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October 20, 2005

Don Hwang
Alameda County Environmental Health
1311 Harbor Bay Pkwy, Ste 250
Alameda, California 94502-6577

Alameda County
OCT 25 2005
Environmental Health

**Subject: Request for Site Closure
Express Gas & Mart, 2951 High Street, Oakland
LOP Case No. 1038**

Dear Mr. Hwang:

Enclosed is the *Request for Site Closure and Quarterly Verification Monitoring Report, Fourth Quarter 2005* for the subject LUFT site. A *Verification Monitoring Work Plan* was submitted the ACEH on November 26, 2004. Per Bob Schultz's verbal approval, the verification monitoring program was started on January 3, 2005. On this same date the ozone sparge system was permanently turned off. Six rounds of verification monitoring have now been completed. All constituents of concern have remained significantly below site-specific threshold levels (SSTLs) for the last ten sampling events. The site no longer poses a potential threat to groundwater quality.

A Site Closure Summary is included in Appendix C of the report to assist you in your review. Please call me at (925) 937-1759 if you have any questions in regard to this request for site closure.

Very truly yours,

Cook Environmental Services, Inc.



Tim Cook, P.E., CEG
Principal

cc: Aziz Kandahari, Express Gas & Mart
Mark Owens, UST Cleanup Fund
Cherie McCaulou, San Francisco Bay RWQCB
Jennifer Rice, Esq.

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**REQUEST FOR SITE CLOSURE
AND
VERIFICATION MONITORING REPORT
FOURTH QUARTER 2005**

**PROJECT SITE:
Express Gas & Mart
2951 High Street
Oakland, California 94619**

**PREPARED FOR:
Mr. Aziz Kandahari
Himalaya Trading Company
2951 High Street
Oakland, California 94619**

**SUBMITTED TO:
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502**

**PREPARED BY:
Cook Environmental Services, Inc.
271 Las Juntas Way
Walnut Creek, California 94597**

**Alameda County
OCT 25 2005
Environmental Health**

Project No. 1004

October 20, 2005

PROFESSIONAL CERTIFICATION

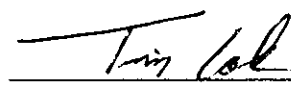
REQUEST FOR SITE CLOSURE
AND
VERIFICATION MONITORING REPORT
Fourth Quarter 2005

Express Gas & Mart
2951 High Street
Oakland, California 94619

Cook Environmental Services, Inc.
Project No. 1004
October 20, 2005

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The conclusions presented in this document are professional opinions based solely upon the stated scope of work and the interpretation of available information as described herein. Such information may include third party data that either has not, or could not be independently verified. Cook Environmental Services, Inc. recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs or requirements of other potential users, including public agencies not directly involved. Any use or reuse of this document or the findings, conclusions, and recommendations presented herein is at the sole risk of said user.



Tim Cook, P.E., CEG
Principal



INTRODUCTION

This report presents the results of the fourth quarter 2005 verification monitoring program for the Express Gas & Mart located at 2951 High Street in Oakland, California (the "Site"). The report also summarizes site characterization and remediation activities to support a request for site closure.

The sampling described herein is the last sampling event in a one year verification monitoring program at this site. Subsurface contamination was caused by accidental releases from underground storage tanks (USTs) that were replaced in May 2001. The contaminant investigation and corrective action were conducted by Cook Environmental Services, Inc. (CES) on behalf of the responsible party, Mr. Aziz Kandahari. The local oversight program (LOP) agency overseeing this case is Alameda County Environmental Health (ACEH). Groundwater monitoring this quarter was conducted on October 4, 2005.

PHYSICAL SETTING

Site Location

The Site is a retail gasoline station and convenience store located on the corner of High Street and Penniman Avenue, in southeastern Oakland, California. The Site location is shown on **Figure 1** and Site features are depicted on **Figure 2**. Neighboring land use is commercial and residential.

Topography and Drainage

The Site is located about 3½ miles east of San Francisco Bay. The Site location is near the base of the Oakland Hills, at a surface elevation of approximately 132 feet above mean sea level (amsl). Hilly topography occurs directly south and east of the Site. The ground surface at the Site slopes gently toward High Street, but the regional topography slopes southwesterly from the Oakland Hills. The nearest surface water body is Peralta Creek, located approximately ½ mile north-northeast of the Site.

Geology and Soils

The Site area is located on an alluvial apron that extends northwest and southeast between the San Francisco Bay on the west and the Diablo Range on the east. The active Hayward Fault forms a structural boundary between the alluvial apron and the Diablo Range. Surficial sediments are Holocene-age alluvial fan and fluvial deposits (Helley, E.J. and Graymer, R.W., 1997). These sediments are gravelly sand and sandy gravel that grade into sand and silty clay. The nearby hilly areas directly south and east of the Site are underlain by similar, though older, deposits of Pleistocene age.

Soil borings were drilled and sampled and monitoring wells were installed at the Site in March and April 2003. Soils encountered in the 25-foot deep borings were gravelly to sandy silts with some interbedded silts, sandy clays and silty fine sands. Groundwater was observed in two of the four borings, at depths of 16 feet below grade (fbg) and 4 fbg. The latter boring was drilled offsite, within the High Street right-of-way.

Groundwater

The Site is within the San Francisco Bay regional watershed. The Quaternary alluvial deposits of the region host beneficial use aquifers. Slightly less than half the region's water supply is derived from groundwater. The balance is obtained from imported surface water. The water bearing unit at the Site is primarily gravelly clay. The porosity of the water bearing zone is secondary. Groundwater moves primarily through fractures in the gravelly clay. Static water levels in the onsite monitoring wells range from about 2 to 9 fbg, depending upon the season. Water level data indicate the direction of groundwater flow ranges from southerly to southwesterly. Field measurements of specific conductance (SC) among the monitoring wells range from approximately 400 to 2,000 microsiemens.

PROJECT BACKGROUND

Groundwater monitoring has been conducted periodically at the Site since early 1995. Groundwater quality was impacted by petroleum hydrocarbons such as benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MtBE). A report by Aqua Science Engineers, Inc. (ASE), dated November 14, 2000, indicates that 2,550 pounds of oxygen releasing compound (ORC[®]) slurry was injected into borings along the northern and eastern side of the former USTs in June 1997. The ORC[®] apparently increased the dissolved oxygen (DO) concentrations in the five nearby monitoring wells for approximately one year. Contaminant concentrations decreased slightly in well MW-5 during that period. ORC[®] socks were installed in wells MW-4 and MW-5 in August 1998 after the DO concentrations declined. The ORC[®] socks were removed in September 2000 after proving ineffective at reducing petroleum hydrocarbon concentrations in groundwater.

A Tier 2 Risk-Based Corrective Action (RBCA) analysis was performed for the Site by Christopher Palmer in August 1997. The RBCA was conducted to develop site-specific threshold levels for petroleum hydrocarbon contaminants in soil and groundwater (SSTLs are listed in **Table 3**). The RBCA was reviewed and commented on by Alameda County. Alameda County approved the RBCA in a letter dated October 21, 1997.

On February 28, 2001, soil samples were collected along a product line leading to the fuel dispensers in front of the convenience mart during the installation of new dispensers. All of the soil samples yielded detectable concentrations of petroleum hydrocarbons. Total petroleum hydrocarbons as gasoline (TPH-g) was detected at concentrations ranging from 71 milligrams per kilogram (mg/kg) to 3,600 mg/kg. A *Site Investigation Work Plan* dated March 26, 2001 was

submitted to the ACEH. The work plan described methods and procedures to conduct a soil and groundwater investigation around the fuel dispensers. The ACEH approved the work plan and requested that the USTs and contaminated soils be removed and disposed.

Six soil borings were drilled and sampled in late April 2001. Sample results from the borings yielded TPH-g concentrations in soil up to 4,000 mg/kg and in groundwater up to 78,000 micrograms per liter ($\mu\text{g/L}$), confirming that petroleum hydrocarbons had impacted soil and groundwater. The dispenser pumps, product lines, and four steel gasoline USTs were excavated and removed from the Site by W.A. Craig, Inc. in May 2001. The USTs were inspected and appeared to be in good condition. However, soil samples from the base and the sides of the UST excavation yielded TPH-g concentrations up to 1,700 mg/kg on the west sidewall of the excavation at 8 fbg. W.A. Craig, Inc. excavated approximately 3,700 tons of hydrocarbon contaminated soil between May 9 and September 27, 2001. The soil was disposed of at the B&J Class II Landfill in Vacaville, California. The excavation area is shown on **Figure 2**.

Following Site restoration and re-opening of the Express Gas & Mart, little additional activity occurred until March 2003, when four new monitoring wells were installed to replace wells removed during excavation. Monitoring well construction information is summarized in **Table 1**. Quarterly groundwater monitoring was resumed in April 2003. The wells had not been sampled since the September 2000 sampling reported by ASE. The April 2003 analytical data indicated that MtBE was above the SSTL of 8,400 $\mu\text{g/L}$ in wells MW-5 and MW-7.

Based on the April 2003 groundwater sampling results, W.A. Craig, Inc. recommended corrective action to remediate the subsurface contamination at the Site to below SSTLs. A *Feasibility Study/Corrective Action Plan* dated July 28, 2003 and an *Addendum to Corrective Action Plan* dated September 10, 2003 were submitted to ACEH. The ACEH approved the installation of an OS system in a letter dated February 18, 2004.

An OS system consisting of ten ozone-spargers and a control panel began operating on April 14, 2004. Prior to startup, monitoring wells MW-5, MW-7, MW-8, and MW-9 were purged and sampled to determine baseline concentrations. Except for brief periods of mechanical failure or maintenance, the system operated continuously from April 14, 2004 until January 3, 2005.

Tim Cook of CES called Bob Schultz, the former ACEH caseworker for the Site on November 19, 2004 to discuss Site closure. Mr. Schultz requested a *Verification Monitoring Work Plan* describing methods and procedures to ensure the Site is no longer a risk to groundwater quality. This work plan was submitted to ACEH on November 26, 2004. Mr. Schultz conditionally approved the work plan during a phone conversation on January 19, 2005. The OS system was turned off on January 3, 2005 and verification monitoring began on January 4, 2005. The ACEH has yet to review or comment on the *Verification Monitoring Work Plan*.

As described in the *Verification Monitoring Plan*, site monitoring wells were sampled for four quarters prior to requesting closure. This fourth quarterly sampling event took place on October 4, 2005. Concentrations in all eight monitoring wells remained below the SSTLs for six consecutive quarterly sampling events (since May 8, 2004). The OS system is responsible for reducing these concentrations.

SCOPE OF WORK

The scope of work performed during this quarter included the following tasks:

- Measured static water levels in eight monitoring wells;
- Collected and analyzed quarterly verification monitoring groundwater samples from eight monitoring wells;
- Collected field measurements from eight monitoring wells including water level, DO concentrations, temperature, pH, and specific conductance;
- Analyzed groundwater samples for TPH-g, BTEX, MtBE, DIPE, EtBE, tAME, tBA, methanol, ethanol, EDB, and DCA (see *Laboratory Analyses* section of this report for chemical names and analytical methods used);
- Maintained the California State Water Resources Control Board Geographical Environmental Information Management System (GeoTracker) database;
- Prepared a Case Closure Summary; and
- Prepared this *Request for Site Closure and Verification Monitoring Report*.

FIELD PROCEDURES

Groundwater Level Measurements

CES measured water levels in Site monitoring wells on October 4, 2005 using an electronic water level indicator. Water levels were recorded on monitoring well sampling logs included in **Appendix A**. Prior to taking the measurements, the wells were uncapped and water levels were allowed to equilibrate with atmospheric pressure for at least 30 minutes. Water level measurements were referenced to the surveyed top of the well casings. The depth-to-water measurements were used to calculate the standing water volume and the amount of water to be purged prior to collecting a sample. The depth to water and surveyed wellhead elevations were also used to determine the static groundwater elevations and flow direction.

Purging and Sampling

All eight monitoring wells were sampled on October 4, 2005. At least three well casing volumes were purged from each well before collecting groundwater samples. Wells were purged using clean disposable polyethylene bailers. The DO concentration, pH, temperature, and SC of the groundwater were intermittently monitored with portable instrumentation during purging. Field measurements were recorded on the monitoring well sampling logs in **Appendix A**.

Upon completion of purging activities, a groundwater sample was collected from each well with a dedicated disposable bailer. The groundwater samples were decanted from the bailer into laboratory-supplied, 40-ml volatile organic analysis (VOA) vials preserved with hydrochloric acid. Care was taken to ensure that the vials were completely filled to avoid headspace volatilization of dissolved petroleum hydrocarbons. Each sample vial was labeled with the well ID. Samples were stored on ice and submitted under chain-of-custody control to McCampbell Analytical Inc. of Pacheco, California (DHS certification number 1644).

Samples were analyzed for TPH-g using EPA Method 8015C (modified), for BTEX and MtBE using EPA Method 8021B, and for MtBE, di-isopropyl ether (DIPE), ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (tAME), tert-butyl alcohol (tBA), methanol, ethanol, ethylene dibromide (EDB), and 1,2-dichloroethane (DCA) using EPA Method 8260B. Discussions in this report cite MtBE concentrations determined by EPA Method 8260B, which is considered a more accurate analysis than Method 8021B.

DATA EVALUATION

Groundwater Levels and Elevations

Water level data for Site monitoring wells are summarized in **Table 2**. The surveyed top-of-casing (TOC) elevations and the depth to water measurements were used to calculate groundwater elevations in the monitoring wells. The water level in well MW-7 was depressed below its static water level due to residual high pressure from pumping ozone gas into a nearby sparge point. This water level is not indicative of the static water level in this well. Water levels in wells ranged from 8.17 feet below TOC in MW-1 to 12.68 feet below TOC in MW-7. Groundwater elevations ranged from 118.25 feet above mean sea level (msl) in well MW-7 to 123.47 feet above msl in MW-1. Excluding well MW-7, groundwater elevations decreased an average of 1.79 feet since the last quarterly monitoring event on July 6, 2005. Groundwater elevations for all eight monitoring wells are shown on **Figure 3**. The groundwater gradient was calculated using static water elevations in wells MW-3, MW-8, and MW-9. On October 4, 2005 the groundwater flow direction was S 15° W with a gradient of 0.007 feet per foot (ft/ft). On July 6, 2005 the groundwater flow direction was S 8° W with a gradient of 0.040 feet per foot (ft/ft). Hydrographs for all eight monitoring wells are presented on **Figure 4**.

Quarterly Groundwater Monitoring Results

The only petroleum hydrocarbons detected in Site wells this quarter were MtBE and DCA. As in previous sampling events, MtBE was detected in wells MW-1, MW-3, MW-5, MW-7, MW-8, MW-9 and MW-10. DCA was detected only in well MW-7. Concentrations of all detectable constituents of concern were significantly below their respective SSTLs. Groundwater analytical results are summarized in **Table 3**. Laboratory analytical reports are included in **Appendix B**.

The highest MtBE concentration was 490 µg/L and was observed in well MW-10, which is approximately 70 feet downgradient of the Site. This concentration is considerably below the SSTL for MtBE, which is 8,400 µg/L. MtBE was detected in this same well last quarter at 420 µg/L. MtBE concentrations in the monitoring wells on October 4, 2005 are shown on **Figure 5**. Since startup of the OS system, petroleum hydrocarbon concentrations in the wells closest to the former USTs that previously yielded the highest hydrocarbon concentrations (wells MW-5, MW-7, and MW-9) have shown a remarkable decrease.

