



76 Broadway  
Sacramento, California 95818

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Alameda County  
Environmental Health

February 18, 2009

Barbara Jakub  
Alameda County Health Agency  
1131 Harbor Bay parkway, Suite250  
Alameda, California 94502-577

Re: ***Work Plan for CPT Vertical/lateral Stratigraphic and Plume Definition***  
**76 Service Station # 1871 RO # 0455**  
**96 MacArthur Blvd**  
**Oakland, CA**

Dear Ms. Jakub:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

Terry L. Grayson  
Site Manager  
Risk Management & Remediation

MS. BARBARA JAKUB  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

WORK PLAN FOR CPT VERTICAL AND LATERAL  
STRATIGRAPHIC AND PLUME DEFINITION



76 SERVICE STATION NO. 1871  
96 MACARTHUR BLVD  
OAKLAND, CA

DELTA PROJECT C101871  
AOC # 01120  
February 16, 2009

Prepared for:

ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

Prepared by:

Delta Consultants

## TABLE OF CONTENTS

|             |   |          |
|-------------|---|----------|
| <b>1.0</b>  | <b>CERTIFICATION .....</b>                        | <b>3</b> |
| <b>2.0</b>  | <b>DECLARATION .....</b>                          | <b>4</b> |
| <b>3.0</b>  | <b>PROJECT OBJECTIVES AND SCOPE OF WORK .....</b> | <b>4</b> |
| <b>4.0</b>  | <b>SITE BACKGROUND AND DESCRIPTION .....</b>      | <b>5</b> |
| <b>5.0</b>  | <b>SITE BACKGROUND.....</b>                       | <b>5</b> |
| <b>6.0</b>  | <b>SENSITIVE RECEPTORS.....</b>                   | <b>6</b> |
| <b>7.0</b>  | <b>SITE ASSESSMENT ACTIVITIES .....</b>           | <b>6</b> |
| 7.1         | REMEDICATION STATUS.....                          | 6        |
| 7.2         | MONITORING STATUS .....                           | 6        |
| <b>8.0</b>  | <b>PROPOSED SCOPE OF WORK.....</b>                | <b>6</b> |
| 8.1         | PRE-FIELD ACTIVITIES .....                        | 7        |
| 8.2         | CPT BORINGS .....                                 | 7        |
| <b>9.0</b>  | <b>WASTE DISPOSAL.....</b>                        | <b>7</b> |
| <b>10.0</b> | <b>SCHEDULING AND REPORTING .....</b>             | <b>7</b> |
| <b>11.0</b> | <b>REMARKS.....</b>                               | <b>7</b> |

## TABLES

Table 1 – List of Installed Monitoring Wells, Total Depths, Screened Intervals and Total Installed Screen Lengths

## FIGURES

Figure 1 – Site Location Map  
Figure 2 – Site Map with Proposed CPT Boring Locations  
Figure 3 – Site Rose Diagram

## APPENDICES

Appendix A - May 16, 2002 Gettler-Ryan Inc. (GR) Off-site Subsurface Investigation Report  
Appendix B – TRC, Quarterly Monitoring Report, October through December 2008  
Appendix C – Fourth Quarter 2008 Ozone Injection System O&M Report

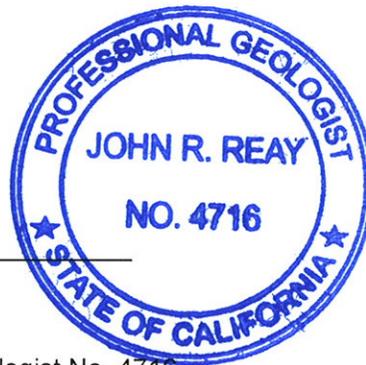
**1.0 CERTIFICATION**

This report was prepared under the supervision and direction of the undersigned California Professional Geologist.

**Delta Consultants**



John R. Reay, P.G.  
Project Manager  
California Registered Professional Geologist No. 4716



## 2.0 DECLARATION

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants has prepared this *Work Plan for Downgradient Investigation* for the above referenced site. This work plan includes a description of the site background, remediation status, site conditions, and presents a scope of work to investigate migration of petroleum hydrocarbons in the groundwater at the site.

## 3.0 PROJECT OBJECTIVES AND SCOPE OF WORK

The objective of this assessment is to utilize direct push CPT technology to clearly define subsurface stratigraphy and to characterize the vertical and lateral distribution of petroleum hydrocarbons including methyl tertiary butyl ether (MTBE), TPH as gasoline (TPHg), and benzene, those compounds identified as the primary contaminants of concern (COCs) in groundwater at this site. Previously conducted investigation efforts have utilized hollow stem auger technology to install monitoring wells with between 15 and 20 feet of screened interval (Gettler-Ryan Inc. (2002) thus allowing for the potential for cross communication between aquifer sands.

**Table 1**  
**List of Installed Monitoring Wells, Total Depths,**  
**Screened Intervals and Total Installed Screen Lengths**

| Well  | Total Depth | Screened Interval | Total Screen (ft) |
|-------|-------------|-------------------|-------------------|
| MW-1  | 25 fbg      | 10-25 fbg         | 15                |
| MW-6  | 25 fbg      | 5-25 fbg          | 20                |
| MW-7  | 25 fbg      | 5-25 fbg          | 20                |
| MW-8  | 25 fbg      | 5-25 fbg          | 20                |
| MW-9  | 20 fbg      | 5-20 fbg          | 15                |
| MW-10 | 20 fbg      | 5-20 fbg          | 15                |
| MW-11 | 30 fbg      | 15-30 fbg         | 15                |

Further, hollow stem drilling methodology does not allow for a detailed and accurate definition of stratigraphy and based on an apparently strong southerly or southwesterly groundwater flow direction (Figure 3), the appearance and continued occurrence of COC in MW-9, which appears to be cross-gradient of the release site, appears problematic and may be due to a previously undefined aquifer system. To resolve these apparent uncertainties the following scope of work is recommended:

- Advancement of Cone Penetration Test (CPT) boring at one onsite and three offsite locations to a depth of 60 feet or refusal (Figure 2).
- Collection and analysis of depth-discrete soil and groundwater grab samples based on real-time CPT stratigraphic correlation.
- Prepare lithologic cross-section using CPT lithologic data and incorporating data included in May 16, 2002 Gettler-Ryan Inc. *Off-site Subsurface Investigation Report* (Appendix A).
- Assess changes in MTBE concentrations over time to identify trends in plume migration integrating CPT groundwater analytical data with data collected in Quarterly Monitoring Reports.
- Preparation of a Site Conceptual Model based on historical data and data collected during this phase of investigation.
- Preparation of a final report documenting CPT drilling activities, groundwater and soil sampling procedures, laboratory analytical results, and conclusions and recommendations.

#### **4.0 SITE BACKGROUND AND DESCRIPTION**

The site is an operating service station located on the north corner of the intersection of MacArthur Boulevard and Harrison Street in Oakland, California. The site is currently a QuikStop market and petroleum dispensing facility.

There are four dispenser islands, one station building, and two gasoline underground storage tanks (USTs). The Site is located on the western flank of the Oakland Hills and is underlain by Late Pleistocene age alluvium. These deposits are composed of weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. The northwest-southeast trending Hayward Fault is located approximately 2.3 miles northeast of the Site. An artificial groundwater barrier may be found downgradient of the Site as a result of the I-580 freeway structure (conversation with ACHCSA personnel).

The shallow groundwater at the Site appears to be unconfined and depth to groundwater has ranged from approximately 6 to 18 feet bgs. The groundwater flow direction has predominantly been to the southwest (figure 3) with an average gradient of 0.02 to 0.05 feet per foot.

According to the cross-section data (B-B' and C-C') interpretation in the GR 2002 report impacted soil was encountered in the same sand to gravel interval in MW-6 through MW-8. However, the cross-section data indicate the sand to gravel interval in MW-9 and MW-10 are separate from those found in MW-6 through 8. Cross-section A-A' also indicates that the sand to gravel interval becomes closer to ground surface to the south. Due to difficulties inherent in correlating subsurface strata from borings logged from soil cuttings, i.e. auger borings, these correlations may not be as accurate or reliable as those made from core/CPT analysis and critical stratigraphic relations may be missed or misinterpreted.

#### **5.0 SITE BACKGROUND**

May 1992 Roux Associates (Roux) performed a dispenser and product piping modification project.

October 1992 Roux installed three 4-inch diameter groundwater monitoring wells onsite.

January 1993 Quarterly groundwater sampling and monitoring began.

August 1994 A 280-gallon single-wall steel waste oil UST was replaced with a 550-gallon double-wall fiberglass UST. Confirmation sampling was performed.

February 1996 The Alameda County Health Care Service Agency (ACHCSA) approved Unocal's request to reduce the groundwater monitoring and sampling frequency from quarterly to semi-annually (KEI, 1996).

March 1996 Two monitoring wells were installed at the site.

May 1998 John's Excavating of Santa Rosa, California removed all underground and aboveground equipment and facilities. Facilities included two 12,000-gallon double-wall steel gasoline USTs, one 550-gallon double-wall steel waste oil UST, two hydraulic lifts, two dispenser islands and related single-wall product piping, and one service station building. Gettler-Ryan Inc. (GR) personnel performed soil and groundwater sampling activities in conjunction with the station demolition. A total of 1,252.78 tons of soil were removed from the site during demolition activities and transported to Forward Landfill for disposal.

September 1998 Two wells that were damaged during site demolition activities were drilled out and the boreholes backfilled with neat cement to grade. In addition, one soil boring was advanced onsite to a total depth of 16.5 feet below ground surface (bgs). Groundwater was encountered at approximately 10.5 feet bgs. Soil and groundwater samples were collected for development of a Risk Based Corrective Action (RBCA) evaluation for the site.

February 1999 GR performed a RBCA evaluation. The RBCA evaluation concluded that, since the site was scheduled for construction of a fuel dispensing facility covered with concrete and asphalt and no groundwater receptors were located within a 1/4 mile radius of the site, the potential threat to public health and environment was not of significant concern.

June 1999 GR installed three offsite monitoring wells, and advanced nine soil borings on and near the site. Depth-discrete soil and groundwater samples were collected.

April 2002 An ozone injection system was installed and activated at the site.

September 2003 Operations and maintenance responsibilities for the remediation system were transferred to SECOR International Inc. (SECOR).

October 2003 Site environmental consulting responsibilities were transferred to TRC.

January 2006 Operations and maintenance responsibilities for the remediation system were transferred to Environ Strategy Consultants, Inc. International Inc. (Environ Strategy).

November 2007 At the request of the ACHCSA, TRC submitted a Site Conceptual Model.

October 2007 Site environmental consulting responsibilities were transferred to Delta Consultants.

## **6.0 SENSITIVE RECEPTORS**

No potential receptors for impacted groundwater were identified within a ¼ mile radius of the site during the 1999 RBCA evaluation. No other sensitive receptor surveys have been conducted for the site.

## **7.0 SITE ASSESSMENT ACTIVITIES**

### **7.1 REMEDIATION STATUS**

An ozone injection system is currently in operation at this site. The system is being operated by Environ Strategy Consultants, Inc., and has been in operation since June 2003. The Second Quarter 2008 Ozone Injection System O&M Report for this site is included as Appendix D.

### **7.2 MONITORING STATUS**

The most recent monitoring and sampling event was conducted at the site on December 30, 2008. The measured depth to groundwater ranged from 6.73 feet to 16.16 feet below top of casing (TOC). The groundwater flow direction was southwest with a hydraulic gradient of 0.03 feet per foot.

During the fourth quarter 2008 groundwater sampling event, TPH-G was in five of the seven sampled wells with a maximum concentration of 3,200 micrograms per liter (µg/l) in well MW-1. MTBE was detected in six of the seven sampled wells with a maximum concentration of 230 µg/L in well MW-9. Benzene was detected in one of the seven sampled wells with a maximum concentration on 2.5 µg/L in well MW-1. MTBE concentration maps for the 2003 through 2008 groundwater sampling events are included in Appendix A with historical groundwater analytical tables for MW-9. The primary constituents of concern are TPH-G, benzene, and MTBE. In general, concentrations of TPH-G, benzene, and MTBE have decreased since the initiation of groundwater monitoring at the site in 2002.

MTBE is the primary COC at this site. The concentrations of MTBE in MW-9 have varied over time. The historical concentrations of MTBE have ranged from a low of 200 ug/L in the groundwater sample collected in January 2003 to a maximum concentration of 2,800 ug/L in the groundwater sample collected in December 2005. The concentration of MTBE in MW-9 has generally been declining since December 2005. The most recent sampling event on December 30, 2008 indicated a MTBE concentration of 230 ug/L.

## **8.0 PROPOSED SCOPE OF WORK**

Delta proposes to install one onsite and three offsite CPT borings in the vicinity of MW-9, MW-10 and MW-11 (Figure 2).

## 8.1 PRE-FIELD ACTIVITIES

Prior to commencing drilling activities, permits will be acquired from Zone 7 water district. Underground Service Alert (USA) will be notified at least two days prior to field activities to mark underground utilities at the property boundaries. Prior to drilling each boring, a pilot hole will be cleared using an air knife to approximately 5 feet bgs to verify the absence of buried utilities.

A site and job specific health and safety plan that promotes personnel safety and preparedness during the planned activities will be prepared. On the morning of the day that the field activities are to commence, a "tailgate" meeting will be conducted with all exclusion zone workers to discuss the health and safety issues and concerns related to the specific work.

## 8.2 CPT BORINGS

Direct push CPT technology will be used to advance all borings. The proposed CPT boring locations are shown on Figure 2. The CPT boring will be advanced to approximately 60 feet below ground surface (bgs) or refusal.

Soil samples will be collected at five foot intervals to first encountered groundwater or significant changes in lithology based on field observations. Groundwater samples will be collected from first encountered water and all significant aquifer sands encountered. All samples will be properly preserved and transported to a state-certified laboratory under appropriate chain-of-custody protocol. The samples will be analyzed for the following.

- Total petroleum hydrocarbons quantified as gasoline (TPH-G) by EPA Method 8260B.
- Benzene, toluene, ethyl benzene, total xylenes (BTEX) by EPA Method 8260B.
- MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, Ethanol, and EDB - (8 oxygenates) by EPA method 8260B.

## 9.0 WASTE DISPOSAL

Soil cuttings and water generated during site assessment activities will be stored onsite in Department of Transportation (DOT)-approved 55-gallon drums pending disposal to an approved disposal/recycling facility. Waste manifests will be prepared for proper transport and disposal of the waste.

## 10.0 SCHEDULING AND REPORTING

- 1<sup>ST</sup> Q 09: Workplan submitted to ACEH.
- 2<sup>nd</sup> Q 09: Comments to workplan received from ACEH.
- Proceed with field work within 90 days of receipt of ACEH comments.
- Following completion of the assessment activities, a final report will be prepared which presents the CPT log results, laboratory analytical results, conclusions, and recommendations. The assessment report will be submitted to ACEH within 60 days of the completion of the field activities. Required electronic submittals will be uploaded to the State Geotracker and Alameda County databases.

## 11.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report will be performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have questions regarding this report, please contact John Reay at (916) 503-1260 or Terry Grayson at 916-558-7666.

Sincerely,

**DELTA CONSULTANTS**

**FIGURES**

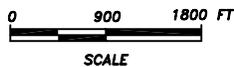


FIGURE 1

SITE LOCATION MAP

76 STATION NO.1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

|                              |                         |
|------------------------------|-------------------------|
| PROJECT NO.<br>C101871       | DRAWN BY<br>JH 01/29/09 |
| FILE NO.<br>1871-SiteLocator | PREPARED BY<br>AB       |
| REVISION NO.                 | REVIEWED BY<br>JR       |



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE (1973)



**Historical Groundwater Flow Directions  
for Tosco (76) Service Station No. 1871  
January 2001 through September 2007**

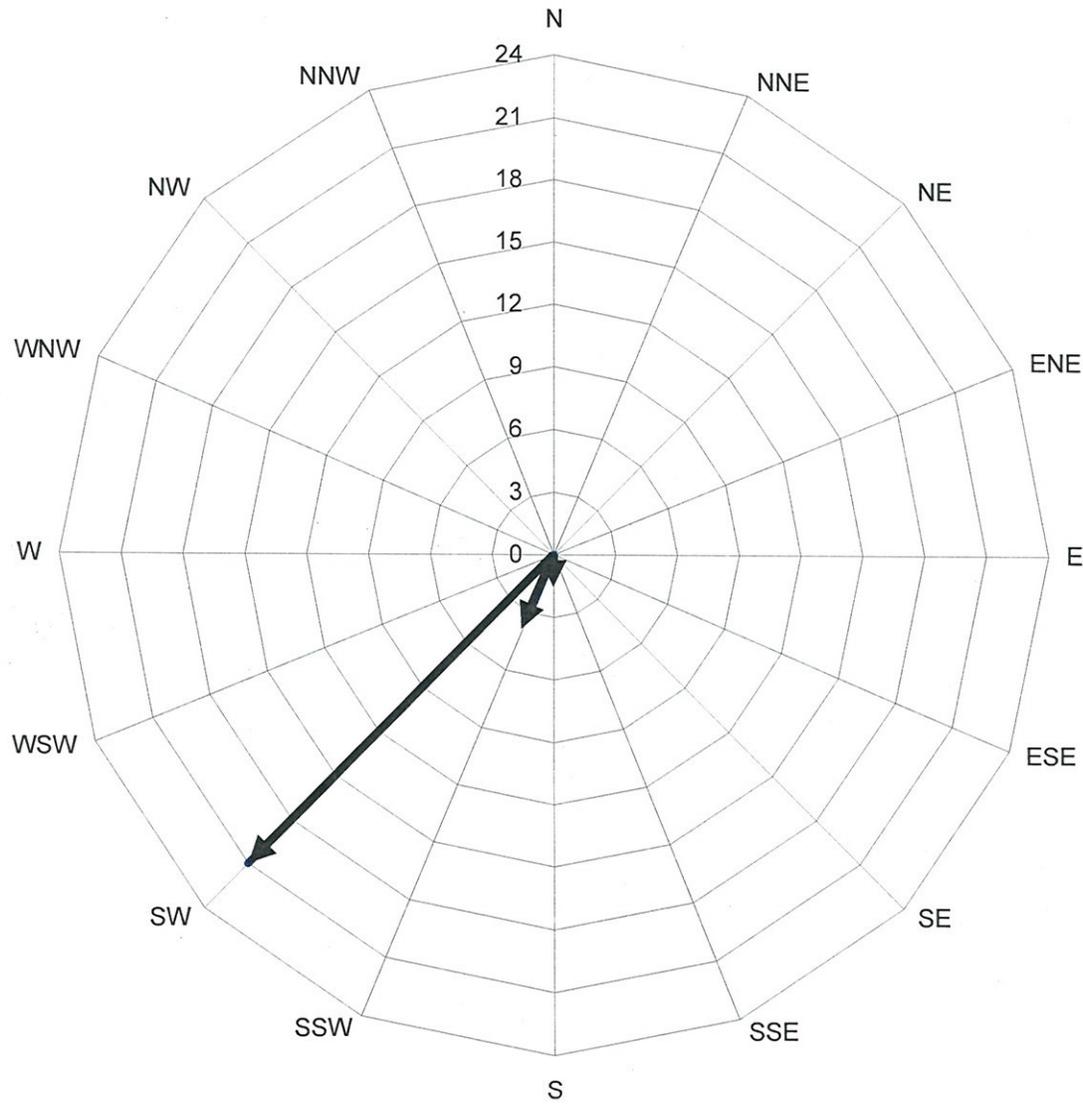


Figure 3



**APPENDIX A**

May 16, 2002 Gettler-Ryan Inc. (GR) Off-site Subsurface Investigation Report



# GETTLER-RYAN INC.

## OFF-SITE SUBSURFACE INVESTIGATION REPORT

at

Former Tosco (76) Service Station No. 1871  
96 MacArthur Boulevard  
Oakland, California

Report No. 140165.07

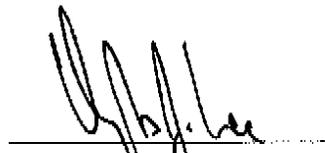
### Prepared for:

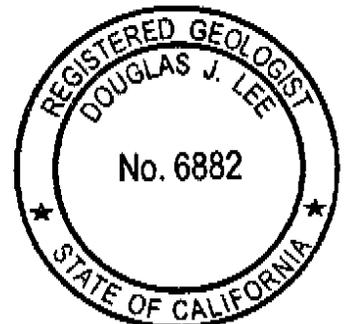
Mr. David B. De Witt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 400  
San Ramon, California 94583

### Prepared by:

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1364 North McDowell Blvd., Suite B2  
Petaluma, California 94954

  
Clyde J. Galantine  
Senior Geologist

  
Douglas J. Lee  
Senior Geologist  
RG 6882



May 16, 2002

|        |        |    |   |             |
|--------|--------|----|---|-------------|
| FILE # | 251871 | SS | X | BP          |
| RPT    | X      | QM |   | TRANSMITTAL |
| 1      | 2      | 3  | 4 | 5           |
|        |        |    |   | 6           |

## TABLE OF CONTENTS

|   |   |
|---|---|
| <b>INTRODUCTION</b> .....                             | 1 |
| <b>SITE DESCRIPTION</b> .....                         | 1 |
| <b>SITE HISTORY/PREVIOUS ENVIRONMENTAL WORK</b> ..... | 1 |
| <b>REGIONAL GEOLOGY</b> .....                         | 4 |
| <b>FIELD ACTIVITIES</b> .....                         | 5 |
| Well Installation .....                               | 6 |
| Well Monitoring, Development, and Sampling .....      | 6 |
| Wellhead Survey .....                                 | 6 |
| <b>SUBSURFACE CONDITIONS</b> .....                    | 6 |
| <b>CHEMICAL ANALYTICAL RESULTS</b> .....              | 6 |
| Chemical Analytical Procedures .....                  | 7 |
| Soil Chemical Analytical Results .....                | 7 |
| Groundwater Chemical Analytical Results .....         | 7 |
| Stockpile Chemical Analytical Results .....           | 7 |
| <b>WASTE DISPOSAL</b> .....                           | 7 |
| <b>SUMMARY</b> .....                                  | 8 |
| <b>CONCLUSIONS</b> .....                              | 8 |
| <b>DISTRIBUTION</b> .....                             | 8 |
| <b>REFERENCES</b> .....                               | 8 |

## TABLES

- Table 1. Groundwater Monitoring Data and Analytical Results
- Table 2. Groundwater Analytical Results
- Table 3. Groundwater Analytical Results-Oxygenate Compounds
- Table 4. Soil Sample Analytical Results

## **FIGURES**

- Figure 1. Vicinity Map
- Figure 2. Site Plan
- Figure 3. Potentiometric Map
- Figure 4. Concentration Map
- Figure 5. Cross Section A-A'
- Figure 6. Cross Section B-B'
- Figure 7. Cross Section C-C'

## **APPENDICES**

- Appendix A. GR Field Methods and Procedures
- Appendix B. Permits, Boring Logs, and Well Construction Details
- Appendix C. Well Development and Groundwater Sampling Field Data Sheets
- Appendix D. Surveyor's Report
- Appendix E. Laboratory Reports and Chain-of-Custody Forms
- Appendix F. Waste Disposal Confirmation Form

# OFF-SITE SUBSURFACE INVESTIGATION REPORT

at

Former Tosco (76) Service Station No. 1871  
96 MacArthur Boulevard  
Oakland, California

Report No. 140165.07

## INTRODUCTION

This report summarizes an off-site subsurface investigation performed by Gettler-Ryan Inc. (GR) in December 2001 and January 2002 at the subject site. The purpose of this subsurface investigation was to delineate the lateral extent of hydrocarbon-impacted soil and groundwater downgradient of the subject site. The work performed included: drilling three off-site soil borings and constructing a groundwater monitoring well in each boring; collecting soil samples for description and chemical analysis; developing and sampling the newly installed groundwater monitoring wells and sampling the existing wells; surveying the wells; submitting the soil and groundwater samples for analysis; arranging for waste disposal; and preparing this report. This work was performed at the request of Tosco Corporation (Tosco), a subsidiary of Philips Petroleum Company, and in response to a request by Alameda County Health Care Services Agency (ACHSCA). This work was proposed in the GR Report No. 140165.07, *Work Plan for a Limited Subsurface Investigation*, dated November 1, 1999. The Work Plan was approved with conditions in a letter from the ACHSCA dated November 4, 1999.

## SITE DESCRIPTION

The site is located on the north corner of the intersection of MacArthur Boulevard and Harrison Street in Oakland, California. The site is currently a QuikStop market and petroleum dispensing facility. The Tosco underground and above ground facilities, including the station building, two dispenser islands, two gasoline underground storage tanks (USTs), one waste oil UST, and four groundwater monitoring wells, were demolished and removed from the site. One on-site groundwater monitoring well (MW-1) and three off-site monitoring wells (MW-6, MW-7, MW-8) remain. Pertinent former and existing site features are shown on Figure 2.

## SITE HISTORY/PREVIOUS ENVIRONMENTAL WORK

A dispenser and product piping modification project was performed at the site in May 1992. Four soil samples were collected from beneath the dispensers by representatives of Roux Associates (Roux) at depths ranging from 2 to 5 feet bgs. Petroleum hydrocarbon concentrations reported in the samples ranged from not detected to 58 parts per million (ppm) of Total Petroleum Hydrocarbons as Gasoline (TPHg), and not detected to 0.20 ppm of benzene. An additional sample was collected

below the south end of the east island at 8 feet bgs. The sample contained 1,700 ppm of TPHg and 3.1 ppm of benzene (KEI, 1996).

Three 4-inch diameter groundwater monitoring wells designated MW-1, MW-2, and MW-3 were installed on-site by Roux in October 1992 (Figure 2). The wells were completed to total depths of 24 and 25 feet bgs. Groundwater was encountered at depths of 14 to 15 feet bgs. Soil samples collected from well borings MW-1 and MW-2 were reported as not detected for TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX). Soil samples collected from MW-3 at depths of 12-13.5 feet bgs and 13.5-15 feet bgs contained 4.2 ppm of TPHg and 0.079 ppm of benzene, and 10 ppm of TPHg and 0.040 ppm of benzene, respectively. Groundwater samples collected from the wells contained petroleum hydrocarbon concentrations ranging from 140 to 260,000 parts per billion (ppb) of TPHg and 2.2 to 2,300 ppb of benzene. Quarterly groundwater monitoring and sampling was initiated upon receipt of the initial groundwater sample results. In February 1996, ACHCSA approved Unocal's request to reduce the groundwater monitoring and sampling program from quarterly to semi-annually (KEI, 1996).

A 280-gallon single-wall steel waste oil UST was replaced with a 550-gallon double-wall fiberglass UST in August 1994. One soil sample was collected from below the UST at a depth of 9 feet bgs by a representative from Kaprealian Engineering Incorporated (KEI). The excavation was deepened to 14 feet bgs and another soil sample was collected due to the obvious presence of petroleum hydrocarbons in the soil. Four sidewall soil samples were also collected at 9 feet bgs. The bottom sample collected at 9 feet bgs contained 46 ppm of TPHg, 0.12 ppm of benzene, 97 ppm of Total Petroleum Hydrocarbons as Diesel (TPHd), 1,400 ppm of Oil and Grease (O&G), and elevated concentrations of various semi-volatile organic (EPA Method 8270) compounds. One sidewall sample contained 960 ppm of TPHg, 2.2 ppm of benzene, 1,400 ppm of TPHg, 17,000 ppm of TOG, and elevated concentrations of 8270 compounds. The three other sidewall samples contained O&G concentrations ranging from 160 to 2,400 ppm. The soil sample collected at the bottom of the excavation at 14 feet bgs was reported as not detected for O&G and 8270 compounds (KEI, 1996).

In March 1996, KEI personnel witnessed the advancing of two soil borings (EB-1, EB-2) and installation of two additional monitoring wells (MW-4, MW-5) at the site (Figure 2). Soil borings EB-1 and EB-2 were advanced to depths of 13.5 and 14 feet bgs, respectively. Wells MW-4 and MW-5 were installed to a total depth of 20 feet bgs. Soil samples collected from boring EB-1 were reported as not detected for TPHg, BTEX, TPHd, O&G, 8270 compounds, and volatile organic (EPA Method 8010) compounds, except for 6.6 ppb of 1,1-dichloroethene (8010 compound) detected in the sample collected at 5 feet bgs. The soil sample collected at 5 feet bgs in boring EB-2 was reported as not detected for all analytes. The soil sample collected at 10 feet bgs in boring EB-2 contained 5.7 ppm of TPHg, 73 ppm of TPHd, 540 ppm of O&G, and elevated concentrations of 8270 compounds, and was reported as not detected for benzene and 8010 compounds. The soil sample collected at 5 feet bgs from well boring MW-4 was reported as not detected for TPHg, benzene, O&G, and 8270 compounds and contained 1.1 ppm of TPHd and elevated concentrations of 8010 compounds. The soil sample collected at 9.5 feet bgs from well boring MW-4 contained 24 ppm of TPHg, 350 ppm of TPHd, 1,000 ppm of O&G, and elevated concentrations of 8010 and 8270 compounds, and was reported as not detected for benzene. The soil samples collected from well boring MW-5 were

reported as not detected for TPHg and BTEX, except for 0.023 ppm of benzene detected in the sample collected at 9 feet bgs (KEI, 1996).

Grab groundwater samples were collected from both soil borings. Groundwater sample EB-1 was reported as not detected for all analytes except for 1.3 ppb xylenes and 0.54 ppb 1,1-dichloroethane. Groundwater EB-2 was reported as not detected for O&G and 8010 compounds and contained 1,400 ppb of TPHg, 690 ppb of benzene, 410 ppb of TPHd, and elevated concentrations of 8270 compounds. A groundwater sample collected from well MW-4 was reported as not detected for TPHg and contained 630 ppb of benzene, 110 ppb of TPHd and 18,000 ppb of methyl tertiary butyl ether (MtBE). A groundwater sample collected from MW-5 contained 31,000 ppb of TPHg, 5,500 ppb of benzene, and 66,000 ppb MtBE (KEI, 1996).

In May 1998, all underground and aboveground equipment and facilities were removed by John's Excavating of Santa Rosa, California. Facilities included two 12,000-gallon double-wall steel gasoline USTs, one 550-gallon double-wall steel waste oil UST, two hydraulic lifts, two dispenser islands and related single-wall product piping, and one service station building. GR personnel performed soil and groundwater sampling activities in conjunction with the station demolition.

Soil samples were collected beneath or near the USTs, hydraulic lifts, and dispenser islands/product piping. Four soil samples were collected from the sidewalls of the gasoline UST excavation at a depth of 11.5 feet bgs. Petroleum hydrocarbon concentrations in the samples ranged between not detected to 2,000 ppm of TPHg, not detected to 9.7 ppm of benzene, and 1.9 to 16 ppm of MtBE. The areas south and west of the excavation were overexcavated to groundwater and two confirmation sidewall samples were collected. These two samples, collected at 11 feet bgs, contained petroleum hydrocarbon concentrations ranging from not detected and 5.0 ppm of TPHg, 0.049 and 0.080 ppm of benzene, and 6.6 and 12 ppm of MtBE.

One soil sample was collected beneath each of the dispenser islands at a depth of 4 feet bgs. The sample collected beneath the north dispenser island was reported as not detected for TPHg and BTEX and contained 0.74 ppm of MtBE. The sample collected from beneath the south dispenser island was reported as not detected for benzene and MtBE and contained 15 ppm of TPHg. One soil sample was collected from the bottom of the waste oil UST excavation at a depth of 11 feet bgs. The sample was reported as not detected for all analytes except for 140 ppm of O&G. One soil sample was collected beneath each of the hydraulic lifts at a depth of 8 feet bgs. Both of these samples were reported as not detected for Total Petroleum Hydrocarbons as hydraulic fluid (TPHhf).

Grab groundwater samples were collected from the gasoline and waste oil UST excavations. The sample collected from the gasoline UST excavation was reported as not detected for benzene and MtBE and contained 620,000 ppb of TPHg. The groundwater sample collected from the waste oil UST excavation was reported as not detected for BTEX, MtBE, O&G and 8270 compounds, and contained 90 ppb of TPHg, 890 ppb of TPHd, and elevated concentrations of 8010 compounds.

A total of 1,252.78 tons of soil were removed from the site during demolition activities and transported to Forward Landfill for disposal (GR, 1998).

The tops of casings on monitoring wells MW-2 through MW-5 were damaged during site demolition activities. On September 14, 1998, these wells were properly destroyed by overdrilling and the boreholes were backfilled with neat cement to grade. In addition, one soil boring (EB-3) was advanced on-site to a total depth of 16.5 feet bgs (Figure 2). Groundwater was encountered at approximately 10.5 feet bgs. Soil and groundwater samples were collected for use in a RBCA analysis for the site.

A Risk-Based Corrective Action (RBCA) Evaluation was performed by the site by GR in February 1999. The RBCA Evaluation determined that, since the site was scheduled for construction of a fuel dispensing facility covered with concrete and asphalt and no groundwater receptors were located within a ¼-mile radius of the site, the potential threat to public health and environment is not of significant concern (GR, 1999a).

A limited subsurface investigation was performed in June 1999, which included the installation of three off-site groundwater monitoring wells (MW-6, MW-7, MW-8), and advancing seven Geoprobos (B-4 through B-10) and two soil borings (B-11, B-12) on and near the site. Depth-discrete soil and groundwater samples were collected and analyzed for TPHg, BTEX, MtBE, and five oxygenate compounds. Soil samples were reported to contain petroleum hydrocarbon concentrations ranging from not detected to 210 ppm of TPHg, not detected to 1.6 ppm of benzene, and not detected to 3.3 ppm of MtBE. Nine grab groundwater samples collected from the Geoprobos and soil borings were reported as not detected for TPHg and benzene, except for 0.54 ppb of benzene in B-6 at 11.7 feet bgs and 95,000 ppb of TPHg and 10,000 ppb of benzene in B-10 at 15.2 feet bgs. MtBE concentrations ranged from not detected in borings B-4, B-5, B-6, B-8, B-9, and B-12, to a maximum concentration of 270,000 ppb in boring B-10 at 15.2 feet bgs. Petroleum hydrocarbon concentrations in wells MW-1, MW-6, MW-7, and MW-8 ranged from not detected to 49,000 ppb of TPHg (MW-1), not detected to 6,900 ppb of benzene (MW-1), and not detected to 97,000 ppb of MtBE (MW-6). The oxygenate compounds (excluding MtBE) were reported as not detected for all samples (GR, 1999b).

Groundwater monitoring and sampling has been performed quarterly semiannually at the site since January 1993. Depth to groundwater has ranged from 7.70 to 15.50 feet from top of casing. Groundwater flow direction has ranged from southwest to south-southwest with an average hydraulic gradient of 0.03. Petroleum hydrocarbon concentrations have ranged from not detected to 260,000 ppb of TPHg, not detected to 8,700 ppb of benzene, and 270 to 120,000 ppb of MtBE (GR, 2002).

A 10-point ozone sparge remediation system was installed at the site and activated on April 8, 2002. System installation and startup will be documented in a future report.

## **REGIONAL GEOLOGY**

The site is located on the western flank of the Oakland Hills and is underlain by Late Pleistocene age alluvium. These deposits are composed of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel. The northwest-southeast trending Hayward Fault

is located approximately 2.3 miles northeast of the site (Helley, 1979). The nearest surface water is Glen Echo Creek, located approximately 1,000 feet northwest of the site.

Based on previous subsurface investigations, the site is underlain by clay to approximately 5 to 7 feet below ground surface (bgs). The clay is underlain by silt, silty sand, and poorly graded, fine sand to 16 feet bgs. Clay was encountered beneath these sediments to a total explored depth of 25.5 feet bgs. See Figures 5 through 7 for geologic cross sections of the area. The site is currently monitored and sampled semiannually in January and July. Groundwater was measured at approximately 8 to 15 feet bgs during the January 31, 2002 groundwater monitoring event (GR, 2002). This shallow groundwater at the site appears to be unconfined. The groundwater flow direction has ranged from west-southwest to southwest with an average gradient of 0.03 to 0.06 feet/foot. A potential artificial barrier may exist downgradient of the site as a result of the presence and construction of the I-580 freeway structure (conversation with ACHCSA personnel).

## **FIELD ACTIVITIES**

Field work was performed in accordance with the GR Site Safety Plan No. 140165.06, dated November 14, 2001. GR Field Methods and Procedures and Site Safety Plan are presented in Appendix A. Underground Service Alert (USA) was notified prior to beginning the drilling activities and a utility locator service was employed to clear the drilling location. Off-site access permitting with State of California Department of Transportation (Caltrans) was initiated in January 1999 and completed in August 2001. Drilling and well installation was performed under Alameda County Public Works Agency (ACPWA) Permits Nos. WOI-2135 through WOI-2137 and Caltrans Encroachment Permit No. 0400-NSV-0643. A copy of the permits are included in Appendix B.

Three off-site soil borings were drilled on December 27, 2001 and completed as groundwater monitoring wells MW-9, MW-10, and MW-11, which were installed to total depths of approximately 20, 20, and 30 feet bgs, respectively. The purpose of these wells was to delineate hydrocarbon-impacted groundwater downgradient of the site. The locations of the wells are shown on Figure 2.

The borings were drilled using a limited access drill rig equipped with eight-inch diameter hollow stem augers. Drilling was performed by Gregg Drilling and Testing, Inc. of Martinez, California (#C57 485165). A GR geologist observed the drilling and well installation activities, described the encountered soil, field screened the soil samples for the presence of volatile organic compounds and prepared a log of the boring. Logs of the soil borings are included in Appendix B.

Soil cuttings generated during drilling were placed in drums and stored at the site pending disposal. Sample Comp 1 was collected from the stockpiled soil cuttings and submitted to the laboratory to be composited and analyzed as one sample. Stockpile sampling procedures are presented in Appendix A.

