# GETTLER-RYAN INC.

## TRANSMITTAL

TO: Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

DATE: June 30, 1998
G-R #: 180075

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

**RE: Tosco (Unocal) SS #7376**
**4191 First Street**
**Pleasanton, California**

WE HAVE ENCLOSED THE FOLLOWING:

| COPIES | DATED | DESCRIPTION |
|---|---|---|
| 1 | June 18, 1998 | Groundwater Monitoring and Sampling Report<br>First Quarter 1998 - March 16, 1998 |

COMMENTS:

At the request of Tosco Marketing Company, we are providing you a copy of the above referenced report. The site is monitored and sampled on a quarterly basis. If you have questions please contact the Tosco Project Manager, Ms. Tina R. Berry at (925) 277-2321.

Enclosure

cc: Mr. Dave Vossler, Gettler-Ryan Inc., Novato, CA

agency/7376trb.qmt

# GETTLER-RYAN INC.

June 18, 1998
G-R Job #180075

Ms. Tina R. Berry
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: First Quarter 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #7376
4191 First Street
Pleasanton, California

Dear Ms. Berry:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 16, 1998, field personnel monitored six wells (MW-1, MW-2B, and MW-3 through MW-6) and sampled five wells (MW-1, MW-2B, MW-3, MW-4, and MW-6) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. **Separate-phase hydrocarbons were present in one well (MW-5).** Static water level data and groundwater elevations are summarized in Table 1. Product Thickness/Removal Data is summarized in Table 2. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Table 1, and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

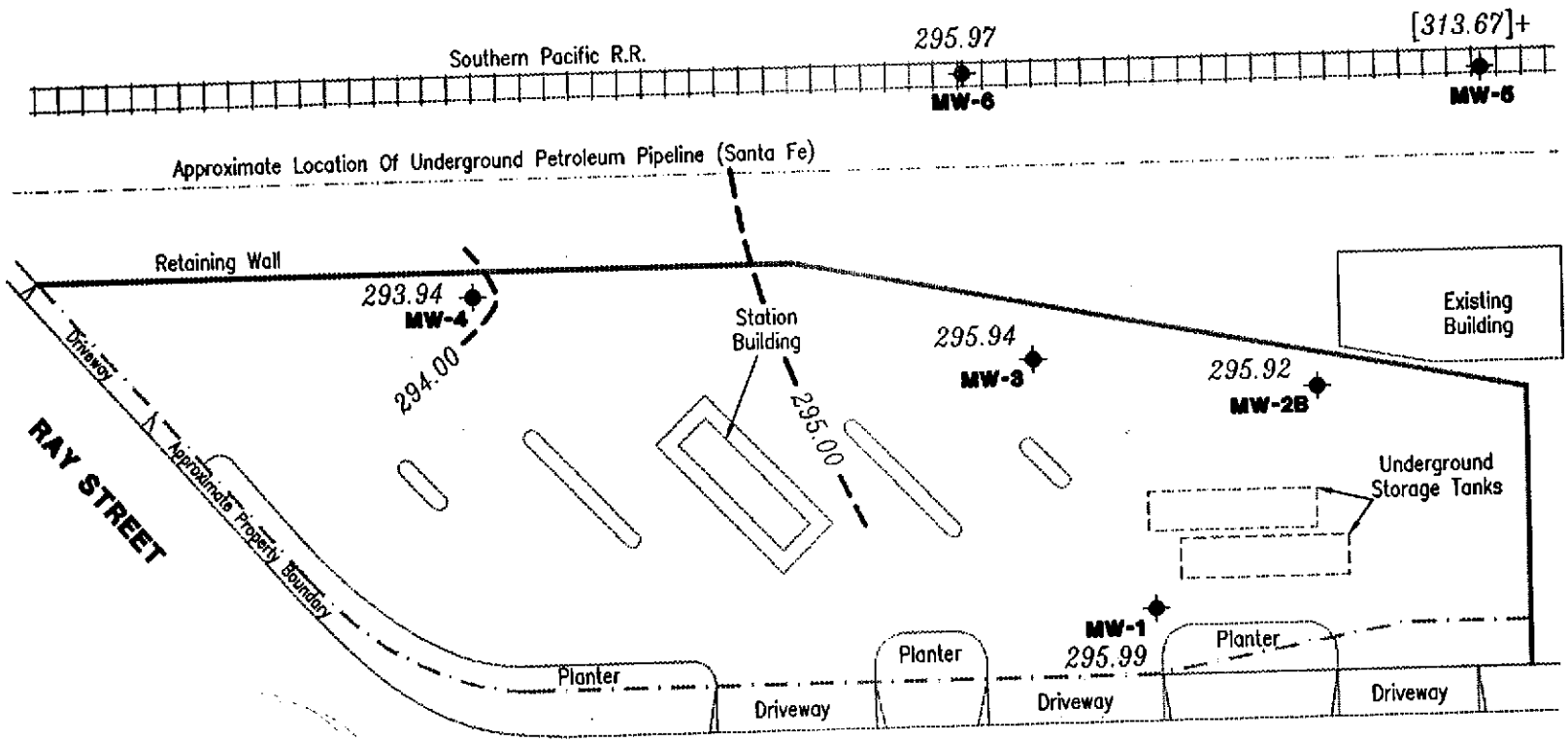
Sincerely,

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577


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

7376.qml




## EXPLANATION

- ✦ Groundwater monitoring well
- *99.99* Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 Groundwater elevation contour, dashed where inferred.
- [*99.99*] Not used in contouring
- \+ Groundwater elevation corrected for the presence of free-phase hydrocarbons

Approximate groundwater flow direction at a gradient of 0.02 Ft./Ft.

Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

FIGURE 1

**Gettler - Ryan Inc.**

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

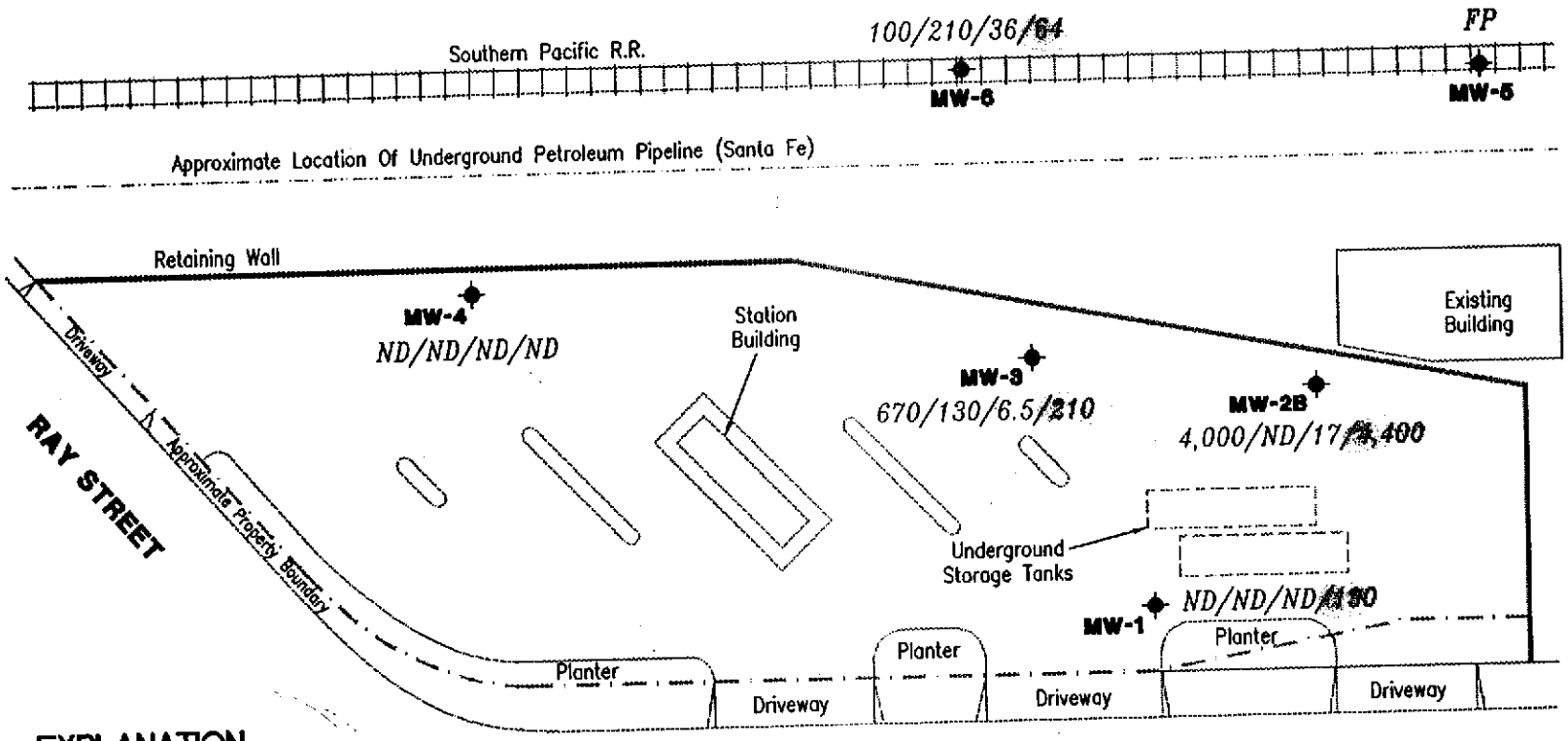
POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 7376
4191 First Street
Pleasanton, California

JOB NUMBER 180075

REVIEWED BY

DATE March 16, 1998

REVISED DATE




## EXPLANATION

- ◆ Groundwater monitoring well
- *A/B/C/D* TPH(D) (Total Petroleum Hydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb
- *ND* Not Detected
- *FP* Free Product

Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

FIGURE 2

**Gettler - Ryan Inc.**
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

CONCENTRATION MAP
Tosco (Unocal) Service Station No. 7376
4191 First Street
Pleasanton, California

