

**RECEIVED**

9:04 am, Apr 05, 2010

Alameda County  
Environmental Health



76 Broadway  
Sacramento, California 95818

April 1, 2010

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

Re: **Quarterly Summary Report—First Quarter 2010**  
**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,

A handwritten signature in black ink, appearing to read "Terry L. Grayson". The signature is fluid and cursive, with a large, sweeping underline that extends across the width of the signature.

Terry L. Grayson  
Site Manager  
Risk Management & Remediation

March 30, 2010

Ms. Barbara J. Jakub  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

**Re: Quarterly Summary Report -  
First Quarter 2010**

76 Service Station No, 1871  
96 MacArthur Boulevard  
Oakland, California  
RO#0455  
AOC 1120



Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) is submitting this quarterly summary report for subject site.

As monitoring and sampling at this site is performed semi-annually during the second and fourth quarters and no monitoring and sampling was performed during this quarter, monitoring and sampling data presented in this report is fourth quarter 2009 data. First Quarter 2010 O&M data is presented.

Sincerely,

**DELTA CONSULTANTS**

A handwritten signature in blue ink that reads "James B. Barnard".

James B. Barnard  
Project Manager  
Registered California Professional Geologist No.  
7478



cc: Mr. Terry Grayson - ConocoPhillips (electronic copy only)

**QUARTERLY SUMMARY REPORT  
FIRST QUARTER 2010  
76 Service Station No. 1871  
96 MacArthur Boulevard  
Oakland, California  
County: Alameda**

**SITE 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).

**SITE BACKGROUND AND ACTIVITY**

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

October 1992: Roux installed three 4-inch diameter groundwater monitoring wells (MW-1 through MW-3) 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-walled steel UST. Confirmation sampling was performed.

February 1996: The Alameda County Department of Environmental Health (ACEH) approved Unocal's request to reduce the groundwater monitoring and sampling frequency from quarterly to semiannually (I(EI, 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 (RI3CA) 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 (MW-6 through MW-8), and advanced nine soil borings (B-4 through B-12) 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. (Environ Strategy),

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

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

### **SENSITIVE RECEPTORS**

On September 16, 1998, Gettler-Ryan, Inc. conducted a search of California Department of Water Resources (DWR) records to locate any municipal or domestic wells located within a one-half mile radius of the site. One water producing well was located approximately one-half mile north of the site. The use of this well is unknown. The nearest body of surface water located is Glen Echo Creek, approximately 1,000 feet northwest of the site.

No potential receptors for impacted groundwater were identified within one-quarter mile distance of the site during the 1999 RBCA evaluation.

## **GROUNDWATER MONITORING AND SAMPLING**

As monitoring and sampling at this site is performed semi-annually during the second and fourth quarters and **no monitoring and sampling was performed during this quarter**, monitoring and sampling data presented in this report is fourth quarter 2009 data.

The groundwater monitoring well network, consisting of one onsite and six offsite monitoring wells, was monitored and sampled on a quarterly basis between January 2002 and June 2009. The site is now monitored semi-annually during the second and fourth quarters. During the most recent groundwater sampling event conducted on December 16, 2009 reported depth to groundwater ranged from 6.59 feet (MW-10) to 16.47 feet (MW-9) below top of casing (TOC). All seven wells were gauged and sampled during this quarter,

The groundwater flow direction was reported west at a gradient of 0.04. This varies from the gradient of 0.036 to the south reported during the previous sampling event (June 23, 2009). Reported historical groundwater flow direction has been predominantly to the southwest. A historical groundwater flow direction (rose) diagram is included as Attachment A.

Site wells are analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX compounds), methyl tert butyl ether (MTBE), tert butyl alcohol (TBA), and ethanol by EPA method 8260B.

Fourth quarter 2009 Dissolved groundwater concentrations are reported as follows:

**TPHg** was detected in three of the seven sampled wells with a maximum concentration of 4,600 micrograms per liter (ug/L) (MW-1). This is an increase from the maximum concentration of 740 ug/L reported in the sample from well MW-1 during the previous sampling event in June 2009, however it is consistent with recent historical concentrations. TPHg concentrations in well MW-1 have ranged between 2,200 ug/L and 8,800 ug/L since September of 2006, with the exception of the lack of detection of TPHg in September 2007, and the detection of 740 ug/L during the previous sampling event in June 2009. MW-7 and MW-9 showed concentrations of 150 ug/L, and 86 ug/L, respectively, during the most recent sampling event (12/16/09). However, according to the laboratory report data qualifier A90, the TPHg detection in well MW-9 is entirely due to the presence of MTBE, and is not actually TPHg.

**Benzene** was detected in one of the seven sampled wells with a maximum concentration of 10 ug/L in MW-1. This is consistent with recent historical fluctuations in the benzene concentration in this well, remaining under 30 ug/L since the first quarter of 2007. Benzene was not detected in any wells

during the previous sampling event in June 2009. Benzene concentrations have been decreasing steadily since the start of the ozone injection system in 2003, from a maximum detected concentration of 7,700 ug/L in 1997 to the most recently detected concentration of 10 ug/L (12/16/09).

**Toluene** was under laboratory reporting limits in all wells during this sampling period.

**Ethylbenzene** was detected in one of the seven wells with a maximum concentration of 270 ug/L in MW-1. This is the highest concentration of ethylbenzene detected in well MW-1 since March of 2008, when ethylbenzene was detected at 430 ug/L.

**Total Xylenes** were detected in one of the seven wells with a maximum concentration of 140 ug/L in MW-1. This is an increase from the previous sampling event in June 2009 of 12 ug/L, although it is consistent with recent historical concentrations.

**MTBE** was detected in five of the seven sampled wells with concentrations ranging from 2.4 ug/L (MW-8) to 130 ug/L (MW-9). The most recent (12/16/09) concentration in MW-9 is the lowest concentration of MTBE reported in this well since the sampling of this well commenced. MTBE concentrations in well MW-9 have shown a decreasing trend since the maximum historical concentration of 2,800 ug/L in December 2005. Data from the most recent sampling event (12/16/09) shows that samples from wells MW-1, MW-6, MW-7, and MW-8, had concentrations of 52 ug/L, 2.7 ug/L, 3.7 ug/L, and 2.4 ug/L, respectively, during the most recent sampling event (12/16/09).

**TBA** was detected in one of the seven wells at a maximum concentration of 22 ug/L in MW-9. This is a decrease from a maximum concentration of 500 ug/L in MW-1 during the previous sampling event.

Standard sampling procedures could not be followed due to slow groundwater recharge. Details are described as follows:

During the sampling of wells MW-10 and MW-11, the wells were sampled prior to allowing the water level to recharge to 80% of the pre-purge static water level. In both cases, the wells were allowed two hours to recharge following purging, prior to sampling. Additionally, well MW-1 was not purged of three casing volumes (21 gallons) prior to sampling. After purging 11 gallons, the well was dry. The well was allowed to recover for 2 hours, but remained dry.

Laboratory data qualifier A01 was noted on MTBE analysis on sample MW-9, and on all analyses on sample MW-1. Lab data qualifier A01 is defined as: Practical Quantitation Limits and Method Detection Limits are raised due to sample dilution. The elevated analyte concentrations required dilution of the

samples in order for the samples to be within the laboratory instrumentation's (EPA Method 8260) calibration range.

Laboratory data qualifier A90 was noted on the TPHg analysis for sample MW-9. Lab qualifier A90 is defined as: TPPH does not exhibit a gasoline pattern. TPPH is entirely due to MTBE.

A copy of TRC's *Semi-Annual Monitoring Report – July through December 2009*, dated January 11, 2009, is included as Attachment B.

## **REMEDIATION STATUS**

**O&M activities were performed during first quarter 2010** by Environ Strategy.

April 2002: Gettler-Ryan installed an ozone sparge system utilizing 10 ozone sparge wells completed to maximum depths of 25 to 30 feet bgs. The system was activated on April 8, 2002. Since then approximately 220 pounds of ozone have been injected.

During the current reporting period, December 1, 2009 through February 28, 2010, Environ Strategy continued operation and maintenance activities on the ozone sparging system. During this period, the system was 100% operational, operating for 2,687 hours, injecting 24 lbs of ozone. Since startup, total operational time is 32,844 hours and total ozone injected is 296 pounds.

A copy of Environ Strategy's *First Quarter 2010 Ozone Injection O&M Report*, dated March 15, 2010, has been included as Attachment C.

## **CONCLUSIONS AND RECOMMENDATIONS**

Soil samples have shown maximum TPHg, benzene, and MTBE concentrations of 7,400 mg/kg, 3.1 mg/kg and 1 mg/kg, respectively. During the most recent monitoring and sampling event (12/16/09), the maximum TPHg and MTBE concentrations were 4600 ug/L (MW-1) and 130 ug/L (MW-9).

An ozone sparge system was activated on April 8, 2002. At that time one monitoring well (MW- 1) was onsite; monitoring wells MW-2 through MW-5 had been destroyed. Concentration data from MW-1 suggests that ozone sparging initially reduced petroleum hydrocarbon concentrations in groundwater, as evidenced in the decreasing TPHg concentrations in MW-1. Concentrations of TPHg have been steady to decreasing in all wells monitored since activation of the ozone sparge system.

Down-gradient offsite migration of MTBE is based on the historical analytical results of groundwater samples from monitoring wells MW-6, MW-7, and

MW-8, located adjacent to the site, and MW-9, located more than 150 feet and cross-gradient from the onsite source. With the exception of MW-9, MTBE concentrations are noted to be steadily decreasing in all wells monitored since the activation of the ozone sparge system. Assessment of down-gradient migration of MTBE, e.g., rate of migration, has not yet been addressed.

Delta submitted a *Work Plan for CPT Vertical and Lateral Stratigraphic and Plume Definition* dated February 16, 2009; the current Delta Project Manager has reviewed groundwater concentration data and discovered discrepancies with constituent concentrations and predominant flow direction. Currently, MW-10 is being omitted from the groundwater elevation map due to the large discrepancy in groundwater elevation as compared with other wells associated with the site. Additionally, all wells were last surveyed in 2002, and none of the site's sparge wells have been surveyed. Differences in groundwater elevation may be due to one, or a combination of factors, including incorrect survey data, perched groundwater, and wells screened within or across different water-bearing zones. Surveying of all wells, while completing the sparge well survey, will rule out incorrect survey data as one of the contributing factors for the discrepancies.

Delta recommends that all wells associated with the site be resurveyed prior to moving forward with the proposed scope of work, as accurate gradient and flow direction are essential in determining the locations for further investigation.

Delta will coordinate with TRC to conduct survey activities under existing encroachment permits prior to the next sampling event. If casing elevations are found to differ from existing data, groundwater gradient and flow direction data for the previous 3 year's should be recalculated and used to produce an updated rose diagram.

### **RECENT CORRESPONDENCE**

In a letter dated July 24, 2009, the ACEH requested that, for sites on a quarterly monitoring schedule, groundwater monitoring and sampling be reduced to a semi-annual, unless site specific needs warrant otherwise, Sampling frequency for this site was semi-annual prior to the issuance of this ACEH letter.

### **FOURTH QUARTER 2009 ACTIVITIES**

- TRC conducted monitoring and sampling of the groundwater monitoring well network December 16, 2009, and then prepared *Semi-Annual Monitoring Report July through December 2009*, dated January 11, 2010.



- Delta prepared *Semi-Annual Summary Report July through December 2009*, dated January 21, 2010.

### **FIRST QUARTER 2010 ACTIVITIES**

- Environ Strategy performed O&M activities at the site, and summarized their findings in *First Quarter 2010 Ozone Injection System O&M Report*, dated March 15, 2010.
- Delta summarized fourth quarter 2009 monitoring and sampling data and first quarter 2010 O&M data and prepared a quarterly summary report.

### **SECOND QUARTER 2010 ACTIVITIES**

- TRC will perform semi-annual monitoring and sampling activities and prepare their findings in a semi-annual monitoring report.
- Environ Strategy will perform O&M activities.
- Delta will prepare a semi-annual summary report.

**CONSULTANT:** Delta Consultants

\*\*\*\*\*

### **ATTACHMENTS:**

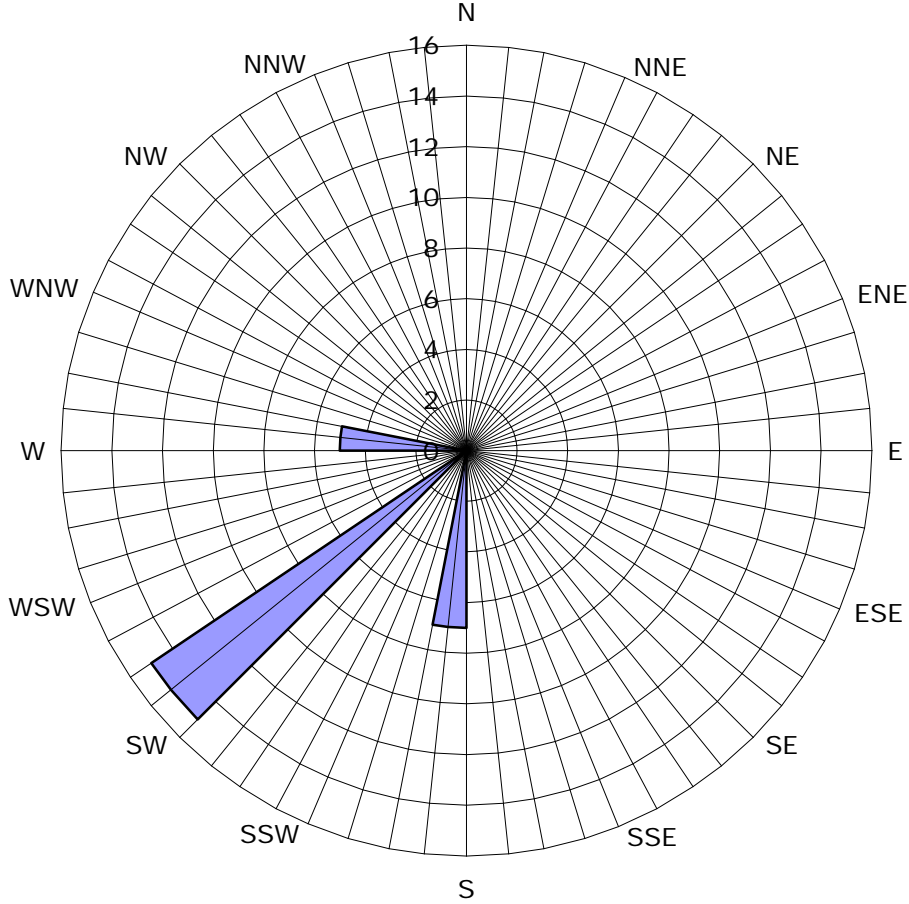
Attachment A – Historical Groundwater Flow Direction (Rose) Diagram  
Attachment B – Semi-Annual Monitoring Report – July through December 2009  
Attachment C – First Quarter 2010 Ozone Injection O&M Report

**ATTACHMENT A**

Historical Groundwater Flow Direction (Rose) Diagram

**Historic Groundwater Flow Directions  
ConocoPhillips Site No. 1871**

96 MacArthur Blvd  
Oakland, California



Legend  
Concentric circles represent  
quarterly monitoring events.  
First Quarter 2004 through  
Fourth Quarter 2009.  
27 data points shown.

■ Groundwater Flow Direction

**ATTACHMENT B**

Semi-Annual Monitoring Report – July through December 2009



123 Technology Drive West  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

DATE: January 11, 2010

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, California 95818

ATTN: MR. TERRY GRAYSON

SITE: 76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

RE: SEMI-ANNUAL MONITORING REPORT  
JULY THROUGH DECEMBER 2009

Dear Mr. Grayson,

Please find enclosed our Semi-Annual 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

  
Anju Farfan  
Groundwater Program Operations Manager

CC: Ms. Lia Holden, Delta Consultants (3 copies)

Enclosures  
20-0400/1871R24.QMS

**SEMI-ANNUAL MONITORING REPORT  
JULY THROUGH DECEMBER 2009**

76 STATION 1871  
96 MacArthur Boulevard  
Oakland, California

Prepared For:

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

By:

*Dennis E. Jensen*

Senior Project Geologist, Irvine Operations

Date: 1/8/10



## LIST OF ATTACHMENTS

Summary Sheet	Summary of Gauging and Sampling Activities
Tables	Table Key Contents of Tables Table 1: Current Fluid Levels and Selected Analytical Results Table 1a: Additional Current Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 2a: Additional Historic Analytical Results Table 2b: Additional Historic Analytical Results
Figures	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map
Graphs	Groundwater Elevations vs. Time TPH-G Concentrations vs. Time Benzene Concentrations vs. Time MTBE Concentrations vs. Time
Field Activities	General Field Procedures Field Monitoring Data Sheet – 12/16/09 Groundwater Sampling Field Notes – 12/16/09
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

**Summary of Gauging and Sampling Activities**  
**July 2009 through December 2009**  
**76 Station 1871**  
**96 MacArthur Boulevard**  
**Oakland, CA**

---

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

Water Sampling Contractor: **TRC**  
Compiled by: **Daniel Lee**

Date(s) of Gauging/Sampling Event: **12/16/09**

---

**Sample Points**

Groundwater wells: **1 onsite, 6 offsite**      Points gauged: **7**      Points sampled: **7**

Purging method: **Submersible pump/bailer**

Purge water disposal: **Crosby and Overton treatment facility**

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: **6.59 feet**      Maximum: **16.47 feet**

Average groundwater elevation (relative to available local datum): **68.87 feet**

Average change in groundwater elevation since previous event: **-0.34 feet**

Interpreted groundwater gradient and flow direction:

    Current event: **0.04 ft/ft, west**

    Previous event: **0.036 ft/ft, south (6/23/09)**

---

**Selected Laboratory Results**

Sample Points with detected **Benzene**: **1**      Sample Points above MCL (1.0 µg/l): **1**  
    Maximum reported benzene concentration: **10 µg/l (MW-1)**

Sample Points with **TPH-G by GC/MS** **3**      Maximum: **4,600 µg/l (MW-1)**

Sample Points with **MTBE 8260B** **5**      Maximum: **130 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)
D	=	duplicate
P	=	no-purge sample

### ANALYTES

DIPE	=	di-isopropyl ether
ETBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
TPH-G	=	total petroleum hydrocarbons with gasoline distinction
TPH-G (GC/MS)	=	total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B
TPH-D	=	total petroleum hydrocarbons with diesel distinction
TRPH	=	total recoverable petroleum hydrocarbons
TAME	=	tertiary amyl methyl ether
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)

### 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. "Prior to the 4<sup>th</sup> quarter, 2009, the word Monitoring was used in table comments interchangeably with the word Gauging. Starting in Q4'09, the word Monitoring is used to include both Gauging and Sampling."