### Well Installation

Wells MW-9, MW-10, and MW-11 were constructed using 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 0.020-inch machine-slotted well screen. The annular space around the well screen in the well boring was packed with Lonestar #3 sand to approximately one foot above the top of the well screen. The sandpack in the well was followed by a bentonite transition seal and then completed with neat cement. The top of the well is protected by a vault box, locking well cap, and lock. Well construction details are presented on the boring logs in Appendix B.

### Well Monitoring, Development, and Sampling

Monitoring, development, and sampling of the newly installed wells and semiannual monitoring and sampling of the existing wells was performed by GR personnel on January 31, 2002. Copies of the well development and field monitoring data sheets are included in Appendix C. Purge water generated during development and sampling procedures was stored in two properly labeled drums on-site pending disposal. Monitoring data are summarized in Table 1.

### Wellhead Survey

Following installation of the wells, the well casing elevations were surveyed by Virgil Chavez Land Surveying of Vallejo, California (California Land Surveyor No. 6323). Top of casing and vault box elevations were measured relative to MSL, and the horizontal locations of the wells were surveyed using GPS. A copy of the surveyor's report is included in Appendix D.

## **SUBSURFACE CONDITIONS**

The unsaturated (vadose) zone is comprised predominantly of 1 to 8 feet of fill material overlying clay and silt. The saturated zone is comprised of the same clay and silt with interbedded sands to a total explored depth of 30 feet bgs. See Figures 5 through 7 for geologic cross sections of the area. Prior to collection of groundwater samples on January 31, 2002, GR personnel measured the depth to groundwater at 7.91 to 14.72 feet below top of casing (TOC). The groundwater flow direction was to the southwest with a gradient of 0.03 to 0.06 feet/feet (Figure 3).

## **CHEMICAL ANALYTICAL RESULTS**

A total of four soil samples from the well borings, one composite sample from the stockpiled drill cuttings, and seven groundwater samples were collected and submitted for chemical analysis. Soil samples were not collected from well boring MW-10 due to its proximity to previously advanced soil boring B-8. Soil samples were selected using field screening data and geologic criteria. Analyses of soil and groundwater samples were performed by Sequoia Analytical of Redwood City or Petaluma, California (ELAP #1210 or 2384). Copies of the laboratory reports and chain-of-custody forms are included in Appendix E.

### Chemical Analytical Procedures

Selected soil samples from the borings were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX), methyl tert-butyl ether (MtBE) according to Environmental Protection Agency (EPA) Method 5030/8015/8020. Groundwater samples were analyzed for TPHg, BTEX, and MtBE by EPA Methods 8021 and 8260B. In addition, groundwater samples MW-9, MW-10 and MW-11 were analyzed for oxygenate and lead scavenger compounds ethanol, tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B. Soil stockpile sample Comp 1 was analyzed for TPHg, BTEX, MtBE and total lead.

### Soil Chemical Analytical Results

No petroleum hydrocarbons were detected in two soil samples collected from well boring MW-9 at 6.5 and 9 feet bgs or from well boring MW-11 at 16 or 24.5 feet bgs. Soil chemical analytical data are summarized in Table 4.

### Groundwater Chemical Analytical Results

Groundwater samples from newly installed downgradient wells MW-10, MW-11 and MW-12 were reported as not detected at for all petroleum hydrocarbons except for 680 and 910 ppb of MtBE by EPA Methods 8020 and 8260, respectively, in MW-9 and 1.2 ppb of MtBE by EPA Method 8260 in MW-10. Petroleum hydrocarbon concentrations in the remaining wells ranged from not detected to 42,000 ppb of TPHg, not detected to 5,800 ppb of benzene, and 700 to 31,000 ppb of MtBE. Groundwater sample chemical analytical data are summarized in Tables 1, 2 and 3 and shown on Figure 4.

### Stockpile Chemical Analytical Results

Soil stockpile sample Comp 1 was reported as not detected for TPHg and BTEX, or MtBE and contained 7.7 ppm of total lead. Sample analytical data are summarized in Table 4.

## **WASTE DISPOSAL**

Approximately 107 gallons of waste water generated by cleaning the drilling equipment and well development procedures were removed from the site by GR, and transported to the Tosco Refinery in Rodeo, California, for disposal. A total of five drums of soil (drill cuttings) were removed from the site by Denbeste Transportation of Windsor, California and transported to the Forward Incorporated facility in Manteca, California for disposal. A copy of the Forward disposal confirmation form is included in Appendix F.

## **SUMMARY**

Three downgradient groundwater monitoring wells (MW-9, MW-10, MW-11) were installed on December 27, 2001. These wells were sampled during the first quarter 2002 groundwater monitoring and sampling event on January 31, 2002. Soil samples collected from the well borings were reported as not detected for all petroleum hydrocarbons. Petroleum hydrocarbon concentrations from the monitoring well groundwater samples ranged from not detected for all analytes to 42,000 ppb of TPHg, 5,800 ppb of benzene, and 31,000 ppb of MtBE. The groundwater flow direction was to the southwest at a hydraulic gradient of 0.03 to 0.06 feet/feet. An ozone sparge remediation system was installed on the site and activated on April 8, 2002.

## **CONCLUSIONS**

The purpose of this investigation was to delineate the lateral extent of hydrocarbon-impacted soil and groundwater downgradient of the site. Analytical data from the well boring soil samples indicates that hydrocarbon-impacted soil has been delineated. Groundwater analytical data from the newly installed downgradient monitoring wells indicate that the extent of hydrocarbon-impacted groundwater has been delineated southwest of the site. The groundwater sample from monitoring well MW-9, located approximately 150 feet west of the site, contained 910 ppb of MtBE. Based on the southwesterly flow direction exhibited in the January 31, 2002 Potentiometric Map, MW-9 is not directly downgradient of the former source, and therefore the MtBE concentration in MW-9 should be confirmed by further sampling. At this time, it is unclear whether preferential pathways or the construction of the support structures for Interstate 580 influence groundwater flow in the area southwest and west of the site. Therefore, GR recommends that additional groundwater monitoring and sampling be performed to verify groundwater flow direction and hydrocarbon concentrations at and in the vicinity of the site. Based on the results of the monitoring and sampling events, GR will make recommendations for further actions as warranted.

## **DISTRIBUTION**

GR recommends that a copy of this report be forwarded to Mr. Don Hwang of Alameda County Health Care Services Agency at 1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor, Alameda, CA 94502.

## **REFERENCES**

Gettler-Ryan Inc., 1998, Soil Sampling During Underground Storage Tank and Piping Removal at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.02 dated October 19, 1998.

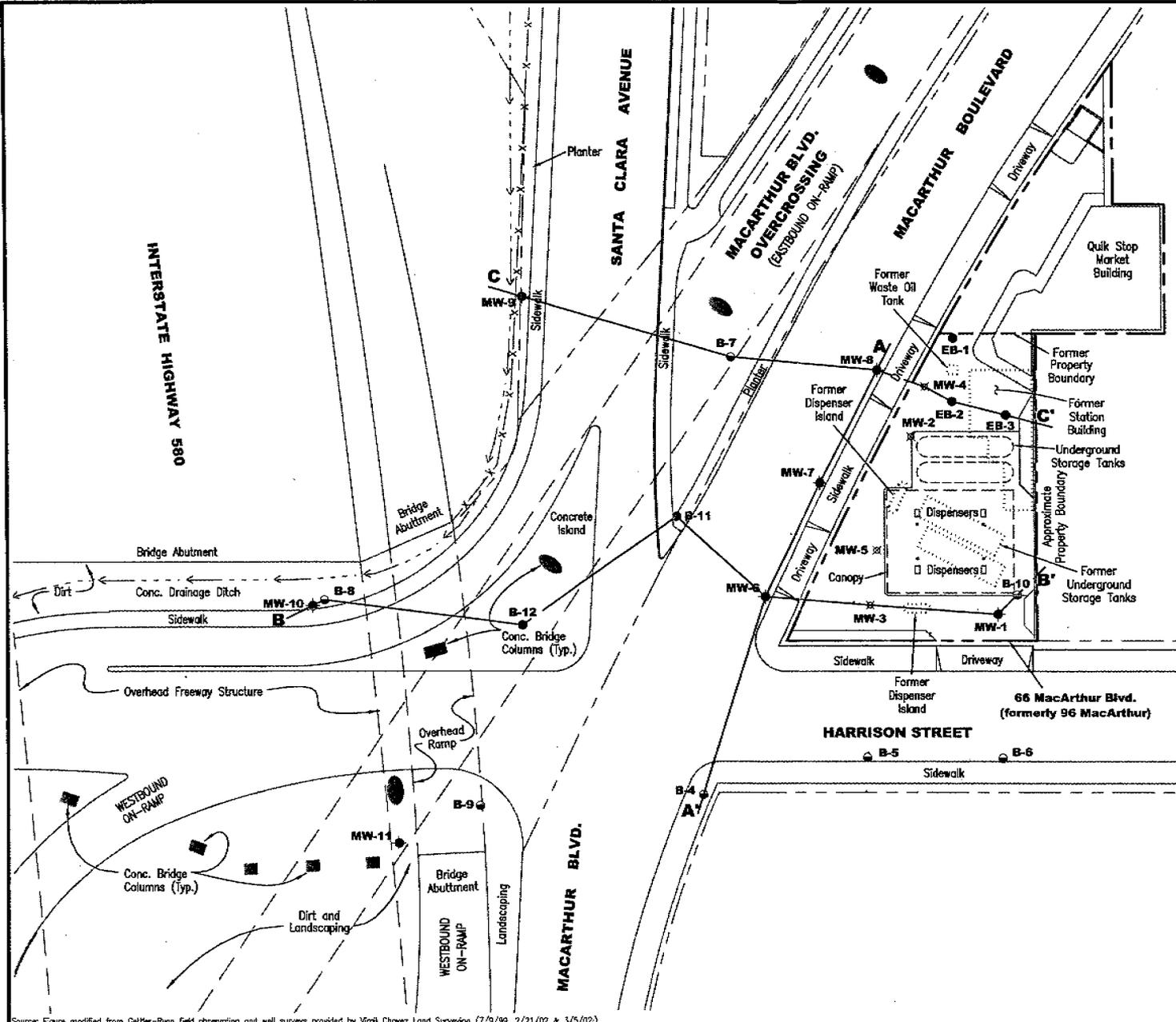
Gettler-Ryan Inc., 1999a, Risk-Based Corrective Action Evaluation at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.05-1 dated February 25, 1999.

Gettler-Ryan Inc., 1999b, Limited Subsurface Investigation Report at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.04-1 dated August 6, 1999.

Gettler-Ryan Inc., 2002, First Semi-Annual 2002 Groundwater Monitoring & Sampling Report for Tosco (Unocal) Service Station No. 1871, 96 MacArthur Boulevard, Oakland, California: Job #180068 dated March 14, 2002.

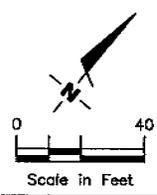
Helley, E. J. and K. R. Lajoie, 1979, Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning: U.S. Geological Survey Professional Paper 943.

Kaprealian Engineering Incorporated, 1996, Continuing Soil and Groundwater Investigation at Unocal Service Station No. 1871, 96 MacArthur Boulevard, Oakland, California: Report KEI-P94-0601.R4 dated May 17, 1996.



**EXPLANATION**

- ◆ Groundwater monitoring well
- ✕ Destroyed groundwater monitoring well
- Soil boring
- Geoprobe boring
- A A' Cross section line



Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgi Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)

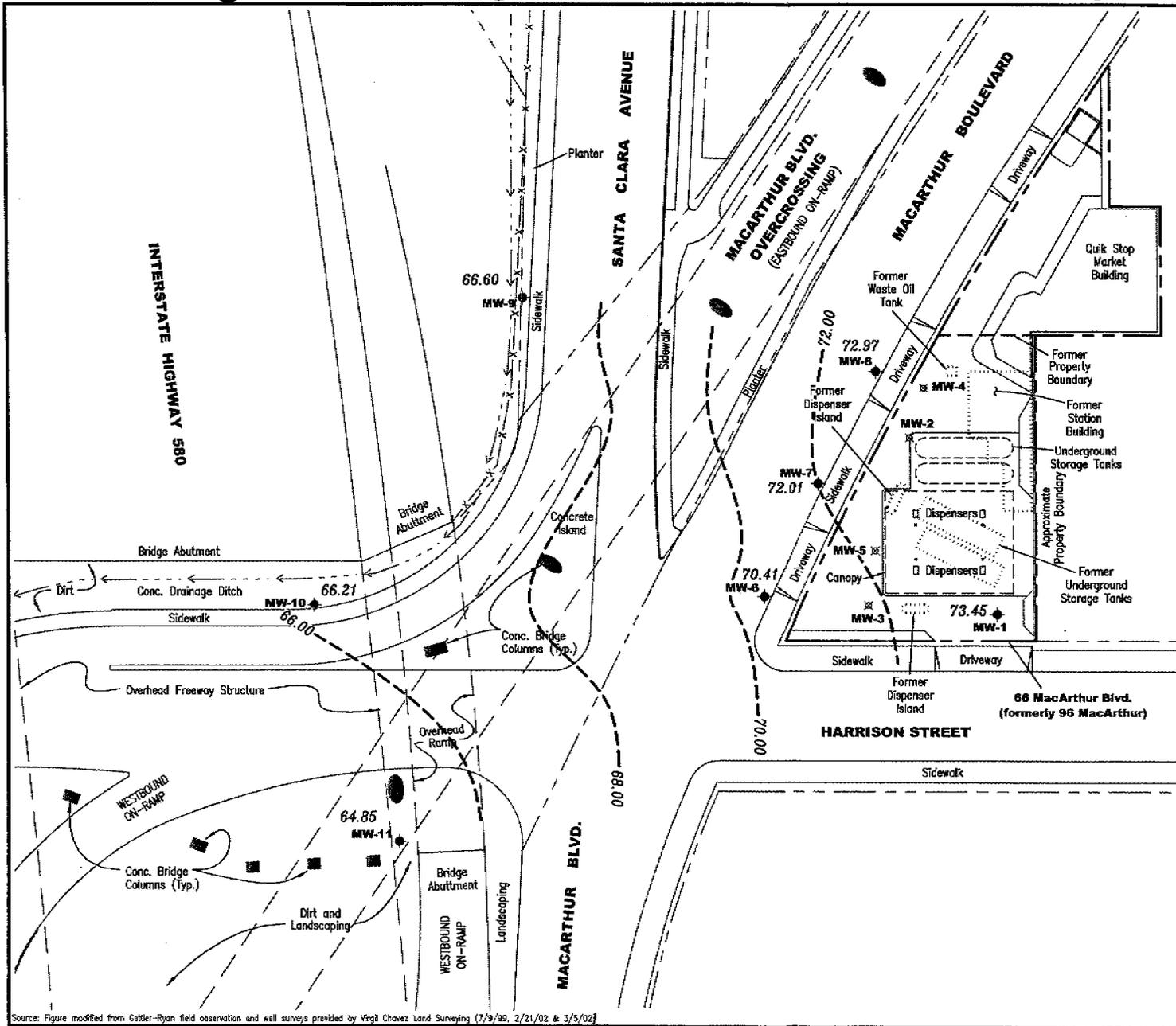
FIGURE

**2**

**SITE PLAN**  
 Former Tosco (76) Service Station No. 1871  
 96 MacArthur Boulevard  
 Oakland, California

**GETTLER-RYAN INC.**  
 5747 Sierra Ct., Suite J  
 Dublin, CA 94568 (925) 551-7555

PROJECT NUMBER: 14.0165.07  
 FILE NAME: P:\JOB\140165\1871\1871.dwg  
 LAYOUT: T01  
 DATE: 3/02  
 REVISED DATE: 3/02



**EXPLANATION**

- ◆ Groundwater monitoring well
- ✕ Destroyed groundwater monitoring well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 - - - Groundwater elevation contour, dashed where inferred

  
 Approximate groundwater flow direction at a gradient of 0.03 to 0.06 FT./FT.

Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgil Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)

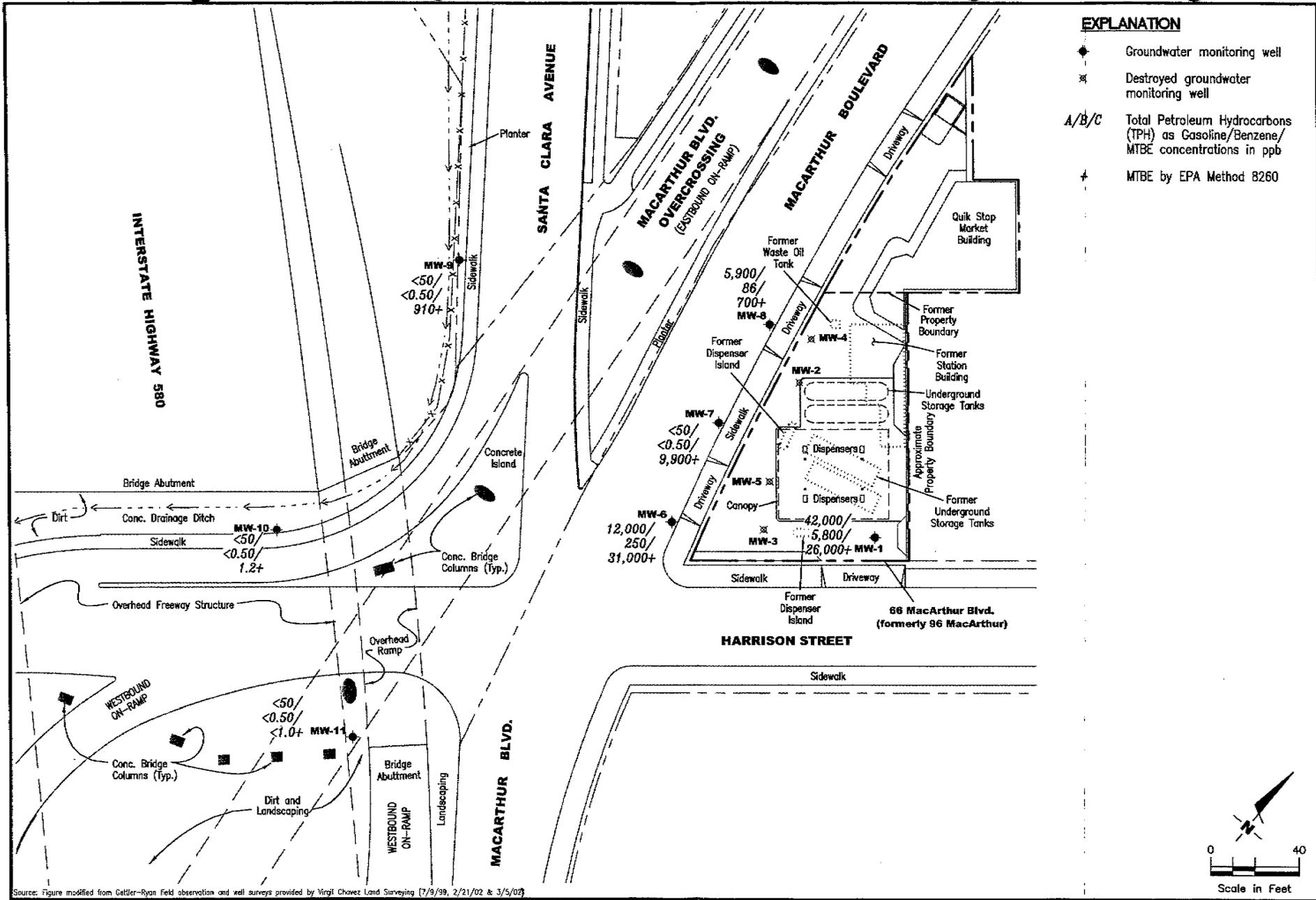
POTENTIOMETRIC MAP  
 Former Tosco (76) Service Station No. 1871  
 96 MacArthur Boulevard  
 Oakland, California


**GETTLER - RYAN INC.**  
 8747 Sierra Ct., Suite J  
 Dublin, CA 94568 (925) 951-7555

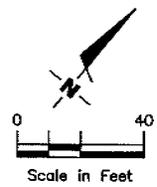
PROJECT NUMBER  
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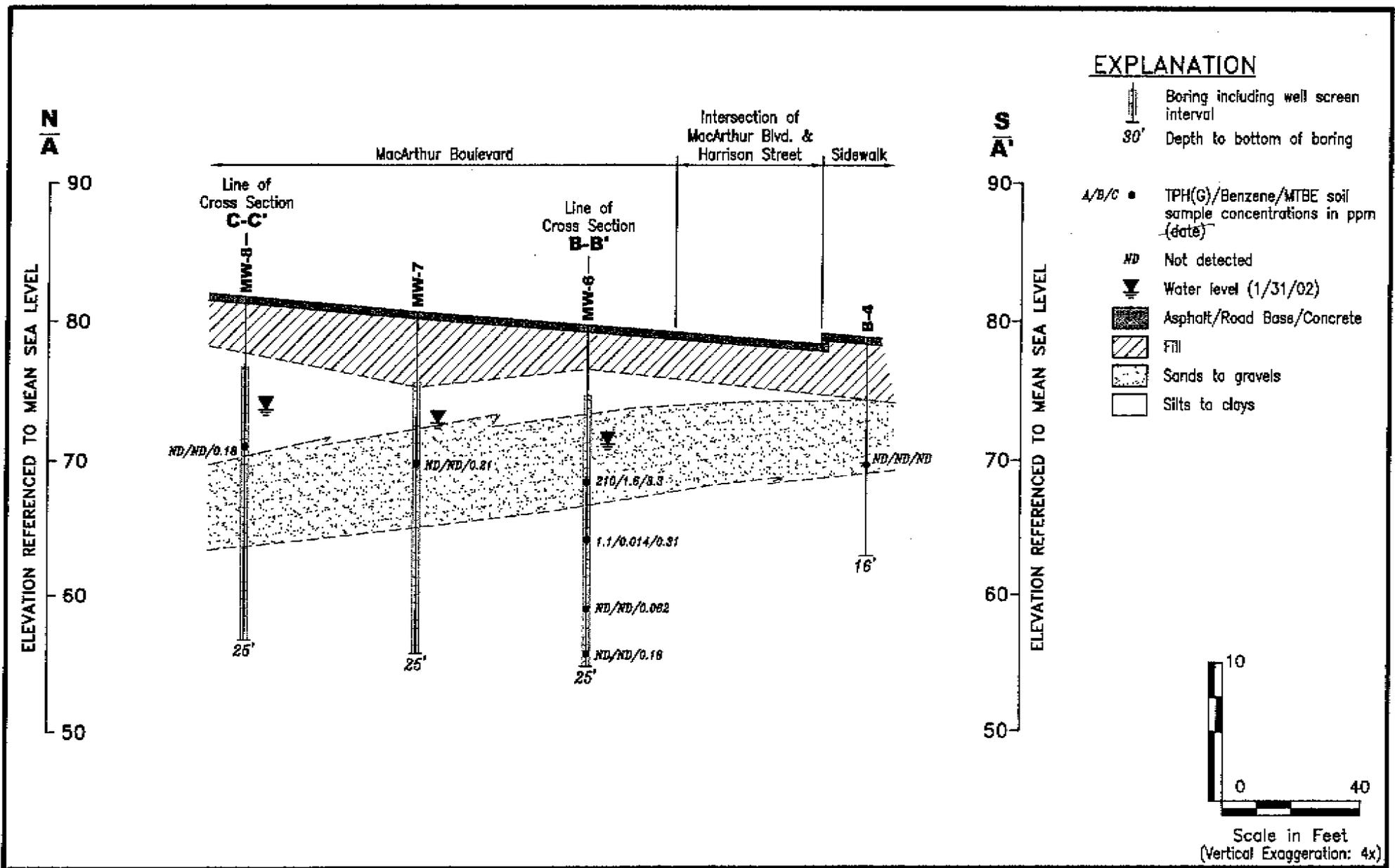
DATE  
 January 31, 2002  
 REVISION DATE

REVIEWED BY



Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgil Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)





**GETTLER - RYAN INC.**  
 8747 Sierra Ct., Suite J  
 Dublin, CA 94568 (925) 551-7555

**CROSS SECTION A-A'**  
 Former Tosco (76) Service Station No. 1871  
 96 MacArthur Boulevard  
 Oakland, California

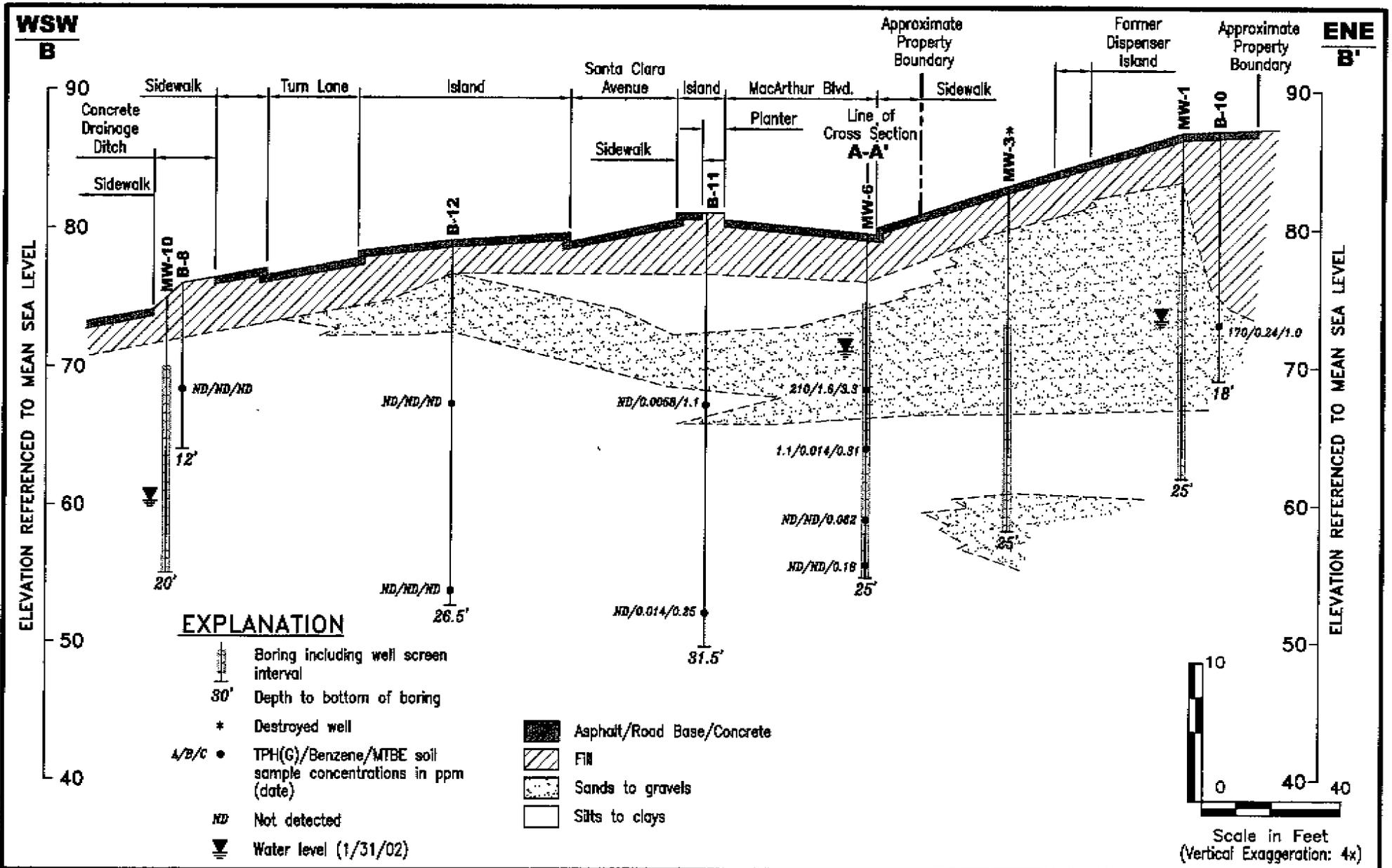
FIGURE  
**5**

PROJECT NUMBER  
 140165.07

REVIEWED BY

DATE  
 7/99

REVISED DATE  
 3/02

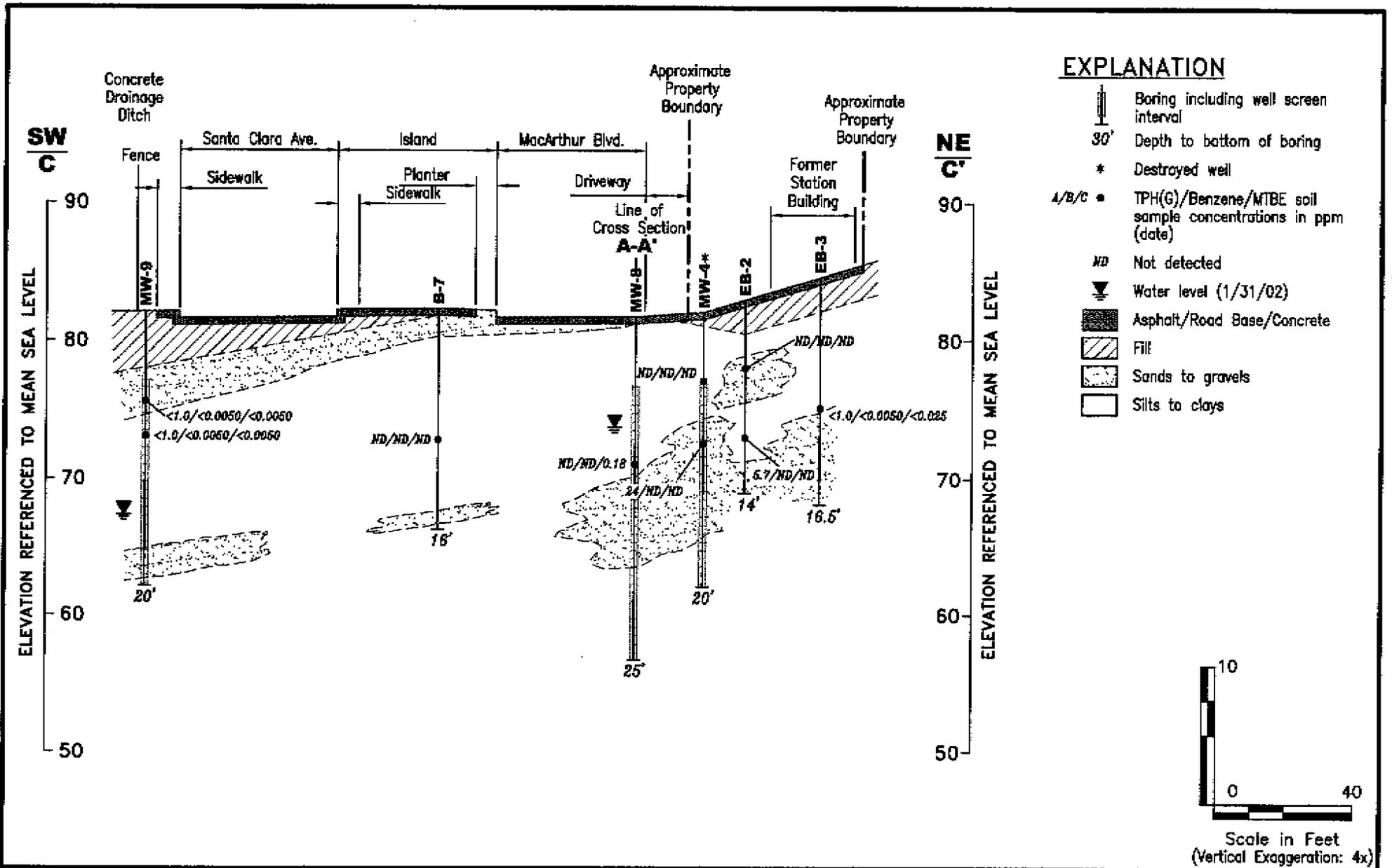


**GETTLER - RYAN INC.**  
6747 Serra Ct., Suite J  
Dublin, CA 94568 (925) 551-7555

**CROSS SECTION B-B'**  
Former Tosco (76) Service Station No. 1871  
96 MacArthur Boulevard  
Oakland, California

FIGURE  
**6**

|                             |             |              |                      |
|-----------------------------|-------------|--------------|----------------------|
| PROJECT NUMBER<br>140165.07 | REVIEWED BY | DATE<br>7/99 | REVISED DATE<br>3/02 |
|-----------------------------|-------------|--------------|----------------------|



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

**CROSS SECTION C-C'**  
 Former Tosco (76) Service Station No. 1871  
 96 MacArthur Boulevard  
 Oakland, California

FIGURE  
**7**

|                             |             |              |              |
|-----------------------------|-------------|--------------|--------------|
| PROJECT NUMBER<br>140165.07 | REVIEWED BY | DATE<br>3/02 | REVISED DATE |
|-----------------------------|-------------|--------------|--------------|

**APPENDIX B**

TRC Quarterly Monitoring Report October through December 2008



21 Technology Drive  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

www.TRCsolutions.com

DATE: January 19, 2009

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, California 95818

ATTN: MR. TERRY GRAYSON

SITE: 76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2008

Dear Mr. Grayson:

Please find enclosed our Quarterly Monitoring Report for 76 Station, located at 96 MacArthur Boulevard, Oakland, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read "Anju Farfan".

Anju Farfan  
Groundwater Program Operations Manager

CC: Mr. John Reay, Delta Consultants (3 copies)

Enclosures  
20-0400/1871R21.QMS

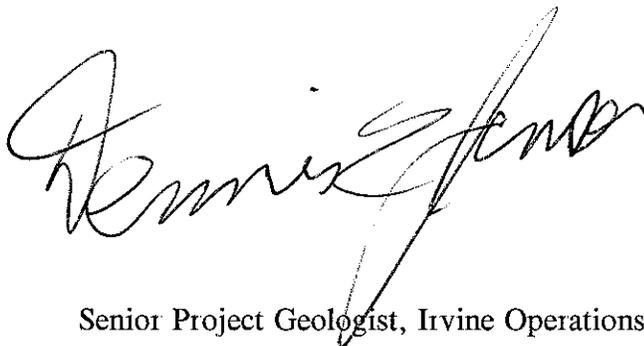
**QUARTERLY MONITORING REPORT  
OCTOBER THROUGH DECEMBER 2008**

76 STATION 1871  
96 MacArthur Boulevard  
Oakland, California

Prepared For:

Mr. Terry Grayson  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:

  
Senior Project Geologist, Irvine Operations

Date: 4/16/09



## LIST OF ATTACHMENTS

|                    |  |
|--------------------|--|
| Summary Sheet      | Summary of Gauging and Sampling Activities   |
| Tables             | <p>Table Key</p> <p>Contents of Tables</p> <p>Table 1: Current Fluid Levels and Selected Analytical Results</p> <p>Table 1a: Additional Current Analytical Results</p> <p>Table 2: Historic Fluid Levels and Selected Analytical Results</p> <p>Table 2a: Additional Historic Analytical Results</p> <p>Table 2b: Additional Historic Analytical Results</p> |
| Figures            | <p>Figure 1: Vicinity Map</p> <p>Figure 2: Groundwater Elevation Contour Map</p> <p>Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map</p> <p>Figure 4: Dissolved-Phase Benzene Concentration Map</p> <p>Figure 5: Dissolved-Phase MTBE Concentration Map</p>   |
| Graphs             | <p>Groundwater Elevations vs. Time</p> <p>TPH-G Concentrations vs. Time</p> <p>Benzene Concentrations vs. Time</p> <p>MTBE Concentrations vs. Time</p>   |
| Field Activities   | <p>General Field Procedures</p> <p>Field Monitoring Data Sheet – 12/30/08</p> <p>Groundwater Sampling Field Notes – 12/30/08</p>   |
| Laboratory Reports | <p>Official Laboratory Reports</p> <p>Quality Control Reports</p> <p>Chain of Custody Records</p>  |
| Statements         | <p>Purge Water Disposal</p> <p>Limitations</p>   |

**Summary of Gauging and Sampling Activities**  
**October 2008 through December 2008**  
**76 Station 1871**  
**96 MacArthur Boulevard**  
**Oakland, CA**

Project Coordinator: **Terry Grayson**  
Telephone: **916-558-7666**

Water Sampling Contractor: **TRC**  
Compiled by: **Christina Carrillo**

Date(s) of Gauging/Sampling Event: **12/30/08**

**Sample Points**

Groundwater wells: **1** onsite, **6** offsite      Points gauged: **7**      Points sampled: **7**  
Purging method: **Diaphragm pump**  
Purge water disposal: **Veolia/Rodeo Unit 100**  
Other Sample Points: **0**      Type: **--**

**Liquid Phase Hydrocarbons (LPH)**

Sample Points with LPH: **0**      Maximum thickness (feet): **--**  
LPH removal frequency: **--**      Method: **--**  
Treatment or disposal of water/LPH: **--**

**Hydrogeologic Parameters**

Depth to groundwater (below TOC):      Minimum: **6.73 feet**      Maximum: **16.16 feet**  
Average groundwater elevation (relative to available local datum): **68.98 feet**  
Average change in groundwater elevation since previous event: **0.60 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.03 ft/ft, southwest**  
    Previous event: **0.05 ft/ft, southwest (09/25/08)**

**Selected Laboratory Results**

Sample Points with detected **Benzene**: **1**      Sample Points above MCL (1.0 µg/l): **1**  
    Maximum reported benzene concentration: **2.5 µg/l (MW-1)**  
Sample Points with **TPH-G by GC/MS** **5**      Maximum: **3,200 µg/l (MW-1)**  
Sample Points with **MTBE 8260B** **6**      Maximum: **230 µg/l (MW-9)**

**Notes:**

# TABLES

## TABLE KEY

### STANDARD ABBREVIATIONS

|       |   |   |
|-------|---|---|
| --    | = | not analyzed, measured, or collected                                |
| LPH   | = | liquid-phase hydrocarbons   |
| Trace | = | less than 0.01 foot of LPH in well                                  |
| µg/l  | = | micrograms per liter (approx. equivalent to parts per billion, ppb) |
| mg/l  | = | milligrams per liter (approx. equivalent to parts per million, ppm) |
| ND <  | = | not detected at or above laboratory detection limit                 |
| TOC   | = | top of casing (surveyed reference elevation)                        |

### ANALYTES

|               |   |   |
|---------------|---|---|
| BTEX          | = | benzene, toluene, ethylbenzene, and (total) xylenes                               |
| DIPE          | = | di-isopropyl ether  |
| ETBE          | = | ethyl tertiary butyl ether  |
| MTBE          | = | methyl tertiary butyl ether   |
| PCB           | = | polychlorinated biphenyls   |
| PCE           | = | tetrachloroethene   |
| TBA           | = | tertiary butyl alcohol  |
| ICA           | = | trichloroethane   |
| ICE           | = | trichloroethene   |
| IPH-G         | = | total petroleum hydrocarbons with gasoline distinction                            |
| IPH-G (GC/MS) | = | total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B |
| IPH-D         | = | total petroleum hydrocarbons with diesel distinction                              |
| IRPH          | = | total recoverable petroleum hydrocarbons  |
| IAME          | = | tertiary amyl methyl ether  |
| 1,1-DCA       | = | 1,1-dichloroethane  |
| 1,2-DCA       | = | 1,2-dichloroethane (same as EDC, ethylene dichloride)                             |
| 1,1-DCE       | = | 1,1-dichloroethene  |
| 1,2-DCE       | = | 1,2-dichloroethene (cis- and trans-)  |

### NOTES

1. Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as:  $\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})$ , where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
8. Groundwater vs. Time graphs may be corrected for apparent level changes due to re-survey.

### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 1871 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

# Contents of Tables 1 and 2

## Site: 76 Station 1871

### Current Event

| Table 1 | Well/<br>Date | Depth to<br>Water | LPH<br>Thickness | Ground-<br>water<br>Elevation | Change in<br>Elevation | TPH-G<br>(8015M) | TPH-G<br>(GC/MS) | Benzene | Toluene | Ethyl-<br>benzene | Total<br>Xylenes | MTBE<br>(8021B) | MTBE<br>(8260B) |
|---------|---------------|-------------------|------------------|-------------------------------|------------------------|------------------|------------------|---------|---------|-------------------|------------------|-----------------|-----------------|
|---------|---------------|-------------------|------------------|-------------------------------|------------------------|------------------|------------------|---------|---------|-------------------|------------------|-----------------|-----------------|

| Table 1a | Well/<br>Date | TBA | Ethanol<br>(8260B) | Post-purge<br>Dissolved<br>Oxygen | Pre-purge<br>Dissolved<br>Oxygen | Pre-purge<br>ORP | Post-purge<br>ORP |
|----------|---------------|-----|--------------------|-----------------------------------|----------------------------------|------------------|-------------------|
|----------|---------------|-----|--------------------|-----------------------------------|----------------------------------|------------------|-------------------|

### Historic Data

| Table 2 | Well/<br>Date | Depth to<br>Water | LPH<br>Thickness | Ground-<br>water<br>Elevation | Change in<br>Elevation | TPH-G<br>(8015M) | TPH-G<br>(GC/MS) | Benzene | Toluene | Ethyl-<br>benzene | Total<br>Xylenes | MTBE<br>(8021B) | MTBE<br>(8260B) |
|---------|---------------|-------------------|------------------|-------------------------------|------------------------|------------------|------------------|---------|---------|-------------------|------------------|-----------------|-----------------|
|---------|---------------|-------------------|------------------|-------------------------------|------------------------|------------------|------------------|---------|---------|-------------------|------------------|-----------------|-----------------|

| Table 2a | Well/<br>Date | TPH-D | TBA | Ethanol<br>(8260B) | Ethylene-<br>dibromide<br>(EDB) | 1,2-DCA<br>(EDC) | DIPE | ETBE | TAME | pH<br>(lab) | Post-purge<br>Dissolved<br>Oxygen | Pre-purge<br>Dissolved<br>Oxygen | Pre-purge<br>ORP |
|----------|---------------|-------|-----|--------------------|---------------------------------|------------------|------|------|------|-------------|-----------------------------------|----------------------------------|------------------|
|----------|---------------|-------|-----|--------------------|---------------------------------|------------------|------|------|------|-------------|-----------------------------------|----------------------------------|------------------|

| Table 2b | Well/<br>Date | Post-purge<br>ORP |
|----------|---------------|-------------------|
|----------|---------------|-------------------|

**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**December 30, 2008**  
**76 Station 1871**

| Date Sampled | TOC Elevation<br>(feet) | Depth to Water<br>(feet) | LPH Thickness<br>(feet)                    | Ground-water Elevation<br>(feet) | Change in Elevation<br>(feet) | TPH-G<br>(8015M)<br>(µg/l) | TPH-G<br>(GC/MS)<br>(µg/l) | Benzene<br>(µg/l) | Toluene<br>(µg/l) | Ethyl-<br>benzene<br>(µg/l) | Total<br>Xylenes<br>(µg/l) | MTBE<br>(8021B)<br>(µg/l) | MTBE<br>(8260B)<br>(µg/l) | Comments |
|--------------|-------------------------|--------------------------|--|----------------------------------|-------------------------------|----------------------------|----------------------------|-------------------|-------------------|-----------------------------|----------------------------|---------------------------|---------------------------|----------|
| <b>MW-1</b>  |                         |                          | <b>(Screen Interval in feet: 9.5-24.5)</b> |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 86.99                   | 14.16                    | 0.00                                       | 72.83                            | 0.39                          | --                         | 3200                       | 2.5               | ND<0.50           | 100                         | 150                        | --                        | 8.3                       |          |
| <b>MW-6</b>  |                         |                          | <b>(Screen Interval in feet: 5.0-25.0)</b> |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 79.67                   | 8.96                     | 0.00                                       | 70.71                            | 0.99                          | --                         | 55                         | ND<0.50           | ND<0.50           | ND<0.50                     | ND<1.0                     | --                        | 12                        |          |
| <b>MW-7</b>  |                         |                          | <b>(Screen Interval in feet: 5.0-25.0)</b> |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 80.67                   | 8.99                     | 0.00                                       | 71.68                            | 0.56                          | --                         | 130                        | ND<0.50           | ND<0.50           | ND<0.50                     | 1.1                        | --                        | 5.7                       |          |
| <b>MW-8</b>  |                         |                          | <b>(Screen Interval in feet: 5.0-25.0)</b> |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 81.71                   | 9.72                     | 0.00                                       | 71.99                            | 0.52                          | --                         | 50                         | ND<0.50           | ND<0.50           | ND<0.50                     | ND<1.0                     | --                        | 5.7                       |          |
| <b>MW-9</b>  |                         |                          | <b>(Screen Interval in feet:--)</b>        |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 82.07                   | 16.16                    | 0.00                                       | 65.91                            | 0.32                          | --                         | 160                        | ND<0.50           | ND<0.50           | ND<0.50                     | ND<1.0                     | --                        | 230                       |          |
| <b>MW-10</b> |                         |                          | <b>(Screen Interval in feet:--)</b>        |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 74.98                   | 6.73                     | 0.00                                       | 68.25                            | 0.97                          | --                         | ND<50                      | ND<0.50           | ND<0.50           | ND<0.50                     | ND<1.0                     | --                        | 0.80                      |          |
| <b>MW-11</b> |                         |                          | <b>(Screen Interval in feet:--)</b>        |                                  |                               |                            |                            |                   |                   |                             |                            |                           |                           |          |
| 12/30/08     | 77.31                   | 15.82                    | 0.00                                       | 61.49                            | 0.48                          | --                         | ND<50                      | ND<0.50           | ND<0.50           | ND<0.50                     | ND<1.0                     | --                        | ND<0.50                   |          |

**Table 1 a**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**76 Station 1871**

| Date<br>Sampled | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Post-purge                    | Pre-purge                     | Pre-purge                | Post-purge                |
|-----------------|---------------|------------------------------|-------------------------------|-------------------------------|--------------------------|---------------------------|
|                 |               |                              | Dissolved<br>Oxygen<br>(mg/l) | Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) | Post-purge<br>ORP<br>(mV) |
| <b>MW-1</b>     |               |                              |                               |                               |                          |                           |
| 12/30/08        | 400           | ND<250                       | 2.44                          | 0.91                          | 0                        | -2                        |
| <b>MW-6</b>     |               |                              |                               |                               |                          |                           |
| 12/30/08        | ND<10         | ND<250                       | 4.50                          | 1.62                          | 14                       | 8                         |
| <b>MW-7</b>     |               |                              |                               |                               |                          |                           |
| 12/30/08        | ND<10         | ND<250                       | 4.13                          | 1.81                          | -14                      | -19                       |
| <b>MW-8</b>     |               |                              |                               |                               |                          |                           |
| 12/30/08        | ND<10         | ND<250                       | 1.78                          | 2.19                          | 11                       | 14                        |
| <b>MW-9</b>     |               |                              |                               |                               |                          |                           |
| 12/30/08        | 21            | ND<250                       | 5.47                          | 5.43                          | 52                       | 38                        |
| <b>MW-10</b>    |               |                              |                               |                               |                          |                           |
| 12/30/08        | ND<10         | ND<250                       | 5.89                          | 3.18                          | 181                      | 184                       |
| <b>MW-11</b>    |               |                              |                               |                               |                          |                           |
| 12/30/08        | ND<10         | ND<250                       | 2.74                          | 2.67                          | 195                      | 195                       |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                                    | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-1 (Screen Interval in feet: 9.5-24.5)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 11/03/92  | --                   | --                    | --                   | --                            | --                         | 260000               | --                   | 2300           | 4600           | 3700                 | 17000                | --                  | --                  |          |
| 01/25/93  | 81.18                | --                    | 0.00                 | --                            | --                         | 120000               | --                   | 2100           | 4600           | 4900                 | 22000                | --                  | --                  |          |
| 04/29/93  | 81.18                | 13.71                 | 0.00                 | 67.47                         | --                         | 100000               | --                   | 850            | 2000           | 4300                 | 19000                | --                  | --                  |          |
| 07/16/93  | 81.18                | 14.51                 | 0.00                 | 66.67                         | -0.80                      | 29000                | --                   | 590            | 560            | 980                  | 4200                 | --                  | --                  |          |
| 10/19/93  | 81.18                | 15.20                 | 0.00                 | 65.98                         | -0.69                      | 67000                | --                   | 1400           | 2600           | 2900                 | 5000                 | --                  | --                  |          |
| 01/20/94  | 81.18                | 15.17                 | 0.00                 | 66.01                         | 0.03                       | 92000                | --                   | 1200           | 3000           | 3400                 | 17000                | --                  | --                  |          |
| 04/13/94  | 81.18                | 14.44                 | 0.00                 | 66.74                         | 0.73                       | 51000                | --                   | 1000           | 2600           | 3200                 | 15000                | --                  | --                  |          |
| 07/13/94  | 81.18                | 14.88                 | 0.00                 | 66.30                         | -0.44                      | 35000                | --                   | 550            | 150            | 1400                 | 5700                 | --                  | --                  |          |
| 10/10/94  | 81.18                | 15.55                 | 0.00                 | 65.63                         | -0.67                      | 52000                | --                   | 1000           | 810            | 3300                 | 12000                | --                  | --                  |          |
| 01/10/95  | 81.18                | 12.44                 | 0.00                 | 68.74                         | 3.11                       | 810                  | --                   | 16             | 18             | 59                   | 250                  | --                  | --                  |          |
| 04/17/95  | 81.18                | 12.68                 | 0.00                 | 68.50                         | -0.24                      | 48000                | --                   | 880            | 530            | 2500                 | 11000                | --                  | --                  |          |
| 07/24/95  | 81.18                | 13.97                 | 0.00                 | 67.21                         | -1.29                      | 48000                | --                   | 1500           | 420            | 2700                 | 9700                 | --                  | --                  |          |
| 10/23/95  | 81.18                | 14.85                 | 0.00                 | 66.33                         | -0.88                      | 47000                | --                   | 780            | 210            | 2100                 | 11000                | 270                 | --                  |          |
| 01/18/96  | 81.18                | 14.21                 | 0.00                 | 66.97                         | 0.64                       | 30000                | --                   | 1500           | 500            | 3500                 | 13000                | 2400                | --                  |          |
| 04/18/96  | 86.24                | 13.40                 | 0.00                 | 72.84                         | 5.87                       | 66000                | --                   | 2700           | 2200           | 3100                 | 13000                | 57000               | --                  |          |
| 07/24/96  | 86.24                | 14.15                 | 0.00                 | 72.09                         | -0.75                      | 5600                 | --                   | 2100           | ND             | 160                  | 160                  | 24000               | --                  |          |
| 10/24/96  | 86.24                | 14.85                 | 0.00                 | 71.39                         | -0.70                      | 110000               | --                   | 7500           | 8000           | 3300                 | 14000                | 58000               | --                  |          |
| 01/28/97  | 86.24                | 11.25                 | 0.00                 | 74.99                         | 3.60                       | 94000                | --                   | 7700           | 19000          | 3100                 | 15000                | 120000              | --                  |          |
| 07/29/97  | 86.24                | 14.67                 | 0.00                 | 71.57                         | -3.42                      | ND                   | --                   | ND             | ND             | ND                   | ND                   | 70000               | --                  |          |
| 01/14/98  | 86.24                | 12.27                 | 0.00                 | 73.97                         | 2.40                       | 85000                | --                   | 6100           | 10000          | 3000                 | 17000                | 110000              | --                  |          |
| 07/01/98  | 86.24                | 14.32                 | 0.00                 | 71.92                         | -2.05                      | 110000               | --                   | 8700           | 12000          | 2700                 | 15000                | 110000              | --                  |          |
| 06/18/99  | 86.24                | 13.93                 | 0.00                 | 72.31                         | 0.39                       | 49000                | --                   | 6900           | 6500           | 380                  | 12000                | 72000               | 47000               |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled          | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|-----------------------|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-1 continued</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 01/21/00              | 86.24                | 15.05                 | 0.00                 | 71.19                         | -1.12                      | 63700                | --                   | 5520           | 2000           | 2640                 | 13100                | 57100               | --                  |          |
| 07/10/00              | 86.24                | 13.97                 | 0.00                 | 72.27                         | 1.08                       | 67800                | --                   | 9910           | 4120           | 3330                 | 16100                | 67400               | 54000               |          |
| 01/04/01              | 86.24                | 14.92                 | 0.00                 | 71.32                         | -0.95                      | 63900                | --                   | 6270           | 784            | 2670                 | 12900                | --                  | 38100               |          |
| 07/16/01              | 86.24                | 14.32                 | 0.00                 | 71.92                         | 0.60                       | 66000                | --                   | 7100           | 330            | 2300                 | 9800                 | 36000               | 41000               |          |
| 01/31/02              | 86.99                | 13.54                 | 0.00                 | 73.45                         | 1.53                       | 42000                | --                   | 5800           | 1800           | 2000                 | 8200                 | 26000               | 26000               |          |
| 04/11/02              | 86.99                | 13.64                 | 0.00                 | 73.35                         | -0.10                      | 58000                | --                   | 2900           | 1200           | 1800                 | 10000                | 19000               | --                  |          |
| 07/11/02              | 86.99                | 13.96                 | 0.00                 | 73.03                         | -0.32                      | --                   | 5900                 | 330            | ND<10          | 230                  | 600                  | --                  | 3400                |          |
| 10/15/02              | 86.99                | 14.71                 | 0.00                 | 72.28                         | -0.75                      | --                   | 470                  | 16             | ND<2.5         | 14                   | 16                   | --                  | 390                 |          |
| 01/14/03              | 86.99                | 12.77                 | 0.00                 | 74.22                         | 1.94                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 49                  |          |
| 04/16/03              | 86.99                | 13.18                 | 0.00                 | 73.81                         | -0.41                      | --                   | 510                  | 57             | 0.62           | 29                   | 61                   | --                  | 160                 |          |
| 07/16/03              | 86.99                | 14.26                 | 0.00                 | 72.73                         | -1.08                      | --                   | 27000                | 260            | 23             | 730                  | 3200                 | --                  | 1200                |          |
| 10/02/03              | 86.99                | 14.95                 | 0.00                 | 72.04                         | -0.69                      | --                   | 45000                | 1400           | 32             | 2900                 | 7600                 | --                  | 3200                |          |
| 01/07/04              | 86.99                | 12.30                 | 0.00                 | 74.69                         | 2.65                       | --                   | 34000                | 690            | 41             | 1600                 | 5200                 | --                  | 2600                |          |
| 04/02/04              | 86.99                | 13.18                 | 0.00                 | 73.81                         | -0.88                      | --                   | 350                  | 1.8            | ND<0.50        | 6.2                  | 30                   | --                  | 19                  |          |
| 07/29/04              | 86.99                | 14.61                 | 0.00                 | 72.38                         | -1.43                      | --                   | 41000                | 550            | ND<20          | 2000                 | 6100                 | --                  | 1200                |          |
| 11/24/04              | 86.99                | 14.98                 | 0.00                 | 72.01                         | -0.37                      | --                   | 55000                | 910            | 28             | 3100                 | 11000                | --                  | 1600                |          |
| 01/24/05              | 86.99                | 12.98                 | 0.00                 | 74.01                         | 2.00                       | --                   | 24000                | 240            | ND<20          | 1100                 | 3600                 | --                  | 1800                |          |
| 06/23/05              | 86.99                | 13.39                 | 0.00                 | 73.60                         | -0.41                      | --                   | 24000                | 140            | ND<25          | 1100                 | 2900                 | --                  | 600                 |          |
| 09/28/05              | 86.99                | 14.63                 | 0.00                 | 72.36                         | -1.24                      | --                   | 8200                 | 22             | 0.97           | 290                  | 660                  | --                  | 320                 |          |
| 12/20/05              | 86.99                | 11.42                 | 0.00                 | 75.57                         | 3.21                       | --                   | 10000                | 17             | 29             | 180                  | 840                  | --                  | 2400                |          |
| 03/10/06              | 86.99                | 10.98                 | 0.00                 | 76.01                         | 0.44                       | --                   | 10000                | 35             | ND<5.0         | 470                  | 1300                 | --                  | 960                 |          |
| 06/23/06              | 86.99                | 11.85                 | 0.00                 | 75.14                         | -0.87                      | --                   | 11000                | 110            | ND<5.0         | 610                  | 1600                 | --                  | 780                 |          |
| 09/27/06              | 86.99                | 14.11                 | 0.00                 | 72.88                         | -2.26                      | --                   | 8500                 | 22             | ND<10          | 270                  | 740                  | --                  | 460                 |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                              | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-1 continued</b>                     |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 12/22/06                                  | 86.99                | 13.66                 | 0.00                 | 73.33                         | 0.45                       | --                   | 7300                 | 35             | ND<5.0         | 370                  | 850                  | --                  | 210                 |          |
| 03/23/07                                  | 86.99                | 13.25                 | 0.00                 | 73.74                         | 0.41                       | --                   | 8800                 | 28             | ND<2.5         | 440                  | 910                  | --                  | 170                 |          |
| 06/29/07                                  | 86.99                | 13.47                 | 0.00                 | 73.52                         | -0.22                      | --                   | 6300                 | 16             | ND<2.5         | 300                  | 650                  | --                  | 50                  |          |
| 09/28/07                                  | 86.99                | 13.92                 | 0.00                 | 73.07                         | -0.45                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 1.2                 |          |
| 12/17/07                                  | 86.99                | 14.57                 | 0.00                 | 72.42                         | -0.65                      | --                   | 4700                 | ND<5.0         | ND<5.0         | 71                   | 160                  | --                  | 18                  |          |
| 03/25/08                                  | 86.99                | 13.56                 | 0.00                 | 73.43                         | 1.01                       | --                   | 7400                 | 28             | ND<2.5         | 430                  | 540                  | --                  | 170                 |          |
| 06/12/08                                  | 86.99                | 14.07                 | 0.00                 | 72.92                         | -0.51                      | --                   | 4900                 | 6.4            | ND<2.5         | 170                  | 280                  | --                  | 16                  |          |
| 09/25/08                                  | 86.99                | 14.55                 | 0.00                 | 72.44                         | -0.48                      | --                   | 2200                 | 2.1            | ND<0.50        | 72                   | 110                  | --                  | 11                  |          |
| 12/30/08                                  | 86.99                | 14.16                 | 0.00                 | 72.83                         | 0.39                       | --                   | 3200                 | 2.5            | ND<0.50        | 100                  | 150                  | --                  | 8.3                 |          |
| <b>MW-2 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 11/03/92                                  | 76.61                | --                    | --                   | --                            | --                         | 140                  | --                   | 2.2            | ND             | ND                   | 2.0                  | --                  | --                  |          |
| 01/25/93                                  | 76.61                | --                    | --                   | --                            | --                         | 2100                 | --                   | 56             | 1.1            | 90                   | 140                  | --                  | --                  |          |
| 04/29/93                                  | 76.61                | 9.73                  | 0.00                 | 66.88                         | --                         | 1500                 | --                   | 290            | ND             | 33                   | 11                   | --                  | --                  |          |
| 07/16/93                                  | 76.61                | 10.17                 | 0.00                 | 66.44                         | -0.44                      | 510                  | --                   | 17             | 0.60           | 3.2                  | 2.5                  | --                  | --                  |          |
| 10/19/93                                  | 76.61                | 11.18                 | 0.00                 | 65.43                         | -1.01                      | 670                  | --                   | 24             | 1.1            | 7.7                  | 23                   | --                  | --                  |          |
| 01/20/94                                  | 76.61                | 11.12                 | 0.00                 | 65.49                         | 0.06                       | 820                  | --                   | 97             | ND             | 12                   | ND                   | --                  | --                  |          |
| 04/13/94                                  | 76.61                | 10.12                 | 0.00                 | 66.49                         | 1.00                       | 550                  | --                   | 71             | ND             | 5.1                  | 1.3                  | --                  | --                  |          |
| 07/13/94                                  | 76.61                | 10.86                 | 0.00                 | 65.75                         | -0.74                      | 2000                 | --                   | 490            | ND             | 17                   | 13                   | --                  | --                  |          |
| 10/10/94                                  | 76.61                | 11.48                 | 0.00                 | 65.13                         | -0.62                      | 2300                 | --                   | 340            | ND             | 25                   | ND                   | --                  | --                  |          |
| 01/10/95                                  | 76.61                | 8.71                  | 0.00                 | 67.90                         | 2.77                       | 850                  | --                   | 3.8            | ND             | 8.5                  | 1.3                  | --                  | --                  |          |
| 04/17/95                                  | 76.61                | 8.90                  | 0.00                 | 67.71                         | -0.19                      | 1300                 | --                   | 4.7            | ND             | 8.3                  | 1.2                  | --                  | --                  |          |
| 07/24/95                                  | 76.61                | 9.94                  | 0.00                 | 66.67                         | -1.04                      | 960                  | --                   | 20             | ND             | 4.2                  | 6.2                  | --                  | --                  |          |
| 10/23/95                                  | 76.61                | 10.70                 | 0.00                 | 65.91                         | -0.76                      | ND                   | --                   | ND             | ND             | ND                   | ND                   | 19                  | --                  |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                              | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments           |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|--------------------|
| <b>MW-2 continued</b>                     |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |                    |
| 01/18/96                                  | 76.61                | 10.11                 | 0.00                 | 66.50                         | 0.59                       | 900                  | --                   | 300            | 86             | 7.6                  | 18                   | 4300                | --                  |                    |
| 04/18/96                                  | 81.66                | 9.27                  | 0.00                 | 72.39                         | 5.89                       | 18000                | --                   | 3600           | 680            | 890                  | 4100                 | 19000               | --                  |                    |
| 07/24/96                                  | 81.66                | 10.02                 | 0.00                 | 71.64                         | -0.75                      | 100000               | --                   | 13000          | 21000          | 2700                 | 16000                | 120000              | --                  |                    |
| 10/24/96                                  | 81.66                | 10.78                 | 0.00                 | 70.88                         | -0.76                      | 800                  | --                   | 110            | 17             | 11                   | 20                   | 20000               | --                  |                    |
| 01/28/97                                  | 81.66                | 7.70                  | 0.00                 | 73.96                         | 3.08                       | 45000                | --                   | 2400           | 2900           | 2000                 | 7600                 | 29000               | --                  |                    |
| 07/29/97                                  | 81.66                | 10.28                 | 0.00                 | 71.38                         | -2.58                      | ND                   | --                   | 1.2            | 0.72           | 0.63                 | 0.62                 | 17000               | --                  |                    |
| 01/14/98                                  | 81.66                | 8.63                  | 0.00                 | 73.03                         | 1.65                       | 14000                | --                   | 1000           | 150            | 790                  | 3300                 | 23000               | --                  |                    |
| 07/01/98                                  | 81.66                | 9.53                  | 0.00                 | 72.13                         | -0.90                      | 2700                 | --                   | 100            | ND             | 180                  | 78                   | 7100                | --                  |                    |
| 06/18/99                                  | --                   | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                   | --                   | --                  | --                  | Well was destroyed |
| <b>MW-3 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |                    |
| 11/03/92                                  | 77.48                | --                    | --                   | --                            | --                         | 2100                 | --                   | 120            | 15             | 38                   | 200                  | --                  | --                  |                    |
| 01/25/93                                  | 77.48                | --                    | --                   | --                            | --                         | 2300                 | --                   | 80             | 1              | 55                   | 52                   | --                  | --                  |                    |
| 04/29/93                                  | 77.48                | 11.37                 | 0.00                 | 66.11                         | --                         | 4500                 | --                   | 1700           | ND             | 200                  | 140                  | --                  | --                  |                    |
| 07/16/93                                  | 77.48                | 12.09                 | 0.00                 | 65.39                         | -0.72                      | 4000                 | --                   | 1100           | 28             | 52                   | 70                   | --                  | --                  |                    |
| 10/19/93                                  | 77.48                | 12.69                 | 0.00                 | 64.79                         | -0.60                      | 3800                 | --                   | 42             | ND             | 50                   | 56                   | --                  | --                  |                    |
| 01/20/94                                  | 77.48                | 12.65                 | 0.00                 | 64.83                         | 0.04                       | 4200                 | --                   | 11             | ND             | 21                   | 15                   | --                  | --                  |                    |
| 04/13/94                                  | 77.48                | 12.02                 | 0.00                 | 65.46                         | 0.63                       | 4200                 | --                   | 210            | ND             | 36                   | 53                   | --                  | --                  |                    |
| 07/13/94                                  | 77.48                | 12.46                 | 0.00                 | 65.02                         | -0.44                      | 1800                 | --                   | 16             | 16             | ND                   | 21                   | --                  | --                  |                    |
| 10/10/94                                  | 77.48                | 12.98                 | 0.00                 | 64.50                         | -0.52                      | 4300                 | --                   | 11             | ND             | 12                   | ND                   | --                  | --                  |                    |
| 01/10/95                                  | 77.48                | 10.42                 | 0.00                 | 67.06                         | 2.56                       | 310                  | --                   | 4.6            | ND             | 3.5                  | 2.1                  | --                  | --                  |                    |
| 04/17/95                                  | 77.48                | 10.42                 | 0.00                 | 67.06                         | 0.00                       | 7800                 | --                   | ND             | 4.6            | 300                  | 450                  | --                  | --                  |                    |
| 07/24/95                                  | 77.48                | 11.76                 | 0.00                 | 65.72                         | -1.34                      | 3200                 | --                   | 170            | ND             | 22                   | 16                   | --                  | --                  |                    |
| 10/23/95                                  | 77.48                | 12.50                 | 0.00                 | 64.98                         | -0.74                      | 3900                 | --                   | 55             | ND             | 19                   | 11                   | 4500                | --                  |                    |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                              | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments           |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|---------------------|----------------------|---------------------|---------------------|--------------------|
| <b>MW-3 continued</b>                     |                      |                       |                      |                               |                            |                      |                      |                |                |                     |                      |                     |                     |                    |
| 01/18/96                                  | 77.48                | 11.79                 | 0.00                 | 65.69                         | 0.71                       | 2200                 | --                   | 270            | 33             | 26                  | 18                   | 5500                | --                  |                    |
| 04/18/96                                  | 82.55                | 11.30                 | 0.00                 | 71.25                         | 5.56                       | 6000                 | --                   | 1800           | ND             | 100                 | 230                  | 48000               | --                  |                    |
| 07/24/96                                  | 82.55                | 12.17                 | 0.00                 | 70.38                         | -0.87                      | ND                   | --                   | 2500           | ND             | ND                  | ND                   | 71000               | --                  |                    |
| 10/24/96                                  | 82.55                | 12.65                 | 0.00                 | 69.90                         | -0.48                      | 3800                 | --                   | 660            | ND             | 15                  | ND                   | 65000               | --                  |                    |
| 01/28/97                                  | 82.55                | 9.50                  | 0.00                 | 73.05                         | 3.15                       | 4400                 | --                   | 250            | 13             | 87                  | 47                   | 54000               | --                  |                    |
| 07/29/97                                  | 82.55                | 11.99                 | 0.00                 | 70.56                         | -2.49                      | ND                   | --                   | 3500           | ND             | 220                 | ND                   | 75000               | --                  |                    |
| 01/14/98                                  | 82.55                | 10.30                 | 0.00                 | 72.25                         | 1.69                       | ND                   | --                   | 430            | ND             | 100                 | 380                  | 37000               | --                  |                    |
| 07/01/98                                  | 82.55                | 11.70                 | 0.00                 | 70.85                         | -1.40                      | ND                   | --                   | 430            | ND             | ND                  | ND                   | 45000               | --                  |                    |
| 06/18/99                                  | --                   | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                  | --                   | --                  | --                  | Well was destroyed |
| <b>MW-4 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                     |                      |                     |                     |                    |
| 04/18/96                                  | 82.04                | 9.83                  | 0.00                 | 72.21                         | --                         | ND                   | --                   | 630            | ND             | ND                  | ND                   | 18000               | --                  |                    |
| 07/24/96                                  | 82.04                | 10.47                 | 0.00                 | 71.57                         | -0.64                      | ND                   | --                   | ND             | ND             | ND                  | 5.2                  | 3900                | --                  |                    |
| 10/24/96                                  | 82.04                | 11.14                 | 0.00                 | 70.90                         | -0.67                      | ND                   | --                   | ND             | ND             | ND                  | ND                   | 6300                | --                  |                    |
| 01/28/97                                  | 82.04                | 7.94                  | 0.00                 | 74.10                         | 3.20                       | 1200                 | --                   | 490            | ND             | 17                  | 6.8                  | 16000               | --                  |                    |
| 07/29/97                                  | 82.04                | 10.86                 | 0.00                 | 71.18                         | -2.92                      | 50                   | --                   | 1.5            | 0.61           | 0.73                | 0.78                 | 15000               | --                  |                    |
| 01/14/98                                  | 82.04                | 8.73                  | 0.00                 | 73.31                         | 2.13                       | ND                   | --                   | ND             | ND             | ND                  | ND                   | 5200                | --                  |                    |
| 07/01/98                                  | 82.04                | 10.51                 | 0.00                 | 71.53                         | -1.78                      | ND                   | --                   | ND             | ND             | ND                  | ND                   | 640                 | --                  |                    |
| 06/18/99                                  | 82.04                | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                  | --                   | --                  | --                  | Well was destroyed |
| <b>MW-5 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                     |                      |                     |                     |                    |
| 04/18/96                                  | 81.80                | 9.65                  | 0.00                 | 72.15                         | --                         | 31000                | --                   | 5500           | 1400           | 1700                | 8100                 | 66000               | --                  |                    |
| 07/24/96                                  | 81.80                | 10.80                 | 0.00                 | 71.00                         | -1.15                      | 32000                | --                   | 6400           | ND             | 1600                | 6100                 | 120000              | --                  |                    |
| 10/24/96                                  | 81.80                | 11.40                 | 0.00                 | 70.40                         | -0.60                      | 17000                | --                   | 6900           | ND             | 970                 | 130                  | 84000               | --                  |                    |
| 01/28/97                                  | 81.80                | 7.76                  | 0.00                 | 74.04                         | 3.64                       | 19000                | --                   | 6100           | 62             | 82                  | 310                  | 160000              | --                  |                    |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                                    | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments           |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|--------------------|
| <b>MW-5 continued</b>                           |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |                    |
| 07/29/97  | 81.80                | 11.58                 | 0.00                 | 70.22                         | -3.82                      | ND                   | --                   | ND             | ND             | ND                   | ND                   | 71000               | --                  |                    |
| 01/14/98  | 81.80                | 9.08                  | 0.00                 | 72.72                         | 2.50                       | ND                   | --                   | 3600           | ND             | ND                   | ND                   | 80000               | --                  |                    |
| 07/01/98  | 81.80                | 11.25                 | 0.00                 | 70.55                         | -2.17                      | 6400                 | --                   | 2100           | 21             | 120                  | 330                  | 61000               | --                  |                    |
| 06/18/99  | 81.80                | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                   | --                   | --                  | --                  | Well was destroyed |
| <b>MW-6 (Screen Interval in feet: 5.0-25.0)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |                    |
| 06/18/99  | 78.91                | 9.30                  | 0.00                 | 69.61                         | --                         | 2100                 | --                   | 21             | 29             | ND                   | 47                   | 97000               | 71000               |                    |
| 01/21/00  | 78.91                | 9.37                  | 0.00                 | 69.54                         | -0.07                      | 1880                 | --                   | 143            | 31.2           | 106                  | 196                  | 41200               | 48800               |                    |
| 07/10/00  | 78.91                | 8.94                  | 0.00                 | 69.97                         | 0.43                       | 5710                 | --                   | 869            | 209            | 301                  | 1430                 | 22200               | 19500               |                    |
| 01/04/01  | 78.91                | 9.21                  | 0.00                 | 69.70                         | -0.27                      | ND                   | --                   | ND             | ND             | ND                   | ND                   | --                  | 9510                |                    |
| 07/16/01  | 78.91                | 9.42                  | 0.00                 | 69.49                         | -0.21                      | 4800                 | --                   | 200            | 21             | 150                  | 440                  | 29000               | 34000               |                    |
| 01/31/02  | 78.91                | 8.50                  | 0.00                 | 70.41                         | 0.92                       | 12000                | --                   | 250            | 92             | 500                  | 1500                 | 26000               | 31000               |                    |
| 04/11/02  | 79.67                | 9.08                  | 0.00                 | 70.59                         | 0.18                       | 3600                 | --                   | 42             | 32             | 39                   | 280                  | 120000              | --                  |                    |
| 07/11/02  | 79.67                | 9.70                  | 0.00                 | 69.97                         | -0.62                      | --                   | 12000                | ND<100         | ND<100         | ND<100               | ND<200               | --                  | 15000               |                    |
| 10/15/02  | 79.67                | 9.96                  | 0.00                 | 69.71                         | -0.26                      | --                   | 1300                 | ND<10          | ND<10          | ND<10                | ND<20                | --                  | 3200                |                    |
| 01/14/03  | 79.67                | 8.31                  | 0.00                 | 71.36                         | 1.65                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 120                 |                    |
| 04/16/03  | 79.67                | 8.21                  | 0.00                 | 71.46                         | 0.10                       | --                   | 270                  | ND<0.50        | ND<0.50        | ND<0.50              | 1.3                  | --                  | 15                  |                    |
| 07/16/03  | 79.67                | 9.43                  | 0.00                 | 70.24                         | -1.22                      | --                   | 290                  | 39             | 0.60           | ND<0.50              | 15                   | --                  | 150                 |                    |
| 10/02/03  | 79.67                | 9.92                  | 0.00                 | 69.75                         | -0.49                      | --                   | 200                  | ND<1.0         | ND<1.0         | ND<1.0               | ND<2.0               | --                  | 220                 |                    |
| 01/07/04  | 79.67                | 8.08                  | 0.00                 | 71.59                         | 1.84                       | --                   | 140                  | 2.4            | ND<1.0         | 8.6                  | 13                   | --                  | 86                  |                    |
| 04/02/04  | 79.67                | 8.63                  | 0.00                 | 71.04                         | -0.55                      | --                   | 3200                 | ND<20          | ND<20          | ND<20                | ND<40                | --                  | 5900                |                    |
| 07/29/04  | 79.67                | 9.75                  | 0.00                 | 69.92                         | -1.12                      | --                   | 170                  | ND<1.0         | ND<1.0         | ND<1.0               | ND<2.0               | --                  | 160                 |                    |
| 11/24/04  | 79.67                | 9.59                  | 0.00                 | 70.08                         | 0.16                       | --                   | 80                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 45                  |                    |
| 01/24/05  | 79.67                | 8.33                  | 0.00                 | 71.34                         | 1.26                       | --                   | 100                  | 1.1            | ND<0.50        | 0.60                 | 1.1                  | --                  | 40                  |                    |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                                    | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-6 continued</b>                           |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 06/23/05  | 79.67                | 8.33                  | 0.00                 | 71.34                         | 0.00                       | --                   | 230                  | 0.52           | ND<0.50        | 3.6                  | 9.6                  | --                  | 200                 |          |
| 09/28/05  | 79.67                | 9.56                  | 0.00                 | 70.11                         | -1.23                      | --                   | 500                  | ND<0.50        | ND<0.50        | ND<0.50              | 1.2                  | --                  | 980                 |          |
| 12/20/05  | 79.67                | 7.82                  | 0.00                 | 71.85                         | 1.74                       | --                   | 640                  | 0.79           | ND<0.50        | 0.68                 | 2.3                  | --                  | 2400                |          |
| 03/10/06  | 79.67                | 6.83                  | 0.00                 | 72.84                         | 0.99                       | --                   | 970                  | 1.2            | ND<0.50        | 1.3                  | 5.0                  | --                  | 3600                |          |
| 06/23/06  | 79.67                | 8.13                  | 0.00                 | 71.54                         | -1.30                      | --                   | 1700                 | ND<12          | ND<12          | ND<12                | ND<25                | --                  | 1100                |          |
| 09/27/06  | 79.67                | 9.44                  | 0.00                 | 70.23                         | -1.31                      | --                   | ND<1200              | ND<12          | ND<12          | ND<12                | ND<12                | --                  | 620                 |          |
| 12/22/06  | 79.67                | 8.60                  | 0.00                 | 71.07                         | 0.84                       | --                   | 9100                 | ND<10          | ND<10          | ND<10                | ND<10                | --                  | 600                 |          |
| 03/23/07  | 79.67                | 8.39                  | 0.00                 | 71.28                         | 0.21                       | --                   | 330                  | ND<0.50        | ND<0.50        | 0.82                 | ND<0.50              | --                  | 680                 |          |
| 06/29/07  | 79.67                | 9.02                  | 0.00                 | 70.65                         | -0.63                      | --                   | 180                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 290                 |          |
| 09/28/07  | 79.67                | 9.65                  | 0.00                 | 70.02                         | -0.63                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | ND<0.50             |          |
| 12/17/07  | 79.67                | 9.62                  | 0.00                 | 70.05                         | 0.03                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 21                  |          |
| 03/25/08  | 79.67                | 8.63                  | 0.00                 | 71.04                         | 0.99                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 12                  |          |
| 06/12/08  | 79.67                | 9.47                  | 0.00                 | 70.20                         | -0.84                      | --                   | 84                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 17                  |          |
| 09/25/08  | 79.67                | 9.95                  | 0.00                 | 69.72                         | -0.48                      | --                   | 66                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 15                  |          |
| 12/30/08  | 79.67                | 8.96                  | 0.00                 | 70.71                         | 0.99                       | --                   | 55                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 12                  |          |
| <b>MW-7 (Screen Interval in feet: 5.0-25.0)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 06/18/99  | 79.92                | 8.70                  | 0.00                 | 71.22                         | --                         | ND                   | --                   | ND             | ND             | ND                   | ND                   | 16000               | 13000               |          |
| 01/21/00  | 79.92                | 9.30                  | 0.00                 | 70.62                         | -0.60                      | ND                   | --                   | ND             | ND             | ND                   | ND                   | 12300               | 18200               |          |
| 07/10/00  | 79.92                | 8.72                  | 0.00                 | 71.20                         | 0.58                       | ND                   | --                   | ND             | ND             | ND                   | ND                   | 16900               | 13800               |          |
| 01/04/01  | 79.92                | 9.17                  | 0.00                 | 70.75                         | -0.45                      | ND                   | --                   | ND             | ND             | ND                   | 0.719                | --                  | 37.3                |          |
| 07/16/01  | 79.92                | 9.02                  | 0.00                 | 70.90                         | 0.15                       | ND                   | --                   | ND             | ND             | ND                   | ND                   | 7200                | 4700                |          |
| 01/31/02  | 79.92                | 7.91                  | 0.00                 | 72.01                         | 1.11                       | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | 8900                | 9900                |          |
| 04/11/02  | 80.67                | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                   | --                   | --                  | --                  |          |