A slight rebound in MtBE concentrations when compared to the previous quarter was observed in MW-1, MW-8, MW-9 and MW-10. MtBE concentrations decreased in wells MW-3 and MW-5. The concentration remained the same in MW-7. MtBE was not detected in MW-6. Graphs of MtBE concentrations in wells MW-3, MW-5, MW-7 and MW-8 are shown on **Figure 6**. The MtBE concentration in well MW-3 has decreased two orders of magnitude since the OS system began operation, while MtBE concentrations in MW-5 and MW-7 have decreased three to four orders of magnitude. Graphs of MtBE concentrations in wells MW-1, MW-9 and MW-10 are shown on **Figure 7**.

TPH-g and BTEX constituents were not detected in any monitoring well this quarter. Previously benzene had been detected in wells MW-5 and MW-7 at concentrations above the SSTL of 34 µg/L. Graphs of benzene concentrations versus time in wells MW-5 and MW-7 are shown on **Figure 8**.

Baseline DO concentrations were measured in wells MW-1, MW-3, MW-5 and MW-7 on April 14, 2004. The average baseline DO concentration was approximately 0.22 milligrams per liter (mg/L). The average DO concentration in these same wells was 5.54 mg/L on January 4, 2005 5.83 mg/L on April 5, 2005, 6.93 mg/L on July 6, 2005 and 6.11 mg/L on October 4, 2005. DO concentrations remain significantly above baseline concentrations, which suggest that the residual DO is from the OS system. DO concentrations in monitoring wells are summarized in **Table 4**.

GeoTracker Requirements

Laboratory data were submitted electronically to the GeoTracker database as required by AB2886 (Water Code Sections 13195-13198). Electronic analytical reports (EDF files) are prepared and formatted by the laboratory and submitted by CES. Groundwater elevations in Site wells (GEO_WELL file) were also submitted.

CONCLUSIONS

The OS system began operation on April 14, 2004 and ceased operation on January 3, 2005. Verification monitoring began on January 4, 2005 in accordance with the *Verification Monitoring Work Plan* to ensure that concentrations of constituents of concern remain below SSTLs. This work plan proposed to cease monitoring and consider the site for closure if constituents of concern remained below SSTLs for three monthly sampling events. Bob Schultz of ACEH requested verification monitoring for one hydrologic cycle (i.e., one year) during a phone conversation with Tim Cook on February 9, 2005. Four quarterly verification monitoring events have now been completed.

Results of this investigation are consistent with previous reports in that MtBE is the constituent of concern and in general, concentrations are decreasing with time. Constituents of concern have remained below their respective SSTLs since May 26, 2004. Quarterly groundwater monitoring of all eight monitoring wells on October 4, 2005 verify that constituents of concern remain below SSTLs for the eleventh straight sampling event. TPH-g and BTEX were not detected in any well this quarter.

There was a slight increase in MtBE concentrations this quarter in wells MW-1, MW-8, MW-9 and MW-10. There was slight decrease in MtBE concentrations this quarter in wells MW-3 and MW-5. The MtBE concentration remained constant at 18 ug/L in well MW-7. MtBE was not detected in upgradient well MW-6. The highest MtBE concentration this quarter was 490 µg/L in downgradient well MW-10, which is significantly below the SSTL of 8,400 ug/L.

DO concentrations remain substantially above baseline levels in wells MW-1, MW-3, MW-5 and MW-7. The increased DO concentrations indicate that residual oxygen from the OS system is causing aerobic degradation (i.e., natural attenuation) of the remaining dissolved hydrocarbons.

RECOMMENDATIONS

Concentrations of all constituents of concern have remained below their respective SSTLs for eleven consecutive sampling events. The ozone sparge treatment system was turned off on January 3, 2005. Four quarterly verification monitoring events have been completed (i.e., on a hydrologic cycle) and there has been no significant rebound of contaminant concentrations. Based on these findings, the site is a low risk to groundwater quality and we recommend case closure. A Case Closure Summary for this Site is included in **Appendix C**. After site closure has been granted by the ACEH, we recommend decommissioning the eight monitoring wells and ten sparge wells in accordance with the guidelines and requirements of Alameda County and the California Department of Water Resources.

TABLES

Table 1
Monitoring and Ozone-Sparge Well Construction Information
 2951 High Street
 Oakland, California

Well ID	Date Installed	Casing Diameter (inches)	Total Depth (fbg)	Screened Interval (fbg)	Water-Bearing Unit	Top of Casing Elevation (feet amsl)	Northing (feet)	Easting (feet)
MW-1	2/95	2	25	N/A	N/A	131.64	2,112,552.39	6,070,038.16
MW-3	2/95	2	25	N/A	N/A	131.05	2,112,539.60	6,070,048.55
MW-5	12/9/96	2	30	5-30	N/A	131.99	2,112,582.04	6,070,083.59
MW-6	1/7/97	2	30	5-30	N/A	132.58	2,112,662.53	6,070,113.49
MW-7	3/24/03	2	25	15-25	gravelly sandy silt	130.93	2,112,533.18	6,070,106.31
MW-8	3/24/03	2	25	15-25	gravelly sandy silt	131.15	2,112,527.86	6,070,153.72
MW-9	3/25/03	2	25	15-25	silty gravelly sand	130.00	2,112,484.75	6,070,065.55
MW-10	4/4/03	2	25	15-25	sandy silt	127.19	2,112,393.29	6,069,984.72
SP-1	3/25/04	3/4	37	30.5-33	clayey sand	130.39	2,112,529.17	6,070,105.65
SP-2	3/25/04	3/4	31	26.5-29	sandy clay	130.07	2,112,534.87	6,070,118.37
SP-3	3/24/04	3/4	32	28.5-31	gravelly sandy clay	130.66	2,112,541.87	6,070,131.76
SP-4	3/25/04	3/4	33	14.5-17	gravelly sandy clay	130.51	2,112,541.66	6,070,102.66
SP-5	3/26/04	3/4	30	20-22.5	clayey gravelly sand	130.55	2,112,553.75	6,070,115.66
SP-6	3/26/04	3/4	30	21.5-24	clayey sandy gravel	130.88	2,112,564.81	6,070,106.43
SP-7	3/26/04	3/4	30	25.5-28	gravelly sand	131.20	2,112,575.20	6,070,106.74
SP-8	3/26/04	3/4	31	28.5-31	gravelly sandy clay	130.98	2,112,569.95	6,070,091.53
SP-9	3/25/04	3/4	33	25-27.5	clayey sand	130.85	2,112,562.57	6,070,080.59
SP-10	3/26/04	3/4	30	21.5-24	gravelly clay	131.23	2,112,578.47	6,070,085.11

Notes:

MW denotes monitoring wells. SP denotes sparge wells.

fbg = feet below grade; amsl = above mean sea level; N/A = data not available.

Monitoring wells surveyed by Virgil Chavez Land Surveying on April 15, 2003.

Ozone-sparge wells surveyed by Virgil Chavez Land Surveying on April 22, 2004.

MW-1, MW-3, MW-5, and MW-6 were installed by Aqua Science Engineers, Inc.

MW-7, MW-8, MW-9, MW-10, and SP-1 through SP-10 were installed by W.A. Craig, Inc.

Table 2
Groundwater Elevations in Monitoring Wells
2951 High Street
Oakland, California

Well ID	Date	TOC Elevation	DTW	Groundwater Elevation
MW-1	04/04/03	131.64	5.07	126.57
	07/16/03		7.32	124.32
	10/28/03		9.16	122.48
	01/13/04		4.03	127.61
	04/14/04		5.37	126.27
	04/29/04		5.55	126.09
	05/13/04		6.24	125.40
	05/26/04		6.61	125.03
	06/10/04		7.08	124.56
	07/08/04		7.49	124.15
	10/01/04		8.38	123.26
	01/03/05		2.12	129.52
	04/05/05		5.41	126.23
	07/06/05		5.52	126.12
	10/04/05		8.17	123.47
MW-3	04/04/03	131.05	5.86	125.19
	07/16/03		7.86	123.19
	10/28/03		9.43	121.62
	01/13/04		5.76	125.29
	04/14/04		6.72	124.33
	04/29/04		6.81	124.24
	05/13/04		7.62	123.43
	05/26/04		7.80	123.25
	06/10/04		8.17	122.88
	07/08/04		8.34	122.71
	10/01/04		9.41	121.64
	01/03/05		4.19	126.86
	02/03/05		5.41	125.64
	03/04/05		3.90	127.15
	04/05/05		6.75	124.30
07/06/05	6.70	124.35		
10/04/05	8.65	122.40		
MW-5	04/04/03	131.99	6.94	125.05
	07/16/03		8.17	123.82
	10/28/03		9.43	122.56
	01/13/04		6.27	125.72
	04/14/04		6.79	125.20
	04/29/04		7.35	124.64
	05/13/04		7.71	124.28
	05/26/04		7.66	124.33
	06/10/04		8.11	123.88
	07/08/04		8.38	123.61
	10/01/04		8.83	123.16
	01/03/05		4.96	127.03
	02/03/05		5.91	126.08
	03/04/05		4.48	127.51
	04/05/05		6.81	125.18
07/06/05	7.54	124.45		
10/04/05	9.25	122.74		

Table 2
Groundwater Elevations in Monitoring Wells
2951 High Street
Oakland, California

Well ID	Date	TOC Elevation	DTW	Groundwater Elevation	
MW-6	04/04/03	132.58	5.13	127.45	
	07/16/03		7.99	124.59	
	10/28/03		9.18	123.40	
	01/13/04		5.97	126.61	
	04/29/04		7.05	125.53	
	07/08/04		8.01	124.57	
	10/01/04		8.59	123.99	
	01/03/05		4.25	128.33	
	04/05/05		5.42	127.16	
	07/06/05		7.15	125.43	
10/04/05	8.90	123.68			
MW-7	04/04/03	130.93	7.06	123.87	
	07/16/03		8.11	122.82	
	10/28/03		9.25	121.68	
	01/13/04		6.80	124.13	
	04/14/04		7.30	123.63	
	04/29/04		*	20.80	110.13
	05/13/04		*	17.51	113.42
	05/26/04		*	18.79	112.14
	06/10/04		*	19.41	111.52
	07/08/04		*	13.92	117.01
	10/01/04		*	19.61	111.32
	01/03/05		*	7.25	123.68
	02/03/05		*	11.41	119.52
	03/04/05			5.05	125.88
	04/05/05		*	7.32	123.61
07/06/05	*	12.20	118.73		
10/04/05	*	12.68	118.25		
MW-8	04/04/03	131.15	6.60	124.55	
	07/16/03		7.79	123.36	
	10/28/03		8.83	122.32	
	01/13/04		6.02	125.13	
	04/14/04		6.90	124.25	
	04/29/04		7.25	123.90	
	05/13/04		7.52	123.63	
	05/26/04		7.71	123.44	
	06/10/04		7.89	123.26	
	07/08/04		7.45	123.70	
	10/01/04		8.46	122.69	
	01/03/05		4.40	126.75	
	02/03/05		5.78	125.37	
	03/04/05		4.40	126.75	
	04/05/05		6.95	124.20	
07/06/05	7.12	124.03			
10/04/05	8.62	122.53			

Table 2
Groundwater Elevations in Monitoring Wells
2951 High Street
Oakland, California

Well ID	Date	TOC Elevation	DTW	Groundwater Elevation
MW-9	04/04/03	130.00	7.35	122.65
	07/16/03		8.50	121.50
	10/28/03		9.56	120.44
	01/13/04		6.83	123.17
	04/14/04		7.61	122.39
	04/29/04		8.23	121.77
	05/13/04		8.25	121.75
	05/26/04		8.44	121.56
	06/10/04		8.71	121.29
	07/08/04		8.68	121.32
	10/01/04		9.29	120.71
	01/03/05		5.30	124.70
	04/05/05		7.63	122.37
	07/06/05		8.02	121.98
10/04/05	9.44	120.56		
MW-10	04/23/03	127.19	7.06	120.13
	07/16/03		7.72	119.47
	10/28/03		8.61	118.58
	01/13/04		6.15	121.04
	04/29/04		7.09	120.10
	07/08/04		7.84	119.35
	10/01/04		8.25	118.94
	01/03/05		4.60	122.59
	04/05/05		7.12	120.07
	07/06/05		7.11	120.08
	10/04/05		8.43	118.76

Notes:

Elevations are in feet above mean sea level.

TOC, Top of casing. DTW, Depth to water in feet below TOC.

* Well MW-7 is under pressure from ozone sparging. The water level is artificially low.

Table 3
Analytical Results for Groundwater Samples
2951 High Street
Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA	
MW-1	02/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	05/26/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	08/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	04/04/03	<50	<0.5	<0.5	<0.5	<0.5	270	<5	<5	<5	<50	<5,000	<500	<5	<5	
	07/16/03	<50	<0.5	<0.5	<0.5	<0.5	420	<10	<10	<10	<100	<10,000	<1,000	<10	<10	
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	1,200	<50	<50	<50	<500	<50,000	<5,000	<50	<50	
	01/13/04	58	0.85	<0.5	3.1	8.4	380	<0.5	<0.5	<0.5	<5.0	<50	<5	<0.5	<0.5	
	*	04/29/04	<50	<0.5	<0.5	<0.5	<0.5	260	<5	<5	<5	<50	<5,000	<500	<5	<5
	07/08/04	<50	<0.5	<0.5	<0.5	<1.0	341	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5	
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	33	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	44	<0.5	<0.5	<0.5	6.8	<500	<50	<0.5	<0.5	
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	270	<5	<5	<5	<50	<5,000	<500	<5	<5	
	10/04/05	<50	<0.5	<0.5	<0.5	<0.5	400	<5	<5	<5	<50	<5,000	<500	<5	<5	
MW-3	02/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	05/26/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	08/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	04/04/03	<50	<0.5	<0.5	<0.5	<0.5	1,600	<25	<25	<25	<250	<25,000	<2,500	<25	<25	
	07/16/03	<50	<0.5	<0.5	<0.5	<0.5	1,200	<50	<50	<50	<500	<50,000	<5,000	<50	<50	
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	1,400	<50	<50	<50	<500	<50,000	<5,000	<50	<50	
	01/13/04	<200	<2	<2	<2	<2	790	<2	<2	<2	<20	<200	<20	<2	<2	
	*	04/29/04	<50	<0.5	<0.5	<0.5	<0.5	140	<5	<5	<5	<50	<5,000	<500	<5	<5
	07/08/04	<50	<0.5	<0.5	<0.5	<1.0	24.3	<0.5	<1	<1	<10	NT	<100	<1.0	<1.0	
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	4.0	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	49	<1.0	<1.0	<1.0	<10	<1000	<100	<1.0	<1.0	
	02/03/05	<50	<0.5	<0.5	<0.5	<0.5	4.9	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
	03/04/05	<50	<0.5	<0.5	<0.5	<0.5	32	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	1.5	
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	12	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	44	<1.0	<1.0	<1.0	<10	<1000	<100	<1.0	<1.0	
10/04/05	<50	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5		