JOB NUMBER 180075
REVIEWED BY
DATE March 16, 1998
REVISED DATE

# Table 1

## Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

Pleasanton, California

| Well ID/ TOC* | Date | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPH(D) | TPH(G) | B | T | E | X | MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | <-------- | | | ppb | | | --------> |
| MW-1 | 12/08/87[1] | | | | 2,100[2] | 50[3] | 58 | 8 | ND | 10 | -- |
| | 12/07/94 | | | | -- | ND | ND | ND | ND | ND | -- |
| | 03/01/95 | | | | 120 | ND | ND | 1.1 | ND | 1.3 | -- |
| | 06/01/95 | | | | 54[5] | 130 | 1.0 | 2.9 | 0.79 | 4.5 | -- |
| | 09/06/95 | | | | 690 | ND | ND | ND | ND | ND | --[6] |
| | 12/12/95 | | | | 190[5] | ND | ND | ND | ND | ND | -- |
| | 03/01/96 | | | | 56 | ND | ND | ND | ND | ND | 370 |
| | 06/15/96 | | | | ND | ND | ND | ND | ND | ND | 270 |
| | 09/18/96 | | | | 130[5] | ND | ND | ND | ND | ND | 590 |
| | 12/21/96 | | | | ND | ND | ND | ND | ND | ND | 150 |
| 366.99 | 03/07/97 | 71.49 | 295.50 | 0.00 | ND | ND | ND | ND | ND | ND | 220 |
| | 06/27/97 | 80.05 | 286.94 | 0.00 | ND | ND | ND | ND | ND | ND | 17 |
| | 09/29/97 | 80.04 | 286.95 | 0.00 | ND | ND | ND | ND | ND | ND | 24 |
| | 12/15/97 | 80.07 | 286.92 | 0.00 | ND | ND | ND | ND | ND | ND | 25 |
| | **03/16/98** | **71.00** | **295.99** | **0.00** | **ND** | **ND** | **ND** | **0.52** | **ND** | **0.71** | **190** |
| MW-2 | 12/08/87 | | | | 620[2] | 1,800[3] | 910 | 800 | 260 | 1,200 | -- |
| | 12/07/94 | DAMAGED | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/07/95 | DESTROYED | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2B | 03/01/95 | | | | 320 | ND | ND | ND | ND | ND | -- |
| | 06/01/95 | | | | 280 | 350 | 19 | 5.8 | ND | 7.7 | -- |
| | 09/06/95 | | | | ND | ND | 90 | ND | ND | ND | --[6] |
| | 12/12/95 | | | | 850[4] | 1,200 | 630 | ND | 15 | 57 | --[7] |
| | 03/01/96 | | | | 870[4] | 1,000 | 620 | ND | ND | 5.3 | 4,300 |
| | 06/15/96 | | | | 420 | 910 | 350 | ND | ND | ND | 3,700 |
| | 09/18/96 | | | | 600 | 1,200 | 95 | ND | ND | ND | 5,200 |
| | 12/21/96 | | | | 470 | 330[8] | 57 | ND | ND | ND | 2,900 |
| 365.05 | 03/07/97 | 69.67 | 295.38 | Sheen | 870[4] | 190 | 28 | 0.64 | ND | 1.5 | 4,300 |
| | 06/27/97 | 82.40 | 282.65 | 0.00 | 680[4] | 98 | 3.4 | 1.0 | 0.53 | ND | 3,100 |
| | 09/29/97 | 82.72 | 282.33 | 0.00 | 430 | ND | ND | ND | ND | ND | 3,000 |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

Pleasanton, California

| Well ID/ TOC* | Date | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPH(D) | TPH(G) | B | T | E | X | MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | <-------- | | ppb | | | | --------> |
| MW-2B | 12/15/97 | 82.57 | 282.48 | 0.00 | 490 | 54[9] | ND | ND | ND | ND | 4,100 |
| (cont) | **03/16/98** | **69.13** | **295.92** | **Sheen** | **4,000[10]** | **ND[11]** | **17** | **ND[11]** | **ND[11]** | **ND[11]** | **4,400** |
| MW-3 | 12/08/87 | | | | 2,300[2] | 24,000[3] | 2,600 | 1,300 | 160 | 660 | -- |
| | 12/07/94 | | | | -- | ND | ND | ND | ND | ND | -- |
| | 03/01/95 | | | | 140[4] | ND | ND | 1.1 | ND | 1.1 | -- |
| | 06/01/95 | | | | 140[5] | 62 | 7.8 | 0.90 | ND | 1.6 | -- |
| | 09/06/95 | | | | 880[5] | 4,100 | 380 | 490 | 130 | 710 | --[6] |
| | 12/12/95 | | | | 3,100[4] | 19,000 | 600 | 380 | 2,100 | 5,300 | --[7] |
| | 03/01/96 | | | | 1,500[5] | 3,400 | 950 | 3.2 | 1,900 | 290 | 59 |
| | 06/15/96 | | | | 400[4] | 780 | 190 | 8.8 | 3.8 | 4.0 | 630 |
| | 09/18/96 | | | | 170 | 2,800 | 340 | 12 | 11 | 110 | 2,500 |
| | 12/21/96 | | | | 64[4] | 51 | 1.3 | ND | ND | 0.53 | 20 |
| 367.01 | 03/07/97 | 71.58 | 295.43 | 0.00 | 570[4] | 1,400 | 53 | 14 | 29 | 68 | 220 |
| | 06/27/97 | 83.27 | 283.74 | 0.00 | ND | ND | ND | ND | ND | ND | 27 |
| | 09/29/97 | 83.33 | 283.68 | 0.00 | ND | ND | ND | ND | ND | ND | 11 |
| | 12/15/97 | 83.35 | 283.66 | 0.00 | ND | ND | ND | ND | ND | ND | 19 |
| | **03/16/98** | **71.07** | **295.94** | **0.00** | **670[10]** | **130[12]** | **6.5** | **1.9** | **1.5** | **1.6** | **210** |
| MW-4 | 09/18/96 | | | | 200 | 160 | 14 | ND | ND | 1.6 | ND |
| | 12/21/96 | | | | ND | ND | ND | ND | ND | ND | ND |
| 369.03 | 03/07/97 | 68.04 | 300.99 | 0.00 | ND | ND | 1.9 | 0.99 | ND | 1.5 | ND |
| | 06/27/97 | 79.06 | 289.97 | 0.00 | ND | ND | ND | ND | ND | ND | ND |
| | 09/29/97 | 85.83 | 283.20 | 0.00 | ND | ND | ND | ND | ND | ND | ND |
| | 12/15/97 | 87.26 | 281.77 | 0.00 | ND | ND | ND | ND | ND | ND | ND |
| | **03/16/98** | **75.09** | **293.94** | **0.00** | **ND** | **ND** | **ND** | **0.69** | **ND** | **0.82** | **ND** |
| MW-5 | 09/18/96 | | | | 4,700[5] | 36,000 | 6,700 | 410 | 730 | 6,500 | 4,100 |
| | 12/21/96 | | | | 4,700[4] | 25,000 | 3,200 | 300 | 780 | 3,600 | 2,600 |
| 363.23 | 03/07/97 | 56.30 | 306.93 | Sheen | 2,100[4] | 14,000 | 1,300 | 120 | 410 | 1,200 | 1,700 |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

