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**ENVIRONMENTAL ENGINEERING, INC**  
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October 11, 2007

Mr. Jerry Wickham  
Alameda County  
Department of Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: **StID#3337**  
Site Address: 3609 International Blvd., Oakland, California

Dear Mr. Wickham:

SOMA's "Third Quarter 2007 Groundwater Monitoring and Remediation System Operation Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 734-6400.

Sincerely,

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist



Enclosure

cc: Mr. Abolghassem Razi w/report enclosure  
Tony's Express Auto Service

Mr. Vince Tong w/report enclosure  
Traction International

**Third Quarter 2007  
Groundwater Monitoring and  
Remediation System Operation Report**

**Tony's Express Auto Service  
3609 International Boulevard  
Oakland, California**

**October 11, 2007**

**Project 2331**

**Prepared for  
Tony's Express Auto Service  
3609 International Boulevard  
Oakland, California 94601**



**ENVIRONMENTAL ENGINEERING, INC.**

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## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Abolghassem Razi, property owner of 3609 International Boulevard, Oakland, California, to comply with Alameda County Environmental Health Services requirements for the Third Quarter 2007 groundwater monitoring event.



Mansour Sepehr, Ph.D., P.E.  
Principal Hydrogeologist



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- Appendix C Chain of Custody Form and Laboratory Report for the Third Quarter 2007 Monitoring Event
- Appendix D Chain of Custody Forms and Laboratory Reports for the Groundwater Extraction Treatment System

# 1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this monitoring report on behalf of Mr. Abolghassem Razi, owner of Tony's Express Auto Service located at 3609 International Boulevard at the intersection of 36<sup>th</sup> Avenue in Oakland, California (the Site, Figure 1).

This report summarizes results of the Third Quarter 2007 groundwater monitoring event conducted at the Site on August 20 and 21, 2007, and includes laboratory analytical results for the groundwater samples.

A natural attenuation study was conducted during this monitoring event to evaluate whether petroleum hydrocarbons found in the groundwater were biodegrading.

Groundwater monitoring activities were performed in accordance with general guidelines of the Regional Water Quality Control Board and the Alameda County Environmental Health Services. A description of SOMA's groundwater monitoring procedures is included in Appendix A. Figure 2 shows well and riser locations.

This report also describes operation of the groundwater extraction system installed by SOMA in December 1999 and the vapor extraction system installed by SOMA in July 2000. System locations are shown in Figure 2.

## 1.1 Background

July 1993: Soil Tech Engineering removed one single-walled 10,000-gallon gasoline underground storage tank (UST), one single-walled 6,000-gallon gasoline UST, and one 550-gallon waste oil tank from the Site. Three double-walled USTs replaced them: currently, one 10,000-gallon double-walled UST and two 6,000-gallon double-walled USTs are beneath the Site. Figure 2 shows UST locations.

December 1997: Western Geo-Engineers conducted additional investigations and groundwater monitoring events. Results indicated elevated levels of petroleum hydrocarbons and methyl tertiary-butyl ether (MtBE) in the groundwater.

April 1999: Mr. Razi, owner, retained SOMA for groundwater monitoring, risk-based corrective action (RBCA) study, preparation of a corrective action plan (CAP), and soil and groundwater remediation at the Site. Results of the RBCA study indicated that the Site is a high-risk groundwater site; therefore, on- and off-site soil and groundwater required remedial action.

The source of petroleum hydrocarbons in the groundwater was believed to be the former USTs used to store gasoline at the Site. Results of the CAP study indicated that installation of a French drain combined with a vapor extraction system would be the most cost-effective alternative for Site remediation.

Late August 1999: SOMA installed a French drain and groundwater treatment system to prevent further migration of chemically impacted groundwater.

July 2000: SOMA installed a vapor extraction system.

January 2002: Environmental Fabric removed the former product dispensers and installed new ones.

July 25, 2003: SOMA installed an additional on-site extraction pump in the western French drain riser to create a capture zone in the region around the USTs and to contain off-site migration in the southwestern corner of the Site.

