



76 Broadway  
Sacramento, California 95818

**RECEIVED**

9:00 am, Jun 29, 2011

Alameda County  
Environmental Health

June 21, 2011

Ms. Barbara Jakub  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

Re: **Semi-Annual Summary Report Transmittal  
First Quarter through Second Quarter 2011  
76 Service Station #1871  
96 MacArthur Boulevard  
Oakland, California**

**RO # 0455**

Dear Ms. Jakub:

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

If you have any questions or need additional information, please call:

Ted Moise (Contractor)  
ConocoPhillips  
Risk Management & Remediation  
76 Broadway  
Sacramento, CA 95818

Phone: (510) 245-5162  
Fax: (918) 662-4480  
[Ted.Moise@contractor.conocophillips.com](mailto:Ted.Moise@contractor.conocophillips.com)

Sincerely,

Eric G. Hetrick  
Site Manager  
Risk Management & Remediation

Attachment

# ***SEMI ANNUAL SUMMARY REPORT***

## ***Second Quarter 2011***

*76 Service Station No. 1871  
96 MacArthur Blvd  
Oakland, CA*

*Antea Group Project No. C1Q1871010*

*June 21, 2011*

*Prepared for:*  
**ConocoPhillips**  
**76 Broadway**  
**Sacramento, CA 95818**

*Prepared by:*  
**Antea™ Group**  
11050 White Rock Road  
Suite 110  
Rancho Cordova, CA  
95670



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June 21, 2011

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

**Re: SEMI-ANNUAL SUMMARY REPORT  
FIRST QUARTER THROUGH SECOND QUARTER 2011**  
76 Service Station No. 1871  
96 MacArthur Boulevard  
Oakland, California  
RO#0455, AOC 1120

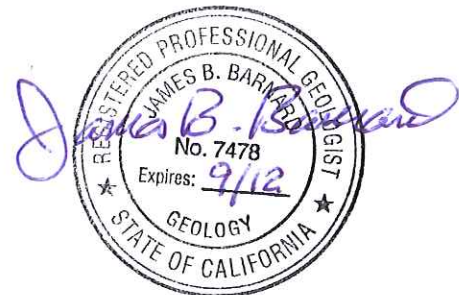
Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Antea™Group, formerly known as Delta Consultants (Delta), is submitting the subject report and forwarding a copy of TRC's Semi-Annual *Groundwater Monitoring Report – April through June 2011*- dated June 16 2011, and a copy of the *Second Quarter 2011 Ozone Injection System O&M Report* by Environ Strategy Consultants, Inc. (Environ Strategy) dated June 1, 2011. Antea Group will be assuming responsibility for uploading of TRC and Environ Strategies quarterly reports to GeoTracker.

Sincerely,

ANTEA™ GROUP

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



cc: Mr. Ted Moise - ConocoPhillips (electronic copy only)



## **1.0 INTRODUCTION**

### **1.1 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 Quik Stop market and petroleum dispensing facility. There are four dispenser islands, one station building, and two gasoline underground storage tanks (USTs).

### **1.2 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. Conformation 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.

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.

August 19, 2010: Morrow Surveying surveyed all of the on-site and off-site wells (MW-1, MW-6, MW-8, MW-9, MW-10, and MW-11), all to the same datum. Offsite well MW-7 was surveyed on December 13, 2010.

### **1.3 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 tile 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.

## **2.0 GROUNDWATER MONITORING AND SAMPLING**

**The groundwater monitoring well network consists of one onsite and six offsite monitoring wells. The site previously followed quarterly sampling between January 2002 and June 2009. Currently the site is monitored and sampled on a semi-annual basis during the second and fourth quarters. Data presented below is from TRC's Groundwater Monitoring Report April through June 2011, dated June 16, 2011 (Attachment A). No M&S activities were performed during first quarter 2011, due to the fact that this site is monitored and sampled on a semi-annual basis during second and fourth quarters.**

### **2.1 FIRST QUARTER THROUGH SECOND QUARTER 2011 MONITORING AND SAMPLING ACTIVITIES**

The most recent groundwater sampling event was conducted by TRC on May 27, 2011. Depth to groundwater ranged from 6.62 feet below top of casing (TOC) in MW-10 to 15.60 feet below TOC in MW-11. Average groundwater elevation was calculated as 72.60 feet above mean sea level (MSL). This is an average increase of 1.63 ft from the previous sampling event (10/13/10). All seven wells were gauged and sampled during the current event.

The groundwater gradient and flow direction was interpreted as 0.05 feet per foot (ft/ft) to the west. During the previous sampling event (10/13/10) gradient and flow direction were reported as 0.03 ft/ft west. Historically, groundwater flow direction has been predominantly to the southwest, and to a lesser extent to the west and south. A historical groundwater flow direction rose diagram is included as Attachment B.

Groundwater samples collected during the current sampling event were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert butyl ether (MTBE), tert butyl alcohol (TBA), and ethanol by EPA method 8260B.

#### **2.1.1 Constituents of Concern**

**TPHG:** TPHg was above laboratory indicated reporting limits in groundwater sample collected from three of the seven wells sampled with a maximum concentration of 1,500micrograms per liter ( $\mu\text{g/L}$ ) in MW-1 during the

current sampling event. This is a decrease from a maximum concentration of 4,600 µg/L in MW-1 during the previous sampling event (10/13/11).

**Benzene:** Benzene was above laboratory indicated reporting limits in groundwater samples collected from one of the seven wells sampled with a concentration of 3.2 µg/L in MW-1 during the current sampling event. This is an increase from a maximum concentration of 3.0 µg/L in MW-1 during the previous sampling event (10/13/11).

**Toluene:** Toluene was below laboratory indicated reporting limits in groundwater samples collected from all of the seven wells sampled during the current sampling event. This is consistent with the previous two sampling events (12/16/09, 4/14/10, 10/13/11).

**Ethylbenzene:** Ethylbenzene was above laboratory indicated reporting limits in groundwater samples collected from one of the seven sampled wells with a concentration of 86 µg/L in MW-1 during the current sampling event. This is a decrease from a maximum concentration of 180 µg/L in MW-1 during the previous sampling event (10/13/11).

**Total Xylenes:** Total xylenes were above laboratory indicated reporting limits in groundwater samples collected from one of the seven wells sampled with a concentration of 14 µg/L in MW-1 during the current sampling event. This is a decrease from a maximum concentration of 73µg/L in MW-1 during the previous sampling event (10/13/11).

**MTBE:** MTBE was above laboratory indicated reporting limits in groundwater samples collected from five of the seven wells sampled with a maximum concentration of 70 µg/L in MW-9 during the current sampling event. This is a decrease from the maximum concentration of 160 µg/L in MW-9 during the previous sampling event (10/13/11).

**TBA:** TBA was below the laboratory indicated limits in groundwater samples from all seven wells during the current event. During the previous event, TBA was above laboratory indicated reporting limits in groundwater samples collected from two of the seven wells sampled with a maximum concentration of 73 µg/L in MW-1 (10/13/11).

**Other Fuel Oxygenates:** 1,2-DCA, EDB, and Ethanol were all below laboratory indicated reporting limits in groundwater samples collected from all of the seven wells sampled during the current sampling event.

Laboratory data qualifier A01 was noted on the benzene, 1,2 DCA, ethyl-benzene, MTBE, toluene, total xylene, TBA, ethanol, and TPHg samples from 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.

### 3.0 REMEDIATION STATUS

In 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. To date the system has operated for 43,928 hours and has injected approximately 395 pounds of ozone into the subsurface.

During the reporting period (from March 1, 2011 through May 31, 2011), the ozone sparge system operated for 2,345 hours at a 100% on-line efficiency and injected approximately 21 pounds of ozone into the subsurface.

The *Second Quarter 2011 Ozone Injection System O&M Report* prepared by Environ Strategy Consultants, Inc. (Environ Strategy) dated June 1, 2011 is provided as Attachment C.

#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

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, indicates decreasing trends . MTBE concentrations in well MW-9 have shown a decreasing trend since the maximum historical concentration of 2,800 µg/L in December 2005. Data from the most recent sampling event 5/27/11 show that samples from wells MW-1, MW-6, MW-7, MW-8, and MW-10 had concentrations of 10 µg/L, 6.0 µg/L, 5.2 µg/L, 1.1µg/L, and 70 µg/L, respectively.

Delta submitted a *Work Plan for CPT Vertical and Lateral Stratigraphic and Plume Definition* dated February 16, 2009.

On August 19, 2010, Morrow Surveying surveyed all of the on-site and off-site wells (MW-1, MW-6, MW-8, MW-9, MW-10, and MW-11), all to the same datum. MW-7 was surveyed on December 13, 2010. The new survey data for the seven wells was communicated to TRC, and has been incorporated into the groundwater flow direction and gradient interpretation during the fourth quarter 2010 monitoring and sampling event.

#### **5.0 RECENT CORRESPONDENCE**

No correspondence has been received during this reporting period.

#### **6.0 FIRST QUARTER THROUGH SECOND QUARTER 2011 ACTIVITIES**

- TRC performed monitoring and sampling activities at the site on May 27, 2011, and prepared their results in *Groundwater Monitoring Report – April through June 2011*, dated June 16, 2011.
- Environ Strategy performed O&M activities at the site, and prepared their findings in the *Second Quarter 2011 Ozone Injection System O&M Report*, dated June 1, 2011.
- Antea Group prepared *Semi-Annual Summary Report – First Quarter through Second Quarter 2011*.

#### **7.0 THIRD QUARTER THROUGH FOURTH QUARTER 2011 PLANNED ACTIVITIES**

- TRC will perform semi-annual monitoring and sampling activities and prepare their findings in a semi-annual groundwater monitoring report.
- Environ Strategy will perform third and fourth quarters 2011 O&M Activities, and prepare their findings in a quarterly ozone injection system O&M report.

- Antea Group will prepare a semi-annual summary report.

## 8.0 REMARKS

The descriptions, conclusions, and recommendations contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were conducted. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

CONSULTANT: **ANTEA™GROUP**

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### ATTACHMENTS:

Attachment A – Groundwater Monitoring Report – April through June 2011  
Attachment B – Historical Groundwater Flow Direction Rose Diagram  
Attachment C – Second Quarter 2011 Ozone Injection O&M Report



**ATTACHMENT A**

Groundwater Monitoring Report – April through June 2011



123 Technology Drive West  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

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

DATE: June 16, 2011

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, California 95818

ATTN: MR. TED MOISE

SITE: 76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

RE: GROUNDWATER MONITORING REPORT  
APRIL THROUGH JUNE 2011

Dear Mr. Moise,

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

Sincerely,

TRC

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

Anju Farfan  
Groundwater Program Operations Manager

CC: Mr. James Barnard, Delta Consultants (3 copies)

Enclosures  
20-0400/1871R27.QMS

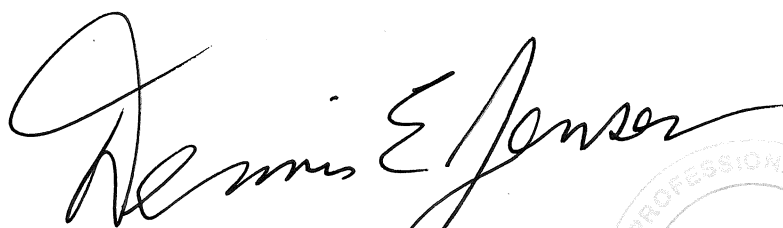
**GROUNDWATER MONITORING REPORT  
APRIL THROUGH JUNE 2011**

76 STATION 1871  
96 MacArthur Boulevard  
Oakland, California

Prepared For:

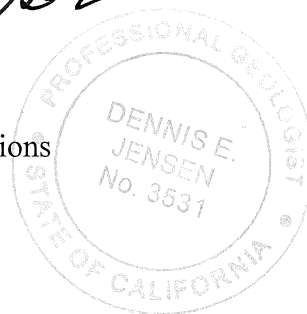
Mr. Ted Moise  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations

Date: 6/16/11



## 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 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 – 5/27/11 Groundwater Sampling Field Notes – 5/27/11
Laboratory Reports	Official Laboratory Reports Quality Control Reports Chain of Custody Records
Statements	Purge Water Disposal Limitations

**Summary of Gauging and Sampling Activities**  
**April 2011 through June 2011**  
**76 Station 1871**  
**96 MacArthur Boulevard**  
**Oakland, CA**

---

Project Coordinator: **Ted Moise**  
Telephone: **510-245-5162**

Water Sampling Contractor: **TRC**  
Compiled by: **Allan Ramirez**

Date(s) of Gauging/Sampling Event: **5/27/2011**

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**Sample Points**

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

Purging method: **Submersible pump**

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

Other Sample Points: **0**           Type: --

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**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: **6.62 feet**                     Maximum: **15.6 feet**

Average groundwater elevation (relative to available local datum): **72.60 feet**

Average change in groundwater elevation since previous event: **1.63 feet**

Interpreted groundwater gradient and flow direction:

    Current event: **0.05 ft/ft, south to west**

    Previous event: **0.03 ft/ft, west (10/13/2010)**

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**Selected Laboratory Results**

Sample Points with detected **Benzene**:   **1**     Sample Points above MCL (1.0 µg/l): **1**  
    Maximum reported benzene concentration: **3.2 µg/l (MW-1)**

Sample Points with **TPH-G by GC/MS**   **3**     Maximum: **1,500 µg/l (MW-1)**

Sample Points with **MTBE 8260B**       **5**     Maximum: **70 µg/l (MW-9)**

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**Notes:**

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# TABLES

## TABLE KEY

### STANDARD ABBREVIATIONS

--	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
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: Surface Elevation – Measured Depth to Water + (Dp x 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 1st quarter 2010, the word “monitor” was used in table comments interchangeably with the word “gauge”. Starting in the 1<sup>st</sup> quarter 2010, the word “monitor” is used to include both “gauge” and “sample”.

### 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**  
**May 27, 2011**  
**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>											
5/27/2011	90.21	13.75	0.00	76.46	1.08	--	1500	3.2	ND<2.5	86	14	--	10	
<b>MW-6</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
5/27/2011	82.51	8.76	0.00	73.75	1.12	--	52	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	6.0	
<b>MW-7</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
5/27/2011	83.80	8.73	0.00	75.07	4.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	
<b>MW-8</b>			<b>(Screen Interval in feet: 5.0-25.0)</b>											
5/27/2011	84.86	8.12	0.00	76.74	2.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.1	
<b>MW-9</b>			<b>(Screen Interval in feet:--)</b>											
5/27/2011	85.18	15.37	0.00	69.81	1.43	--	59	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	70	
<b>MW-10</b>			<b>(Screen Interval in feet:--)</b>											
5/27/2011	78.18	6.62	0.00	71.56	1.02	--	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>											
5/27/2011	80.44	15.60	0.00	64.84	-0.45	--	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)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	Post-purge Dissolved Oxygen (mg/l)	Post-purge ORP (mV)
<b>MW-1</b>						
5/27/2011	ND<50	ND<1200	ND<2.5	ND<2.5	0.37	-19
<b>MW-6</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	0.61	199
<b>MW-7</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	0.48	145
<b>MW-8</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	0.48	209
<b>MW-9</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	1.51	95
<b>MW-10</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	1.52	192
<b>MW-11</b>						
5/27/2011	ND<10	ND<250	ND<0.50	ND<0.50	3.11	205