**Table 2**  
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**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled          | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments             |
|-----------------------|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------------------|
| <b>MW-7 continued</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |                      |
| 07/11/02              | 80.67                | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                   | --                   | --                  | --                  | Inaccessible         |
| 10/15/02              | 80.67                | 9.81                  | 0.00                 | 70.86                         | --                         | --                   | ND<5000              | ND<50          | ND<50          | ND<50                | ND<100               | --                  | 12000               |                      |
| 01/14/03              | 80.67                | 7.89                  | 0.00                 | 72.78                         | 1.92                       | --                   | ND<25000             | ND<250         | ND<250         | ND<250               | ND<500               | --                  | 33000               |                      |
| 04/16/03              | 80.67                | 8.04                  | 0.00                 | 72.63                         | -0.15                      | --                   | ND<25000             | ND<250         | ND<250         | ND<250               | ND<500               | --                  | 37000               |                      |
| 07/16/03              | 80.67                | 9.19                  | 0.00                 | 71.48                         | -1.15                      | --                   | 25000                | ND<250         | ND<250         | ND<250               | ND<500               | --                  | 38000               |                      |
| 10/02/03              | 80.67                | 9.89                  | 0.00                 | 70.78                         | -0.70                      | --                   | 17000                | ND<100         | ND<100         | ND<100               | ND<200               | --                  | 22000               |                      |
| 01/07/04              | 80.67                | 7.27                  | 0.00                 | 73.40                         | 2.62                       | --                   | ND<20000             | ND<200         | 460            | ND<200               | 540                  | --                  | 19000               |                      |
| 04/02/04              | 80.67                | 8.09                  | 0.00                 | 72.58                         | -0.82                      | --                   | 3400                 | ND<20          | ND<20          | ND<20                | ND<40                | --                  | 5100                |                      |
| 07/29/04              | 80.67                | 9.40                  | 0.00                 | 71.27                         | -1.31                      | --                   | 7400                 | ND<50          | ND<50          | ND<50                | ND<100               | --                  | 11000               |                      |
| 11/24/04              | 80.67                | 9.65                  | 0.00                 | 71.02                         | -0.25                      | --                   | 6200                 | ND<50          | ND<50          | ND<50                | ND<100               | --                  | 6800                |                      |
| 01/24/05              | 80.67                | 7.92                  | 0.00                 | 72.75                         | 1.73                       | --                   | ND<5000              | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 13000               |                      |
| 06/23/05              | 80.67                | 8.56                  | 0.00                 | 72.11                         | -0.64                      | --                   | 8700                 | ND<25          | ND<25          | ND<25                | ND<50                | --                  | 12000               |                      |
| 09/28/05              | 80.67                | 9.37                  | 0.00                 | 71.30                         | -0.81                      | --                   | 1200                 | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 5700                |                      |
| 12/20/05              | 80.67                | 6.31                  | 0.00                 | 74.36                         | 3.06                       | --                   | 1100                 | 0.90           | ND<0.50        | 24                   | 37                   | --                  | 8200                |                      |
| 03/10/06              | 80.67                | 5.84                  | 0.00                 | 74.83                         | 0.47                       | --                   | 1200                 | 24             | ND<0.50        | 3.6                  | ND<1.0               | --                  | 4700                |                      |
| 06/23/06              | 80.67                | 6.83                  | 0.00                 | 73.84                         | -0.99                      | --                   | 1800                 | 21             | ND<12          | ND<12                | ND<25                | --                  | 1500                |                      |
| 09/27/06              | 80.67                | 8.95                  | 0.00                 | 71.72                         | -2.12                      | --                   | ND<1200              | ND<12          | ND<12          | ND<12                | ND<12                | --                  | 350                 |                      |
| 12/22/06              | 80.67                | 8.35                  | 0.00                 | 72.32                         | 0.60                       | --                   | 24000                | ND<50          | ND<50          | ND<50                | ND<50                | --                  | 190                 |                      |
| 03/23/07              | 80.67                | 8.01                  | 0.00                 | 72.66                         | 0.34                       | --                   | 85                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 92                  |                      |
| 06/29/07              | 80.67                | --                    | --                   | --                            | --                         | --                   | --                   | --             | --             | --                   | --                   | --                  | --                  | Car parked over well |
| 09/28/07              | 80.67                | 9.05                  | 0.00                 | 71.62                         | --                         | --                   | 50                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 37                  |                      |
| 12/19/07              | 80.67                | 9.23                  | 0.00                 | 71.44                         | -0.18                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 5.2                 |                      |
| 03/25/08              | 80.67                | 8.45                  | 0.00                 | 72.22                         | 0.78                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 7.3                 |                      |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                                    | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-7 continued</b>                           |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 06/12/08  | 80.67                | 8.92                  | 0.00                 | 71.75                         | -0.47                      | --                   | 52                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 9.4                 |          |
| 09/25/08  | 80.67                | 9.55                  | 0.00                 | 71.12                         | -0.63                      | --                   | 65                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 5.6                 |          |
| 12/30/08  | 80.67                | 8.99                  | 0.00                 | 71.68                         | 0.56                       | --                   | 130                  | ND<0.50        | ND<0.50        | ND<0.50              | 1.1                  | --                  | 5.7                 |          |
| <b>MW-8 (Screen Interval in feet: 5.0-25.0)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 06/18/99  | 80.96                | 9.10                  | 0.00                 | 71.86                         | --                         | ND                   | --                   | ND             | ND             | ND                   | ND                   | 290                 | 160                 |          |
| 01/21/00  | 80.96                | 10.00                 | 0.00                 | 70.96                         | -0.90                      | ND                   | --                   | ND             | ND             | ND                   | 1.09                 | 224                 | 221                 |          |
| 07/10/00  | 80.96                | 7.94                  | 0.00                 | 73.02                         | 2.06                       | ND                   | --                   | ND             | ND             | ND                   | ND                   | 234                 | 223                 |          |
| 01/04/01  | 80.96                | 9.76                  | 0.00                 | 71.20                         | -1.82                      | 3790                 | --                   | 141            | 8.92           | 128                  | 375                  | --                  | 34200               |          |
| 07/16/01  | 80.96                | 9.15                  | 0.00                 | 71.81                         | 0.61                       | ND                   | --                   | ND             | ND             | ND                   | ND                   | 66                  | 70                  |          |
| 01/31/02  | 80.96                | 7.99                  | 0.00                 | 72.97                         | 1.16                       | 5900                 | --                   | 86             | ND<10          | 630                  | 390                  | 670                 | 700                 |          |
| 04/11/02  | 81.71                | 9.00                  | 0.00                 | 72.71                         | -0.26                      | 250                  | --                   | 2.0            | ND<0.50        | 38                   | 2.2                  | 410                 | --                  |          |
| 07/11/02  | 81.71                | 9.60                  | 0.00                 | 72.11                         | -0.60                      | --                   | 110                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 120                 |          |
| 10/15/02  | 81.71                | 10.60                 | 0.00                 | 71.11                         | -1.00                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 21                  |          |
| 01/14/03  | 81.71                | 8.63                  | 0.00                 | 73.08                         | 1.97                       | --                   | ND<250               | 2.6            | ND<2.5         | 18                   | ND<5.0               | --                  | 430                 |          |
| 04/16/03  | 81.71                | 8.98                  | 0.00                 | 72.73                         | -0.35                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 18                  |          |
| 07/16/03  | 81.71                | 9.63                  | 0.00                 | 72.08                         | -0.65                      | --                   | 110                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 140                 |          |
| 10/02/03  | 81.71                | 10.41                 | 0.00                 | 71.30                         | -0.78                      | --                   | 75                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 78                  |          |
| 01/07/04  | 81.71                | 8.21                  | 0.00                 | 73.50                         | 2.20                       | --                   | ND<5000              | ND<50          | ND<50          | ND<50                | 340                  | --                  | 3700                |          |
| 04/02/04  | 81.71                | 8.51                  | 0.00                 | 73.20                         | -0.30                      | --                   | 3000                 | ND<20          | ND<20          | ND<20                | ND<40                | --                  | 5200                |          |
| 07/29/04  | 81.71                | 9.78                  | 0.00                 | 71.93                         | -1.27                      | --                   | 3200                 | ND<25          | ND<25          | ND<25                | ND<50                | --                  | 5500                |          |
| 11/24/04  | 81.71                | 10.19                 | 0.00                 | 71.52                         | -0.41                      | --                   | 2100                 | ND<10          | ND<10          | ND<10                | ND<20                | --                  | 2400                |          |
| 01/24/05  | 81.71                | 8.49                  | 0.00                 | 73.22                         | 1.70                       | --                   | ND<2500              | 4.0            | 0.52           | ND<0.50              | 29                   | --                  | 1800                |          |
| 06/23/05  | 81.71                | 8.34                  | 0.00                 | 73.37                         | 0.15                       | --                   | 490                  | ND<0.50        | ND<0.50        | 1.5                  | ND<1.0               | --                  | 980                 |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                              | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|---|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-8 continued</b>                     |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 09/28/05                                  | 81.71                | 9.61                  | 0.00                 | 72.10                         | -1.27                      | --                   | 270                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 520                 |          |
| 12/20/05                                  | 81.71                | 7.35                  | 0.00                 | 74.36                         | 2.26                       | --                   | 2700                 | ND<0.50        | ND<0.50        | 78                   | 82                   | --                  | 86                  |          |
| 03/10/06                                  | 81.71                | 6.63                  | 0.00                 | 75.08                         | 0.72                       | --                   | 190                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 51                  |          |
| 06/23/06                                  | 81.71                | 6.56                  | 0.00                 | 75.15                         | 0.07                       | --                   | 3600                 | ND<0.50        | ND<0.50        | 100                  | 57                   | --                  | ND<0.50             |          |
| 09/27/06                                  | 81.71                | 9.64                  | 0.00                 | 72.07                         | -3.08                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 18                  |          |
| 12/22/06                                  | 81.71                | 9.42                  | 0.00                 | 72.29                         | 0.22                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | 0.50                 | --                  | 16                  |          |
| 03/23/07                                  | 81.71                | 8.68                  | 0.00                 | 73.03                         | 0.74                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 12                  |          |
| 06/29/07                                  | 81.71                | 9.10                  | 0.00                 | 72.61                         | -0.42                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 17                  |          |
| 09/28/07                                  | 81.71                | 9.89                  | 0.00                 | 71.82                         | -0.79                      | --                   | 99                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 21                  |          |
| 12/17/07                                  | 81.71                | 9.81                  | 0.00                 | 71.90                         | 0.08                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 16                  |          |
| 03/25/08                                  | 81.71                | 8.40                  | 0.00                 | 73.31                         | 1.41                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 14                  |          |
| 06/12/08                                  | 81.71                | 9.53                  | 0.00                 | 72.18                         | -1.13                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 14                  |          |
| 09/25/08                                  | 81.71                | 10.24                 | 0.00                 | 71.47                         | -0.71                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 5.6                 |          |
| 12/30/08                                  | 81.71                | 9.72                  | 0.00                 | 71.99                         | 0.52                       | --                   | 50                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 5.7                 |          |
| <b>MW-9 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 01/31/02                                  | 82.07                | 14.72                 | 0.00                 | 67.35                         | --                         | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | 680                 | 910                 |          |
| 04/11/02                                  | 82.07                | 14.85                 | 0.00                 | 67.22                         | -0.13                      | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | 620                 | --                  |          |
| 07/11/02                                  | 82.07                | 15.39                 | 0.00                 | 66.68                         | -0.54                      | --                   | 580                  | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 580                 |          |
| 10/15/02                                  | 82.07                | 16.16                 | 0.00                 | 65.91                         | -0.77                      | --                   | 570                  | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 1400                |          |
| 01/14/03                                  | 82.07                | 14.75                 | 0.00                 | 67.32                         | 1.41                       | --                   | ND<200               | ND<2.0         | ND<2.0         | ND<2.0               | ND<4.0               | --                  | 220                 |          |
| 04/16/03                                  | 82.07                | 14.51                 | 0.00                 | 67.56                         | 0.24                       | --                   | ND<500               | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 860                 |          |
| 07/16/03                                  | 82.07                | 15.54                 | 0.00                 | 66.53                         | -1.03                      | --                   | ND<2500              | ND<25          | ND<25          | ND<25                | ND<50                | --                  | 1300                |          |
| 10/02/03                                  | 82.07                | 16.28                 | 0.00                 | 65.79                         | -0.74                      | --                   | 820                  | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 990                 |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                               | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|--|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-9 continued</b>                      |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 01/07/04                                   | 82.07                | 14.65                 | 0.00                 | 67.42                         | 1.63                       | --                   | ND<1000              | ND<10          | ND<10          | ND<10                | ND<20                | --                  | 1200                |          |
| 04/02/04                                   | 82.07                | 15.08                 | 0.00                 | 66.99                         | -0.43                      | --                   | 510                  | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 850                 |          |
| 07/29/04                                   | 82.07                | 15.81                 | 0.00                 | 66.26                         | -0.73                      | --                   | ND<1000              | ND<10          | ND<10          | ND<10                | ND<20                | --                  | 1300                |          |
| 11/24/04                                   | 82.07                | 16.25                 | 0.00                 | 65.82                         | -0.44                      | --                   | 1100                 | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 1300                |          |
| 01/24/05                                   | 82.07                | 14.96                 | 0.00                 | 67.11                         | 1.29                       | --                   | ND<1000              | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 2300                |          |
| 06/23/05                                   | 82.07                | 14.40                 | 0.00                 | 67.67                         | 0.56                       | --                   | 1500                 | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 2000                |          |
| 09/28/05                                   | 82.07                | 15.67                 | 0.00                 | 66.40                         | -1.27                      | --                   | ND<2500              | ND<25          | ND<25          | ND<25                | ND<50                | --                  | 2400                |          |
| 12/20/05                                   | 82.07                | 14.61                 | 0.00                 | 67.46                         | 1.06                       | --                   | 560                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 2800                |          |
| 03/10/06                                   | 82.07                | 13.39                 | 0.00                 | 68.68                         | 1.22                       | --                   | 1100                 | ND<5.0         | ND<5.0         | ND<5.0               | ND<10                | --                  | 2100                |          |
| 06/23/06                                   | 82.07                | 13.68                 | 0.00                 | 68.39                         | -0.29                      | --                   | 1700                 | ND<12          | ND<12          | ND<12                | ND<25                | --                  | 1700                |          |
| 09/27/06                                   | 82.07                | 14.83                 | 0.00                 | 67.24                         | -1.15                      | --                   | ND<1200              | ND<12          | ND<12          | ND<12                | ND<12                | --                  | 1400                |          |
| 12/22/06                                   | 82.07                | 14.75                 | 0.00                 | 67.32                         | 0.08                       | --                   | 680                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 1100                |          |
| 03/23/07                                   | 82.07                | 14.52                 | 0.00                 | 67.55                         | 0.23                       | --                   | 240                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | 660                 |          |
| 06/29/07                                   | 82.07                | 14.89                 | 0.00                 | 67.18                         | -0.37                      | --                   | 210                  | ND<0.50        | ND<0.50        | ND<0.50              | 0.52                 | --                  | 410                 |          |
| 09/28/07                                   | 82.07                | 15.48                 | 0.00                 | 66.59                         | -0.59                      | --                   | 390                  | ND<2.5         | ND<2.5         | ND<2.5               | ND<2.5               | --                  | 430                 |          |
| 12/17/07                                   | 82.07                | 15.72                 | 0.00                 | 66.35                         | -0.24                      | --                   | 190                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 480                 |          |
| 03/25/08                                   | 82.07                | 14.91                 | 0.00                 | 67.16                         | 0.81                       | --                   | 250                  | ND<2.5         | ND<2.5         | ND<2.5               | ND<5.0               | --                  | 340                 |          |
| 06/12/08                                   | 82.07                | 15.70                 | 0.00                 | 66.37                         | -0.79                      | --                   | 180                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 270                 |          |
| 09/25/08                                   | 82.07                | 16.48                 | 0.00                 | 65.59                         | -0.78                      | --                   | 170                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 320                 |          |
| 12/30/08                                   | 82.07                | 16.16                 | 0.00                 | 65.91                         | 0.32                       | --                   | 160                  | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 230                 |          |
| <b>MW-10 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 01/31/02                                   | 74.98                | 8.02                  | 0.00                 | 66.96                         | --                         | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | ND<5.0              | 1.2                 |          |
| 04/11/02                                   | 74.98                | 7.60                  | 0.00                 | 67.38                         | 0.42                       | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | ND<2.5              | --                  |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled           | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|------------------------|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|---------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-10 continued</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                     |                      |                     |                     |          |
| 07/11/02               | 74.98                | 8.91                  | 0.00                 | 66.07                         | -1.31                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 1.1                 |          |
| 10/15/02               | 74.98                | 11.49                 | 0.00                 | 63.49                         | -2.58                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<2.0              |          |
| 01/14/03               | 74.98                | 8.47                  | 0.00                 | 66.51                         | 3.02                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<2.0              |          |
| 04/16/03               | 74.98                | 7.92                  | 0.00                 | 67.06                         | 0.55                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<2.0              |          |
| 07/16/03               | 74.98                | 7.03                  | 0.00                 | 67.95                         | 0.89                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<2.0              |          |
| 10/02/03               | 74.98                | 7.63                  | 0.00                 | 67.35                         | -0.60                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<2.0              |          |
| 01/07/04               | 74.98                | 6.22                  | 0.00                 | 68.76                         | 1.41                       | --                   | 54                   | ND<0.50        | ND<0.50        | 1.3                 | 4.5                  | --                  | ND<2.0              |          |
| 04/02/04               | 74.98                | 7.49                  | 0.00                 | 67.49                         | -1.27                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 1.0                 |          |
| 07/29/04               | 74.98                | 7.41                  | 0.00                 | 67.57                         | 0.08                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<0.50             |          |
| 11/24/04               | 74.98                | 7.55                  | 0.00                 | 67.43                         | -0.14                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 3.5                 |          |
| 01/24/05               | 74.98                | 6.40                  | 0.00                 | 68.58                         | 1.15                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 0.71                |          |
| 06/23/05               | 74.98                | 6.46                  | 0.00                 | 68.52                         | -0.06                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<0.50             |          |
| 09/28/05               | 74.98                | 7.52                  | 0.00                 | 67.46                         | -1.06                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<0.50             |          |
| 12/20/05               | 74.98                | 6.04                  | 0.00                 | 68.94                         | 1.48                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 0.57                |          |
| 03/10/06               | 74.98                | 5.86                  | 0.00                 | 69.12                         | 0.18                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | ND<0.50             |          |
| 06/23/06               | 74.98                | 6.42                  | 0.00                 | 68.56                         | -0.56                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 0.50                |          |
| 09/27/06               | 74.98                | 6.92                  | 0.00                 | 68.06                         | -0.50                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<0.50              | --                  | 48                  |          |
| 12/22/06               | 74.98                | 5.90                  | 0.00                 | 69.08                         | 1.02                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<0.50              | --                  | 8.5                 |          |
| 03/23/07               | 74.98                | 6.48                  | 0.00                 | 68.50                         | -0.58                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<0.50              | --                  | 0.54                |          |
| 06/29/07               | 74.98                | 6.78                  | 0.00                 | 68.20                         | -0.30                      | --                   | ND<50                | ND<0.50        | ND<0.50        | 0.76                | 1.6                  | --                  | 5.6                 |          |
| 09/28/07               | 74.98                | 7.24                  | 0.00                 | 67.74                         | -0.46                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<0.50              | --                  | 15                  |          |
| 12/17/07               | 74.98                | 6.92                  | 0.00                 | 68.06                         | 0.32                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 5.6                 |          |
| 03/25/08               | 74.98                | 6.74                  | 0.00                 | 68.24                         | 0.18                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50             | ND<1.0               | --                  | 1.3                 |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled                               | TOC Elevation (feet) | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Change in Elevation (feet) | TPH-G (8015M) (µg/l) | TPH-G (GC/MS) (µg/l) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | MTBE (8021B) (µg/l) | MTBE (8260B) (µg/l) | Comments |
|--|----------------------|-----------------------|----------------------|-------------------------------|----------------------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|---------------------|---------------------|----------|
| <b>MW-10 continued</b>                     |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 06/12/08                                   | 74.98                | 7.11                  | 0.00                 | 67.87                         | -0.37                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 2.6                 |          |
| 09/25/08                                   | 74.98                | 7.70                  | 0.00                 | 67.28                         | -0.59                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 1.8                 |          |
| 12/30/08                                   | 74.98                | 6.73                  | 0.00                 | 68.25                         | 0.97                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | 0.80                |          |
| <b>MW-11 (Screen Interval in feet: --)</b> |                      |                       |                      |                               |                            |                      |                      |                |                |                      |                      |                     |                     |          |
| 01/31/02                                   | 77.31                | 11.71                 | 0.00                 | 65.60                         | --                         | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | ND<5.0              | ND<1.0              |          |
| 04/11/02                                   | 77.31                | 11.95                 | 0.00                 | 65.36                         | -0.24                      | ND<50                | --                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | ND<2.5              | --                  |          |
| 07/11/02                                   | 77.31                | 12.79                 | 0.00                 | 64.52                         | -0.84                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 10/15/02                                   | 77.31                | 13.67                 | 0.00                 | 63.64                         | -0.88                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<2.0              |          |
| 01/14/03                                   | 77.31                | 13.31                 | 0.00                 | 64.00                         | 0.36                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<2.0              |          |
| 04/16/03                                   | 77.31                | 14.08                 | 0.00                 | 63.23                         | -0.77                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<2.0              |          |
| 07/16/03                                   | 77.31                | 12.98                 | 0.00                 | 64.33                         | 1.10                       | --                   | 65                   | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<2.0              |          |
| 10/02/03                                   | 77.31                | 12.96                 | 0.00                 | 64.35                         | 0.02                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<2.0              |          |
| 01/07/04                                   | 77.31                | 16.20                 | 0.00                 | 61.11                         | -3.24                      | --                   | 63                   | ND<0.50        | ND<0.50        | 0.68                 | 2.2                  | --                  | ND<2.0              |          |
| 04/02/04                                   | 77.31                | 18.01                 | 0.00                 | 59.30                         | -1.81                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 07/29/04                                   | 77.31                | 14.39                 | 0.00                 | 62.92                         | 3.62                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 11/24/04                                   | 77.31                | 16.72                 | 0.00                 | 60.59                         | -2.33                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 01/24/05                                   | 77.31                | 17.44                 | 0.00                 | 59.87                         | -0.72                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 06/23/05                                   | 77.31                | 12.37                 | 0.00                 | 64.94                         | 5.07                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 09/28/05                                   | 77.31                | 16.78                 | 0.00                 | 60.53                         | -4.41                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 12/20/05                                   | 77.31                | 17.06                 | 0.00                 | 60.25                         | -0.28                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 03/10/06                                   | 77.31                | 16.20                 | 0.00                 | 61.11                         | 0.86                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 06/23/06                                   | 77.31                | 12.65                 | 0.00                 | 64.66                         | 3.55                       | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<1.0               | --                  | ND<0.50             |          |
| 09/27/06                                   | 77.31                | 14.78                 | 0.00                 | 62.53                         | -2.13                      | --                   | ND<50                | ND<0.50        | ND<0.50        | ND<0.50              | ND<0.50              | --                  | ND<0.50             |          |

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2008**  
**76 Station 1871**

| Date Sampled           | TOC Elevation<br>(feet) | Depth to Water<br>(feet) | LPH Thickness<br>(feet) | Ground-water Elevation<br>(feet) | Change in Elevation<br>(feet) | TPH-G (8015M)<br>(µg/l) | TPH-G (GC/MS)<br>(µg/l) | Benzene<br>(µg/l) | Toluene<br>(µg/l) | Ethyl-benzene<br>(µg/l) | Total Xylenes<br>(µg/l) | MTBE (8021B)<br>(µg/l) | MTBE (8260B)<br>(µg/l) | Comments |
|------------------------|-------------------------|--------------------------|-------------------------|----------------------------------|-------------------------------|-------------------------|-------------------------|-------------------|-------------------|-------------------------|-------------------------|------------------------|------------------------|----------|
| <b>MW-11 continued</b> |                         |                          |                         |                                  |                               |                         |                         |                   |                   |                         |                         |                        |                        |          |
| 12/22/06               | 77.31                   | 13.48                    | 0.00                    | 63.83                            | 1.30                          | --                      | 55                      | ND<0.50           | ND<0.50           | 2.1                     | 5.4                     | --                     | ND<0.50                |          |
| 03/23/07               | 77.31                   | 13.78                    | 0.00                    | 63.53                            | -0.30                         | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<0.50                 | --                     | ND<0.50                |          |
| 06/29/07               | 77.31                   | 15.58                    | 0.00                    | 61.73                            | -1.80                         | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | 0.62                    | --                     | ND<0.50                |          |
| 09/28/07               | 77.31                   | 16.02                    | 0.00                    | 61.29                            | -0.44                         | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<0.50                 | --                     | ND<0.50                |          |
| 12/17/07               | 77.31                   | 15.75                    | 0.00                    | 61.56                            | 0.27                          | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | 1.0                     | --                     | ND<0.50                |          |
| 03/25/08               | 77.31                   | 15.74                    | 0.00                    | 61.57                            | 0.01                          | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<1.0                  | --                     | ND<0.50                |          |
| 06/12/08               | 77.31                   | 13.87                    | 0.00                    | 63.44                            | 1.87                          | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<1.0                  | --                     | ND<0.50                |          |
| 09/25/08               | 77.31                   | 16.30                    | 0.00                    | 61.01                            | -2.43                         | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<1.0                  | --                     | ND<0.50                |          |
| 12/30/08               | 77.31                   | 15.82                    | 0.00                    | 61.49                            | 0.48                          | --                      | ND<50                   | ND<0.50           | ND<0.50           | ND<0.50                 | ND<1.0                  | --                     | ND<0.50                |          |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|--------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-1</b>  |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 06/18/99     | --              | ND            | ND                           | ND  | --                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 07/16/01     | --              | ND            | ND                           | ND  | --                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 01/14/03     | --              | ND<100        | ND<500                       | ND<2.0                                    | --                         | ND<2.0         | ND<2.0         | ND<2.0         | --                  | --  | --   | --                       |
| 07/16/03     | --              | --            | ND<10000                     | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03     | --              | --            | ND<25000                     | --  | --                         | --             | --             | --             | --                  | 25.1  | 45.7                                       | 80.1                     |
| 01/07/04     | --              | --            | ND<20000                     | --  | --                         | --             | --             | --             | --                  | 12.12                                       | 12.31                                      | 142                      |
| 04/02/04     | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 11.33                                       | 13.42                                      | 36                       |
| 07/29/04     | --              | --            | ND<2000                      | --  | --                         | --             | --             | --             | --                  | 5.37  | 5.51                                       | -2                       |
| 11/24/04     | --              | --            | ND<2000                      | --  | --                         | --             | --             | --             | 6.58                | 3.08  | 4.73                                       | -43                      |
| 01/24/05     | --              | --            | ND<2000                      | --  | --                         | --             | --             | --             | --                  | 14.3  | 17.0                                       | 100                      |
| 06/23/05     | --              | --            | ND<50000                     | --  | --                         | --             | --             | --             | --                  | --  | 4.79                                       | -103                     |
| 09/28/05     | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 3.45  | 4.73                                       | -91                      |
| 12/20/05     | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.16  | 2.76                                       | -210                     |
| 03/10/06     | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 1.45  | 1.64                                       | -511                     |
| 06/23/06     | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | --  | 4.31                                       | -030                     |
| 09/27/06     | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | --                  | 4.50  | 4.72                                       | -32                      |
| 12/22/06     | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 6.80  | 2.35                                       | -121                     |
| 03/23/07     | --              | --            | ND<1200                      | --  | --                         | --             | --             | --             | --                  | 3.22  | 3.45                                       | -135                     |
| 06/29/07     | --              | --            | ND<1200                      | --  | --                         | --             | --             | --             | --                  | 6.64  | 7.11                                       | -131                     |
| 09/28/07     | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 7.84                                       | -167                     |
| 12/17/07     | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 9.74  | 6.51                                       | -63                      |
| 03/25/08     | --              | --            | ND<1200                      | --  | --                         | --             | --             | --             | --                  | 6.70  | 6.50                                       | -60                      |
| 06/12/08     | --              | 330           | ND<1200                      | --  | --                         | --             | --             | --             | --                  | --  | 4.33                                       | 65                       |
| 09/25/08     | --              | 740           | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.16                                       | 105                      |
| 12/30/08     | --              | 400           | ND<250                       | --  | --                         | --             | --             | --             | --                  | 2.44  | 0.91                                       | 0                        |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled | TPH-D  |         | Ethanol           | Ethylene-                    | 1,2-DCA         |                |                |                | pH            | Post-purge                    | Pre-purge                     | Pre-purge                |
|--------------|--------|---------|-------------------|------------------------------|-----------------|----------------|----------------|----------------|---------------|-------------------------------|-------------------------------|--------------------------|
|              | (µg/l) | (µg/l)  | (8260B)<br>(µg/l) | dibromide<br>(EDB)<br>(µg/l) | (EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | (lab)<br>(pH) | Dissolved<br>Oxygen<br>(mg/l) | Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
| <b>MW-4</b>  |        |         |                   |                              |                 |                |                |                |               |                               |                               |                          |
| 04/18/96     | 110    | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 07/24/96     | ND     | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 10/24/96     | ND     | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 01/28/97     | 210    | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 07/29/97     | ND     | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 01/14/98     | ND     | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 07/01/98     | ND     | --      | --                | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| <b>MW-6</b>  |        |         |                   |                              |                 |                |                |                |               |                               |                               |                          |
| 06/18/99     | --     | ND      | ND                | ND                           | ND              | ND             | ND             | ND             | --            | --                            | --                            | --                       |
| 07/16/01     | --     | ND      | ND                | ND                           | ND              | ND             | ND             | ND             | --            | --                            | --                            | --                       |
| 07/11/02     | --     | ND<1000 | ND<5000           | ND<100                       | ND<100          | ND<200         | ND<100         | ND<100         | --            | --                            | --                            | --                       |
| 01/14/03     | --     | ND<100  | ND<500            | ND<2.0                       | ND<2.0          | ND<2.0         | ND<2.0         | ND<2.0         | --            | --                            | --                            | --                       |
| 07/16/03     | --     | --      | ND<500            | --                           | --              | --             | --             | --             | --            | --                            | --                            | --                       |
| 10/02/03     | --     | --      | ND<1000           | --                           | --              | --             | --             | --             | --            | 15.5                          | 26.2                          | 139                      |
| 01/07/04     | --     | --      | ND<1000           | --                           | --              | --             | --             | --             | --            | 12.63                         | 14.29                         | -12                      |
| 04/02/04     | --     | --      | ND<2000           | --                           | --              | --             | --             | --             | --            | 12.63                         | 12.72                         | 9                        |
| 07/29/04     | --     | --      | ND<100            | --                           | --              | --             | --             | --             | --            | 4.74                          | 4.79                          | -19                      |
| 11/24/04     | --     | --      | ND<50             | --                           | --              | --             | --             | --             | 6.99          | 2.81                          | 5.54                          | -29                      |
| 01/24/05     | --     | --      | ND<50             | --                           | --              | --             | --             | --             | --            | 14.5                          | 15.3                          | 72                       |
| 06/23/05     | --     | --      | ND<1000           | --                           | --              | --             | --             | --             | --            | 1.86                          | 1.73                          | 70                       |
| 09/28/05     | --     | --      | ND<1000           | --                           | --              | --             | --             | --             | --            | 2.63                          | 2.57                          | -74                      |
| 12/20/05     | --     | --      | ND<250            | --                           | --              | --             | --             | --             | --            | 1.52                          | 2.30                          | -280                     |
| 03/10/06     | --     | --      | ND<250            | --                           | --              | --             | --             | --             | --            | 5.25                          | 0.80                          | 173                      |
| 06/23/06     | --     | --      | ND<6200           | --                           | --              | --             | --             | --             | --            | --                            | 3.39                          | -105                     |
| 09/27/06     | --     | --      | ND<6200           | --                           | --              | --             | --             | --             | --            | 2.54                          | 3.01                          | -109                     |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled          | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|-----------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-6 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 12/22/06              | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | --                  | 1.22  | 4.03                                       | -46                      |
| 03/23/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.64  | 3.62                                       | -101                     |
| 06/29/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.49  | 6.78                                       | 171                      |
| 09/28/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.36  | 8.40                                       | 167                      |
| 12/17/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 10.19                                       | 9.38                                       | -23                      |
| 03/25/08              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 10.03                                       | 10.10                                      | -20                      |
| 06/12/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 0.80                                       | 30                       |
| 09/25/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.05                                       | 118                      |
| 12/30/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.50  | 1.62                                       | 14                       |
| <b>MW-7</b>           |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 06/18/99              | --              | ND            | ND                           | ND  | ND                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 07/16/01              | --              | ND            | ND                           | ND  | ND                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 01/14/03              | --              | ND<50000      | ND<250000                    | ND<1000                                   | ND<1000                    | ND<1000        | ND<1000        | ND<1000        | --                  | --  | --   | --                       |
| 07/16/03              | --              | --            | ND<250000                    | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03              | --              | --            | ND<100000                    | --  | --                         | --             | --             | --             | --                  | 24.3  | 28.2                                       | 109                      |
| 01/07/04              | --              | --            | ND<200000                    | --  | --                         | --             | --             | --             | --                  | 10.79                                       | 10.85                                      | 23                       |
| 04/02/04              | --              | --            | ND<2000                      | --  | --                         | --             | --             | --             | --                  | 12.41                                       | 11.32                                      | 24                       |
| 07/29/04              | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | --                  | 4.10  | 3.96                                       | 17                       |
| 11/24/04              | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | 6.60                | 1.99  | 3.29                                       | -43                      |
| 01/24/05              | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | --                  | 17.2  | 14.5                                       | 71                       |
| 06/23/05              | --              | --            | ND<50000                     | --  | --                         | --             | --             | --             | --                  | 2.84  | 2.18                                       | -37                      |
| 09/28/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 3.45  | 3.63                                       | -81                      |
| 12/20/05              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 2.04  | 2.03                                       | -263                     |
| 03/10/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 1.28  | 0.95                                       | 164                      |
| 06/23/06              | --              | --            | ND<6200                      | --  | --                         | --             | --             | --             | --                  | --  | 3.95                                       | -119                     |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled          | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|-----------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-7 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 09/27/06              | --              | --            | ND<6200                      | --  | --                         | --             | --             | --             | --                  | 3.16  | 3.98                                       | -107                     |
| 12/22/06              | --              | --            | ND<25000                     | --  | --                         | --             | --             | --             | --                  | 2.25  | 2.03                                       | -86                      |
| 03/23/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.38  | 3.75                                       | -49                      |
| 09/28/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.16  | 7.96                                       | 30                       |
| 12/19/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 6.70  | 6.72                                       | -17                      |
| 03/25/08              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.77  | 4.81                                       | -30                      |
| 06/12/08              | --              | 30            | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 3.96                                       | 55                       |
| 09/25/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.11                                       | 115                      |
| 12/30/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.13  | 1.81                                       | -14                      |
| <b>MW-8</b>           |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 06/18/99              | --              | ND            | ND                           | ND  | ND                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 07/16/01              | --              | ND            | ND                           | ND  | ND                         | ND             | ND             | ND             | --                  | --  | --   | --                       |
| 01/14/03              | --              | ND<500        | ND<2500                      | ND<10                                     | ND<10                      | ND<10          | ND<10          | ND<10          | --                  | --  | --   | --                       |
| 07/16/03              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 23.6  | 28.5                                       | 188                      |
| 01/07/04              | --              | --            | ND<50000                     | --  | --                         | --             | --             | --             | --                  | 9.94  | 13.13                                      | -15                      |
| 04/02/04              | --              | --            | ND<2000                      | --  | --                         | --             | --             | --             | --                  | 13.37                                       | 12.82                                      | -10                      |
| 07/29/04              | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 3.68  | 3.73                                       | 18                       |
| 11/24/04              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | 6.67                | 3.97  | 2.71                                       | -36                      |
| 01/24/05              | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 41.6  | 41.2                                       | 56                       |
| 06/23/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 2.05  | 2.13                                       | 58                       |
| 09/28/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 2.12  | 1.98                                       | -40                      |
| 12/20/05              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 2.02  | 3.72                                       | -402                     |
| 03/10/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 1.51  | 0.99                                       | -182                     |
| 06/23/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 2.81                                       | -135                     |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled          | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|-----------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-8 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 09/27/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.87  | 4.91                                       | -155                     |
| 12/22/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 1.80  | 2.40                                       | 16                       |
| 03/23/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.52  | 3.90                                       | 25                       |
| 06/29/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.35  | 5.29                                       | 98                       |
| 09/28/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 7.18  | 7.24                                       | 16                       |
| 12/17/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 6.95  | 5.26                                       | 26                       |
| 03/25/08              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.22  | 5.15                                       | 70                       |
| 06/12/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 9.40                                       | 38                       |
| 09/25/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.33                                       | 98                       |
| 12/30/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | 1.78  | 2.19                                       | 11                       |
| <b>MW-9</b>           |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 01/31/02              | --              | ND<140        | ND<3600                      | ND<7.1                                    | ND<7.1                     | ND<7.1         | ND<7.1         | ND<7.1         | --                  | --  | --   | --                       |
| 01/14/03              | --              | ND<400        | ND<2000                      | ND<8.0                                    | ND<8.0                     | ND<8.0         | ND<8.0         | ND<8.0         | --                  | --  | --   | --                       |
| 07/16/03              | --              | --            | ND<25000                     | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03              | --              | --            | ND<5000                      | --  | --                         | --             | --             | --             | --                  | 29.5  | 28.4                                       | 201                      |
| 01/07/04              | --              | --            | ND<10000                     | --  | --                         | --             | --             | --             | --                  | 10.45                                       | 12.00                                      | 9                        |
| 04/02/04              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 16.37                                       | 13.21                                      | 12                       |
| 07/29/04              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 11/24/04              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | 6.47                | 3.24  | 1.71                                       | -68                      |
| 01/24/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 26.0  | 22.5                                       | -45                      |
| 06/23/05              | --              | --            | ND<10000                     | --  | --                         | --             | --             | --             | --                  | 1.50  | 1.44                                       | -136                     |
| 09/28/05              | --              | --            | ND<50000                     | --  | --                         | --             | --             | --             | --                  | 2.51  | 1.67                                       | -94                      |
| 12/20/05              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.05  | 4.67                                       | -102                     |
| 03/10/06              | --              | --            | ND<2500                      | --  | --                         | --             | --             | --             | --                  | 2.82  | 2.13                                       | 160                      |
| 06/23/06              | --              | --            | ND<6200                      | --  | --                         | --             | --             | --             | --                  | --  | 0.84                                       | -65                      |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled          | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|-----------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-9 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 09/27/06              | --              | --            | ND<6200                      | --  | --                         | --             | --             | --             | --                  | 0.68  | 0.75                                       | -61                      |
| 12/22/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 9.00  | 4.89                                       | -44                      |
| 03/23/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 6.85  | 5.33                                       | -114                     |
| 06/29/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 6.87  | 6.25                                       | 23                       |
| 09/28/07              | --              | --            | ND<1200                      | --  | --                         | --             | --             | --             | --                  | 7.17  | 7.04                                       | 30                       |
| 12/17/07              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.05  | 4.81                                       | -27                      |
| 03/25/08              | --              | --            | ND<1200                      | --  | --                         | --             | --             | --             | --                  | 6.55  | 6.67                                       | -10                      |
| 06/12/08              | --              | 250           | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 2.55                                       | 86                       |
| 09/25/08              | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.44                                       | 26                       |
| 12/30/08              | --              | 21            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.47  | 5.43                                       | 52                       |
| <b>MW-10</b>          |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 01/31/02              | --              | ND<20         | ND<500                       | ND<1.0                                    | ND<1.0                     | ND<1.0         | ND<1.0         | ND<1.0         | --                  | --  | --   | --                       |
| 01/14/03              | --              | ND<100        | ND<500                       | ND<2.0                                    | ND<2.0                     | ND<2.0         | ND<2.0         | ND<2.0         | --                  | --  | --   | --                       |
| 07/16/03              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 24.8  | 25.7                                       | 192                      |
| 01/07/04              | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 10.04                                       | 11.62                                      | 35                       |
| 04/02/04              | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 11.91                                       | 12.02                                      | 42                       |
| 07/29/04              | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 4.81  | 4.83                                       | 83                       |
| 11/24/04              | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | 6.89                | 2.59  | 3.07                                       | -39                      |
| 01/24/05              | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 27.5  | 25.5                                       | 87                       |
| 06/23/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 7.83  | 176  | 40                       |
| 09/28/05              | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 6.95  | 2.37                                       | -66                      |
| 12/20/05              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.85  | 3.45                                       | 59                       |
| 03/10/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 2.52  | 4.48                                       | 87                       |
| 06/23/06              | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.49                                       | -68                      |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled           | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|------------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-10 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 09/27/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 1.79  | 1.55                                       | -85                      |
| 12/22/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.20  | 3.00                                       | 107                      |
| 03/23/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.09  | 5.01                                       | -60                      |
| 06/29/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 9.12  | 6.27                                       | 165                      |
| 09/28/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.34  | 8.21                                       | 124                      |
| 12/17/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.97  | 4.46                                       | -15                      |
| 03/25/08               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 4.35  | 4.40                                       | -10                      |
| 06/12/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 1.42                                       | 75                       |
| 09/25/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 52.15                                      | 94                       |
| 12/30/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.89  | 3.18                                       | 181                      |
| <b>MW-11</b>           |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 01/31/02               | --              | ND<20         | ND<500                       | ND<1.0                                    | ND<1.0                     | ND<1.0         | ND<1.0         | ND<1.0         | --                  | --  | --   | --                       |
| 01/14/03               | --              | ND<100        | ND<500                       | ND<2.0                                    | ND<2.0                     | ND<2.0         | ND<2.0         | ND<2.0         | --                  | --  | --   | --                       |
| 07/16/03               | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 10/02/03               | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 33.7  | 23.2                                       | 202                      |
| 01/07/04               | --              | --            | ND<500                       | --  | --                         | --             | --             | --             | --                  | 11.69                                       | 13.82                                      | 99                       |
| 04/02/04               | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 11.94                                       | 14.08                                      | -1                       |
| 07/29/04               | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | --  | --   | --                       |
| 11/24/04               | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | 6.75                | 3.85  | 4.32                                       | 82                       |
| 01/24/05               | --              | --            | ND<50                        | --  | --                         | --             | --             | --             | --                  | 30.01                                       | 32.6                                       | 79                       |
| 06/23/05               | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 2.17  | 2.16                                       | 76                       |
| 09/28/05               | --              | --            | ND<1000                      | --  | --                         | --             | --             | --             | --                  | 4.97  | 4.59                                       | -4                       |
| 12/20/05               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.16  | 4.77                                       | 35                       |
| 03/10/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.11  | 9.99                                       | 68                       |
| 06/23/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 7.74                                       | -26                      |