### 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.



**Table 1**  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**December 16, 2009**  
**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 8015 (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</b>			<b>(Screen Interval in feet: 9.5-24.5)</b>											
12/16/09	86.99	14.32	0.00	72.67	-0.44	--	4600	10	ND<1.0	270	140	--	52	
<b>MW-6</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
12/16/09	79.67	9.39	0.00	70.28	-0.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.7	
<b>MW-7</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
12/16/09	80.67	9.42	0.00	71.25	-0.37	--	150	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.7	
<b>MW-8</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
12/16/09	81.71	10.08	0.00	71.63	-0.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
<b>MW-9</b>			<b>(Screen Interval in feet:--)</b>											
12/16/09	82.07	16.47	0.00	65.60	-0.52	--	86	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	130	
<b>MW-10</b>			<b>(Screen Interval in feet:--)</b>											
12/16/09	74.98	6.59	0.00	68.39	0.48	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-11</b>			<b>(Screen Interval in feet:--)</b>											
12/16/09	77.31	15.03	0.00	62.28	-1.05	--	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 Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Post-purge Dissolved Oxygen (mg/l)	Post-purge ORP (mV)
<b>MW-1</b> 12/16/09	ND<20	ND<500	0.66	38
<b>MW-6</b> 12/16/09	ND<10	ND<250	1.55	116
<b>MW-7</b> 12/16/09	ND<10	ND<250	1.08	118
<b>MW-8</b> 12/16/09	ND<10	ND<250	1.24	75
<b>MW-9</b> 12/16/09	22	ND<250	0.99	102
<b>MW-10</b> 12/16/09	ND<10	ND<250	3.31	118
<b>MW-11</b> 12/16/09	ND<10	ND<250	4.62	160

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
11/3/92	--	--	--	--	--	260000	--	2300	4600	3700	17000	--	--	
1/25/93	81.18	--	0.00	--	--	120000	--	2100	4600	4900	22000	--	--	
4/29/93	81.18	13.71	0.00	67.47	--	100000	--	850	2000	4300	19000	--	--	
7/16/93	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	--	--	
1/20/94	81.18	15.17	0.00	66.01	0.03	92000	--	1200	3000	3400	17000	--	--	
4/13/94	81.18	14.44	0.00	66.74	0.73	51000	--	1000	2600	3200	15000	--	--	
7/13/94	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	--	--	
1/10/95	81.18	12.44	0.00	68.74	3.11	810	--	16	18	59	250	--	--	
4/17/95	81.18	12.68	0.00	68.50	-0.24	48000	--	880	530	2500	11000	--	--	
7/24/95	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	--	
1/18/96	81.18	14.21	0.00	66.97	0.64	30000	--	1500	500	3500	13000	2400	--	
4/18/96	86.24	13.40	0.00	72.84	5.87	66000	--	2700	2200	3100	13000	57000	--	
7/24/96	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	--	
1/28/97	86.24	11.25	0.00	74.99	3.60	94000	--	7700	19000	3100	15000	120000	--	
7/29/97	86.24	14.67	0.00	71.57	-3.42	ND	--	ND	ND	ND	ND	70000	--	
1/14/98	86.24	12.27	0.00	73.97	2.40	85000	--	6100	10000	3000	17000	110000	--	
7/1/98	86.24	14.32	0.00	71.92	-2.05	110000	--	8700	12000	2700	15000	110000	--	
6/18/99	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 2009**  
**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 8015 (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>														
1/21/00	86.24	15.05	0.00	71.19	-1.12	63700	--	5520	2000	2640	13100	57100	--	
7/10/00	86.24	13.97	0.00	72.27	1.08	67800	--	9910	4120	3330	16100	67400	54000	
1/4/01	86.24	14.92	0.00	71.32	-0.95	63900	--	6270	784	2670	12900	--	38100	
7/16/01	86.24	14.32	0.00	71.92	0.60	66000	--	7100	330	2300	9800	36000	41000	
1/31/02	86.99	13.54	0.00	73.45	1.53	42000	--	5800	1800	2000	8200	26000	26000	
4/11/02	86.99	13.64	0.00	73.35	-0.10	58000	--	2900	1200	1800	10000	19000	--	
7/11/02	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	
1/14/03	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	
4/16/03	86.99	13.18	0.00	73.81	-0.41	--	510	57	0.62	29	61	--	160	
7/16/03	86.99	14.26	0.00	72.73	-1.08	--	27000	260	23	730	3200	--	1200	
10/2/03	86.99	14.95	0.00	72.04	-0.69	--	45000	1400	32	2900	7600	--	3200	
1/7/04	86.99	12.30	0.00	74.69	2.65	--	34000	690	41	1600	5200	--	2600	
4/2/04	86.99	13.18	0.00	73.81	-0.88	--	350	1.8	ND<0.50	6.2	30	--	19	
7/29/04	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	
1/24/05	86.99	12.98	0.00	74.01	2.00	--	24000	240	ND<20	1100	3600	--	1800	
6/23/05	86.99	13.39	0.00	73.60	-0.41	--	24000	140	ND<25	1100	2900	--	600	
9/28/05	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	
3/10/06	86.99	10.98	0.00	76.01	0.44	--	10000	35	ND<5.0	470	1300	--	960	
6/23/06	86.99	11.85	0.00	75.14	-0.87	--	11000	110	ND<5.0	610	1600	--	780	
9/27/06	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 2009**  
**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 8015 (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	
3/23/07	86.99	13.25	0.00	73.74	0.41	--	8800	28	ND<2.5	440	910	--	170	
6/29/07	86.99	13.47	0.00	73.52	-0.22	--	6300	16	ND<2.5	300	650	--	50	
9/28/07	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	
3/25/08	86.99	13.56	0.00	73.43	1.01	--	7400	28	ND<2.5	430	540	--	170	
6/12/08	86.99	14.07	0.00	72.92	-0.51	--	4900	6.4	ND<2.5	170	280	--	16	
9/25/08	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	
3/24/09	86.99	12.76	0.00	74.23	1.40	--	3500	6.8	ND<0.50	140	140	--	28	
6/23/09	86.99	13.88	0.00	73.11	-1.12	--	740	ND<2.5	ND<2.5	17	12	--	7.5	
12/16/09	86.99	14.32	0.00	72.67	-0.44	--	4600	10	ND<1.0	270	140	--	52	
<b>MW-2 (Screen Interval in feet: --)</b>														
11/3/92	76.61	--	--	--	--	140	--	2.2	ND	ND	2.0	--	--	
1/25/93	76.61	--	--	--	--	2100	--	56	1.1	90	140	--	--	
4/29/93	76.61	9.73	0.00	66.88	--	1500	--	290	ND	33	11	--	--	
7/16/93	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	--	--	
1/20/94	76.61	11.12	0.00	65.49	0.06	820	--	97	ND	12	ND	--	--	
4/13/94	76.61	10.12	0.00	66.49	1.00	550	--	71	ND	5.1	1.3	--	--	
7/13/94	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	--	--	
1/10/95	76.61	8.71	0.00	67.90	2.77	850	--	3.8	ND	8.5	1.3	--	--	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
4/17/95	76.61	8.90	0.00	67.71	-0.19	1300	--	4.7	ND	8.3	1.2	--	--	
7/24/95	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	--	
1/18/96	76.61	10.11	0.00	66.50	0.59	900	--	300	86	7.6	18	4300	--	
4/18/96	81.66	9.27	0.00	72.39	5.89	18000	--	3600	680	890	4100	19000	--	
7/24/96	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	--	
1/28/97	81.66	7.70	0.00	73.96	3.08	45000	--	2400	2900	2000	7600	29000	--	
7/29/97	81.66	10.28	0.00	71.38	-2.58	ND	--	1.2	0.72	0.63	0.62	17000	--	
1/14/98	81.66	8.63	0.00	73.03	1.65	14000	--	1000	150	790	3300	23000	--	
7/1/98	81.66	9.53	0.00	72.13	-0.90	2700	--	100	ND	180	78	7100	--	
6/18/99	--	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-3</b>			<b>(Screen Interval in feet: --)</b>											
11/3/92	77.48	--	--	--	--	2100	--	120	15	38	200	--	--	
1/25/93	77.48	--	--	--	--	2300	--	80	1	55	52	--	--	
4/29/93	77.48	11.37	0.00	66.11	--	4500	--	1700	ND	200	140	--	--	
7/16/93	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	--	--	
1/20/94	77.48	12.65	0.00	64.83	0.04	4200	--	11	ND	21	15	--	--	
4/13/94	77.48	12.02	0.00	65.46	0.63	4200	--	210	ND	36	53	--	--	
7/13/94	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	--	--	
1/10/95	77.48	10.42	0.00	67.06	2.56	310	--	4.6	ND	3.5	2.1	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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-3 continued</b>														
4/17/95	77.48	10.42	0.00	67.06	0.00	7800	--	ND	4.6	300	450	--	--	
7/24/95	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	--	
1/18/96	77.48	11.79	0.00	65.69	0.71	2200	--	270	33	26	18	5500	--	
4/18/96	82.55	11.30	0.00	71.25	5.56	6000	--	1800	ND	100	230	48000	--	
7/24/96	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	--	
1/28/97	82.55	9.50	0.00	73.05	3.15	4400	--	250	13	87	47	54000	--	
7/29/97	82.55	11.99	0.00	70.56	-2.49	ND	--	3500	ND	220	ND	75000	--	
1/14/98	82.55	10.30	0.00	72.25	1.69	ND	--	430	ND	100	380	37000	--	
7/1/98	82.55	11.70	0.00	70.85	-1.40	ND	--	430	ND	ND	ND	45000	--	
6/18/99	--	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-4 (Screen Interval in feet: --)</b>														
4/18/96	82.04	9.83	0.00	72.21	--	ND	--	630	ND	ND	ND	18000	--	
7/24/96	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	--	
1/28/97	82.04	7.94	0.00	74.10	3.20	1200	--	490	ND	17	6.8	16000	--	
7/29/97	82.04	10.86	0.00	71.18	-2.92	50	--	1.5	0.61	0.73	0.78	15000	--	
1/14/98	82.04	8.73	0.00	73.31	2.13	ND	--	ND	ND	ND	ND	5200	--	
7/1/98	82.04	10.51	0.00	71.53	-1.78	ND	--	ND	ND	ND	ND	640	--	
6/18/99	82.04	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-5 (Screen Interval in feet: --)</b>														
4/18/96	81.80	9.65	0.00	72.15	--	31000	--	5500	1400	1700	8100	66000	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
7/24/96	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	--	
1/28/97	81.80	7.76	0.00	74.04	3.64	19000	--	6100	62	82	310	160000	--	
7/29/97	81.80	11.58	0.00	70.22	-3.82	ND	--	ND	ND	ND	ND	71000	--	
1/14/98	81.80	9.08	0.00	72.72	2.50	ND	--	3600	ND	ND	ND	80000	--	
7/1/98	81.80	11.25	0.00	70.55	-2.17	6400	--	2100	21	120	330	61000	--	
6/18/99	81.80	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-6 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/99	78.91	9.30	0.00	69.61	--	2100	--	21	29	ND	47	97000	71000	
1/21/00	78.91	9.37	0.00	69.54	-0.07	1880	--	143	31.2	106	196	41200	48800	
7/10/00	78.91	8.94	0.00	69.97	0.43	5710	--	869	209	301	1430	22200	19500	
1/4/01	78.91	9.21	0.00	69.70	-0.27	ND	--	ND	ND	ND	ND	--	9510	
7/16/01	78.91	9.42	0.00	69.49	-0.21	4800	--	200	21	150	440	29000	34000	
1/31/02	78.91	8.50	0.00	70.41	0.92	12000	--	250	92	500	1500	26000	31000	
4/11/02	79.67	9.08	0.00	70.59	0.18	3600	--	42	32	39	280	120000	--	
7/11/02	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	
1/14/03	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	
4/16/03	79.67	8.21	0.00	71.46	0.10	--	270	ND<0.50	ND<0.50	ND<0.50	1.3	--	15	
7/16/03	79.67	9.43	0.00	70.24	-1.22	--	290	39	0.60	ND<0.50	15	--	150	
10/2/03	79.67	9.92	0.00	69.75	-0.49	--	200	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	220	
1/7/04	79.67	8.08	0.00	71.59	1.84	--	140	2.4	ND<1.0	8.6	13	--	86	
4/2/04	79.67	8.63	0.00	71.04	-0.55	--	3200	ND<20	ND<20	ND<20	ND<40	--	5900	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
7/29/04	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	
1/24/05	79.67	8.33	0.00	71.34	1.26	--	100	1.1	ND<0.50	0.60	1.1	--	40	
6/23/05	79.67	8.33	0.00	71.34	0.00	--	230	0.52	ND<0.50	3.6	9.6	--	200	
9/28/05	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	
3/10/06	79.67	6.83	0.00	72.84	0.99	--	970	1.2	ND<0.50	1.3	5.0	--	3600	
6/23/06	79.67	8.13	0.00	71.54	-1.30	--	1700	ND<12	ND<12	ND<12	ND<25	--	1100	
9/27/06	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	
3/23/07	79.67	8.39	0.00	71.28	0.21	--	330	ND<0.50	ND<0.50	0.82	ND<0.50	--	680	
6/29/07	79.67	9.02	0.00	70.65	-0.63	--	180	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	290	
9/28/07	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	
3/25/08	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	
6/12/08	79.67	9.47	0.00	70.20	-0.84	--	84	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	17	
9/25/08	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	
3/24/09	79.67	8.02	0.00	71.65	0.94	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
6/23/09	79.67	9.33	0.00	70.34	-1.31	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	9.0	
12/16/09	79.67	9.39	0.00	70.28	-0.06	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.7	
<b>MW-7 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/99	79.92	8.70	0.00	71.22	--	ND	--	ND	ND	ND	ND	16000	13000	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
1/21/00	79.92	9.30	0.00	70.62	-0.60	ND	--	ND	ND	ND	ND	12300	18200	
7/10/00	79.92	8.72	0.00	71.20	0.58	ND	--	ND	ND	ND	ND	16900	13800	
1/4/01	79.92	9.17	0.00	70.75	-0.45	ND	--	ND	ND	ND	0.719	--	37.3	
7/16/01	79.92	9.02	0.00	70.90	0.15	ND	--	ND	ND	ND	ND	7200	4700	
1/31/02	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	
4/11/02	80.67	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
7/11/02	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	
1/14/03	80.67	7.89	0.00	72.78	1.92	--	ND<25000	ND<250	ND<250	ND<250	ND<500	--	33000	
4/16/03	80.67	8.04	0.00	72.63	-0.15	--	ND<25000	ND<250	ND<250	ND<250	ND<500	--	37000	
7/16/03	80.67	9.19	0.00	71.48	-1.15	--	25000	ND<250	ND<250	ND<250	ND<500	--	38000	
10/2/03	80.67	9.89	0.00	70.78	-0.70	--	17000	ND<100	ND<100	ND<100	ND<200	--	22000	
1/7/04	80.67	7.27	0.00	73.40	2.62	--	ND<20000	ND<200	460	ND<200	540	--	19000	
4/2/04	80.67	8.09	0.00	72.58	-0.82	--	3400	ND<20	ND<20	ND<20	ND<40	--	5100	
7/29/04	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	
1/24/05	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	
6/23/05	80.67	8.56	0.00	72.11	-0.64	--	8700	ND<25	ND<25	ND<25	ND<50	--	12000	
9/28/05	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	
3/10/06	80.67	5.84	0.00	74.83	0.47	--	1200	24	ND<0.50	3.6	ND<1.0	--	4700	
6/23/06	80.67	6.83	0.00	73.84	-0.99	--	1800	21	ND<12	ND<12	ND<25	--	1500	
9/27/06	80.67	8.95	0.00	71.72	-2.12	--	ND<1200	ND<12	ND<12	ND<12	ND<12	--	350	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
12/22/06	80.67	8.35	0.00	72.32	0.60	--	24000	ND<50	ND<50	ND<50	ND<50	--	190	
3/23/07	80.67	8.01	0.00	72.66	0.34	--	85	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	92	
6/29/07	80.67	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
9/28/07	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	
3/25/08	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	
6/12/08	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	
9/25/08	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	
3/24/09	80.67	7.73	0.00	72.94	1.26	--	98	0.50	ND<0.50	ND<0.50	ND<1.0	--	9.2	
6/23/09	80.67	9.05	0.00	71.62	-1.32	--	290	1.2	ND<0.50	ND<0.50	ND<1.0	--	6.7	
12/16/09	80.67	9.42	0.00	71.25	-0.37	--	150	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.7	
<b>MW-8 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/99	80.96	9.10	0.00	71.86	--	ND	--	ND	ND	ND	ND	290	160	
1/21/00	80.96	10.00	0.00	70.96	-0.90	ND	--	ND	ND	ND	1.09	224	221	
7/10/00	80.96	7.94	0.00	73.02	2.06	ND	--	ND	ND	ND	ND	234	223	
1/4/01	80.96	9.76	0.00	71.20	-1.82	3790	--	141	8.92	128	375	--	34200	
7/16/01	80.96	9.15	0.00	71.81	0.61	ND	--	ND	ND	ND	ND	66	70	
1/31/02	80.96	7.99	0.00	72.97	1.16	5900	--	86	ND<10	630	390	670	700	
4/11/02	81.71	9.00	0.00	72.71	-0.26	250	--	2.0	ND<0.50	38	2.2	410	--	
7/11/02	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	
1/14/03	81.71	8.63	0.00	73.08	1.97	--	ND<250	2.6	ND<2.5	18	ND<5.0	--	430	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
4/16/03	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	
7/16/03	81.71	9.63	0.00	72.08	-0.65	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	140	
10/2/03	81.71	10.41	0.00	71.30	-0.78	--	75	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	78	
1/7/04	81.71	8.21	0.00	73.50	2.20	--	ND<5000	ND<50	ND<50	ND<50	340	--	3700	
4/2/04	81.71	8.51	0.00	73.20	-0.30	--	3000	ND<20	ND<20	ND<20	ND<40	--	5200	
7/29/04	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	
1/24/05	81.71	8.49	0.00	73.22	1.70	--	ND<2500	4.0	0.52	ND<0.50	29	--	1800	
6/23/05	81.71	8.34	0.00	73.37	0.15	--	490	ND<0.50	ND<0.50	1.5	ND<1.0	--	980	
9/28/05	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	
3/10/06	81.71	6.63	0.00	75.08	0.72	--	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	51	
6/23/06	81.71	6.56	0.00	75.15	0.07	--	3600	ND<0.50	ND<0.50	100	57	--	ND<0.50	
9/27/06	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	
3/23/07	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	
6/29/07	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	
9/28/07	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	
3/25/08	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	
6/12/08	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	
9/25/08	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
3/24/09	81.71	8.43	0.00	73.28	1.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.4	
6/23/09	81.71	9.63	0.00	72.08	-1.20	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.7	
12/16/09	81.71	10.08	0.00	71.63	-0.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
<b>MW-9 (Screen Interval in feet: --)</b>														
1/31/02	82.07	14.72	0.00	67.35	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	680	910	
4/11/02	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	--	
7/11/02	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	
1/14/03	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	
4/16/03	82.07	14.51	0.00	67.56	0.24	--	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	--	860	
7/16/03	82.07	15.54	0.00	66.53	-1.03	--	ND<2500	ND<25	ND<25	ND<25	ND<50	--	1300	
10/2/03	82.07	16.28	0.00	65.79	-0.74	--	820	ND<5.0	ND<5.0	ND<5.0	ND<10	--	990	
1/7/04	82.07	14.65	0.00	67.42	1.63	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	1200	
4/2/04	82.07	15.08	0.00	66.99	-0.43	--	510	ND<5.0	ND<5.0	ND<5.0	ND<10	--	850	
7/29/04	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	
1/24/05	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	
6/23/05	82.07	14.40	0.00	67.67	0.56	--	1500	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2000	
9/28/05	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	
3/10/06	82.07	13.39	0.00	68.68	1.22	--	1100	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2100	
6/23/06	82.07	13.68	0.00	68.39	-0.29	--	1700	ND<12	ND<12	ND<12	ND<25	--	1700	
9/27/06	82.07	14.83	0.00	67.24	-1.15	--	ND<1200	ND<12	ND<12	ND<12	ND<12	--	1400	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
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	
3/23/07	82.07	14.52	0.00	67.55	0.23	--	240	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	660	
6/29/07	82.07	14.89	0.00	67.18	-0.37	--	210	ND<0.50	ND<0.50	ND<0.50	0.52	--	410	
9/28/07	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	
3/25/08	82.07	14.91	0.00	67.16	0.81	--	250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	340	
6/12/08	82.07	15.70	0.00	66.37	-0.79	--	180	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	270	
9/25/08	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	
3/24/09	82.07	15.23	0.00	66.84	0.93	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	180	
6/23/09	82.07	15.95	0.00	66.12	-0.72	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	190	
12/16/09	82.07	16.47	0.00	65.60	-0.52	--	86	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	130	
<b>MW-10 (Screen Interval in feet: --)</b>														
1/31/02	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	
4/11/02	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	--	
7/11/02	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	
1/14/03	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	
4/16/03	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	
7/16/03	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	
10/2/03	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	
1/7/04	74.98	6.22	0.00	68.76	1.41	--	54	ND<0.50	ND<0.50	1.3	4.5	--	ND<2.0	
4/2/04	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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>														
7/29/04	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	
1/24/05	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	
6/23/05	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	
9/28/05	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	
3/10/06	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	
6/23/06	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	
9/27/06	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	
3/23/07	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	
6/29/07	74.98	6.78	0.00	68.20	-0.30	--	ND<50	ND<0.50	ND<0.50	0.76	1.6	--	5.6	
9/28/07	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	
3/25/08	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	
6/12/08	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	
9/25/08	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	
3/24/09	74.98	6.41	0.00	68.57	0.32	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
6/23/09	74.98	7.07	0.00	67.91	-0.66	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.60	
12/16/09	74.98	6.59	0.00	68.39	0.48	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>MW-11 (Screen Interval in feet: --)</b>														
1/31/02	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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-11 continued</b>														
4/11/02	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	--	
7/11/02	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	
1/14/03	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	
4/16/03	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	
7/16/03	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	
10/2/03	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	
1/7/04	77.31	16.20	0.00	61.11	-3.24	--	63	ND<0.50	ND<0.50	0.68	2.2	--	ND<2.0	
4/2/04	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	
7/29/04	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	
1/24/05	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	
6/23/05	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	
9/28/05	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	
3/10/06	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	
6/23/06	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	
9/27/06	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	
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	
3/23/07	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	
6/29/07	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	
9/28/07	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through December 2009**  
**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 8015 (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-11 continued</b>														
3/25/08	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	
6/12/08	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	
9/25/08	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	
3/24/09	77.31	15.58	0.00	61.73	0.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
6/23/09	77.31	13.98	0.00	63.33	1.60	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
12/16/09	77.31	15.03	0.00	62.28	-1.05	--	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			Ethylene-	1,2-DCA					pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-1</b>												
6/18/99	--	ND	ND	ND	--	ND	ND	ND	--	--	--	--
7/16/01	--	ND	ND	ND	--	ND	ND	ND	--	--	--	--
1/14/03	--	ND<100	ND<500	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/03	--	--	ND<10000	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<25000	--	--	--	--	--	--	25.1	45.7	80.1
1/7/04	--	--	ND<20000	--	--	--	--	--	--	12.12	12.31	142
4/2/04	--	--	ND<50	--	--	--	--	--	--	11.33	13.42	36
7/29/04	--	--	ND<2000	--	--	--	--	--	--	5.37	5.51	-2
11/24/04	--	--	ND<2000	--	--	--	--	--	6.58	3.08	4.73	-43
1/24/05	--	--	ND<2000	--	--	--	--	--	--	14.3	17.0	100
6/23/05	--	--	ND<50000	--	--	--	--	--	--	--	4.79	-103
9/28/05	--	--	ND<1000	--	--	--	--	--	--	3.45	4.73	-91
12/20/05	--	--	ND<250	--	--	--	--	--	--	4.16	2.76	-210
3/10/06	--	--	ND<2500	--	--	--	--	--	--	1.45	1.64	-511
6/23/06	--	--	ND<2500	--	--	--	--	--	--	--	4.31	-030
9/27/06	--	--	ND<5000	--	--	--	--	--	--	4.50	4.72	-32
12/22/06	--	--	ND<2500	--	--	--	--	--	--	6.80	2.35	-121
3/23/07	--	--	ND<1200	--	--	--	--	--	--	3.22	3.45	-135
6/29/07	--	--	ND<1200	--	--	--	--	--	--	6.64	7.11	-131
9/28/07	--	--	ND<250	--	--	--	--	--	--	--	7.84	-167
12/17/07	--	--	ND<2500	--	--	--	--	--	--	9.74	6.51	-63
3/25/08	--	--	ND<1200	--	--	--	--	--	--	6.70	6.50	-60
6/12/08	--	330	ND<1200	--	--	--	--	--	--	--	4.33	65
9/25/08	--	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 (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	pH (lab) (pH)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-1 continued</b>												
3/24/09	--	390	ND<250	--	--	--	--	--	--	1.60	1.31	-29
6/23/09	--	500	ND<1200	--	--	--	--	--	--	--	0.86	-28
12/16/09	--	ND<20	ND<500	--	--	--	--	--	--	0.66	--	--
<b>MW-4</b>												
4/18/96	110	--	--	--	--	--	--	--	--	--	--	--
7/24/96	ND	--	--	--	--	--	--	--	--	--	--	--
10/24/96	ND	--	--	--	--	--	--	--	--	--	--	--
1/28/97	210	--	--	--	--	--	--	--	--	--	--	--
7/29/97	ND	--	--	--	--	--	--	--	--	--	--	--
1/14/98	ND	--	--	--	--	--	--	--	--	--	--	--
7/1/98	ND	--	--	--	--	--	--	--	--	--	--	--
<b>MW-6</b>												
6/18/99	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/01	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/11/02	--	ND<1000	ND<5000	ND<100	ND<100	ND<200	ND<100	ND<100	--	--	--	--
1/14/03	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/03	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<1000	--	--	--	--	--	--	15.5	26.2	139
1/7/04	--	--	ND<1000	--	--	--	--	--	--	12.63	14.29	-12
4/2/04	--	--	ND<2000	--	--	--	--	--	--	12.63	12.72	9
7/29/04	--	--	ND<100	--	--	--	--	--	--	4.74	4.79	-19
11/24/04	--	--	ND<50	--	--	--	--	--	6.99	2.81	5.54	-29
1/24/05	--	--	ND<50	--	--	--	--	--	--	14.5	15.3	72
6/23/05	--	--	ND<1000	--	--	--	--	--	--	1.86	1.73	70
9/28/05	--	--	ND<1000	--	--	--	--	--	--	2.63	2.57	-74