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
11/3/1992	--	--	--	--	--	260000	--	2300	4600	3700	17000	--	--	
1/25/1993	81.18	--	0.00	--	--	120000	--	2100	4600	4900	22000	--	--	
4/29/1993	81.18	13.71	0.00	67.47	--	100000	--	850	2000	4300	19000	--	--	
7/16/1993	81.18	14.51	0.00	66.67	-0.80	29000	--	590	560	980	4200	--	--	
10/19/1993	81.18	15.20	0.00	65.98	-0.69	67000	--	1400	2600	2900	5000	--	--	
1/20/1994	81.18	15.17	0.00	66.01	0.03	92000	--	1200	3000	3400	17000	--	--	
4/13/1994	81.18	14.44	0.00	66.74	0.73	51000	--	1000	2600	3200	15000	--	--	
7/13/1994	81.18	14.88	0.00	66.30	-0.44	35000	--	550	150	1400	5700	--	--	
10/10/1994	81.18	15.55	0.00	65.63	-0.67	52000	--	1000	810	3300	12000	--	--	
1/10/1995	81.18	12.44	0.00	68.74	3.11	810	--	16	18	59	250	--	--	
4/17/1995	81.18	12.68	0.00	68.50	-0.24	48000	--	880	530	2500	11000	--	--	
7/24/1995	81.18	13.97	0.00	67.21	-1.29	48000	--	1500	420	2700	9700	--	--	
10/23/1995	81.18	14.85	0.00	66.33	-0.88	47000	--	780	210	2100	11000	270	--	
1/18/1996	81.18	14.21	0.00	66.97	0.64	30000	--	1500	500	3500	13000	2400	--	
4/18/1996	86.24	13.40	0.00	72.84	5.87	66000	--	2700	2200	3100	13000	57000	--	
7/24/1996	86.24	14.15	0.00	72.09	-0.75	5600	--	2100	ND	160	160	24000	--	
10/24/1996	86.24	14.85	0.00	71.39	-0.70	110000	--	7500	8000	3300	14000	58000	--	
1/28/1997	86.24	11.25	0.00	74.99	3.60	94000	--	7700	19000	3100	15000	120000	--	
7/29/1997	86.24	14.67	0.00	71.57	-3.42	ND	--	ND	ND	ND	ND	70000	--	
1/14/1998	86.24	12.27	0.00	73.97	2.40	85000	--	6100	10000	3000	17000	110000	--	
7/1/1998	86.24	14.32	0.00	71.92	-2.05	110000	--	8700	12000	2700	15000	110000	--	
6/18/1999	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 May 2011**  
**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>														
1/21/2000	86.24	15.05	0.00	71.19	-1.12	63700	--	5520	2000	2640	13100	57100	--	
7/10/2000	86.24	13.97	0.00	72.27	1.08	67800	--	9910	4120	3330	16100	67400	54000	
1/4/2001	86.24	14.92	0.00	71.32	-0.95	63900	--	6270	784	2670	12900	--	38100	
7/16/2001	86.24	14.32	0.00	71.92	0.60	66000	--	7100	330	2300	9800	36000	41000	
1/31/2002	86.99	13.54	0.00	73.45	1.53	42000	--	5800	1800	2000	8200	26000	26000	
4/11/2002	86.99	13.64	0.00	73.35	-0.10	58000	--	2900	1200	1800	10000	19000	--	
7/11/2002	86.99	13.96	0.00	73.03	-0.32	--	5900	330	ND<10	230	600	--	3400	
10/15/2002	86.99	14.71	0.00	72.28	-0.75	--	470	16	ND<2.5	14	16	--	390	
1/14/2003	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	
4/16/2003	86.99	13.18	0.00	73.81	-0.41	--	510	57	0.62	29	61	--	160	
7/16/2003	86.99	14.26	0.00	72.73	-1.08	--	27000	260	23	730	3200	--	1200	
10/2/2003	86.99	14.95	0.00	72.04	-0.69	--	45000	1400	32	2900	7600	--	3200	
1/7/2004	86.99	12.30	0.00	74.69	2.65	--	34000	690	41	1600	5200	--	2600	
4/2/2004	86.99	13.18	0.00	73.81	-0.88	--	350	1.8	ND<0.50	6.2	30	--	19	
7/29/2004	86.99	14.61	0.00	72.38	-1.43	--	41000	550	ND<20	2000	6100	--	1200	
11/24/2004	86.99	14.98	0.00	72.01	-0.37	--	55000	910	28	3100	11000	--	1600	
1/24/2005	86.99	12.98	0.00	74.01	2.00	--	24000	240	ND<20	1100	3600	--	1800	
6/23/2005	86.99	13.39	0.00	73.60	-0.41	--	24000	140	ND<25	1100	2900	--	600	
9/28/2005	86.99	14.63	0.00	72.36	-1.24	--	8200	22	0.97	290	660	--	320	
12/20/2005	86.99	11.42	0.00	75.57	3.21	--	10000	17	29	180	840	--	2400	
3/10/2006	86.99	10.98	0.00	76.01	0.44	--	10000	35	ND<5.0	470	1300	--	960	
6/23/2006	86.99	11.85	0.00	75.14	-0.87	--	11000	110	ND<5.0	610	1600	--	780	
9/27/2006	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 May 2011**  
**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>														
12/22/2006	86.99	13.66	0.00	73.33	0.45	--	7300	35	ND<5.0	370	850	--	210	
3/23/2007	86.99	13.25	0.00	73.74	0.41	--	8800	28	ND<2.5	440	910	--	170	
6/29/2007	86.99	13.47	0.00	73.52	-0.22	--	6300	16	ND<2.5	300	650	--	50	
9/28/2007	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	
12/17/2007	86.99	14.57	0.00	72.42	-0.65	--	4700	ND<5.0	ND<5.0	71	160	--	18	
3/25/2008	86.99	13.56	0.00	73.43	1.01	--	7400	28	ND<2.5	430	540	--	170	
6/12/2008	86.99	14.07	0.00	72.92	-0.51	--	4900	6.4	ND<2.5	170	280	--	16	
9/25/2008	86.99	14.55	0.00	72.44	-0.48	--	2200	2.1	ND<0.50	72	110	--	11	
12/30/2008	86.99	14.16	0.00	72.83	0.39	--	3200	2.5	ND<0.50	100	150	--	8.3	
3/24/2009	86.99	12.76	0.00	74.23	1.40	--	3500	6.8	ND<0.50	140	140	--	28	
6/23/2009	86.99	13.88	0.00	73.11	-1.12	--	740	ND<2.5	ND<2.5	17	12	--	7.5	
12/16/2009	86.99	14.32	0.00	72.67	-0.44	--	4600	10	ND<1.0	270	140	--	52	
4/14/2010	86.99	12.12	0.00	74.87	2.20	--	1500	4.8	ND<1.0	100	36	--	20	
10/13/2010	90.21	14.83	0.00	75.38	0.51	--	4600	3.0	ND<0.50	180	73	--	5.6	
5/27/2011	90.21	13.75	0.00	76.46	1.08	--	1500	3.2	ND<2.5	86	14	--	10	
<b>MW-2 (Screen Interval in feet: --)</b>														
11/3/1992	76.61	--	--	--	--	140	--	2.2	ND	ND	2.0	--	--	
1/25/1993	76.61	--	--	--	--	2100	--	56	1.1	90	140	--	--	
4/29/1993	76.61	9.73	0.00	66.88	--	1500	--	290	ND	33	11	--	--	
7/16/1993	76.61	10.17	0.00	66.44	-0.44	510	--	17	0.60	3.2	2.5	--	--	
10/19/1993	76.61	11.18	0.00	65.43	-1.01	670	--	24	1.1	7.7	23	--	--	
1/20/1994	76.61	11.12	0.00	65.49	0.06	820	--	97	ND	12	ND	--	--	
4/13/1994	76.61	10.12	0.00	66.49	1.00	550	--	71	ND	5.1	1.3	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
7/13/1994	76.61	10.86	0.00	65.75	-0.74	2000	--	490	ND	17	13	--	--	
10/10/1994	76.61	11.48	0.00	65.13	-0.62	2300	--	340	ND	25	ND	--	--	
1/10/1995	76.61	8.71	0.00	67.90	2.77	850	--	3.8	ND	8.5	1.3	--	--	
4/17/1995	76.61	8.90	0.00	67.71	-0.19	1300	--	4.7	ND	8.3	1.2	--	--	
7/24/1995	76.61	9.94	0.00	66.67	-1.04	960	--	20	ND	4.2	6.2	--	--	
10/23/1995	76.61	10.70	0.00	65.91	-0.76	ND	--	ND	ND	ND	ND	19	--	
1/18/1996	76.61	10.11	0.00	66.50	0.59	900	--	300	86	7.6	18	4300	--	
4/18/1996	81.66	9.27	0.00	72.39	5.89	18000	--	3600	680	890	4100	19000	--	
7/24/1996	81.66	10.02	0.00	71.64	-0.75	100000	--	13000	21000	2700	16000	120000	--	
10/24/1996	81.66	10.78	0.00	70.88	-0.76	800	--	110	17	11	20	20000	--	
1/28/1997	81.66	7.70	0.00	73.96	3.08	45000	--	2400	2900	2000	7600	29000	--	
7/29/1997	81.66	10.28	0.00	71.38	-2.58	ND	--	1.2	0.72	0.63	0.62	17000	--	
1/14/1998	81.66	8.63	0.00	73.03	1.65	14000	--	1000	150	790	3300	23000	--	
7/1/1998	81.66	9.53	0.00	72.13	-0.90	2700	--	100	ND	180	78	7100	--	
6/18/1999	--	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-3 (Screen Interval in feet: --)</b>														
11/3/1992	77.48	--	--	--	--	2100	--	120	15	38	200	--	--	
1/25/1993	77.48	--	--	--	--	2300	--	80	1	55	52	--	--	
4/29/1993	77.48	11.37	0.00	66.11	--	4500	--	1700	ND	200	140	--	--	
7/16/1993	77.48	12.09	0.00	65.39	-0.72	4000	--	1100	28	52	70	--	--	
10/19/1993	77.48	12.69	0.00	64.79	-0.60	3800	--	42	ND	50	56	--	--	
1/20/1994	77.48	12.65	0.00	64.83	0.04	4200	--	11	ND	21	15	--	--	
4/13/1994	77.48	12.02	0.00	65.46	0.63	4200	--	210	ND	36	53	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
7/13/1994	77.48	12.46	0.00	65.02	-0.44	1800	--	16	16	ND	21	--	--	
10/10/1994	77.48	12.98	0.00	64.50	-0.52	4300	--	11	ND	12	ND	--	--	
1/10/1995	77.48	10.42	0.00	67.06	2.56	310	--	4.6	ND	3.5	2.1	--	--	
4/17/1995	77.48	10.42	0.00	67.06	0.00	7800	--	ND	4.6	300	450	--	--	
7/24/1995	77.48	11.76	0.00	65.72	-1.34	3200	--	170	ND	22	16	--	--	
10/23/1995	77.48	12.50	0.00	64.98	-0.74	3900	--	55	ND	19	11	4500	--	
1/18/1996	77.48	11.79	0.00	65.69	0.71	2200	--	270	33	26	18	5500	--	
4/18/1996	82.55	11.30	0.00	71.25	5.56	6000	--	1800	ND	100	230	48000	--	
7/24/1996	82.55	12.17	0.00	70.38	-0.87	ND	--	2500	ND	ND	ND	71000	--	
10/24/1996	82.55	12.65	0.00	69.90	-0.48	3800	--	660	ND	15	ND	65000	--	
1/28/1997	82.55	9.50	0.00	73.05	3.15	4400	--	250	13	87	47	54000	--	
7/29/1997	82.55	11.99	0.00	70.56	-2.49	ND	--	3500	ND	220	ND	75000	--	
1/14/1998	82.55	10.30	0.00	72.25	1.69	ND	--	430	ND	100	380	37000	--	
7/1/1998	82.55	11.70	0.00	70.85	-1.40	ND	--	430	ND	ND	ND	45000	--	
6/18/1999	--	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-4 (Screen Interval in feet: --)</b>														
4/18/1996	82.04	9.83	0.00	72.21	--	ND	--	630	ND	ND	ND	18000	--	
7/24/1996	82.04	10.47	0.00	71.57	-0.64	ND	--	ND	ND	ND	5.2	3900	--	
10/24/1996	82.04	11.14	0.00	70.90	-0.67	ND	--	ND	ND	ND	ND	6300	--	
1/28/1997	82.04	7.94	0.00	74.10	3.20	1200	--	490	ND	17	6.8	16000	--	
7/29/1997	82.04	10.86	0.00	71.18	-2.92	50	--	1.5	0.61	0.73	0.78	15000	--	
1/14/1998	82.04	8.73	0.00	73.31	2.13	ND	--	ND	ND	ND	ND	5200	--	
7/1/1998	82.04	10.51	0.00	71.53	-1.78	ND	--	ND	ND	ND	ND	640	--	

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**November 1992 Through May 2011**  
**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-4 continued</b>														
6/18/1999	82.04	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-5 (Screen Interval in feet: --)</b>														
4/18/1996	81.80	9.65	0.00	72.15	--	31000	--	5500	1400	1700	8100	66000	--	
7/24/1996	81.80	10.80	0.00	71.00	-1.15	32000	--	6400	ND	1600	6100	120000	--	
10/24/1996	81.80	11.40	0.00	70.40	-0.60	17000	--	6900	ND	970	130	84000	--	
1/28/1997	81.80	7.76	0.00	74.04	3.64	19000	--	6100	62	82	310	160000	--	
7/29/1997	81.80	11.58	0.00	70.22	-3.82	ND	--	ND	ND	ND	ND	71000	--	
1/14/1998	81.80	9.08	0.00	72.72	2.50	ND	--	3600	ND	ND	ND	80000	--	
7/1/1998	81.80	11.25	0.00	70.55	-2.17	6400	--	2100	21	120	330	61000	--	
6/18/1999	81.80	--	--	--	--	--	--	--	--	--	--	--	--	Well was destroyed
<b>MW-6 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/1999	78.91	9.30	0.00	69.61	--	2100	--	21	29	ND	47	97000	71000	
1/21/2000	78.91	9.37	0.00	69.54	-0.07	1880	--	143	31.2	106	196	41200	48800	
7/10/2000	78.91	8.94	0.00	69.97	0.43	5710	--	869	209	301	1430	22200	19500	
1/4/2001	78.91	9.21	0.00	69.70	-0.27	ND	--	ND	ND	ND	ND	--	9510	
7/16/2001	78.91	9.42	0.00	69.49	-0.21	4800	--	200	21	150	440	29000	34000	
1/31/2002	78.91	8.50	0.00	70.41	0.92	12000	--	250	92	500	1500	26000	31000	
4/11/2002	79.67	9.08	0.00	70.59	0.18	3600	--	42	32	39	280	120000	--	
7/11/2002	79.67	9.70	0.00	69.97	-0.62	--	12000	ND<100	ND<100	ND<100	ND<200	--	15000	
10/15/2002	79.67	9.96	0.00	69.71	-0.26	--	1300	ND<10	ND<10	ND<10	ND<20	--	3200	
1/14/2003	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	
4/16/2003	79.67	8.21	0.00	71.46	0.10	--	270	ND<0.50	ND<0.50	ND<0.50	1.3	--	15	
7/16/2003	79.67	9.43	0.00	70.24	-1.22	--	290	39	0.60	ND<0.50	15	--	150	



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**November 1992 Through May 2011**  
**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>														
10/2/2003	79.67	9.92	0.00	69.75	-0.49	--	200	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	220	
1/7/2004	79.67	8.08	0.00	71.59	1.84	--	140	2.4	ND<1.0	8.6	13	--	86	
4/2/2004	79.67	8.63	0.00	71.04	-0.55	--	3200	ND<20	ND<20	ND<20	ND<40	--	5900	
7/29/2004	79.67	9.75	0.00	69.92	-1.12	--	170	ND<1.0	ND<1.0	ND<1.0	ND<2.0	--	160	
11/24/2004	79.67	9.59	0.00	70.08	0.16	--	80	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	45	
1/24/2005	79.67	8.33	0.00	71.34	1.26	--	100	1.1	ND<0.50	0.60	1.1	--	40	
6/23/2005	79.67	8.33	0.00	71.34	0.00	--	230	0.52	ND<0.50	3.6	9.6	--	200	
9/28/2005	79.67	9.56	0.00	70.11	-1.23	--	500	ND<0.50	ND<0.50	ND<0.50	1.2	--	980	
12/20/2005	79.67	7.82	0.00	71.85	1.74	--	640	0.79	ND<0.50	0.68	2.3	--	2400	
3/10/2006	79.67	6.83	0.00	72.84	0.99	--	970	1.2	ND<0.50	1.3	5.0	--	3600	
6/23/2006	79.67	8.13	0.00	71.54	-1.30	--	1700	ND<12	ND<12	ND<12	ND<25	--	1100	
9/27/2006	79.67	9.44	0.00	70.23	-1.31	--	ND<1200	ND<12	ND<12	ND<12	ND<12	--	620	
12/22/2006	79.67	8.60	0.00	71.07	0.84	--	9100	ND<10	ND<10	ND<10	ND<10	--	600	
3/23/2007	79.67	8.39	0.00	71.28	0.21	--	330	ND<0.50	ND<0.50	0.82	ND<0.50	--	680	
6/29/2007	79.67	9.02	0.00	70.65	-0.63	--	180	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	290	
9/28/2007	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	
12/17/2007	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	
3/25/2008	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	
6/12/2008	79.67	9.47	0.00	70.20	-0.84	--	84	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	17	
9/25/2008	79.67	9.95	0.00	69.72	-0.48	--	66	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	15	
12/30/2008	79.67	8.96	0.00	70.71	0.99	--	55	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	12	
3/24/2009	79.67	8.02	0.00	71.65	0.94	--	73	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
6/23/2009	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
12/16/2009	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	
4/14/2010	79.67	8.13	0.00	71.54	1.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.1	
10/13/2010	82.51	9.88	0.00	72.63	1.09	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.0	
5/27/2011	82.51	8.76	0.00	73.75	1.12	--	52	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	6.0	
<b>MW-7 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/1999	79.92	8.70	0.00	71.22	--	ND	--	ND	ND	ND	ND	16000	13000	
1/21/2000	79.92	9.30	0.00	70.62	-0.60	ND	--	ND	ND	ND	ND	12300	18200	
7/10/2000	79.92	8.72	0.00	71.20	0.58	ND	--	ND	ND	ND	ND	16900	13800	
1/4/2001	79.92	9.17	0.00	70.75	-0.45	ND	--	ND	ND	ND	0.719	--	37.3	
7/16/2001	79.92	9.02	0.00	70.90	0.15	ND	--	ND	ND	ND	ND	7200	4700	
1/31/2002	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	
4/11/2002	80.67	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
7/11/2002	80.67	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
10/15/2002	80.67	9.81	0.00	70.86	--	--	ND<5000	ND<50	ND<50	ND<50	ND<100	--	12000	
1/14/2003	80.67	7.89	0.00	72.78	1.92	--	ND<25000	ND<250	ND<250	ND<250	ND<500	--	33000	
4/16/2003	80.67	8.04	0.00	72.63	-0.15	--	ND<25000	ND<250	ND<250	ND<250	ND<500	--	37000	
7/16/2003	80.67	9.19	0.00	71.48	-1.15	--	25000	ND<250	ND<250	ND<250	ND<500	--	38000	
10/2/2003	80.67	9.89	0.00	70.78	-0.70	--	17000	ND<100	ND<100	ND<100	ND<200	--	22000	
1/7/2004	80.67	7.27	0.00	73.40	2.62	--	ND<20000	ND<200	460	ND<200	540	--	19000	
4/2/2004	80.67	8.09	0.00	72.58	-0.82	--	3400	ND<20	ND<20	ND<20	ND<40	--	5100	
7/29/2004	80.67	9.40	0.00	71.27	-1.31	--	7400	ND<50	ND<50	ND<50	ND<100	--	11000	
11/24/2004	80.67	9.65	0.00	71.02	-0.25	--	6200	ND<50	ND<50	ND<50	ND<100	--	6800	
1/24/2005	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	

**Table 2**  
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**November 1992 Through May 2011**  
**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>														
6/23/2005	80.67	8.56	0.00	72.11	-0.64	--	8700	ND<25	ND<25	ND<25	ND<50	--	12000	
9/28/2005	80.67	9.37	0.00	71.30	-0.81	--	1200	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5700	
12/20/2005	80.67	6.31	0.00	74.36	3.06	--	1100	0.90	ND<0.50	24	37	--	8200	
3/10/2006	80.67	5.84	0.00	74.83	0.47	--	1200	24	ND<0.50	3.6	ND<1.0	--	4700	
6/23/2006	80.67	6.83	0.00	73.84	-0.99	--	1800	21	ND<12	ND<12	ND<25	--	1500	
9/27/2006	80.67	8.95	0.00	71.72	-2.12	--	ND<1200	ND<12	ND<12	ND<12	ND<12	--	350	
12/22/2006	80.67	8.35	0.00	72.32	0.60	--	24000	ND<50	ND<50	ND<50	ND<50	--	190	
3/23/2007	80.67	8.01	0.00	72.66	0.34	--	85	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	92	
6/29/2007	80.67	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
9/28/2007	80.67	9.05	0.00	71.62	--	--	50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	37	
12/19/2007	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	
3/25/2008	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	
6/12/2008	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	
9/25/2008	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	
12/30/2008	80.67	8.99	0.00	71.68	0.56	--	130	ND<0.50	ND<0.50	ND<0.50	1.1	--	5.7	
3/24/2009	80.67	7.73	0.00	72.94	1.26	--	98	0.50	ND<0.50	ND<0.50	ND<1.0	--	9.2	
6/23/2009	80.67	9.05	0.00	71.62	-1.32	--	290	1.2	ND<0.50	ND<0.50	ND<1.0	--	6.7	
12/16/2009	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	
4/14/2010	80.67	7.87	0.00	72.80	1.55	--	60	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	6.7	
10/13/2010	80.67	10.13	0.00	70.54	-2.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.6	
5/27/2011	83.80	8.73	0.00	75.07	4.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	
<b>MW-8 (Screen Interval in feet: 5.0-25.0)</b>														
6/18/1999	80.96	9.10	0.00	71.86	--	ND	--	ND	ND	ND	ND	290	160	

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**November 1992 Through May 2011**  
**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>														
1/21/2000	80.96	10.00	0.00	70.96	-0.90	ND	--	ND	ND	ND	1.09	224	221	
7/10/2000	80.96	7.94	0.00	73.02	2.06	ND	--	ND	ND	ND	ND	234	223	
1/4/2001	80.96	9.76	0.00	71.20	-1.82	3790	--	141	8.92	128	375	--	34200	
7/16/2001	80.96	9.15	0.00	71.81	0.61	ND	--	ND	ND	ND	ND	66	70	
1/31/2002	80.96	7.99	0.00	72.97	1.16	5900	--	86	ND<10	630	390	670	700	
4/11/2002	81.71	9.00	0.00	72.71	-0.26	250	--	2.0	ND<0.50	38	2.2	410	--	
7/11/2002	81.71	9.60	0.00	72.11	-0.60	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	120	
10/15/2002	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	
1/14/2003	81.71	8.63	0.00	73.08	1.97	--	ND<250	2.6	ND<2.5	18	ND<5.0	--	430	
4/16/2003	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	
7/16/2003	81.71	9.63	0.00	72.08	-0.65	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	140	
10/2/2003	81.71	10.41	0.00	71.30	-0.78	--	75	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	78	
1/7/2004	81.71	8.21	0.00	73.50	2.20	--	ND<5000	ND<50	ND<50	ND<50	340	--	3700	
4/2/2004	81.71	8.51	0.00	73.20	-0.30	--	3000	ND<20	ND<20	ND<20	ND<40	--	5200	
7/29/2004	81.71	9.78	0.00	71.93	-1.27	--	3200	ND<25	ND<25	ND<25	ND<50	--	5500	
11/24/2004	81.71	10.19	0.00	71.52	-0.41	--	2100	ND<10	ND<10	ND<10	ND<20	--	2400	
1/24/2005	81.71	8.49	0.00	73.22	1.70	--	ND<2500	4.0	0.52	ND<0.50	29	--	1800	
6/23/2005	81.71	8.34	0.00	73.37	0.15	--	490	ND<0.50	ND<0.50	1.5	ND<1.0	--	980	
9/28/2005	81.71	9.61	0.00	72.10	-1.27	--	270	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	520	
12/20/2005	81.71	7.35	0.00	74.36	2.26	--	2700	ND<0.50	ND<0.50	78	82	--	86	
3/10/2006	81.71	6.63	0.00	75.08	0.72	--	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	51	
6/23/2006	81.71	6.56	0.00	75.15	0.07	--	3600	ND<0.50	ND<0.50	100	57	--	ND<0.50	
9/27/2006	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	

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**November 1992 Through May 2011**  
**76 Station 1871**

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<b>MW-8 continued</b>														
12/22/2006	81.71	9.42	0.00	72.29	0.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	0.50	--	16	
3/23/2007	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	
6/29/2007	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	
9/28/2007	81.71	9.89	0.00	71.82	-0.79	--	99	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	21	
12/17/2007	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	
3/25/2008	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	
6/12/2008	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	
9/25/2008	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	
12/30/2008	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	
3/24/2009	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	
6/23/2009	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	
12/16/2009	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	
4/14/2010	81.71	8.28	0.00	73.43	1.80	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.4	
10/13/2010	84.86	10.79	0.00	74.07	0.64	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	3.0	
5/27/2011	84.86	8.12	0.00	76.74	2.67	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.1	
<b>MW-9 (Screen Interval in feet: --)</b>														
1/31/2002	82.07	14.72	0.00	67.35	--	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	680	910	
4/11/2002	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	--	
7/11/2002	82.07	15.39	0.00	66.68	-0.54	--	580	ND<5.0	ND<5.0	ND<5.0	ND<10	--	580	
10/15/2002	82.07	16.16	0.00	65.91	-0.77	--	570	ND<5.0	ND<5.0	ND<5.0	ND<10	--	1400	
1/14/2003	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	
4/16/2003	82.07	14.51	0.00	67.56	0.24	--	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<10	--	860	
7/16/2003	82.07	15.54	0.00	66.53	-1.03	--	ND<2500	ND<25	ND<25	ND<25	ND<50	--	1300	