Table 3
Analytical Results for Groundwater Samples
2951 High Street
Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-5	12/13/96	3,600	180	350	81	510	430	NT	NT	NT	NT	NT	NT	NT	NT
	03/27/97	120,000	28,000	16,000	2,600	10,000	64,000	NT	NT	NT	NT	NT	NT	NT	NT
**	06/27/97	6,300	10,000	2,400	290	4,500	43,000	NT	NT	NT	NT	NT	NT	NT	NT
	09/22/97	<50,000	7.9	3.3	0.6	3.3	30,000	NT	NT	NT	NT	NT	NT	NT	NT
	12/06/97	<5,000	33	12	<5	7.3	33,000	NT	NT	NT	NT	NT	NT	NT	NT
	03/23/98	29,000	150	160	130	320	34,000	NT	NT	NT	NT	NT	NT	NT	NT
	06/10/98	53,000	7,000	2,400	540	3,400	67,000	NT	NT	NT	NT	NT	NT	NT	NT
	07/23/98	36,000	1,000	270	<120	740	51,000	NT	NT	NT	NT	NT	NT	NT	NT
***	09/16/98	56,000	3,400	1,300	430	1,800	84,000	NT	NT	NT	NT	NT	NT	NT	NT
	11/23/98	63,000	5,700	2,900	500	2,200	87,000	NT	NT	NT	NT	NT	NT	NT	NT
	03/05/99	42,000	<250	<250	<250	<250	38,000	NT	NT	NT	NT	NT	NT	NT	NT
	06/17/99	37,000	510	85	5.6	89	61,000	NT	NT	NT	NT	NT	NT	NT	NT
DRC	09/15/99	54,000	8,500	1,800	420	2,400	55,000	NT	NT	NT	NT	NT	NT	NT	NT
	12/09/99	34,000	1,600	230	130	570	33,000	NT	NT	NT	NT	NT	NT	NT	NT
	03/06/00	21,000	7,800	870	440	2,100	30,000	NT	NT	NT	NT	NT	NT	NT	NT
	06/07/00	<50,000	11,000	890	570	3,000	68,000	NT	NT	NT	NT	NT	NT	NT	NT
	09/18/00	40,000	4,900	<250	<250	1,700	46,000	NT	NT	NT	NT	NT	NT	NT	NT
	04/04/03	1,800	560	<5.0	<5.0	30	19,000	<330	<330	<330	<3,300	<330,000	<33,000	<330	<330
	07/16/03	2,800	1,000	<5	10	80	16,000	<200	<200	<200	<2,000	<200,000	<20,000	<200	<200
	10/28/03	740	290	<5.0	<5.0	7.2	14,000	<170	<170	<170	<1,700	<170,000	<17,000	<170	<170
	01/13/04	<500	48	<5	<5	<5	2,000	<5	<5	<5	<50	<500	<50	<5	<5
*	04/14/04	6,600	2,700	<50	<50	260	20,000	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	04/29/04	<500	6.3	<5	<5	7.8	11,000	<250	<250	<250	<2,500	<250,000	<25,000	<250	<250
DRC	05/13/04	<50	<0.5	<0.5	<0.5	<0.5	3,000	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	05/26/04	<50	<0.5	<0.5	<0.5	<0.5	460	<10	<10	<10	<100	<10,000	<1,000	<10	<10
	06/10/04	<50	<0.5	<0.5	<0.5	<0.5	38	<0.5	<0.5	<0.5	<5.0	<50	<5.0	<0.5	<0.5
	07/08/04	<50	1.5	<0.5	<0.5	<1.0	9.6	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	02/03/05	<50	<0.5	<0.5	<0.5	<0.5	4.2	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	03/04/05	<50	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	14	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	6.2	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	10/04/05	<50	<0.5	<0.5	<0.5	<0.5	4.4	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5

Table 3
Analytical Results for Groundwater Samples
2951 High Street
Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-6	01/13/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	03/27/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	06/27/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	09/22/97	<50	<0.5	<0.5	<0.5	<0.5	24	NT	NT	NT	NT	NT	NT	NT	NT
	12/06/97	94	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	03/23/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	06/10/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	07/23/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	09/16/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	03/05/99	55	<0.5	0.92	0.5	1.3	<5	NT	NT	NT	NT	NT	NT	NT	NT
	06/17/99	<50	<0.5	<0.5	<0.5	<0.5	8.0	NT	NT	NT	NT	NT	NT	NT	NT
	09/15/99	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	12/09/99	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	03/06/00	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	06/07/00	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	04/04/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	07/16/03	<50	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	01/13/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<50	<5	<0.5	<0.5
	*	04/29/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5
	07/08/04	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	10/04/05	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5

Table 3
Analytical Results for Groundwater Samples
2951 High Street
Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-7	04/04/03	1,400	54	27	15	180	26,000	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	07/16/03	18,000	1,100	630	1,100	2,000	13,000	<200	<200	<200	<2,000	<200,000	<20,000	<200	<200
	10/28/03	10,000	750	370	750	1,000	17,000	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	01/13/04	7,200	430	150	560	550	22,000	<50	<50	<50	<500	<5000	<500	<50	<50
	04/14/04	8,900	520	360	640	1,100	21,000	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	04/29/04	<500	<5	<5	<5	12	12,000	<250	<250	<250	<2,500	<250,000	<25,000	<250	<250
	05/13/04	660	<5.0	28	25	120	10,000	<170	<170	<170	<1,700	<170,000	<17,000	<170	<170
	05/26/04	380	<2.5	15	15	79	7,600	<200	<200	<200	<2,000	<200,000	<20,000	<200	<200
	06/10/04	<1,000	<10	<10	<10	<10	4,900	<10	<10	<10	300	<10,000	<100	<10	<10
	07/08/04	67	<0.5	<0.5	1.3	10	1,040	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5
	10/01/04	85	<0.5	<0.5	0.63	6.0	2,300	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	130	<2.5	<2.5	<2.5	<25	<2500	<250	<2.5	3.2
	02/03/05	<50	<0.5	<0.5	<0.5	<0.5	4.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	2.9
	03/04/05	<50	<0.5	<0.5	<0.5	<0.5	21	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	6.7	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	3.2
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	2.0
10/04/05	<50	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	1.1	
MW-8	04/04/03	<50	<0.5	<0.5	<0.5	<0.5	230	<5	<5	<5	<50	<5,000	<500	<5	<5
	07/16/03	<50	<0.5	<0.5	<0.5	<0.5	340	<5	<5	<5	<50	<5,000	<500	<5	<5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	250	<5.0	<5.0	<5.0	<50	<5,000	<500	<5	<5.0
	01/13/04	<50	<0.5	<0.5	<0.5	<0.5	140	<0.5	<0.5	<0.5	<5.0	<50	<5	<0.5	<0.5
	04/14/04	<50	<0.5	<0.5	<0.5	<0.5	260	<5	<5	<5	<50	<5,000	<500	<5	<5
	04/29/04	<50	<0.5	<0.5	<0.5	<0.5	130	<5	<5	<5	<50	<5,000	<500	<5	<5
	05/13/04	<50	<0.5	<0.5	<0.5	<0.5	110	<2.5	<2.5	<2.5	<25	<2,500	<250	<2.5	<2.5
	05/26/04	<50	<0.5	<0.5	<0.5	<0.5	150	<2.5	<2.5	<2.5	<25	<2,500	<250	<2.5	<2.5
	06/10/04	<50	<0.5	<0.5	<0.5	<0.5	290	<0.5	<0.5	<0.5	<5.0	<50	<5.0	<0.5	<0.5
	07/08/04	<50	<0.5	<0.5	<0.5	<1.0	395	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	450	<10	<10	<10	<100	<10,000	<5.0	<0.5	<0.5
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	330	<5	<5	<5	<50	<5,000	<500	<5	<5
	02/03/05	<50	<0.5	<0.5	<0.5	<0.5	360	<5	<5	<5	53	<5,000	<500	<5	<5
	03/04/05	<50	<0.5	<0.5	<0.5	<0.5	180	<5	<5	<5	53	<5,000	<500	<5	<5
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	140	<2.5	<2.5	<2.5	29	<2500	<250	<2.5	<2.5
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	160	<2.5	<2.5	<2.5	29	<2500	<250	<2.5	<2.5
10/04/05	<50	<0.5	<0.5	<0.5	<0.5	320	<5	<5	<5	<50	<5,000	<500	<5	<5	

Table 3
Analytical Results for Groundwater Samples
 2951 High Street
 Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-9	04/04/03	<50	<0.5	<0.5	<0.5	<0.5	85	<1.5	<1.5	<1.5	<12	<1,200	<120	<1.5	2
	07/16/03	<50	<0.5	<0.5	<0.5	<0.5	170	<2.5	<2.5	3	27	<2,500	<250	<2.5	<2.5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	230	<5.0	<5.0	<5.0	57	<5,000	<500	<5.0	<5.0
	01/13/04	<50	<0.5	<0.5	<0.5	<0.5	55	<0.5	<0.5	0.72	5.8	<50	<5	<0.5	1
	04/14/04	<50	<0.5	<0.5	<0.5	<0.5	58	<1	<1	<1	<10	<1,000	<100	<1	<1
	04/29/04	<50	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	0.63
	05/13/04	<50	<0.5	<0.5	<0.5	<0.5	5.9	<0.5	<0.5	<0.5	<5.0	<50	<5.0	<0.5	0.66
	05/26/04	<50	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	0.53
	06/10/04	<50	<0.5	<0.5	<0.5	<0.5	14	<0.5	<0.5	<0.5	<5.0	<50	<5.0	<0.5	0.60
	07/08/04	<50	<0.5	<0.5	<0.5	<1.0	7.3	<0.5	<1	<1	<10	NT	<100	<1.0	<0.5
	10/01/04	<50	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	01/03/05	<50	<0.5	<0.5	<0.5	<0.5	4.0	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	48	<0.5	<0.5	0.75	13	<500	<50	<0.5	<0.5
07/06/05	<50	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
10/04/05	<50	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5	
MW-10	04/23/03	79	<0.5	<0.5	<0.5	<0.5	1,900	<25	<25	58	<250	<25,000	<2,500	<25	<25
	07/16/03	73	20	<0.5	<0.5	<0.5	1,100	<20	<20	39	<200	<20,000	<2,000	<20	<20
	10/28/03	76	<0.5	<0.5	<0.5	<0.5	1,900	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	01/13/04	<500	<5	<5	<5	<5	2,300	<5	<5	72	<50	<500	<50	<5	<5
	04/29/04	54	<0.5	<0.5	<0.5	<0.5	1,000	<17	<17	24	<170	<17,000	<1,700	<17	<17
	07/08/04	76	<0.5	<0.5	<0.5	<1.0	1,650	<0.5	<1	37	211	NT	<100	<1.0	<0.5
	10/01/04	67	<0.5	<0.5	<0.5	<0.5	1,500	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	01/03/05	62	<0.5	<0.5	<0.5	<0.5	1,700	<25	<25	<25	<250	<25,000	<2,500	<25	<25
	04/05/05	<50	<0.5	<0.5	<0.5	<0.5	520	<17	<17	<17	230	<17,000	<1,700	<17	<17
	07/06/05	<50	<0.5	<0.5	<0.5	<0.5	420	<5	<5	12	<50	<5,000	<500	<5	<5
10/04/05	<50	<0.5	<0.5	<0.5	<0.5	490	<10	<10	<10	<100	<10,000	<1,000	<10	<10	
SSTL	NE	34	270	180	470	8,400	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:

SSTLs are site-specific target levels developed for the site by Aqua Science Engineers, Inc. in 1997. **Bold** concentrations exceed the SSTL.

Concentrations are micrograms per liter (ug/L). NE, SSTL not established for this compound. NT, analyte not tested.

Data prior to April 2003 are from *Groundwater Monitoring Report for September 2000 Sampling* by Aqua Science Engineers, Inc. dated 11/14/2000.

* First sampling event after the OS system was started up on April 14, 2004.

** Oxygen Release Compound (ORC) was injected into borings on the south side of MW-5 in late June 1997.

*** ORC socks were placed in MW-5 in August 1998 and removed in September 2000.

TPH-g total petroleum hydrocarbons as gasoline

EtBE ethyl tert-butyl ether

EDB ethylene dibromide (1,2-dibromoethane)

MtBE methyl tert-butyl ether

tAME tert-amyl methyl ether

DCA 1,2-dichloroethane

DIPE di-isopropyl ether

tBA tert-butyl alcohol

Table 4
Field Measurements of Dissolved Oxygen and Temperature
2951 High Street
Oakland, California

Well ID	Date	DO (mg/L)	Temperature (Celsius)	% Oxygen Saturation
MW-1	04/04/03	0.64	18.5	6.7%
	07/16/03	0.82	18.5	8.6%
	10/28/03	0.51	19.3	5.5%
	01/13/04	0.17	19.3	1.8%
	04/14/04	0.23	18.4	2.4%
	* 04/29/04	0.56	18.1	5.9%
	05/13/04	0.70	18.4	7.4%
	05/26/04	0.40	18.5	4.2%
	06/10/04	1.42	18.5	15.0%
	07/08/04	0.71	18.7	7.5%
	10/01/04	1.97	19.5	21.2%
	01/03/05	2.06	19.2	22.0%
	04/05/05	2.41	18.9	25.6%
	07/06/05	3.47	20.9	38.4%
10/04/05	2.05	21.6	23.0%	
MW-3	04/04/03	0.78	18.8	8.3%
	07/16/03	2.13	18.8	22.6%
	10/28/03	0.67	19.1	7.2%
	01/13/04	0.25	19.3	2.7%
	04/14/04	0.17	18.6	1.8%
	* 04/29/04	6.52	18.0	68.1%
	05/13/04	5.87	18.5	61.9%
	05/26/04	2.76	18.5	29.1%
	06/10/04	6.12	18.5	64.5%
	07/08/04	0.76	18.7	8.0%
	10/01/04	3.45	19.3	37.0%
	01/03/05	2.71	19.2	29.0%
	02/03/05	2.60	19.2	27.8%
	03/04/05	3.34	16.3	33.7%
	04/05/05	3.53	18.6	37.3%
07/06/05	3.00	19.9	32.5%	
10/04/05	1.60	19.9	17.4%	
MW-5	04/04/03	0.70	19.2	7.5%
	07/16/03	NA	NA	NA
	10/28/03	0.83	19.70	9.0%
	01/13/04	0.57	19.80	6.2%
	04/14/04	0.32	19.70	3.5%
	* 04/29/04	9.83	19.50	105.8%
	05/13/04	10.89	19.50	117.2%
	05/26/04	10.50	19.50	113.0%
	06/10/04	14.14	19.50	152.1%
	07/08/04	11.46	19.40	123.0%
	10/01/04	12.67	19.50	136.3%
	01/03/05	9.25	20.10	100.7%
	02/03/05	13.50	20.20	147.3%
	03/04/05	6.96	17.60	72.1%
	04/05/05	9.78	19.40	105.0%
07/06/05	16.90	20.60	186.0%	
10/04/05	17.35	20.50	190.5%	

Table 4
Field Measurements of Dissolved Oxygen and Temperature
2951 High Street
Oakland, California