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

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	dibromide	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-6 continued</b>												
12/20/05	--	--	ND<250	--	--	--	--	--	--	1.52	2.30	-280
3/10/06	--	--	ND<250	--	--	--	--	--	--	5.25	0.80	173
6/23/06	--	--	ND<6200	--	--	--	--	--	--	--	3.39	-105
9/27/06	--	--	ND<6200	--	--	--	--	--	--	2.54	3.01	-109
12/22/06	--	--	ND<5000	--	--	--	--	--	--	1.22	4.03	-46
3/23/07	--	--	ND<250	--	--	--	--	--	--	3.64	3.62	-101
6/29/07	--	--	ND<250	--	--	--	--	--	--	8.49	6.78	171
9/28/07	--	--	ND<250	--	--	--	--	--	--	8.36	8.40	167
12/17/07	--	--	ND<250	--	--	--	--	--	--	10.19	9.38	-23
3/25/08	--	--	ND<250	--	--	--	--	--	--	10.03	10.10	-20
6/12/08	--	ND<10	ND<250	--	--	--	--	--	--	--	0.80	30
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	1.05	118
12/30/08	--	ND<10	ND<250	--	--	--	--	--	--	4.50	1.62	14
3/24/09	--	ND<10	ND<250	--	--	--	--	--	--	1.79	1.87	104
6/23/09	--	ND<10	ND<250	--	--	--	--	--	--	1.96	2.12	64
12/16/09	--	ND<10	ND<250	--	--	--	--	--	--	1.55	--	--
<b>MW-7</b>												
6/18/99	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/01	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
1/14/03	--	ND<50000	ND<250000	ND<1000	ND<1000	ND<1000	ND<1000	ND<1000	--	--	--	--
7/16/03	--	--	ND<250000	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<100000	--	--	--	--	--	--	24.3	28.2	109
1/7/04	--	--	ND<200000	--	--	--	--	--	--	10.79	10.85	23
4/2/04	--	--	ND<2000	--	--	--	--	--	--	12.41	11.32	24
7/29/04	--	--	ND<5000	--	--	--	--	--	--	4.10	3.96	17

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

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	dibromide	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-7 continued</b>												
11/24/04	--	--	ND<5000	--	--	--	--	--	6.60	1.99	3.29	-43
1/24/05	--	--	ND<5000	--	--	--	--	--	--	17.2	14.5	71
6/23/05	--	--	ND<50000	--	--	--	--	--	--	2.84	2.18	-37
9/28/05	--	--	ND<1000	--	--	--	--	--	--	3.45	3.63	-81
12/20/05	--	--	ND<250	--	--	--	--	--	--	2.04	2.03	-263
3/10/06	--	--	ND<250	--	--	--	--	--	--	1.28	0.95	164
6/23/06	--	--	ND<6200	--	--	--	--	--	--	--	3.95	-119
9/27/06	--	--	ND<6200	--	--	--	--	--	--	3.16	3.98	-107
12/22/06	--	--	ND<25000	--	--	--	--	--	--	2.25	2.03	-86
3/23/07	--	--	ND<250	--	--	--	--	--	--	3.38	3.75	-49
9/28/07	--	--	ND<250	--	--	--	--	--	--	8.16	7.96	30
12/19/07	--	--	ND<250	--	--	--	--	--	--	6.70	6.72	-17
3/25/08	--	--	ND<250	--	--	--	--	--	--	4.77	4.81	-30
6/12/08	--	30	ND<250	--	--	--	--	--	--	--	3.96	55
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	1.11	115
12/30/08	--	ND<10	ND<250	--	--	--	--	--	--	4.13	1.81	-14
3/24/09	--	ND<10	ND<250	--	--	--	--	--	--	2.70	2.39	159
6/23/09	--	16	ND<250	--	--	--	--	--	--	0.42	0.84	-8
12/16/09	--	ND<10	ND<250	--	--	--	--	--	--	1.08	--	--
<b>MW-8</b>												
6/18/99	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/01	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
1/14/03	--	ND<500	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--
7/16/03	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<500	--	--	--	--	--	--	23.6	28.5	188



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

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	dibromide	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-8 continued</b>												
1/7/04	--	--	ND<50000	--	--	--	--	--	--	9.94	13.13	-15
4/2/04	--	--	ND<2000	--	--	--	--	--	--	13.37	12.82	-10
7/29/04	--	--	ND<2500	--	--	--	--	--	--	3.68	3.73	18
11/24/04	--	--	ND<1000	--	--	--	--	--	6.67	3.97	2.71	-36
1/24/05	--	--	ND<2500	--	--	--	--	--	--	41.6	41.2	56
6/23/05	--	--	ND<1000	--	--	--	--	--	--	2.05	2.13	58
9/28/05	--	--	ND<1000	--	--	--	--	--	--	2.12	1.98	-40
12/20/05	--	--	ND<250	--	--	--	--	--	--	2.02	3.72	-402
3/10/06	--	--	ND<250	--	--	--	--	--	--	1.51	0.99	-182
6/23/06	--	--	ND<250	--	--	--	--	--	--	--	2.81	-135
9/27/06	--	--	ND<250	--	--	--	--	--	--	4.87	4.91	-155
12/22/06	--	--	ND<250	--	--	--	--	--	--	1.80	2.40	16
3/23/07	--	--	ND<250	--	--	--	--	--	--	3.52	3.90	25
6/29/07	--	--	ND<250	--	--	--	--	--	--	5.35	5.29	98
9/28/07	--	--	ND<250	--	--	--	--	--	--	7.18	7.24	16
12/17/07	--	--	ND<250	--	--	--	--	--	--	6.95	5.26	26
3/25/08	--	--	ND<250	--	--	--	--	--	--	5.22	5.15	70
6/12/08	--	ND<10	ND<250	--	--	--	--	--	--	--	9.40	38
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	1.33	98
12/30/08	--	ND<10	ND<250	--	--	--	--	--	--	1.78	2.19	11
3/24/09	--	ND<10	ND<250	--	--	--	--	--	--	2.07	1.87	103
6/23/09	--	ND<10	ND<250	--	--	--	--	--	--	0.55	0.90	73
12/16/09	--	ND<10	ND<250	--	--	--	--	--	--	1.24	--	--
<b>MW-9</b>												
1/31/02	--	ND<140	ND<3600	ND<7.1	ND<7.1	ND<7.1	ND<7.1	ND<7.1	--	--	--	--

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

Date Sampled	TPH-D (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	pH (lab) (pH)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-9 continued</b>												
1/14/03	--	ND<400	ND<2000	ND<8.0	ND<8.0	ND<8.0	ND<8.0	ND<8.0	--	--	--	--
7/16/03	--	--	ND<25000	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<5000	--	--	--	--	--	--	29.5	28.4	201
1/7/04	--	--	ND<10000	--	--	--	--	--	--	10.45	12.00	9
4/2/04	--	--	ND<500	--	--	--	--	--	--	16.37	13.21	12
7/29/04	--	--	ND<1000	--	--	--	--	--	--	--	--	--
11/24/04	--	--	ND<500	--	--	--	--	--	6.47	3.24	1.71	-68
1/24/05	--	--	ND<1000	--	--	--	--	--	--	26.0	22.5	-45
6/23/05	--	--	ND<10000	--	--	--	--	--	--	1.50	1.44	-136
9/28/05	--	--	ND<50000	--	--	--	--	--	--	2.51	1.67	-94
12/20/05	--	--	ND<250	--	--	--	--	--	--	5.05	4.67	-102
3/10/06	--	--	ND<2500	--	--	--	--	--	--	2.82	2.13	160
6/23/06	--	--	ND<6200	--	--	--	--	--	--	--	0.84	-65
9/27/06	--	--	ND<6200	--	--	--	--	--	--	0.68	0.75	-61
12/22/06	--	--	ND<250	--	--	--	--	--	--	9.00	4.89	-44
3/23/07	--	--	ND<250	--	--	--	--	--	--	6.85	5.33	-114
6/29/07	--	--	ND<250	--	--	--	--	--	--	6.87	6.25	23
9/28/07	--	--	ND<1200	--	--	--	--	--	--	7.17	7.04	30
12/17/07	--	--	ND<250	--	--	--	--	--	--	5.05	4.81	-27
3/25/08	--	--	ND<1200	--	--	--	--	--	--	6.55	6.67	-10
6/12/08	--	250	ND<250	--	--	--	--	--	--	--	2.55	86
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	1.44	26
12/30/08	--	21	ND<250	--	--	--	--	--	--	5.47	5.43	52
3/24/09	--	24	ND<250	--	--	--	--	--	--	2.80	2.69	66
6/23/09	--	14	ND<250	--	--	--	--	--	--	1.88	1.42	-20

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

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	dibromide	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-9 continued</b>												
12/16/09	--	22	ND<250	--	--	--	--	--	--	0.99	--	--
<b>MW-10</b>												
1/31/02	--	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--
1/14/03	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/03	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<500	--	--	--	--	--	--	24.8	25.7	192
1/7/04	--	--	ND<500	--	--	--	--	--	--	10.04	11.62	35
4/2/04	--	--	ND<50	--	--	--	--	--	--	11.91	12.02	42
7/29/04	--	--	ND<50	--	--	--	--	--	--	4.81	4.83	83
11/24/04	--	--	ND<50	--	--	--	--	--	6.89	2.59	3.07	-39
1/24/05	--	--	ND<50	--	--	--	--	--	--	27.5	25.5	87
6/23/05	--	--	ND<1000	--	--	--	--	--	--	7.83	176	40
9/28/05	--	--	ND<1000	--	--	--	--	--	--	6.95	2.37	-66
12/20/05	--	--	ND<250	--	--	--	--	--	--	3.85	3.45	59
3/10/06	--	--	ND<250	--	--	--	--	--	--	2.52	4.48	87
6/23/06	--	--	ND<250	--	--	--	--	--	--	--	1.49	-68
9/27/06	--	--	ND<250	--	--	--	--	--	--	1.79	1.55	-85
12/22/06	--	--	ND<250	--	--	--	--	--	--	3.20	3.00	107
3/23/07	--	--	ND<250	--	--	--	--	--	--	5.09	5.01	-60
6/29/07	--	--	ND<250	--	--	--	--	--	--	9.12	6.27	165
9/28/07	--	--	ND<250	--	--	--	--	--	--	8.34	8.21	124
12/17/07	--	--	ND<250	--	--	--	--	--	--	4.97	4.46	-15
3/25/08	--	--	ND<250	--	--	--	--	--	--	4.35	4.40	-10
6/12/08	--	ND<10	ND<250	--	--	--	--	--	--	--	1.42	75
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	52.15	94