Pleasanton, California

| Well ID/ TOC* | Date | DTW (ft.) | GWE (msl) | Product Thickness (ft.) | TPH(D) | TPH(G) | B | T | E | X | MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | <----------ppb----------> | | | | | | |
| MW-5 | 06/27/97 | 68.88 | 295.03** | 0.90 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- |
| (cont) | 09/29/97 | 69.47 | 294.02** | 0.35 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- |
| | 12/15/97 | 64.92 | 298.53** | 0.30 | NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT | | | | | -- | -- |
| | **03/16/98** | **49.63** | **313.67**** | **0.09** | **NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT** | | | | | -- | -- |
| **MW-6** | 09/18/96 | | | | ND | 160 | 5.4 | ND | ND | ND | ND |
| | 12/21/96 | | | | ND | 300[8] | 96 | 1.3 | ND | 1.7 | 21 |
| 363.12 | 03/07/97 | 67.61 | 295.51 | 0.00 | 190[4] | 1,800[8] | 920 | 18 | ND | 31 | 290 |
| | 06/27/97 | 80.45 | 282.67 | 0.00 | 73[5] | ND | 0.73 | ND | ND | 38 | 38 |
| | 09/29/97 | 86.02 | 277.10 | 0.00 | ND | 62[9] | ND | ND | ND | ND | 43 |
| | 12/15/97 | 84.03 | 279.09 | 0.00 | ND | 78[9] | ND | ND | ND | ND | 39 |
| | **03/16/98** | **67.15** | **295.97** | **0.00** | **100[10]** | **210[12]** | **36** | **2.5** | **ND** | **3.0** | **64** |
| **Trip Blank** | | | | | | | | | | | |
| TB-LB | **03/16/98** | -- | -- | -- | -- | ND | ND | ND | ND | ND | ND |

# Table 1

## Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7376

4191 First Street

Pleasanton, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to March 16, 1998, were provided by MPDS Services, Inc.

TOC = Top of Casing
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to 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 have been surveyed relative to mean seal level (msl) per City of Pleasanton Benchmark V1, a brass disk on the north curb of Ray Street, approximately 200 feet northwest of the centerline of First Street (Elevation = 367.17 feet msl).

** Groundwater elevation corrected for the presence of free product; correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].

1 1,2 - Dichloroethene was detected at a concentration of 18 ppb.

2 Reported as Total Extractable Hydrocarbons (TEH).

3 Reported as Total Petroleum Hydrocarbons (TPH).

4 Laboratory report indicates that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

5 Laboratory report indicates that the hydrocarbons detected did not appear to be diesel.

6 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

7 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected form this well.

8 Laboratory report indicates that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

9 Laboratory report indicates that the hydrocarbons detected did not appear to be gasoline.

10 Laboratory report indicates diesel and unidentified hydrocarbons >C16.

11 Detection limit raised. Refer to analytical results.

12 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.

*Depth to water and groundwater elevation history will be updated in future reports.*

# Table 2

**Product Thickness/Removal Data**

Tosco (Unocal) Service Station #7376

4191 First Street

Pleasanton, California

| Well ID | Date | DTW (ft.) | Product Thickness (ft.) | Amount Bailed (Product + Water) gallons |
|---|---|---|---|---|
| **MW-5** | 03/07/97 | 56.30 | Sheen | -- |
| | 06/27/97 | 68.88 | 0.90 | -- |
| | 09/29/97 | 69.47 | 0.35 | -- |
| | 12/15/97 | 64.92 | 0.30 | -- |
| | **03/16/98** | **49.63** | **0.09** | **0.25** |

**EXPLANATIONS:**

Product thickness/removal data prior to March 16, 1998, were provided by MPDS Services, Inc.