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled           | TPH-D<br>(µg/l) | TBA<br>(µg/l) | Ethanol<br>(8260B)<br>(µg/l) | Ethylene-<br>dibromide<br>(EDB)<br>(µg/l) | 1,2-DCA<br>(EDC)<br>(µg/l) | DIPE<br>(µg/l) | ETBE<br>(µg/l) | TAME<br>(µg/l) | pH<br>(lab)<br>(pH) | Post-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>Dissolved<br>Oxygen<br>(mg/l) | Pre-purge<br>ORP<br>(mV) |
|------------------------|-----------------|---------------|------------------------------|---|----------------------------|----------------|----------------|----------------|---------------------|---|--|--------------------------|
| <b>MW-11 continued</b> |                 |               |                              |   |                            |                |                |                |                     |   |  |                          |
| 09/27/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.72  | 5.98                                       | 32                       |
| 12/22/06               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 3.81  | 4.35                                       | 46                       |
| 03/23/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 5.47  | 5.85                                       | 38                       |
| 06/29/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 7.87  | 7.80                                       | 242                      |
| 09/28/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 7.24  | 7.30                                       | 280                      |
| 12/17/07               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.71  | 8.01                                       | 47                       |
| 03/25/08               | --              | --            | ND<250                       | --  | --                         | --             | --             | --             | --                  | 8.41  | 8.40                                       | 45                       |
| 06/12/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 3.33                                       | 160                      |
| 09/25/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | --  | 4.28                                       | 115                      |
| 12/30/08               | --              | ND<10         | ND<250                       | --  | --                         | --             | --             | --             | --                  | 2.74  | 2.67                                       | 195                      |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date<br>Sampled | Post-purge<br>ORP<br>(mV) |
|-----------------|---------------------------|
| <b>MW-1</b>     |                           |
| 10/02/03        | 21.0                      |
| 01/07/04        | 24                        |
| 04/02/04        | 34                        |
| 07/29/04        | -4                        |
| 11/24/04        | -39                       |
| 01/24/05        | 96                        |
| 09/28/05        | -94                       |
| 12/20/05        | -328                      |
| 03/10/06        | -615                      |
| 09/27/06        | -25                       |
| 12/22/06        | -72                       |
| 03/23/07        | -141                      |
| 06/29/07        | -65                       |
| 12/17/07        | -46                       |
| 03/25/08        | -64                       |
| 12/30/08        | -2                        |
| <b>MW-6</b>     |                           |
| 10/02/03        | 175                       |
| 01/07/04        | 24                        |
| 04/02/04        | 23                        |
| 07/29/04        | -8                        |
| 11/24/04        | -12                       |
| 01/24/05        | 70                        |
| 06/23/05        | 71                        |
| 09/28/05        | -80                       |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date<br>Sampled | Post-purge<br>ORP<br>(mV) |
|-----------------|---------------------------|
|-----------------|---------------------------|

---

**MW-6 continued**

|          |      |
|----------|------|
| 12/20/05 | -217 |
| 03/10/06 | 224  |
| 09/27/06 | -104 |
| 12/22/06 | -67  |
| 03/23/07 | -92  |
| 06/29/07 | 84   |
| 09/28/07 | 154  |
| 12/17/07 | -14  |
| 03/25/08 | -18  |
| 12/30/08 | 8    |

**MW-7**

|          |      |
|----------|------|
| 10/02/03 | 153  |
| 01/07/04 | 5    |
| 04/02/04 | 10   |
| 07/29/04 | 18   |
| 11/24/04 | -24  |
| 01/24/05 | 48   |
| 06/23/05 | -32  |
| 09/28/05 | -85  |
| 12/20/05 | -256 |
| 03/10/06 | -179 |
| 09/27/06 | -95  |
| 12/22/06 | -101 |
| 03/23/07 | -47  |
| 09/28/07 | 26   |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date Sampled          | Post-purge<br>ORP<br>(mV) |
|-----------------------|---------------------------|
| <b>MW-7 continued</b> |                           |
| 12/19/07              | -13                       |
| 03/25/08              | -34                       |
| 12/30/08              | -19                       |
| <b>MW-8</b>           |                           |
| 10/02/03              | 197                       |
| 01/07/04              | 21                        |
| 04/02/04              | 16                        |
| 07/29/04              | 30                        |
| 11/24/04              | -20                       |
| 01/24/05              | 60                        |
| 06/23/05              | 56                        |
| 09/28/05              | -26                       |
| 12/20/05              | -326                      |
| 03/10/06              | -181                      |
| 09/27/06              | -139                      |
| 12/22/06              | 12                        |
| 03/23/07              | 22                        |
| 06/29/07              | 92                        |
| 09/28/07              | 22                        |
| 12/17/07              | 24                        |
| 03/25/08              | 77                        |
| 12/30/08              | 14                        |
| <b>MW-9</b>           |                           |
| 10/02/03              | 203                       |
| 01/07/04              | 27                        |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

Date  
Sampled      Post-purge  
                  ORP  
                  (mV)

---

**MW-9 continued**

|          |      |
|----------|------|
| 04/02/04 | 32   |
| 11/24/04 | -67  |
| 01/24/05 | -45  |
| 06/23/05 | -144 |
| 09/28/05 | -119 |
| 12/20/05 | -42  |
| 03/10/06 | 161  |
| 09/27/06 | -43  |
| 12/22/06 | -70  |
| 03/23/07 | -82  |
| 06/29/07 | 22   |
| 09/28/07 | 30   |
| 12/17/07 | -35  |
| 03/25/08 | -14  |
| 12/30/08 | 38   |

**MW-10**

|          |     |
|----------|-----|
| 10/02/03 | 213 |
| 01/07/04 | 59  |
| 04/02/04 | 45  |
| 07/29/04 | 102 |
| 11/24/04 | -29 |
| 01/24/05 | 84  |
| 06/23/05 | 44  |
| 09/28/05 | -64 |
| 12/20/05 | 58  |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date<br>Sampled | Post-purge<br>ORP<br>(mV) |
|-----------------|---------------------------|
|-----------------|---------------------------|

**MW-10 continued**

|          |     |
|----------|-----|
| 03/10/06 | 83  |
| 09/27/06 | -65 |
| 12/22/06 | 85  |
| 06/29/07 | 172 |
| 09/28/07 | 126 |
| 12/17/07 | -2  |
| 03/25/08 | -12 |
| 12/30/08 | 184 |

**MW-11**

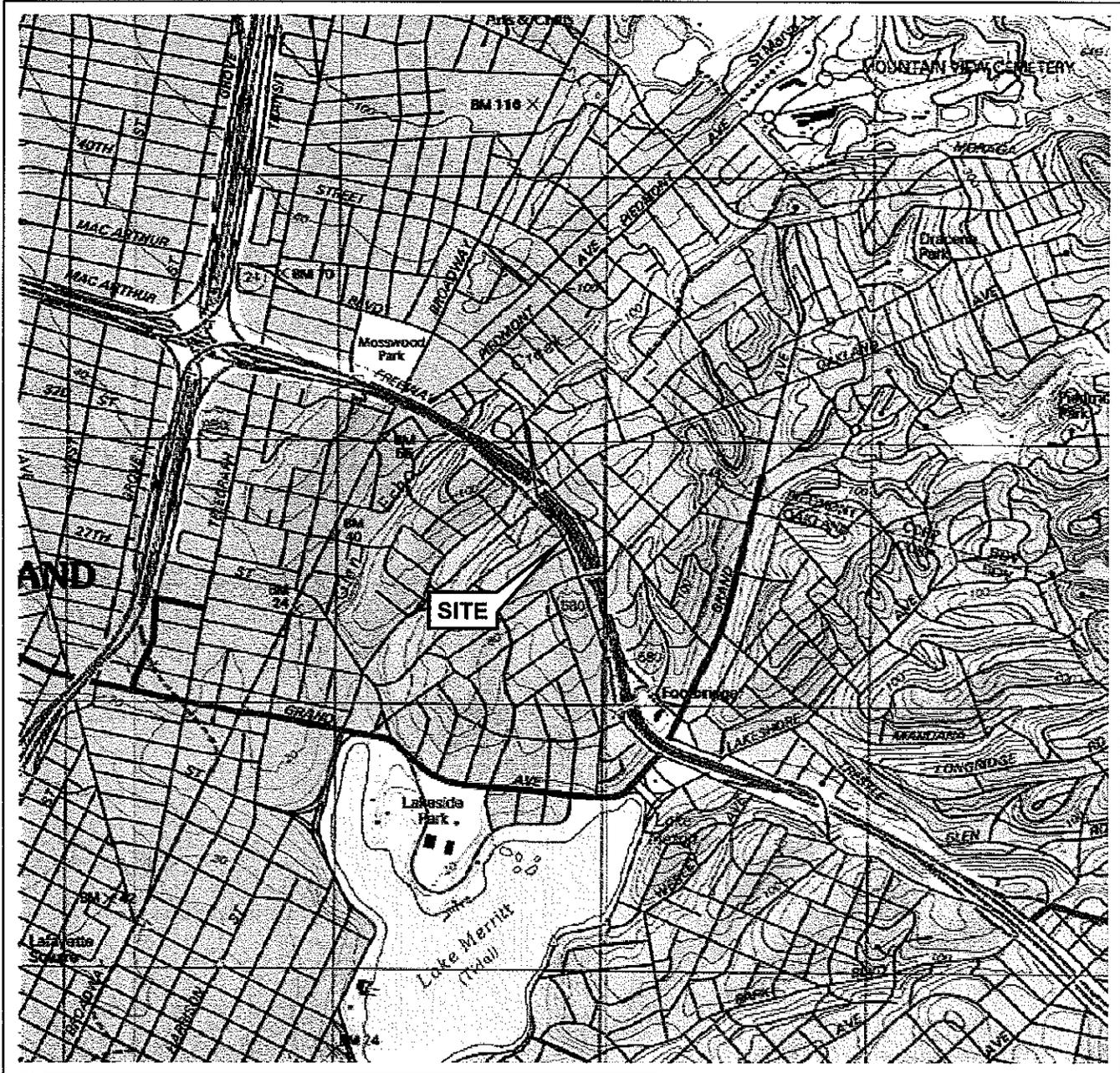
|          |     |
|----------|-----|
| 10/02/03 | 255 |
| 01/07/04 | 103 |
| 04/02/04 | 108 |
| 11/24/04 | 143 |
| 01/24/05 | 83  |
| 06/23/05 | 82  |
| 09/28/05 | -1  |
| 12/20/05 | 070 |
| 03/10/06 | 97  |
| 09/27/06 | 40  |
| 12/22/06 | 44  |
| 03/23/07 | 34  |
| 06/29/07 | 223 |
| 09/28/07 | 244 |
| 12/17/07 | 46  |
| 03/25/08 | 44  |

**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

| Date<br>Sampled | Post-purge<br>ORP<br>(mV) |
|-----------------|---------------------------|
| <b>MW-11</b>    | <b>continued</b>          |
| 12/30/08        | 195                       |

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# FIGURES



SOURCE:

United States Geological Survey  
7 1/2 Minute Topographic Map:  
Oakland Quadrangle

0 1/4 1/2 3/4 1 MILE



SCALE 1:24,000



QUADRANGLE  
LOCATION



FACILITY:

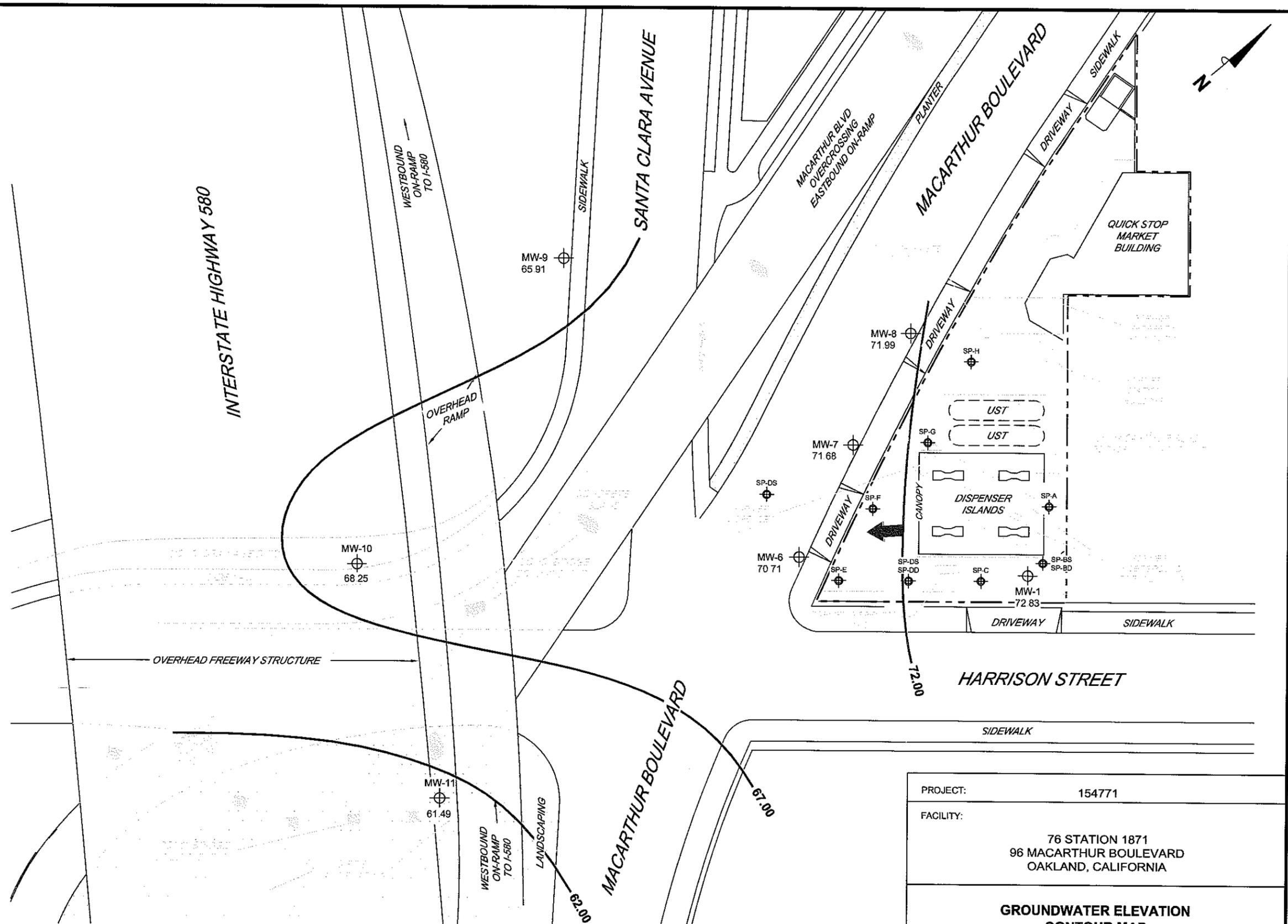
76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

VICINITY MAP

FIGURE 1

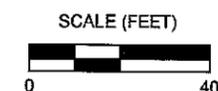
**LEGEND**

- MW-11  Monitoring Well with Groundwater Elevation (feet)
- SP-H  Ozone Sparge Well
- 72.00  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



MS=1:40 1871-003 L:\graphics\CMS NORTH-SOUTH\10001871\1871-QMS.DWG Jan 19, 2009 - 2:35pm aakors

**NOTES:**  
 Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.



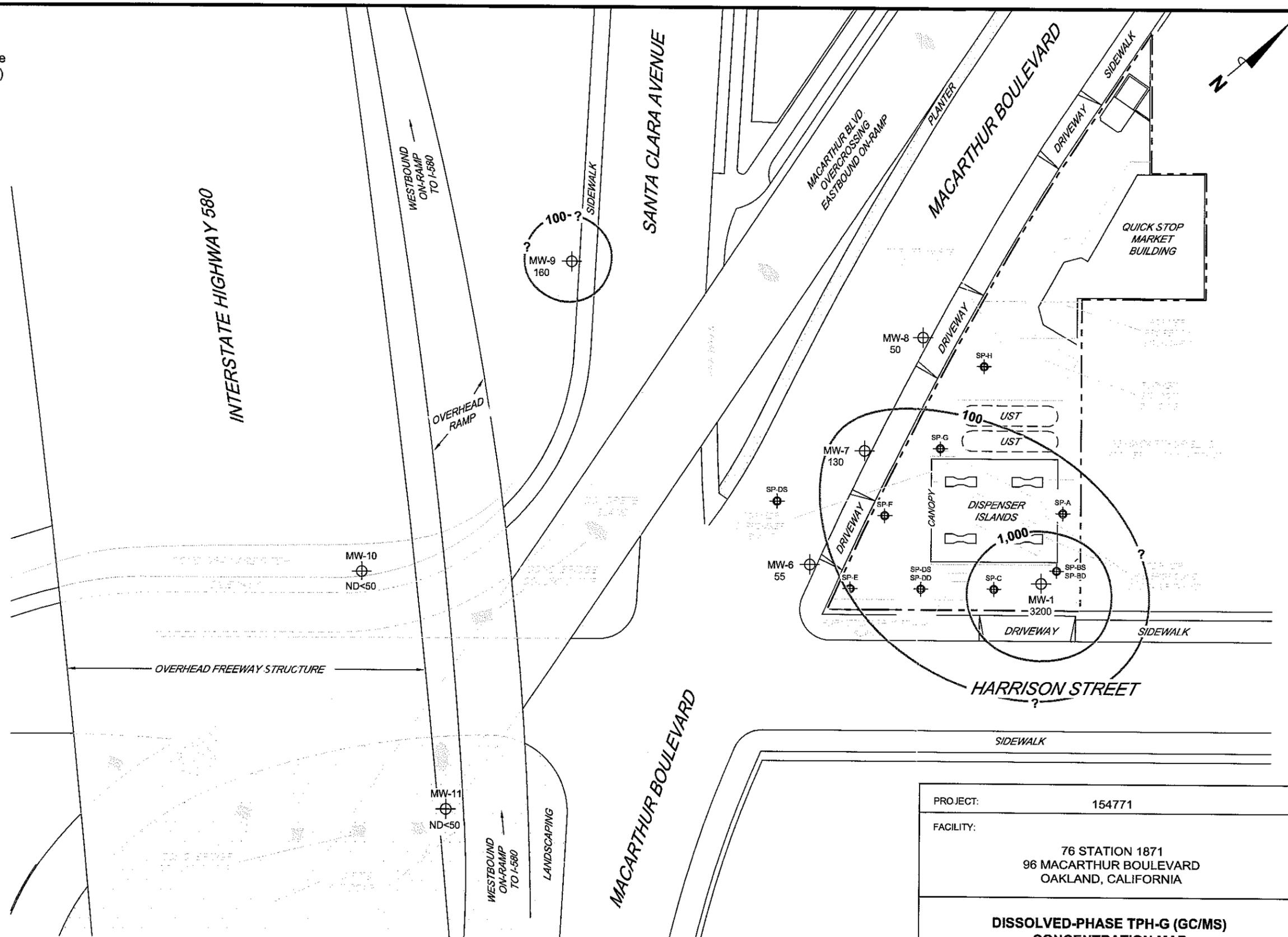
|   |  |
|---|--|
| PROJECT:  | 154771   |
| FACILITY:   | 76 STATION 1871<br>96 MACARTHUR BOULEVARD<br>OAKLAND, CALIFORNIA |
| <b>GROUNDWATER ELEVATION<br/>CONTOUR MAP<br/>December 30, 2008</b>                    |  |
|  | <b>FIGURE 2</b>  |

**LEGEND**

MW-11  Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)

SP-H  Ozone Sparge Well

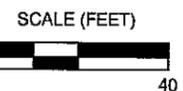
 1,000 Dissolved-Phase TPH-G (GC/MS) Contour (µg/l)



MS=1-140 1871-003 L:\Graphics\ICMS NORTH-SOUTH\10001871\1871-QMS.DWG Jan 15, 2009 - 2:10pm akakors

**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.  
 TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B.  
 µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank



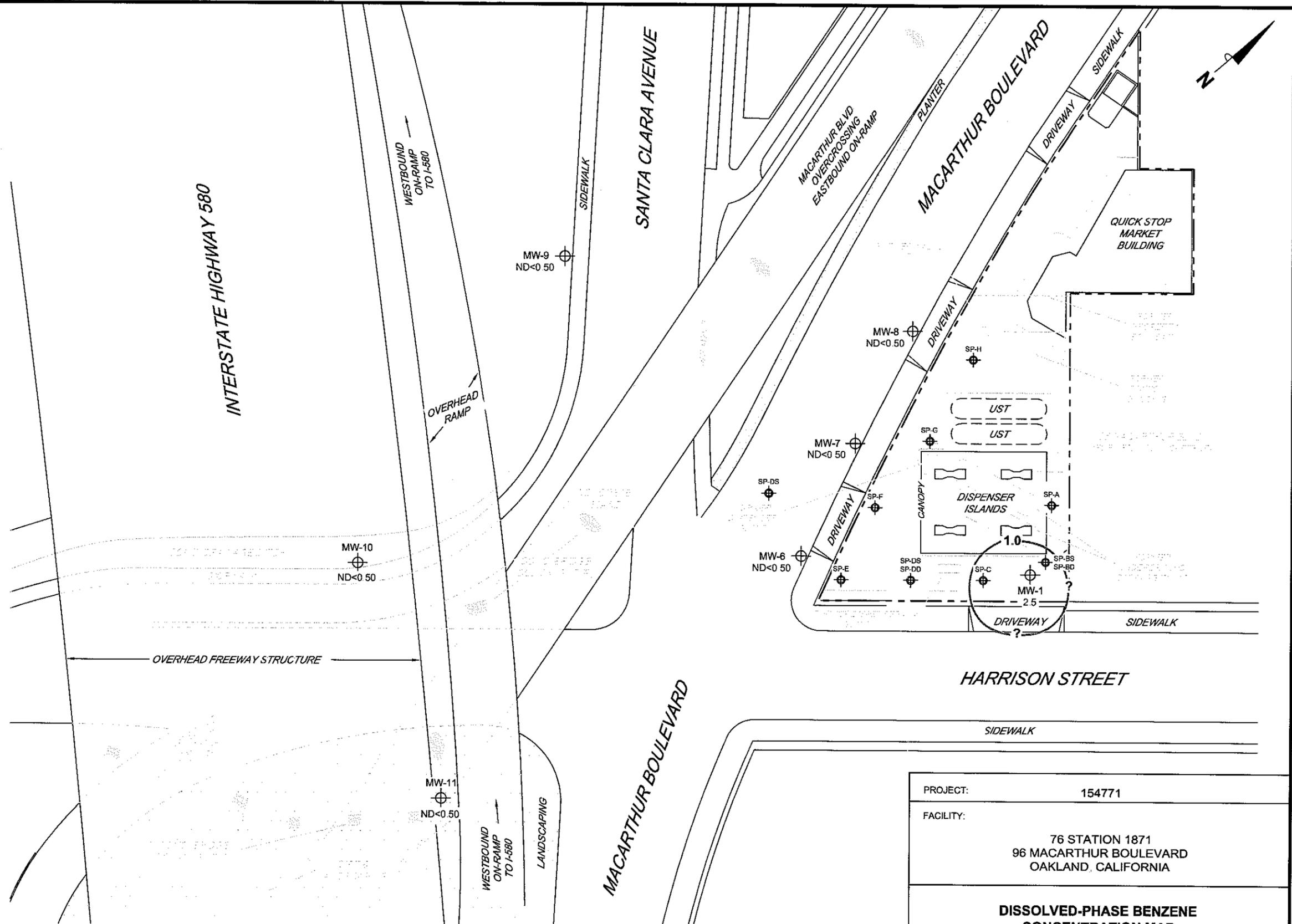
|   |  |
|---|--|
| PROJECT:  | 154771   |
| FACILITY:   | 76 STATION 1871<br>96 MACARTHUR BOULEVARD<br>OAKLAND, CALIFORNIA |
| <b>DISSOLVED-PHASE TPH-G (GC/MS)<br/>CONCENTRATION MAP<br/>December 30, 2008</b>      |  |
|  | <b>FIGURE 3</b>  |

**LEGEND**

MW-11  Monitoring Well with Dissolved-Phase Benzene Concentration ( $\mu\text{g/l}$ )

SP-H  Ozone Sparge Well

1.0  Dissolved-Phase Benzene Contour ( $\mu\text{g/l}$ )



L:\graphics\QMS NORTH-SOUTH\10001871\11871-QMS.DWG Jan 15, 2009 - 2:11pm askers

**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples  
 $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank

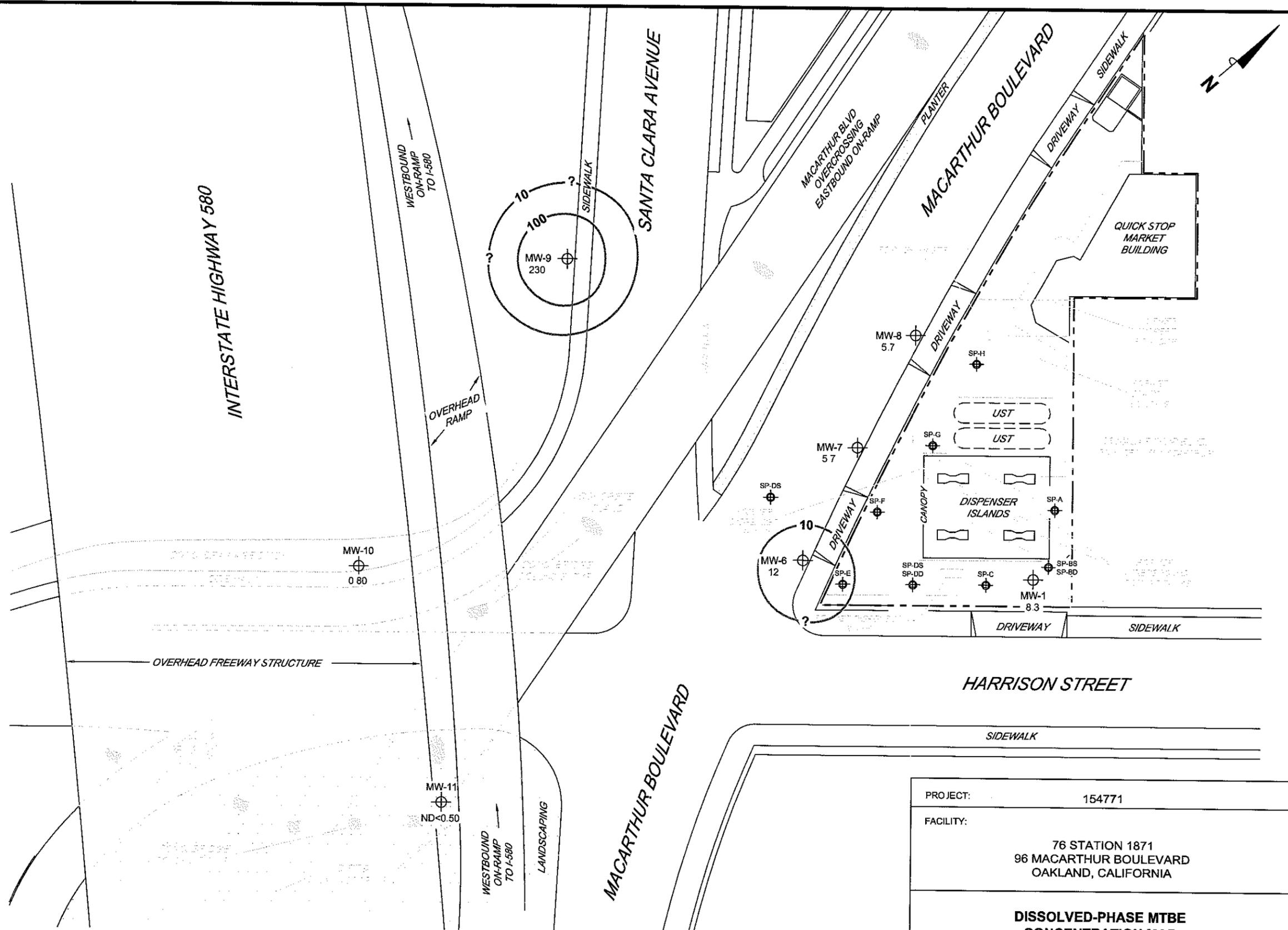
SCALE (FEET)



|   |  |
|---|--|
| PROJECT:  | 154771   |
| FACILITY:   | 76 STATION 1871<br>96 MACARTHUR BOULEVARD<br>OAKLAND, CALIFORNIA |
| <b>DISSOLVED-PHASE BENZENE<br/>CONCENTRATION MAP<br/>December 30, 2008</b>            |  |
|  | <b>FIGURE 4</b>  |

**LEGEND**

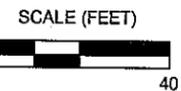
- MW-11  Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )
- SP-H  Ozone Sparge Well
-  100 Dissolved-Phase MTBE Contour ( $\mu\text{g/l}$ )



MS=1-40 1871-003 L:\Graphics\GIS NORTH-SOUTH\10001871-1871-QMS.DWG Jan 15, 2009 - 2:14pm akers

**NOTES:**

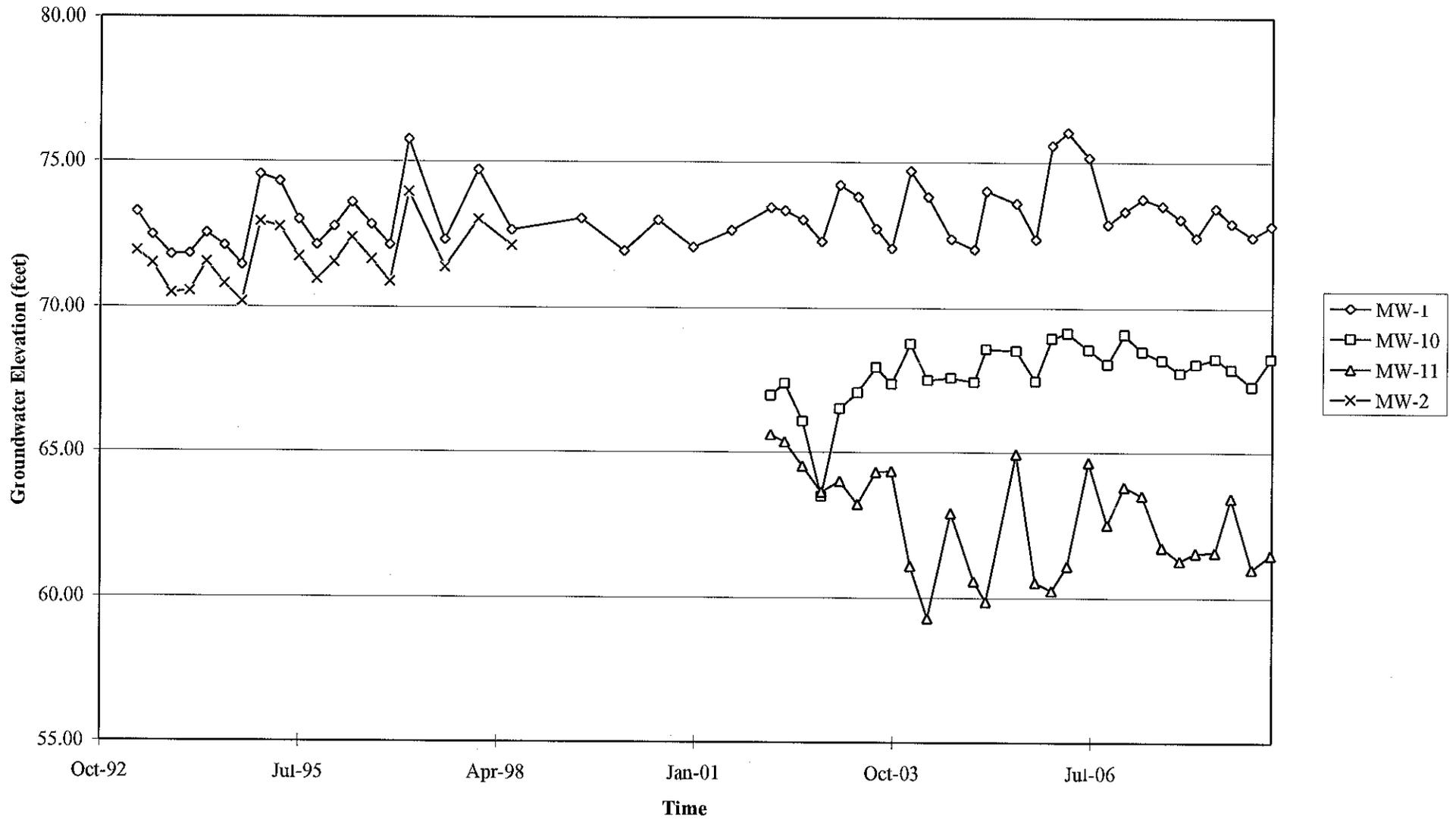
Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Results obtained using EPA Method 8260B.