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

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	(8260B)	dibromide	(EDC)	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
										(mg/l)	(mg/l)	(mV)
<b>MW-10 continued</b>												
12/30/08	--	ND<10	ND<250	--	--	--	--	--	--	5.89	3.18	181
3/24/09	--	ND<10	ND<250	--	--	--	--	--	--	4.37	4.07	144
6/23/09	--	ND<10	ND<250	--	--	--	--	--	--	3.17	1.64	57
12/16/09	--	ND<10	ND<250	--	--	--	--	--	--	3.31	--	--
<b>MW-11</b>												
1/31/02	--	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--
1/14/03	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/03	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/03	--	--	ND<500	--	--	--	--	--	--	33.7	23.2	202
1/7/04	--	--	ND<500	--	--	--	--	--	--	11.69	13.82	99
4/2/04	--	--	ND<50	--	--	--	--	--	--	11.94	14.08	-1
7/29/04	--	--	ND<50	--	--	--	--	--	--	--	--	--
11/24/04	--	--	ND<50	--	--	--	--	--	6.75	3.85	4.32	82
1/24/05	--	--	ND<50	--	--	--	--	--	--	30.01	32.6	79
6/23/05	--	--	ND<1000	--	--	--	--	--	--	2.17	2.16	76
9/28/05	--	--	ND<1000	--	--	--	--	--	--	4.97	4.59	-4
12/20/05	--	--	ND<250	--	--	--	--	--	--	5.16	4.77	35
3/10/06	--	--	ND<250	--	--	--	--	--	--	5.11	9.99	68
6/23/06	--	--	ND<250	--	--	--	--	--	--	--	7.74	-26
9/27/06	--	--	ND<250	--	--	--	--	--	--	5.72	5.98	32
12/22/06	--	--	ND<250	--	--	--	--	--	--	3.81	4.35	46
3/23/07	--	--	ND<250	--	--	--	--	--	--	5.47	5.85	38
6/29/07	--	--	ND<250	--	--	--	--	--	--	7.87	7.80	242
9/28/07	--	--	ND<250	--	--	--	--	--	--	7.24	7.30	280
12/17/07	--	--	ND<250	--	--	--	--	--	--	8.71	8.01	47

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

Date Sampled			Ethylene-							Post-purge	Pre-purge	Pre-purge
	TPH-D (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	pH (lab) (pH)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-11 continued</b>												
3/25/08	--	--	ND<250	--	--	--	--	--	--	8.41	8.40	45
6/12/08	--	ND<10	ND<250	--	--	--	--	--	--	--	3.33	160
9/25/08	--	ND<10	ND<250	--	--	--	--	--	--	--	4.28	115
12/30/08	--	ND<10	ND<250	--	--	--	--	--	--	2.74	2.67	195
3/24/09	--	ND<10	ND<250	--	--	--	--	--	--	2.27	2.20	185
6/23/09	--	ND<10	ND<250	--	--	--	--	--	--	3.62	4.14	67
12/16/09	--	ND<10	ND<250	--	--	--	--	--	--	4.62	--	--

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

Date Sampled	Post-purge ORP (mV)
<b>MW-1</b>	
10/2/03	21.0
1/7/04	24
4/2/04	34
7/29/04	-4
11/24/04	-39
1/24/05	96
9/28/05	-94
12/20/05	-328
3/10/06	-615
9/27/06	-25
12/22/06	-72
3/23/07	-141
6/29/07	-65
12/17/07	-46
3/25/08	-64
12/30/08	-2
3/24/09	-32
12/16/09	38
<b>MW-6</b>	
10/2/03	175
1/7/04	24
4/2/04	23
7/29/04	-8
11/24/04	-12
1/24/05	70

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

Date Sampled	Post-purge ORP (mV)
-----------------	---------------------------

---

**MW-6 continued**

6/23/05	71
9/28/05	-80
12/20/05	-217
3/10/06	224
9/27/06	-104
12/22/06	-67
3/23/07	-92
6/29/07	84
9/28/07	154
12/17/07	-14
3/25/08	-18
12/30/08	8
3/24/09	91
6/23/09	79
12/16/09	116

**MW-7**

10/2/03	153
1/7/04	5
4/2/04	10
7/29/04	18
11/24/04	-24
1/24/05	48
6/23/05	-32
9/28/05	-85
12/20/05	-256

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

Date Sampled	Post-purge ORP (mV)
-----------------	---------------------------

---

**MW-7 continued**

3/10/06	-179
9/27/06	-95
12/22/06	-101
3/23/07	-47
9/28/07	26
12/19/07	-13
3/25/08	-34
12/30/08	-19
3/24/09	138
6/23/09	-33
12/16/09	118

**MW-8**

10/2/03	197
1/7/04	21
4/2/04	16
7/29/04	30
11/24/04	-20
1/24/05	60
6/23/05	56
9/28/05	-26
12/20/05	-326
3/10/06	-181
9/27/06	-139
12/22/06	12
3/23/07	22



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

Date Sampled	Post-purge ORP (mV)
-----------------	---------------------------

---

**MW-8 continued**

6/29/07	92
9/28/07	22
12/17/07	24
3/25/08	77
12/30/08	14
3/24/09	109
6/23/09	55
12/16/09	75

**MW-9**

10/2/03	203
1/7/04	27
4/2/04	32
11/24/04	-67
1/24/05	-45
6/23/05	-144
9/28/05	-119
12/20/05	-42
3/10/06	161
9/27/06	-43
12/22/06	-70
3/23/07	-82
6/29/07	22
9/28/07	30
12/17/07	-35
3/25/08	-14

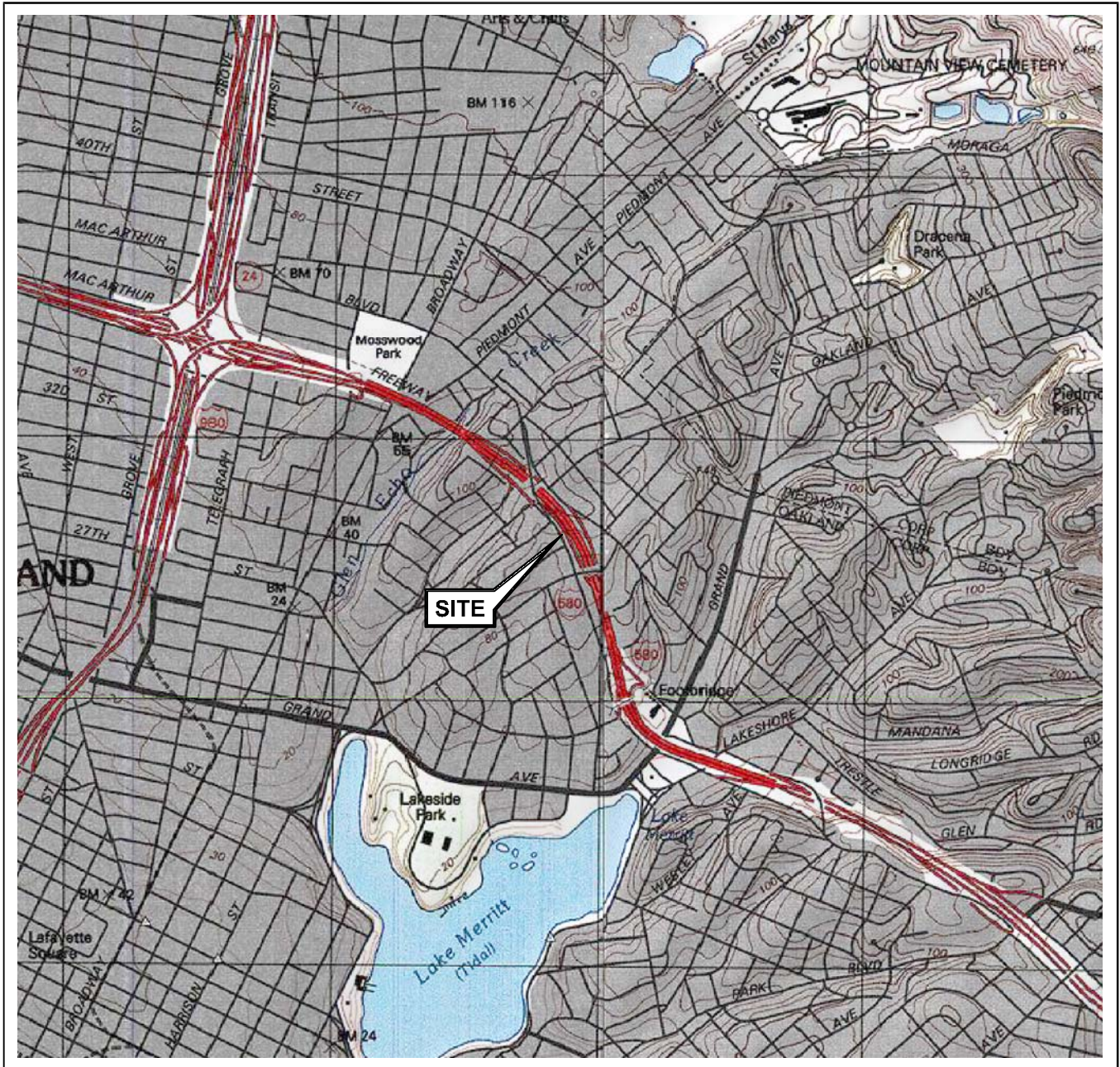
**Table 2 b**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

Date Sampled	Post-purge ORP (mV)
<b>MW-9 continued</b>	
12/30/08	38
3/24/09	58
6/23/09	-30
12/16/09	102
<b>MW-10</b>	
10/2/03	213
1/7/04	59
4/2/04	45
7/29/04	102
11/24/04	-29
1/24/05	84
6/23/05	44
9/28/05	-64
12/20/05	58
3/10/06	83
9/27/06	-65
12/22/06	85
6/29/07	172
9/28/07	126
12/17/07	-2
3/25/08	-12
12/30/08	184
3/24/09	160
6/23/09	68
12/16/09	118

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

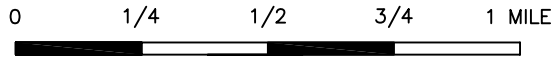
Date Sampled	Post-purge ORP (mV)
<b>MW-11</b>	
10/2/03	255
1/7/04	103
4/2/04	108
11/24/04	143
1/24/05	83
6/23/05	82
9/28/05	-1
12/20/05	070
3/10/06	97
9/27/06	40
12/22/06	44
3/23/07	34
6/29/07	223
9/28/07	244
12/17/07	46
3/25/08	44
12/30/08	195
3/24/09	190
6/23/09	67
12/16/09	160

# FIGURES



SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Oakland Quadrangle



SCALE 1:24,000



QUADRANGLE  
LOCATION







FACILITY:

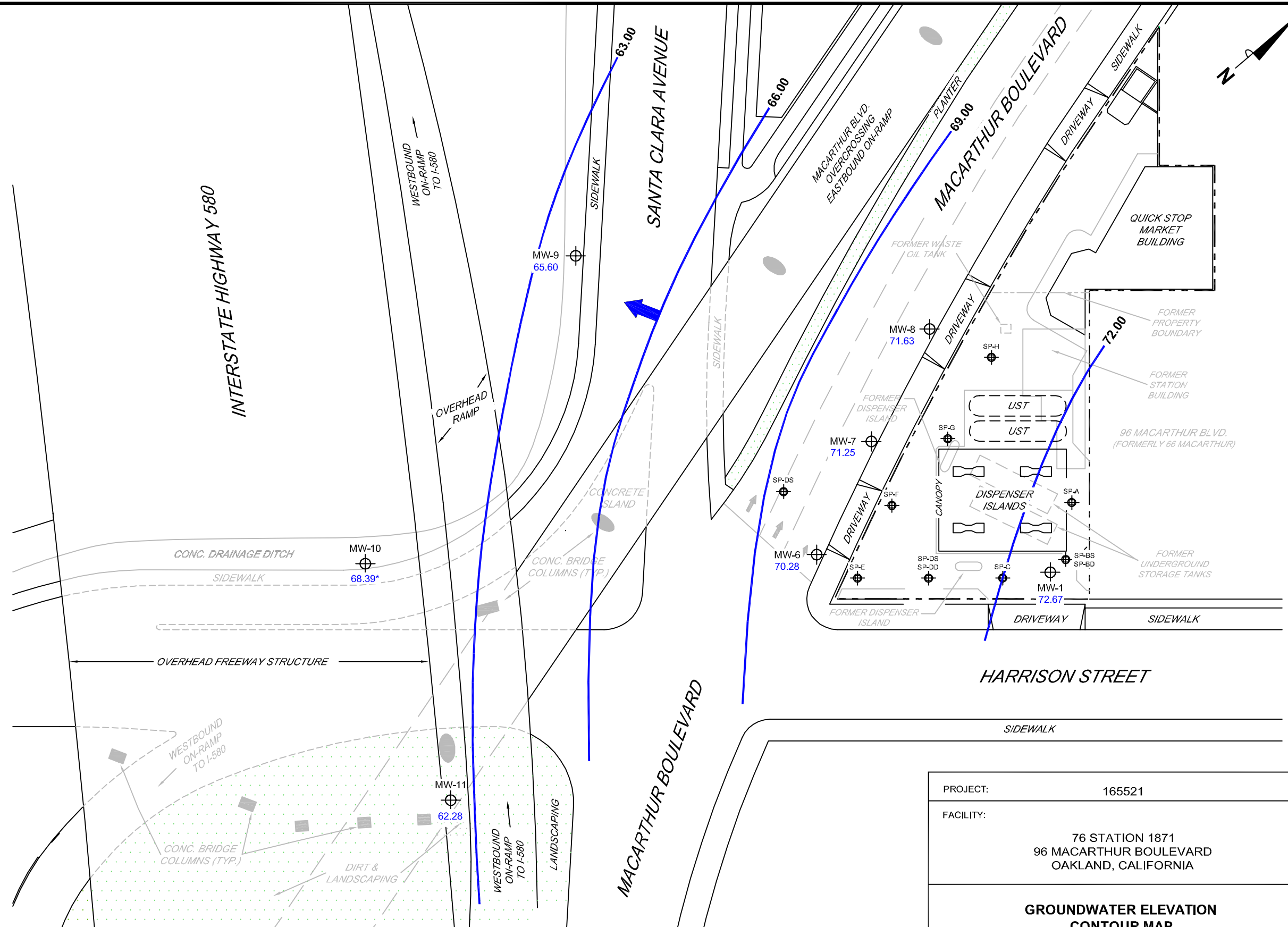
76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

VICINITY MAP

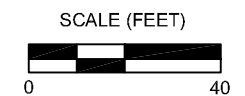
FIGURE 1

**LEGEND**

- MW-11  Monitoring Well with Groundwater Elevation (feet)
- SP-41  Ozone Sparge Well
- 72.00  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



**NOTES:**  
 Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. \* = not included in groundwater contour interpretation.  
 UST = underground storage tank.



PROJECT:	165521
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA



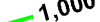
**GROUNDWATER ELEVATION  
 CONTOUR MAP  
 December 16, 2009**

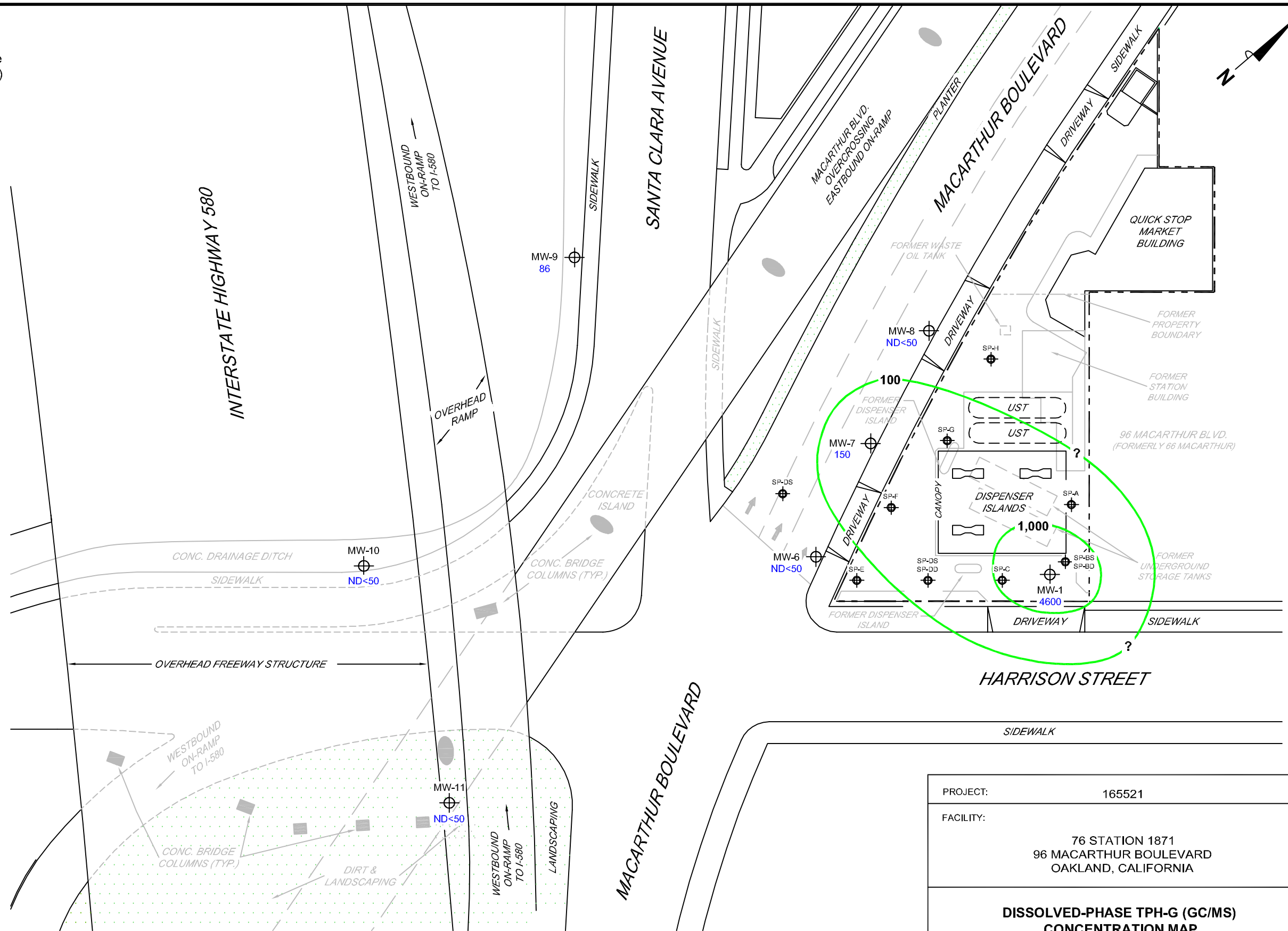
	<b>FIGURE 2</b>
---	-----------------

MS=1:40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jan 08, 2010 - 2:18pm Rcollins

L:\Graphics\QMS NORTH-SOUTH\10001871-11871-QMS.DWG Jan 08, 2010 - 2:18pm Rcollins MS=1:40 1871-003

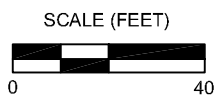
**LEGEND**


- MW-11  Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (  $\mu\text{g/l}$  )
- SP-H  Ozone Sparge Well
-  1,000 Dissolved-Phase TPH-G (GC/MS) Contour (  $\mu\text{g/l}$  )



**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.  
 $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report.  
 UST = underground storage tank.

