

ALCO  
HAZMAT

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**Chevron**

November 11, 1993

**Chevron U.S.A. Products Company**  
2410 Camino Ramon  
San Ramon, CA 94583  
P.O. Box 5004  
San Ramon, CA 94583-0804

Ms. Juliet Shin  
Alameda County Health Care Services  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

**Marketing Department**  
Phone 510 842 9500

**Re: Former Chevron Service Station #9-2384  
15526 Hesperian Boulevard, San Lorenzo, CA**

Dear Ms. Shin:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated October 25, 1993, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Benzene was detected in monitor wells MW-1 and MW-2 at concentrations of 0.9 ppb and 23 ppb, respectively. Depth to ground water was measured at approximately 12.7 feet to 13.3 feet below grade and the direction of flow is to the west.

In Chevron's letter of September 22, 1993, we indicated that one more round of monitoring and sampling would occur prior to submitting a work plan for off-site delineation. The need for off-site investigation was dictated by the presence of dissolved hydrocarbons in the most downgradient on-site well, MW-6. The results of this sampling event indicate that concentrations of dissolved hydrocarbons are below method detection limits in this well.

At this time we feel it is appropriate to monitor and sample all wells at this site on a quarterly basis for a period of one year. If significant changes in hydrocarbon concentrations occur during this time period, we will respond accordingly. At the conclusion of one year, the site data will be reevaluated and appropriate next actions proposed.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

  
Mark A. Miller  
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area  
Ms. B.C. Owen  
File (9-2384 QM4)

Mr. Ken Williams  
Century 21 Korpi & Associates  
15200 Hesperian Blvd.  
San Leandro, CA 94570

Dr. Beryl Bearint  
19135 S.E. Coral Reef Lane  
Jupiter, FL 33458-1051



# GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

October 25, 1993

Project No. 020204094

Mr. Mark Miller  
Chevron U.S.A. Products Company  
2410 Camino Ramon  
San Ramon, CA 94583-0804

SUBJECT: *Groundwater Monitoring and Sampling Activities*  
Chevron Service Station No. 9-2384  
15526 Hesperian Boulevard, San Lorenzo, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached groundwater monitoring and sampling data collected on September 22 and October 1, 1993. Five of the six groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons on September 22 and October 1, 1993. Separate-phase hydrocarbons were not detected in the monitoring wells. Monitoring well MW-5 was not accessible because the well had been paved over. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, monitoring wells MW-1, MW-2, MW-3 were purged and sampled on September 22, 1993 and monitoring wells MW-4 and MW-6 were purged and sampled on October 1, 1993. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 3. Monitoring-well purge water was removed by Groundwater Technology and transported to the Chevron Terminal in Richmond, California, for recycling.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please call our Concord office at (510) 671-2387.