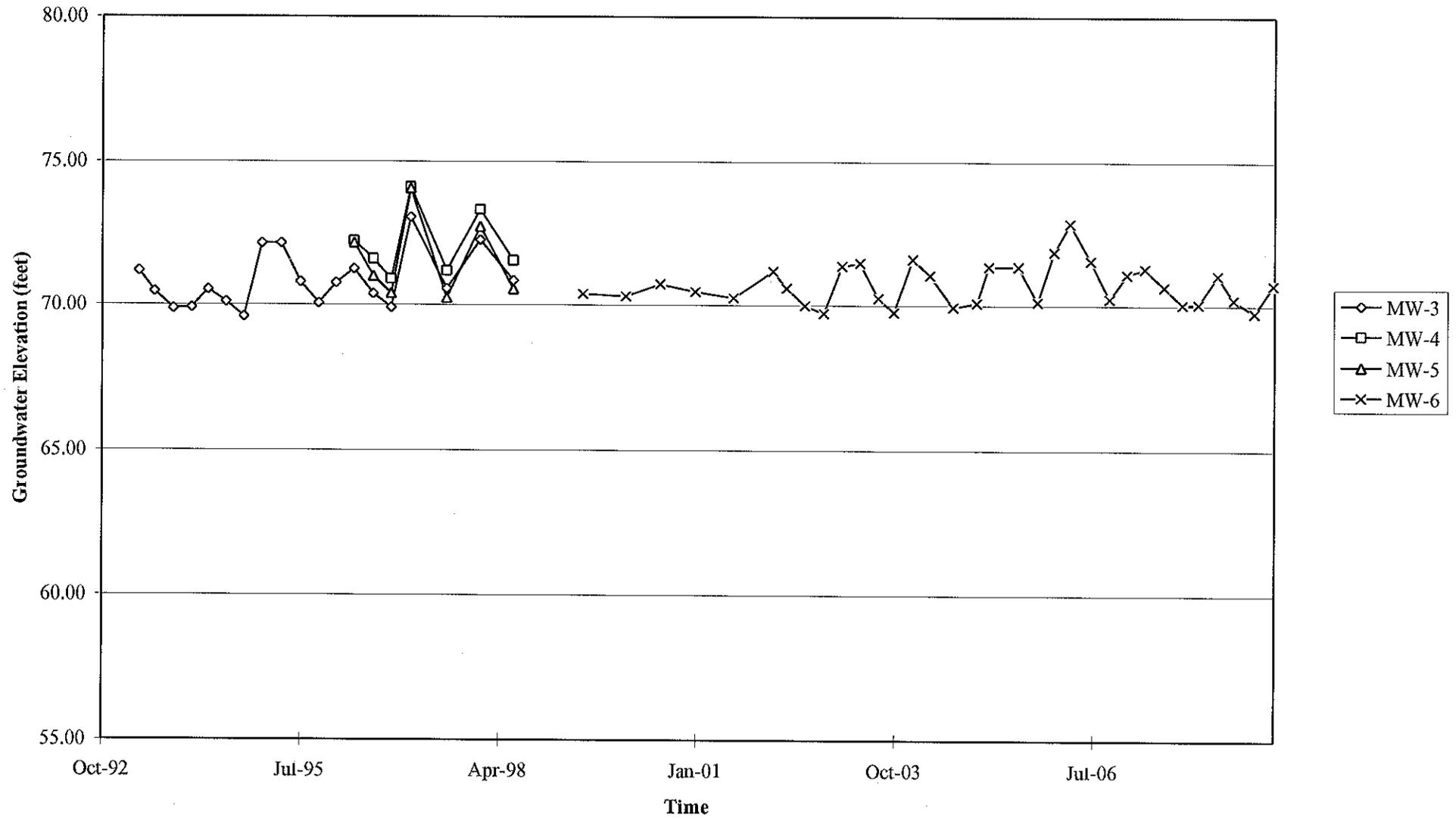
|   |  |
|---|--|
| PROJECT:  | 154771   |
| FACILITY:   | 76 STATION 1871<br>96 MACARTHUR BOULEVARD<br>OAKLAND, CALIFORNIA |
| <b>DISSOLVED-PHASE MTBE<br/>CONCENTRATION MAP<br/>December 30, 2008</b>               |  |
|  | <b>FIGURE 5</b>  |

# GRAPHS

Groundwater Elevations vs. Time  
76 Station 1871

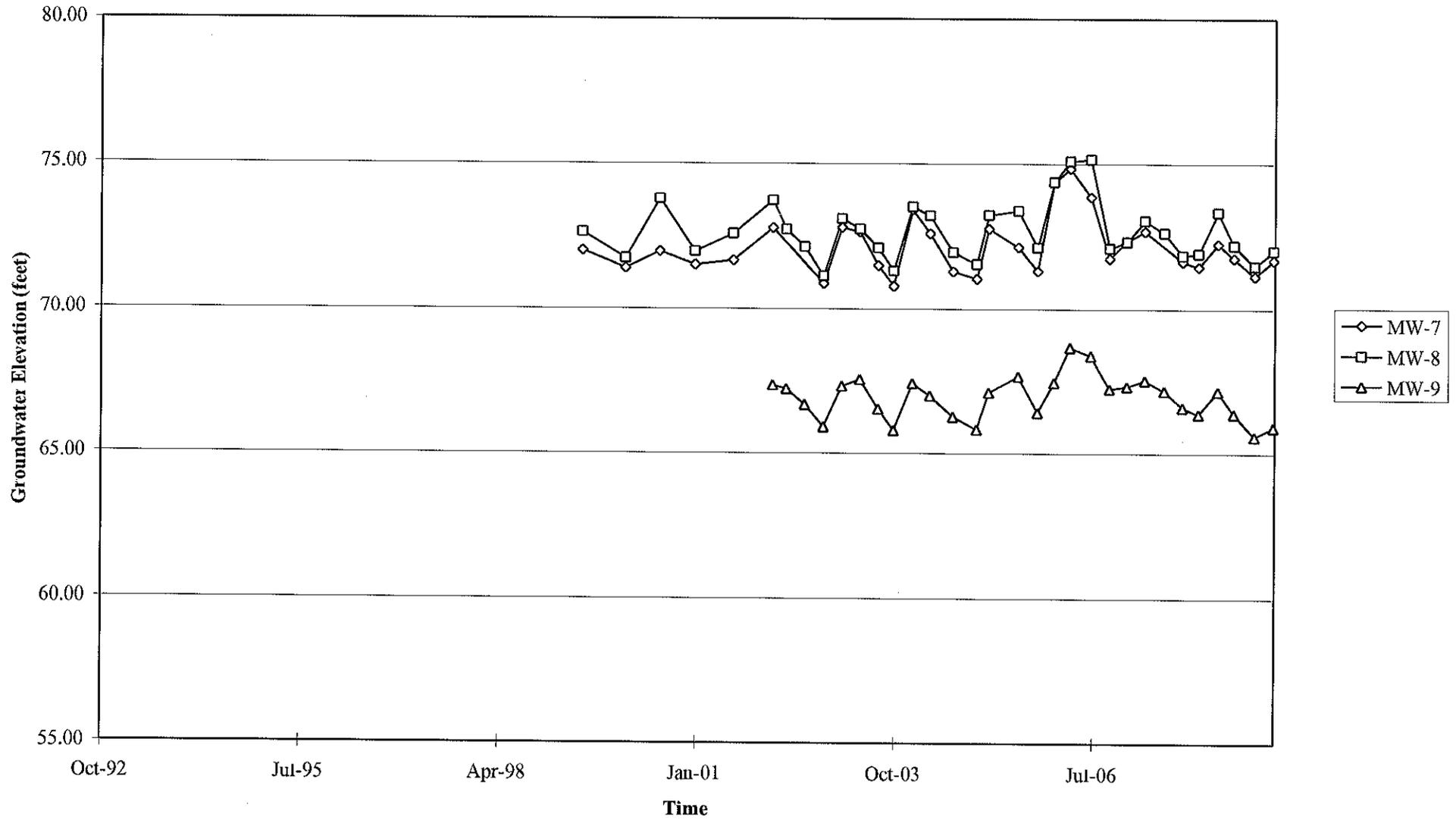


Groundwater Elevations vs. Time  
76 Station 1871



Elevations may have been corrected for apparent changes due to resurvey

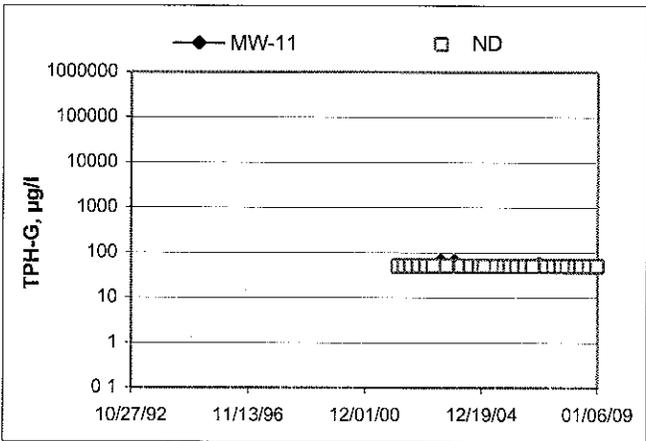
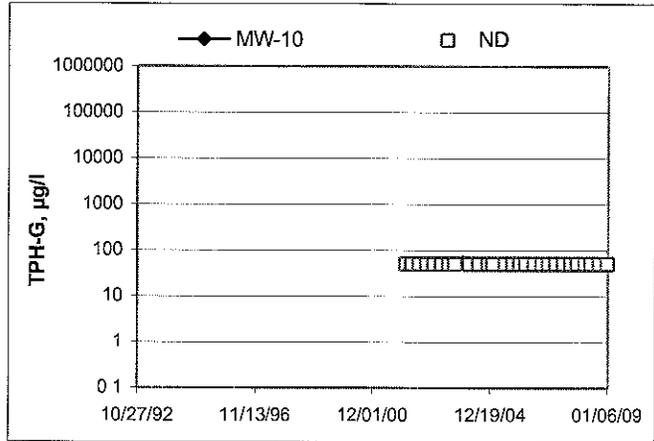
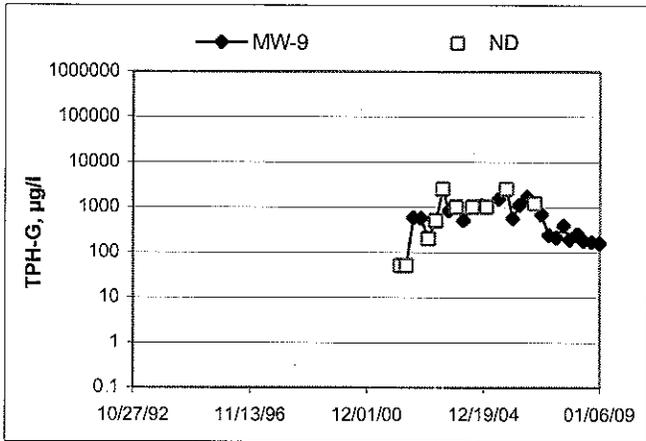
Groundwater Elevations vs. Time  
76 Station 1871



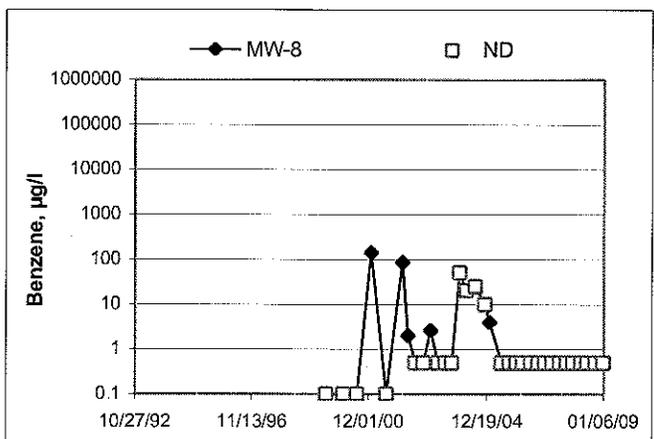
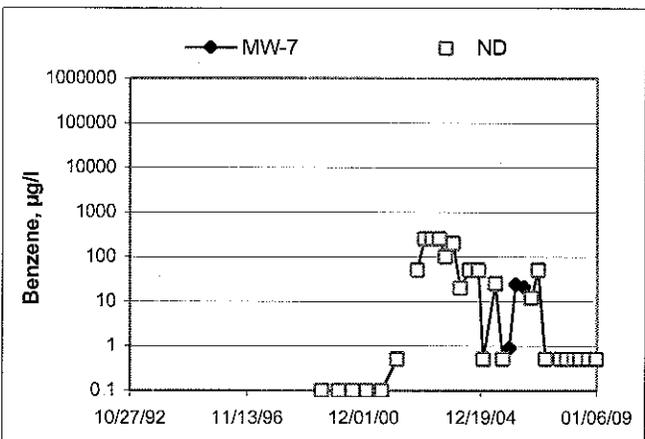
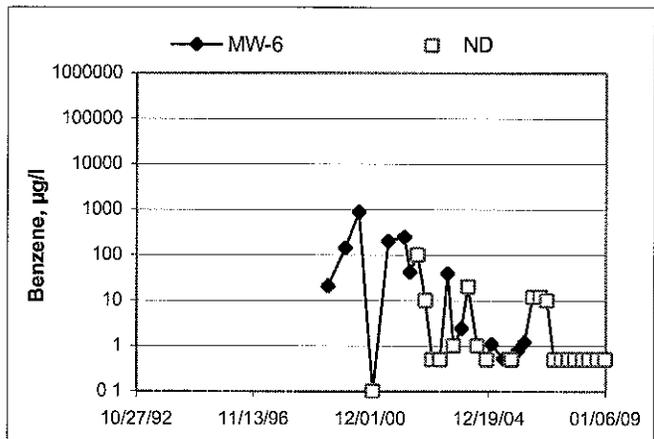
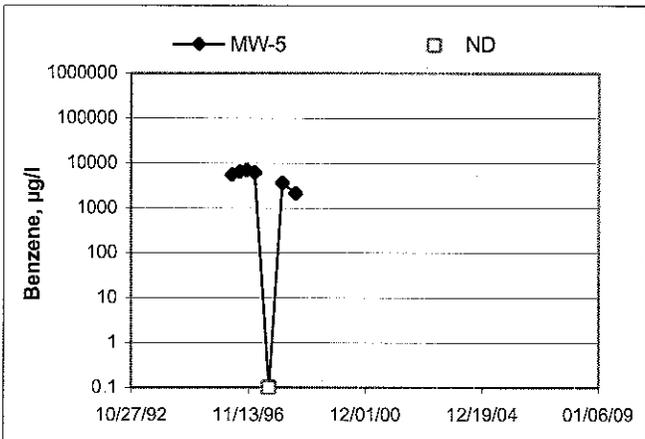
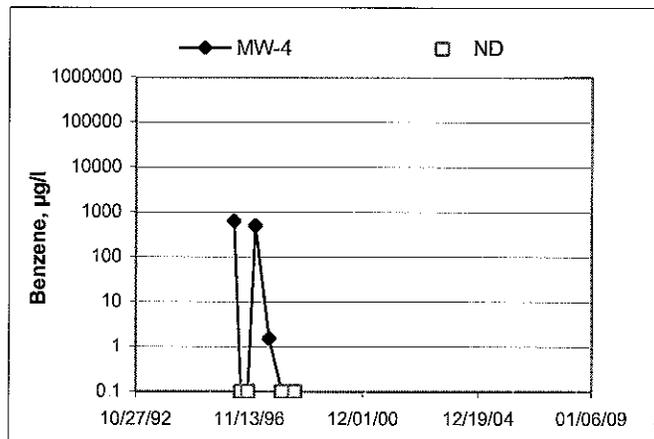
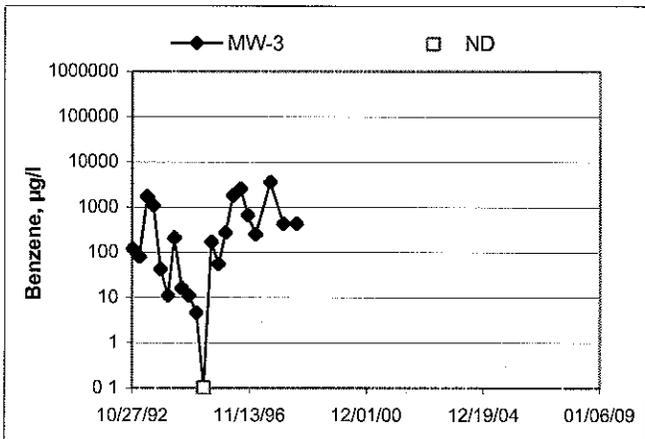
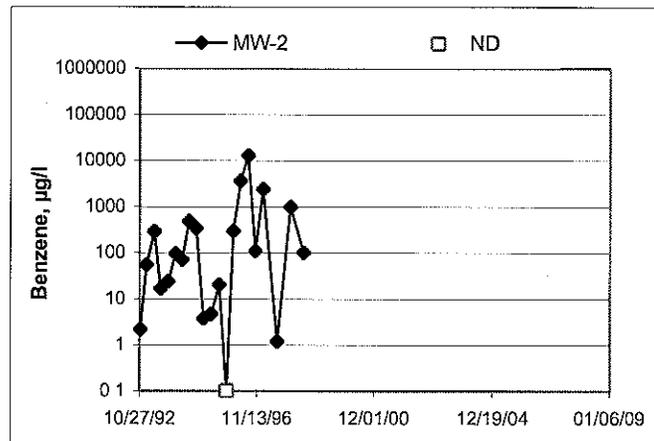
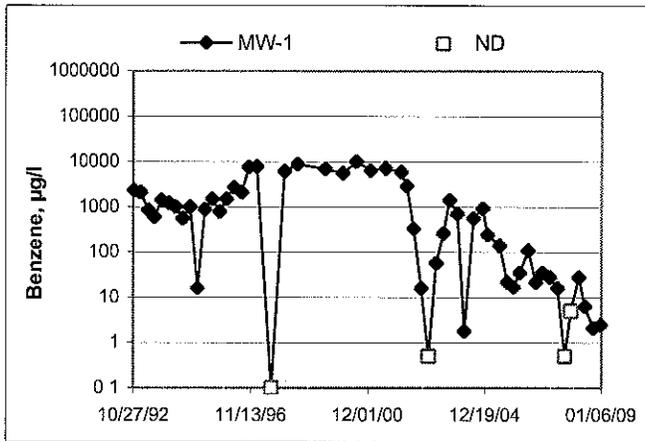
Elevations may have been corrected for apparent changes due to resurvey



TPH-G Concentrations vs Time  
76 Station 1871

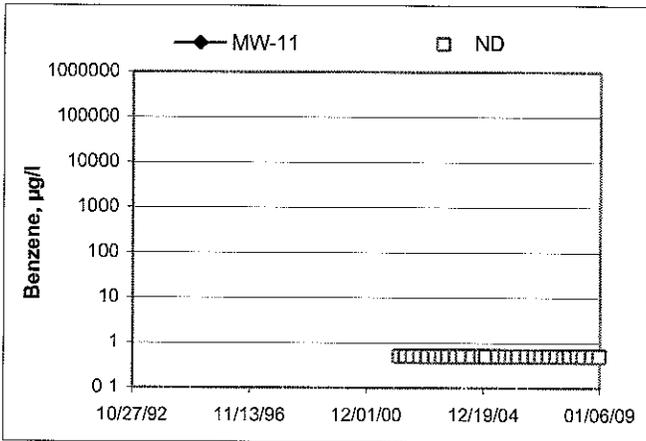
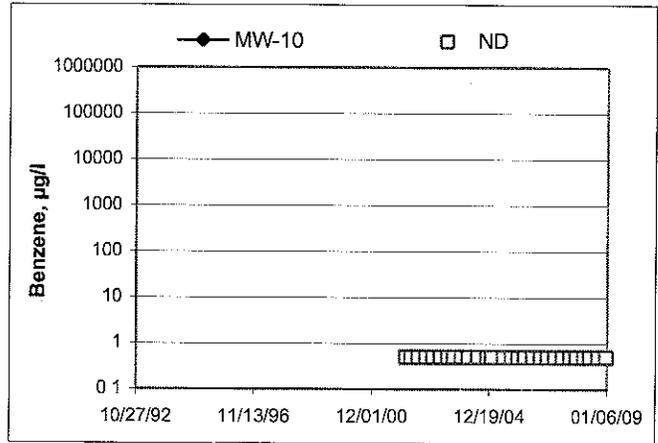
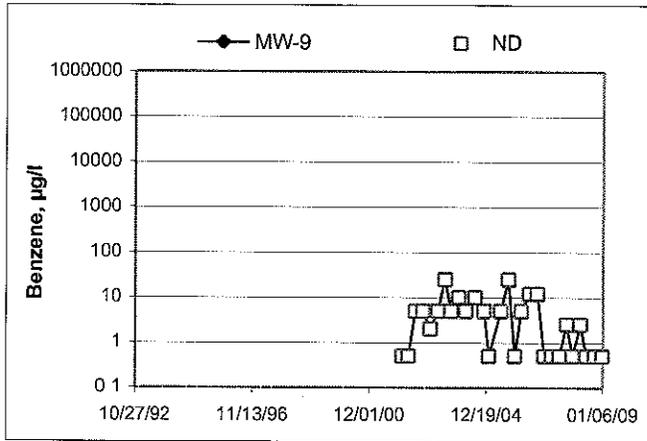


## Benzene Concentrations vs Time 76 Station 1871

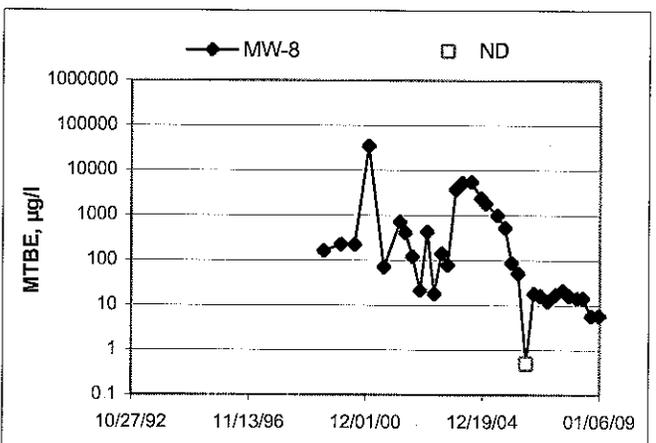
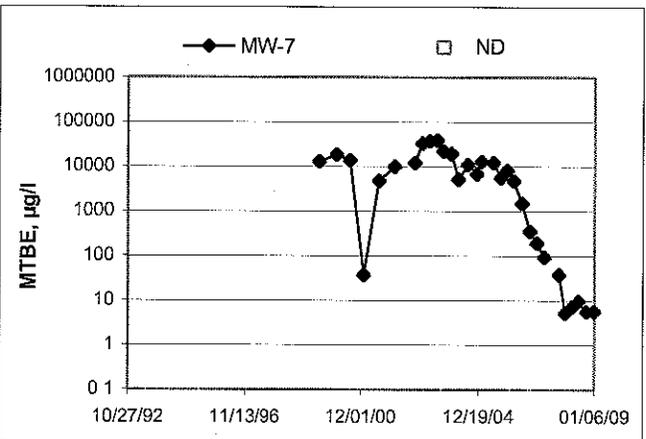
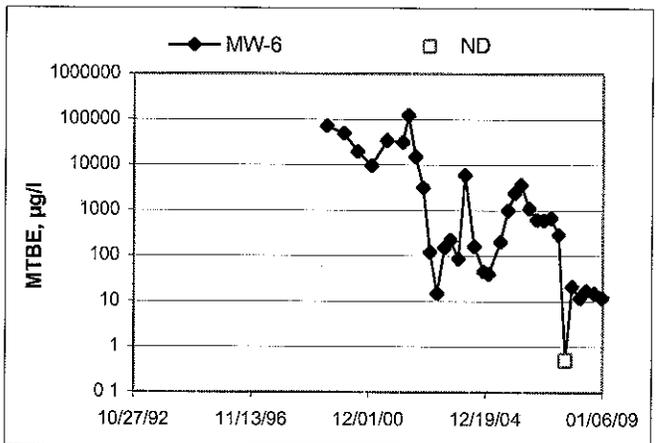
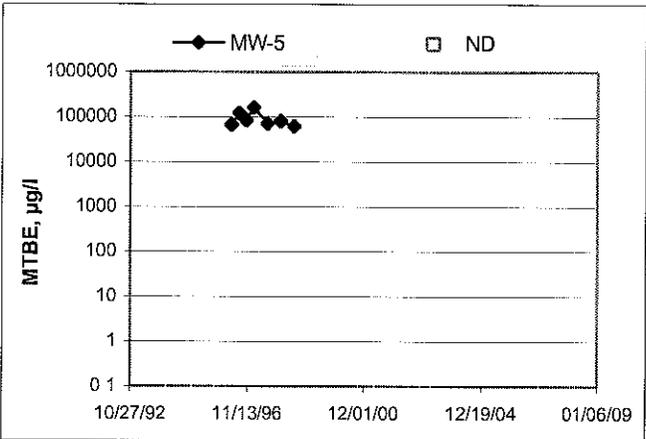
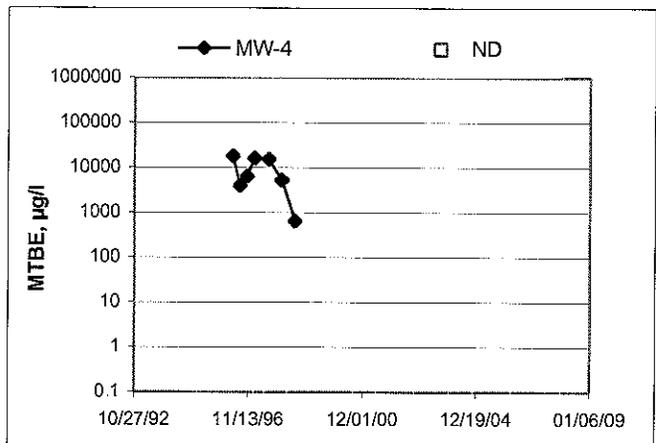
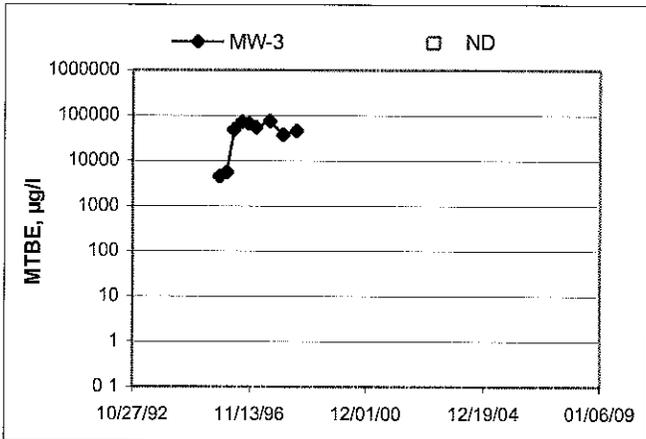
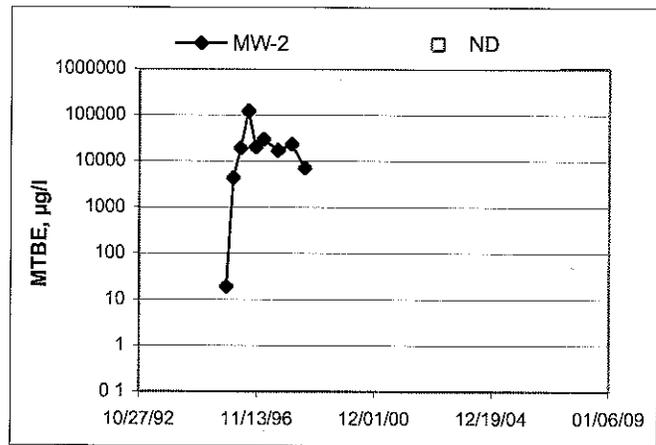
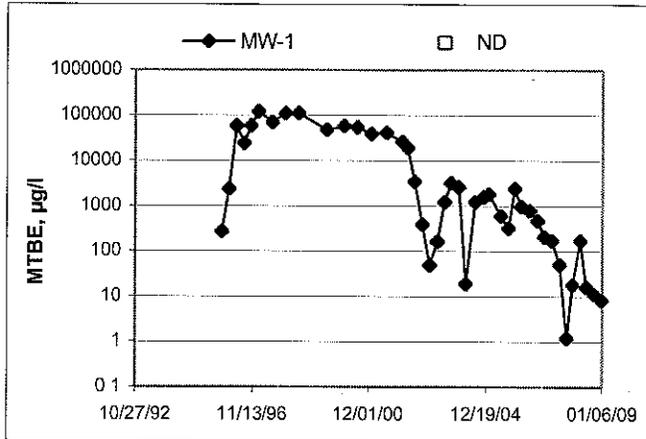


# Benzene Concentrations vs Time

76 Station 1871



### MTBE Concentrations vs Time 76 Station 1871





# GENERAL FIELD PROCEDURES

## **Groundwater Monitoring and Sampling Assignments**

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and TRC's previous experience with the site.

## **Fluid Level Measurements**

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

## **Purging and Groundwater Parameter Measurement**

TSR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the TSR indicates that other parameters are also to be measured during purging. TRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the TSR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

## **Groundwater Sample Collection**

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

## **Sequence of Gauging, Purging and Sampling**

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

## **Decontamination**

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

## **Exceptions**

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages



## GROUNDWATER SAMPLING FIELD NOTES

Technician: JOE

Site: 1871

Project No.: 154771

Date: 12-30-08

Well No. MW-11

Purge Method: DIA

Depth to Water (feet): 15.82

Depth to Product (feet):           

Total Depth (feet): 30.04

LPH & Water Recovered (gallons):           

Water Column (feet): 14.22

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 18.66

1 Well Volume (gallons): 3

| Time Start                                  | Time Stop   | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F/C) | pH          | D.O. (mg/L) | ORP        | Turbidity |
|---|-------------|------------------------|-------------------------|----------------------|-------------------|-------------|-------------|------------|-----------|
| <u>0722</u>                                 |             |                        | <u>3</u>                | <u>2694</u>          | <u>14.0</u>       | <u>6.90</u> | <u>2.67</u> | <u>195</u> |           |
|   |             |                        | <u>6</u>                | <u>2692</u>          | <u>14.8</u>       | <u>6.69</u> | <u>2.56</u> | <u>196</u> |           |
|   | <u>0726</u> |                        | <u>9</u>                | <u>2686</u>          | <u>15.0</u>       | <u>6.67</u> | <u>2.74</u> | <u>195</u> |           |
|   |             | Static at Time Sampled |                         | Total Gallons Purged |                   | Sample Time |             |            |           |
|   |             | <u>20.06</u>           |                         | <u>9</u>             |                   | <u>1018</u> |             |            |           |
| Comments: <u>DiD NOT Recharge IN 2 Hrs.</u> |             |                        |                         |                      |                   |             |             |            |           |

Well No. MW-10

Purge Method: DIA

Depth to Water (feet): 6.73

Depth to Product (feet):           

Total Depth (feet): 19.98

LPH & Water Recovered (gallons):           

Water Column (feet): 13.25

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 9.38

1 Well Volume (gallons): 3

| Time Start   | Time Stop   | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F/C) | pH          | D.O. (mg/L) | ORP        | Turbidity |
|--|-------------|------------------------|-------------------------|----------------------|-------------------|-------------|-------------|------------|-----------|
| <u>0745</u>  |             |                        | <u>3</u>                | <u>508.3</u>         | <u>14.0</u>       | <u>7.67</u> | <u>3.18</u> | <u>181</u> |           |
|  |             |                        | <u>6</u>                | <u>536.2</u>         | <u>14.8</u>       | <u>7.27</u> | <u>5.00</u> | <u>183</u> |           |
|  | <u>0747</u> |                        | <u>9</u>                | <u>535.5</u>         | <u>15.0</u>       | <u>7.35</u> | <u>5.89</u> | <u>184</u> |           |
|  |             | Static at Time Sampled |                         | Total Gallons Purged |                   | Sample Time |             |            |           |
|  |             | <u>13.28</u>           |                         | <u>9</u>             |                   | <u>1011</u> |             |            |           |
| Comments: <u>Dry AT 9 Gals. DiD NOT Recharge IN 2 Hrs.</u> |             |                        |                         |                      |                   |             |             |            |           |

## GROUNDWATER SAMPLING FIELD NOTES

Technician: JOE

Site: 1871

Project No: 154771

Date: 12-30-08

Well No. MW-8

Purge Method: DIA

Depth to Water (feet): 9.72

Depth to Product (feet):           

Total Depth (feet): 24.30

LPH & Water Recovered (gallons):           

Water Column (feet): 14.58

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 12.63

1 Well Volume (gallons): 3

| Time Start                      | Time Stop   | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F, C) | pH          | D.O. (mg/L) | ORP         | Turbidity |
|---------------------------------|-------------|------------------------|-------------------------|----------------------|--------------------|-------------|-------------|-------------|-----------|
| <u>0809</u>                     |             |                        | <u>3</u>                | <u>323.5</u>         | <u>15.6</u>        | <u>7.15</u> | <u>2.19</u> | <u>11</u>   |           |
|                                 |             |                        | <u>6</u>                | <u>357.6</u>         | <u>17.4</u>        | <u>6.84</u> | <u>1.50</u> | <u>4720</u> |           |
|                                 | <u>0811</u> |                        | <u>9</u>                | <u>368.6</u>         | <u>17.5</u>        | <u>6.67</u> | <u>1.78</u> | <u>14</u>   |           |
|                                 |             | Static at Time Sampled | Total Gallons Purged    |                      | Sample Time        |             |             |             |           |
|                                 |             | <u>9.76</u>            | <u>9</u>                |                      | <u>1038</u>        |             |             |             |           |
| Comments: <u>DRY AT 9 GALS.</u> |             |                        |                         |                      |                    |             |             |             |           |

Well No. MW-7

Purge Method: DIA

Depth to Water (feet): 8.99

Depth to Product (feet):           

Total Depth (feet): 24.32

LPH & Water Recovered (gallons):           

Water Column (feet): 15.33

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 12.05

1 Well Volume (gallons): 3

| Time Start                      | Time Stop   | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F, C) | pH          | D.O. (mg/L) | ORP        | Turbidity |
|---------------------------------|-------------|------------------------|-------------------------|----------------------|--------------------|-------------|-------------|------------|-----------|
| <u>0827</u>                     |             |                        | <u>3</u>                | <u>542.2</u>         | <u>16.2</u>        | <u>6.92</u> | <u>1.81</u> | <u>-14</u> |           |
|                                 |             |                        | <u>6</u>                | <u>548.9</u>         | <u>17.9</u>        | <u>6.66</u> | <u>1.35</u> | <u>-21</u> |           |
|                                 | <u>0829</u> |                        | <u>9</u>                | <u>558.4</u>         | <u>17.8</u>        | <u>6.79</u> | <u>4.13</u> | <u>-19</u> |           |
|                                 |             | Static at Time Sampled | Total Gallons Purged    |                      | Sample Time        |             |             |            |           |
|                                 |             | <u>9.16</u>            | <u>9</u>                |                      | <u>1048</u>        |             |             |            |           |
| Comments: <u>DRY AT 9 GALS.</u> |             |                        |                         |                      |                    |             |             |            |           |