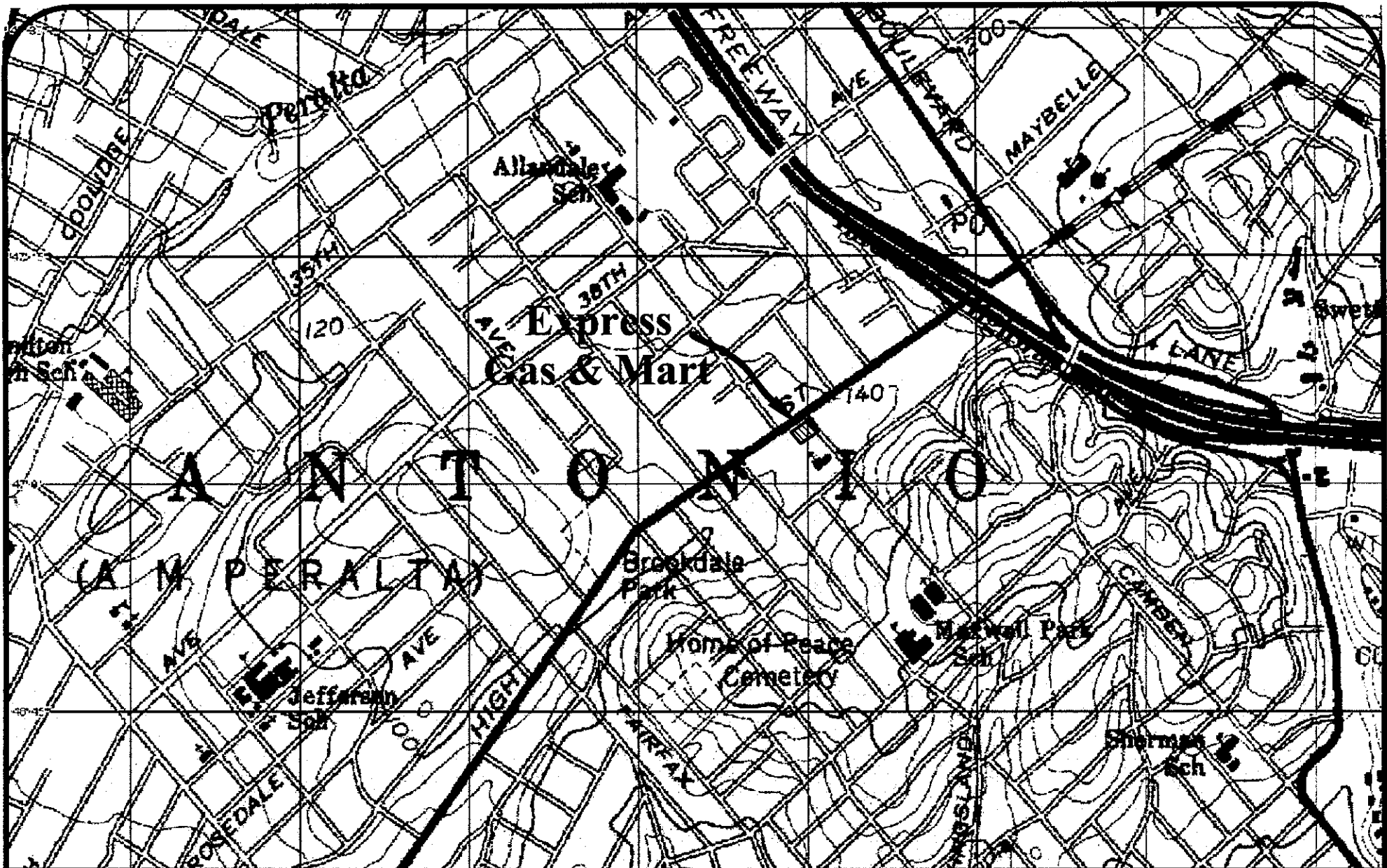
Well ID	Date	DO (mg/L)	Temperature (Celsius)	% Oxygen Saturation
MW-6	04/04/03	NA	NA	NA
	07/16/03	0.54	19.1	5.8%
	10/28/03	1.26	19.3	13.5%
	01/13/04	0.27	19.4	2.9%
	* 04/29/04	1.37	18.7	14.5%
	07/08/04	0.31	19.8	3.4%
	10/01/04	0.27	19.3	2.9%
	01/03/05	1.30	19.1	13.9%
	04/05/05	1.40	19.2	15.0%
	07/06/05	2.32	19.8	25.1%
10/04/05	2.13	20.6	23.4%	
MW-7	04/04/03	0.97	20.1	10.6%
	07/16/03	0.69	19.8	7.5%
	10/28/03	0.49	20.5	5.4%
	01/13/04	0.14	20.5	1.5%
	04/14/04	0.17	20.2	1.9%
	* 04/29/04	7.34	20.0	79.8%
	05/13/04	10.60	19.9	115.0%
	05/26/04	13.73	19.9	148.9%
	06/10/04	13.16	19.9	142.7%
	07/08/04	10.50	20.0	114.1%
	10/01/04	9.12	20.6	100.4%
	01/03/05	7.52	20.1	81.9%
	02/03/05	11.10	20.7	122.4%
	03/04/05	9.03	18.0	94.3%
	04/05/05	7.58	19.9	82.2%
	07/06/05	4.35	20.9	48.2%
10/04/05	3.43	20.9	38.0%	
MW-8	04/04/03	1.50	20.8	16.6%
	07/16/03	0.78	20.5	8.6%
	10/28/03	0.41	21.3	4.6%
	01/13/04	0.58	21.4	6.5%
	04/14/04	0.20	20.6	2.2%
	* 04/29/04	1.10	20.1	12.0%
	05/13/04	1.15	20.4	12.6%
	05/26/04	0.64	20.5	7.0%
	06/10/04	0.22	20.5	2.4%
	07/08/04	0.22	20.5	2.4%
	10/01/04	0.12	21.3	1.3%
	01/03/05	0.93	20.9	10.3%
	02/03/05	0.20	21.2	2.2%
	03/04/05	1.50	17.9	15.6%
	04/05/05	0.87	20.3	9.5%
07/06/05	1.83	21.3	20.4%	
10/04/05	1.50	22.1	17.0%	

Table 4
Field Measurements of Dissolved Oxygen and Temperature
2951 High Street
Oakland, California

Well ID	Date	DO (mg/L)	Temperature (Celsius)	% Oxygen Saturation
MW-9	04/04/03	1.30	20.4	14.2%
	07/16/03	0.82	20.1	8.9%
	10/28/03	0.41	20.4	4.5%
	01/13/04	0.11	20.5	1.2%
	04/14/04	0.14	20.2	1.5%
	04/29/04	10.02	20.2	109.3%
	05/13/04	10.91	20.0	118.6%
	05/26/04	6.16	19.9	66.8%
	06/10/04	5.84	19.9	63.3%
	07/08/04	3.99	19.9	43.3%
	10/01/04	3.30	20.3	36.1%
	01/03/05	3.33	19.5	35.8%
	04/05/05	3.21	20.5	35.2%
	07/06/05	3.55	20.8	39.2%
10/04/05	3.35	20.8	37.0%	
MW-10	04/23/03	2.75	19.1	29.3%
	07/16/03	1.00	19.2	10.7%
	10/28/03	0.55	19.6	5.9%
	01/13/04	0.13	19.7	1.4%
	04/29/04	0.19	18.7	2.0%
	07/08/04	0.19	19	2.0%
	10/01/04	0.14	19.4	1.5%
	01/03/05	1.27	18.3	13.3%
	04/05/05	1.10	18.6	11.6%
	07/06/05	2.32	19.3	24.9%
	10/04/05	2.36	19.7	25.5%

Notes: DO, Dissolved oxygen concentration in milligrams per liter.
 Formula for calculating % saturation = $C/(-0.1883*T+12.967)$, where
 C is the DO concentration in mg/L and T is the temperature in degrees Celsius.
 * First sampling event after the OS system was started up on April 14, 2004.
 N/A No data available.

FIGURES



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS

Scale: ———| 350 ft

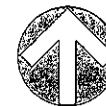
Datum: WGS84

Cook Environmental Services, Inc.

271 Las Juntas Way
 Walnut Creek, CA 94597
 (925) 937-1759 work
 (925) 937-6869 cell
 cookenvironmental@att.net

Site Location Map






Express Gas & Mart
 2951 High Street
 Oakland, California

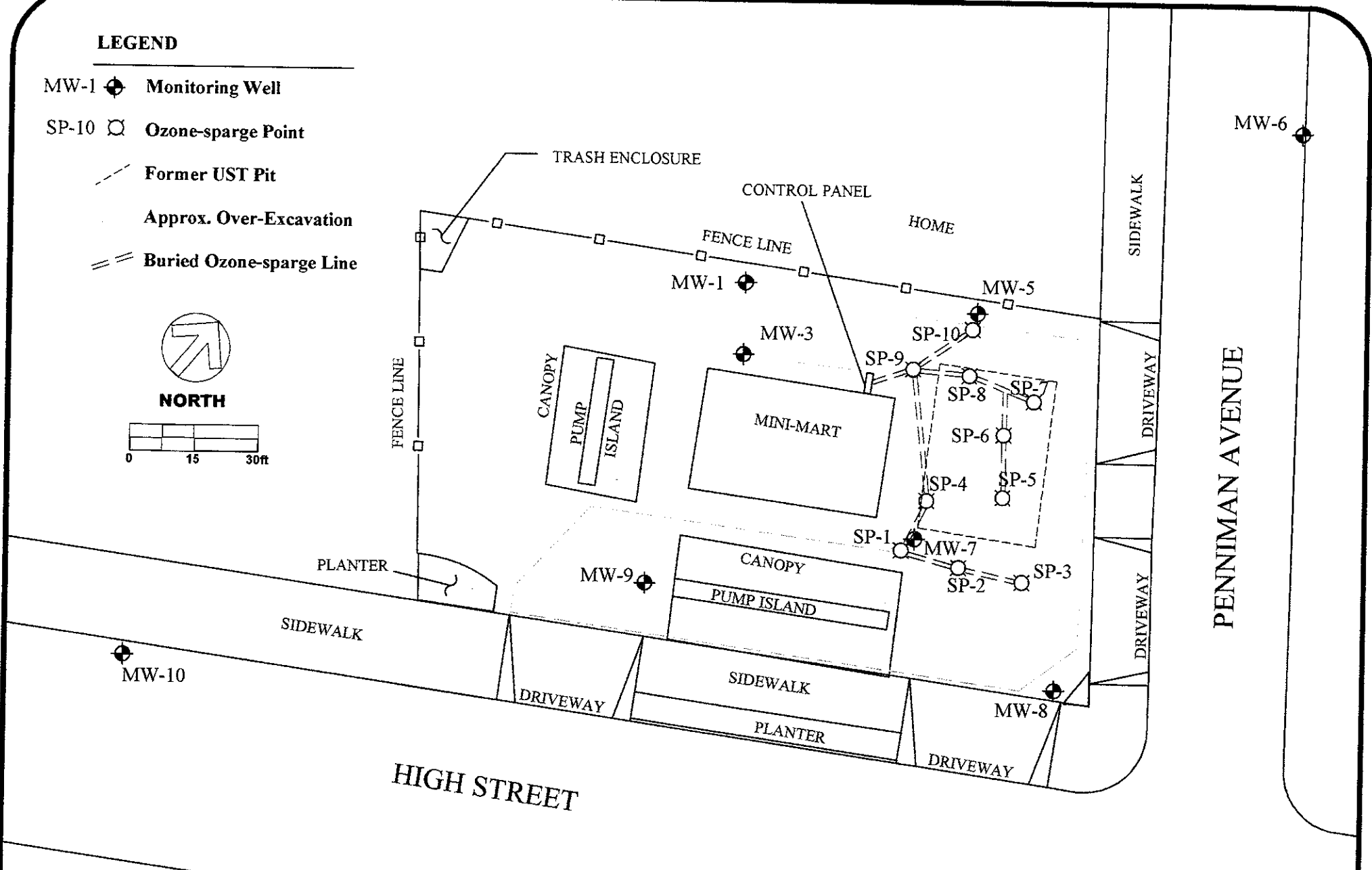
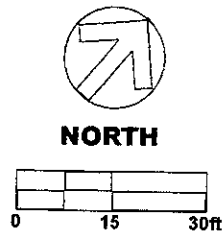


NORTH

Project #: 1004	Figure:
Date: 10/20/05	1
Scale: as shown	

LEGEND

- MW-1  Monitoring Well
- SP-10  Ozone-sparse Point
-  Former UST Pit
-  Approx. Over-Excavation
-  Buried Ozone-sparse Line



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 cookenvironmental@att.net

Site Features

Express Gas & Mart
 2951 High Street
 Oakland, California

Project #: 1004

Date: 10/20/05

Scale: 1"=30'

Figure:

2

LEGEND

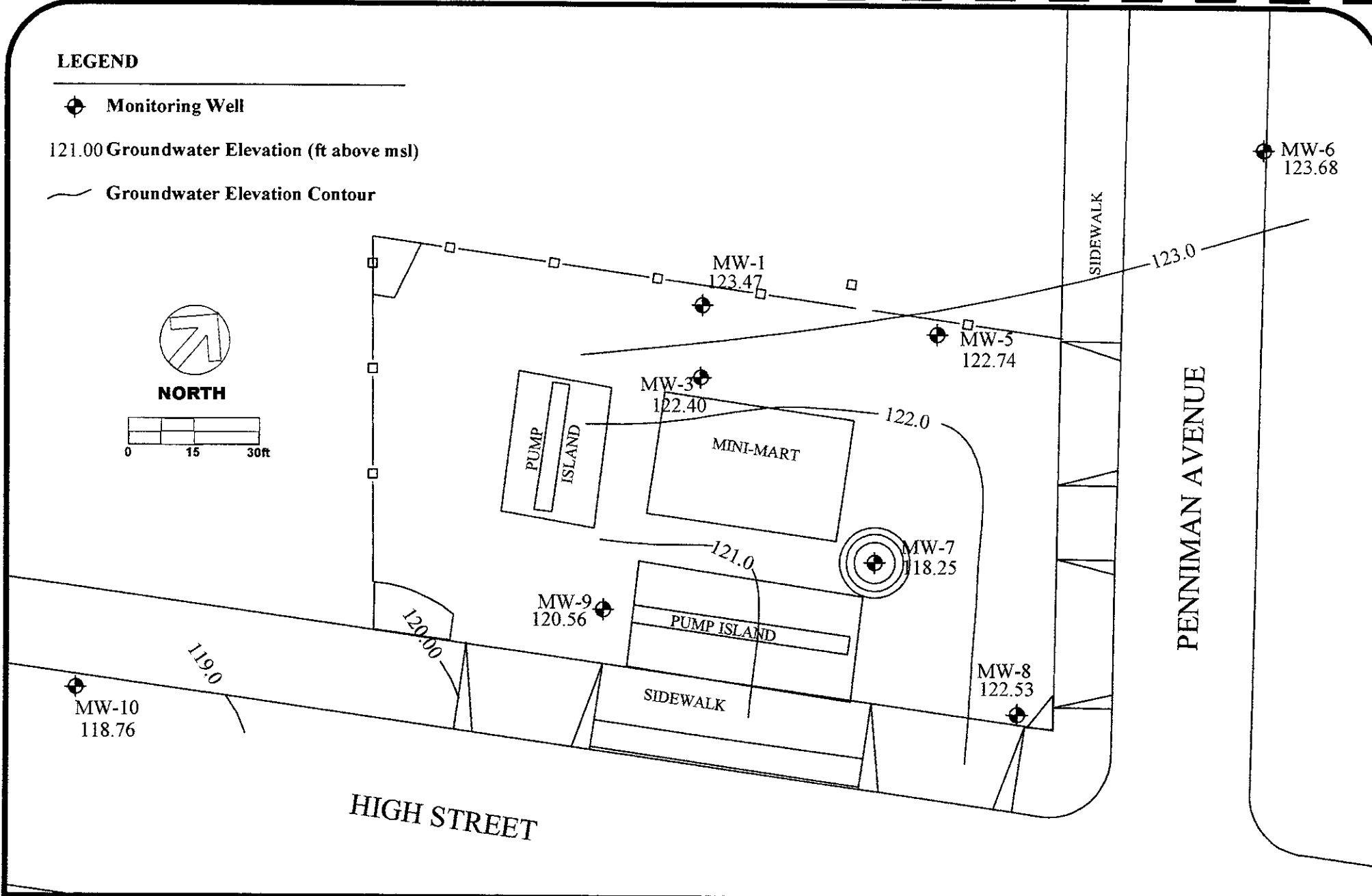
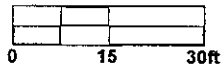
⊕ Monitoring Well

121.00 Groundwater Elevation (ft above msl)

— Groundwater Elevation Contour



NORTH



Cook Environmental Services, Inc.