Sincerely,  
Groundwater Technology, Inc.  
Written/Submitted by

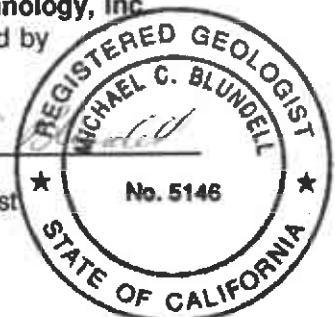
  
\_\_\_\_\_  
Tim Watchers  
Project Geologist

PR 

Attachment 1 Figure  
Attachment 2 Table  
Attachment 3 Laboratory Report

Groundwater Technology, Inc.  
Reviewed/Approved by

  
\_\_\_\_\_  
Michael C. Blundell  
Registered Geologist  
No. 5146

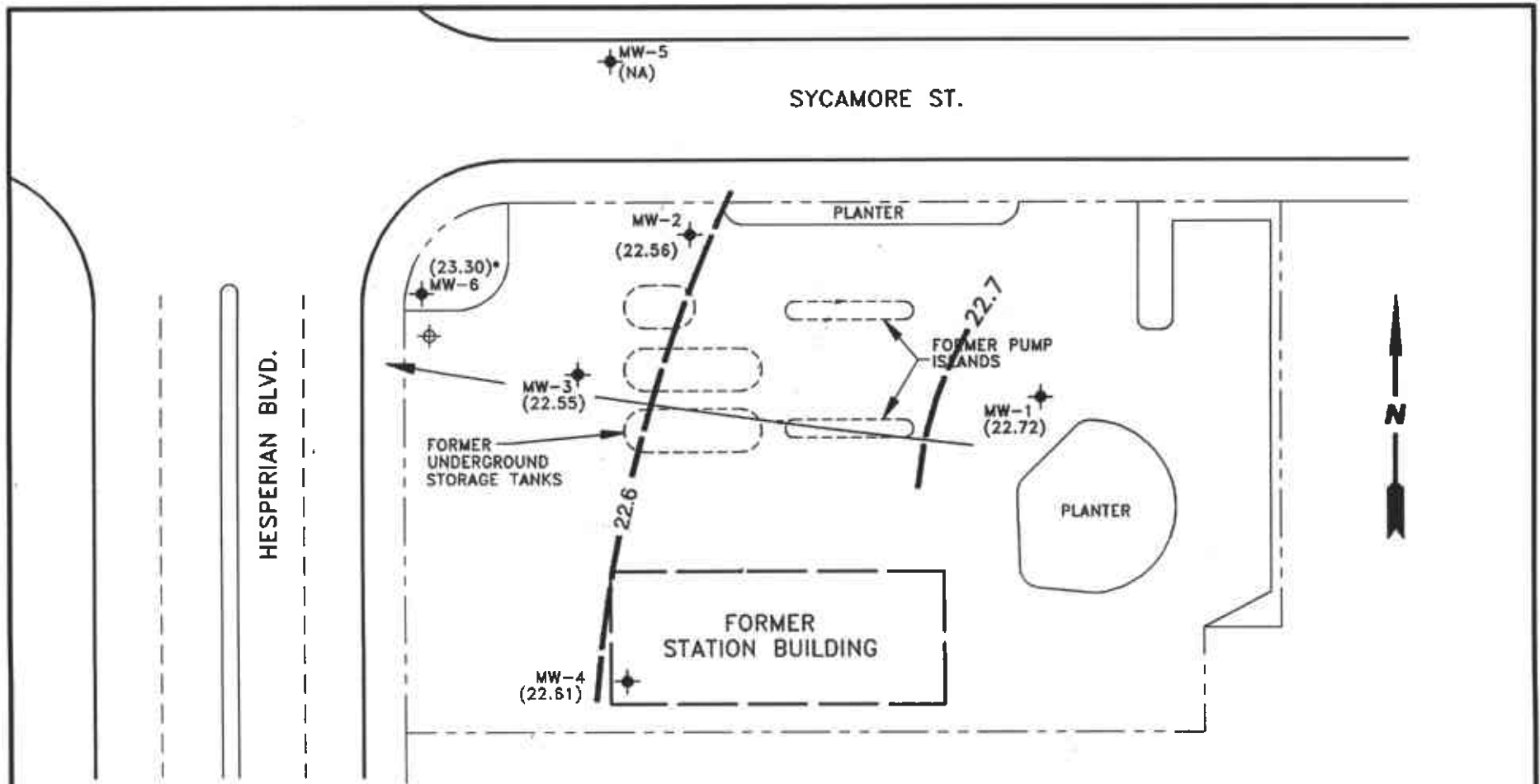


For:  
Wendell W. Lattz  
Vice President, General Manager  
West Region

4094R023.020

**ATTACHMENT 1**

**Figure**



**LEGEND**

- ◆ MONITORING WELL
- ⊕ ABANDONED MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- NA NOT AVAILABLE
- \* DATA NOT USED FOR CONTOURING



|  |   |
|--|---|
|  | <b>GROUNDWATER TECHNOLOGY</b><br>4057 PORT CHICAGO HWY<br>CONCORD, CA 94520<br>(510) 671-2387 |
|--|---|

**POTENTIOMETRIC SURFACE MAP (10/1/93)**

|   |                    |                |                |   |                           |                     |                   |
|---|--------------------|----------------|----------------|---|---------------------------|---------------------|-------------------|
| CLIENT:<br><b>CHEVRON U.S.A. PRODUCTS CO.</b><br>SERVICE STATION No. 9-2384 |                    |                |                | LOCATION:<br><b>15526 HESPERIAN BLVD.</b><br><b>SAN LORENZO, CALIFORNIA</b> |                           | REV. NO.:<br>1      | DATE:<br>10/21/93 |
| PM<br><i>JAW</i>  | PE/RG<br><i>MB</i> | DESIGNED<br>TW | DETAILED<br>CY | ACAD FILE:<br>PSM093  | PROJECT NO.:<br>020204376 | FIGURE:<br><b>1</b> |                   |

**ATTACHMENT 2**

**Table**

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-2384**  
**15526 Hesperian Boulevard, San Lorenzo, California**