## GROUNDWATER SAMPLING FIELD NOTES

Technician: JOE

Site: 1871

Project No.: 154771

Date: 12-30-08

Well No. MW-6

Purge Method: DIA

Depth to Water (feet): 8.96

Depth to Product (feet):           

Total Depth (feet): 24.20

LPH & Water Recovered (gallons):           

Water Column (feet): 15.24

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 12.00

1 Well Volume (gallons): 3

| Time Start                      | Time Stop   | Depth to Water (feet) | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F/C) | pH          | D.O (mg/L)  | ORP       | Turbidity |
|---------------------------------|-------------|-----------------------|-------------------------|----------------------|-------------------|-------------|-------------|-----------|-----------|
| <u>0845</u>                     |             |                       | <u>3</u>                | <u>731.4</u>         | <u>16.2</u>       | <u>6.81</u> | <u>1.62</u> | <u>14</u> |           |
|                                 |             |                       | <u>6</u>                | <u>730.0</u>         | <u>17.3</u>       | <u>6.54</u> | <u>1.78</u> | <u>15</u> |           |
|                                 | <u>0847</u> |                       | <u>9</u>                | <u>728.1</u>         | <u>18.1</u>       | <u>6.98</u> | <u>4.50</u> | <u>8</u>  |           |
| Static at Time Sampled          |             |                       | Total Gallons Purged    |                      |                   | Sample Time |             |           |           |
| <u>9.05</u>                     |             |                       | <u>9</u>                |                      |                   | <u>1058</u> |             |           |           |
| Comments: <u>DRY AT 9 GALS.</u> |             |                       |                         |                      |                   |             |             |           |           |

Well No. MW-9

Purge Method: DIA

Depth to Water (feet): 16.16

Depth to Product (feet):           

Total Depth (feet): 19.90

LPH & Water Recovered (gallons):           

Water Column (feet): 3.74

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 16.90

1 Well Volume (gallons): 1

| Time Start                     | Time Stop   | Depth to Water (feet) | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F/C) | pH          | D.O (mg/L)  | ORP       | Turbidity |
|--------------------------------|-------------|-----------------------|-------------------------|----------------------|-------------------|-------------|-------------|-----------|-----------|
| <u>0908</u>                    |             |                       | <u>1</u>                | <u>559.0</u>         | <u>14.2</u>       | <u>7.18</u> | <u>5.43</u> | <u>52</u> |           |
|                                |             |                       | <u>2</u>                | <u>548.8</u>         | <u>15.0</u>       | <u>7.17</u> | <u>5.28</u> | <u>38</u> |           |
|                                | <u>0909</u> |                       | <u>3</u>                | <u>553.0</u>         | <u>15.0</u>       | <u>7.18</u> | <u>5.47</u> | <u>38</u> |           |
| Static at Time Sampled         |             |                       | Total Gallons Purged    |                      |                   | Sample Time |             |           |           |
| <u>16.23</u>                   |             |                       | <u>3</u>                |                      |                   | <u>1117</u> |             |           |           |
| Comments: <u>DRY AT 3 GALS</u> |             |                       |                         |                      |                   |             |             |           |           |

## GROUNDWATER SAMPLING FIELD NOTES

Technician: JOE

Site: 1871

Project No.: 154771

Date: 12-30-08

Well No. MW-1

Purge Method: DIA

Depth to Water (feet): 14.16

Depth to Product (feet): \_\_\_\_\_

Total Depth (feet): 24.03

LPH & Water Recovered (gallons): \_\_\_\_\_

Water Column (feet): 9.87

Casing Diameter (Inches): 4"

80% Recharge Depth(feet): 16.13

1 Well Volume (gallons): 7

| Time Start  | Time Stop | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F, C) | pH          | D.O. (mg/L) | ORP | Turbidity |
|---|-----------|------------------------|-------------------------|----------------------|--------------------|-------------|-------------|-----|-----------|
| 0928  |           |                        | 7                       | 373.9                | 17.5               | 6.73        | 0.91        | 0   |           |
|   | 0931      |                        | 14                      | 574.9                | 19.1               | 6.48        | 2.44        | -2  |           |
|   |           |                        | 21                      |                      |                    |             |             |     |           |
|   |           | Static at Time Sampled |                         | Total Gallons Purged |                    | Sample Time |             |     |           |
|   |           | <u>18.28</u>           |                         | <u>14</u>            |                    | <u>1134</u> |             |     |           |
| Comments: <u>DRY AT 14 GALS. DID NOT RECHARGE IN 2 HRS.</u> |           |                        |                         |                      |                    |             |             |     |           |

Well No. \_\_\_\_\_

Purge Method: \_\_\_\_\_

Depth to Water (feet): \_\_\_\_\_

Depth to Product (feet): \_\_\_\_\_

Total Depth (feet): \_\_\_\_\_

LPH & Water Recovered (gallons): \_\_\_\_\_

Water Column (feet): \_\_\_\_\_

Casing Diameter (Inches): \_\_\_\_\_

80% Recharge Depth(feet): \_\_\_\_\_

1 Well Volume (gallons): \_\_\_\_\_

| Time Start      | Time Stop | Depth to Water (feet)  | Volume Purged (gallons) | Conductivity (uS/cm) | Temperature (F, C) | pH          | D.O. (mg/L) | ORP | Turbidity |
|-----------------|-----------|------------------------|-------------------------|----------------------|--------------------|-------------|-------------|-----|-----------|
|                 |           |                        |                         |                      |                    |             |             |     |           |
|                 |           |                        |                         |                      |                    |             |             |     |           |
|                 |           |                        |                         |                      |                    |             |             |     |           |
|                 |           |                        |                         |                      |                    |             |             |     |           |
|                 |           | Static at Time Sampled |                         | Total Gallons Purged |                    | Sample Time |             |     |           |
|                 |           |                        |                         |                      |                    |             |             |     |           |
| Comments: _____ |           |                        |                         |                      |                    |             |             |     |           |



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Date of Report: 01/06/2009

Anju Farfan

TRC

21 Technology Drive  
Irvine, CA 92618

RE: 1871  
BC Work Order: 0817024  
Invoice ID: B055379

Enclosed are the results of analyses for samples received by the laboratory on 12/30/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
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4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 [www.bclabs.com](http://www.bclabs.com)  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Farfan

Reported: 01/06/2009 9:27

### Laboratory / Client Sample Cross Reference

| Laboratory | Client Sample Information |             |  | Receive Date:    | Sampling Date:   | Sample Depth: | Sample Matrix: | Delivery Work Order: | Global ID:  | Location ID (FieldPoint): | Matrix: | Sample QC Type (SACode): | Cooler ID: |
|------------|---------------------------|-------------|--|------------------|------------------|---------------|----------------|----------------------|-------------|---------------------------|---------|--------------------------|------------|
| 0817024-01 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 10:18 | ---           | Water          |                      | T0600101493 | MW-11                     | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-11       |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |
| 0817024-02 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 10:11 | ---           | Water          |                      | T0600101493 | MW-10                     | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-10       |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |
| 0817024-03 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 10:38 | ---           | Water          |                      | T0600101493 | MW-8                      | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-8        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |
| 0817024-04 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 10:48 | ---           | Water          |                      | T0600101493 | MW-7                      | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-7        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Fartan

Reported: 01/06/2009 9:27

### Laboratory / Client Sample Cross Reference

| Laboratory | Client Sample Information |             |  | Receive Date:    | Sampling Date:   | Sample Depth: | Sample Matrix: | Delivery Work Order: | Global ID:  | Location ID (FieldPoint): | Matrix: | Sample QC Type (SACode): | Cooler ID: |
|------------|---------------------------|-------------|--|------------------|------------------|---------------|----------------|----------------------|-------------|---------------------------|---------|--------------------------|------------|
| 0817024-05 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 10:58 | ---           | Water          |                      | T0600101493 | MW-6                      | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-6        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |
| 0817024-06 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 11:17 | ---           | Water          |                      | T0600101493 | MW-9                      | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-9        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |
| 0817024-07 | COC Number:               | ---         |  | 12/30/2008 20:30 | 12/30/2008 11:34 | ---           | Water          |                      | T0600101493 | MW-1                      | W       | CS                       |            |
|            | Project Number:           | 1871        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Location:        | ---         |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampling Point:           | MW-1        |  |                  |                  |               |                |                      |             |                           |         |                          |            |
|            | Sampled By:               | Joe of TRCI |  |                  |                  |               |                |                      |             |                           |         |                          |            |



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Farfan

Reported: 01/06/2009 9:27

### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-01              |        | Client Sample Name: 1871, MW-11, 12/30/2008 10:18:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|---|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units   | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Xylenes                          | ND     | ug/L  | 1.0                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | ND     | ug/L  | 10                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L  | 250                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | ND     | ug/L  | 50                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 107    | %   | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.8   | %   | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 101    | %   | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:18 | SDU     | MS-V10         | 1        | BRL1944     |         |           |

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Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Farfan

Reported: 01/06/2009 9:27

### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-02              |        | Client Sample Name: 1871, MW-10, 12/30/2008 10:11:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|---|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units   | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 0.80   | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Total Xylenes                          | ND     | ug/L  | 1.0                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | ND     | ug/L  | 10                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L  | 250                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | ND     | ug/L  | 50                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 104    | %   | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.6   | %   | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 100    | %   | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:36 | SDU     | MS-V10         | 1        | BRL1944     |         |           |

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Project Manager: Anju Farfan

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### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-03              |        | Client Sample Name: 1871, MW-8, 12/30/2008 10:38:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|--|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units  | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 5.7    | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Xylenes                          | ND     | ug/L   | 1.0                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | ND     | ug/L   | 10                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L   | 250                  |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | 50     | ug/L   | 50                   |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 109    | %  | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.9   | %  | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 98.2   | %  | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 12/31/08 23:54 | SDU     | MS-V10         | 1        | BRL1944     |         |           |

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### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-04              |        | Client Sample Name: 1871, MW-7, 12/30/2008 10:48:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|--|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units  | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 5.7    | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Xylenes                          | 1.1    | ug/L   | 1.0                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | ND     | ug/L   | 10                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L   | 250                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | 130    | ug/L   | 50                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 105    | %  | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 99.2   | %  | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 97.7   | %  | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:12 | SDU     | MS-V10         | 1        | BRL1944     |         |           |

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### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-05              |        | Client Sample Name: 1871, MW-6, 12/30/2008 10:58:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|--|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units  | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 12     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Xylenes                          | ND     | ug/L   | 1.0                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | ND     | ug/L   | 10                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L   | 250                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | 55     | ug/L   | 50                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 107    | %  | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 99.7   | %  | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 101    | %  | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:30 | SDU     | MS-V10         | i        | BRL1944     |         |           |

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### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0817024-06 Client Sample Name: 1871, MW-9, 12/30/2008 11:17:00AM, Joe

| Constituent                            | Result | Units | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru- ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
|--|--------|-------|----------------------|-----|----------|-----------|----------------|---------|-----------------|----------|-------------|---------|-----------|
| Benzene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | 1        | BRL1944     | ND      |           |
| Ethylbenzene                           | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | i        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 230    | ug/L  | 2.5                  |     | EPA-8260 | 12/30/08  | 01/02/09 20:18 | SDU     | MS-V10          | 5        | BRL1944     | ND      | A01       |
| Toluene                                | ND     | ug/L  | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | i        | BRL1944     | ND      |           |
| Total Xylenes                          | ND     | ug/L  | 1.0                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | i        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | 21     | ug/L  | 10                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | i        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L  | 250                  |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | i        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | 160    | ug/L  | 50                   |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | 1        | BRL1944     | ND      | A90       |
| 1,2-Dichloroethane-d4 (Surrogate)      | 109    | %     | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | 1        | BRL1944     |         |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 104    | %     | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:18 | SDU     | MS-V10          | 5        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.2   | %     | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | 1        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.7   | %     | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:18 | SDU     | MS-V10          | 5        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 100    | %     | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 00:47 | SDU     | MS-V10          | 1        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 96.8   | %     | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:18 | SDU     | MS-V10          | 5        | BRL1944     |         |           |

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Project Manager: Anju Fartan

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### Volatile Organic Analysis (EPA Method 8260)

| BCL Sample ID: 0817024-07              |        | Client Sample Name: 1871, MW-1, 12/30/2008 11:34:00AM, Joe |                      |     |          |           |                |         |                |          |             |         |           |
|--|--------|--|----------------------|-----|----------|-----------|----------------|---------|----------------|----------|-------------|---------|-----------|
| Constituent                            | Result | Units  | PQL                  | MDL | Method   | Prep Date | Run Date/Time  | Analyst | Instru-ment ID | Dilution | QC Batch ID | MB Bias | Lab Quals |
| Benzene                                | 2.5    | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Ethylbenzene                           | 100    | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Methyl t-butyl ether                   | 8.3    | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | i        | BRL1944     | ND      |           |
| Toluene                                | ND     | ug/L   | 0.50                 |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Xylenes                          | 150    | ug/L   | 1.0                  |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| t-Butyl alcohol                        | 400    | ug/L   | 10                   |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Ethanol                                | ND     | ug/L   | 250                  |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     | ND      |           |
| Total Purgeable Petroleum Hydrocarbons | 3200   | ug/L   | 250                  |     | EPA-8260 | 12/30/08  | 01/02/09 20:36 | SDU     | MS-V10         | 5        | BRL1944     | ND      | A01       |
| 1,2-Dichloroethane-d4 (Surrogate)      | 104    | %  | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | i        | BRL1944     |         |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | 106    | %  | 76 - 114 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:36 | SDU     | MS-V10         | 5        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 100    | %  | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     |         |           |
| Toluene-d8 (Surrogate)                 | 97.2   | %  | 88 - 110 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:36 | SDU     | MS-V10         | 5        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 97.6   | %  | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/02/09 20:36 | SDU     | MS-V10         | 5        | BRL1944     |         |           |
| 4-Bromofluorobenzene (Surrogate)       | 93.6   | %  | 86 - 115 (LCL - UCL) |     | EPA-8260 | 12/30/08  | 01/01/09 01:05 | SDU     | MS-V10         | 1        | BRL1944     |         |           |

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Project Manager: Anju Farfan

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### Volatile Organic Analysis (EPA Method 8260)

#### Quality Control Report - Precision & Accuracy

| Constituent                       | Batch ID | QC Sample Type         | Source Sample ID | Source Result | Result | Spike Added | Units | RPD | Percent Recovery | Control Limits |                            |
|-----------------------------------|----------|------------------------|------------------|---------------|--------|-------------|-------|-----|------------------|----------------|----------------------------|
|                                   |          |                        |                  |               |        |             |       |     |                  | RPD            | Percent Recovery Lab Quals |
| Benzene                           | BRL1944  | Matrix Spike           | 0814857-44       | 0             | 25.420 | 25.000      | ug/L  |     | 102              |                | 70 - 130                   |
|                                   |          | Matrix Spike Duplicate | 0814857-44       | 0             | 26.880 | 25.000      | ug/L  | 5.7 | 108              | 20             | 70 - 130                   |
| Toluene                           | BRL1944  | Matrix Spike           | 0814857-44       | 0             | 26.160 | 25.000      | ug/L  |     | 105              |                | 70 - 130                   |
|                                   |          | Matrix Spike Duplicate | 0814857-44       | 0             | 26.440 | 25.000      | ug/L  | 0.9 | 106              | 20             | 70 - 130                   |
| 1,2-Dichloroethane-d4 (Surrogate) | BRL1944  | Matrix Spike           | 0814857-44       | ND            | 10.130 | 10.000      | ug/L  |     | 101              |                | 76 - 114                   |
|                                   |          | Matrix Spike Duplicate | 0814857-44       | ND            | 10.420 | 10.000      | ug/L  |     | 104              |                | 76 - 114                   |
| Toluene-d8 (Surrogate)            | BRL1944  | Matrix Spike           | 0814857-44       | ND            | 10.070 | 10.000      | ug/L  |     | 101              |                | 88 - 110                   |
|                                   |          | Matrix Spike Duplicate | 0814857-44       | ND            | 9.9500 | 10.000      | ug/L  |     | 99.5             |                | 88 - 110                   |
| 4-Bromofluorobenzene (Surrogate)  | BRL1944  | Matrix Spike           | 0814857-44       | ND            | 10.090 | 10.000      | ug/L  |     | 101              |                | 86 - 115                   |
|                                   |          | Matrix Spike Duplicate | 0814857-44       | ND            | 9.9000 | 10.000      | ug/L  |     | 99.0             |                | 86 - 115                   |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Farfan

Reported: 01/06/2009 9:27

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

| Constituent                       | Batch ID | QC Sample ID | QC Type | Result | Spike Level | PQL  | Units | Percent Recovery | RPD | Control Limits   |     | Lab Quals |
|-----------------------------------|----------|--------------|---------|--------|-------------|------|-------|------------------|-----|------------------|-----|-----------|
|                                   |          |              |         |        |             |      |       |                  |     | Percent Recovery | RPD |           |
| Benzene                           | BRL1944  | BRL1944-BS1  | LCS     | 26.210 | 25.000      | 0.50 | ug/L  | 105              |     | 70 - 130         |     |           |
| Toluene                           | BRL1944  | BRL1944-BS1  | LCS     | 26.610 | 25.000      | 0.50 | ug/L  | 106              |     | 70 - 130         |     |           |
| 1,2-Dichloroethane-d4 (Surrogate) | BRL1944  | BRL1944-BS1  | LCS     | 10.170 | 10.000      |      | ug/L  | 102              |     | 76 - 114         |     |           |
| Toluene-d8 (Surrogate)            | BRL1944  | BRL1944-BS1  | LCS     | 9.9200 | 10.000      |      | ug/L  | 99.2             |     | 88 - 110         |     |           |
| 4-Bromofluorobenzene (Surrogate)  | BRL1944  | BRL1944-BS1  | LCS     | 10.040 | 10.000      |      | ug/L  | 100              |     | 86 - 115         |     |           |



TRC  
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Irvine, CA 92618

Project: 1871  
Project Number: 4509117982  
Project Manager: Anju Farfan

Reported: 01/06/2009 9:27

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

| Constituent                            | Batch ID | QC Sample ID | MB Result | Units | PQL  | MDL                  | Lab Quals |
|--|----------|--------------|-----------|-------|------|----------------------|-----------|
| Benzene                                | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 0.50 |                      |           |
| Ethylbenzene                           | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 0.50 |                      |           |
| Methyl t-butyl ether                   | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 0.50 |                      |           |
| Toluene                                | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 0.50 |                      |           |
| Total Xylenes                          | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 1.0  |                      |           |
| t-Butyl alcohol                        | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 10   |                      |           |
| Ethanol                                | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 250  |                      |           |
| Total Purgeable Petroleum Hydrocarbons | BRL1944  | BRL1944-BLK1 | ND        | ug/L  | 50   |                      |           |
| 1,2-Dichloroethane-d4 (Surrogate)      | BRL1944  | BRL1944-BLK1 | 105       | %     |      | 76 - 114 (LCL - UCL) |           |
| Toluene-d8 (Surrogate)                 | BRL1944  | BRL1944-BLK1 | 96.5      | %     |      | 88 - 110 (LCL - UCL) |           |
| 4-Bromofluorobenzene (Surrogate)       | BRL1944  | BRL1944-BLK1 | 98.9      | %     |      | 86 - 115 (LCL - UCL) |           |

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Reported: 01/06/2009 9:27

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference
- A01 PQL's and MDL's are raised due to sample dilution.
- A90 TPPH does not exhibit a "gasoline" pattern. TPPH is entirely due to MTBE.

Submission #: 08-17024

SHIPPING INFORMATION

Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER

Ice Chest  None   
 Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  
 YES  NO

Emissivity: 0.98 Container: VOA Thermometer ID: T11103  
 Temperature: A 2.9 °C / C 2.8 °C

Date/Time 2038  
12-30-08  
 Analyst Init JWL

| SAMPLE CONTAINERS                    | SAMPLE NUMBERS |     |     |     |     |     |     |     |     |     |
|--------------------------------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                      | 1              | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| QT GENERAL MINERAL/ GENERAL PHYSICAL |                |     |     |     |     |     |     |     |     |     |
| PT PE UNPRESERVED                    |                |     |     |     |     |     |     |     |     |     |
| QT INORGANIC CHEMICAL METALS         |                |     |     |     |     |     |     |     |     |     |
| PT INORGANIC CHEMICAL METALS         |                |     |     |     |     |     |     |     |     |     |
| PT CYANIDE                           |                |     |     |     |     |     |     |     |     |     |
| PT NITROGEN FORMS                    |                |     |     |     |     |     |     |     |     |     |
| PT TOTAL SULFIDE                     |                |     |     |     |     |     |     |     |     |     |
| 2oz. NITRATE / NITRITE               |                |     |     |     |     |     |     |     |     |     |
| PT TOTAL ORGANIC CARBON              |                |     |     |     |     |     |     |     |     |     |
| PT TOX                               |                |     |     |     |     |     |     |     |     |     |
| PT CHEMICAL OXYGEN DEMAND            |                |     |     |     |     |     |     |     |     |     |
| PIA PHENOLICS                        |                |     |     |     |     |     |     |     |     |     |
| 40ml VOA VIAL TRAVEL BLANK           |                |     |     |     |     |     |     |     |     |     |
| 40ml VOA VIAL                        | A13            | A13 | A13 | A13 | A13 | A13 | A13 | ( ) | ( ) | ( ) |
| QT EPA 413.1, 413.2, 418.1           |                |     |     |     |     |     |     |     |     |     |
| PT ODOR                              |                |     |     |     |     |     |     |     |     |     |
| RADIOLOGICAL                         |                |     |     |     |     |     |     |     |     |     |
| BACTERIOLOGICAL                      |                |     |     |     |     |     |     |     |     |     |
| 40 ml VOA VIAL- 504                  |                |     |     |     |     |     |     |     |     |     |
| QT EPA 508/608/8080                  |                |     |     |     |     |     |     |     |     |     |
| QT EPA 515.1/8150                    |                |     |     |     |     |     |     |     |     |     |
| QT EPA 525                           |                |     |     |     |     |     |     |     |     |     |
| QT EPA 525 TRAVEL BLANK              |                |     |     |     |     |     |     |     |     |     |
| 100ml EPA 547                        |                |     |     |     |     |     |     |     |     |     |
| 100ml EPA 531.1                      |                |     |     |     |     |     |     |     |     |     |
| QT EPA 548                           |                |     |     |     |     |     |     |     |     |     |
| QT EPA 549                           |                |     |     |     |     |     |     |     |     |     |
| QT EPA 632                           |                |     |     |     |     |     |     |     |     |     |
| QT EPA 8015M                         |                |     |     |     |     |     |     |     |     |     |
| QT AMBER                             |                |     |     |     |     |     |     |     |     |     |
| 8 OZ. JAR                            |                |     |     |     |     |     |     |     |     |     |
| 32 OZ. JAR                           |                |     |     |     |     |     |     |     |     |     |
| SOIL SLEEVE                          |                |     |     |     |     |     |     |     |     |     |
| PCB VIAL                             |                |     |     |     |     |     |     |     |     |     |
| PLASTIC BAG                          |                |     |     |     |     |     |     |     |     |     |
| FERROUS IRON                         |                |     |     |     |     |     |     |     |     |     |
| ENCORE                               |                |     |     |     |     |     |     |     |     |     |

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: Am Date/Time: 12-30-08  
 A = Actual / C = Corrected

2130



## **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring wells was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, to the ConocoPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures - Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file at TRC's Concord Office. Purge water containing a significant amount of liquid-phase hydrocarbons was accumulated separately in drums for transportation and disposal by others.

### **Limitations**

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.

**APPENDIX C**

Fourth Quarter 2008 Ozone Injection System O&M Report

December 15, 2008

One Technology, Suite B-123  
 Irvine, California 92618  
 tel 949.486.0884  
 fax 949.486.0885  
 environstrategy.com

Mr. Daniel Davis  
 Project Manager  
 Delta Environmental Consultants Inc.  
 3164 Gold Camp Rd Suite 200  
 Rancho Cordova, CA 95670

Project No. 400-A

**Fourth Quarter 2008**  
**Ozone Injection System O&M Report**  
**76 Service Station No. 1871**  
 96 MacArthur Boulevard  
 Oakland, California

Dear Mr. Davis:

Environ Strategy Consultants, Inc. is pleased to submit this ozone injection system operation and maintenance (O&M) report for 76 Service Station No. 1871, located at 96 MacArthur Boulevard, Oakland, California. An ozone injection system was started on June 23, 2003 to remediate hydrocarbon-impacted groundwater.

|  |   |
|--|---|
| Type of Remediation System:  | Ozone Injection System  |
| Operation Data During:<br>Reporting Period:<br>Sept. 1, 2008 – Nov. 30, 2008 | Operated 74 days during the period<br>Hours of Operation: 1,767 |
| System Operation Data Since<br>Startup: June 23, 2003                        | Total Hours of Operation: 24,105                                |
| Note: September 10 – 27, 2008 – Ozone system down for well box repair.       |   |

Environ Strategy appreciates the opportunity to be of service. If you have any questions or require additional information regarding this report, please do not hesitate to call us at (949) 486-0884.

Respectfully submitted,



Tyler Colopy  
 Staff Scientist



Jinghui Niu, P.E.  
 Principal Engineer



**Fourth Quarter 2008 O&M Report**

**76 Service Station No. 1871**

December 15, 2008

Page 2

Attachments: Figure - Site Plan

Table 1 - Ozone Injection - System Operation Data

Table 2 - Ozone Injection - Groundwater Monitoring Data

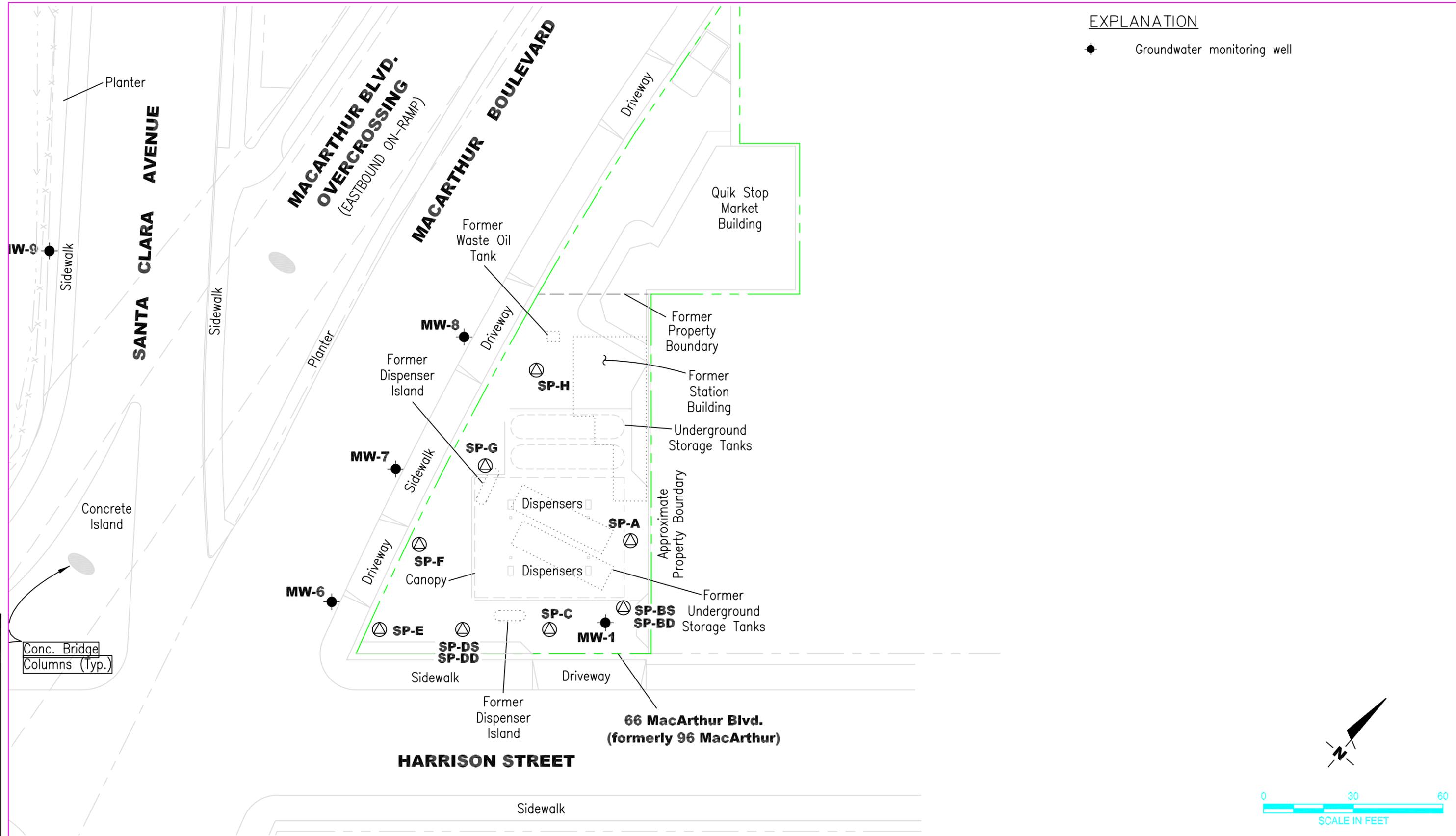
Graph 1 - MW-1 TPHg, Benzene, and MtBE Groundwater Concentrations

Graph 2 - MW-7 TPHg, Benzene, and MtBE Groundwater Concentrations

Appendix A – Field Notes

cc: Bill Borgh, ConocoPhillips Company (electronic copy)

**Figure**



**EXPLANATION**

● Groundwater monitoring well



Source: Caltrans As-Built Plans and Right of Way Maps confirmed by field observations

|           |               |
|-----------|---------------|
| DRAWN BY: | MD            |
| CHECKED:  | AD            |
| APPROVED: | RB            |
| DATE:     | 3/22/04 PR    |
| JOB NO.:  | 77CP.60004.01 |
| CAD FILE: | SITEPLAN      |

  
**environ strategy consultants, inc.**  
 ONE TECHNOLOGY, SUITE B-123  
 IRVINE, CA

PREPARED FOR:  
**CONOCOPHILLIPS**  
**76 STATION #1871**  
 96 MACARTHUR BOULEVARD  
 OAKLAND, CALIFORNIA

**FIGURE 1**  
 SITE PLAN

## **Tables**

**Table 1**  
**Ozone Injection - System Operation Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
Page 1 of 4

| Date     | Notes | OZONE SPARGE SYSTEM    |           |                   |                      |                          |                      | OZ-1           | OZ-2           | OZ-3           | OZ-4           | OZ-5           | OZ-6           | OZ-7           | OZ-8           | OZ-9           | OZ-10          |                |
|----------|-------|------------------------|-----------|-------------------|----------------------|--------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|          |       | System Status (On/Off) |           | Hourmeter Reading | Period Online Factor | Cumulative Online Factor | Ozone Injected (lbs) | Pressure (psi) |
|          |       | Arrival                | Departure |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |                |
| 6/23/03  |       | On                     | On        | 8807.26           | --                   | 0.95                     | --                   | 20             | 18             | 19             | 20             | 21             | 23             | 20             | 26             | 14             | 26             |                |
| 7/16/03  |       | Off                    | On        | 8850.46           | 0.09                 | 0.91                     | 0.39                 | 27             | 18             | 31             | 40             | 28             | 29             | 31             | 38             | 24             | 25             |                |
| 8/30/03  |       | On                     | On        | 9180.61           | 0.35                 | 0.86                     | 2.97                 | 17             | 15             | 17             | 19             | 19             | 19             | 20             | 26             | 19             | 26             |                |
| 9/18/03  |       | On                     | On        | 9327.43           | 0.37                 | 0.84                     | 1.32                 | 13.5           | 14.7           | 17.0           | 16.3           | 16.0           | 19.7           | 16.8           | 19.8           | 15.7           | 20             |                |
| 10/16/03 |       | On                     | On        | --                | --                   | 0.84                     | --                   | 27.0           | 19.5           | 40.8           | 39.0           | 40.8           | 38.5           | 34.2           | 46.4           | 24.2           | 39.8           |                |
| 11/17/03 |       | On                     | On        | 9696.55           | 0.29                 | 0.81                     | --                   | 11.0           | 20.0           | 17.0           | 18.0           | 17.5           | 17.0           | 16.0           | 21.0           | 51.0           | 22.0           |                |
| 12/5/03  |       | On                     | On        | 9804.98           | 0.29                 | 0.80                     | 0.98                 | 33.0           | 21.0           | 44.0           | 40.0           | 43.0           | 39.0           | 33.5           | 44.0           | 26.0           | 33.0           |                |
| 1/16/04  |       | On                     | On        | 10471.28          | 0.76                 | 0.79                     | 6.00                 | 12.5           | 11.0           | 18.5           | 16.5           | 17.5           | 17.0           | 16.0           | 20.0           | 16.0           | 20.0           |                |
| 2/3/04   |       | On                     | On        | 10727.69          | 0.68                 | 0.79                     | 2.31                 | 12.3           | 11.5           | 18.2           | 16.5           | 18.2           | 17.3           | 16.0           | 19.0           | 16.0           | 18.2           |                |
| 3/24/04  |       | On                     | On        | 11424.95          | 0.66                 | 0.78                     | 6.28                 | 31.0           | 18.3           | 37.5           | 26.0           | 34.0           | 33.2           | 32.3           | 41.5           | 23.0           | 31.0           |                |
| 4/14/04  |       | On                     | On        | 11676.10          | 0.57                 | 0.77                     | 2.26                 | 32.0           | 19.0           | 38.7           | 26.0           | 37.7           | 37.1           | 32.8           | 41.8           | 23.8           | 29.5           |                |
| 4/15/04  | a     | On                     | On        | 11685.29          | 0.44                 | 0.77                     | 0.08                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 4/16/04  | a     | On                     | On        | 11693.80          | 0.41                 | 0.77                     | 0.08                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 4/19/04  | a     | On                     | On        | 11742.90          | 0.78                 | 0.77                     | 0.44                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 4/23/04  | a     | On                     | On        | 11773.10          | 0.36                 | 0.77                     | 0.27                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 5/4/04   |       | Off                    | On        | 11837.70          | 0.28                 | 0.76                     | 0.58                 | 32.2           | 20.5           | 39.4           | 36.2           | 38.1           | 32.0           | 33.5           | 60.0           | 25.8           | 33.1           |                |
| 5/11/04  |       | On                     | On        | 11950.51          | 0.77                 | 0.76                     | 1.02                 | 32.5           | 20.0           | 38.5           | 29.8           | 38.8           | 39.5           | 34.8           | 60.0           | 23.5           | 35.9           |                |
| 6/14/04  | b,c   | On                     | On        | 12464.64          | 0.72                 | 0.76                     | 4.63                 | 20.0           | 21.0           | 38.8           | 27.2           | 37.0           | 38.2           | 35.2           | 60.0           | 24.0           | 32.1           |                |
| 7/29/04  | d     | On                     | On        | 844.62            | 0.99                 | 0.77                     | 7.60                 | 22             | 15             | --             | 26             | 35             | 34             | 35             | --             | 25             | 33             |                |
| 8/12/04  | e     | On                     | On        | 1075.97           | 0.98                 | 0.78                     | 2.08                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 9/10/04  |       | On                     | On        | 1490.23           | 0.85                 | 0.78                     | 3.73                 | 32             | 32             | 33             | 33             | 21             | 24             | 30             | 20             | 26             | 30             |                |
| 10/5/04  |       | On                     | On        | 1868.83           | 0.90                 | 0.78                     | 3.41                 | 31             | 32             | 33             | 31             | 22             | 23             | 31             | 21             | 26             | 28             |                |
| 11/5/04  |       | On                     | On        | 2360.90           | 0.93                 | 0.79                     | 4.43                 | 22             | 26             | 12             | 18             | 12             | 22             | 30             | 32             | 26             | 22             |                |
| 12/2/04  | f     | Off                    | Off       | 2802.02           | 0.97                 | 0.79                     | 3.97                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 1/13/05  |       | Off                    | On        | 2802.07           | 0.00                 | 0.76                     | 0.00                 | 23             | 27             | 15             | 20             | 15             | 23             | 31             | 34             | 28             | 25             |                |
| 2/25/05  | g     | Off                    | Off       | 2802.42           | 0.00                 | 0.73                     | 0.00                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 3/8/05   | h,i   | Off                    | Off       | 2802.42           | 0.00                 | 0.72                     | 0.00                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 4/5/05   | i     | Off                    | Off       | 2802.42           | 0.00                 | 0.70                     | 0.00                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 5/4/05   | j     | Off                    | On        | 2802.49           | 0.00                 | 0.69                     | 0.00                 | 14             | 11             | 16             | 12             | 20             | 27             | 25             | 29             | 25             | 31             |                |
| 6/2/05   | k     | On                     | On        | 3407.97           | 1.00                 | 0.69                     | 5.45                 | 35             | 25             | Off            | 40             | 41             | 36             | 35             | 34             | 27             | 25             |                |
| 7/7/05   | k,l,m | On                     | On        | 4067.42           | 1.29                 | 0.71                     | 5.94                 | 31             | 23             | Off            | 30             | Off            | 26             | 32             | 28             | 25             | Off            |                |
| 8/26/05  | n     | On                     | On        | 4665.98           | 0.81                 | 0.72                     | 5.39                 | 13             | 13             | Off            | 14             | Off            | 13             | 12             | 12             | 13             | Off            |                |
| 9/23/05  | o     | On                     | On        | 4947.97           | 0.69                 | 0.71                     | 2.54                 | 16             | 15             | Off            | Off            | Off            | 16             | 16             | 16             | 16             | Off            |                |
| 10/23/05 | p     | On                     | On        | 5264.28           | 0.72                 | 0.71                     | 2.85                 | 16             | 16             | Off            | Off            | Off            | 16             | 16             | 16             | 16             | Off            |                |
| 11/11/05 | q,r   | On                     | Off       | 0.90              | --                   | 0.71                     | --                   | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |                |
| 11/15/05 | s     | Off                    | On        | 0.90              | 0.00                 | 0.71                     | 0.00                 | 35             | 16             | 16             | 22             | 23             | 18             | 23             | 23             | 23             | 24             |                |
| 12/6/05  | t     | Off                    | On        | 2.49              | 0.00                 | 0.70                     | 0.01                 | 22             | 20             | 19             | 24             | 24             | 22             | 26             | 23             | 24             | 25             |                |
| 1/4/06   | u     | Off                    | On        | 6                 | 0.01                 | 0.69                     | 0.03                 | 20             | 20             | 18             | 17             | 23             | 20             | 25             | 19             | 22             | 20             |                |
| 1/18/06  | u     | Off                    | On        | 203               | 0.67                 | 0.69                     | 1.77                 | 22             | 19             | 19             | 20             | 19             | 18             | 21             | 22             | 22             | 23             |                |
| 2/1/06   | v     | Off                    | On        | 316               | 0.38                 | 0.68                     | 1.02                 | 20             | 20             | 18             | 22             | 22             | 18             | 23             | 23             | 22             | 25             |                |
| 2/15/06  | v     | Off                    | On        | 344               | 0.10                 | 0.68                     | 0.25                 | 20             | 19             | 18             | 17             | 19             | 20             | 23             | 19             | 22             | 20             |                |
| 3/1/06   | v     | Off                    | On        | 417               | 0.25                 | 0.67                     | 0.66                 | 21             | 20             | 19             | 19             | 21             | 17             | 24             | 23             | 21             | 21             |                |