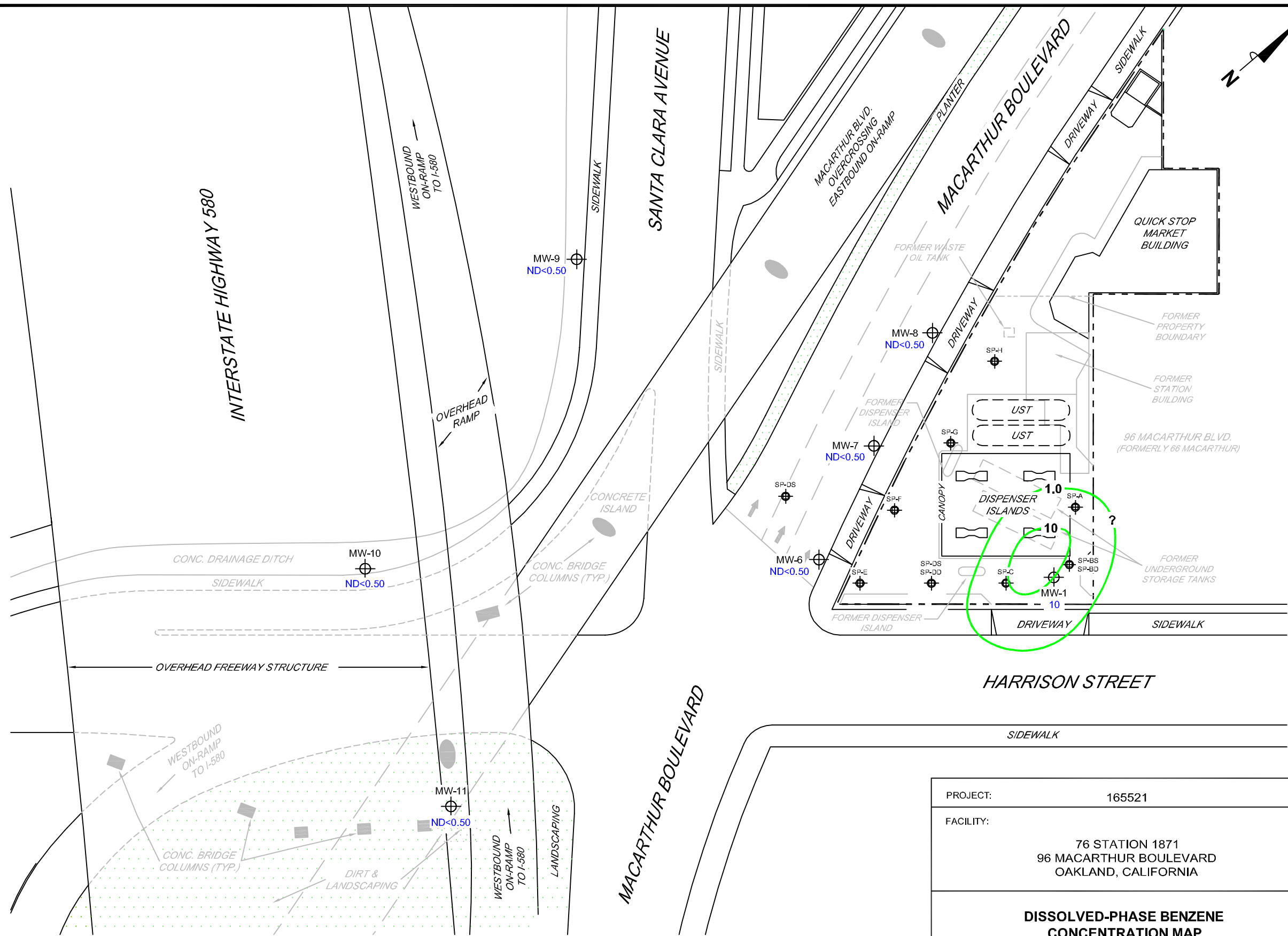


PROJECT:	165521
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA
<b>DISSOLVED-PHASE TPH-G (GC/MS) CONCENTRATION MAP December 16, 2009</b>	
	<b>FIGURE 3</b>

MS=1:40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jan 08, 2010 - 2:19pm Rcollins

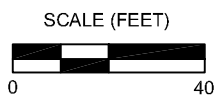
**LEGEND**

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



**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.



PROJECT:	165521
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA
<b>DISSOLVED-PHASE BENZENE CONCENTRATION MAP</b> December 16, 2009	






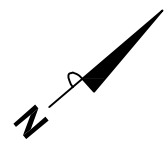
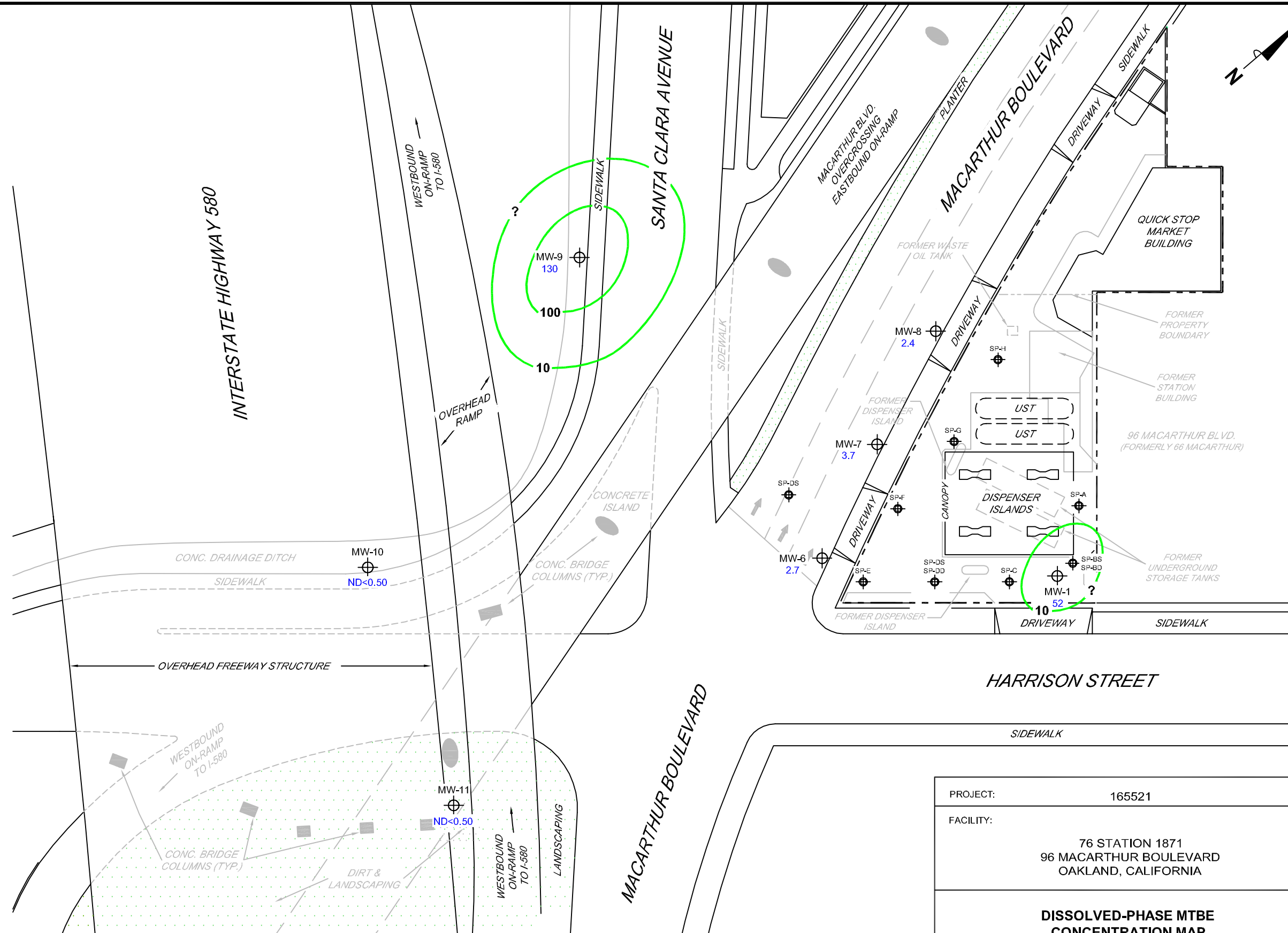
**FIGURE 4**



MS=1:40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jan 08, 2010 - 2:20pm Rcollins

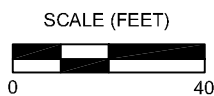
**LEGEND**


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



**NOTES:**

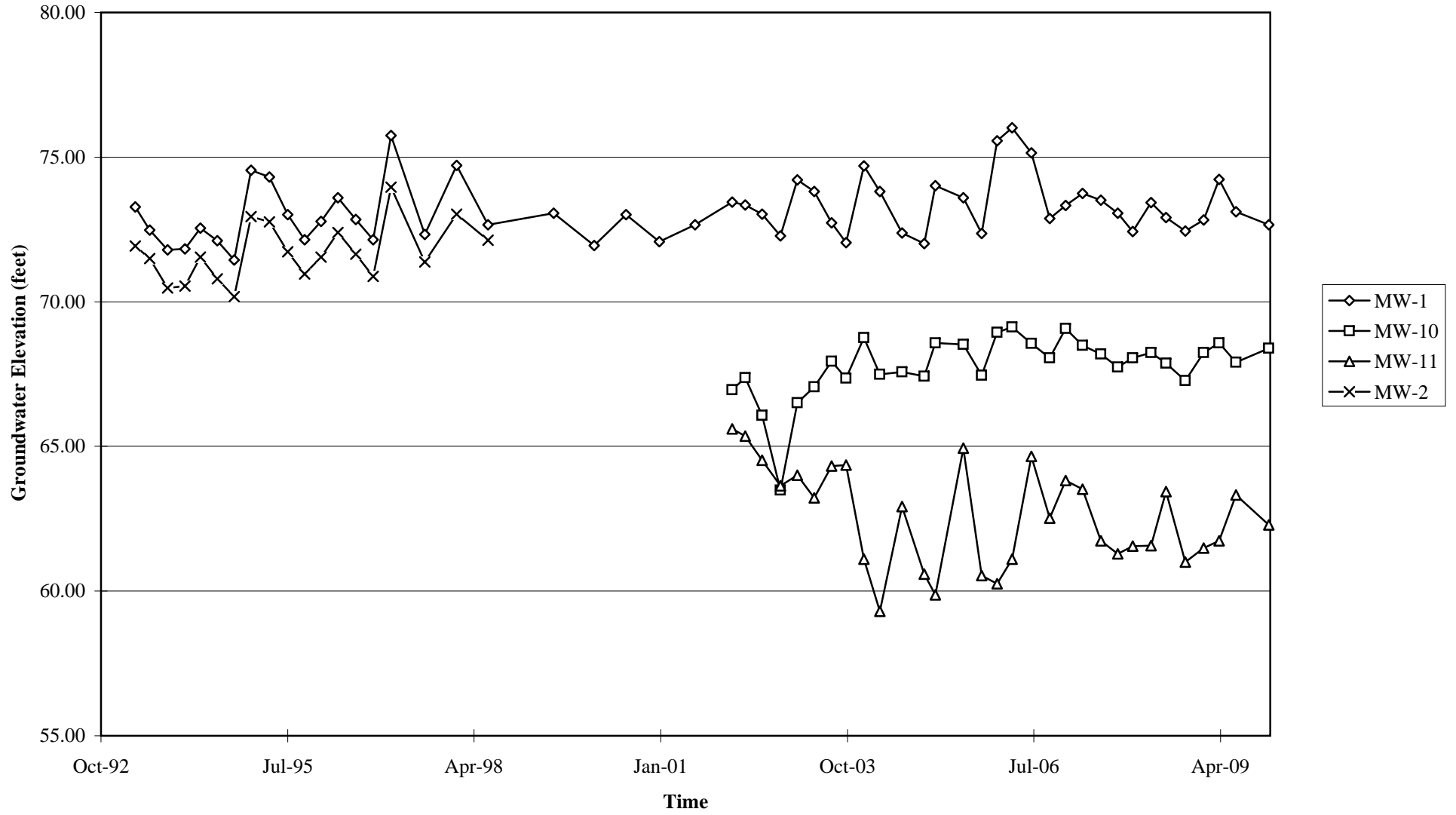
Contour lines are interpretive and based on laboratory analysis results of groundwater samples. MTBE = methyl tertiary butyl ether.  $\mu\text{g/l}$  = micrograms per liter. ND = not detected at limit indicated on official laboratory report. UST = underground storage tank. Results obtained using EPA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



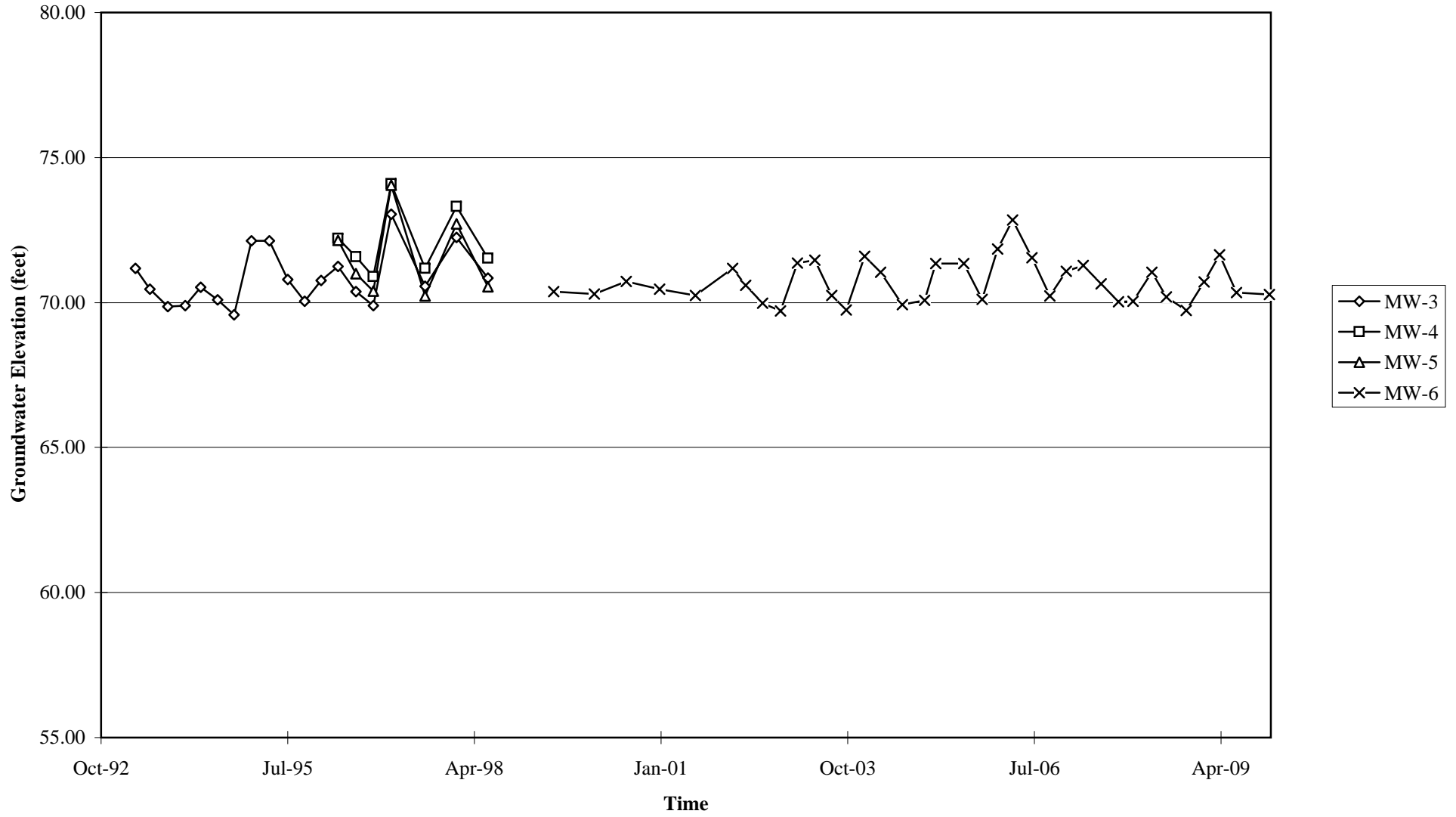
PROJECT:	165521
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA
<b>DISSOLVED-PHASE MTBE CONCENTRATION MAP</b> December 16, 2009	
	<b>FIGURE 5</b>