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<b>MW-9 continued</b>														
10/2/2003	82.07	16.28	0.00	65.79	-0.74	--	820	ND<5.0	ND<5.0	ND<5.0	ND<10	--	990	
1/7/2004	82.07	14.65	0.00	67.42	1.63	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	1200	
4/2/2004	82.07	15.08	0.00	66.99	-0.43	--	510	ND<5.0	ND<5.0	ND<5.0	ND<10	--	850	
7/29/2004	82.07	15.81	0.00	66.26	-0.73	--	ND<1000	ND<10	ND<10	ND<10	ND<20	--	1300	
11/24/2004	82.07	16.25	0.00	65.82	-0.44	--	1100	ND<5.0	ND<5.0	ND<5.0	ND<10	--	1300	
1/24/2005	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	
6/23/2005	82.07	14.40	0.00	67.67	0.56	--	1500	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2000	
9/28/2005	82.07	15.67	0.00	66.40	-1.27	--	ND<2500	ND<25	ND<25	ND<25	ND<50	--	2400	
12/20/2005	82.07	14.61	0.00	67.46	1.06	--	560	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2800	
3/10/2006	82.07	13.39	0.00	68.68	1.22	--	1100	ND<5.0	ND<5.0	ND<5.0	ND<10	--	2100	
6/23/2006	82.07	13.68	0.00	68.39	-0.29	--	1700	ND<12	ND<12	ND<12	ND<25	--	1700	
9/27/2006	82.07	14.83	0.00	67.24	-1.15	--	ND<1200	ND<12	ND<12	ND<12	ND<12	--	1400	
12/22/2006	82.07	14.75	0.00	67.32	0.08	--	680	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	1100	
3/23/2007	82.07	14.52	0.00	67.55	0.23	--	240	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	660	
6/29/2007	82.07	14.89	0.00	67.18	-0.37	--	210	ND<0.50	ND<0.50	ND<0.50	0.52	--	410	
9/28/2007	82.07	15.48	0.00	66.59	-0.59	--	390	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	430	
12/17/2007	82.07	15.72	0.00	66.35	-0.24	--	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	480	
3/25/2008	82.07	14.91	0.00	67.16	0.81	--	250	ND<2.5	ND<2.5	ND<2.5	ND<5.0	--	340	
6/12/2008	82.07	15.70	0.00	66.37	-0.79	--	180	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	270	
9/25/2008	82.07	16.48	0.00	65.59	-0.78	--	170	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	320	
12/30/2008	82.07	16.16	0.00	65.91	0.32	--	160	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	230	
3/24/2009	82.07	15.23	0.00	66.84	0.93	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	180	
6/23/2009	82.07	15.95	0.00	66.12	-0.72	--	110	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	190	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
12/16/2009	82.07	16.47	0.00	65.60	-0.52	--	86	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	130	
4/14/2010	82.07	14.68	0.00	67.39	1.79	--	100	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	160	
10/13/2010	85.18	16.80	0.00	68.38	0.99	--	63	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	160	
5/27/2011	85.18	15.37	0.00	69.81	1.43	--	59	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	70	
<b>MW-10 (Screen Interval in feet: --)</b>														
1/31/2002	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	
4/11/2002	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	--	
7/11/2002	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	
10/15/2002	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	
1/14/2003	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	
4/16/2003	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	
7/16/2003	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	
10/2/2003	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	
1/7/2004	74.98	6.22	0.00	68.76	1.41	--	54	ND<0.50	ND<0.50	1.3	4.5	--	ND<2.0	
4/2/2004	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	
7/29/2004	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	
11/24/2004	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	
1/24/2005	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	
6/23/2005	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	
9/28/2005	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	
12/20/2005	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	
3/10/2006	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	
6/23/2006	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
9/27/2006	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	
12/22/2006	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	
3/23/2007	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	
6/29/2007	74.98	6.78	0.00	68.20	-0.30	--	ND<50	ND<0.50	ND<0.50	0.76	1.6	--	5.6	
9/28/2007	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	
12/17/2007	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	
3/25/2008	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	
6/12/2008	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	
9/25/2008	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	
12/30/2008	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	
3/24/2009	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	
6/23/2009	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	
12/16/2009	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	
4/14/2010	74.98	6.16	0.00	68.82	0.43	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
10/13/2010	78.18	7.64	0.00	70.54	1.72	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	0.58	
5/27/2011	78.18	6.62	0.00	71.56	1.02	--	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>														
1/31/2002	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	
4/11/2002	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	--	
7/11/2002	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	
10/15/2002	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	
1/14/2003	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	
4/16/2003	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	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
7/16/2003	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	
10/2/2003	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	
1/7/2004	77.31	16.20	0.00	61.11	-3.24	--	63	ND<0.50	ND<0.50	0.68	2.2	--	ND<2.0	
4/2/2004	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	
7/29/2004	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	
11/24/2004	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	
1/24/2005	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	
6/23/2005	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	
9/28/2005	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	
12/20/2005	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	
3/10/2006	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	
6/23/2006	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	
9/27/2006	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	
12/22/2006	77.31	13.48	0.00	63.83	1.30	--	55	ND<0.50	ND<0.50	2.1	5.4	--	ND<0.50	
3/23/2007	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	
6/29/2007	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	
9/28/2007	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	
12/17/2007	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	
3/25/2008	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	
6/12/2008	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	
9/25/2008	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	
12/30/2008	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	
3/24/2009	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	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**November 1992 Through May 2011**  
**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>														
6/23/2009	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	
12/16/2009	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	
4/14/2010	77.31	15.48	0.00	61.83	-0.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
10/13/2010	80.44	15.15	0.00	65.29	3.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
5/27/2011	80.44	15.60	0.00	64.84	-0.45	--	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-						pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	Ethanol	dibromide	1,2-DCA	DIPE	ETBE	TAME	(lab	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(8260B)	(EDB)	(EDC)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
			(µg/l)	(µg/l)	(µg/l)					(mg/l)	(mg/l)	(mV)
<b>MW-1</b>												
6/18/1999	--	ND	ND	ND	--	ND	ND	ND	--	--	--	--
7/16/2001	--	ND	ND	ND	--	ND	ND	ND	--	--	--	--
1/14/2003	--	ND<100	ND<500	ND<2.0	--	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/2003	--	--	ND<10000	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<25000	--	--	--	--	--	--	25.1	45.7	80.1
1/7/2004	--	--	ND<20000	--	--	--	--	--	--	12.12	12.31	142
4/2/2004	--	--	ND<50	--	--	--	--	--	--	11.33	13.42	36
7/29/2004	--	--	ND<2000	--	--	--	--	--	--	5.37	5.51	-2
11/24/2004	--	--	ND<2000	--	--	--	--	--	6.58	3.08	4.73	-43
1/24/2005	--	--	ND<2000	--	--	--	--	--	--	14.3	17.0	100
6/23/2005	--	--	ND<50000	--	--	--	--	--	--	--	4.79	-103
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	3.45	4.73	-91
12/20/2005	--	--	ND<250	--	--	--	--	--	--	4.16	2.76	-210
3/10/2006	--	--	ND<2500	--	--	--	--	--	--	1.45	1.64	-511
6/23/2006	--	--	ND<2500	--	--	--	--	--	--	--	4.31	-030
9/27/2006	--	--	ND<5000	--	--	--	--	--	--	4.50	4.72	-32
12/22/2006	--	--	ND<2500	--	--	--	--	--	--	6.80	2.35	-121
3/23/2007	--	--	ND<1200	--	--	--	--	--	--	3.22	3.45	-135
6/29/2007	--	--	ND<1200	--	--	--	--	--	--	6.64	7.11	-131
9/28/2007	--	--	ND<250	--	--	--	--	--	--	--	7.84	-167
12/17/2007	--	--	ND<2500	--	--	--	--	--	--	9.74	6.51	-63
3/25/2008	--	--	ND<1200	--	--	--	--	--	--	6.70	6.50	-60
6/12/2008	--	330	ND<1200	--	--	--	--	--	--	--	4.33	65
9/25/2008	--	740	ND<250	--	--	--	--	--	--	--	1.16	105
12/30/2008	--	400	ND<250	--	--	--	--	--	--	2.44	0.91	0

**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-1 continued</b>												
3/24/2009	--	390	ND<250	--	--	--	--	--	--	1.60	1.31	-29
6/23/2009	--	500	ND<1200	--	--	--	--	--	--	--	0.86	-28
12/16/2009	--	ND<20	ND<500	--	--	--	--	--	--	0.66	--	--
4/14/2010	--	500	ND<500	--	--	--	--	--	--	2.48	--	--
10/13/2010	--	73	ND<250	ND<0.50	ND<0.50	--	--	--	--	2.00	--	--
5/27/2011	--	ND<50	ND<1200	ND<2.5	ND<2.5	--	--	--	--	0.37	--	--
<b>MW-4</b>												
4/18/1996	110	--	--	--	--	--	--	--	--	--	--	--
7/24/1996	ND	--	--	--	--	--	--	--	--	--	--	--
10/24/1996	ND	--	--	--	--	--	--	--	--	--	--	--
1/28/1997	210	--	--	--	--	--	--	--	--	--	--	--
7/29/1997	ND	--	--	--	--	--	--	--	--	--	--	--
1/14/1998	ND	--	--	--	--	--	--	--	--	--	--	--
7/1/1998	ND	--	--	--	--	--	--	--	--	--	--	--
<b>MW-6</b>												
6/18/1999	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/2001	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/11/2002	--	ND<1000	ND<5000	ND<100	ND<100	ND<200	ND<100	ND<100	--	--	--	--
1/14/2003	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/2003	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<1000	--	--	--	--	--	--	15.5	26.2	139
1/7/2004	--	--	ND<1000	--	--	--	--	--	--	12.63	14.29	-12
4/2/2004	--	--	ND<2000	--	--	--	--	--	--	12.63	12.72	9
7/29/2004	--	--	ND<100	--	--	--	--	--	--	4.74	4.79	-19
11/24/2004	--	--	ND<50	--	--	--	--	--	6.99	2.81	5.54	-29

**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>												
1/24/2005	--	--	ND<50	--	--	--	--	--	--	14.5	15.3	72
6/23/2005	--	--	ND<1000	--	--	--	--	--	--	1.86	1.73	70
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	2.63	2.57	-74
12/20/2005	--	--	ND<250	--	--	--	--	--	--	1.52	2.30	-280
3/10/2006	--	--	ND<250	--	--	--	--	--	--	5.25	0.80	173
6/23/2006	--	--	ND<6200	--	--	--	--	--	--	--	3.39	-105
9/27/2006	--	--	ND<6200	--	--	--	--	--	--	2.54	3.01	-109
12/22/2006	--	--	ND<5000	--	--	--	--	--	--	1.22	4.03	-46
3/23/2007	--	--	ND<250	--	--	--	--	--	--	3.64	3.62	-101
6/29/2007	--	--	ND<250	--	--	--	--	--	--	8.49	6.78	171
9/28/2007	--	--	ND<250	--	--	--	--	--	--	8.36	8.40	167
12/17/2007	--	--	ND<250	--	--	--	--	--	--	10.19	9.38	-23
3/25/2008	--	--	ND<250	--	--	--	--	--	--	10.03	10.10	-20
6/12/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	0.80	30
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	1.05	118
12/30/2008	--	ND<10	ND<250	--	--	--	--	--	--	4.50	1.62	14
3/24/2009	--	ND<10	ND<250	--	--	--	--	--	--	1.79	1.87	104
6/23/2009	--	ND<10	ND<250	--	--	--	--	--	--	1.96	2.12	64
12/16/2009	--	ND<10	ND<250	--	--	--	--	--	--	1.55	--	--
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	3.19	--	--
10/13/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	6.40	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	0.61	--	--
<b>MW-7</b>												
6/18/1999	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/2001	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--

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

Date Sampled			Ethylene-						pH	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)	(lab) (pH)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-7 continued</b>												
1/14/2003	--	ND<50000	ND<250000	ND<1000	ND<1000	ND<1000	ND<1000	ND<1000	--	--	--	--
7/16/2003	--	--	ND<250000	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<100000	--	--	--	--	--	--	24.3	28.2	109
1/7/2004	--	--	ND<200000	--	--	--	--	--	--	10.79	10.85	23
4/2/2004	--	--	ND<2000	--	--	--	--	--	--	12.41	11.32	24
7/29/2004	--	--	ND<5000	--	--	--	--	--	--	4.10	3.96	17
11/24/2004	--	--	ND<5000	--	--	--	--	--	6.60	1.99	3.29	-43
1/24/2005	--	--	ND<5000	--	--	--	--	--	--	17.2	14.5	71
6/23/2005	--	--	ND<50000	--	--	--	--	--	--	2.84	2.18	-37
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	3.45	3.63	-81
12/20/2005	--	--	ND<250	--	--	--	--	--	--	2.04	2.03	-263
3/10/2006	--	--	ND<250	--	--	--	--	--	--	1.28	0.95	164
6/23/2006	--	--	ND<6200	--	--	--	--	--	--	--	3.95	-119
9/27/2006	--	--	ND<6200	--	--	--	--	--	--	3.16	3.98	-107
12/22/2006	--	--	ND<25000	--	--	--	--	--	--	2.25	2.03	-86
3/23/2007	--	--	ND<250	--	--	--	--	--	--	3.38	3.75	-49
9/28/2007	--	--	ND<250	--	--	--	--	--	--	8.16	7.96	30
12/19/2007	--	--	ND<250	--	--	--	--	--	--	6.70	6.72	-17
3/25/2008	--	--	ND<250	--	--	--	--	--	--	4.77	4.81	-30
6/12/2008	--	30	ND<250	--	--	--	--	--	--	--	3.96	55
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	1.11	115
12/30/2008	--	ND<10	ND<250	--	--	--	--	--	--	4.13	1.81	-14
3/24/2009	--	ND<10	ND<250	--	--	--	--	--	--	2.70	2.39	159
6/23/2009	--	16	ND<250	--	--	--	--	--	--	0.42	0.84	-8
12/16/2009	--	ND<10	ND<250	--	--	--	--	--	--	1.08	--	--

**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>												
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	0.78	--	--
10/13/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	6.50	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	0.48	--	--
<b>MW-8</b>												
6/18/1999	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
7/16/2001	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
1/14/2003	--	ND<500	ND<2500	ND<10	ND<10	ND<10	ND<10	ND<10	--	--	--	--
7/16/2003	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<500	--	--	--	--	--	--	23.6	28.5	188
1/7/2004	--	--	ND<50000	--	--	--	--	--	--	9.94	13.13	-15
4/2/2004	--	--	ND<2000	--	--	--	--	--	--	13.37	12.82	-10
7/29/2004	--	--	ND<2500	--	--	--	--	--	--	3.68	3.73	18
11/24/2004	--	--	ND<1000	--	--	--	--	--	6.67	3.97	2.71	-36
1/24/2005	--	--	ND<2500	--	--	--	--	--	--	41.6	41.2	56
6/23/2005	--	--	ND<1000	--	--	--	--	--	--	2.05	2.13	58
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	2.12	1.98	-40
12/20/2005	--	--	ND<250	--	--	--	--	--	--	2.02	3.72	-402
3/10/2006	--	--	ND<250	--	--	--	--	--	--	1.51	0.99	-182
6/23/2006	--	--	ND<250	--	--	--	--	--	--	--	2.81	-135
9/27/2006	--	--	ND<250	--	--	--	--	--	--	4.87	4.91	-155
12/22/2006	--	--	ND<250	--	--	--	--	--	--	1.80	2.40	16
3/23/2007	--	--	ND<250	--	--	--	--	--	--	3.52	3.90	25
6/29/2007	--	--	ND<250	--	--	--	--	--	--	5.35	5.29	98
9/28/2007	--	--	ND<250	--	--	--	--	--	--	7.18	7.24	16
12/17/2007	--	--	ND<250	--	--	--	--	--	--	6.95	5.26	26

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

Date Sampled			Ethylene-						pH	Post-purge	Pre-purge	Pre-purge
	TPH-D	TBA	Ethanol	dibromide	1,2-DCA	DIPE	ETBE	TAME	(lab)	Dissolved	Dissolved	Pre-purge
	(µg/l)	(µg/l)	(8260B)	(EDB)	(EDC)	(µg/l)	(µg/l)	(µg/l)	(pH)	Oxygen	Oxygen	ORP
			(µg/l)	(µg/l)	(µg/l)					(mg/l)	(mg/l)	(mV)
<b>MW-8 continued</b>												
3/25/2008	--	--	ND<250	--	--	--	--	--	--	5.22	5.15	70
6/12/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	9.40	38
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	1.33	98
12/30/2008	--	ND<10	ND<250	--	--	--	--	--	--	1.78	2.19	11
3/24/2009	--	ND<10	ND<250	--	--	--	--	--	--	2.07	1.87	103
6/23/2009	--	ND<10	ND<250	--	--	--	--	--	--	0.55	0.90	73
12/16/2009	--	ND<10	ND<250	--	--	--	--	--	--	1.24	--	--
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	0.92	--	--
10/13/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	0.70	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	0.48	--	--
<b>MW-9</b>												
1/31/2002	--	ND<140	ND<3600	ND<7.1	ND<7.1	ND<7.1	ND<7.1	ND<7.1	--	--	--	--
1/14/2003	--	ND<400	ND<2000	ND<8.0	ND<8.0	ND<8.0	ND<8.0	ND<8.0	--	--	--	--
7/16/2003	--	--	ND<25000	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<5000	--	--	--	--	--	--	29.5	28.4	201
1/7/2004	--	--	ND<10000	--	--	--	--	--	--	10.45	12.00	9
4/2/2004	--	--	ND<500	--	--	--	--	--	--	16.37	13.21	12
7/29/2004	--	--	ND<1000	--	--	--	--	--	--	--	--	--
11/24/2004	--	--	ND<500	--	--	--	--	--	6.47	3.24	1.71	-68
1/24/2005	--	--	ND<1000	--	--	--	--	--	--	26.0	22.5	-45
6/23/2005	--	--	ND<10000	--	--	--	--	--	--	1.50	1.44	-136
9/28/2005	--	--	ND<50000	--	--	--	--	--	--	2.51	1.67	-94
12/20/2005	--	--	ND<250	--	--	--	--	--	--	5.05	4.67	-102
3/10/2006	--	--	ND<2500	--	--	--	--	--	--	2.82	2.13	160
6/23/2006	--	--	ND<6200	--	--	--	--	--	--	--	0.84	-65



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

Date Sampled			Ethylene-						pH	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)	(lab) (pH)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-9 continued</b>												
9/27/2006	--	--	ND<6200	--	--	--	--	--	--	0.68	0.75	-61
12/22/2006	--	--	ND<250	--	--	--	--	--	--	9.00	4.89	-44
3/23/2007	--	--	ND<250	--	--	--	--	--	--	6.85	5.33	-114
6/29/2007	--	--	ND<250	--	--	--	--	--	--	6.87	6.25	23
9/28/2007	--	--	ND<1200	--	--	--	--	--	--	7.17	7.04	30
12/17/2007	--	--	ND<250	--	--	--	--	--	--	5.05	4.81	-27
3/25/2008	--	--	ND<1200	--	--	--	--	--	--	6.55	6.67	-10
6/12/2008	--	250	ND<250	--	--	--	--	--	--	--	2.55	86
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	1.44	26
12/30/2008	--	21	ND<250	--	--	--	--	--	--	5.47	5.43	52
3/24/2009	--	24	ND<250	--	--	--	--	--	--	2.80	2.69	66
6/23/2009	--	14	ND<250	--	--	--	--	--	--	1.88	1.42	-20
12/16/2009	--	22	ND<250	--	--	--	--	--	--	0.99	--	--
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	1.41	--	--
10/13/2010	--	11	ND<250	ND<0.50	ND<0.50	--	--	--	--	1.08	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	1.51	--	--
<b>MW-10</b>												
1/31/2002	--	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--
1/14/2003	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
7/16/2003	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<500	--	--	--	--	--	--	24.8	25.7	192
1/7/2004	--	--	ND<500	--	--	--	--	--	--	10.04	11.62	35
4/2/2004	--	--	ND<50	--	--	--	--	--	--	11.91	12.02	42
7/29/2004	--	--	ND<50	--	--	--	--	--	--	4.81	4.83	83
11/24/2004	--	--	ND<50	--	--	--	--	--	6.89	2.59	3.07	-39

**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>												
1/24/2005	--	--	ND<50	--	--	--	--	--	--	27.5	25.5	87
6/23/2005	--	--	ND<1000	--	--	--	--	--	--	7.83	176	40
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	6.95	2.37	-66
12/20/2005	--	--	ND<250	--	--	--	--	--	--	3.85	3.45	59
3/10/2006	--	--	ND<250	--	--	--	--	--	--	2.52	4.48	87
6/23/2006	--	--	ND<250	--	--	--	--	--	--	--	1.49	-68
9/27/2006	--	--	ND<250	--	--	--	--	--	--	1.79	1.55	-85
12/22/2006	--	--	ND<250	--	--	--	--	--	--	3.20	3.00	107
3/23/2007	--	--	ND<250	--	--	--	--	--	--	5.09	5.01	-60
6/29/2007	--	--	ND<250	--	--	--	--	--	--	9.12	6.27	165
9/28/2007	--	--	ND<250	--	--	--	--	--	--	8.34	8.21	124
12/17/2007	--	--	ND<250	--	--	--	--	--	--	4.97	4.46	-15
3/25/2008	--	--	ND<250	--	--	--	--	--	--	4.35	4.40	-10
6/12/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	1.42	75
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	52.15	94
12/30/2008	--	ND<10	ND<250	--	--	--	--	--	--	5.89	3.18	181
3/24/2009	--	ND<10	ND<250	--	--	--	--	--	--	4.37	4.07	144
6/23/2009	--	ND<10	ND<250	--	--	--	--	--	--	3.17	1.64	57
12/16/2009	--	ND<10	ND<250	--	--	--	--	--	--	3.31	--	--
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	1.61	--	--
10/13/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	6.67	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	1.52	--	--
<b>MW-11</b>												
1/31/2002	--	ND<20	ND<500	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	--	--	--
1/14/2003	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--