DTW = Depth to water
(ft.) = Feet
-- = Not Measured/Not Available

*Amount Bailed history will be updated in future reports.*

# 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 a MMC flexi-dip 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, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

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

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

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

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # ONOCAL # 7376 Job#: 180075

Address: 4191 FIRST STREET Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE BALIAN

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Well ID MW-1 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: ∅ in. Amount Bailed (product/water): _____ (gal.)

Total Depth 86.43 ft.

Depth to Water 71.00 ft.

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

15.43 X VF 0.17 = 2.62 X 3 (case volume) = Estimated Purge Volume: 7.87 (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, Suction, (Grundfos), Other: _____

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other: _____

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Starting Time: 12:19 Weather Conditions: CLOUD

Sampling Time: 12:45 Water Color: CLEAR Odor: —

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 12:22 | 3 | 6.95 | 354 | 70.0 | | | |
| 12:25 | 5.5 | 6.90 | 355 | 71.7 | | | |
| 12:29 | 8 | 6.88 | 353 | 72.1 | | | |
| | | | | | | | |
| | | | | | | | |

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## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-1 | 3-VOA's | Y | HCl | SEQ. | TPH-G/BTEX/MTBE |
| MW-1 | 1-AMBER | " | — | " | TPH-D |
| | | | | | |
| | | | | | |

COMMENTS: _____

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # UNOCAL SS # 7376 Job#: 180075

Address: 4191 FIRST STREET Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE BALIAN

Well ID MW-2B Well Condition: ONE FLANGE IS BROKEN

Well Diameter 2" in. Hydrocarbon Thickness: Sheen in. Amount Bailed (product/water): _____ (gal.)

Total Depth 85.26 ft.

Depth to Water 69.13 ft.

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

16.13 X VF 0.17 = 2.74 X 3 (case volume) = Estimated Purge Volume: 8.23 (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, Suction, (Grundfos), Other: _____

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 14:00 Weather Conditions: PARTLY SUNNY

Sampling Time: 14:30 Water Color: CLEAR Odor: _____

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °F/C° | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 14:03 | 3 | 6.71 | 427 | 73.9 | | | |
| 14:06 | 6 | 6.70 | 433 | 73.3 | | | |
| 14:09 | 8.5 | 6.68 | 432 | 73.7 | | | |
| | | | | | | | |
| | | | | | | | |

## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-2B | 3-VOA's | Y | HCl | SEQ. | TPH-G/BTEX/MTBE |
| MW-2B | 1-AMBER | Y | — | " | TPH-D |
| | | | | | |
| | | | | | |

COMMENTS: SHEEN

9/97-fieldot.frm

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # UNOCAL SS #7376 Job#: 180075

Address: 4191 FIRST ST Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE BALIAN

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Well ID MW-3 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: ∅ in. Amount Bailed (product/water): _____ (gal.)

Total Depth 94.11 ft.

Depth to Water 71.07 ft.

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

23.04 X VF 0.17 = 3.92 X 3 (case volume) = Estimated Purge Volume: 11.75 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / (Grundfos) / Other: _____

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other: _____

---

Starting Time: 11:31 Weather Conditions: CLOUD

Sampling Time: 12:00 Water Color: CLEAR Odor: —

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 11:35 | 4 | 6.99 | 398 | 70.6 | | | |
| 11:39 | 8 | 7.00 | 407 | 71.3 | | | |
| 11:43 | 12 | 7.00 | 407 | 71.7 | | | |
| | | | | | | | |
| | | | | | | | |

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## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-3 | 3-VOA's | Y | HCl | SEQ. | TPH-G/BTEX/MTBE |
| MW-3 | 1-AMBER | Y | — | " | TPH-D |
| | | | | | |
| | | | | | |

COMMENTS: _____

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # UNOCAL SS #7376 Job#: 180075

Address: 4191 FIRST STREET Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE BALIAN

Well ID MW-4 Well Condition: *

Well Diameter 2" in. Hydrocarbon Thickness: Ø in. Amount Bailed (product/water): _____ (gal.)

Total Depth 93.07 ft.

Depth to Water 75.09 ft.

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

17.98 X VF 0.17 = 3.06 X 3 (case volume) = Estimated Purge Volume: 9.17 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / Suction / (Grundfos) / Other: _____

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: 10:48 Weather Conditions: CLOUD

Sampling Time: 11:10 Water Color: CLEAR Odor: —

Purging Flow Rate: 1 gpm Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 10:51 | 3 | 7.55 | 279 | 70.3 | | | |
| 10:54 | 6 | 7.59 | 279 | 71.4 | | | |
| 10:58 | 9.5 | 7.63 | 283 | 71.9 | | | |
| | | | | | | | |
| | | | | | | | |

## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-4 | 3-VOA'S | Y | HCl | SEQ | TPH-G/BTEX/MTBE |
| MW-4 | 1-AMBER | Y | — | " | TPH-D |
| | | | | | |
| | | | | | |

COMMENTS: * NO WELL PLUG, BECAUSE IF I PUT WELL PLUG IT WILL BREAK, BECAUSE THE CASING IS TOO HIGH, AND THE WELL LID WILL PRESS ON PLUG, SO SHOUD BE TRIMMED (THE CASING)

3/97-fieldst.frm

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # UNOCAL SS #7376 Job#: 180075

Address: 4191 FIRST STREET Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE RALIAP

---

Well ID MW-5 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: 0.09 (ft) Amount Bailed (product/water): 1/4 GAL (gal.)