# GRAPHS

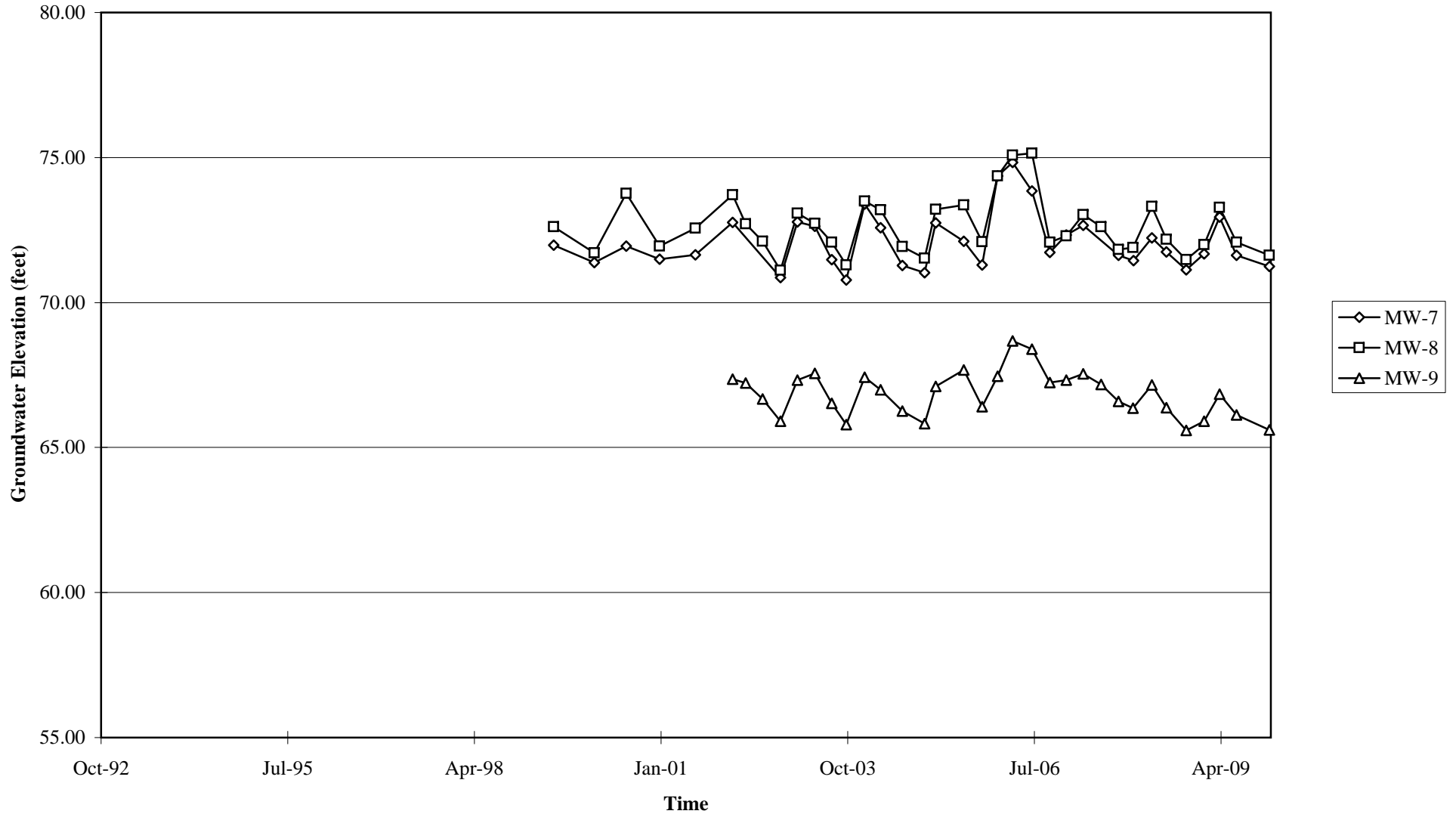
Groundwater Elevations vs. Time  
76 Station 1871



Groundwater Elevations vs. Time  
76 Station 1871



Groundwater Elevations vs. Time  
76 Station 1871

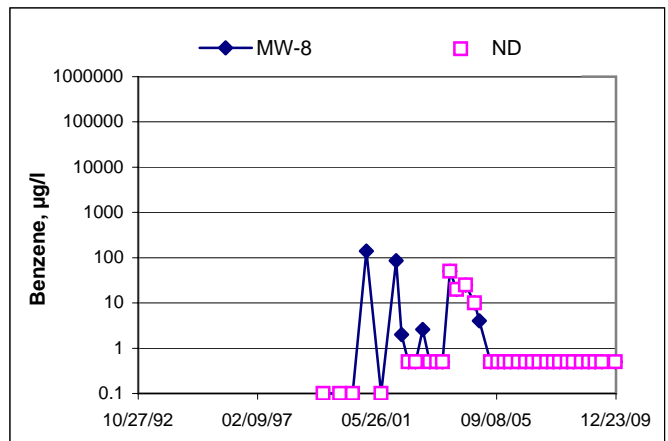
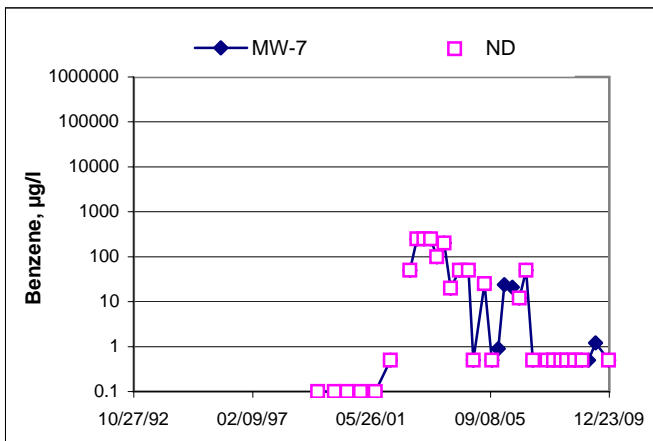
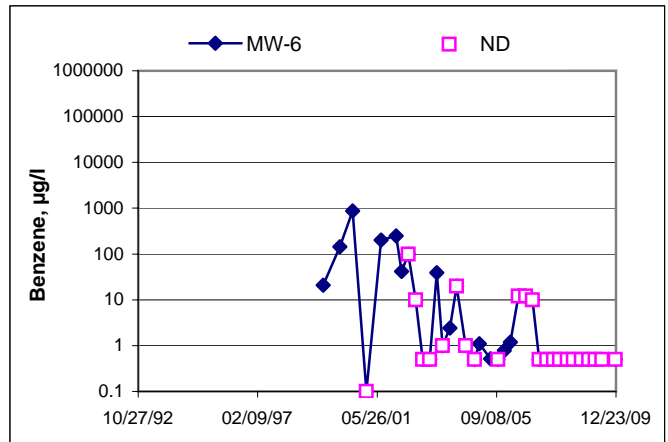
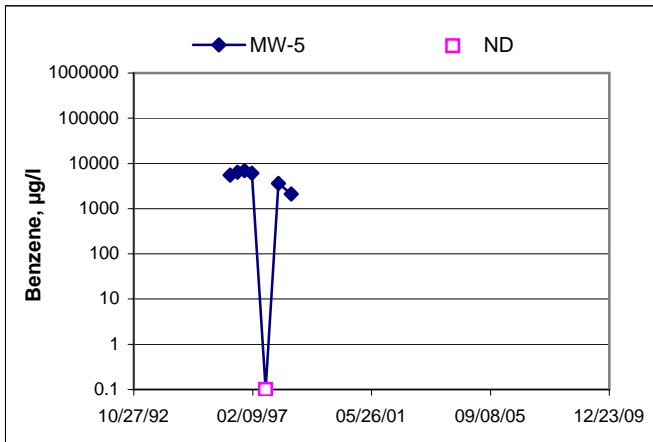
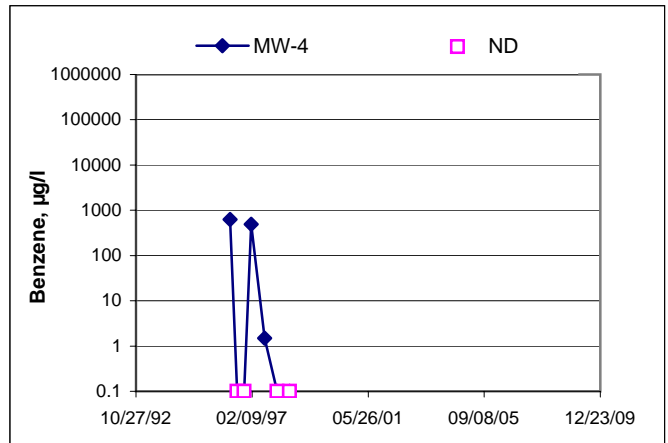
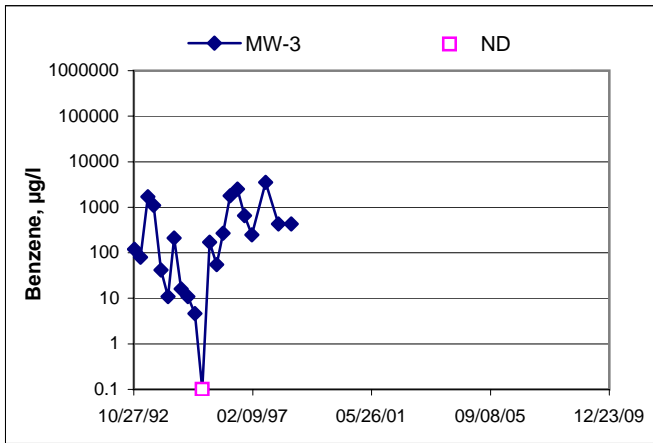
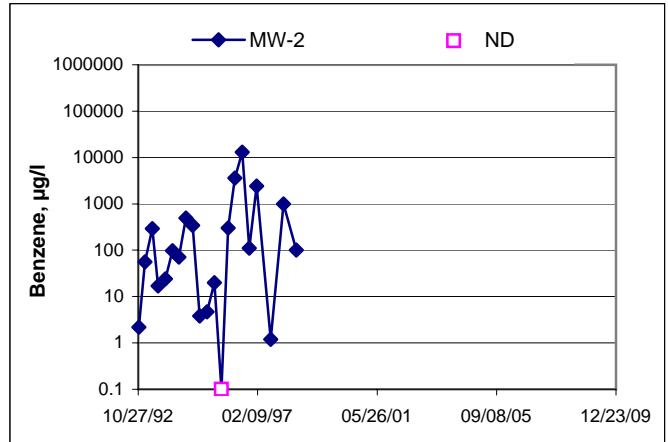
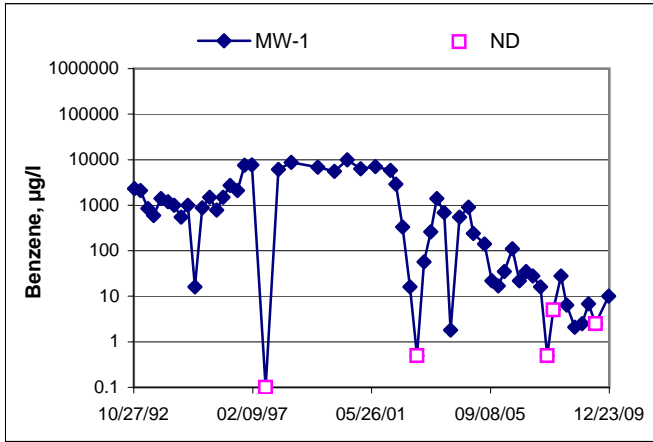


Elevations may have been corrected for apparent changes due to resurvey





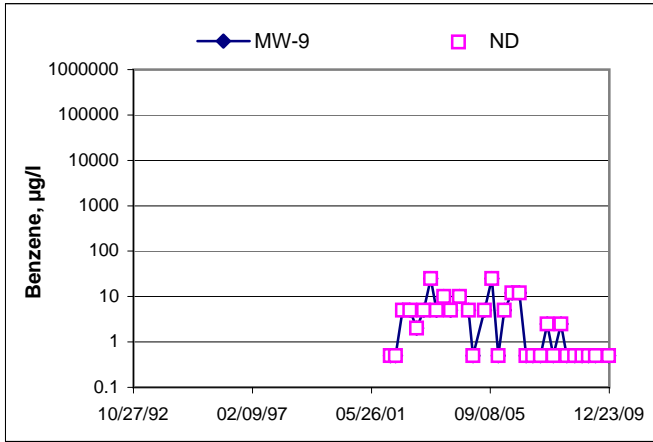
## Benzene Concentrations vs Time 76 Station 1871





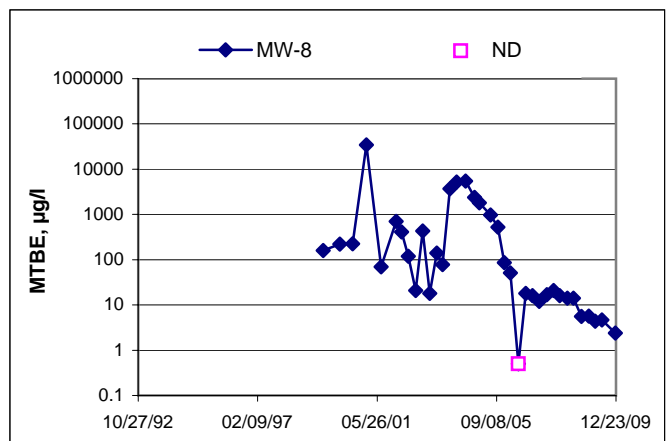
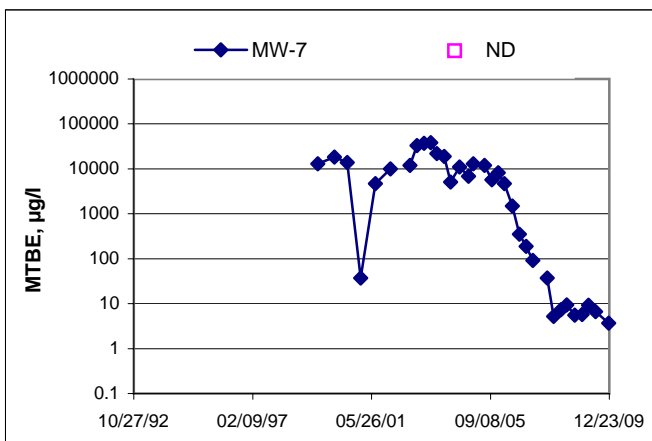
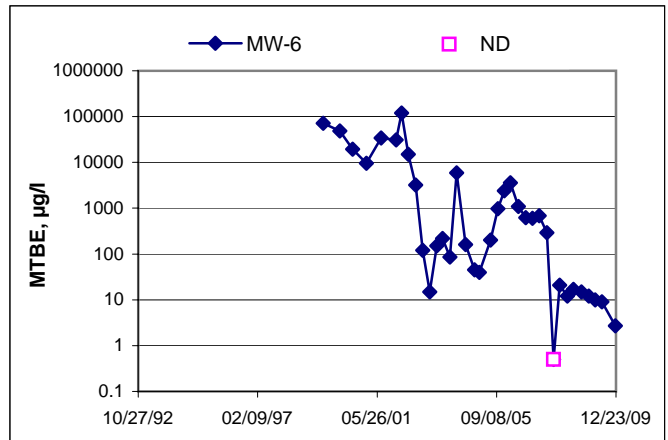
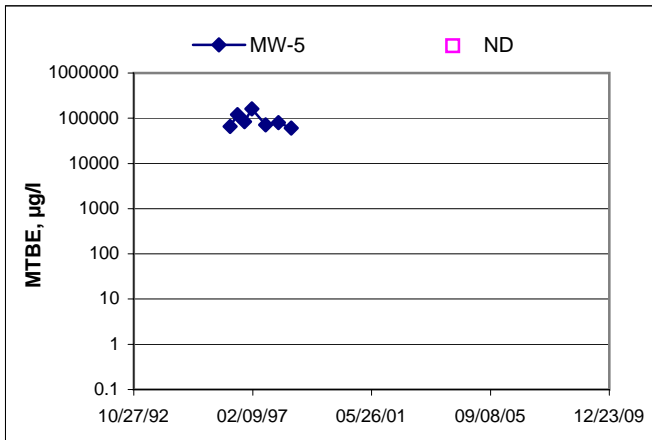
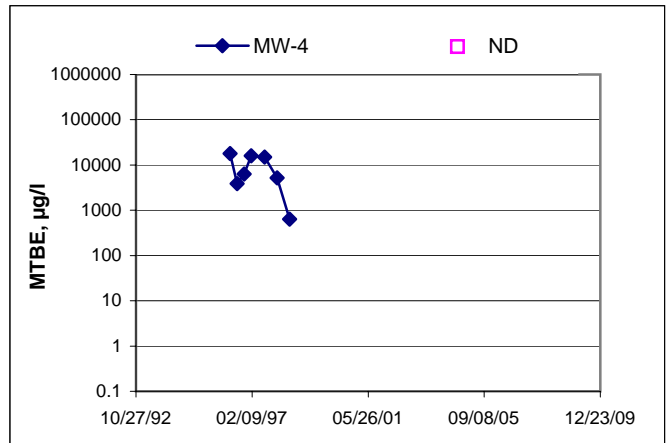
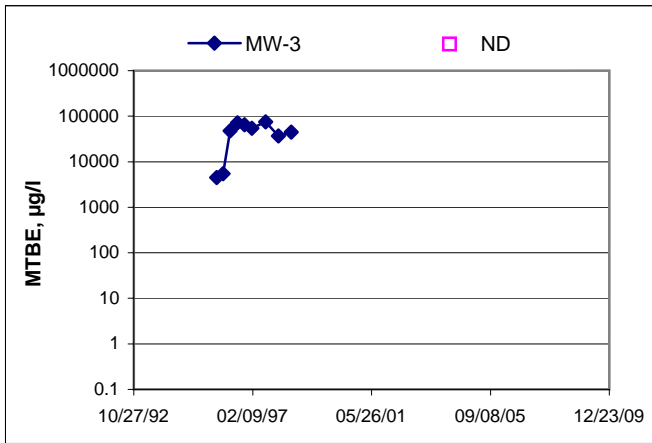
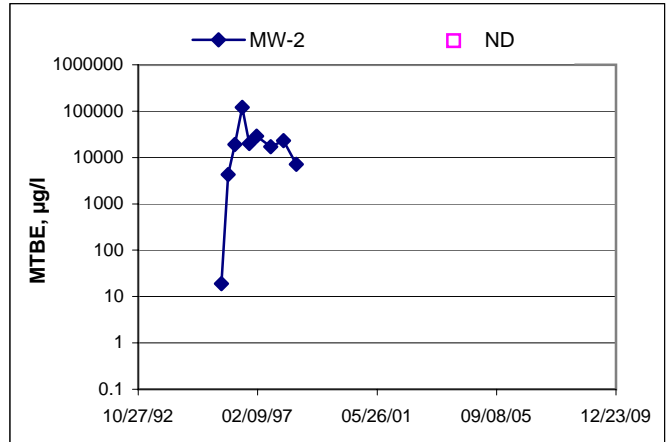
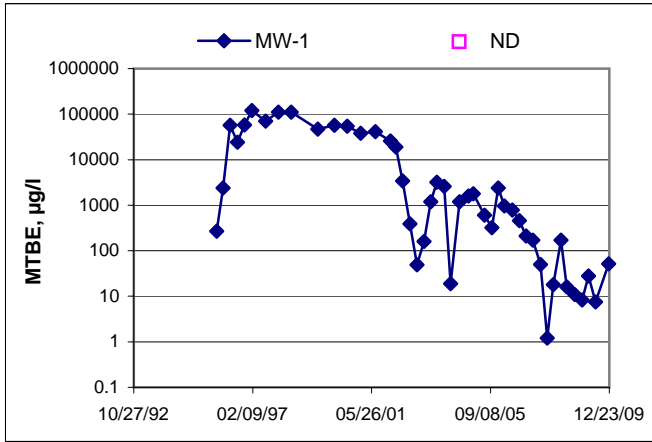
# Benzene Concentrations vs Time