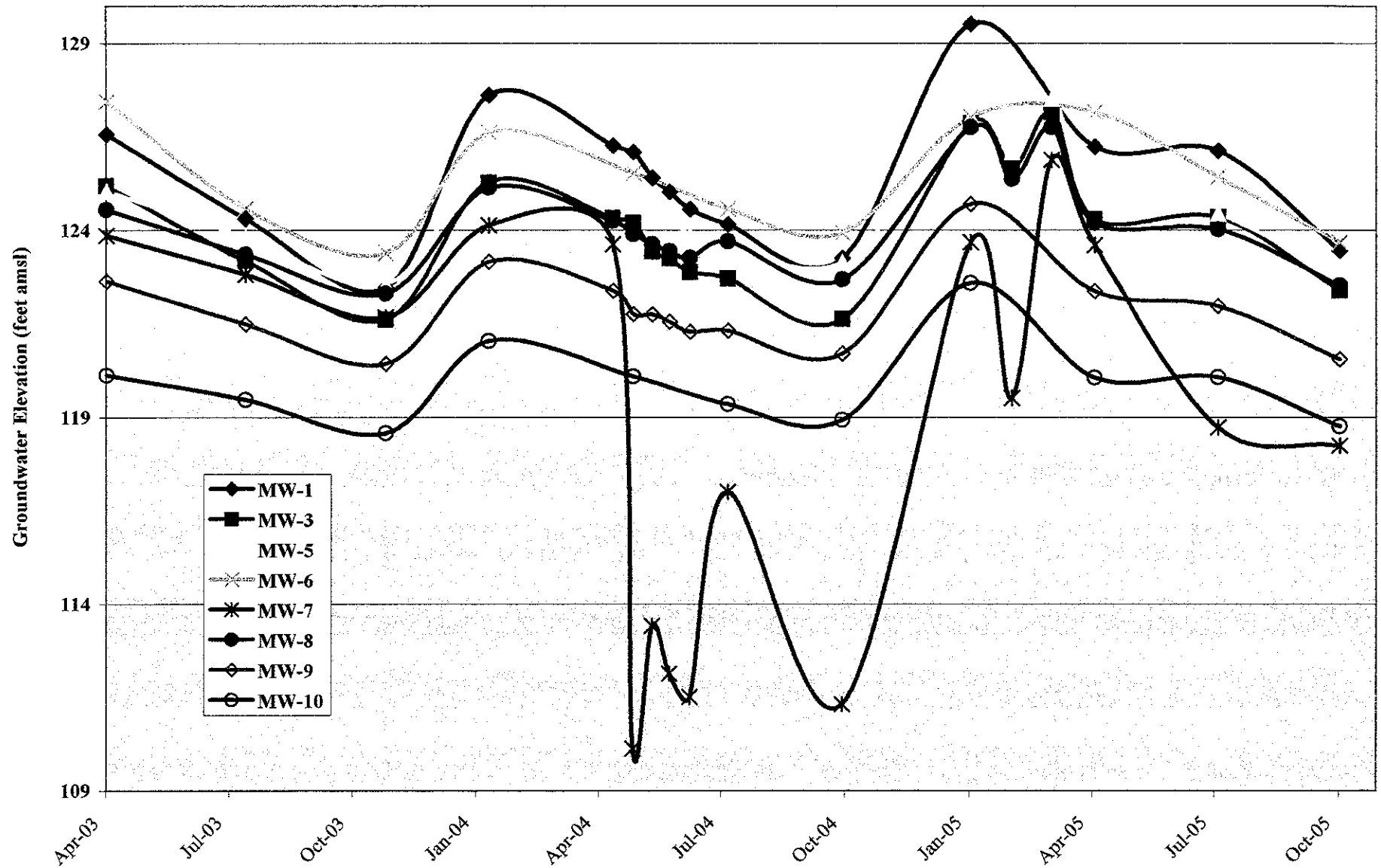
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**Groundwater Elevations on
October 4, 2005**

Express Gas & Mart
2951 High Street
Oakland, California

Project #: 1004	Figure:
Date: 10/20/05	3
Scale: 1"=30'	

Figure 4
Monitoring Well Hydrograph
2951 High Street, Oakland, California

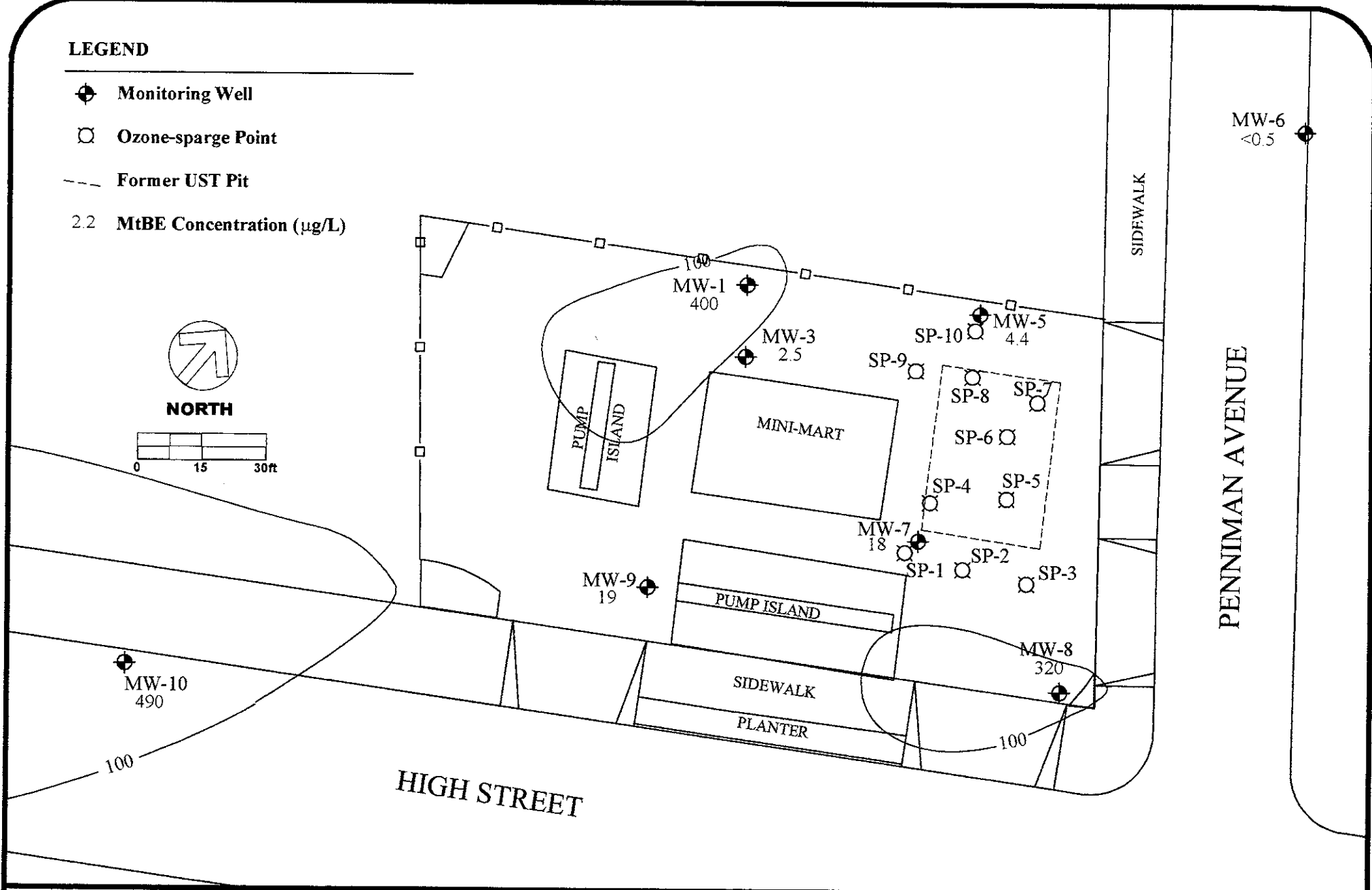
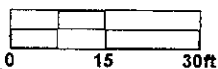


LEGEND

- ⊕ Monitoring Well
- Ozone-sparge Point
- Former UST Pit
- 2.2 MtBE Concentration (μg/L)



NORTH



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**MtBE Concentrations in Groundwater
 on October 4, 2005**

Express Gas & Mart
 2951 High Street
 Oakland, California

Project #: 1004	Figure:
Date: 10/20/05	5
Scale: 1"=30'	

Figure 6
MtBE Concentrations vs. Time in Wells MW-3, MW-5, MW-7 and MW-8
2951 High Street, Oakland, California

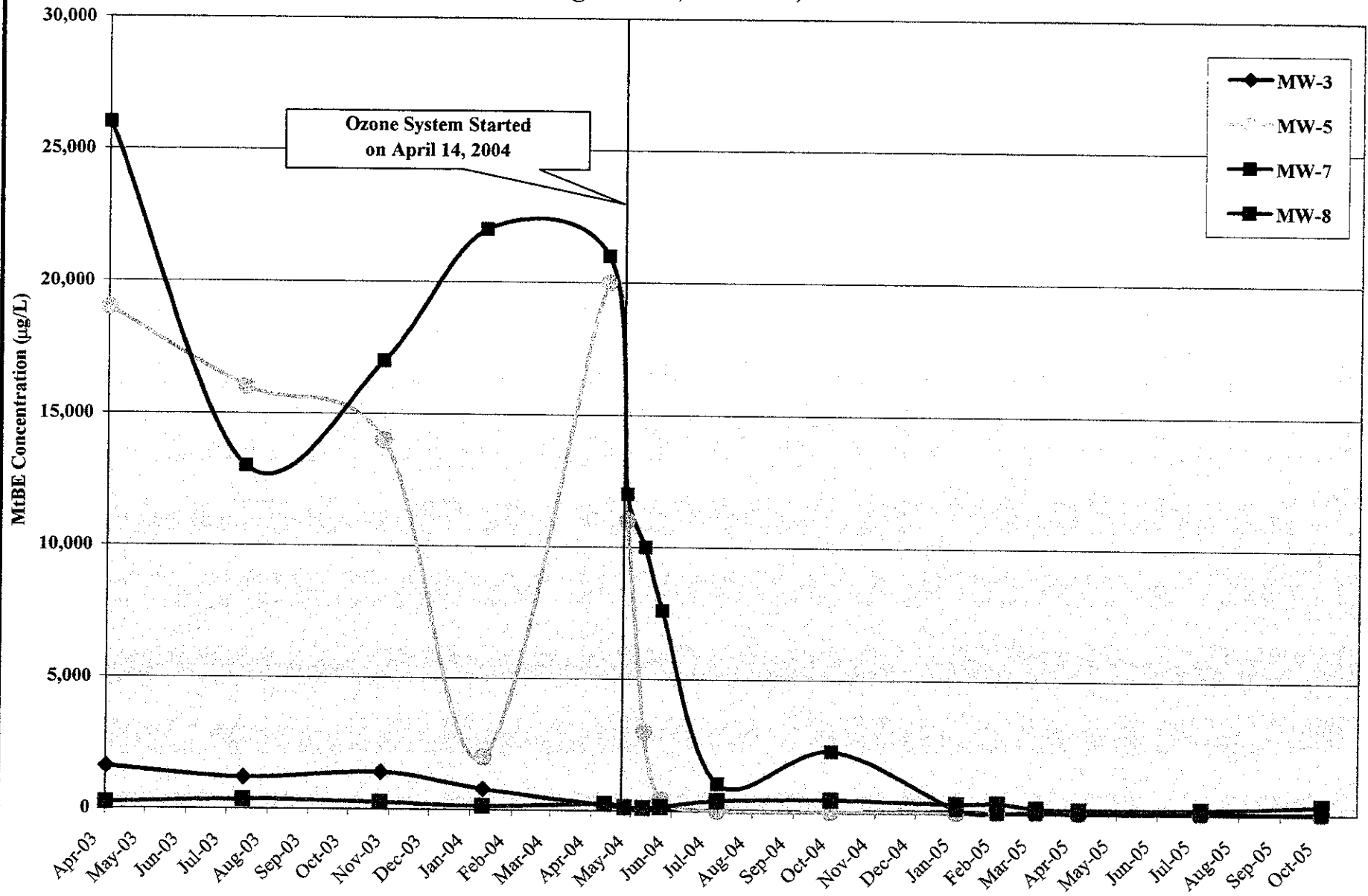


Figure 7
MtBE Concentrations versus time in Wells MW-1, MW-9 and MW-10
2951 High Street, Oakland, California