**Table 1**  
**Ozone Injection - System Operation Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
Page 2 of 4

| Date     | Notes | OZONE SPARGE SYSTEM    |           |                   |                      |                          |                      | OZ-1           | OZ-2           | OZ-3           | OZ-4           | OZ-5           | OZ-6           | OZ-7           | OZ-8           | OZ-9           | OZ-10          |
|----------|-------|------------------------|-----------|-------------------|----------------------|--------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|          |       | System Status (On/Off) |           | Hourmeter Reading | Period Online Factor | Cumulative Online Factor | Ozone Injected (lbs) | Pressure (psi) |
|          |       | Arrival                | Departure |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |
| 3/16/06  | u     | Off                    | On        | 501               | 0.27                 | 0.67                     | 0.76                 | 20             | 19             | 18             | 17             | 19             | 20             | 23             | 20             | 22             | 20             |
| 3/29/06  | u     | Off                    | On        | 560               | 0.22                 | 0.67                     | 0.53                 | 20             | 20             | 19             | 19             | 20             | 21             | 25             | 21             | 22             | 21             |
| 4/16/06  | u     | Off                    | On        | 624               | 0.17                 | 0.66                     | 0.58                 | 20             | 19             | 18             | 17             | 19             | 20             | 23             | 20             | 23             | 21             |
| 4/25/06  | u     | Off                    | On        | 718               | 0.50                 | 0.66                     | 0.85                 | 20             | 20             | 19             | 18             | 20             | 22             | 24             | 21             | 22             | 20             |
| 5/9/06   | u     | Off                    | On        | 776               | 0.20                 | 0.65                     | 0.52                 | 20             | 19             | 19             | 17             | 19             | 21             | 22             | 20             | 22             | 20             |
| 5/23/06  | u     | Off                    | On        | 834               | 0.20                 | 0.65                     | 0.52                 | 19             | 20             | 18             | 18             | 20             | 20             | 23             | 20             | 23             | 21             |
| 6/6/06   | u     | Off                    | On        | 1,042             | 0.71                 | 0.65                     | 1.87                 | 20             | 19             | 18             | 17             | 19             | 20             | 23             | 20             | 22             | 20             |
| 6/20/06  | w     | Off                    | On        | 1,206             | 0.56                 | 0.65                     | 1.48                 | 19             | 20             | 18             | 18             | 19             | 20             | 25             | 21             | 23             | 21             |
| 7/7/06   | x     | Off                    | Off       | 1,313             | 0.30                 | 0.65                     | 0.96                 | --             | --             | --             | --             | --             | --             | --             | --             | --             | --             |
| 7/28/06  | y     | Off                    | On        | 1,313             | 0.00                 | 0.64                     | 0.00                 | 19             | 17             | 16             | 19             | 24             | 17             | 22             | 19             | 21             | 23             |
| 8/15/06  | u     | Off                    | On        | 1,616             | 0.80                 | 0.64                     | 2.73                 | 19             | 17             | 17             | 16             | 19             | 19             | 23             | 19             | 21             | 21             |
| 8/29/06  | u     | Off                    | On        | 1,801             | 0.63                 | 0.64                     | 1.67                 | 19             | 19             | 17             | 17             | 21             | 18             | 21             | 19             | 22             | 23             |
| 9/12/06  | u     | Off                    | On        | 2,022             | 0.75                 | 0.64                     | 1.99                 | 23             | 19             | 17             | 16             | 19             | 19             | 25             | 19             | 22             | 21             |
| 9/22/06  | u     | Off                    | On        | 2,204             | 0.87                 | 0.64                     | 1.64                 | 21             | 21             | 19             | 20             | 23             | 21             | 26             | 23             | 25             | 27             |
| 10/4/06  | u     | Off                    | On        | 2,313             | 0.43                 | 0.64                     | 0.98                 | 18             | 18             | 17             | 18             | 18             | 18             | 25             | 23             | 22             | 21             |
| 10/18/06 | u     | Off                    | On        | 2,401             | 0.30                 | 0.64                     | 0.79                 | 20             | 19             | 17             | 16             | 18             | 19             | 20             | 20             | 21             | 27             |
| 10/31/06 | w     | Off                    | On        | 2,516             | 0.42                 | 0.63                     | 1.04                 | 22             | 20             | 19             | 20             | 19             | 19             | 23             | 21             | 25             | 23             |
| 11/14/06 | u     | Off                    | On        | 2,636             | 0.41                 | 0.63                     | 1.08                 | 18             | 18             | 17             | 17             | 18             | 18             | 22             | 24             | 22             | 24             |
| 11/28/06 | u     | Off                    | On        | 2,744             | 0.37                 | 0.63                     | 0.97                 | 20             | 20             | 19             | 20             | 22             | 21             | 25             | 25             | 22             | 23             |
| 12/14/06 | u     | Off                    | On        | 2,801             | 0.17                 | 0.63                     | 0.51                 | 19             | 19             | 18             | 18             | 19             | 19             | 22             | 22             | 23             | 22             |
| 12/26/06 | u     | Off                    | On        | 2,906             | 0.42                 | 0.62                     | 0.95                 | 20             | 20             | 19             | 20             | 21             | 20             | 25             | 25             | 20             | 24             |
| 1/15/07  | u     | Off                    | On        | 2,983             | 0.18                 | 0.62                     | 0.69                 | 19             | 20             | 18             | 18             | 19             | 19             | 22             | 23             | 22             | 22             |
| 1/29/07  | v     | Off                    | On        | 3,076             | 0.32                 | 0.62                     | 0.84                 | 20             | 20             | 19             | 20             | 20             | 20             | 24             | 21             | 23             | 24             |
| 2/6/07   | u     | Off                    | On        | 3,156             | 0.48                 | 0.62                     | 0.72                 | 19             | 20             | 18             | 17             | 19             | 19             | 21             | 24             | 21             | 23             |
| 2/21/07  | u     | Off                    | On        | 3,303             | 0.47                 | 0.62                     | 1.32                 | 20             | 21             | 20             | 20             | 18             | 21             | 23             | 21             | 25             | 23             |
| 3/5/07   | u     | Off                    | On        | 3,378             | 0.30                 | 0.61                     | 0.68                 | 19             | 20             | 18             | 18             | 18             | 20             | 21             | 23             | 22             | 22             |
| 3/19/07  | u     | Off                    | On        | 3,476             | 0.33                 | 0.61                     | 0.88                 | 20             | 21             | 20             | 19             | 18             | 21             | 23             | 24             | 23             | 24             |
| 4/4/07   | u     | Off                    | On        | 3,515             | 0.12                 | 0.61                     | 0.35                 | 19             | 20             | 18             | 17             | 18             | 19             | 21             | 21             | 21             | 22             |
| 4/18/07  | u     | Off                    | On        | 3,606             | 0.31                 | 0.60                     | 0.82                 | 21             | 21             | 20             | 20             | 18             | 21             | 24             | 24             | 24             | 23             |
| 5/10/07  | u     | Off                    | On        | 3,676             | 0.15                 | 0.60                     | 0.63                 | 19             | 20             | 19             | 17             | 18             | 19             | 20             | 23             | 20             | 21             |
| 5/25/07  | u     | Off                    | On        | 3,758             | 0.26                 | 0.60                     | 0.74                 | 22             | 21             | 20             | 19             | 19             | 21             | 22             | 22             | 22             | 23             |
| 6/4/07   | u     | Off                    | On        | 3,801             | 0.18                 | 0.59                     | 0.39                 | 18             | 20             | 18             | 18             | 17             | 19             | 19             | 20             | 21             | 20             |
| 6/18/07  |       | On                     | On        | 4,137             | 1.00                 | 0.60                     | 3.02                 | 20             | 20             | 19             | 19             | 19             | 20             | 22             | 22             | 20             | 22             |
| 7/2/07   |       | On                     | On        | 4,373             | 0.70                 | 0.60                     | 2.12                 | 15             | 21             | 19             | 18             | 20             | 19             | 24             | 21             | 21             | 23             |
| 7/16/07  |       | On                     | On        | 4,409             | 0.11                 | 0.59                     | 0.32                 | 18             | 20             | 20             | 19             | 21             | 20             | 26             | 23             | 22             | 25             |
| 8/8/07   |       | On                     | On        | 4,961             | 1.00                 | 0.60                     | 4.97                 | 13             | 20             | 20             | 18             | 20             | 18             | 29             | 22             | 20             | 24             |
| 8/27/07  |       | On                     | On        | 5,411             | 0.99                 | 0.60                     | 4.05                 | 14             | 21             | 19             | 20             | 21             | 19             | 30             | 20             | 21             | 21             |
| 9/13/07  |       | On                     | On        | 5,822             | 1.01                 | 0.61                     | 3.70                 | 22             | 21             | 21             | 23             | 21             | 22             | 30             | 20             | 21             | 21             |
| 9/27/07  |       | On                     | On        | 6,155             | 0.99                 | 0.61                     | 3.00                 | 28             | 25             | 25             | 27             | 25             | 26             | 32             | 21             | 26             | 25             |
| 10/29/07 |       | On                     | On        | 6,917             | 0.99                 | 0.62                     | 6.86                 | 28             | 25             | 24             | 25             | 33             | 32             | 32             | 21             | 30             | 30             |

**Table 1**  
**Ozone Injection - System Operation Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
Page 3 of 4

| Date  | Notes | OZONE SPARGE SYSTEM    |           |                   |                      |                          |                      | OZ-1           | OZ-2           | OZ-3           | OZ-4           | OZ-5           | OZ-6           | OZ-7           | OZ-8           | OZ-9           | OZ-10          |    |
|---|-------|------------------------|-----------|-------------------|----------------------|--------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|
|   |       | System Status (On/Off) |           | Hourmeter Reading | Period Online Factor | Cumulative Online Factor | Ozone Injected (lbs) | Pressure (psi) |    |
|   |       | Arrival                | Departure |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| 11/26/07  |       | On                     | On        | 7,591             | 1.00                 | 0.62                     | 6.07                 | 26             | 22             | 24             | 25             | 31             | 30             | 32             | 22             | 30             | 30             |    |
| 12/31/07  |       | On                     | On        | 8,425             | 0.99                 | 0.63                     | 7.51                 | 26             | 20             | 24             | 24             | 30             | 32             | 32             | 30             | 28             | 30             |    |
| 1/28/08   |       | On                     | On        | 9,103             | 1.01                 | 0.63                     | 6.10                 | 26             | 21             | 22             | 21             | 26             | 30             | 28             | 26             | 27             | 27             |    |
| 2/25/08   |       | On                     | On        | 9,778             | 1.00                 | 0.64                     | 6.08                 | 23             | 19             | 22             | 20             | 25             | 30             | 30             | 28             | 27             | 28             |    |
| 3/24/08   |       | On                     | On        | 10,475            | 1.00                 | 0.64                     | 6.27                 | 25             | 20             | 21             | 20             | 24             | 30             | 28             | 27             | 26             | 27             |    |
| 4/28/08   |       | On                     | On        | 11,317            | 1.00                 | 0.65                     | 7.58                 | 24             | 22             | 20             | 22             | 22             | 30             | 29             | 24             | 26             | 26             |    |
| 5/26/08   |       | On                     | On        | 11,992            | 1.00                 | 0.65                     | 6.08                 | 23             | 20             | 22             | 22             | 23             | 30             | 30             | 25             | 27             | 28             |    |
| 6/30/08   |       | On                     | On        | 12,828            | 1.00                 | 0.66                     | 7.52                 | 25             | 22             | 21             | 23             | 22             | 31             | 29             | 26             | 27             | 26             |    |
| 7/28/08   |       | On                     | On        | 13,498            | 1.00                 | 0.66                     | 6.03                 | 22             | 26             | 24             | 28             | 23             | 30             | 22             | 27             | 29             | 21             |    |
| 8/25/08   |       | On                     | On        | 14,261            | 1.00                 | 0.66                     | 6.87                 | 18             | 15             | 25             | 14             | 19             | 22             | 23             | 25             | 24             | 20             |    |
| 9/29/08   |       | On                     | On        | 15,100            | 1.00                 | 0.67                     | 7.55                 | 20             | 14             | 15             | 16             | 18             | 28             | 28             | 20             | 19             | 22             |    |
| 10/27/08  |       | On                     | On        | 15,358            | 0.38                 | 0.67                     | 2.32                 | 20             | 16             | 16             | 17             | 20             | 28             | 28             | 18             | 19             | 21             |    |
| 11/24/08  |       | On                     | On        | 16,028            | 1.00                 | 0.67                     | 6.03                 | 20             | 15             | 15             | 15             | 18             | 25             | 25             | 18             | 16             | 20             |    |
| Sparge time per cycle (min)   |       |                        |           |                   |                      |                          |                      | 7              | 7              | 7              | 7              | 7              | 7              | 7              | 7              | 7              | 7              |    |
| Number of Cycles per Day  |       |                        |           |                   |                      |                          |                      | 20             | 20             | 20             | 20             | 20             | 20             | 20             | 20             | 20             | 20             | 20 |
| <b>Reporting Period: Fourth Quarter 2008 (09/01/2008 to 11/30/2008)</b> |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| Total Hours Operational: 24,105   |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| Total Pounds Ozone Injected: 225  |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| Period Hours Operational: 1767  |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| Period Percent Operational: 81%   |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |
| Period Pounds Ozone Injected: 16  |       |                        |           |                   |                      |                          |                      |                |                |                |                |                |                |                |                |                |                |    |

**Table 1**  
**Ozone Injection - System Operation Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
Page 4 of 4

**Definitions:**

psi Pounds per square inch  
-- Data not available  
NA Not applicable  
lbs Pounds

**Notes:**

Hour Meter Formula adjusted 12/19/07

**June 4, 2007 - Control Panel retrofit installed.**

System cycles through program 18 times per day, for 53% utilization

- a Troubleshooting time counter
- b Hourmeter replaced
- c Solenoid 8 has high pressure, taken offline
- d Solenoid 3 leaking, taken off line
- e Pressures not properly recorded
- f Ozone generator hose ruptured on effluent side to solenoid manifold. No Readings.
- g System down due to bad GFI
- h New GFI was installed.
- i Fan in compressor broken and tubing from compressor to manifold needs to be replaced. System left off until repairs made.
- j Installed new motor fan and manifold fittings, restarted system.
- k OZ-3 turned off due to high pressure of over 60 psi.
- l OZ-5 too brittle. Left off until lines are replaced.
- m OZ-10 turned off due to leak in secondary containment
- n Hourmeter reading not correct, will check next visit
- o Hourmeter not working properly.
- p Pressure gauge stuck at 16 psi.
- q New hourmeter, panel fan, and GFCI installed
- r Fuse blown in ozone generator, system left off
- s Replaced tubing to all wells and replaced ozone generator circuit board and pressure gauge
- t System down due to tripped GFI; foam on door may have been pressing reset button. Foam removed.
- u Ozone sensor tripped; system restarted.
- v Rainbird meter malfunction.
- w System down time due to tripped GFI; system restarted.
- x System off due to bad compressor.
- y Compressor repaired; system restarted.

**Table 2**  
**Ozone Injection - Groundwater Monitoring Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
Page 1 of 1

| Date       | Notes | Monitoring Well: MW-1 |           |               |                |                |                      |                        |              | Monitoring Well: MW-7 |           |               |                |                |                      |                        |               |
|------------|-------|-----------------------|-----------|---------------|----------------|----------------|----------------------|------------------------|--------------|-----------------------|-----------|---------------|----------------|----------------|----------------------|------------------------|---------------|
|            |       | ORP (mV)              | DO (mg/l) | TPHg (µg/L)   | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Xylenes (total) (µg/L) | MtBE (µg/L)  | ORP (mV)              | DO (mg/l) | TPHg (µg/L)   | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Xylenes (total) (µg/L) | MtBE (µg/L)   |
| 4/16/2003  | a     | NM                    | NM        | 510           | 57             | 0.62           | 29                   | 61                     | 160          | NM                    | NM        | <25,000       | <250           | <250           | <250                 | <500                   | 37,000        |
| 6/23/2003  | a     | NM                    | NM        | 75            | <0.50          | <0.50          | <0.50                | 5.3                    | 12           | NM                    | NM        | 20,000        | 260            | <0.50          | <0.50                | <1.0                   | 20,000        |
| 8/29/2003  | a     | NM                    | NM        | 11,000        | 64             | <1.0           | 330                  | 1,400                  | 440          | NM                    | NM        | <10,000       | <100           | <100           | <100                 | <200                   | 24,000        |
| 9/18/2003  |       | NM                    | NM        | 390           | 2.3            | <0.50          | 3.6                  | 31                     | 30           | NM                    | NM        | --            | --             | --             | --                   | --                     | --            |
| 10/16/2003 |       | NM                    | NM        | 2,100         | 6.0            | <0.50          | 24.0                 | 120                    | 110          | NM                    | NM        | --            | --             | --             | --                   | --                     | --            |
| 11/17/2003 |       | NM                    | NM        | 130           | 0.51           | <0.50          | 2.1                  | 7.9                    | 43           | NM                    | NM        | 16,000        | <130           | <130           | <130                 | <250                   | 17,000        |
| 12/5/2003  |       | NM                    | NM        | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | 36           | NM                    | NM        | 12,000        | <100           | <100           | <100                 | <200                   | 19,000        |
| 1/16/2004  | b     | NM                    | NM        | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <2.0         | NM                    | NM        | 17,000        | 160            | 270            | <130                 | <250                   | 19,000        |
| 2/3/2004   |       | 238                   | NM        | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <2.0         | 72                    | NM        | 10,000        | <25            | <25            | <25                  | <50                    | 15,000        |
| 3/24/2004  | b     | 169                   | NM        | <b>55</b>     | <0.50          | <0.50          | <b>0.80</b>          | <b>2.9</b>             | <b>7.8</b>   | 56                    | NM        | <b>13,000</b> | <100           | <100           | <100                 | <200                   | <b>15,000</b> |
| 4/14/2004  | b     | 0.4                   | NM        | <b>23,000</b> | <b>310</b>     | <b>10</b>      | <b>590</b>           | <b>2400</b>            | <b>1700</b>  | 42                    | NM        | <b>9,000</b>  | <50            | <50            | <50                  | <100                   | <b>11,000</b> |
| 5/11/2004  | c     | NM                    | NM        | <b>7,800</b>  | <b>160</b>     | <1.0           | <b>170</b>           | <b>700</b>             | <b>720</b>   | -3                    | NM        | <b>8,300</b>  | <50            | <50            | <50                  | <100                   | <b>11,000</b> |
| 6/14/2004  |       | 20                    | 5.25      | <b>110</b>    | <0.50          | <0.50          | <b>1.0</b>           | <b>6.4</b>             | <b>3.4</b>   | 35                    | 1.45      | <5,000        | <50            | <50            | <50                  | <100                   | <b>6,500</b>  |
| 7/26/2004  |       | NM                    | NM        | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>3.2</b>   | NM                    | NM        | <5,000        | <50            | <50            | <50                  | <100                   | <b>3,100</b>  |
| 8/12/2004  |       | 171                   | 0.07      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>0.80</b>  | 117                   | 0.06      | <b>2,100</b>  | <10            | <10            | <10                  | <20                    | <b>2,700</b>  |
| 9/10/2004  |       | 180                   | 0.08      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>5.7</b>   | 122                   | 0.07      | <b>3,100</b>  | <13            | <13            | <13                  | <25                    | <b>4,400</b>  |
| 10/5/2004  |       | 175                   | 0.09      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <0.50        | 117                   | 0.08      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>7.1</b>    |
| 11/5/2004  | d     | 117                   | 0.05      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>0.89</b>  | 210                   | 0.06      | <b>50</b>     | <0.50          | <0.50          | <0.50                | <1.0                   | <b>1.1</b>    |
| 12/2/2004  |       | 109                   | 0.03      | <b>83</b>     | <b>0.83</b>    | <0.50          | <0.50                | <b>1.2</b>             | <b>44</b>    | 214                   | 0.03      | <b>180</b>    | <b>1.6</b>     | <0.50          | <b>66</b>            | <b>4.5</b>             | <b>51</b>     |
| 1/13/2005  |       | 105                   | 0.04      | <b>1,100</b>  | <b>26</b>      | <b>1.2</b>     | <b>2.10</b>          | <b>70</b>              | <b>630</b>   | 201                   | 0.05      | <b>1,000</b>  | <b>25</b>      | <b>1</b>       | <b>1.9</b>           | <b>68</b>              | <b>460</b>    |
| 2/25/2005  | c,f   | --                    | 2.67      | <b>24,000</b> | <b>350</b>     | <b>10</b>      | <b>820</b>           | <b>2,200</b>           | <b>1,300</b> | 21                    | 2.05      | <b>680</b>    | <2.0           | <2.0           | <b>2.3</b>           | <b>58</b>              | <b>2,500</b>  |
| 3/8/2005   | g     | -35                   | 4.43      | <b>23,000</b> | <b>410</b>     | <1.0           | <b>1,100</b>         | <b>2,300</b>           | <b>1,300</b> | NR                    | NR        | --            | --             | --             | --                   | --                     | --            |
| 4/5/2005   |       | -30                   | 4.56      | <b>34,000</b> | <b>300</b>     | <1.0           | <b>910</b>           | <b>2,000</b>           | <b>1,100</b> | 135                   | 6.53      | <5,000        | <.50           | <.50           | <.50                 | <1.00                  | <b>19,000</b> |
| 5/4/2005   |       | -59                   | 2.40      | <b>26,000</b> | <b>220</b>     | <b>7.4</b>     | <b>790</b>           | <b>2,100</b>           | <b>860</b>   | -24                   | 1.13      | <2,000        | <0.50          | <0.50          | <0.50                | <1.0                   | <b>7,100</b>  |
| 6/2/2005   |       | -20                   | 7.34      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>3.5</b>   | -12                   | 1.01      | <b>3500</b>   | <0.50          | <0.50          | <0.50                | <1.0                   | <b>4,000</b>  |
| 7/7/2005   | i,j   | 142                   | 7.42      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>0.61</b>  | 154                   | 1.40      | <b>5000</b>   | <0.50          | <0.50          | <0.50                | <1.0                   | <b>8,900</b>  |
| 9/23/2005  |       | 16                    | 7.77      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <0.50        | 56                    | 1.39      | <500          | <5.0           | <5.0           | <5.0                 | <10                    | <b>1,900</b>  |
| 10/23/2005 |       | 154                   | 7.13      | <50           | <0.50          | <0.50          | <0.50                | <1.0                   | <b>0.56</b>  | 191                   | 1.59      | <250          | <2.5           | <2.5           | <2.5                 | <5                     | <b>680</b>    |
| 11/1/2005  | k     | --                    | --        | --            | --             | --             | --                   | --                     | --           | --                    | --        | --            | --             | --             | --                   | --                     | --            |

**Definitions:**

TPHg = Total petroleum hydrocarbons as gasoline  
MtBE = Methyl tert-butyl ether  
µg/L = Micrograms per liter

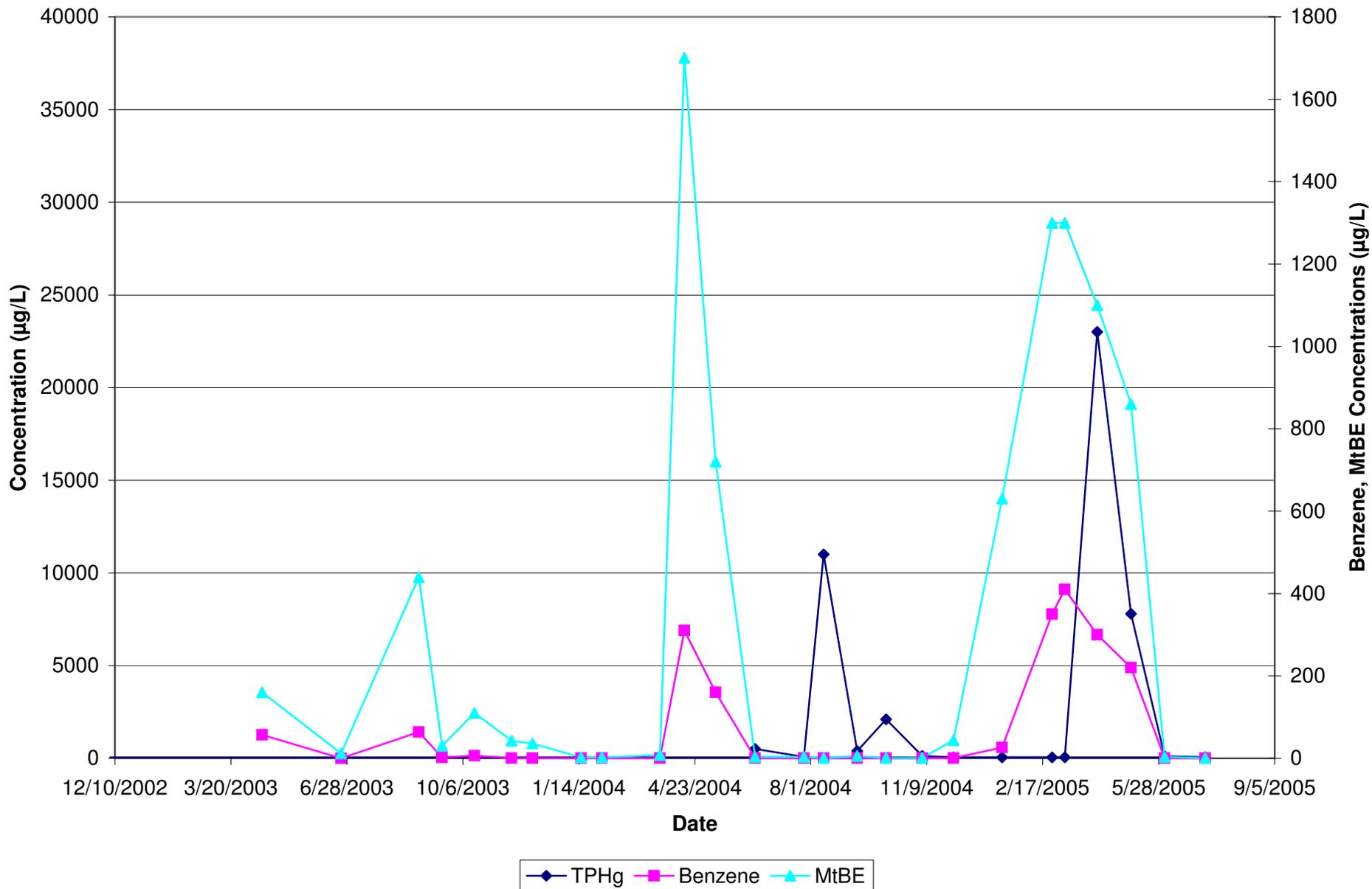
ORP = Oxidation Reduction Potential  
DO = Dissolved Oxygen  
mV = Millivolts  
mg/l = Milligrams per liter

**Notes:**

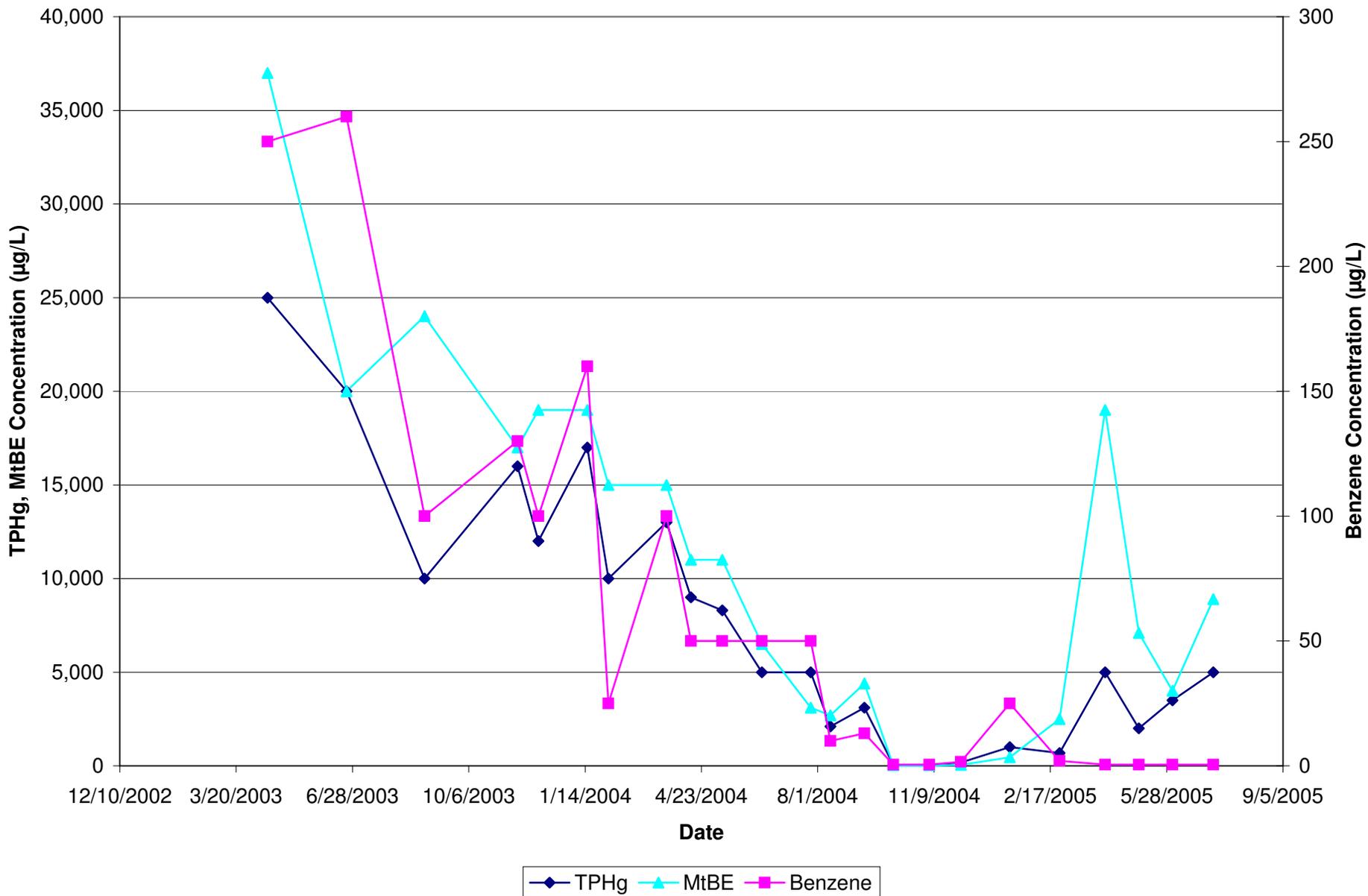
- Data not available
- NM Not Measured
- a Sampled by Gettler-Ryan, Inc.
- b Hydrocarbon in gasoline range does not match laboratory gasoline standard.
- c ORP reading under the range
- d Quantity of unknown hydrocarbon(s) in sample based on gasoline.
- e Data not available at time of reporting
- f MW-7 Estimated value of MtBE; concentration exceeded the calibration of analysis
- g Car parked on MW-7.
- h Data not available at time of reporting
- i Siloxane peaks were found in the sample which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 58 ug/L. (MW-1).
- j The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern. (MW-1)
- k Sampling discontinued at the request of ConocoPhillips

# Graphs

**Graph 1**  
**MW-1 TPHg, Benzene, and MtBE Groundwater Concentrations**  
 76 Service Station No. 1871  
 96 MacArthur Blvd., Oakland, California



**Graph 2**  
**MW-7 TPHg, Benzene, and MtBE Groundwater Concentrations**  
 76 Service Station No. 1871  
 96 MacArthur Blvd., Oakland, California



**Appendix A**  
**Field Notes**

# Ozone Injection System Data Sheet

Station No.: 1871

City: Oakland

|            |          |               |            |            | Well I.D. 02-1 |       |          |           | Well I.D. 02-2 |       |          |           | Well I.D. 02-3  |       |          |           |                |  |  |  |
|------------|----------|---------------|------------|------------|----------------|-------|----------|-----------|----------------|-------|----------|-----------|-----------------|-------|----------|-----------|----------------|--|--|--|
| Date       | Notes    | Status ON/OFF | Cycles/Day | Hour Meter | Pressure       | Temp. | Run Time | Flow Rate | Pressure       | Temp. | Run Time | Flow Rate | Pressure        | Temp. | Run Time | Flow Rate |                |  |  |  |
|            |          |               |            |            | (psi)          | (°F)  | (min)    | (acfm)    | (psi)          | (°F)  | (min)    | (acfm)    | (psi)           | (°F)  | (min)    | (acfm)    |                |  |  |  |
| 29 Sept 06 |          | on/off        | 20         | 15100      | 20             |       | 7        |           | 14             |       | 7        |           | 15              |       | 7        |           |                |  |  |  |
| 27 Sept 06 |          | on/off        | 20         | 15308      | 20             |       | 7        |           | 16             |       | 7        |           | 16              |       | 7        |           |                |  |  |  |
| 24 Sept 06 |          | on/off        | 20         | 16028      | 20             |       | 7        |           | 15             |       | 7        |           | 15              |       | 7        |           |                |  |  |  |
|            |          |               |            |            | Well I.D. 02-4 |       |          |           | Well I.D. 02-5 |       |          |           | Well I.D. 02-6  |       |          |           | Well I.D. 02-7 |  |  |  |
| Date       | Pressure | Temp.         | Run Time   | Flow Rate  | Pressure       | Temp. | Run Time | Flow Rate | Pressure       | Temp. | Run Time | Flow Rate | Pressure        | Temp. | Run Time | Flow Rate |                |  |  |  |
|            | (psi)    | (°F)          | (min)      | (acfm)     | (psi)          | (°F)  | (min)    | (acfm)    | (psi)          | (°F)  | (min)    | (acfm)    | (psi)           | (°F)  | (min)    | (acfm)    |                |  |  |  |
| 29 Sept 06 | 16       |               | 7          |            | 16             |       | 7        |           | 28             |       | 7        |           | 28              |       | 7        |           |                |  |  |  |
| 27 Sept 06 | 17       |               | 7          |            | 20             |       | 7        |           | 28             |       | 7        |           | 28              |       | 7        |           |                |  |  |  |
| 24 Sept 06 | 15       |               | 7          |            | 16             |       | 7        |           | 28             |       | 7        |           | 28              |       | 7        |           |                |  |  |  |
|            |          |               |            |            | Well I.D. 02-8 |       |          |           | Well I.D. 02-9 |       |          |           | Well I.D. 02-10 |       |          |           | Well I.D.      |  |  |  |
| Date       | Pressure | Temp.         | Run Time   | Flow Rate  | Pressure       | Temp. | Run Time | Flow Rate | Pressure       | Temp. | Run Time | Flow Rate | Pressure        | Temp. | Run Time | Flow Rate |                |  |  |  |
|            | (psi)    | (°F)          | (min)      | (acfm)     | (psi)          | (°F)  | (min)    | (acfm)    | (psi)          | (°F)  | (min)    | (acfm)    | (psi)           | (°F)  | (min)    | (acfm)    |                |  |  |  |
| 29 Sept 06 | 20       |               | 7          |            | 19             |       | 7        |           | 22             |       | 7        |           |                 |       |          |           |                |  |  |  |
| 27 Sept 06 | 16       |               | 7          |            | 19             |       | 7        |           | 21             |       | 7        |           |                 |       |          |           |                |  |  |  |
| 24 Sept 06 | 16       |               | 7          |            | 16             |       | 7        |           | 20             |       | 7        |           |                 |       |          |           |                |  |  |  |

## Ozone System Maintenance and Inspection Log

| Date       | Check/Repair Leaks | Check Hoses Fittings & Pipes | Check Air Filter (Document Date Replaced) | Check & Test Safety Interlock | Check Sparge Blower V-Belt Tension & Conditions | Check Controller Program | Change Blower Oil | Sparge Blower Grease Bearings | Sparge Blower Repair/Replace | Comments            |
|------------|--------------------|------------------------------|---|-------------------------------|---|--------------------------|-------------------|-------------------------------|------------------------------|---------------------|
| 29 Sept 06 | OK                 | OK                           | OK  | OK                            | N/A   | OK                       | N/A               | N/A                           | OK                           | 10-27 Sept O3 down  |
| 27 Sept 06 | OK                 | OK                           | OK  | OK                            | N/A   | OK                       | N/A               | N/A                           | OK                           | for well but repair |
| 24 Sept 06 | OK                 | OK                           | OK  | OK                            | N/A   | OK                       | N/A               | N/A                           | OK                           |                     |

Notes:                    A = System down-breaker thrown      B = Compressor Overload.                    C = Ozone sensor Tripped.                    D = Temp. sensor tripped.