Total Depth 72.51 ft.

Depth to Water 49.63 ft.

| 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: _____

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Starting Time: _____ Weather Conditions: PARTLY SUNNY

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

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

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## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS: _____

9/97-fieldst.frm

# WELL MONITORING/SAMPLING
# FIELD DATA SHEET

Client/
Facility # UNOCAL SS #7376 Job#: 180075

Address: 4191 FIRST STREET Date: 3-16-98

City: PLEASANTON, CA Sampler: STEVE BALIAN

---

Well ID MW-6 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: Ø in. Amount Bailed (product/water): _____ (gal.)

Total Depth 88.00 ft.

Depth to Water 67.15 ft.

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

20.85 X VF 0.17 = 3.54 X 3 (case volume) = Estimated Purge Volume: 10.63 (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, Suction, (Grundfos), Other: _____

Sampling Equipment: (Disposable Bailer), Bailer, Pressure Bailer, Grab Sample, Other: _____

---

Starting Time: 13:13 Weather Conditions: CLOUD

Sampling Time: 13:40 Water Color: CLEAR Odor: —

Purging Flow Rate: 1 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

| Time | Volume (gal.) | pH | Conductivity µmhos/cm | Temperature °F | D.O. (mg/L) | ORP (mV) | Alkalinity (ppm) |
|---|---|---|---|---|---|---|---|
| 13:17 | 4 | 6.99 | 418 | 69.6 | | | |
| 13:21 | 7.5 | 6.97 | 420 | 70.2 | | | |
| 13:25 | 11 | 6.97 | 425 | 70.5 | | | |
| | | | | | | | |
| | | | | | | | |

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## LABORATORY INFORMATION

| SAMPLE ID | (#) - CONTAINER | REFRIG. | PRESERV. TYPE | LABORATORY | ANALYSES |
|---|---|---|---|---|---|
| MW-6 | 3-VOA'S | Y | HCl | SEQ. | TPH-G/BTEX/MTBE |
| MW-6 | 1-AMBER | Y | — | " | TPH-D |
| | | | | | |
| | | | | | |

COMMENTS: _____

# Chain-of-Custody-Record

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: TOSCO (UNOCAL) SS#7376
Facility Address: 4191 First Street, Pleasanton, CA
Consultant Project Number: 180075.85
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone): 510-551-7555 (Fax Number): 510-551-7888

Contact (Name): Ms. Tina R. Berry
(Phone): (510) 277-2321
Laboratory Name: Sequoia Analytical
Laboratory Release Number: 9803444
Samples Collected by (Name): STEVE BALIAN
Collection Date: 3-16-98
Signature: STEVE BALIAN

| Sample Number | Lab Sample Number | Number of Containers | Matrix S = Soil A = Air W = Water C = Charcoal | Type G = Grab C = Composite D = Discrete | Time | Sample Preservation | Iced (Yes or No) | Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8020) | TPH Diesel (8015) | Oil and Grease (5520) | Purgeable Halocarbons (8010) | Purgeable Aromatics (8020) | Purgeable Organics (8240) | Extractable Organics (8270) | Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA) | | | | | | DO NOT BILL TB-LB ANALYSIS Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-LB | | 1 | W | G | | HCl | Y | X | | | | | | | | | | | | | 8031849 |
| MW-1 | | 4 | " | " | 12:45 | " | " | X | X | | | | | | | | | | | | 8031850 |
| MW-2 | | 4 | " | " | 14:30 | " | " | X | X | | | | | | | | | | | | 8031851 |
| MW-3 | | 4 | " | " | 12:00 | " | " | X | X | | | | | | | | | | | | 8031852 |
| MW-4 | | 4 | " | " | 11:10 | " | " | X | X | | | | | | | | | | | | 8031853 |
| MW-6 | | 4 | " | " | 13:40 | " | " | X | X | | | | | | | | | | | | 8031854 |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| STEVE BALIAN | G-R Inc. | 3.16.98 1620 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) C. Palmer | | Date/Time 3/16/98 1620 |

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | | |
|---|---|---|---|
| Gettler-Ryan | Client Project ID: | TOSCO (UNOCAL) SS#7376 | Sampled: Mar 16, 1998 |
| 6747 Sierra Court, Suite J | Sample Matrix: | Water | Received: Mar 16, 1998 |
| Dublin, CA 94568 | Analysis Method: | EPA 3510/8015 Mod. | Reported: Apr 6, 1998 |
| Attention: Deanna L. Harding | First Sample #: | 803-1850 | |

QC Batch Number: SP032398 8015EXA | SP032398 8015EXA | SP032398 8015EXA | SP032398 8015EXA | SP032398 8015EXA

## TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

| Analyte | Reporting Limit µg/L | Sample I.D. 803-1850 MW-1 | Sample I.D. 803-1851 MW-2 | Sample I.D. 803-1852 MW-3 | Sample I.D. 803-1853 MW-4 | Sample I.D. 803-1854 MW-6 |
|---|---|---|---|---|---|---|
| Extractable Hydrocarbons | 50 | N.D. | 4000 | 670 | N.D. | 100 |
| Chromatogram Pattern: | | -- | Diesel & Unidentified Hydocarbons > C16 | Diesel & Unidentified Hydocarbons > C16 | -- | Diesel & Unidentified Hydocarbons > C16 |