April 1, 2005: SOMA conducted a pilot test to evaluate use of ozone sparging to actively remediate groundwater at the Site. The test revealed that the unsaturated zone was permeable enough to allow operation of an ozone sparging system. However, ozone injection, especially in the region of more impacted wells MW-1 and MW-3 in the vicinity of the UST cavity, could potentially pose an explosion hazard. Therefore, based on safety concerns, air sparging technology was implemented for site remediation.

November 17 to 23, 2005: SOMA oversaw installation of the air sparge wells and vapor extraction wells by Woodward Drilling, of Rio Vista, California.

February 22, 2006 to March 6, 2006: SOMA oversaw installation of the air sparging system by ACRC, Inc., a construction company in San Ramon, California.

February 5, 2007: An extraction well, EX-1, was installed in the vicinity of the UST cavity due to the continued significant contaminant source within this region. The well diameter is 4 inches with an approximate depth of 20 feet.

April 2007: SOMA began extracting groundwater from the new groundwater extraction well EX-1.

Impacted groundwater from the well is being treated and discharged through the granular activated carbon (GAC) system. Increased groundwater contaminant removal within the UST cavity is being achieved since the startup of extraction from EX-1. Well and remedial line locations are shown in Figure 2.

## 2. RESULTS

Following are results of field measurements and laboratory analyses for the August 20 and 21, 2007 groundwater monitoring event.

### 2.1 Field Measurements

As shown in Table 1, depths to groundwater for the monitoring wells ranged from 11.47 feet in well MW-10 to 13.75 feet in MW-3. Corresponding groundwater elevations ranged from 26.47 feet in MW-12 to 29.80 feet in MW-5. Groundwater elevations for the center, east, and west risers were 25.12 feet, 27.34 feet, and 26.72 feet, respectively.

Figure 3 shows the groundwater elevation contour map. Groundwater flows toward the French drain at an approximate gradient of 0.066 feet/foot. The lowest site-wide groundwater elevation was measured in the center French drain riser. The French drain is providing a capture zone within the region of the UST cavity and in general has reduced off-site contaminant migration.

Field notes for physical, chemical and biodegradation parameters measured during this monitoring event are included in Appendix B.

The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor. The most energetically preferred electron acceptor for redox reactions is dissolved oxygen (DO). Evaluating distribution of electron acceptors can provide evidence of where, and to what extent, hydrocarbon biodegradation is occurring.

Upon equalization of the surrounding aquifer, when the purge cycle was terminated, DO concentrations ranged from 0.06 mg/L in well MW-12 to 1.02 mg/L in MW-1. Oxidation-reduction potential (ORP) showed negative redox potentials in all wells except for MW-2, MW-4R, MW-5, MW-6, MW-7, and MW-10. Oxidation of petroleum hydrocarbons could have occurred in the monitoring wells with negative redox potential, because it indicates that contaminants in groundwater are conducive to anaerobic biodegradation.

Ferrous iron concentrations, which can indicate anaerobic biodegradation, ranged from 0.0 mg/L in well MW-10 to the equipment maximum allowable tolerance range of 3.30 mg/L in MW-3 and MW-6.

Nitrate concentrations were not detected in MW-3, MW-4R, MW-7, MW-10 and MW-12.

High ferrous iron concentrations in combination with non-detectable nitrate levels indicate anaerobic biodegradation beneath the Site.



The absence of sulfate in the groundwater samples may indicate an anaerobic methanogenesis process. Sulfate was below the equipment tolerance level in wells MW-3, MW-4R, and MW-12. Detectable sulfate concentrations ranged from 1 mg/L in MW-6 to 17 mg/L in MW-2.

## 2.2 Laboratory Analysis

Pacific Analytical Laboratory analyzed groundwater samples for volatile organic compounds discussed below using EPA Method 8260B (Appendix C). Table 1 presents laboratory analysis results for groundwater samples collected during this monitoring event.