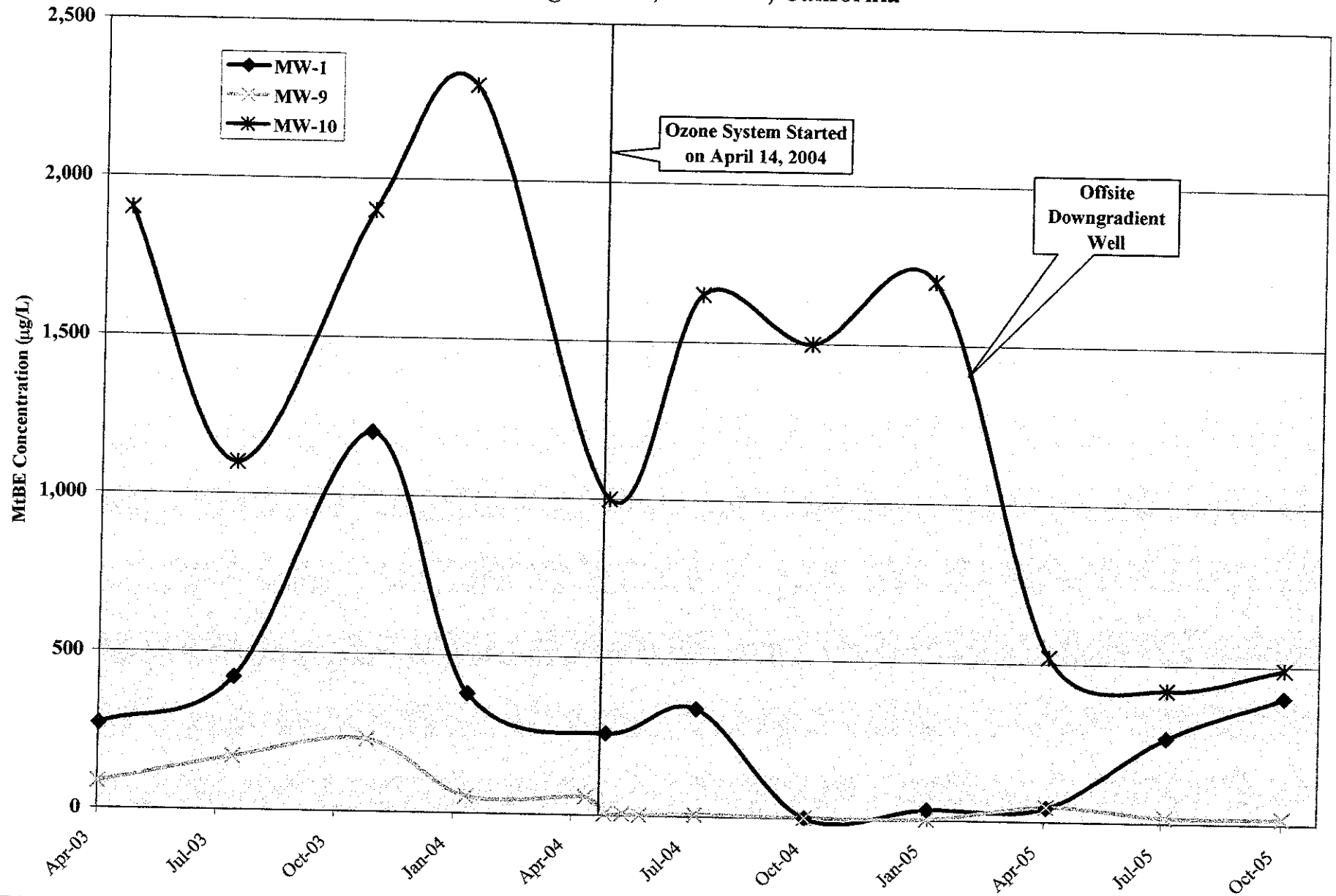
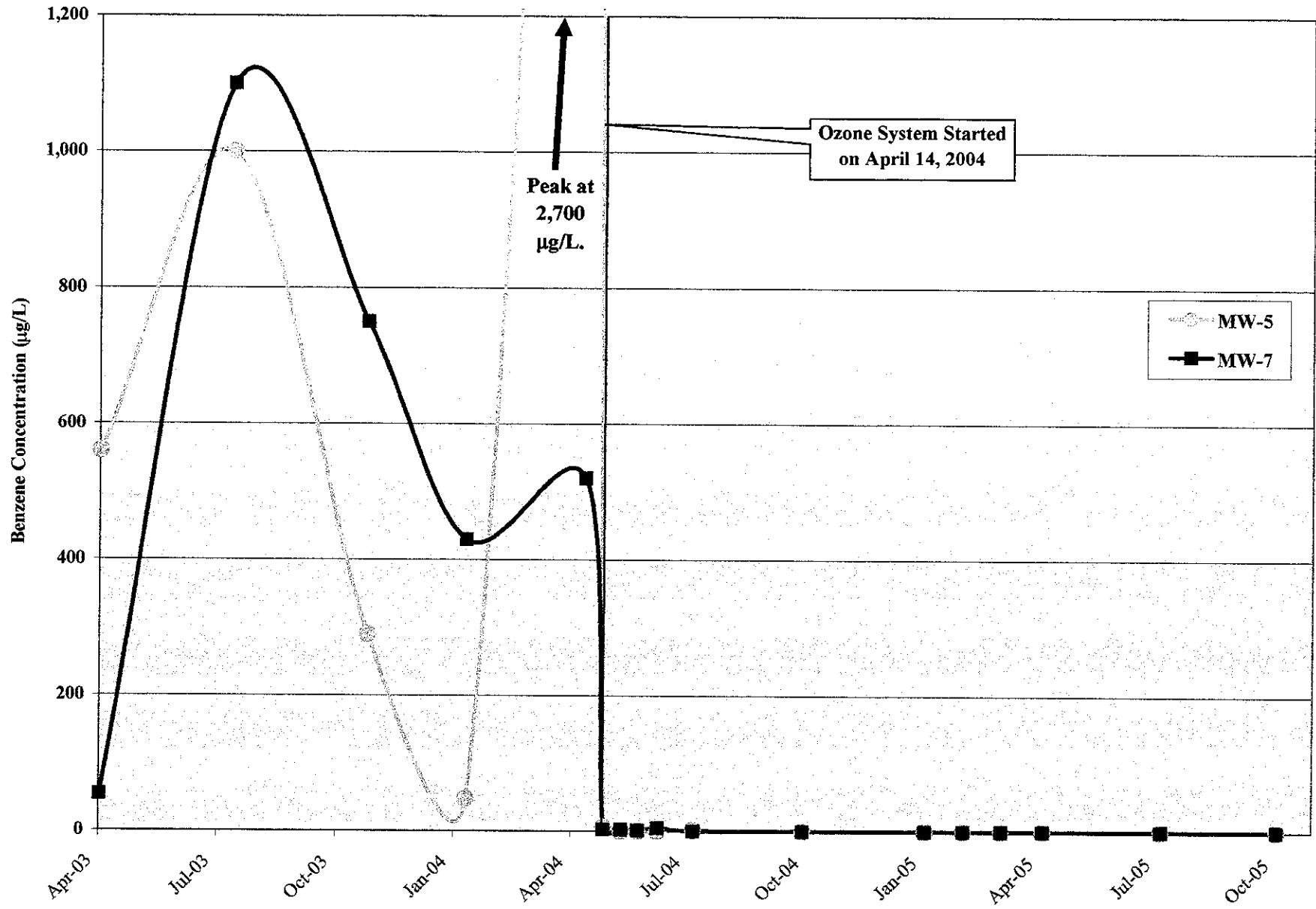


Figure 8
Benzene Concentrations vs. Time in Wells MW-5 and MW-7
2951 High Street, Oakland, California



APPENDIX A
Monitoring Well Sampling Logs

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-1

Well Diameter 2"

Column K-6A

Well Depth 24.81

Depth to Water 8.17

Casing Volume 2.82

3 Casing Volumes 8.5

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS		Comments
					Turbidity (NTU)	DO (mg/L)	
1355	4	23.4	6.07	603	298	1.58	
1400	6	21.8	6.25	655	329	1.94	
1405	8	21.6	6.31	684	343	2.05	

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-3

Well Diameter 2"

Column 16.19

Well Depth 24.84

Depth to Water 9.65

Casing Volume 2.75

3 Casing Volumes 8.25

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

TDS

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
1419	2	21.7	6.12	528	265	2.62	
1424	4	20.9	6.17	538	270	2.43	
1433	6	20.6	6.13	575	286	2.10	
1439	8	19.9	6.22	562	280	1.60	

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-5

Well Diameter 2"

Column 7.83

Well Depth 27.08

Depth to Water 9.25

Casing Volume 3.03

3 Casing Volumes 9.09

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

TDS

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
1014	2.5	22.1	8.20	946	472	9.33	
1020	5.0	21.7	8.58	962	484	16.98	well dry
1040	7.5	20.4	8.76	967	483	17.40	
1048	9	20.5	8.72	964	482	17.35	

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-6

Well Diameter 2"

Column 19.70

Well Depth 28.60

Depth to Water 8.90

Casing Volume 3.34

3 Casing Volumes 10.0

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

TDS

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
11:09	2.5	21.5	7.04	505	273	2.50	
11:14	5.0	20.8	6.71	718	364	2.10	
11:21	7.5	20.6	6.70	861	429	2.13	

COOK ENVIRONMENTAL SERVICES MONITORING WELL SAMPLING LOG

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-7

Well Diameter 2"

Column 12.33

Well Depth 25.01

Depth to Water 12.68*

well under press

Casing Volume 2.09

3 Casing Volumes 6.28

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
1309	2	22.5	6.88	420	209	3.83	
1313	4	21.3	6.89	419	210	3.51	
1318	6	20.9	7.05	388	194	3.43	

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-8

Well Diameter 2"

Column 16.66

Well Depth 25.28

Depth to Water 8.62

Casing Volume 2.83

3 Casing Volumes 8.5

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS		Comments
					Turbidity (NTU)	DO (mg/L)	
1136	2.5	23.1	6.31	916	253	1.60	
1146	8.0	22.7	6.44	500	245	1.46	
1154	8.5	22.1	6.53	514	258	1.50	

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-9

Well Diameter 2"

Column 15.88

Well Depth 25.32

Depth to Water 9.44

Casing Volume 2.69

3 Casing Volumes

~~15.88~~ 8.09

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

TPS

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
1500	2	23.3	6.44	808	409	2.20	
1504	4	21.0	6.63	867	448	2.75	
1508	6	21.0	7.01	913	456	3.75	
1513	8	20.8	6.90	965	487	3.35	

**COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG**

Site Name: High Street

Job # 1004

Date: 10/4/2005

Sampler: T. Cook

Well ID: MW-10

Well Diameter 2"

Column 16.52

Well Depth 24.95

Depth to Water 8.43

Casing Volume 2.80

3 Casing Volumes

8.42

(2" well = col height * 0.17 gal/ft, 4" well = 0.66 gal/ft)

Purge Method: bailer

Sample Method: bailer

TDS

Time	Gallons Purged	Temp C	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
1537	3	21.3	6.87	547	275	2.29	
1540	5	20.1	6.72	908	262	1.94	
1545	7	19.8	6.80	514	258	1.87	
1548	9	19.7	6.85	507	255	2.36	

APPENDIX B

Laboratory Analytical Reports



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Cook Environmental Services, Inc 271 Las Juntas Way Walnut Creek, CA 94596	Client Project ID: #1004; High Street	Date Sampled: 10/04/05
		Date Received: 10/04/05
	Client Contact: Tim Cook	Date Reported: 10/11/05
	Client P.O.:	Date Completed: 10/11/05

WorkOrder: 0510044

October 11, 2005

Dear Tim:

Enclosed are:

- 1). the results of 8 analyzed samples from your #1004; High Street project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 Website: www.mccampbell.com E-mail: main@mccampbell.com

Cook Environmental Services, Inc. 271 Las Juntas Way Walnut Creek, CA 94596	Client Project ID: #1004; High Street	Date Sampled: 10/04/05
	Client Contact: Tim Cook	Date Received: 10/04/05
	Client P.O.:	Date Extracted: 10/08/05-10/11/05
		Date Analyzed: 10/08/05-10/11/05

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0510044

Lab ID	0510044-001B	0510044-002B	0510044-003B	0510044-004B	Reporting Limit for DF=1	
Client ID	MW-1	MW-3	MW-5	MW-6	S	W
Matrix	W	W	W	W		
DF	10	1	1	1		

Compound	Concentration				ug/kg	µg/L
	tert-Amyl methyl ether (TAME)	ND<5.0	ND	ND	ND	NA
t-Butyl alcohol (TBA)	ND<50	ND	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND<5.0	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<5.0	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND<5.0	ND	ND	ND	NA	0.5
Ethanol	ND<500	ND	ND	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND<5.0	ND	ND	ND	NA	0.5
Methanol	ND<5000	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	400	2.5	4.4	ND	NA	0.5

Surrogate Recoveries (%)

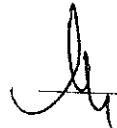
%SS1:	114	107	109	108	
Comments		i			

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

 Angela Rydelius, Lab Manager



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Cook Environmental Services, Inc. 271 Las Juntas Way Walnut Creek, CA 94596	Client Project ID: #1004; High Street	Date Sampled: 10/04/05
	Client Contact: Tim Cook	Date Received: 10/04/05
	Client P.O.:	Date Extracted: 10/08/05-10/11/05
		Date Analyzed: 10/08/05-10/11/05

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0510044

Lab ID	0510044-005B	0510044-006B	0510044-007B	0510044-008B	Reporting Limit for DF = 1	
Client ID	MW-7	MW-8	MW-9	MW-10	S	W
Matrix	W	W	W	W		
DF	1	10	1	20		
Compound	Concentration				ug/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND<5.0	ND	ND<10	NA	0.5
t-Butyl alcohol (TBA)	ND	ND<50	ND	ND<100	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND<5.0	ND	ND<10	NA	0.5
1,2-Dichloroethane (1,2-DCA)	1.1	ND<5.0	ND	ND<10	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<5.0	ND	ND<10	NA	0.5
Ethanol	ND	ND<500	ND	ND<1000	NA	50
Ethyl tert-butyl ether (ETBE)	ND	ND<5.0	ND	ND<10	NA	0.5
Methanol	ND	ND<5000	ND	ND<10,000	NA	500
Methyl-t-butyl ether (MTBE)	18	320	19	490	NA	0.5

Surrogate Recoveries (%)

%SS1:	110	116	109	111	
Comments					

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0510044

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 18376			Spiked Sample ID: 0510046-015A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	60	105	105	0	117	110	6.76	70 - 130	70 - 130
MTBE	ND	10	91.4	82.9	9.66	101	111	9.21	70 - 130	70 - 130
Benzene	ND	10	90.6	86.2	4.99	92.7	88.9	4.22	70 - 130	70 - 130
Toluene	ND	10	91.2	84.8	7.24	94.6	85.6	9.96	70 - 130	70 - 130
Ethylbenzene	ND	10	92.7	89.2	3.82	94.4	97.2	2.87	70 - 130	70 - 130
Xylenes	ND	30	94.7	90	5.05	99	99.7	0.671	70 - 130	70 - 130
%SS:	104	10	99	96	2.33	98	102	3.92	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 18376 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0510044-001A	10/04/05	10/08/05	10/08/05 3:08 PM	0510044-002A	10/04/05	10/10/05	10/10/05 5:21 PM
0510044-003A	10/04/05	10/08/05	10/08/05 4:08 PM	0510044-004A	10/04/05	10/08/05	10/08/05 4:38 PM
0510044-005A	10/04/05	10/10/05	10/10/05 6:21 PM	0510044-006A	10/04/05	10/08/05	10/08/05 8:18 PM
0510044-007A	10/04/05	10/08/05	10/08/05 8:47 PM	0510044-008A	10/04/05	10/08/05	10/08/05 9:17 PM
0510044-008A	10/04/05	10/10/05	10/10/05 4:05 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0510044