**Quality Control Data**

| | | | | | |
|---|---|---|---|---|---|
| Report Limit Multiplication Factor: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Date Extracted: | 3/23/98 | 3/23/98 | 3/23/98 | 3/23/98 | 3/23/98 |
| Date Analyzed: | 3/24/98 | 3/25/98 | 3/25/98 | 3/24/98 | 3/24/98 |
| Instrument Identification: | HP-3B | HP-3B | HP-3B | HP-3B | HP-3B |

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL, #1271**

Mike Gregory
Project Manager

8031849.GET <2>

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | | |
|---|---|---|---|
| Gettler-Ryan | Client Project ID: | TOSCO (UNOCAL) SS#7376 | Sampled: Mar 16, 1998 |
| 6747 Sierra Court, Suite J | Sample Matrix: | Water | Received: Mar 16, 1998 |
| Dublin, CA 94568 | Analysis Method: | EPA 5030/8015 Mod./8020 | Reported: Apr 6, 1998 |
| Attention: Deanna L. Harding | First Sample #: | 803-1849 | |

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

| Analyte | Reporting Limit µg/L | Sample I.D. 803-1849 TB-LB | Sample I.D. 803-1850 MW-1 | Sample I.D. 803-1851 MW-2 | Sample I.D. 803-1852 MW-3 | Sample I.D. 803-1853 MW-4 | Sample I.D. 803-1854 MW-6 |
|---|---|---|---|---|---|---|---|
| QC Batch Number: | | GC032798 802005A | GC033098 802004A | GC032798 802002A | GC033098 802002A | GC032798 802002A | GC032798 802002A |
| Purgeable Hydrocarbons | 50 | N.D. | N.D. | N.D. | 130 | N.D. | 210 |
| Benzene | 0.50 | N.D. | N.D. | 17 | 6.5 | N.D. | 36 |
| Toluene | 0.50 | N.D. | 0.52 | N.D. | 1.9 | 0.69 | 2.5 |
| Ethyl Benzene | 0.50 | N.D. | N.D. | N.D. | 1.5 | N.D. | N.D. |
| Total Xylenes | 0.50 | N.D. | 0.71 | N.D. | 1.6 | 0.82 | 3.0 |
| MTBE | 2.5 | N.D. | 190 | 4,400 | 210 | N.D. | 64 |
| Chromatogram Pattern: | | -- | -- | -- | Gasoline & Unidentified Hydocarbons < C7 | -- | Gasoline & Unidentified Hydocarbons < C7 |
| **Quality Control Data** | | | | | | | |
| Report Limit Multiplication Factor: | | 1.0 | 1.0 | 20 | 2.0 | 1.0 | 1.0 |
| Date Analyzed: | | 3/27/98 | 3/30/98 | 3/27/98 | 3/30/98 | 3/27/98 | 3/27/98 |
| Instrument Identification: | | HP-5 | HP-4 | HP-2 | HP-2 | HP-2 | HP-2 |
| Surrogate Recovery, %: (QC Limits = 70-130%) | | 81 | 109 | 111 | 110 | 111 | 149* |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL, #1271**

Mike Gregory
Project Manager

Please Note:
* Surrogate Recovery was above control limits due to sample coelution.

8031849.GET <1>

Sequoia Analytical

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Gettler-Ryan
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna L. Harding

Client Project ID: TOSCO (UNOCAL) SS#7376
Matrix: Liquid
QC Sample Group: 8031849-854
Reported: Apr 6, 1998

# QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes | Diesel |
|---|---|---|---|---|---|
| QC Batch#: | GC032798 | GC032798 | GC032798 | GC032798 | SP032398 |
| | 802002A | 802002A | 802002A | 802002A | 8015EXA |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8015M |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 | EPA 3510 |
| Analyst: | D. Newcomb | D. Newcomb | D. Newcomb | D. Newcomb | K. Grubb |
| MS/MSD #: | 8031782 | 8031782 | 8031782 | 8031782 | BLK032398A |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 | 3/23/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 | 3/24/98 |
| Instrument I.D.#: | HP-2 | HP-2 | HP-2 | HP-2 | HP-3A |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L | 500 µg/L |
| Result: | 21 | 21 | 22 | 65 | 380 |
| MS % Recovery: | 105 | 105 | 110 | 108 | 75 |
| Dup. Result: | 22 | 22 | 21 | 67 | 260 |
| MSD % Recov.: | 110 | 110 | 105 | 112 | 51 |
| RPD: | 4.7 | 4.7 | 4.7 | 3.0 | 38 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 | 0-50 |
| LCS #: | 2LCS032798 | 2LCS032798 | 2LCS032798 | 2LCS032798 | LCS032398A |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 | 3/23/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 | 3/24/98 |
| Instrument I.D.#: | HP-2 | HP-2 | HP-2 | HP-2 | HP-3A |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L | 500 µg/L |
| LCS Result: | 18 | 18 | 19 | 57 | 330 |
| LCS % Recov.: | 90 | 90 | 95 | 95 | 66 |
| MS/MSD LCS Control Limits | 70-130 | 70-130 | 70-130 | 70-130 | 60-140 |