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**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 1871**

Date Sampled			Ethanol	Ethylene-	1,2-DCA				pH	Post-purge	Pre-purge	Pre-purge
	TPH-D (µg/l)	TBA (µg/l)	(8260B) (µg/l)	dibromide (EDB) (µg/l)	(EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	(lab) (pH)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)	Pre-purge ORP (mV)
<b>MW-11 continued</b>												
7/16/2003	--	--	ND<500	--	--	--	--	--	--	--	--	--
10/2/2003	--	--	ND<500	--	--	--	--	--	--	33.7	23.2	202
1/7/2004	--	--	ND<500	--	--	--	--	--	--	11.69	13.82	99
4/2/2004	--	--	ND<50	--	--	--	--	--	--	11.94	14.08	-1
7/29/2004	--	--	ND<50	--	--	--	--	--	--	--	--	--
11/24/2004	--	--	ND<50	--	--	--	--	--	6.75	3.85	4.32	82
1/24/2005	--	--	ND<50	--	--	--	--	--	--	30.01	32.6	79
6/23/2005	--	--	ND<1000	--	--	--	--	--	--	2.17	2.16	76
9/28/2005	--	--	ND<1000	--	--	--	--	--	--	4.97	4.59	-4
12/20/2005	--	--	ND<250	--	--	--	--	--	--	5.16	4.77	35
3/10/2006	--	--	ND<250	--	--	--	--	--	--	5.11	9.99	68
6/23/2006	--	--	ND<250	--	--	--	--	--	--	--	7.74	-26
9/27/2006	--	--	ND<250	--	--	--	--	--	--	5.72	5.98	32
12/22/2006	--	--	ND<250	--	--	--	--	--	--	3.81	4.35	46
3/23/2007	--	--	ND<250	--	--	--	--	--	--	5.47	5.85	38
6/29/2007	--	--	ND<250	--	--	--	--	--	--	7.87	7.80	242
9/28/2007	--	--	ND<250	--	--	--	--	--	--	7.24	7.30	280
12/17/2007	--	--	ND<250	--	--	--	--	--	--	8.71	8.01	47
3/25/2008	--	--	ND<250	--	--	--	--	--	--	8.41	8.40	45
6/12/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	3.33	160
9/25/2008	--	ND<10	ND<250	--	--	--	--	--	--	--	4.28	115
12/30/2008	--	ND<10	ND<250	--	--	--	--	--	--	2.74	2.67	195
3/24/2009	--	ND<10	ND<250	--	--	--	--	--	--	2.27	2.20	185
6/23/2009	--	ND<10	ND<250	--	--	--	--	--	--	3.62	4.14	67
12/16/2009	--	ND<10	ND<250	--	--	--	--	--	--	4.62	--	--

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**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-11 continued</b>												
4/14/2010	--	ND<10	ND<250	--	--	--	--	--	--	4.15	--	--
10/13/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	2.21	--	--
5/27/2011	--	ND<10	ND<250	ND<0.50	ND<0.50	--	--	--	--	3.11	--	--

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

Date Sampled	Post-purge ORP (mV)
<b>MW-1</b>	
10/2/2003	21.0
1/7/2004	24
4/2/2004	34
7/29/2004	-4
11/24/2004	-39
1/24/2005	96
9/28/2005	-94
12/20/2005	-328
3/10/2006	-615
9/27/2006	-25
12/22/2006	-72
3/23/2007	-141
6/29/2007	-65
12/17/2007	-46
3/25/2008	-64
12/30/2008	-2
3/24/2009	-32
12/16/2009	38
4/14/2010	55
10/13/2010	-48
5/27/2011	-19
<b>MW-6</b>	
10/2/2003	175
1/7/2004	24
4/2/2004	23

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

Date Sampled	Post-purge ORP (mV)
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**MW-6 continued**

7/29/2004	-8
11/24/2004	-12
1/24/2005	70
6/23/2005	71
9/28/2005	-80
12/20/2005	-217
3/10/2006	224
9/27/2006	-104
12/22/2006	-67
3/23/2007	-92
6/29/2007	84
9/28/2007	154
12/17/2007	-14
3/25/2008	-18
12/30/2008	8
3/24/2009	91
6/23/2009	79
12/16/2009	116
4/14/2010	108
10/13/2010	129
5/27/2011	199

**MW-7**

10/2/2003	153
1/7/2004	5
4/2/2004	10

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

Date Sampled	Post-purge ORP (mV)
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**MW-7 continued**

7/29/2004	18
11/24/2004	-24
1/24/2005	48
6/23/2005	-32
9/28/2005	-85
12/20/2005	-256
3/10/2006	-179
9/27/2006	-95
12/22/2006	-101
3/23/2007	-47
9/28/2007	26
12/19/2007	-13
3/25/2008	-34
12/30/2008	-19
3/24/2009	138
6/23/2009	-33
12/16/2009	118
4/14/2010	112
10/13/2010	44
5/27/2011	145

**MW-8**

10/2/2003	197
1/7/2004	21
4/2/2004	16
7/29/2004	30

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

Date Sampled	Post-purge ORP (mV)
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**MW-8 continued**

11/24/2004	-20
1/24/2005	60
6/23/2005	56
9/28/2005	-26
12/20/2005	-326
3/10/2006	-181
9/27/2006	-139
12/22/2006	12
3/23/2007	22
6/29/2007	92
9/28/2007	22
12/17/2007	24
3/25/2008	77
12/30/2008	14
3/24/2009	109
6/23/2009	55
12/16/2009	75
4/14/2010	120
10/13/2010	92
5/27/2011	209

**MW-9**

10/2/2003	203
1/7/2004	27
4/2/2004	32
11/24/2004	-67



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

Date Sampled	Post-purge ORP (mV)
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**MW-9 continued**

1/24/2005	-45
6/23/2005	-144
9/28/2005	-119
12/20/2005	-42
3/10/2006	161
9/27/2006	-43
12/22/2006	-70
3/23/2007	-82
6/29/2007	22
9/28/2007	30
12/17/2007	-35
3/25/2008	-14
12/30/2008	38
3/24/2009	58
6/23/2009	-30
12/16/2009	102
4/14/2010	49
10/13/2010	114
5/27/2011	95

**MW-10**

10/2/2003	213
1/7/2004	59
4/2/2004	45
7/29/2004	102
11/24/2004	-29

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

Date Sampled	Post-purge ORP (mV)
<b>MW-10 continued</b>	
1/24/2005	84
6/23/2005	44
9/28/2005	-64
12/20/2005	58
3/10/2006	83
9/27/2006	-65
12/22/2006	85
6/29/2007	172
9/28/2007	126
12/17/2007	-2
3/25/2008	-12
12/30/2008	184
3/24/2009	160
6/23/2009	68
12/16/2009	118
4/14/2010	112
10/13/2010	147
5/27/2011	192
<b>MW-11</b>	
10/2/2003	255
1/7/2004	103
4/2/2004	108
11/24/2004	143
1/24/2005	83
6/23/2005	82

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

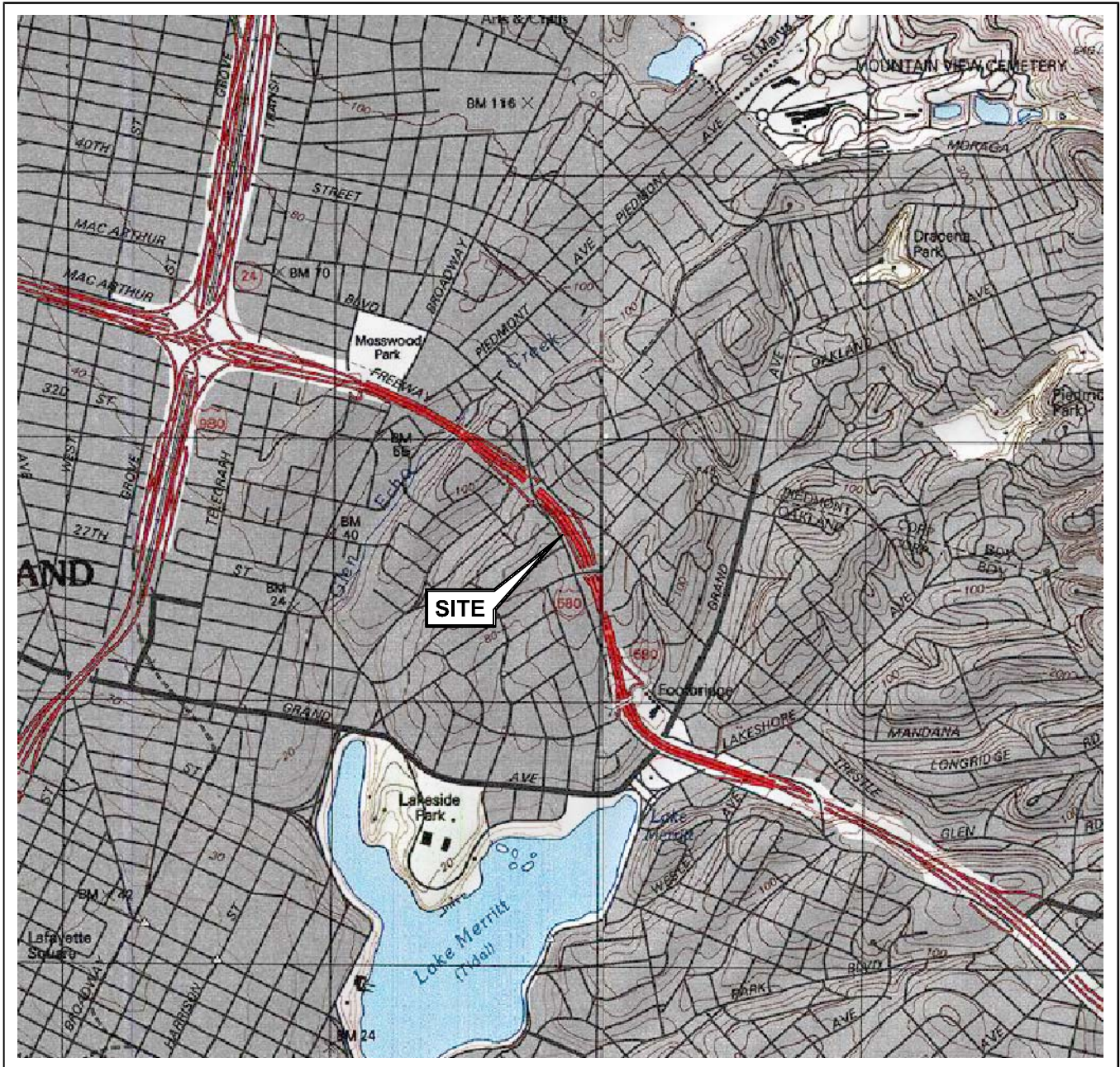
Date Sampled	Post-purge ORP (mV)
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**MW-11 continued**

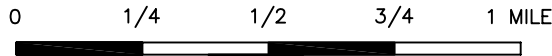
9/28/2005	-1
12/20/2005	070
3/10/2006	97
9/27/2006	40
12/22/2006	44
3/23/2007	34
6/29/2007	223
9/28/2007	244
12/17/2007	46
3/25/2008	44
12/30/2008	195
3/24/2009	190
6/23/2009	67
12/16/2009	160
4/14/2010	143
10/13/2010	133
5/27/2011	205

# FIGURES



SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Oakland Quadrangle



SCALE 1:24,000



QUADRANGLE  
LOCATION







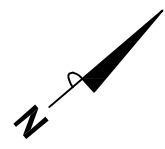
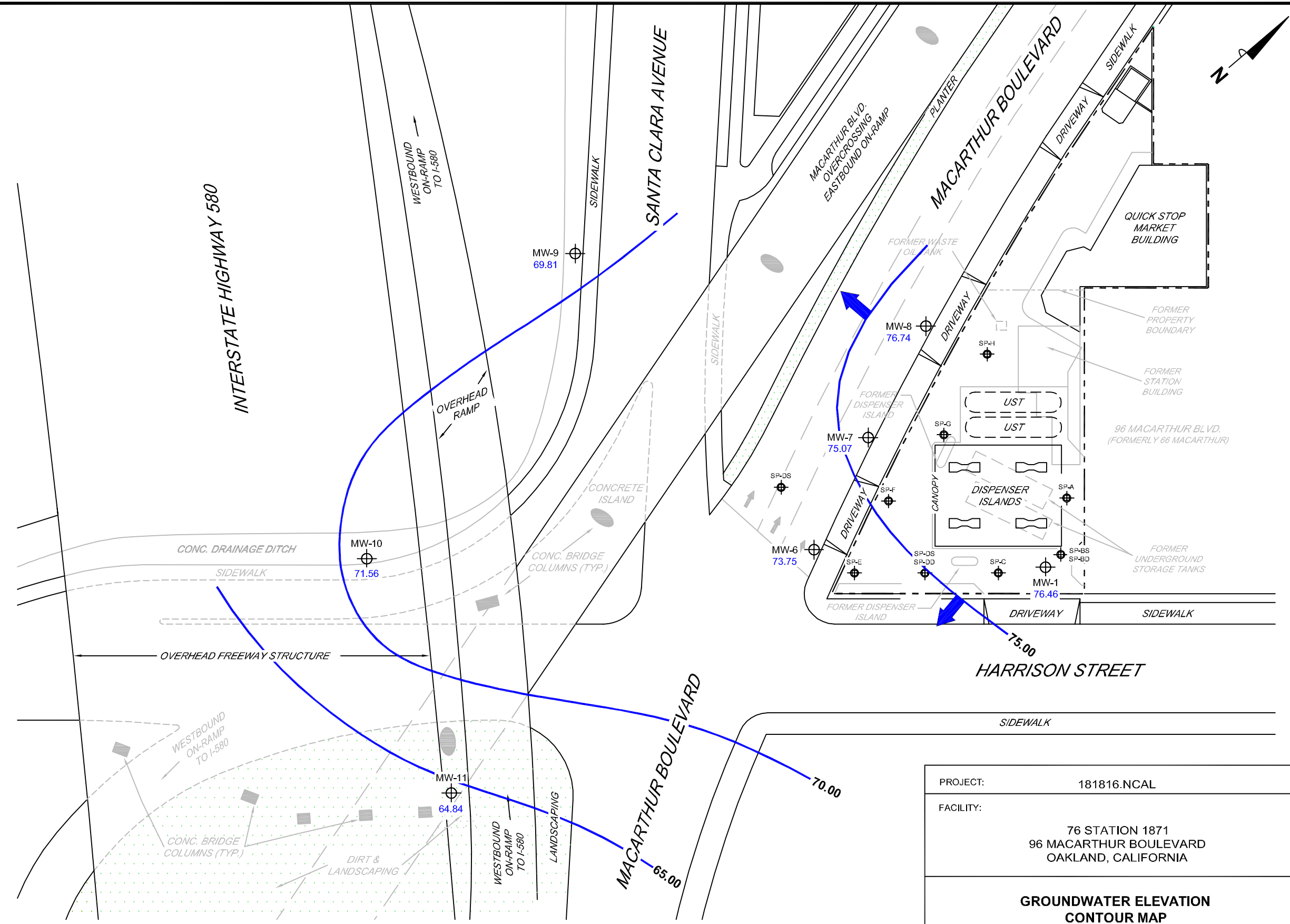
76 STATION 1871  
96 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

VICINITY MAP

FIGURE 1

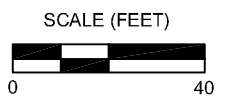
**LEGEND**

- MW-11  Monitoring Well with Groundwater Elevation ( feet)
- SP-41  Ozone Sparge Well
- 75.00  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. UST = underground storage tank.





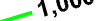
PROJECT:	181816.NCAL
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA

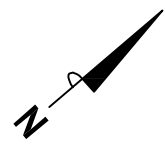
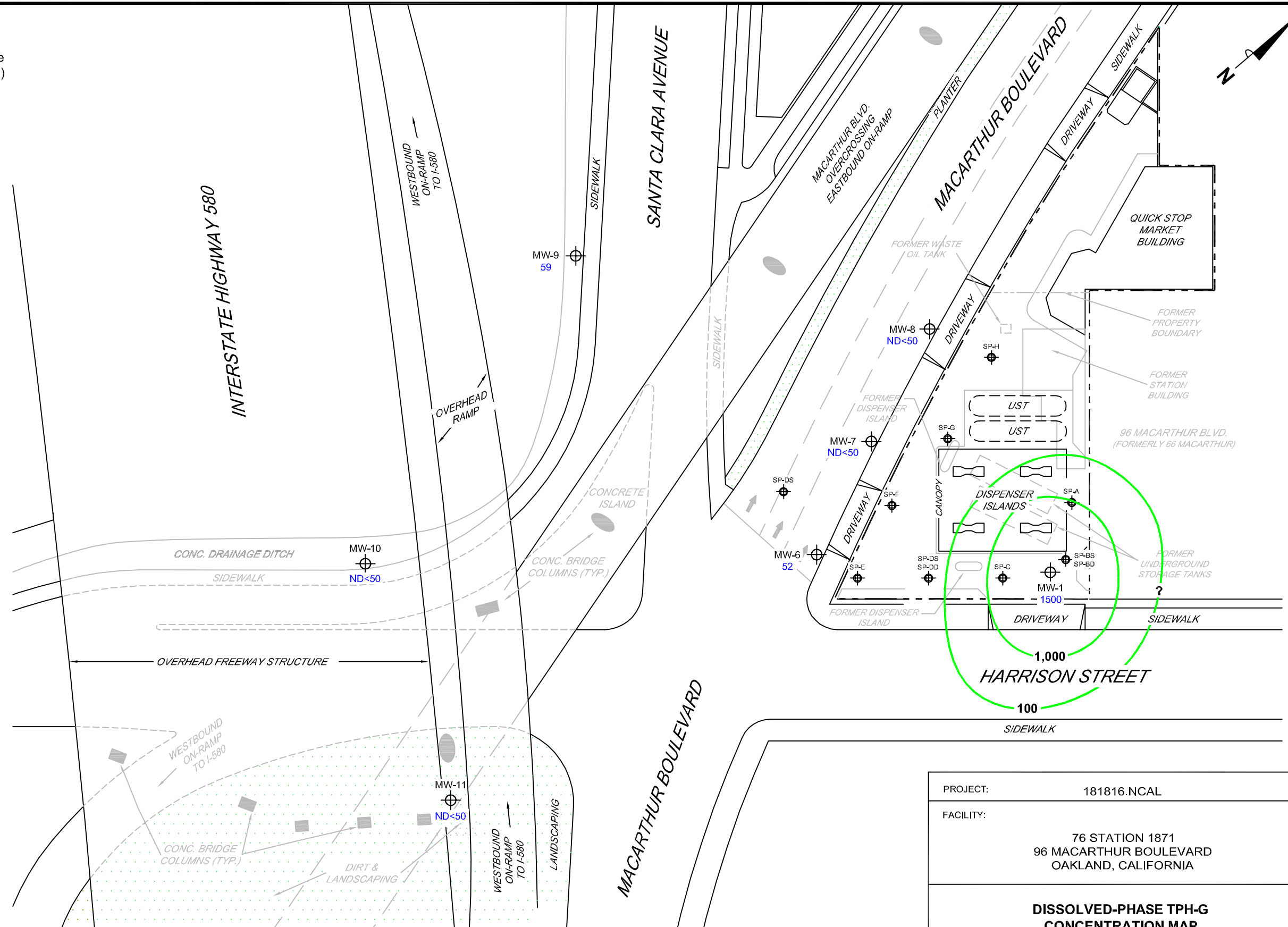
**GROUNDWATER ELEVATION  
CONTOUR MAP  
May 27, 2011**

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

MS=1:40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jun 16, 2011 - 2:08pm bschmidt

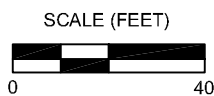
**LEGEND**


- 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 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.






