----------|-------|
| MW-2 (ML]0108-02) Water | Sampled: 09/03/02 13:45 | Received: | 09/03/02 | 16:30 | | | | | |
| Ethanol | ND | 5000 | ug/l | 10 | 2109024 | 09/09/02 | 09/10/02 | EPA 8260B | |
| tert-Butyl alcohol | ND | 1000 | | ** | h | 11 | | π | |
| Methyl tert-butyl ether | 460 | 20 | | ** | Ħ | 10 | ** | er . | |
| Di-isopropyl ether | ND | 20 | " | ** | " | п | 44 | • | |
| Ethyl tert-butyl ether | ND | 20 | r | 6 T | 10 | h | 41 | 71 | |
| tert-Amyl methyl ether | ND | 20 | н | ** | п | H | 41 | ** | |
| 1,2-Dichloroethane | ND | 20 | н | 17 | н | | II | • | |
| Ethylene dibromide | ND | 20 | h | ** | H . | ** | ĮI. | 11 | |
| | 7.4 | 100.07 | 70 | 730 | | | | 6 | |

Surrogase: 1,2-Dichloroethane-d4

120 %

78-129



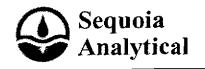
Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding ML10108 Reported: 09/16/02 19:11

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

| Analyse | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|--------|--------------------|---------------------------------------|----------------|------------------|-------------|----------------|-------|--|-------------|
| Analyte | Kesun | Linut | Omis | Levei | Resum | 76KEC | Linus | KFD | Lillit | Notes |
| Batch 2109001 - EPA 5030B [P/T] | | | · · · · · · · · · · · · · · · · · · · | | | | | | | |
| Blank (2109001-BLK1) | | | | Prepared | & Analyze | ed: 09/09/0 | 02 | | | |
| Gasoline Range Organics (C6-C10) | ND | 50 | ug/l | | | | | | | |
| Benzene | ND | 0.50 | 11 | | | | | | | |
| 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 | 10.1 | | * | 10.0 | | 101 | 70-130 | | | |
| Laboratory Control Sample (2109001-BS1 |) | | | Prepared | & Analyze | ed: 09/09/0 | 02 | | | |
| Benzene | 10.6 | 0.50 | ug/l | 10.0 | | 106 | 70-130 | | - · · · · · · · · · · · · · · · · · · · | |
| Toluene | 10.7 | 0.50 | ** | 10.0 | | 107 | 70-130 | | | |
| Ethylbenzene | 9.97 | 0.50 | 17 | 10.0 | | 99.7 | 70-130 | | | |
| Xylenes (total) | 32.4 | 0.50 | ** | 30.0 | | 108 | 70-130 | | | |
| Surrogate: a,a,a-Trifluorotoluene | 10.8 | | * | 10.0 | | 108 | 70-130 | | | |
| Laboratory Control Sample (2109001-BS2 |) | | | Prepared | & Analyze | ed: 09/09/ | 02 | | | |
| Gasoline Range Organics (C6-C10) | 266 | 50 | ug/l | 250 | | 106 | 70-130 | | | |
| Surrogate: a,a,a-Trifluorotoluene | 9.50 | | * | 10.0 | | 95.0 | 70-130 | | | |
| Matrix Spike (2109001-MS1) | So | urce: ML101 | 32-01 | Prepared | & Analyzo | ed: 09/09/ | 02 | | | |
| Gasoline Range Organics (C6-C10) | 529 | 50 | ug/l | 550 | ND | 96.2 | 60-140 | | | |
| Benzene | 6.74 | 0.50 | " | 6.60 | ND | 102 | 60-140 | | | |
| Toluene | 45.4 | 0.50 | r | 39.7 | ND | 114 | 60-140 | | | |
| Ethylbenzene | 10.2 | 0.50 | Ħ | 9.20 | ND | 110 | 60-140 | | | |
| Xylenes (total) | 55.0 | 0.50 | *1 | 46.1 | ND | 119 | 60-140 | | | |
| Surrogate: a,a,a-Trifluorotoluene | 12.6 | | н | 10.0 | | 126 | 70-130 | | | |
| Matrix Spike Dup (2109001-MSD1) | So | urce: ML101: | 32-01 | Prepared | & Analyze | ed: 09/09/ | 02 | | | |
| | | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | 526 | 50 | ug/l | 550 | ND | 95.6 | 60-140 | 0.569 | 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 MLI0108 Reported: 09/16/02 19:11

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 | ŔPD | RPD Limit | Notes |
|---|--------|--------------------|-----------|----------------|------------------|--------------|----------------|------|--------------|-------|
| Batch 2109001 - EPA 5030B [P/T] | | | | | | ··· <u> </u> | | | | |
| Matrix Spike Dup (2109001-MSD1) | So | ource: MLI01 | 32-01 | Prepared | & Analyze | d: 09/09/ | 02 | | | |
| Toluene | 41.7 | 0.50 | ug/l | 39.7 | ND | 105 | 60-140 | 8.50 | 25 | |
| Ethylbenzene | 9.47 | 0.50 | + | 9.20 | ND | 102 | 60-140 | 7.42 | 25 | |
| Xylenes (total) | 50.5 | 0.50 | • | 46.1 | ND | 110 | 60-140 | 8.53 | 25 | |
| Surrogate: a,a,a-Trifluorotoluene | 10.5 | | ņ | 10.0 | | 105 | 70-130 | | | |
| Batch 2111002 - EPA 5030B [P/T] | | | | | | | | | | ı |
| Blank (2111002-BLK1) | | Prepared | & Analyze | | | | | | | |
| 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 | 9.25 | | * | 10.0 | | 92.5 | 70-130 | | | |
| Laboratory Control Sample (2111002-BS1) | | | | Prepared | & Analyz | ed: 09/11/ | 02 | | | |
| Benzene | 9.86 | 0.50 | ug/l | 10.0 | | 98.6 | 70-130 | | | |
| Toluene | 9.90 | 0.50 | | 10.0 | | 99.0 | 70-130 | | | |
| Ethylbenzene | 10.2 | 0.50 | ** | 10.0 | | 102 | 70-130 | | | |
| Xylenes (total) | 30.0 | 0.50 | н | 30.0 | | 100 | 70-130 | | | |
| Surrogate: a,a,a-Triftuorotoluene | 9.23 | | ,, | 10.0 | <u></u> | 92.3 | 70-130 | | | |
| Laboratory Control Sample (2111002-BS2) | | | | Prepared | & Analyz | ed: 09/11/ | 02 | | | |
| Gasoline Range Organics (C6-C10) | 220 | 50 | ug/l | 250 | | 88.0 | 70-130 | | | |
| Surrogate: a,a,a-Trifluorotoluene | 9.47 | | n | 10.0 | · ,, | 94.7 | 70-130 | | | |