| Well ID/<br>Elevation | Date          | TPH-as-<br>Gasoline | Benzene | Toluene | Ethyl-<br>benzene | Xylenes | DTW<br>(ft) | SPT<br>(ft) | GWE<br>(ft) |       |
|-----------------------|---------------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|-------|
| MW-1<br>35.64         | 06/04/92      | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | 13.12       | 0.00        | 22.52       |       |
|                       | 07/30/92      | ---                 | ---     | ---     | ---               | ---     | 13.82       | 0.00        | 21.82       |       |
|                       | 08/25/92      | ---                 | ---     | ---     | ---               | ---     | 14.20       | 0.00        | 21.44       |       |
|                       | 09/23/92      | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | 14.59       | 0.00        | 21.05       |       |
|                       | 12/29/92      | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | 14.28       | 0.00        | 21.36       |       |
|                       | 03/19/93      | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | 10.90       | 0.00        | 24.74       |       |
|                       | 07/02/93      | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | 11.41       | 0.00        | 24.24       |       |
| 35.65                 | 09/22/93      | <50                 | 0.9     | 0.9     | <0.5              | <1.5    | 12.77       | 0.00        | 22.88       |       |
|                       | 10/01/93      | ---                 | ---     | ---     | ---               | ---     | 12.93       | 0.00        | 22.72       |       |
|                       | MW-2<br>35.85 | 06/04/92            | 6,700   | 910     | 17                | 210     | 30          | 13.48       | 0.00        | 22.73 |
|                       |               | 07/30/92            | ---     | ---     | ---               | ---     | ---         | 14.17       | 0.00        | 21.68 |
| 08/25/92              |               | ---                 | ---     | ---     | ---               | ---     | 14.56       | 0.00        | 21.29       |       |
| 09/23/92              |               | 1,500               | 110     | 1.2     | 81                | <0.5    | 14.95       | 0.00        | 20.90       |       |
| 12/29/92              |               | 1,200               | 51      | 1.1     | 27                | <0.5    | 14.61       | 0.00        | 21.24       |       |
| 03/19/93              |               | 750                 | 37      | 1.0     | 34                | 1.6     | 11.24       | 0.00        | 24.61       |       |
| 07/02/93              |               | 2,100               | 45      | 1.4     | 87                | 4.8     | 11.76       | 0.00        | 24.10       |       |
| 35.86                 | 09/22/93      | 880                 | 23      | 2.8     | 38                | <1.5    | 13.12       | 0.00        | 22.74       |       |
|                       | 10/01/93      | ---                 | ---     | ---     | ---               | ---     | 13.30       | 0.00        | 22.56       |       |
| MW-3<br>35.42         | 06/04/92      | 460                 | 12      | 0.8     | 5.8               | 14      | 13.12       | 0.00        | 22.30       |       |
|                       | 07/30/92      | ---                 | ---     | ---     | ---               | ---     | 13.81       | 0.00        | 21.61       |       |
|                       | 08/25/92      | ---                 | ---     | ---     | ---               | ---     | 14.20       | 0.00        | 21.22       |       |
|                       | 09/23/92      | 1,100               | 62      | 1.5     | 110               | 4.0     | 14.58       | 0.00        | 20.84       |       |
|                       | 12/29/92      | 450                 | 21      | 0.7     | 12                | 3.0     | 14.22       | 0.00        | 21.20       |       |
|                       | 03/19/93      | 1,200               | 67      | 1.3     | 96                | 5.5     | 10.87       | 0.00        | 24.55       |       |
|                       | 07/02/93      | 610                 | 73      | 0.5     | 42                | <1.5    | 11.37       | 0.00        | 24.06       |       |
| 35.43                 | 09/22/93      | 400                 | <0.5    | 0.6     | 2.7               | <1.5    | 12.71       | 0.00        | 22.72       |       |
|                       | 10/04/93      | ---                 | ---     | ---     | ---               | ---     | 12.88       | 0.00        | 22.55       |       |
| MW-4<br>35.73         | 07/02/93      | 80                  | <0.5    | 0.6     | <0.5              | <1.5    | 11.77       | 0.00        | 23.96       |       |
|                       | 09/22/93      | ---                 | ---     | ---     | ---               | ---     | ---         | ---         | ---         |       |
|                       | 10/01/93      | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | 13.12       | 0.00        | 22.61       |       |

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-2384**  
**15526 Hesperian Boulevard, San Lorenzo, California**

| Well ID/<br>Elevation | Date     | TPH-as-<br>Gasoline | Benzene | Toluene | Ethyl-<br>benzene | Xylenes | DTW<br>(ft) | SPT<br>(ft) | GWE<br>(ft) |
|-----------------------|----------|---------------------|---------|---------|-------------------|---------|-------------|-------------|-------------|
| MW-5<br>35.50         | 07/02/93 | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | 11.42       | 0.00        | 24.08       |
|                       | 09/22/93 | --                  | --      | --      | --                | --      | --          | --          | --          |
|                       | 10/01/93 | --                  | --      | --      | --                | --      | --          | --          | --          |
| MW-6<br>36.01         | 07/02/93 | 14,000              | 330     | 28      | 980               | 580     | 12.07       | 0.00        | 23.94       |
|                       | 09/22/93 | --                  | --      | --      | --                | --      | --          | --          | --          |
|                       | 10/01/93 | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | 12.71       | 0.00        | 23.30       |
| Trip<br>Blank         | 06/04/92 | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | --          | --          | --          |
|                       | 09/23/92 | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | --          | --          | --          |
|                       | 12/29/92 | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | --          | --          | --          |
|                       | 03/19/93 | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | --          | --          | --          |
|                       | 07/02/93 | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | --          | --          | --          |
|                       | 09/22/93 | <50                 | <0.5    | <0.5    | <0.5              | <1.5    | --          | --          | --          |
|                       | 10/01/93 | <50                 | <0.5    | <0.5    | <0.5              | <0.5    | --          | --          | --          |

All elevations are given as feet above mean sea level.  
Concentrations shown in parts per billion.