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 18366			Spiked Sample ID: 0510024-013A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	104	103	0.994	103	100	2.46	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	102	104	1.39	103	100	2.18	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	10	103	101	1.03	102	99.3	2.24	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	116	115	0.468	116	114	1.69	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	112	112	0	112	111	1.19	70 - 130	70 - 130
Ethanol	ND	500	107	103	3.83	106	108	1.13	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	104	102	1.45	104	101	2.52	70 - 130	70 - 130
Methanol	ND	2500	99.4	104	4.83	101	104	2.17	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	103	102	1.20	102	99.6	2.38	70 - 130	70 - 130
%SS1:	102	10	105	104	0.603	105	105	0	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 18366 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0510044-001B	10/04/05	10/10/05	10/10/05 9:25 PM	0510044-002B	10/04/05	10/08/05	10/08/05 5:27 AM
0510044-003B	10/04/05	10/08/05	10/08/05 6:10 AM	0510044-004B	10/04/05	10/08/05	10/08/05 6:52 AM
0510044-005B	10/04/05	10/08/05	10/08/05 7:34 AM	0510044-006B	10/04/05	10/10/05	0/10/05 11:33 PM
0510044-007B	10/04/05	10/08/05	10/08/05 8:59 AM	0510044-008B	10/04/05	10/11/05	10/11/05 3:44 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

cesw 0510044

McCAMPBELL ANALYTICAL, INC.
 110 2nd AVENUE SOUTH, #D7
 PACHECO, CA 94553-5560
 Website: www.mccampbell.com Email: main@mccampbell.com
 Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME
 EDF Required? Coelt (Normal) RUSH 24 HR 48 HR 72 HR 5 DAY
 Yes Write On (DW) No

Report To: Tim Cook Bill To:
 Company: Cook Environmental Services, Inc.
 271 Las Juntas Way
 Walnut Creek, CA 9457 E-Mail: cookenvironmental@att.net
 Tele: (925) 937-1759 Fax: (925) 937-1759
 Project #: 1004 Project Name: High Street
 Project Location: Oakland
 Sampler Signature: *Tim Cook*

Analysis Request												Other	Comments				
BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 8260 All 9 oxys only	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)		Filter Samples for Metal analysis: Yes / No

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
+ MW-1		10/4/05		3	VOA	X					X	X					
+ MW-3		10/4/05		3	VOA	X					X	X					
+ MW-5		10/4/05		3	VOA	X					X	X					
+ MW-6		10/4/05		3	VOA	X					X	X					
+ MW-7		10/4/05		3	VOA	X					X	X					
+ MW-8		10/4/05		3	VOA	X					X	X					
+ MW-9		10/4/05		3	VOA	X					X	X					
+ MW-10		10/4/05		3	VOA	X					X	X					

Relinquished By: *Tim Cook* Date: 10/4 Time: 5:20 Received By: *Me Vall*
 Relinquished By: Date: Time: Received By:
 Relinquished By: Date: Time: Received By:

ICE/°
 GOOD CONDITION
 HEAD SPACE ABSENT
 DECHLORINATED IN LAB
 APPROPRIATE CONTAINERS
 PRESERVED IN LAB
 COMMENTS:
 PRESERVATION VOAS O&G METALS pH<2 OTHER

McCampbell Analytical, Inc.



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0510044

ClientID: CESW

EDF: YES

Report to:

Tim Cook
 Cook Environmental Services, Inc.
 271 Las Juntas Way
 Walnut Creek, CA 94596

TEL: 925-937-1759
 FAX: 925-937-1759
 ProjectNo: #1004; High Street
 PO:

Bill to:

Tim Cook
 Cook Environmental Services, Inc.
 271 Las Juntas Way
 Walnut Creek, CA 94596

Requested TAT: 5 days

Date Received: 10/04/2005

Date Printed: 10/04/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15									
0510044-001	MW-1	Water	10/4/05	<input type="checkbox"/>	B	A	A																					
0510044-002	MW-3	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-003	MW-5	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-004	MW-6	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-005	MW-7	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-006	MW-8	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-007	MW-9	Water	10/4/05	<input type="checkbox"/>	B	A																						
0510044-008	MW-10	Water	10/4/05	<input type="checkbox"/>	B	A																						

Test Legend:

1	9-OXYS_W	2	G-MBTEX_W	3	PREF REPORT	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

APPENDIX C
Site Closure Summary

SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

Date: October 20, 2005

Agency Name: Alameda County Envir. Health	Address: 1311 Harbor Bay Pkwy, Ste 250
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6746
Responsible Staff Person: Don Hwang	Title:

II. SITE INFORMATION

Site Facility Name: Express Gas & Mart				
Site Facility Address: 2951 High Street				
RB Case Nos.: 01-0100	Local or LOP Case No.: 1038	Priority: groundwater and soil		
URF Filing Date: 03/23/1990	SWEEPS No.:			
Responsible Parties (include addresses and phone numbers)				
Attn: Aziz Kandahari, (510) 332-3383				
Kandahari Trading Company				
5196 Grayhawk Lane				
Dublin, CA 94568				
Tank No.	Size in Gallons	Contents	Closed In—Place/Removed?	Date
1	10,000	Unleaded gas	Removed	5/2001
2	10,000	Unleaded gas	Removed	5/2001
3	10,000	Unleaded gas	Removed	5/2001
4	10,000	Unleaded premium	Removed	5/2001
	500	Waste Oil	Removed	1995

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: USTs and/or related piping and dispensers		
Site characterization complete? yes	Date Approved by Oversight Agency:	
Monitoring wells installed? yes	Number: 8	Proper screened interval? yes
Highest GW Depth Below Ground Surface: 2.12'	Lowest Depth: 20.80'	Flow Direction: southwesterly
Most Sensitive Current Use: surface water (approx ½ mile to Peralta Creek and 2 miles to San Leandro Bay)		
Most Sensitive Potential Use and Probability of Use	Drinking water potential Low probability of use	
Are drinking water wells affected? no	Aquifer Name: shallow	
Is surface water affected? Not sampled, no surface water bodies within 0.5 mi of site	Nearest surface water name: Peralta Creek, 3,780 feet northwest of site	
Off-Site Beneficial Use Impacts (Addresses/Locations): none within 2000'		
Report(s) on file? yes	Where is report(s) filed? LUFT file	

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	4 USTs	Steel tanks cleaned onsite and disposed of offsite	5/2001
Piping	Approx 200'	Fiberglass pipe cleaned onsite and disposed of offsite in a sanitary landfill.	5/2001
Free Product	Approx 200 gals	Sucked from USTs and disposed of as used product offsite.	5/2001
Soil	3,700 tons	Disposed of offsite at the B&J landfill near Vacaville, CA as non-hazardous waste	5/9/01 to 9/27/01
Groundwater	Unknown	Ozone sparging insitu, 10 sparge wells installed in and around former USTs	4/14/04 to 1/4/05
Barrels	10-20 55-gal barrels	Barrels contained purge water from sampling wells. Water was disposed of offsite at licensed treatment facility	1995 through 2005

MAXIMUM DOCUMENTED POLLUTANT CONCENTRATIONS—BEFORE AND AFTER CLEANUP									
POLLUTANT	Soil (ppm)		Water (ppb)		POLLUTANT	Soil (ppm)		Water (ppb)	
	Before	After	Before	After		Before	After	Before	After
MtBE in well MW-1	NS	NS	1,200	400	Benzene in well MW-5	NS	NS	2,700	<0.5
MtBE in well MW-3	NS	NS	1,600	2.5	Benzene in well MW-7	0.52	NS	1,100	<0.5
MtBE in well MW-5	NS	NS	87,000	4.4	TPH-g in well MW-5	NS	NS	120,000	<50
MtBE in well MW-7	NS	NS	26,000	18	TPH-g in well MW-7	48	NS	18,000	<50
MtBE in well MW-8	NS	NS	340	320					

Comments (Depth of Remediation, etc.):
MtBE is the only constituent of concern. A health risk assessment determined that 8,400 ppb is adequate for protection of potential beneficial uses of groundwater in this locale (Palmer, August 1997).

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? yes		
Does corrective action protect public health for current land use? yes		
Site Management Requirements: Provide environmental documents to new owners:		
Housing. Site is commercial, there is residential land use within 100 feet of site.		
Monitoring Wells Decommissioned: 8	Number Decommissioned: 8	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. TECHNICAL REPORTS, CORRESPONDENCE, ETC. THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON

Title: <i>Verification Monitoring Report, First Quarter 2005</i> , Cook Environmental Services	Date: Feb 10, 2005
Title: <i>Verification Monitoring Report, Second Quarter 2005</i> , Cook Environmental Services	Date: May 2, 2005
Title: <i>Verification Monitoring Report, Third Quarter 2005</i> , Cook Environmental Services	Date: Jul 22, 2005
Title: <i>Request for Site Closure and Verification Monitoring Report, Fourth Quarter 2005</i> , Cook Environmental Services, Inc	Date: Oct 20, 2005

VI. ADDITIONAL COMMENTS, DATA, ETC.

PLEASE INCLUDE/ATTACH THE FOLLOWING AS APPROPRIATE:

- 1) SITE MAP INDICATING TANK PIT LOCATION, MONITORING WELL LOCATION, GROUNDWATER GRADIENT, ETC.; AND
- 2) SITE COMMENTS WORTHY OF NOTICE (E.G., AREA OF RESIDUAL POLLUTION LEFT IN PLACE, DEED NOTICES ETC.)

Attached are Figures 6, 7, and 8 of *Request for Site Closure and Verification Monitoring Report, Fourth Quarter 2005*, Cook Environmental Services, Inc. that clearly show benzene and MtBE concentrations in monitoring wells decreased dramatically after the ozone sparging system was turned on in April 2004. It also shows that concentrations of these same constituents remain significantly below the cleanup goal after the system was turned off on January 4, 2005.






MtBE plume has been fully characterized; MtBE has remained below the Site cleanup goal of 8,400 ppb for 18 months (11 consecutive groundwater sampling events). Trends in data collected after the ozone sparge system was turned off on January 4, 2005 show that MtBE concentrations remain significantly below the cleanup goal with no significant rebound concentrations. Groundwater is not used as a drinking water resource within 2,000 feet of the Site.

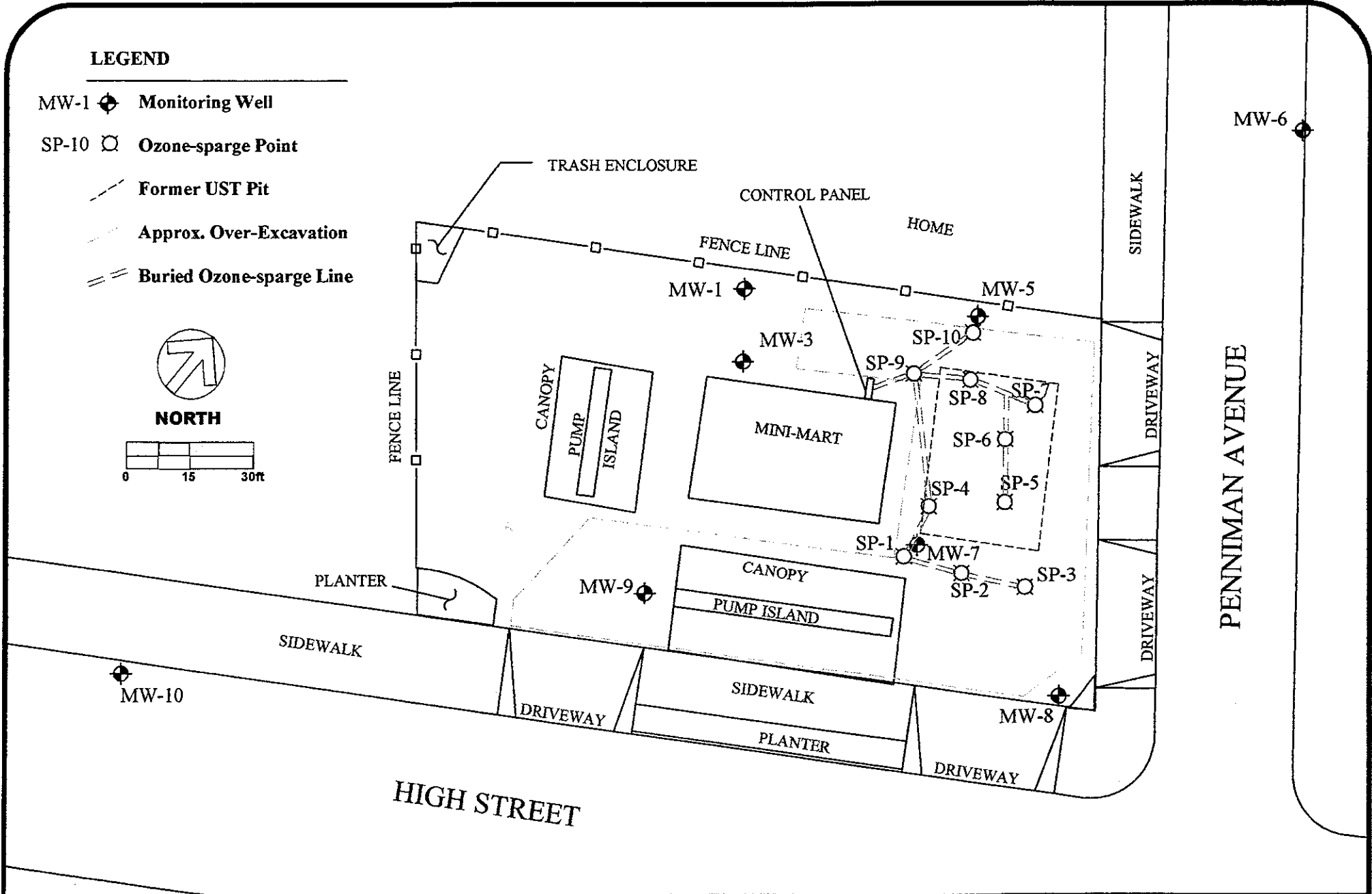
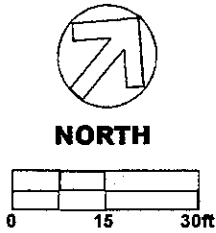
Attached is Figure 3 showing the former UST pit location, monitoring well locations and the groundwater gradient.

Attached is Figure 5 showing residual dissolved MtBE left in place below the cleanup goal of 8,400 ppb.

This document and the related CASE CLOSURE LETTER shall be retained by the lead agency as part of the official site file.