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: A. Vaners

Site: 1871      Project No.: 165521      Date: 12/16/09

Well No. MW-11      Purge Method: Sub  
 Depth to Water (feet): 15.03      Depth to Product (feet): —  
 Total Depth (feet): 30.03      LPH & Water Recovered (gallons): —  
 Water Column (feet): 15.00      Casing Diameter (Inches): 2  
 80% Recharge Depth(feet): 18.03      1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
0637			3	2850	15.8	6.71	4.82	154	
			6	3033	16.0	6.56	4.69	159	
	0642		9	3062	16.5	6.54	4.62	160	
Static at Time Sampled			Total Gallons Purged			Sample Time			
4.80			9			0849			
<b>Comments:</b> <u>Did not recover in 2 hours</u>									

Well No. MW-10      Purge Method: Sub  
 Depth to Water (feet): 6.59      Depth to Product (feet): —  
 Total Depth (feet): 20.00      LPH & Water Recovered (gallons): —  
 Water Column (feet): 13.41      Casing Diameter (Inches): 2  
 80% Recharge Depth(feet): 9.27      1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
0653			3	563.4	15.4	7.65	3.65	134	
			6	506.8	16.0	7.43	3.03	141	
	0657		9	517.1	16.3	7.28	3.31	118	
Static at Time Sampled			Total Gallons Purged			Sample Time			
13.14			9			0859			
<b>Comments:</b> <u>Did not recover in 2 hours</u>									



# GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 1871

Project No.: 165521

Date: 12/16/09

Well No. MW-8

Purge Method: Sub

Depth to Water (feet): 10.08

Depth to Product (feet):           

Total Depth (feet): 24.28

LPH & Water Recovered (gallons):           

Water Column (feet): 14.20

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 12.92

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity	
<b>Pre-Purge</b>										
0710			3	299.3	18.2	7.08	1.72	50		
			6	313.3	19.8	7.01	1.41	61		
	0715		9	313.6	20.3	6.97	1.24	75		
		Static at Time Sampled		Total Gallons Purged			Sample Time			
		10.11		9			0908			
<b>Comments:</b>										

Well No. MW-6

Purge Method: Sub

Depth to Water (feet): 9.39

Depth to Product (feet):           

Total Depth (feet): 24.18

LPH & Water Recovered (gallons):           

Water Column (feet): 14.79

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 12.35

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity	
<b>Pre-Purge</b>										
0725			3	592.1	19.2	6.87	1.71	113		
			6	626.5	20.2	6.90	1.32	115		
	0730		9	611.4	20.1	6.88	1.55	116		
		Static at Time Sampled		Total Gallons Purged			Sample Time			
		9.68		9			0915			
<b>Comments:</b>										



## GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 1871

Project No.: 165521

Date: 12/16/09

Well No. MW-7

Purge Method: Sub

Depth to Water (feet): 9.42

Depth to Product (feet): —

Total Depth (feet): 24.31

LPH & Water Recovered (gallons): —

Water Column (feet): 14.89

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 12.40

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
0742			3	468.9	18.7	7.06	1.01	120	
			6	486.7	19.7	6.94	0.93	120	
	0747		9	492.8	20.2	6.93	1.08	118	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.98			9			0922			
<b>Comments:</b>									

Well No. MW-9

Purge Method: HB

Depth to Water (feet): 16.47

Depth to Product (feet): —

Total Depth (feet): 19.84

LPH & Water Recovered (gallons): —

Water Column (feet): 3.37

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 17.14

1 Well Volume (gallons): 1

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
0756			1	545.0	17.3	6.98	0.88	118	
			2	533.4	17.5	6.89	1.13	105	
	0801		3	536.3	17.6	6.85	0.99	102	
Static at Time Sampled			Total Gallons Purged			Sample Time			
16.56			3			0932			
<b>Comments:</b>									

## GROUNDWATER SAMPLING FIELD NOTES

Technician: A. Vidners

Site: 1871

Project No.: 165321

Date: 12/16/09

Well No. MW-1

Purge Method: Sub

Depth to Water (feet): 14.32

Depth to Product (feet): —

Total Depth (feet): 24.08

LPH & Water Recovered (gallons): —

Water Column (feet): 9.76

Casing Diameter (Inches): 4

80% Recharge Depth(feet): 16.27

1 Well Volume (gallons): 7

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
0817	0822		7	323.7	20.6	6.85	0.66	38	
			14						
	<del>0822</del> AM		21						
Static at Time Sampled			Total Gallons Purged			Sample Time			
17.85			11			1022			
<b>Comments:</b> <u>Dry at 11 gallons did not recover in 2 hours.</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 (µS/cm)	Temperature (F, C)	pH	D.O. (mg/L)	ORP	Turbidity
<b>Pre-Purge</b>									
Static at Time Sampled			Total Gallons Purged			Sample Time			
<b>Comments:</b>									



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



Date of Report: 12/28/2009

Anju Farfan

TRC

123 Technology Drive  
Irvine, CA 92618

RE: 1871  
BC Work Order: 0916963  
Invoice ID: B073334

Enclosed are the results of analyses for samples received by the laboratory on 12/17/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

**Reported:** 12/28/2009 14:28

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Delivery Work Order:
0916963-01	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 08:49	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-11
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-11						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:
0916963-02	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 08:59	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-10
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-10						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:
0916963-03	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 09:08	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-8
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-8						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:
0916963-04	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 09:15	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-6
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-6						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

**Reported:** 12/28/2009 14:28

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Delivery Work Order:
0916963-05	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 09:22	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-7
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-7						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:
0916963-06	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 09:32	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-9
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-9						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:
0916963-07	<b>COC Number:</b>	---		12/17/2009 21:25	12/16/2009 10:22	---	Water	Global ID: T0600101493
	<b>Project Number:</b>	1871						Location ID (FieldPoint): MW-1
	<b>Sampling Location:</b>	---						Matrix: W
	<b>Sampling Point:</b>	MW-1						Sample QC Type (SACode): CS
	<b>Sampled By:</b>	TRCI						Cooler ID:



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0916963-01		Client Sample Name: 1871, MW-11, 12/16/2009 8:49:00AM										
Constituent	Result	Units	PQL	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	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Toluene	ND	ug/L	0.50	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490	ND	
1,2-Dichloroethane-d4 (Surrogate)	88.2	%	76 - 114 (LCL - UCL)	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490		
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490		
4-Bromofluorobenzene (Surrogate)	98.2	%	86 - 115 (LCL - UCL)	EPA-8260	12/21/09	12/22/09 23:44	JCC	MS-V4	1	BSL1490		

TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0916963-02		Client Sample Name:	1871, MW-10, 12/16/2009 8:59:00AM									
Constituent	Result	Units	PQL	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	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Toluene	ND	ug/L	0.50	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
t-Butyl alcohol	ND	ug/L	10	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Ethanol	ND	ug/L	250	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490	ND		
1,2-Dichloroethane-d4 (Surrogate)	90.2	%	76 - 114 (LCL - UCL)	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490			
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490			
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260	12/21/09	12/23/09 00:12	JCC	MS-V4	1	BSL1490			



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 0916963-03	<b>Client Sample Name:</b> 1871, MW-8, 12/16/2009 9:08:00AM
----------------------------------	---

Constituent	Result	Units	PQL	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	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
<b>Methyl t-butyl ether</b>	<b>2.4</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/23/09 00:41</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>	
Toluene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554	ND	
1,2-Dichloroethane-d4 (Surrogate)	91.2	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554		
Toluene-d8 (Surrogate)	99.2	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554		
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 00:41	JCC	MS-V4	1	BSL1554		



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0916963-04		Client Sample Name:	1871, MW-6, 12/16/2009 9:15:00AM								
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
<b>Methyl t-butyl ether</b>	<b>2.7</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/23/09 01:09</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>	
Toluene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
t-Butyl alcohol	ND	ug/L	10	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
Ethanol	ND	ug/L	250	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554	ND	
1,2-Dichloroethane-d4 (Surrogate)	93.0	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554		
Toluene-d8 (Surrogate)	99.5	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554		
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:09	JCC	MS-V4	1	BSL1554		



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID:	0916963-05		Client Sample Name:	1871, MW-7, 12/16/2009 9:22:00AM									
Constituent	Result	Units	PQL	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	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
<b>Methyl t-butyl ether</b>	<b>3.7</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/23/09 01:37</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>		
Toluene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
t-Butyl alcohol	ND	ug/L	10	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
Ethanol	ND	ug/L	250	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554	ND		
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>150</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>12/22/09</b>	<b>12/23/09 01:37</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>		
1,2-Dichloroethane-d4 (Surrogate)	95.6	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554			
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554			
4-Bromofluorobenzene (Surrogate)	97.9	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 01:37	JCC	MS-V4	1	BSL1554			



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0916963-06		Client Sample Name: 1871, MW-9, 12/16/2009 9:32:00AM										
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554	ND	
Ethylbenzene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554	ND	
<b>Methyl t-butyl ether</b>	<b>130</b>	<b>ug/L</b>	<b>1.0</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/24/09 17:04</b>	<b>JCC</b>	<b>MS-V4</b>	<b>2</b>	<b>BSL1554</b>	<b>ND</b>	<b>A01</b>
Toluene	ND	ug/L	0.50	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554	ND	
Total Xylenes	ND	ug/L	1.0	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554	ND	
<b>t-Butyl alcohol</b>	<b>22</b>	<b>ug/L</b>	<b>10</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/23/09 02:05</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>	
Ethanol	ND	ug/L	250	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554	ND	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>86</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>12/22/09</b>	<b>12/23/09 02:05</b>	<b>JCC</b>	<b>MS-V4</b>	<b>1</b>	<b>BSL1554</b>	<b>ND</b>	<b>A90</b>
1,2-Dichloroethane-d4 (Surrogate)	94.0	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554		
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:04	JCC	MS-V4	2	BSL1554		
Toluene-d8 (Surrogate)	98.6	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554		
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:04	JCC	MS-V4	2	BSL1554		
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:05	JCC	MS-V4	1	BSL1554		
4-Bromofluorobenzene (Surrogate)	99.0	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:04	JCC	MS-V4	2	BSL1554		



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0916963-07		Client Sample Name: 1871, MW-1, 12/16/2009 10:22:00AM											
Constituent	Result	Units	PQL	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	10	ug/L	1.0	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554	ND	A01	
Ethylbenzene	270	ug/L	10	EPA-8260	12/22/09	12/24/09 17:33	JCC	MS-V4	20	BSL1554	ND	A01	
Methyl t-butyl ether	52	ug/L	1.0	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554	ND	A01	
Toluene	ND	ug/L	1.0	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554	ND	A01	
<b>Total Xylenes</b>	<b>140</b>	<b>ug/L</b>	<b>2.0</b>	<b>EPA-8260</b>	<b>12/22/09</b>	<b>12/23/09 02:34</b>	<b>JCC</b>	<b>MS-V4</b>	<b>2</b>	<b>BSL1554</b>	<b>ND</b>	<b>A01</b>	
t-Butyl alcohol	ND	ug/L	20	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554	ND	A01	
Ethanol	ND	ug/L	500	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554	ND	A01	
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>4600</b>	<b>ug/L</b>	<b>1000</b>	<b>Luft-GC/MS</b>	<b>12/22/09</b>	<b>12/24/09 17:33</b>	<b>JCC</b>	<b>MS-V4</b>	<b>20</b>	<b>BSL1554</b>	<b>ND</b>	<b>A01</b>	
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554			
1,2-Dichloroethane-d4 (Surrogate)	98.4	%	76 - 114 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:33	JCC	MS-V4	20	BSL1554			
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554			
Toluene-d8 (Surrogate)	99.9	%	88 - 110 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:33	JCC	MS-V4	20	BSL1554			
4-Bromofluorobenzene (Surrogate)	99.1	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/24/09 17:33	JCC	MS-V4	20	BSL1554			
4-Bromofluorobenzene (Surrogate)	99.1	%	86 - 115 (LCL - UCL)	EPA-8260	12/22/09	12/23/09 02:34	JCC	MS-V4	2	BSL1554			



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## 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		Lab Quals
										RPD	Percent Recovery	
Benzene	BSL1490	Matrix Spike	0915623-48	ND	23.780	25.000	ug/L		95.1		70 - 130	
		Matrix Spike Duplicate	0915623-48	ND	23.700	25.000	ug/L	0.3	94.8	20	70 - 130	
Toluene	BSL1490	Matrix Spike	0915623-48	ND	24.490	25.000	ug/L		98.0		70 - 130	
		Matrix Spike Duplicate	0915623-48	ND	24.970	25.000	ug/L	1.9	99.9	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSL1490	Matrix Spike	0915623-48	ND	9.7100	10.000	ug/L		97.1		76 - 114	
		Matrix Spike Duplicate	0915623-48	ND	9.2800	10.000	ug/L		92.8		76 - 114	
Toluene-d8 (Surrogate)	BSL1490	Matrix Spike	0915623-48	ND	10.060	10.000	ug/L		101		88 - 110	
		Matrix Spike Duplicate	0915623-48	ND	10.040	10.000	ug/L		100		88 - 110	
4-Bromofluorobenzene (Surrogate)	BSL1490	Matrix Spike	0915623-48	ND	10.350	10.000	ug/L		104		86 - 115	
		Matrix Spike Duplicate	0915623-48	ND	9.8500	10.000	ug/L		98.5		86 - 115	
Benzene	BSL1554	Matrix Spike	0915623-49	ND	25.950	25.000	ug/L		104		70 - 130	
		Matrix Spike Duplicate	0915623-49	ND	24.990	25.000	ug/L	3.8	100	20	70 - 130	
Toluene	BSL1554	Matrix Spike	0915623-49	ND	25.260	25.000	ug/L		101		70 - 130	
		Matrix Spike Duplicate	0915623-49	ND	24.790	25.000	ug/L	1.9	99.2	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BSL1554	Matrix Spike	0915623-49	ND	9.3400	10.000	ug/L		93.4		76 - 114	
		Matrix Spike Duplicate	0915623-49	ND	8.8500	10.000	ug/L		88.5		76 - 114	
Toluene-d8 (Surrogate)	BSL1554	Matrix Spike	0915623-49	ND	10.140	10.000	ug/L		101		88 - 110	
		Matrix Spike Duplicate	0915623-49	ND	9.9500	10.000	ug/L		99.5		88 - 110	
4-Bromofluorobenzene (Surrogate)	BSL1554	Matrix Spike	0915623-49	ND	9.8200	10.000	ug/L		98.2		86 - 115	
		Matrix Spike Duplicate	0915623-49	ND	9.8600	10.000	ug/L		98.6		86 - 115	

TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## 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	BSL1490	BSL1490-BS1	LCS	25.930	25.000	0.50	ug/L	104		70 - 130		
Toluene	BSL1490	BSL1490-BS1	LCS	26.380	25.000	0.50	ug/L	106		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSL1490	BSL1490-BS1	LCS	9.0300	10.000		ug/L	90.3		76 - 114		
Toluene-d8 (Surrogate)	BSL1490	BSL1490-BS1	LCS	10.110	10.000		ug/L	101		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSL1490	BSL1490-BS1	LCS	9.8100	10.000		ug/L	98.1		86 - 115		
Benzene	BSL1554	BSL1554-BS1	LCS	25.820	25.000	0.50	ug/L	103		70 - 130		
Toluene	BSL1554	BSL1554-BS1	LCS	25.330	25.000	0.50	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BSL1554	BSL1554-BS1	LCS	9.3200	10.000		ug/L	93.2		76 - 114		
Toluene-d8 (Surrogate)	BSL1554	BSL1554-BS1	LCS	9.9000	10.000		ug/L	99.0		88 - 110		
4-Bromofluorobenzene (Surrogate)	BSL1554	BSL1554-BS1	LCS	9.9600	10.000		ug/L	99.6		86 - 115		



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

Reported: 12/28/2009 14:28

## 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	BSL1490	BSL1490-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSL1490	BSL1490-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSL1490	BSL1490-BLK1	ND	ug/L	0.50		
Toluene	BSL1490	BSL1490-BLK1	ND	ug/L	0.50		
Total Xylenes	BSL1490	BSL1490-BLK1	ND	ug/L	1.0		
t-Butyl alcohol	BSL1490	BSL1490-BLK1	ND	ug/L	10		
Ethanol	BSL1490	BSL1490-BLK1	ND	ug/L	250		
Total Purgeable Petroleum Hydrocarbons	BSL1490	BSL1490-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BSL1490	BSL1490-BLK1	91.5	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSL1490	BSL1490-BLK1	99.4	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSL1490	BSL1490-BLK1	98.9	%	86 - 115 (LCL - UCL)		
Benzene	BSL1554	BSL1554-BLK1	ND	ug/L	0.50		
Ethylbenzene	BSL1554	BSL1554-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BSL1554	BSL1554-BLK1	ND	ug/L	0.50		
Toluene	BSL1554	BSL1554-BLK1	ND	ug/L	0.50		
Total Xylenes	BSL1554	BSL1554-BLK1	ND	ug/L	1.0		
t-Butyl alcohol	BSL1554	BSL1554-BLK1	ND	ug/L	10		
Ethanol	BSL1554	BSL1554-BLK1	ND	ug/L	250		
Total Purgeable Petroleum Hydrocarbons	BSL1554	BSL1554-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BSL1554	BSL1554-BLK1	96.1	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BSL1554	BSL1554-BLK1	101	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BSL1554	BSL1554-BLK1	99.7	%	86 - 115 (LCL - UCL)		



TRC  
123 Technology Drive  
Irvine, CA 92618

Project: 1871  
Project Number: 4510932415  
Project Manager: Anju Farfan

**Reported:** 12/28/2009 14:28

**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 #: 09-109103

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: V009 Thermometer ID: TN080

Temperature: A 2.8 °C / C 2.8 °C

Date/Time 12-17-09 <sup>2141</sup>

Analyst Init JNW

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										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A/B	A/B	A/B	A/B	A/B	A/B	A/B	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/608/8080										
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										

CHECK BY JNW  
 DISTRIBUTION  
 SUB-OUT

Comments:

Sample Numbering Completed By: JNW Date/Time: 12/18/09 11:18

A = Actual / C = Corrected



## **STATEMENTS**

### **Purge Water Disposal**

Non-hazardous groundwater produced during purging and sampling of monitoring wells is accumulated at TRC's groundwater monitoring field office at Concord, California, for transportation by a licensed carrier to an authorized disposal facility. Currently, non-hazardous purge water is transported under a bulk non-hazardous waste manifest to Crosby and Overton, Inc. in Long Beach, California.