- TPH = Total petroleum hydrocarbons
- DTW = Depth to water
- SPT = Separate-phase hydrocarbon thickness
- GWE = Groundwater elevation in feet above mean sea level
- = Not applicable, not sampled, not measured



**ATTACHMENT 3**  
**Laboratory Report**



# Superior Precision Analytical, Inc.

1555 Burke, Unit I ▪ San Francisco, California 94124 ▪ (415) 647-2081 / fax (415) 821-7123

Groundwater Technology Inc.  
Attn: NICOLE MERCHANT

Project 02020 4094  
Reported 10/04/93

## TOTAL PETROLEUM HYDROCARBONS

| Lab #    | Sample Identification | Sampled  | Analyzed Matrix |
|----------|-----------------------|----------|-----------------|
| 14780- 1 | TB-LB                 | 09/22/93 | 09/30/93 Water  |
| 14780- 2 | MW1                   | 09/22/93 | 09/30/93 Water  |
| 14780- 3 | MW3                   | 09/22/93 | 10/01/93 Water  |
| 14780- 4 | MW2                   | 09/22/93 | 09/30/93 Water  |

## RESULTS OF ANALYSIS

Laboratory Number: 14780- 1 14780- 2 14780- 3 14780- 4

|                |        |        |        |        |
|----------------|--------|--------|--------|--------|
| Gasoline:      | ND<50  | ND<50  | 400    | 880    |
| Benzene:       | ND<0.5 | 0.9    | ND<0.5 | 23     |
| Toluene:       | ND<0.5 | 0.9    | 0.6    | 2.8    |
| Ethyl Benzene: | ND<0.5 | ND<0.5 | 2.7    | 38     |
| Xylenes:       | ND<1.5 | ND<1.5 | ND<1.5 | ND<1.5 |
| Concentration: | ug/L   | ug/L   | ug/L   | ug/L   |



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 14780

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

| ANALYTE        | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|----------------|-----------------|-----|---------------|
| Gasoline:      | 90/94           | 4%  | 72-116        |
| Benzene:       | 96/98           | 2%  | 71-106        |
| Toluene:       | 92/95           | 3%  | 69-116        |
| Ethyl Benzene: | 92/96           | 4%  | 66-121        |
| Xylenes:       | 89/92           | 3%  | 67-108        |

*Oliver A. Nwogu*

Senior Chemist  
Account Manager





# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

GROUNDWATER TECHNOLOGY, INC.  
Attn: Nicole Merchant

Project 9-2384  
Reported 10/08/93

## TOTAL PETROLEUM HYDROCARBONS

| Lab #    | Sample Identification | Sampled  | Analyzed Matrix |
|----------|-----------------------|----------|-----------------|
| 90155- 1 | TB-LB                 | 10/01/93 | 10/07/93 Water  |
| 90155- 2 | MW-4                  | 10/01/93 | 10/08/93 Water  |
| 90155- 3 | MW-6                  | 10/01/93 | 10/07/93 Water  |

## RESULTS OF ANALYSIS

Laboratory Number: 90155- 1 90155- 2 90155- 3

|                |        |        |        |
|----------------|--------|--------|--------|
| Gasoline:      | ND<50  | ND<50  | ND<50  |
| Benzene:       | ND<0.5 | ND<0.5 | ND<0.5 |
| Toluene:       | ND<0.5 | ND<0.5 | ND<0.5 |
| Ethyl Benzene: | ND<0.5 | ND<0.5 | ND<0.5 |
| Total Xylenes: | ND<0.5 | ND<0.5 | ND<0.5 |
| Concentration: | ug/L   | ug/L   | ug/L   |



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 90155

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

| ANALYTE        | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|----------------|-----------------|-----|---------------|
| Gasoline:      | 100/100         | 0%  | 70-130        |
| Benzene:       | 102/100         | 2%  | 70-130        |
| Toluene:       | 103/102         | 1%  | 70-130        |
| Ethyl Benzene: | 104/102         | 2%  | 70-130        |
| Total Xylenes: | 94/92           | 2%  | 70-130        |

 10/11/93  
Senior Chemist