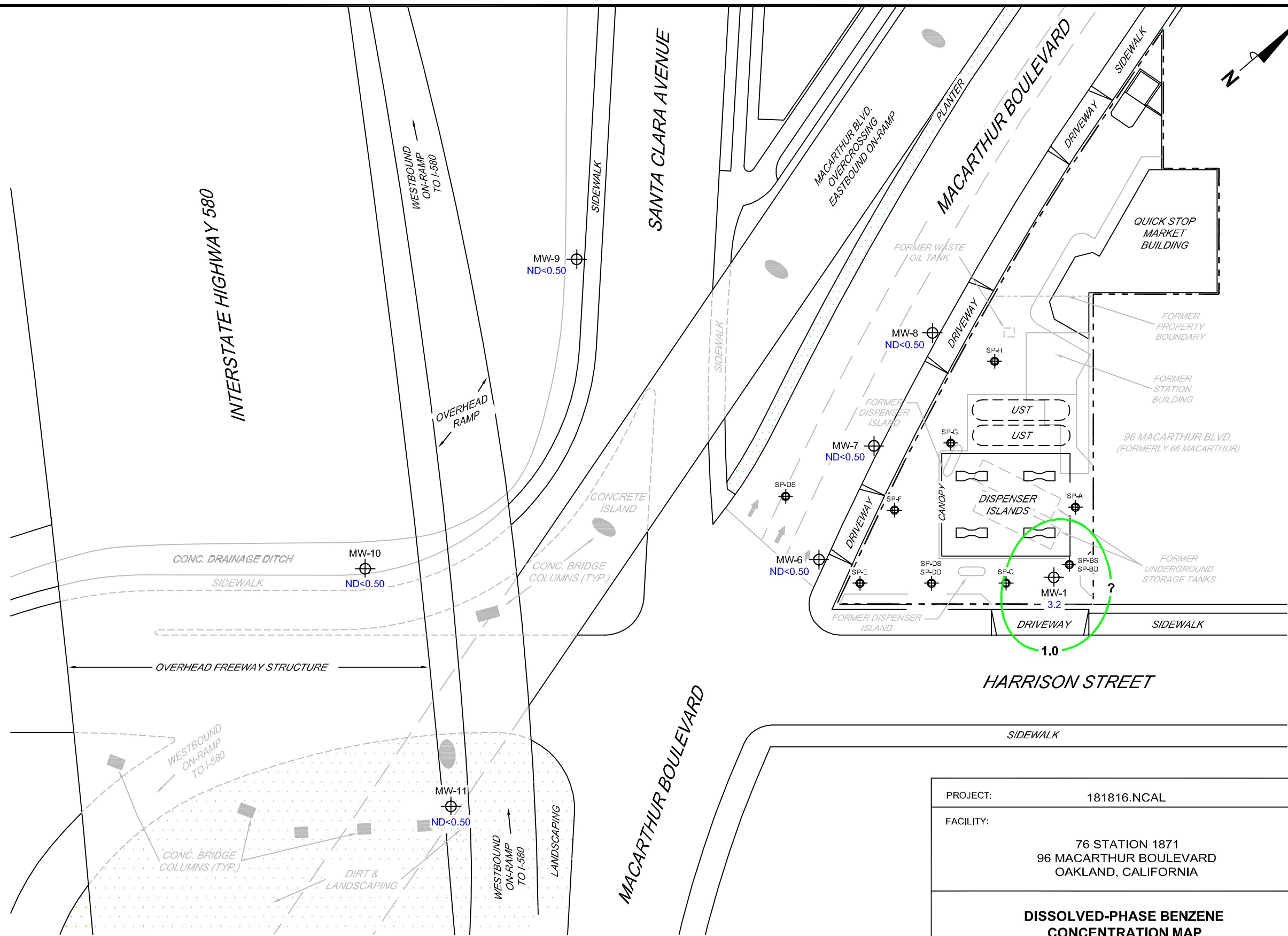
PROJECT:	181816.NCAL
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA
<b>DISSOLVED-PHASE TPH-G CONCENTRATION MAP</b> May 27, 2011	
	<b>FIGURE 3</b>

MS=1-40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-003\1871-QMS.DWG Jun 16, 2011 - 2:08pm bschmidt

MS=1:40 1871-003 L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jun 16, 2011 - 2:08pm bschmidt

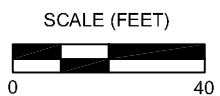
**LEGEND**

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



**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:	181816.NCAL
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA




**DISSOLVED-PHASE BENZENE  
CONCENTRATION MAP  
May 27, 2011**

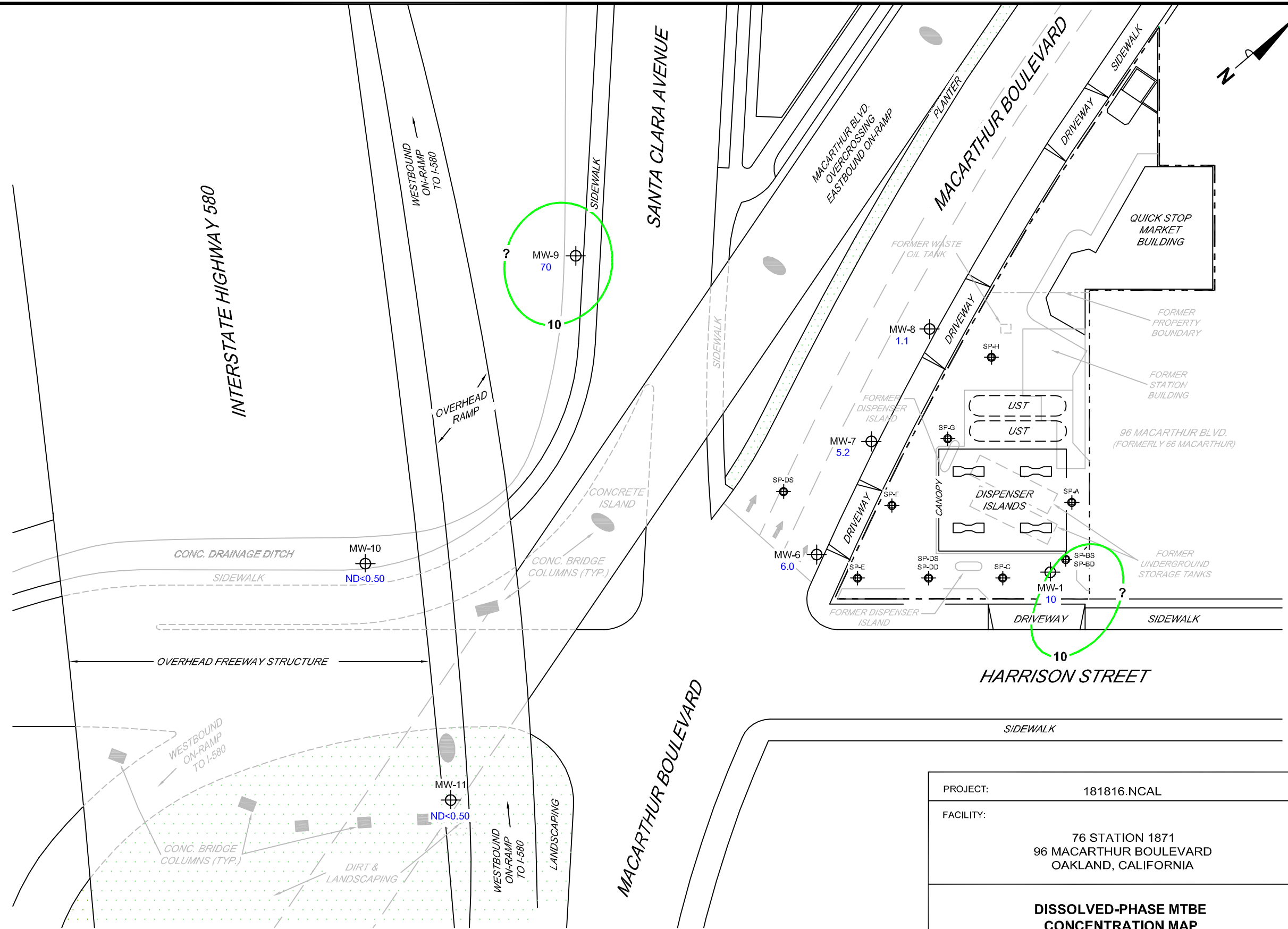
	<p><b>FIGURE 4</b></p>
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L:\Graphics\QMS NORTH-SOUTH\1871-1871-QMS.DWG Jun 16, 2011 - 2:08pm bschmidt  
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**LEGEND**

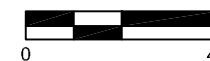
- MW-11  Monitoring Well with Dissolved-Phase MTBE Concentration ( $\mu\text{g/l}$ )
- SP-H  Ozone Sparge Well
-  10 Dissolved-Phase MTBE Contour ( $\mu\text{g/l}$ )




**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.

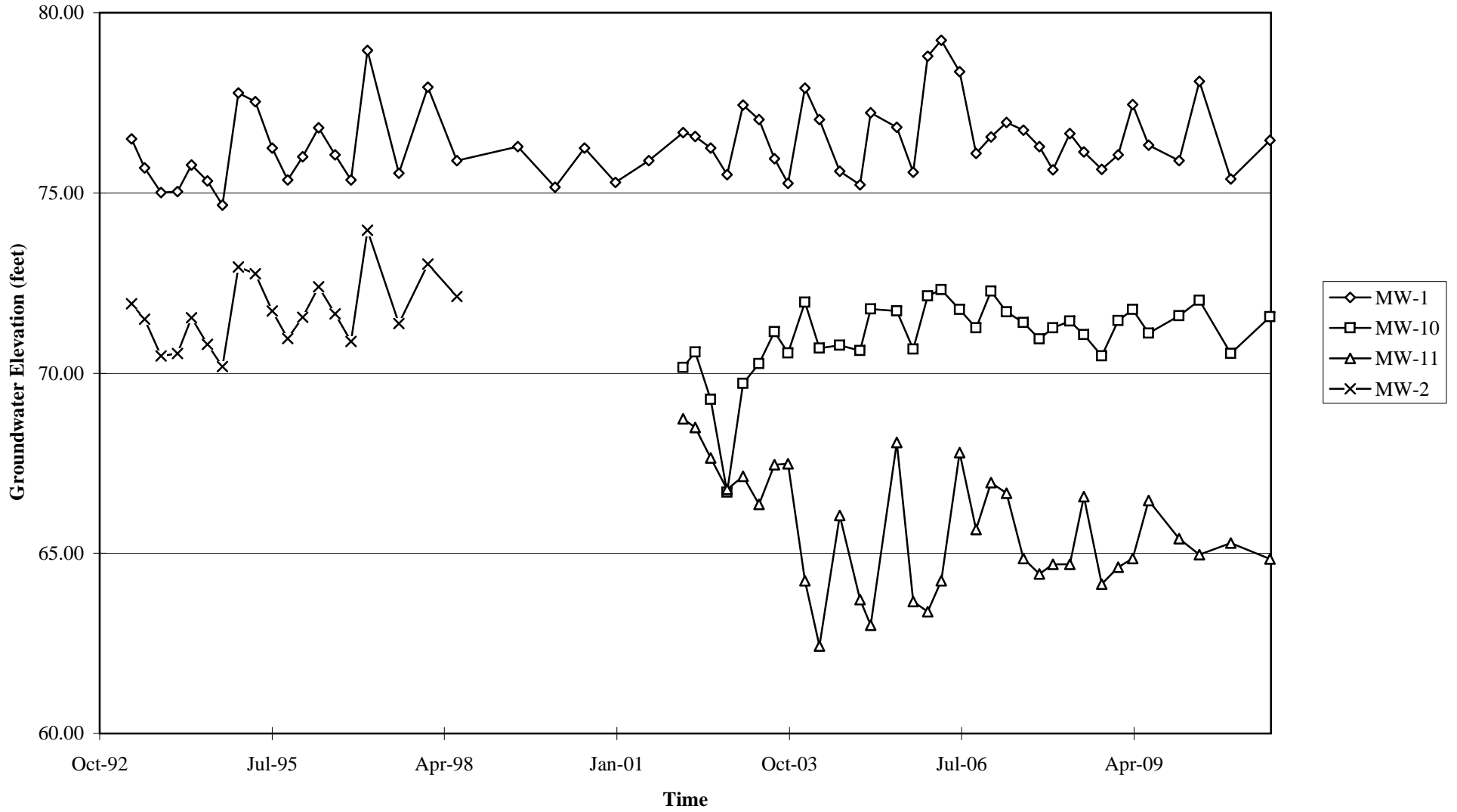
SCALE (FEET)



PROJECT:	181816.NCAL
FACILITY:	76 STATION 1871 96 MACARTHUR BOULEVARD OAKLAND, CALIFORNIA
<b>DISSOLVED-PHASE MTBE CONCENTRATION MAP</b> May 27, 2011	
	<b>FIGURE 5</b>

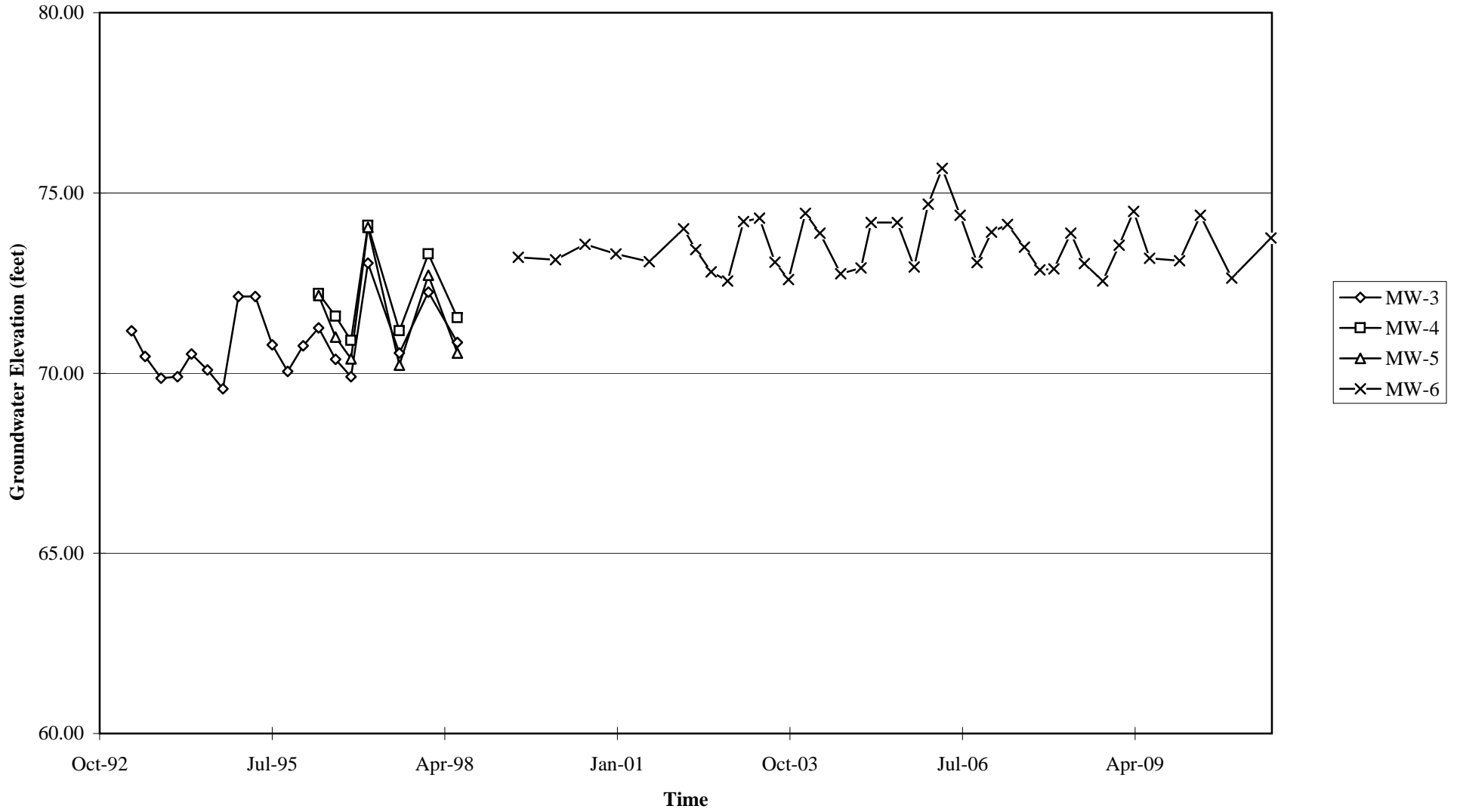
# GRAPHS

Groundwater Elevations vs. Time  
76 Station 1871



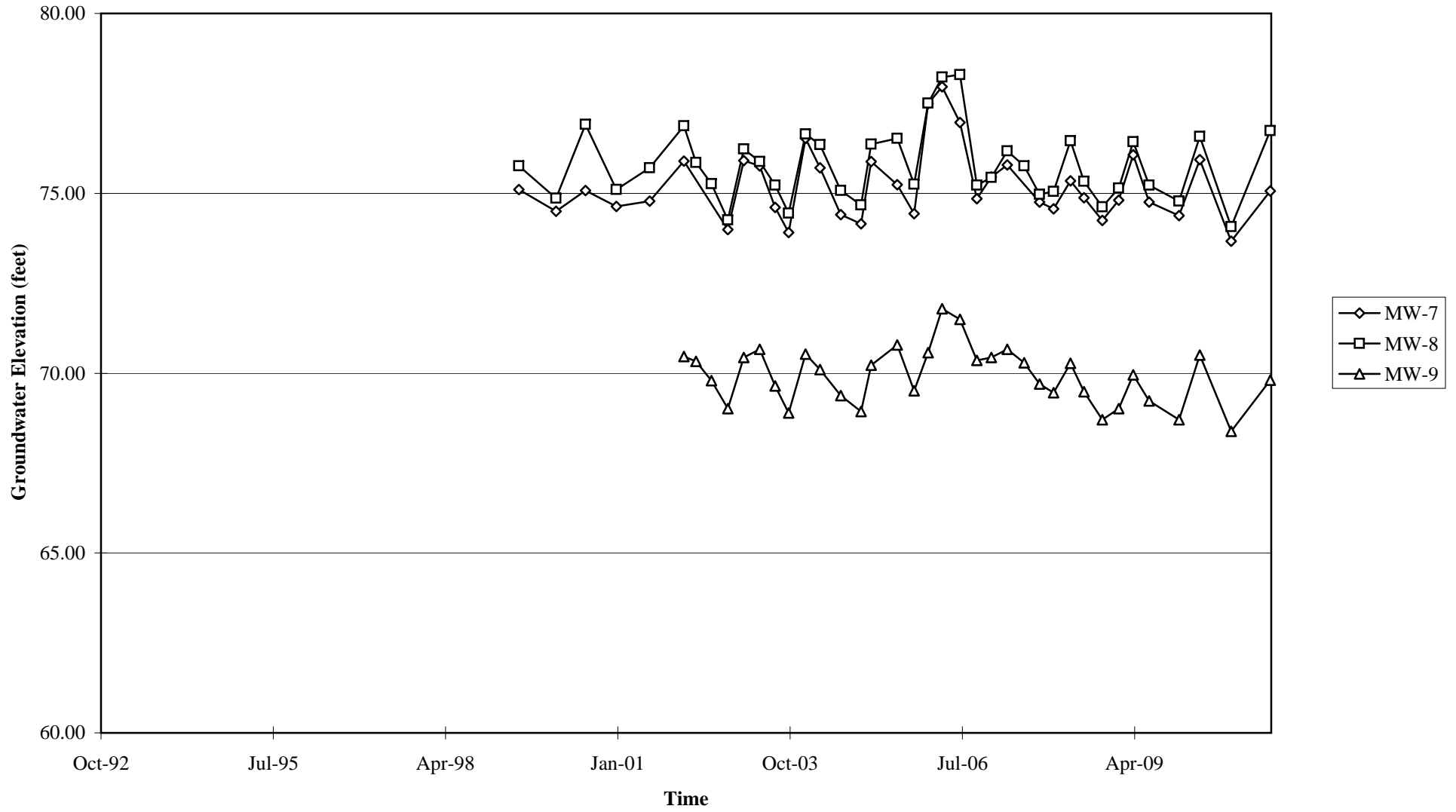
Elevations may have been corrected for apparent changes due to resurvey