LEGEND

- MW-1  Monitoring Well
- SP-10  Ozone-sparg Point
-  Former UST Pit
-  Approx. Over-Excavation
-  Buried Ozone-sparg Line



Cook Environmental Services, Inc.
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 Walnut Creek, CA 94597
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 cookenvironmental@att.net

Site Features
 Express Gas & Mart
 2951 High Street
 Oakland, California

Project #: 1004	2
Date: 10/20/05	
Scale: 1"=30'	

LEGEND

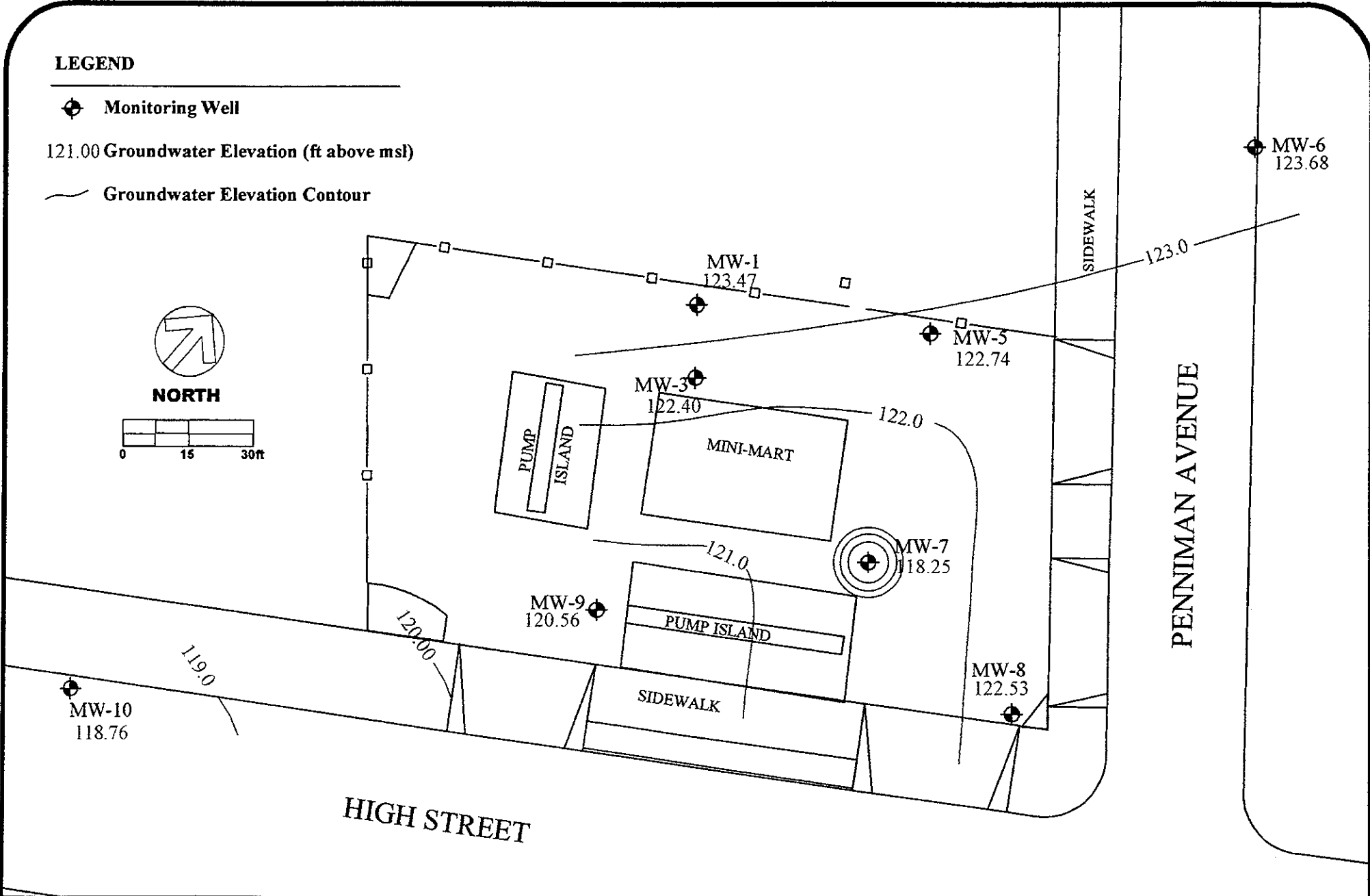
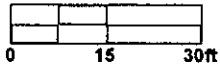
◆ Monitoring Well

121.00 Groundwater Elevation (ft above msl)

— Groundwater Elevation Contour



NORTH



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**Groundwater Elevations on
October 4, 2005**

Express Gas & Mart
2951 High Street
Oakland, California

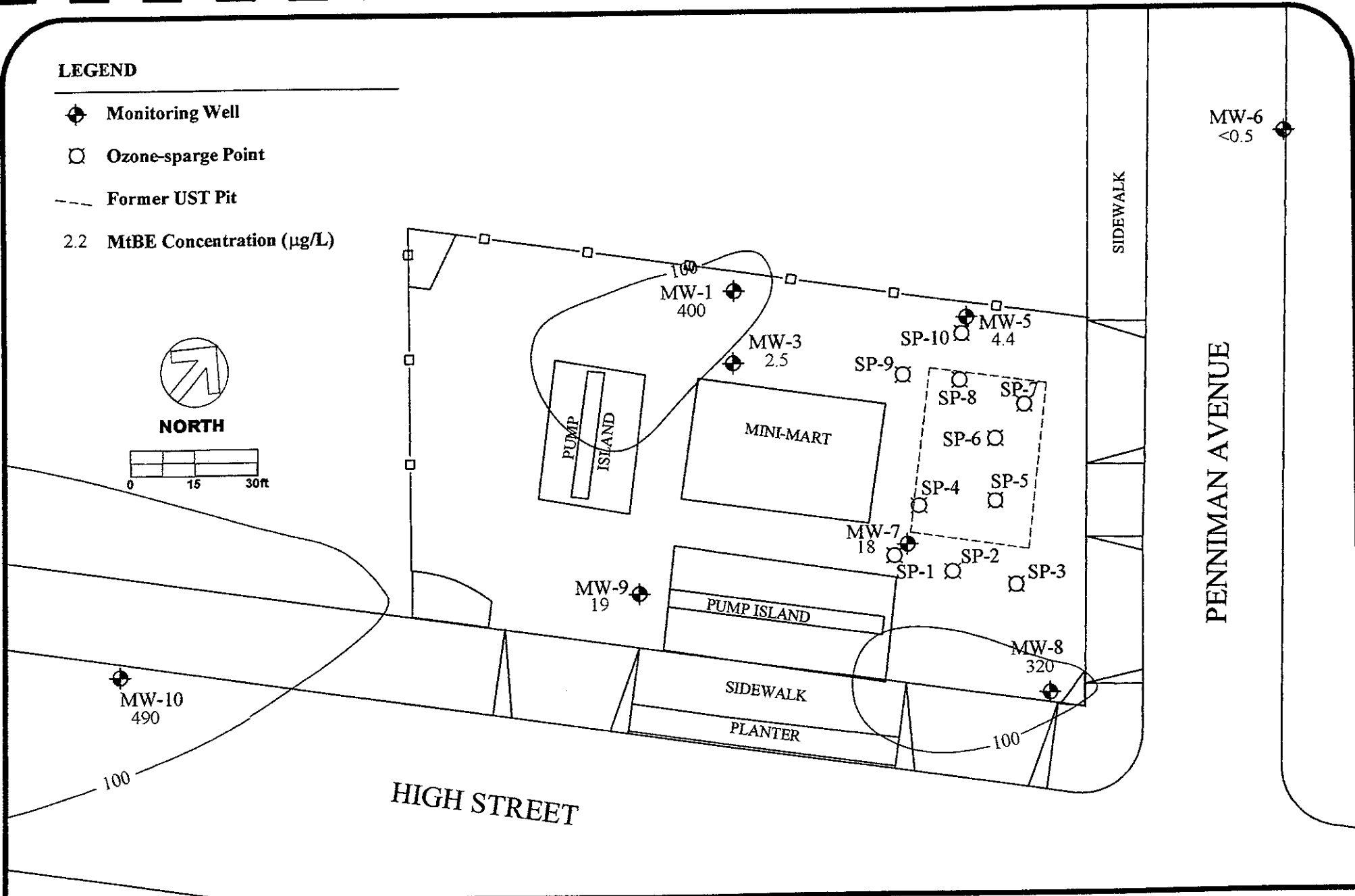
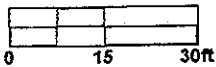
Project #: 1004	Figure:
Date: 10/20/05	3
Scale: 1"=30'	

LEGEND

- ◆ Monitoring Well
 - Ozone-sparge Point
 - Former UST Pit
- 2.2 MtBE Concentration (µg/L)



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**MtBE Concentrations in Groundwater
 on October 4, 2005**

Express Gas & Mart
 2951 High Street
 Oakland, California

Project #: 1004	5
Date: 10/20/05	
Scale: 1"=30'	

Figure 6
MtBE Concentrations vs. Time in Wells MW-3, MW-5, MW-7 and MW-8
2951 High Street, Oakland, California

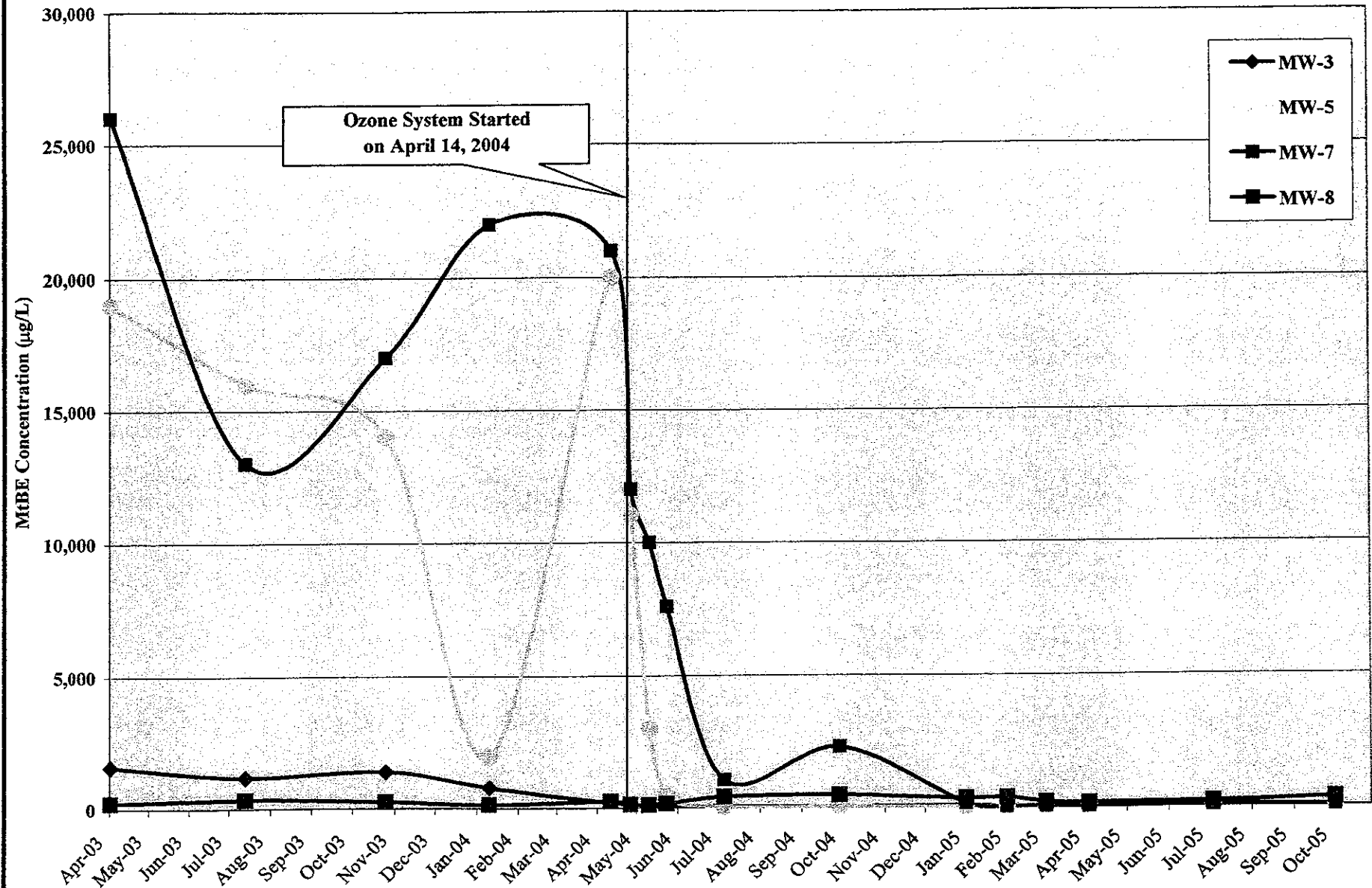


Figure 7
MtBE Concentrations versus time in Wells MW-1, MW-9 and MW-10
2951 High Street, Oakland, California

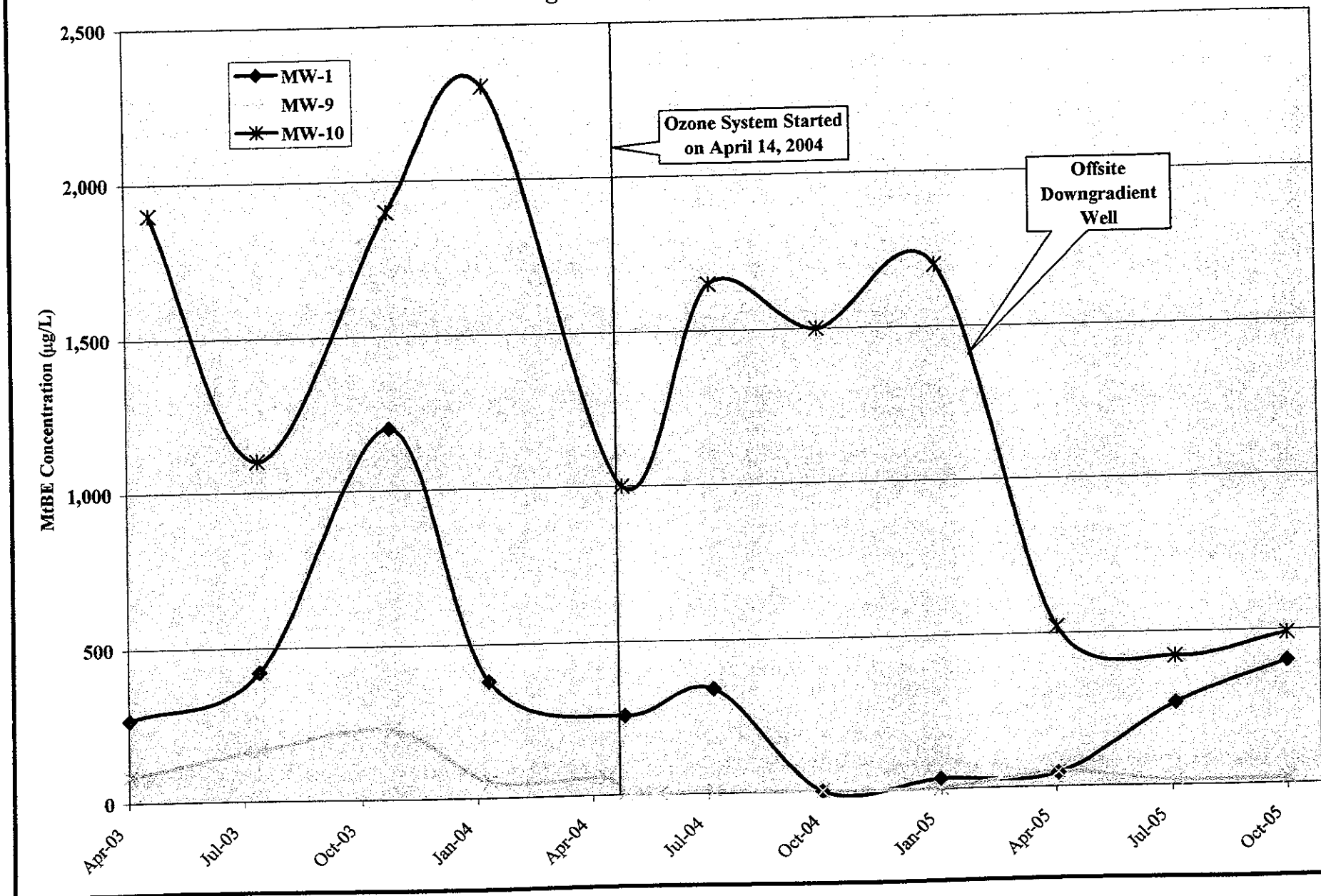


Figure 8
Benzene Concentrations vs. Time in Wells MW-5 and MW-7
2951 High Street, Oakland, California