### **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.

**ATTACHMENT C**

First Quarter 2010 Ozone Injection O&M Report

March 15, 2010

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

Mr. Ken Thomas  
 Project Manager  
 Delta Environmental Consultants Inc  
 911 S. Primrose Ave Suite K  
 Monrovia, CA 91016

Project No. 400-A

**First Quarter 2010**  
**Ozone Injection System O&M Report**  
**76 Service Station No. 1871**  
 96 MacArthur Boulevard  
 Oakland, California

Dear Mr. Reay:

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:	KVA Ozone Injection System
Operation Data During: Reporting Period: Dec. 1, 2009 – Feb. 28, 2010	Period hours of operation: 2,687
System Operation Data Since Startup: June 23, 2003	Total Hours of Operation: 32,844
<p>Note:</p> <p style="text-align: center;">Groundwater samples collected from monitoring wells MW-1, and MW-7 from April 16, 2003 to October 23, 2005 as part of system O&amp;M.</p>	

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 contact us at (949) 486-0884, or by email at [tyler@environstrategy.com](mailto:tyler@environstrategy.com).

Respectfully submitted,



Tyler Colopy  
 Staff Scientist



Jinghui Niu, P.E.  
 Principal Engineer



**First Quarter 2010 O&M Report**

**76 Service Station No. 1871**

March 15, 2010

Page 2

Attachments: Figure - Site Plan

Table 1 - Ozone Injection - System Operation Data

Table 2 - Ozone Injection - Groundwater Monitoring Data

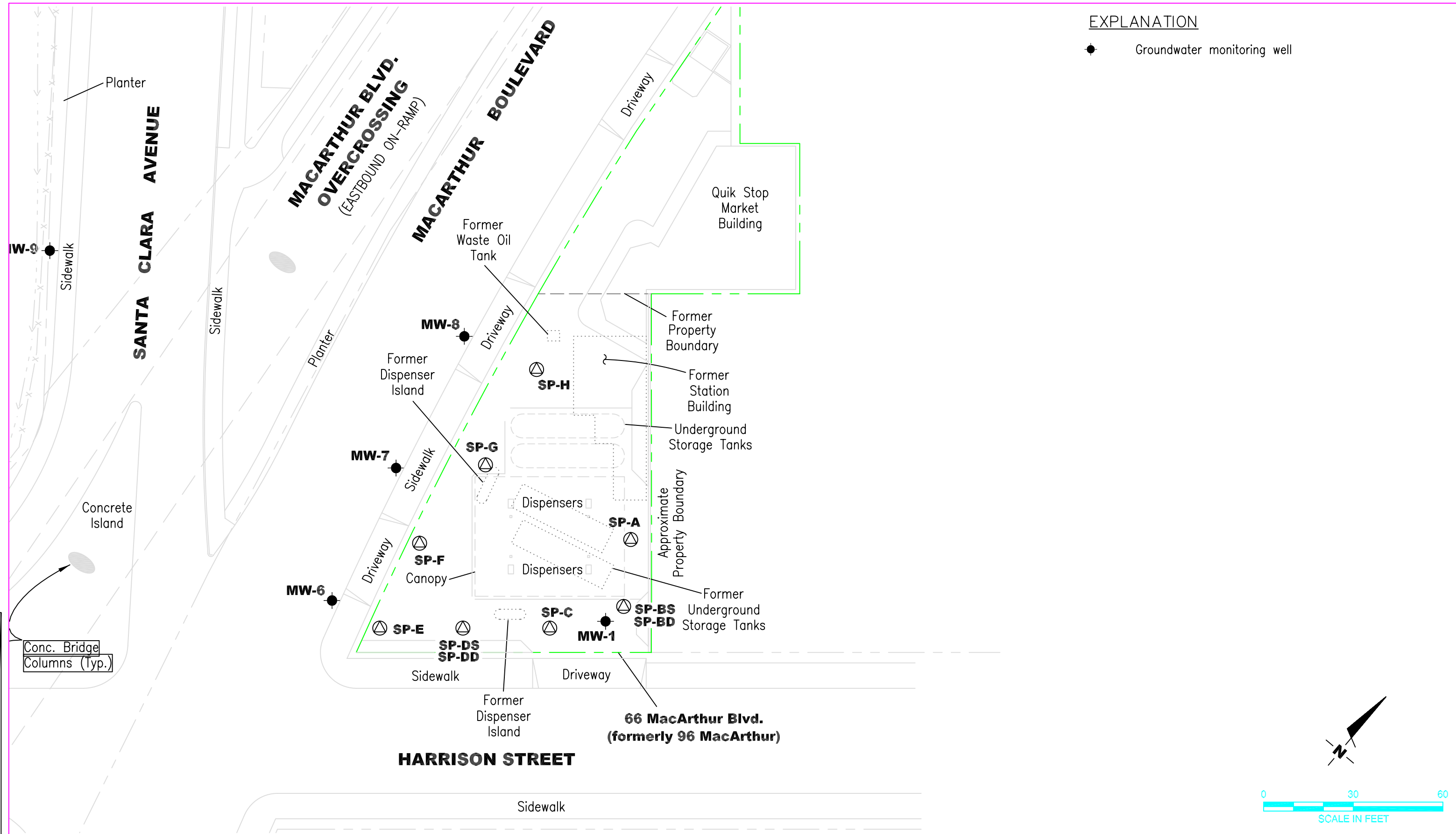
Graph 1 - MW-1 TPHg, Benzene, and MtBE Groundwater Concentrations

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

Appendix A - Field Notes

cc: Terry Grayson, 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						SP-A	SP-BS	SP-BD	SP-C	SP-DS	SP-DD	SP-E	SP-F	SP-G	SP-H	
		System Status (On/Off)		Hourmeter Reading	Period Online Factor	Cumulative Online Factor	Ozone Injected (lbs)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	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						SP-A	SP-BS	SP-BD	SP-C	SP-DS	SP-DD	SP-E	SP-F	SP-G	SP-H	
		System Status (On/Off)		Hourmeter Reading	Period Online Factor	Cumulative Online Factor	Ozone Injected (lbs)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	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						SP-A	SP-BS	SP-BD	SP-C	SP-DS	SP-DD	SP-E	SP-F	SP-G	SP-H
		System Status (On/Off)		Hourmeter Reading	Period Online Factor	Cumulative Online Factor	Ozone Injected (lbs)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	Pressure (psi)	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	z	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
12/29/08		On	On	16,869	1.00	0.67	7.57	20	15	17	16	20	24	22	19	14	20
1/26/09		On	On	17,542	1.00	0.68	6.06	22	17	16	16	21	25	20	18	15	22
2/23/09		On	On	18,214	1.00	0.68	6.05	21	18	19	18	20	23	21	19	16	20
3/30/09		On	On	19,005	0.94	0.69	7.12	20	19	17	17	22	22	21	18	16	21
4/27/09		On	On	19,727	1.00	0.69	6.50	21	21	18	18	21	22	20	19	18	20
5/25/09		On	On	20,400	1.00	0.69	6.06	22	20	17	16	20	21	21	20	19	19
6/22/09		On	On	21,072	1.00	0.70	6.05	20	20	17	18	17	20	21	19	20	20
7/27/09		On	On	21,912	1.00	0.70	7.56	22	21	18	19	16	22	22	21	19	18
8/3/09		On	Off	22,080	1.00	0.70	1.51	21	20	20	21	18	21	20	20	21	19
11/4/09		Off	On	22,080	0.00	0.68	0.00	20	19	19	20	17	20	19	18	19	17
12/30/09		On	On	23,424	1.00	0.68	12.10	23	21	21	23	20	22	23	21	22	21
1/27/10		On	On	24,096	1.00	0.69	6.05	21	20	20	22	21	24	23	20	24	23
2/24/10		On	On	24,767	1.00	0.69	6.04	22	24	22	21	22	25	24	21	26	24
(6/23/2003-3/30/2009) Sparge time per cycle (min)								7	7	7	7	7	7	7	7	7	7
(4/27/2009 to present) Sparge Time per cycle (min)								7	7	7	7	8	8	7	7	7	7
Number of Cycles per Day								20	20	20	20	20	20	20	20	20	20
<b>Reporting Period: First Quarter 2010 (12/01/2009 to 02/28/2010)</b>																	
Total Hours Operational: 32,844																	
Total Pounds Ozone Injected: 296																	
Period Hours Operational: 2687																	
Period Percent Operational: 100%																	
Period Pounds Ozone Injected: 24																	

**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.**

**August 3, 2009** - Ozone down by request of COP PM

**November 4, 2009** - System restarted

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.
- z September 10-27,2008 - System down for well Repair.

**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

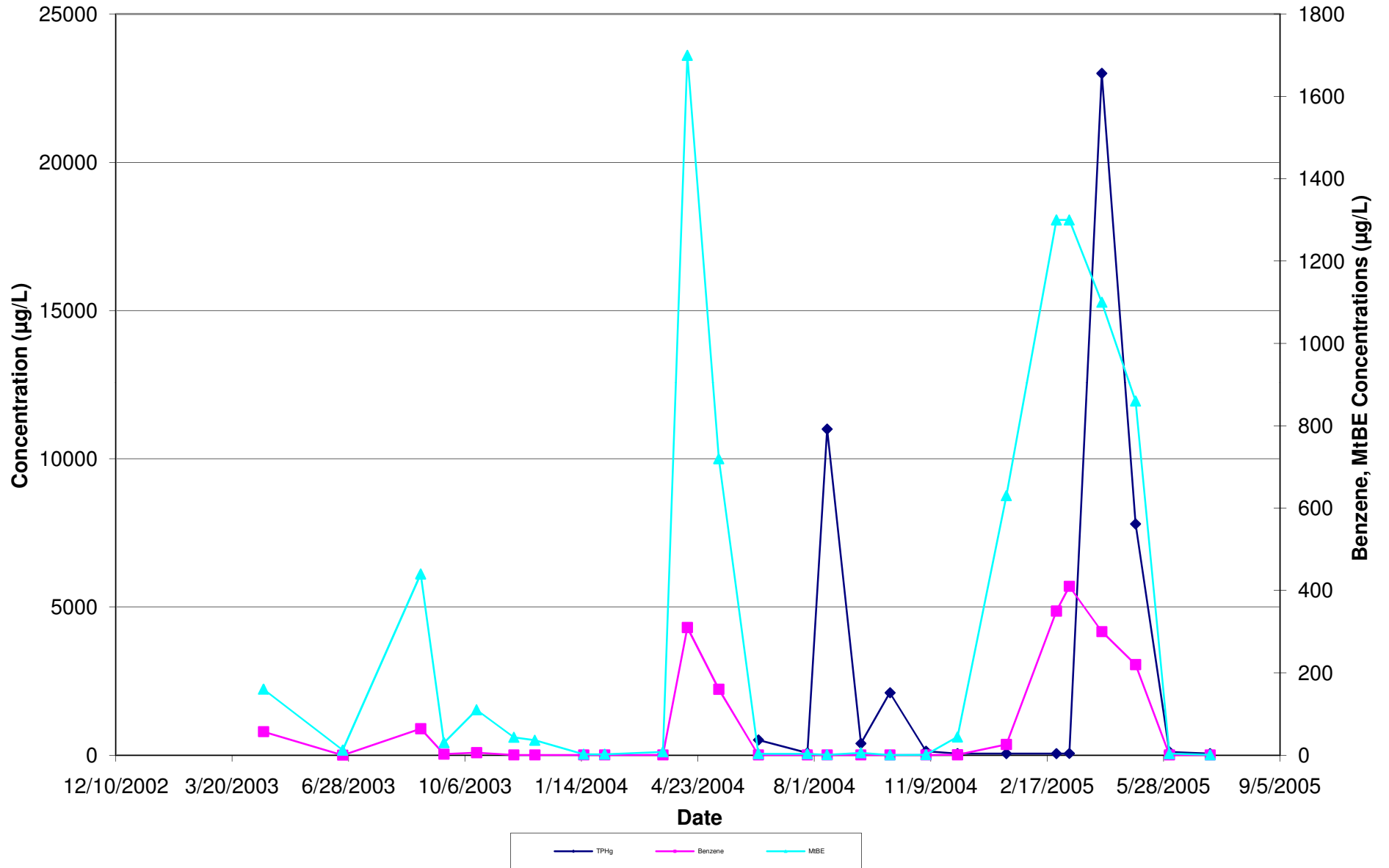
ORP = Oxidation Reduction Potential  
DO = Dissolved Oxygen  
mV = Millivolts  
mg/l = Milligrams per liter

**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

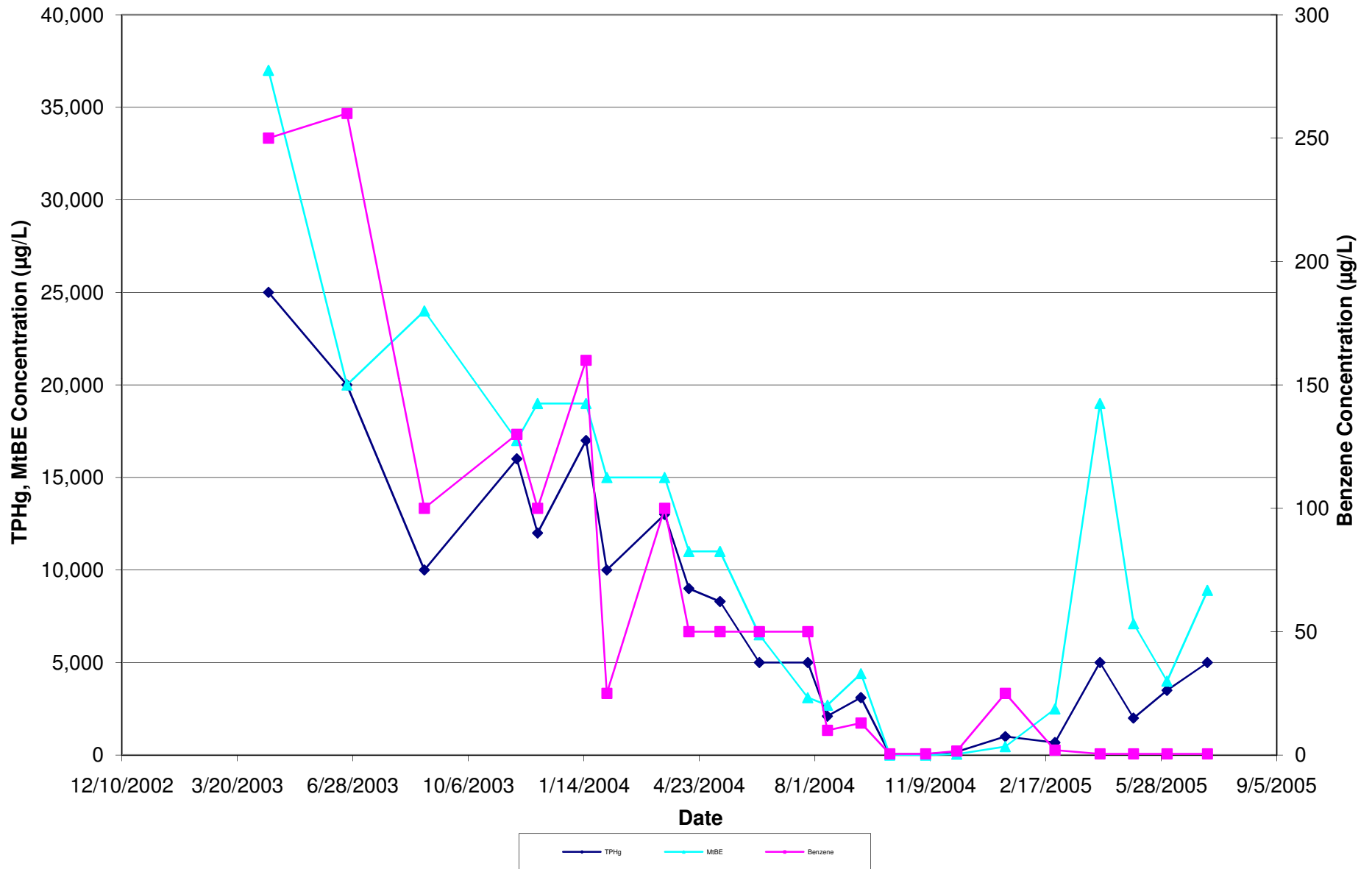
# Graphs

**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

Date	Notes	Status ON/OFF	Cycles/Day	Hour Meter	Well I.D. 02-1				Well I.D. 02-2				Well I.D. 02-3			
					Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)
30 Dec 09		on/off	20	2424	23		7		21		7		21		7	
27 Jan 10		on/off	20	2496	21		7		20		7		20		7	
24 Feb 10		on/off	20	2467	22		7		24		7		22		7	

Date	Well I.D. 02-4				Well I.D. 02-5				Well I.D. 02-6				Well I.D. 02-7			
	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)
30 Dec 09	23		7		20		7		22		7		23		7	
27 Jan 10	22		7		21		7		24		7		23		7	
24 Feb 10	21		7		22		7		25		7		24		7	

Date	Well I.D. 02-8				Well I.D. 02-9				Well I.D. 02-10				Well I.D.			
	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)	Pressure (psi)	Temp. (°F)	Run Time (min)	Flow Rate (acfm)
30 Dec 09	21		7		22		7		21		7					
27 Jan 10	20		7		24		7		23		7					
24 Feb 10	21		7		26		7		24		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
30 Dec 09	OK	OK	OK	OK	N/A	OK	N/A	N/A	OK	
27 Jan 10	OK	OK	OK	OK	N/A	OK	N/A	N/A	OK	
24 Feb 10	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.