Groundwater Elevations vs. Time  
76 Station 1871



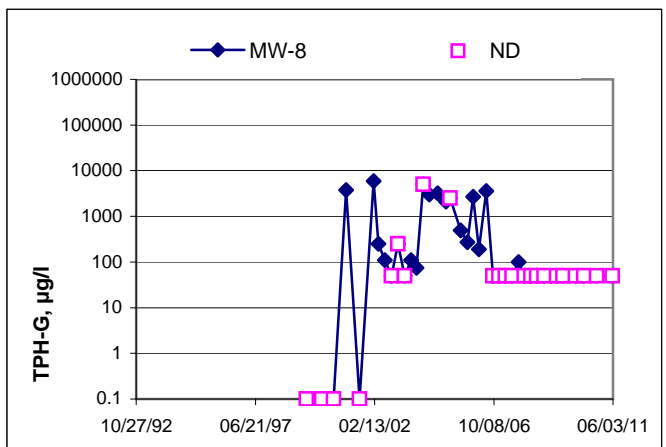
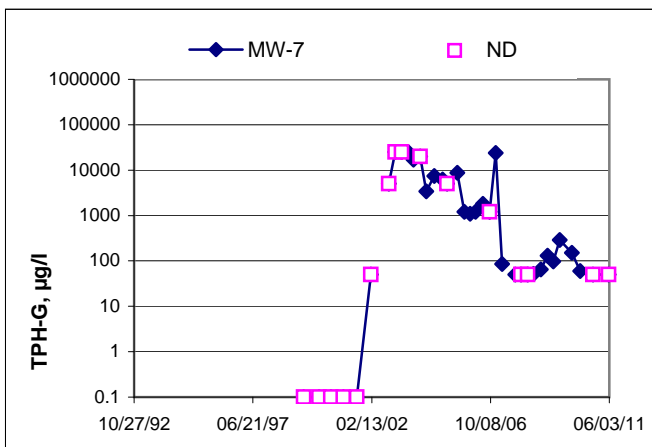
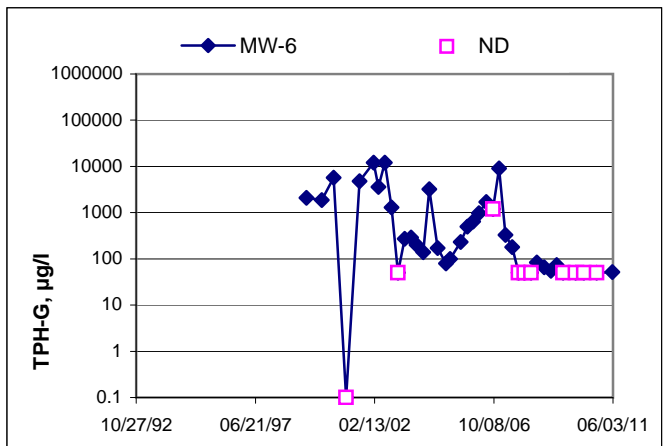
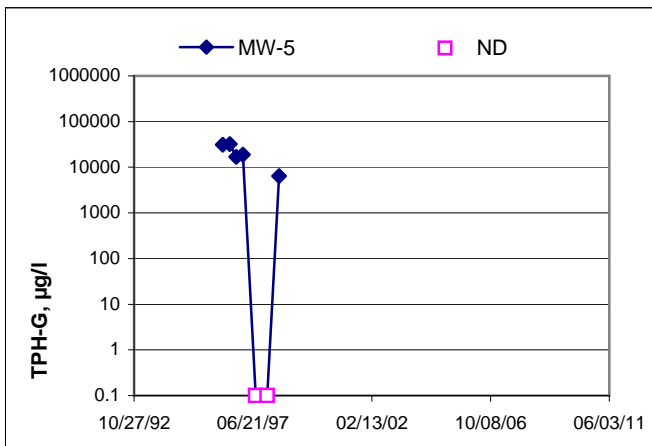
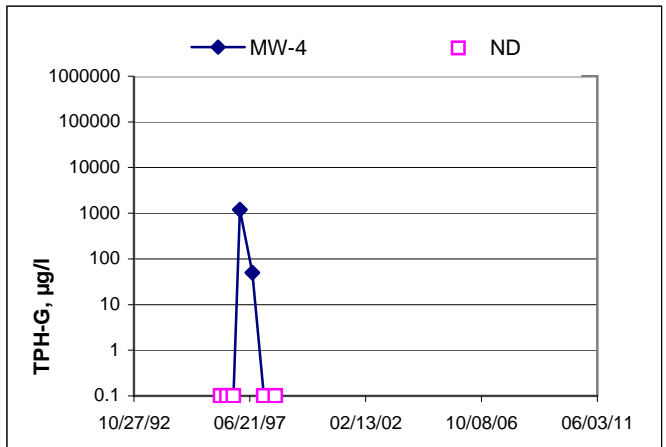
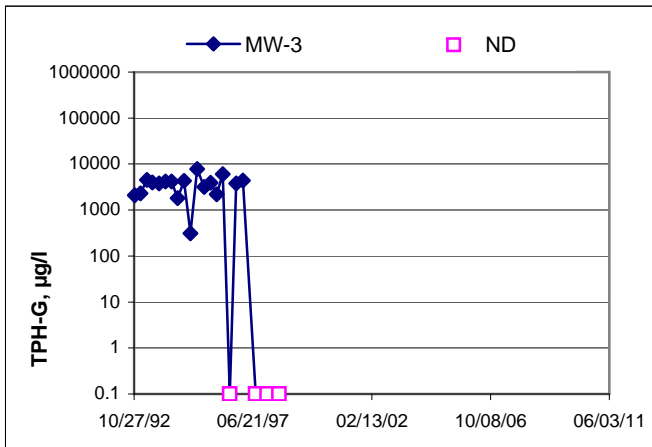
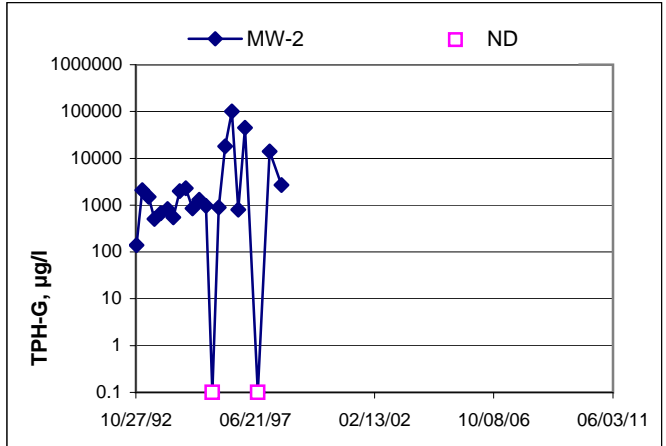
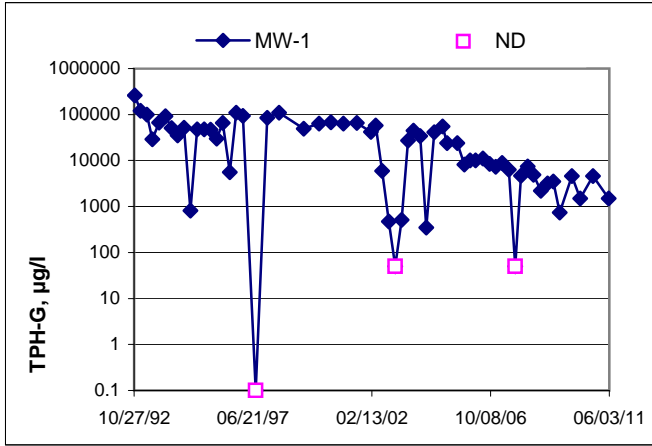
Elevations may have been corrected for apparent changes due to resurvey

Groundwater Elevations vs. Time  
76 Station 1871



Elevations may have been corrected for apparent changes due to resurvey

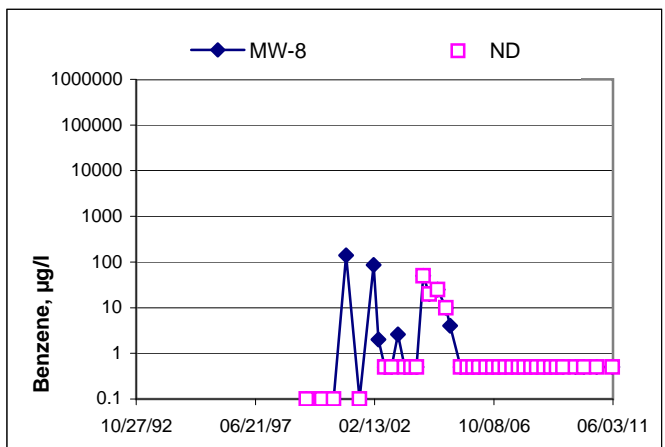
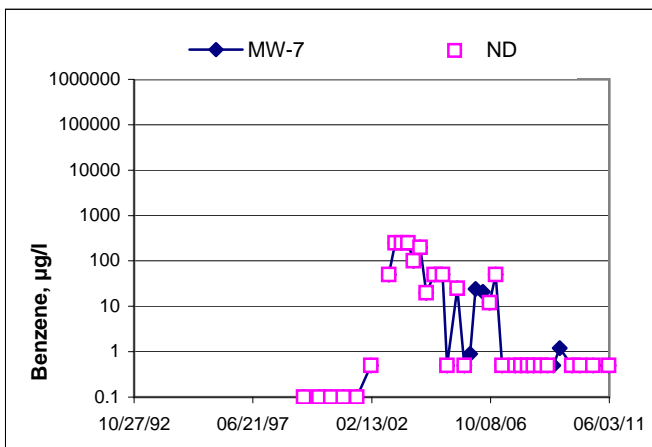
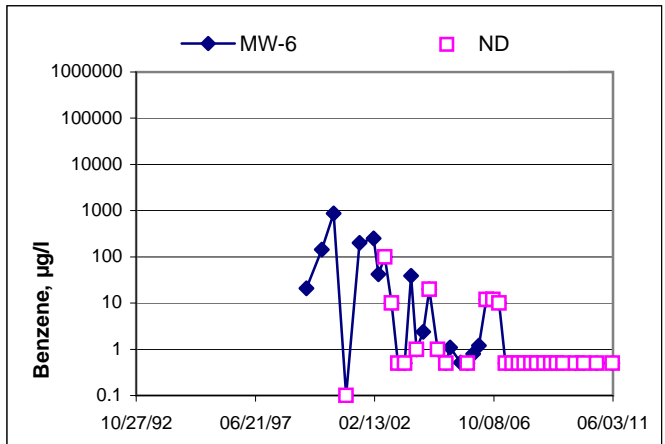
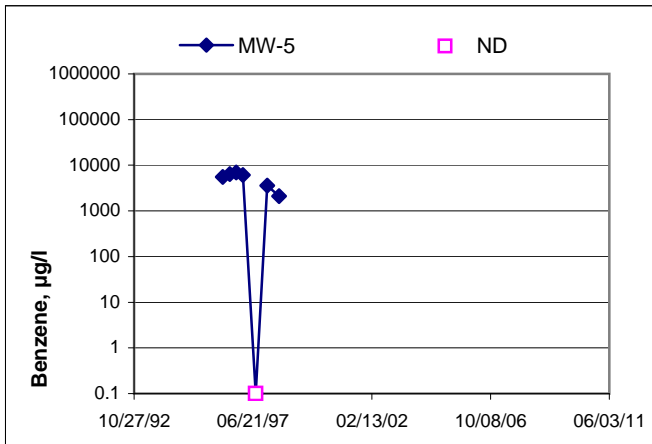
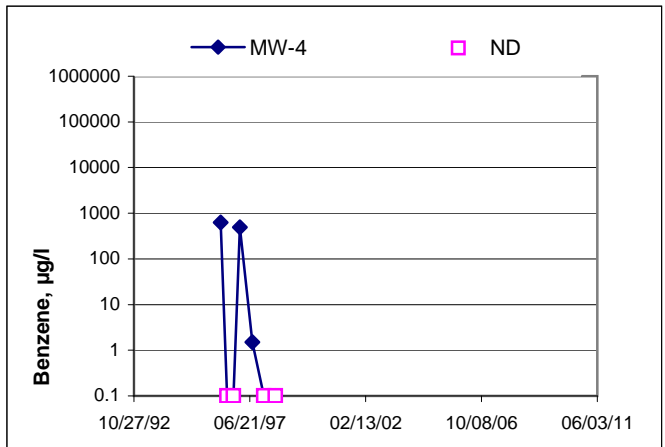
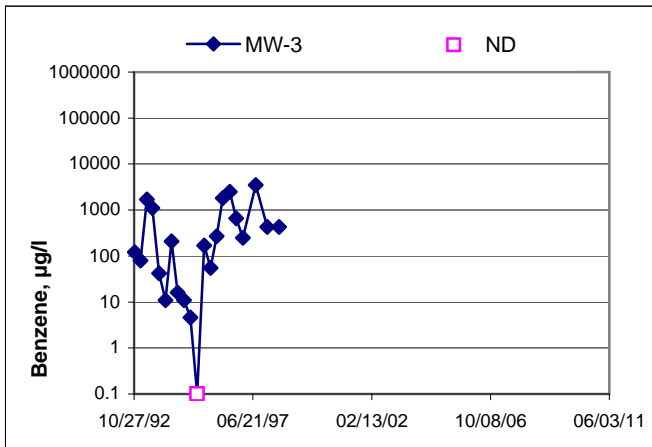
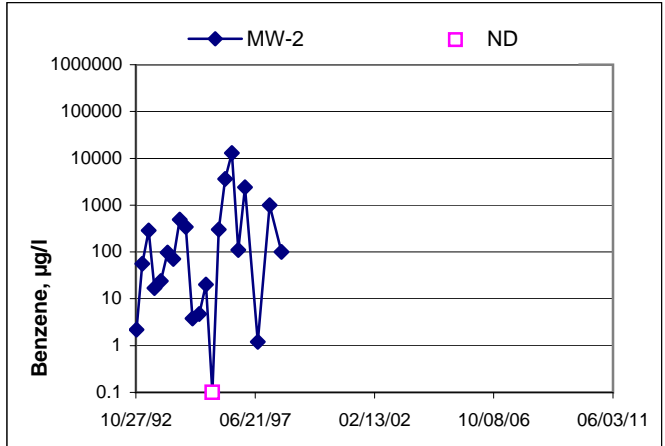
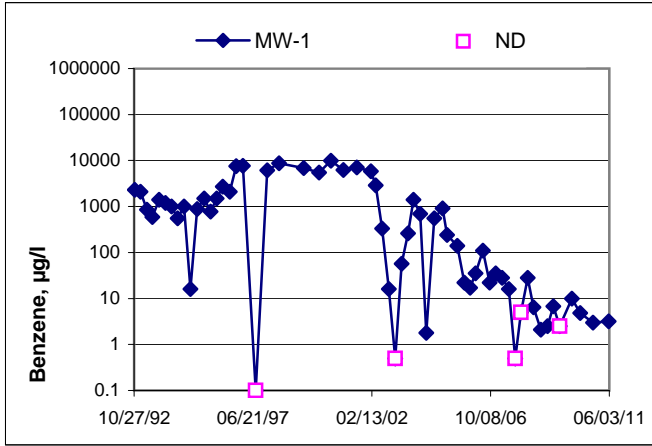
TPH-G Concentrations vs Time  
76 Station 1871





# Benzene Concentrations vs Time

## 76 Station 1871

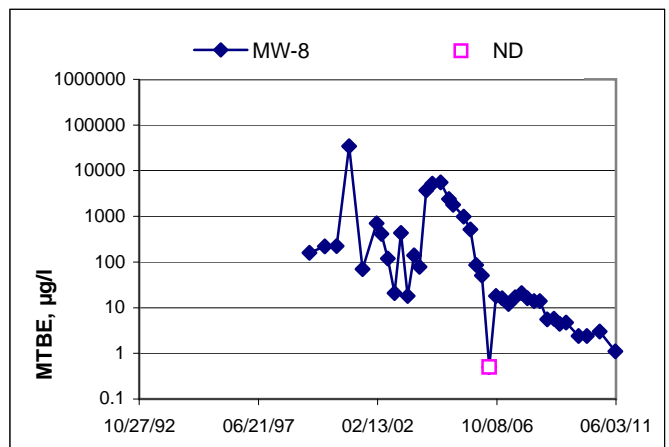
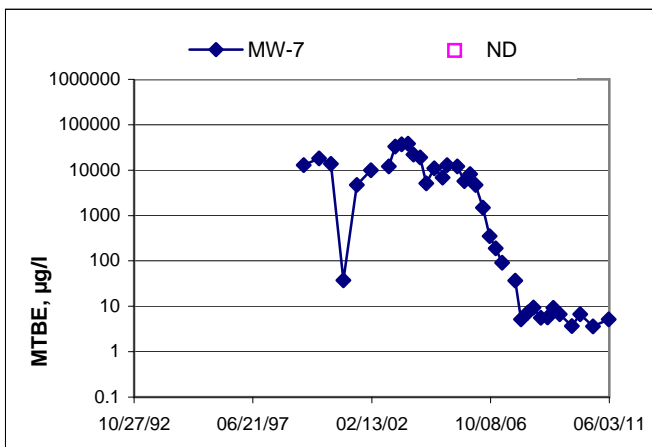
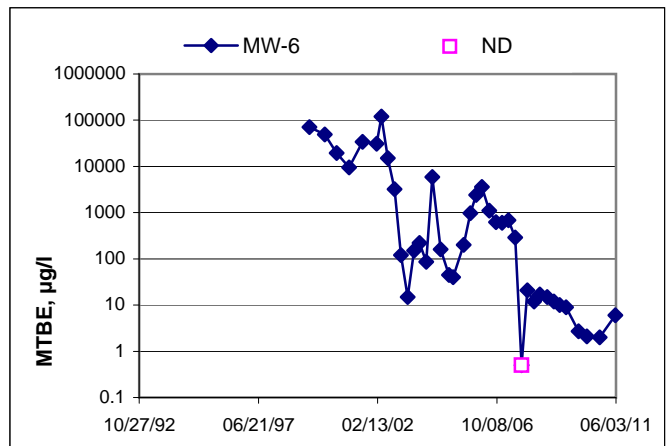
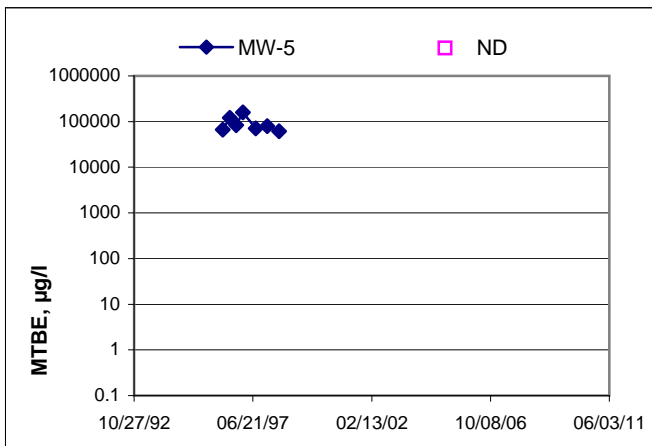
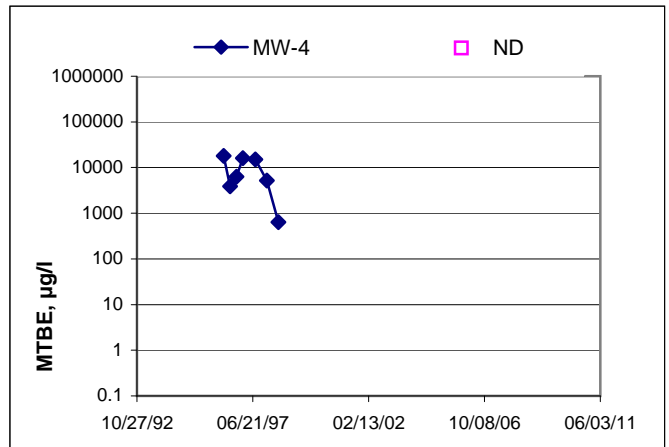
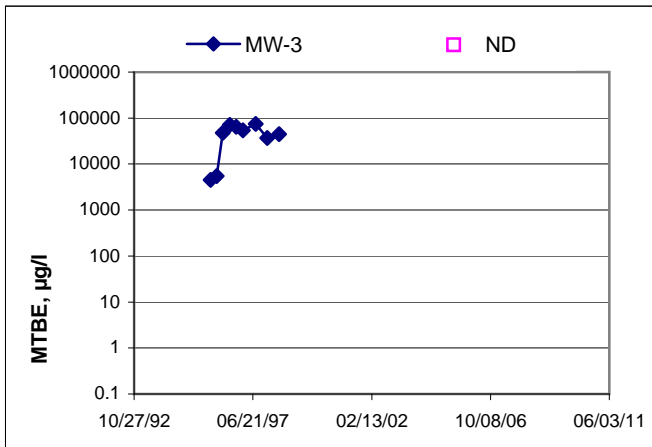
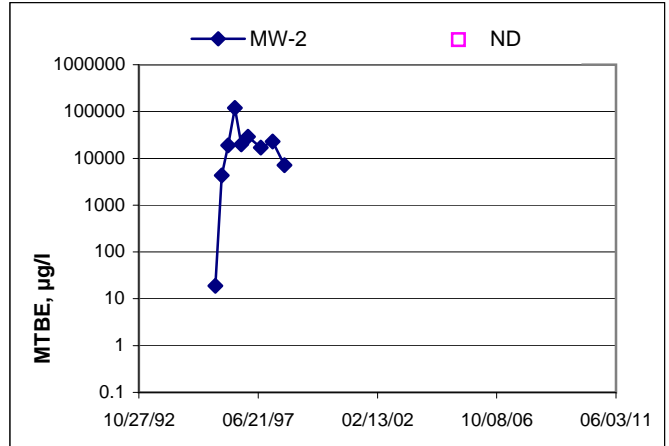
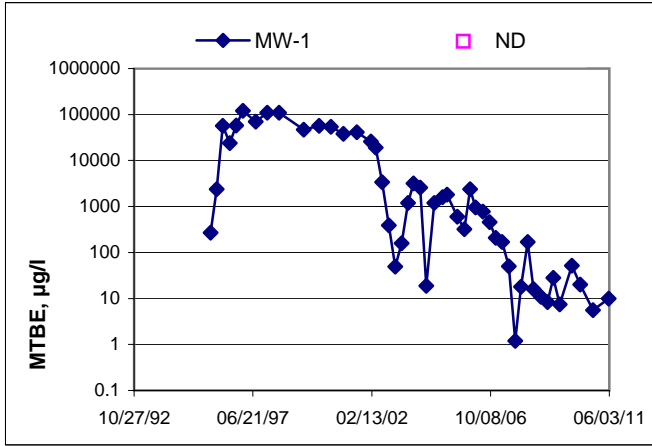






# MTBE Concentrations vs Time

## 76 Station 1871





# GENERAL FIELD PROCEDURES

## Groundwater Gauging and Sampling Assignments

For each site, TRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater gauging 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 (Gauging)

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.

Unless otherwise instructed, a well that is found to contain a measureable amount of LPH (0.01 foot) is not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed.

## 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, using a flow cell, until they become stable in general accordance with EPA guidelines.

## 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.

## **GENERAL FIELD PROCEDURES**

Samples are collected by lowering a new, disposable 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.