SEQUOIA ANALYTICAL, #1271

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Gettler-Ryan
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna L. Harding

Client Project ID: TOSCO (UNOCAL) SS#7376
Matrix: Liquid
QC Sample Group: 8031849-854
Reported: Apr 6, 1998

# QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes |
|---|---|---|---|---|
| QC Batch#: | GC033098 | GC033098 | GC033098 | GC033098 |
| | 802002A | 802002A | 802002A | 802002A |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | D. Newcomb | D. Newcomb | D. Newcomb | D. Newcomb |
| MS/MSD #: | 8031974 | 8031974 | 8031974 | 8031974 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 3/30/98 | 3/30/98 | 3/30/98 | 3/30/98 |
| Analyzed Date: | 3/30/98 | 3/30/98 | 3/30/98 | 3/30/98 |
| Instrument I.D.#: | HP-2 | HP-2 | HP-2 | HP-2 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| Result: | 18 | 19 | 20 | 60 |
| MS % Recovery: | 90 | 95 | 100 | 100 |
| Dup. Result: | 19 | 19 | 21 | 61 |
| MSD % Recov.: | 95 | 95 | 105 | 102 |
| RPD: | 5.4 | 0.0 | 4.9 | 1.7 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 |

| | | | | |
|---|---|---|---|---|
| LCS #: | 2LCS033098 | 2LCS033098 | 2LCS033098 | 2LCS033098 |
| Prepared Date: | 3/30/98 | 3/30/98 | 3/30/98 | 3/30/98 |
| Analyzed Date: | 3/30/98 | 3/30/98 | 3/30/98 | 3/30/98 |
| Instrument I.D.#: | HP-2 | HP-2 | HP-2 | HP-2 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| LCS Result: | 19 | 20 | 20 | 63 |
| LCS % Recov.: | 95 | 100 | 100 | 105 |
| MS/MSD LCS Control Limits | 70-130 | 70-130 | 70-130 | 70-130 |

SEQUOIA ANALYTICAL, #1271

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Gettler-Ryan
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna L. Harding

Client Project ID: TOSCO (UNOCAL) SS#7376
Matrix: Liquid
QC Sample Group: 8031849-854
Reported: Apr 6, 1998

# QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes |
|---|---|---|---|---|
| QC Batch#: | GC032798 | GC032798 | GC032798 | GC032798 |
| | 802004A | 802004A | 802004A | 802004A |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | D. Newcomb | D. Newcomb | D. Newcomb | D. Newcomb |
| MS/MSD #: | 8031826 | 8031826 | 8031826 | 8031826 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Instrument I.D.#: | HP-4 | HP-4 | HP-4 | HP-4 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| Result: | 21 | 21 | 20 | 62 |
| MS % Recovery: | 100 | 105 | 100 | 103 |
| Dup. Result: | 16 | 18 | 19 | 54 |
| MSD % Recov.: | 80 | 90 | 95 | 90 |
| RPD: | 22 | 15 | 5.1 | 14 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 |

| | | | | |
|---|---|---|---|---|
| LCS #: | 4LCS032798 | 4LCS032798 | 4LCS032798 | 4LCS032798 |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Instrument I.D.#: | HP-4 | HP-4 | HP-4 | HP-4 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| LCS Result: | 21 | 21 | 20 | 63 |
| LCS % Recov.: | 105 | 105 | 100 | 105 |

| | | | | |
|---|---|---|---|---|
| MS/MSD LCS Control Limits | 70-130 | 70-130 | 70-130 | 70-130 |

SEQUOIA ANALYTICAL, #1271

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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Gettler-Ryan
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna L. Harding

Client Project ID: TOSCO (UNOCAL) SS#7376
Matrix: Liquid
QC Sample Group: 8031849-854
Reported: Apr 6, 1998

# QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes |
|---|---|---|---|---|
| QC Batch#: | GC032798 | GC032798 | GC032798 | GC032798 |
| | 802005A | 802005A | 802005A | 802005A |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | D. Newcomb | D. Newcomb | D. Newcomb | D. Newcomb |
| MS/MSD #: | 8032055 | 8032055 | 8032055 | 8032055 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Instrument I.D.#: | HP-5 | HP-5 | HP-5 | HP-5 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| Result: | 20 | 20 | 20 | 63 |
| MS % Recovery: | 100 | 100 | 100 | 105 |
| Dup. Result: | 19 | 20 | 20 | 62 |
| MSD % Recov.: | 95 | 100 | 100 | 103 |
| RPD: | 5.1 | 0.0 | 0.0 | 1.6 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 |
| LCS #: | 5LCS032798 | 5LCS032798 | 5LCS032798 | 5LCS032798 |
| Prepared Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Analyzed Date: | 3/27/98 | 3/27/98 | 3/27/98 | 3/27/98 |
| Instrument I.D.#: | HP-5 | HP-5 | HP-5 | HP-5 |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| LCS Result: | 21 | 21 | 22 | 67 |
| LCS % Recov.: | 105 | 105 | 110 | 112 |
| MS/MSD LCS Control Limits | 70-130 | 70-130 | 70-130 | 70-130 |

SEQUOIA ANALYTICAL, #1271

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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