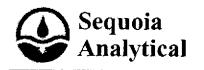
Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding MLI0108 Reported: 09/16/02 19:11

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 2111002 - EPA 5030B [P/T] | | | | | | · | | | | |
| Laboratory Control Sample Dup (211 | | • | | Prepared | & Analyza | ed: 09/11/ | 02 | | | |
| Benzene | 10.1 | 0.50 | цg/i | 10.0 | | 101 | 70-130 | 2.40 | 25 | |
| Toluene | 10.1 | 0.50 | * | 10.0 | | 101 | 70-130 | 2.00 | 25 | |
| Ethylbenzene | 10.3 | 0.50 | Ħ | 10.0 | | 103 | 70-130 | 0.976 | 25 | |
| Xylenes (total) | 30.5 | 0.50 | н | 30.0 | | 102 | 70-130 | 1.65 | 25 | |
| Surrogate: a,a,a-Trifluorotoluene | 10.1 | | Pr | 10.0 | | 101 | 70-130 | | | |
| Laboratory Control Sample Dup (2)1 | 1002-BSD2) | | | Prepared | & Analyz | ed: 09/11/ | 02 | | | |
| Gasoline Range Organics (C6-C10) | 248 | 50 | ug/l | 250 | | 99.2 | 70-130 | 12.0 | 25 | |
| Surrogate: a,a,a-Trifluorotoluene | 11.1 | | " | 10.0 | | 111 | 70-130 | | | |



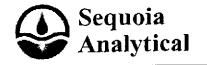
Gettler Ryan/Geostrategies - Tosco/Unocal

6747 Sierra Ct, Suite J Dublin CA, 94568 Project: Tosco SS #0843, Alameda, Ca

Project Number: #0843, Alameda, Ca Project Manager: Deanna Harding MLI0108 Reported: 09/16/02 19:11

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 2109024 - EPA 5030B P/T | | | | · | | | | | Dillit | 140102 |
| Blank (2109024-BLK1) | | | | Prepared: | 09/09/02 | Analyzed | l: 09/10/02 | | | |
| Ethanol | ND | 500 | ug/l | <u>F</u> | 03,03,02 | 1111017200 | 1. 07/10/02 | | | |
| tert-Butyl alcohol | ND | 100 | 11 | | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | •• | | | | | | | |
| Di-isopropyl ether | ND | 2.0 | ** | | | | | | | |
| Ethyl tert-butyl ether | ND | 2.0 | 71 | | | | | | | |
| tert-Amyl methyl ether | ND | 2.0 | • | | | | | | | |
| 1,2-Dichloroethane | ND | 2.0 | n | | | | | | | |
| Ethylene dibromide | ND | 2.0 | п | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 5.45 | | " | 5.00 | · · · · <u></u> · · | 109 | 78-129 | <u>-</u> | | |
| Laboratory Control Sample (2109024-BS1) | | | | Prepared: | 09/09/02 | Analyzed | : 09/10/02 | | | |
| Methyl tert-butyl ether | 10.6 | 2.0 | ug/l | 10.0 | | 106 | 63-137 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 5.53 | ·· | 31 | 5.00 | | 111 | 78-129 | . | | |
| Laboratory Control Sample Dup (2109024- | BSD1) | | | Prepared: | 09/09/02 | Analyzed | : 09/10/02 | | | |
| Methyl tert-butyl ether | 10.7 | 2.0 | ug/l | 10.0 | | 107 | 63-137 | 0.939 | 13 | |
| Surrogate: 1,2-Dichloroethane-d4 | 5.73 | · · · · · · · · · · · · · · · · · · · | p | 5.00 | | 115 | 78-129 | | | |
| Matrix Spike (2109024-MS1) | So | urce: M L 1009 | 93-06 | Prepared: | 09/09/02 | Analyzed | : 09/10/02 | | | |
| Methyl tert-butyl ether | 53.8 | 10 | ug/l | 50.0 | ND | 106 | 0-200 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 5.77 | | . , | 5.00 | | 115 | 78-129 | - | | |
| Matrix Spike Dup (2109024-MSD1) | Soi | orce: MLJ009 | 3-06 | Prepared: | 09/09/02 | Analyzed: | : 09/10/02 | | | |
| Methyl tert-butyl ether | 54.1 | 10 | ug/I | 50.0 | ND | 106 | 0-200 | 0.556 | 200 | |
| urrogate: 1,2-Dichloroethane-d4 | 5.76 | | ** | 5.00 | | 115 | 78-129 | | | |



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 ML10108 Reported: 09/16/02 19:11

Notes and Definitions

HC-21 Chromatogram Pattern: Gasoline C6-C10

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