Sample 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. If wells must be gauged or sampled out of order, alternate interface probes and/or pumps are utilized and are noted in field documentation.

### **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 Liquinox and water and rinsing twice. The final rinse is in deionized water.

### **Purge Water Disposal**

Purge water is generally collected in labeled drums for disposal as non-hazardous waste. Drums may be left on site for disposal by others, or transported to a collection location at a TRC field office, in either Fullerton, California or Concord, California, for eventual transfer to a licensed treatment or recycling facility. Alternatively, 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.

### **Exceptions**

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

# FIELD MONITORING DATA SHEET

Technician: Basilio

Job #/Task #: 181816

Date: 5-27-11

Site # 1871

Project Manager Anj4

Page 1 of 1

Well #	TOC	Time Gauged	Total Depth	Depth to Water	Depth to Product	Product Thickness (feet)	Time Sampled	Misc. Well Notes
MW-11	✓	0545	30.02	15.60	-	-	0955	2"
MW-10	✓	0550	19.95	6.62	-	-	1004	2"
MW-6	✓	0600	24.38	8.76	-	-	1020	2"
MW-8	✓	0607	24.54	8.12	-	-	1026	2"
MW-7	✓	0611	24.55	8.73	-	-	1035	2"
MW-9	✓	0630	19.80	15.37	-	-	1120	
MW-1	✓	0642	24.05	13.75	-	-	1047	4"

FIELD DATA COMPLETE          QA/QC                  COC                  WELL BOX CONDITION SHEETS

MANIFEST                  DRUM INVENTORY                  TRAFFIC CONTROL



# GROUNDWATER SAMPLING FIELD NOTES

Technician: Baird

Site: 1871

Project No.: 181816

Date: 5-27-11

Well No. MW-11

Purge Method: Sub

Depth to Water (feet): 15.60

Depth to Product (feet): -

Total Depth (feet): 30.02

LPH & Water Recovered (gallons): -

Water Column (feet): 14.42

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 18.48

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
Pre-Purge									
0725			3	3195	15.0	10.19	4.17	191	
	0730		6	3292	15.4	9.33	3.73	201	
			9	3356	15.8	9.01	3.11	205	
Static at Time Sampled		Total Gallons Purged			Sample Time				
18.65		9			0955				
Comments:									

Well No. MW-10

Purge Method: Sub

Depth to Water (feet): 6.62

Depth to Product (feet): -

Total Depth (feet): 19.95

LPH & Water Recovered (gallons): -

Water Column (feet): 13.33

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 9.28

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
Pre-Purge									
0746			3	675.9	15.1	8.42	2.47	190	
	0745		6	463.9	15.0	8.07	1.08	191	
			9	438.1	15.3	7.76	1.52	192	
Static at Time Sampled		Total Gallons Purged			Sample Time				
12.82		9			1004				
Comments: <u>did not recover 2 hrs.</u>									

# GROUNDWATER SAMPLING FIELD NOTES

Technician: Baird

Site: 1871

Project No.: 181816

Date: 5-27-11

Well No. MW-6

Purge Method: SUS

Depth to Water (feet): 8.76

Depth to Product (feet): -

Total Depth (feet): 24.38

LPH & Water Recovered (gallons): -

Water Column (feet): 15.62

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 11.88

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
Pre-Purge									
0757			3	801.2	16.6	6.77	1.42	214	
	0802		6	811.9	17.7	6.56	0.61	203	
			9	815.5	18.2	6.44	0.61	199	
Static at Time Sampled			Total Gallons Purged			Sample Time			
8.90			9			1020			
Comments:									

Well No. MW-8

Purge Method: SUS

Depth to Water (feet): 8.12

Depth to Product (feet): -

Total Depth (feet): 24.54

LPH & Water Recovered (gallons): -

Water Column (feet): 16.42

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 11.40

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
Pre-Purge									
0810			3	731.5	17.4	6.43	0.70	212	
	0817		6	721.9	17.9	6.09	0.57	214	
			9	764.7	18.0	6.01	0.48	209	
Static at Time Sampled			Total Gallons Purged			Sample Time			
9.40			9			1026			
Comments:									



# GROUNDWATER SAMPLING FIELD NOTES

Technician: Bailew

Site: 1871

Project No.: 181816

Date: 5-27-11

Well No. MW-7

Purge Method: Sub

Depth to Water (feet): 8.73

Depth to Product (feet): -

Total Depth (feet): 24.55

LPH & Water Recovered (gallons): -

Water Column (feet): 15.82

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 11.89

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
Pre-Purge									
0823			3	567.2	17.6	6.35	0.45	182	
	0829		6	577.4	17.7	6.20	0.55	169	
			9	552.2	17.9	6.13	0.48	145	
Static at Time Sampled			Total Gallons Purged		Sample Time				
9.10			9		1035				
Comments:									

Well No. MW-9

Purge Method: HB

Depth to Water (feet): 15.37

Depth to Product (feet): -

Total Depth (feet): 19.80

LPH & Water Recovered (gallons): -

Water Column (feet): 4.43

Casing Diameter (Inches): 2

80% Recharge Depth(feet): 16.25

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
Pre-Purge									
0911			1	510.2	16.3	6.57	1.93	148	
	0919		2	490.9	16.4	6.22	1.42	108	
			3	494.2	16.4	6.03	1.51	95	
Static at Time Sampled			Total Gallons Purged		Sample Time				
18.10			3		1120				
Comments: <u>Dry at 3 hrs Did not recover 2 hrs.</u>									

# GROUNDWATER SAMPLING FIELD NOTES

Technician: Baird

Site: 1871

Project No.: 181816

Date: 5-27-11

Well No. WW-1

Purge Method: Sub

Depth to Water (feet): 13.75

Depth to Product (feet): -

Total Depth (feet): 24.05

LPH & Water Recovered (gallons): -

Water Column (feet): 10.30

Casing Diameter (Inches): 4

80% Recharge Depth(feet): 15.81

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
Pre-Purge									
<u>0850</u>			<u>7</u>	<u>646.7</u>	<u>18.1</u>	<u>6.25</u>	<u>0.50</u>	<u>-2</u>	
	<u>0859</u>		<u>14</u>	<u>605.4</u>	<u>18.3</u>	<u>5.88</u>	<u>0.37</u>	<u>-19</u>	
			<u>21</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Static at Time Sampled			Total Gallons Purged			Sample Time			
<u>15.81</u>			<u>14</u>			<u>1047</u>			
Comments: <u>Dry at 14 gals did not recover 45 min</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
Pre-Purge									
Static at Time Sampled			Total Gallons Purged			Sample Time			
Comments: _____									



Date of Report: 06/09/2011

Anju Farfan

TRC

123 Technology Drive  
Irvine, CA 92618

Project: 1871  
BC Work Order: 1108404  
Invoice ID: B101864

Enclosed are the results of analyses for samples received by the laboratory on 5/27/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014



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Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 1108404 Page 1 of 2

11-08404

CHK BY DISTRIBUTION  
 SUB-OUT

BC LABORATORIES, INC.

4100 Atlas Court Bakersfield, CA 93308  
 (661) 327-4911 FAX (661) 327-1918

CHAIN OF CUSTODY

Analysis Requested

Bill to: Conoco Phillips / Union Oil Consultant Firm: (circle one):  
 AECOM SAIC  
 ARCADIS STANTEC  
 CRA URS  
 HFA TBC

Site Address: 96 MacArthur Blvd.  
 City: Oakland Consultant PM: Anju  
 Site ID: 1871

State: CA Zip: PO #: 01120-4574567419

Client Mgr: Ted Moise Sampler Name: Bailin

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	TPH Diesel by 8015	TPH-G by GC/MS	BTEX/MTBE/CS by 8260B	Ethanol by 8260B	8260 full list w/MTBE & oxygenates	Number of Containers	Turnaround Time Requested
-1		MW-11	5-27-11 0955	(GW) Ground-water		X	X			3	5H
-2		MW-10	1004	(S) Soil							
-3		MW-6	1020	(WW) Waste-water							
-4		MW-8	1026	(SL) Sludge							
-5		MW-7	1035								
-6		MW-9	1120								
-7		MW-1	1047								

Comments:

Relinquished by: (Signature) [Signature] Received by: [Signature] Date & Time: 5-27-11 1327

Relinquished by: (Signature) [Signature] Received by: [Signature] Date & Time: 5-27-11 1700

Relinquished by: (Signature) [Signature] Received by: [Signature] Date & Time: 6-27-11 1950

GLOBAL ID: T0600101493

(A) = ANALYSIS (C) = CONTAINER (P) = PRESERVATIVE

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com Page 3 of 18



BC LABORATORIES INC.		SAMPLE RECEIPT FORM		Rev. No. 12	06/24/08	Page 1 of 1					
Submission #: <u>11-08404</u>											
SHIPPING INFORMATION Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____				SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____							
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:											
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments:											
Intact? Yes <input type="checkbox"/> No <input type="checkbox"/> Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>											
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.98</u>		Container: <u>VOA</u>		Thermometer ID: <u>163</u>					
		Temperature: A <u>5.2</u> °C / C <u>5.2</u> °C		Date/Time <u>5-27-11</u>		Analyst Init <u>MJM 1950</u>					
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											
202. NITRATE / NITRITE											
PT TOTAL ORGANIC CARBON											
PT TOX											
PT CHEMICAL OXYGEN DEMAND											
PcA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK											
40ml VOA VIAL		A-3	A-3	A-3	A-3	A-3	A-3	A-3			
QT EPA 413.1, 413.2, 418.1											
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
QT EPA 508/608/608D											
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											
12 OZ. JAR											
SOIL SLEEVE											
PCB VIAL											
PLASTIC BAG											
FERROUS IRON											
ENCORE											

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: [Signature] Date/Time: 5/27/11 0943  
 A = Actual / C = Corrected

[H:\DOCS\WFPB\LAB\_DOCS\FORMS\ISAMREC2.WPD]



TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1108404-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 09:55 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-11 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

<b>1108404-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-10 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 10:04 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-10 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

<b>1108404-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-6 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 10:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1108404-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-8 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 10:26 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-8 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

<b>1108404-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-7 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 10:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

<b>1108404-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> 1871 <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-9 <b>Sampled By:</b> TRCI	<b>Receive Date:</b> 05/27/2011 19:50 <b>Sampling Date:</b> 05/27/2011 11:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: T0600101493 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1108404-07

**COC Number:** ---  
**Project Number:** 1871  
**Sampling Location:** ---  
**Sampling Point:** MW-1  
**Sampled By:** TRCI

**Receive Date:** 05/27/2011 19:50  
**Sampling Date:** 05/27/2011 10:47  
**Sample Depth:** ---  
**Lab Matrix:** Water  
**Sample Type:** Groundwater  
Delivery Work Order:  
Global ID: T0600101493  
Location ID (FieldPoint): MW-1  
Matrix: W  
Sample QC Type (SACode): CS  
Cooler ID:



TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-01	<b>Client Sample Name:</b> 1871, MW-11, 5/27/2011 9:55:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 02:47	KEA	MS-V10	1	BUF0191



TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-02	<b>Client Sample Name:</b> 1871, MW-10, 5/27/2011 10:04:00AM
----------------------------------	--

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.0	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.8	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 02:29	KEA	MS-V10	1	BUF0191



TRC  
123 Technology Drive  
Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-03	<b>Client Sample Name:</b> 1871, MW-6, 5/27/2011 10:20:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Methyl t-butyl ether</b>	<b>6.0</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>ND</b>		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>52</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.2	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 02:11	KEA	MS-V10	1	BUF0191

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**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-04	<b>Client Sample Name:</b> 1871, MW-8, 5/27/2011 10:26:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Methyl t-butyl ether</b>	<b>1.1</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>ND</b>		<b>1</b>
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	92.1	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.2	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 01:53	KEA	MS-V10	1	BUF0191

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Irvine, CA 92618

**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-05	<b>Client Sample Name:</b> 1871, MW-7, 5/27/2011 10:35:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Methyl t-butyl ether</b>	<b>5.2</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>ND</b>		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.7	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.3	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 01:35	KEA	MS-V10	1	BUF0191

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**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-06	<b>Client Sample Name:</b> 1871, MW-9, 5/27/2011 11:20:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
<b>Methyl t-butyl ether</b>	<b>70</b>	<b>ug/L</b>	<b>0.50</b>	<b>EPA-8260</b>	<b>ND</b>		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>59</b>	<b>ug/L</b>	<b>50</b>	<b>Luft-GC/MS</b>	<b>ND</b>	<b>A90</b>	1
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	91.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 01:17	KEA	MS-V10	1	BUF0191

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**Reported:** 06/09/2011 17:00  
**Project:** 1871  
**Project Number:** 4514567419  
**Project Manager:** Anju Farfan

### Volatile Organic Analysis (EPA Method 8260)

<b>BCL Sample ID:</b> 1108404-07	<b>Client Sample Name:</b> 1871, MW-1, 5/27/2011 10:47:00AM
----------------------------------	---

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	3.2	ug/L	2.5	EPA-8260	ND	A01	1
1,2-Dibromoethane	ND	ug/L	2.5	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5	EPA-8260	ND	A01	1
Ethylbenzene	86	ug/L	2.5	EPA-8260	ND	A01	1
Methyl t-butyl ether	10	ug/L	2.5	EPA-8260	ND	A01	1
Toluene	ND	ug/L	2.5	EPA-8260	ND	A01	1
<b>Total Xylenes</b>	<b>14</b>	<b>ug/L</b>	<b>5.0</b>	<b>EPA-8260</b>	<b>ND</b>	<b>A01</b>	<b>1</b>
t-Butyl alcohol	ND	ug/L	50	EPA-8260	ND	A01	1
Ethanol	ND	ug/L	1200	EPA-8260	ND	A01	1
<b>Total Purgeable Petroleum Hydrocarbons</b>	<b>1500</b>	<b>ug/L</b>	<b>250</b>	<b>Luft-GC/MS</b>	<b>ND</b>	<b>A01</b>	<b>1</b>
1,2-Dichloroethane-d4 (Surrogate)	108	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	93.6	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/08/11	06/09/11 01:00	KEA	MS-V10	5	BUF0191

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**Reported:** 06/09/2011 17:00  
Project: 1871  
Project Number: 4514567419  
Project Manager: Anju Farfan

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BUF0191</b>						
Benzene	BUF0191-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BUF0191-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BUF0191-BLK1	ND	ug/L	0.50		
Ethylbenzene	BUF0191-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BUF0191-BLK1	ND	ug/L	0.50		
Toluene	BUF0191-BLK1	ND	ug/L	0.50		
Total Xylenes	BUF0191-BLK1	ND	ug/L	1.0		
t-Butyl alcohol	BUF0191-BLK1	ND	ug/L	10		
Ethanol	BUF0191-BLK1	ND	ug/L	250		
Total Purgeable Petroleum Hydrocarbons	BUF0191-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BUF0191-BLK1	106	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BUF0191-BLK1	97.5	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BUF0191-BLK1	99.6	%	86 - 115 (LCL - UCL)		



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Reported: 06/09/2011 17:00  
Project: 1871  
Project Number: 4514567419  
Project Manager: Anju Farfan

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: BUF0191</b>										
Benzene	BUF0191-BS1	LCS	23.640	25.000	ug/L	94.6		70 - 130		
Toluene	BUF0191-BS1	LCS	26.350	25.000	ug/L	105		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BUF0191-BS1	LCS	10.270	10.000	ug/L	103		76 - 114		
Toluene-d8 (Surrogate)	BUF0191-BS1	LCS	9.7600	10.000	ug/L	97.6		88 - 110		
4-Bromofluorobenzene (Surrogate)	BUF0191-BS1	LCS	10.150	10.000	ug/L	102		86 - 115		



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Reported: 06/09/2011 17:00  
Project: 1871  
Project Number: 4514567419  
Project Manager: Anju Farfan

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: BUF0191</b>		Used client sample: N									
Benzene	MS	1107512-49	ND	23.460	25.000	ug/L		93.8		70 - 130	
	MSD	1107512-49	ND	23.330	25.000	ug/L	0.6	93.3	20	70 - 130	
Toluene	MS	1107512-49	ND	26.020	25.000	ug/L		104		70 - 130	
	MSD	1107512-49	ND	24.990	25.000	ug/L	4.0	100	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1107512-49	ND	11.030	10.000	ug/L		110		76 - 114	
	MSD	1107512-49	ND	10.710	10.000	ug/L	2.9	107		76 - 114	
Toluene-d8 (Surrogate)	MS	1107512-49	ND	9.9100	10.000	ug/L		99.1		88 - 110	
	MSD	1107512-49	ND	9.5600	10.000	ug/L	3.6	95.6		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1107512-49	ND	10.190	10.000	ug/L		102		86 - 115	
	MSD	1107512-49	ND	10.160	10.000	ug/L	0.3	102		86 - 115	



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**Reported:** 06/09/2011 17:00  
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**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.

## **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**

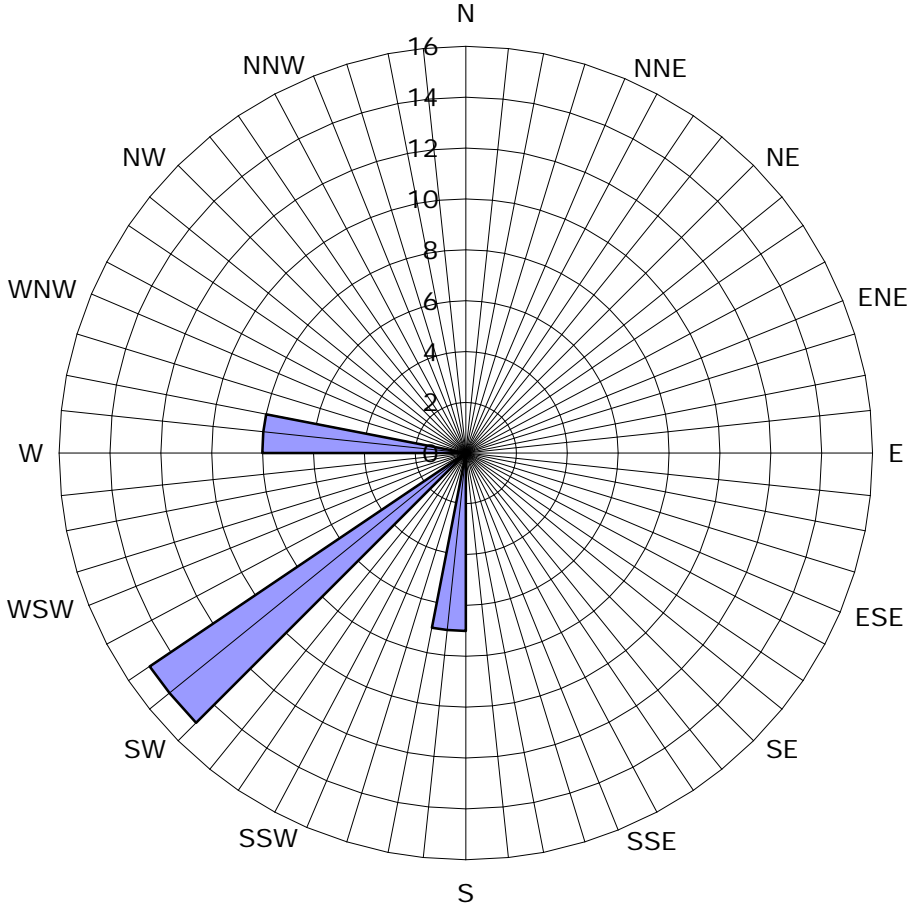
The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by 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 B**

Historical Groundwater Flow Direction Rose Diagram

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

96 MacArthur Blvd  
Oakland, California



■ Groundwater Flow Direction

Legend

Concentric circles represent quarterly monitoring events. First Quarter 2004 through Second Quarter 2011. 30 data points shown.

**ATTACHMENT C**

Second Quarter 2011 Ozone Injection O&M Report



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

June 1, 2011

Mr. James Barnard  
Antea Group  
11050 White Rock Road, Suite 110  
Rancho Cordova, CA 95670

Project No. 400-A

**Second Quarter 2011**  
**Ozone Injection System O&M Report**  
**76 Service Station No. 1871**  
96 MacArthur Boulevard  
Oakland, California

Dear Mr. Barnard:

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 (Figure 1). An ozone injection system was started on June 23, 2003 to remediate hydrocarbon-impacted groundwater (Table 1).

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 dane@environstrategy.com.

Respectfully submitted,



Dane Nygaard  
Project Manager



Jinghui Niu, P.E.  
Principal Engineer



cc: Ted Moise, ConocoPhillips Company (electronic copy)

**Second Quarter 2011 O&M Report**

**76 Service Station No. 1871**

June 1, 2011

---

**Ozone Injection System**

**KVA Ozone Injection System**

**Reporting Period:** March 1, 2011 – May 31, 2011

**Days of Operation:** Operated 92 days during the period

**Hours of Operation:** 2,345

**System Operation Data Since Startup on June 23, 2003:**

**Total Hours of Operation:** 43,928

**Notes:** Second Quarter 2011 – Period hours includes dates February 22, 2011 to May 31, 2011.

Attachments: Figure - Site Plan

Table 1 - Ozone Injection - System Operation Data

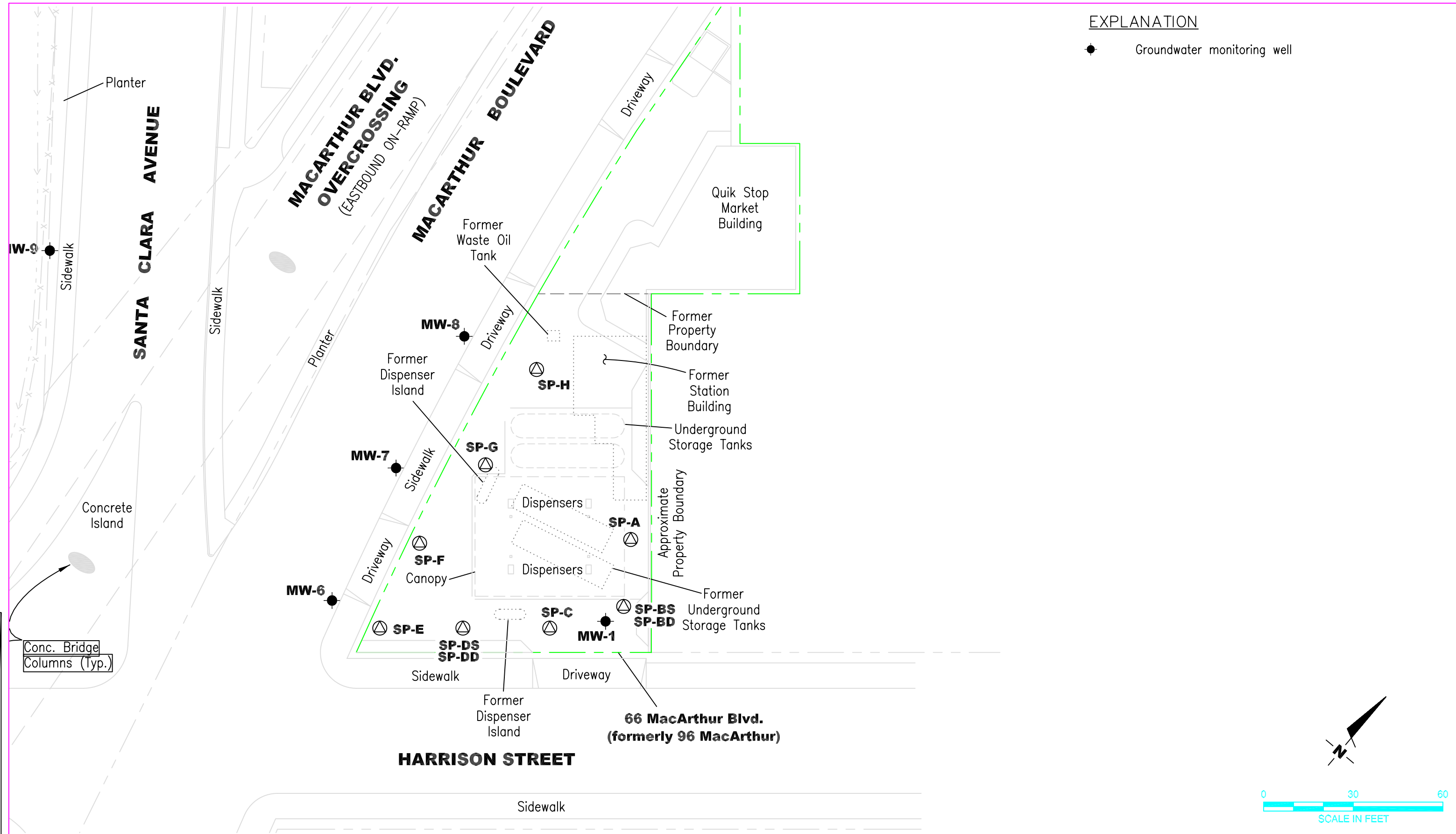
Table 2 - Ozone Injection - Groundwater Monitoring Data

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

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

Appendix A - Field Notes

**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  
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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	1.00	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	
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	

**Table 1**  
**Ozone Injection - System Operation Data**  
76 Service Station No. 1871  
96 MacArthur Blvd., Oakland, California  
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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														
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
3/30/10		On	On	25,607	1.00	0.69	7.56	20	21	22	23	19	23	22	22	25	23
4/27/10		On	On	26,280	1.00	0.70	6.06	21	22	21	22	20	21	20	20	24	21
5/25/10		On	On	26,953	1.00	0.70	6.06	22	24	23	21	21	22	21	22	23	22
6/29/10		On	On	27,795	1.00	0.70	7.58	24	21	22	24	22	20	21	22	24	23
7/27/10		On	On	28,467	1.00	0.71	6.05	21	18	20	22	20	17	19	18	21	20
8/31/10		On	On	29,308	1.00	0.71	7.57	12	18	24	15	13	14	16	10	17	8
9/28/10		On	On	29,980	1.00	0.71	6.05	11	18	15	19	20	17	23	16	15	20
10/26/10		On	On	30,652	1.00	0.71	6.05	9	18	18	20	21	17	21	10	19	17
11/30/10		On	On	31,492	1.00	0.72	7.56	13	22	19	18	28	20	19	15	17	19
12/28/10		On	On	32,163	1.00	0.72	6.04	14	19	18	18	26	21	20	18	18	18
1/25/11		On	On	32,834	1.00	0.72	6.04	18	17	15	21	24	17	19	21	20	15
2/22/11		On	On	33,506	1.00	0.72	6.05	20	21	18	25	21	23	28	25	22	20
3/29/11		On	On	34,342	1.00	0.73	7.52	19	20	18	22	23	22	25	24	23	20
4/26/11		On	On	35,012	1.00	0.73	6.03	22	21	19	20	21	21	23	24	23	22
5/31/11		On	On	35,851	1.00	0.73	7.55	20	20	20	21	20	20	21	22	21	21
(6/23/2003-present) Sparge time per cycle (min)								7	7	7	7	7	7	7	7	7	7
Number of Cycles per Day								20	20	20	20	20	20	20	20	20	20

**Reporting Period: Second Quarter 2011 (03/01/2011 to 05/31/2011)**

Total Hours Operational: 43,928  
Total Pounds Ozone Injected: 395  
Period Hours Operational: 2345  
Period Percent Operational: 100%  
Period Pounds Ozone Injected: 21



**Table 1**  
**Ozone Injection - System Operation Data**  
 76 Service Station No. 1871  
 96 MacArthur Blvd., Oakland, California  
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**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  
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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	<10	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	55	<0.50	<0.50	0.80	2.9	7.8	56	NM	13,000	<100	<100	<100	<200	15,000
4/14/2004	b	0.4	NM	23,000	310	10	590	2400	1700	42	NM	9,000	<50	<50	<50	<100	11,000
5/11/2004	c	NM	NM	7,800	160	<10	170	700	720	-3	NM	8,300	<50	<50	<50	<100	11,000
6/14/2004		20	5.25	110	<0.50	<0.50	1.0	6.4	3.4	35	1.45	<5,000	<50	<50	<50	<100	6,500
7/26/2004		NM	NM	<50	<0.50	<0.50	<0.50	<1.0	3.2	NM	NM	<5,000	<50	<50	<50	<100	3,100
8/12/2004		171	0.07	<50	<0.50	<0.50	<0.50	<1.0	0.80	117	0.06	2,100	<10	<10	<10	<20	2,700
9/10/2004		180	0.08	<50	<0.50	<0.50	<0.50	<1.0	5.7	122	0.07	3,100	<13	<13	<13	<25	4,400
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	7.1
11/5/2004	d	117	0.05	<50	<0.50	<0.50	<0.50	<1.0	0.89	210	0.06	50	<0.50	<0.50	<0.50	<1.0	1.1
12/2/2004		109	0.03	83	0.83	<0.50	<0.50	1.2	44	214	0.03	180	1.6	<0.50	66	4.5	51
1/13/2005		105	0.04	1,100	26	1.2	2.10	70	630	201	0.05	1,000	25	1	1.9	68	460
2/25/2005	c,f	--	2.67	24,000	350	10	820	2,200	1,300	21	2.05	680	<2.0	<2.0	2.3	58	2,500
3/8/2005	g	-35	4.43	23,000	410	<10	1,100	2,300	1,300	NR	NR	--	--	--	--	--	--
4/5/2005		-30	4.56	34,000	300	<10	910	2,000	1,100	135	6.53	<5,000	<50	<50	<50	<1.00	19,000
5/4/2005		-59	2.40	26,000	220	7.4	790	2,100	860	-24	1.13	<2,000	<0.50	<0.50	<0.50	<1.0	7,100
6/2/2005		-20	7.34	<50	<0.50	<0.50	<0.50	<1.0	3.5	-12	1.01	3500	<0.50	<0.50	<0.50	<1.0	4,000
7/7/2005	i,j	142	7.42	<50	<0.50	<0.50	<0.50	<1.0	0.61	154	1.40	5000	<0.50	<0.50	<0.50	<1.0	8,900
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	1,900
10/23/2005		154	7.13	<50	<0.50	<0.50	<0.50	<1.0	0.56	191	1.59	<250	<2.5	<2.5	<2.5	<5	680
11/1/2005	k	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/20/2005		--	--	10000	17	29	180	840	2400	--	--	1100	0.90	<0.50	24	37	8200
3/10/2006		--	--	10000	35	<0.50	470	1300	960	--	--	1200	24	<0.50	3.6	<1.0	4700
6/23/2006		--	--	11000	110	<0.50	610	1600	780	--	--	1800	21	<0.50	<0.50	<1.0	1500
9/27/2006		--	--	8500	22	<0.50	270	740	460	--	--	<2,000	<0.50	<0.50	<0.50	<1.0	350
12/22/2006		--	--	7300	35	<0.50	370	850	210	--	--	24000	<0.50	<0.50	<0.50	<1.0	190
3/23/2007		--	--	8800	28	<0.50	440	910	170	--	--	85	<0.50	<0.50	<0.50	<1.0	92
6/26/2007		--	--	6300	16	<0.50	300	650	50	--	--	--	--	--	--	--	--
9/28/2007		--	--	<50	<0.50	<0.50	<0.50	<1.0	1.2	--	--	50	<0.50	<0.50	<0.50	<1.0	37
12/17/2007		--	--	4700	<0.50	<0.50	71	160	18	--	--	--	--	--	--	--	--
3/25/2008		--	--	7400	28	<0.50	430	540	170	--	--	<50	<0.50	<0.50	<0.50	<1.0	7.3
6/12/2008		--	--	4900	6.4	<0.50	170	280	16	--	--	52	<0.50	<0.50	<0.50	<1.0	9.4
9/25/2008		--	--	2200	2.1	<0.50	72	110	11	--	--	65	<0.50	<0.50	<0.50	<1.0	5.6
12/30/2008		--	--	3200	2.5	<0.50	100	150	8.3	--	--	130	<0.50	<0.50	<0.50	1.1	5.7
3/24/2009		--	--	3500	6.8	<0.50	140	140	28	--	--	98	0.50	<0.50	<0.50	<1.0	9.2
6/23/2009		--	--	740	<0.50	<0.50	17	12	8	--	--	290	1.2	<0.50	<0.50	<1.0	6.7
12/16/2009		--	--	4600	10	<0.50	270	140	52	--	--	150	<0.50	<0.50	<0.50	<1.0	3.7
4/14/2010		54	1.88	1500	5	<1.00	100	36	20	110	0.97	60	<0.50	<0.50	<0.50	<1.0	2.1
10/13/2010		--	--	4600	3	<0.50	180	73	6	--	--	<50	<0.50	<0.50	<0.50	<1.0	3.6

**Definitions:**

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

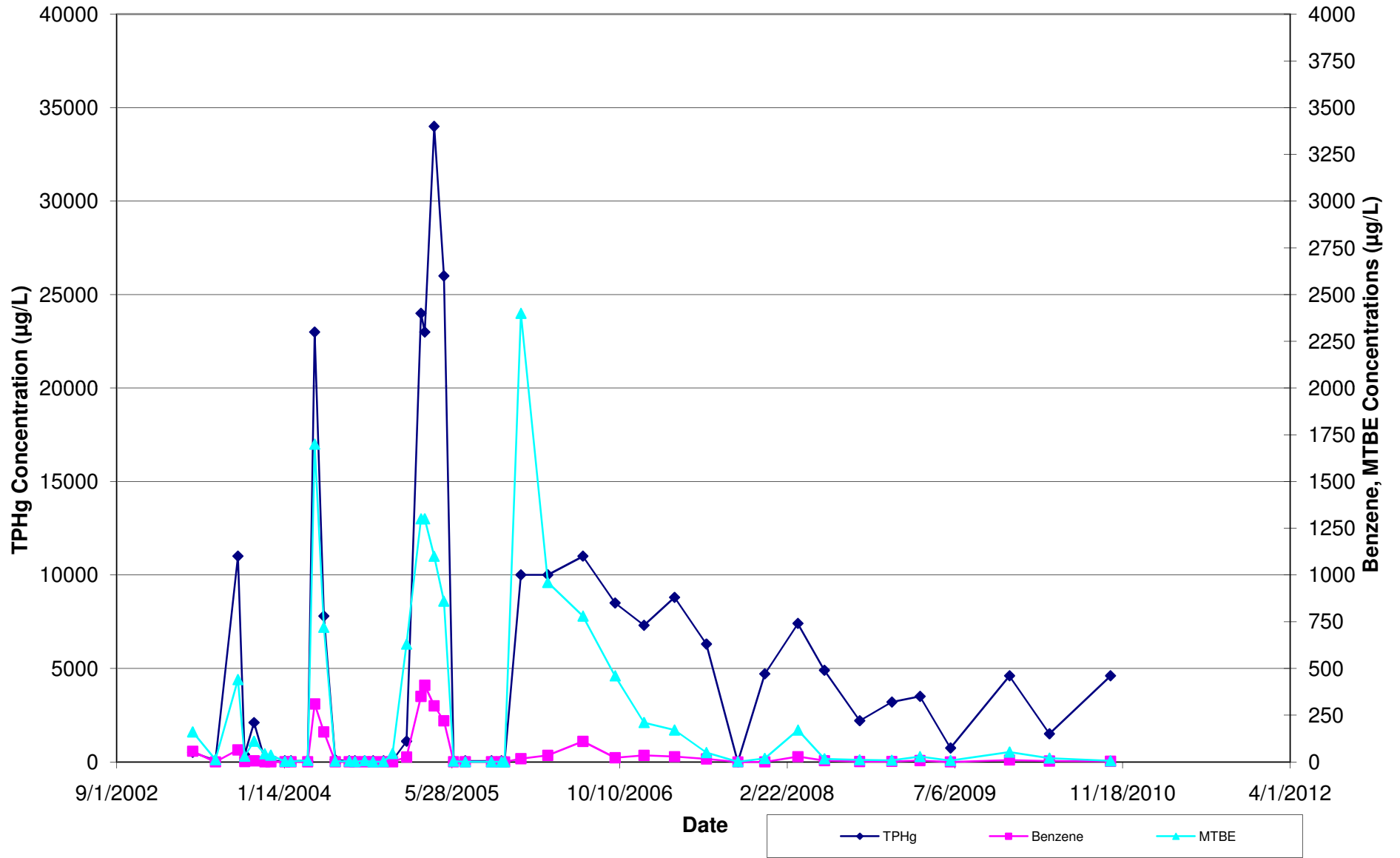
ORP = Oxidation Reduction Potential  
DO = Dissolved Oxygen  
mV = Millivolts  
mg/l = Milligrams per liter

**Notes:**

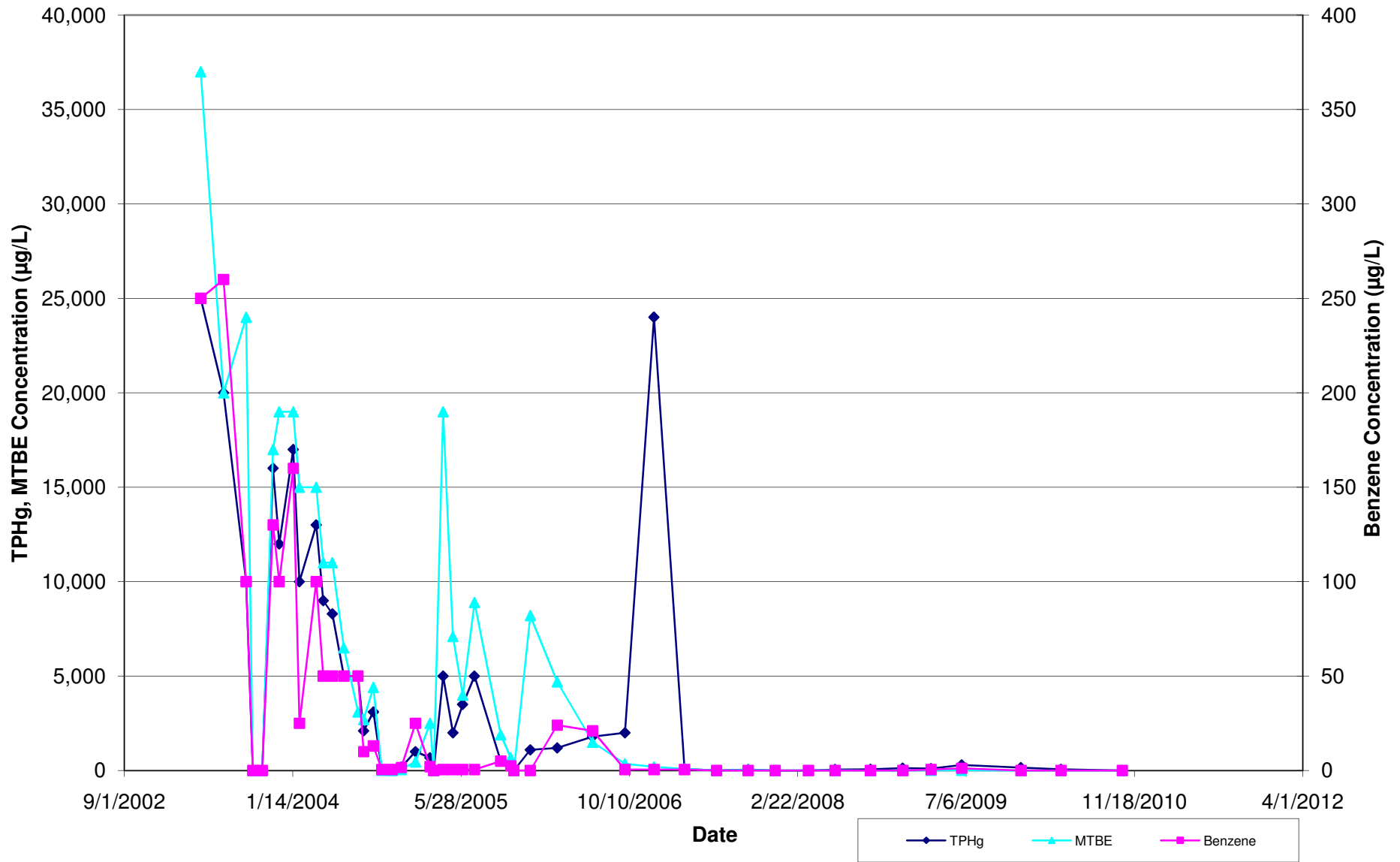
- Data not available
- NM Not Measured
- a Sampled by Gettler-Ryan, Inc.
- b Hydrocarbon in gasoline range does not match laboratory gasoline standard.
- c ORP reading under the range
- d Quantity of unknown hydrocarbon(s) in sample based on gasoline.
- e Data not available at time of reporting
- f MW-7 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 µg/L. (MW-1).
- j The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern. (MW-1)
- k Monthly 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	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate
					(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)
29 Mar 11		on/ua	20	31342	19		7		20		7		18		7	
26 April		on/ua	20	35012	22		7		21		7		19		7	
31 May 11		on/ua	20	35851	20		7		20		7		20		7	

Date	Well I.D. 02-4				Well I.D. 02-5				Well I.D. 02-6				Well I.D. 02-7			
	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate
	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)
29 Mar 11	22		7		20		7		22		7		25		7	
26 Apr 11	20		7		21		7		21		7		23		7	
31 May 11	21		7		20		7		20		7		21		7	

Date	Well I.D. 02-8				Well I.D. 02-9				Well I.D. 02-10				Well I.D.			
	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate	Pressure	Temp.	Run Time	Flow Rate
	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)	(psi)	(°F)	(min)	(acfm)
29 Mar 11	24		7		20		7		20		7					
26 April	24		7		20		7		22		7					
31 May 11	22		7		21		7		21		7					

## Ozone System Maintenance and Inspection Log

Date	Check/Repair Leaks	Check Hoses Fittings & Pipes	Check Air Filter (Document Date Replaced)	Check & Test Safety Interlock	Check Sparge Blower V-Belt Tension & Conditions	Check Controller Program	Change Blower Oil	Sparge Blower Grease Bearings	Sparge Blower Repair/Replace	Comments
29 Mar 11	u	u	u	u	N/A	u	N/A	N/A	u	
26 April	u	u	u	u	u	u	N/A	N/A	u	
31 May 11	u	u	u	u	N/A	u	N/A	N/A	u	

Notes:

A = System down-breaker thrown

B = Compressor Overload.

C = Ozone sensor Tripped.

D = Temp. sensor tripped.