Total petroleum hydrocarbons as gasoline (TPH-g) was detected throughout the Site except at well MW-7. Detectable TPH-g concentrations ranged from 82.4 µg/L in MW-5 to 13,200 µg/L in MW-3.

In the more impacted MW-1, MW-3 and MW-6, the following concentration trends were observed.

- In MW-3, which is in the vicinity of the UST cavity, TPH-g has shown an increase. However, by comparing with the Third Quarter 2006 monitoring event, the current TPH-g concentration is significantly lower than Third Quarter 2006.
- Since the previous monitoring event, TPH-g concentration has decreased in MW-6.
- In comparison with the last several groundwater monitoring events, TPH-g concentrations showed a continuous declining pattern.

Refer to Table 1 for detailed TPH-g site concentration trends.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater. The majority of the TPH-g plume was in the vicinity of the UST cavity at wells MW-1 and MW-3, as well as east of the station building at MW-6. Capture zones have been established at the French drain and extraction well, which have decreased off-site migration. TPH-g decreased at both off-site wells, MW-10 and MW-12, since First Quarter 2007.

The following benzene, toluene, ethylbenzene, and total xylene (BTEX) concentration trends were observed during this monitoring event:

- Maximum concentration of benzene was reported in MW-3 at 2,240 µg/L. Benzene concentration was below laboratory detection limit in MW-2.
- Toluene was non-detectable in MW-2, MW-4R, MW-5, MW-7, MW-10 and MW-12.

- Ethylbenzene was non-detectable in MW-2.
- The highest benzene, toluene, ethylbenzene, and total xylenes were detected at MW-3 at 2,240 µg/L, 119 µg/L, 868 µg/L, and 983 µg/L, respectively.

Figure 5 shows the contour map of benzene concentrations in the groundwater. The majority of the benzene plume appears to be in the vicinity of the pump islands and USTs, at wells MW-1 and MW-3. Refer to Table 1 for benzene concentration trends.

MtBE was below the laboratory detection limit in wells MW-2, MW-4R, MW-5, MW-6, and MW-7. Detectable MtBE concentrations ranged from 20.3 µg/L in MW-12 to 172 µg/L in MW-1. Figure 6 shows the contour map of MtBE concentrations in the groundwater.

Refer to Table 1 for site-wide concentration trends. The laboratory report and chain of custody form for this monitoring event are included in Appendix C.

### **3. GROUNDWATER TREATMENT SYSTEM OPERATION**

The treatment system began operating on December 9, 1999. Since startup, 3,663,550 gallons of groundwater have been treated and discharged (as of September 28, 2007) into the East Bay Municipal Utility District (EBMUD) sewer system under the existing discharge permit.

As of January 9, 2004, the previously installed pneumatic downhole pumps in the western and center French drain risers were removed and replaced with electrical submersible pumps. On May 4, 2005, to maintain accurate recordings of the total flow through the system, a newer totalizer meter was installed. On September 29, 2005, the existing 2,000-pound carbon vessel was replaced with a newer 2,000-pound carbon vessel that was refurbished with new carbon; the 200-pound carbon drum was also replaced. The former 2,000-pound vessel had become rusted from prolonged use. A schematic diagram of the remediation system is displayed in Figure 7.

On February 19, 2007, a carbon change-out was conducted on the remedial system, during which the 2,000-pound vessel was refurbished with new carbon and the 200-pound carbon drum was replaced.

To reduce the hydrocarbon source region in the vicinity of the UST cavity, SOMA oversaw installation of extraction well EX-1 by Gregg Drilling & Testing, Inc. on February 5, 2007. On April 20, 2007, SOMA installed an electric submersible pump in well EX-1, connected it to the existing groundwater remediation system, and began extracting groundwater from the well. The pump is powered on the

same electrical circuit as the two existing pumps inside the French drain risers. Underground piping to the existing system influent surge tank conveys the extracted groundwater, which is then treated using GAC and discharged to the local sanitary sewer system, in accordance with the Site EBMUD discharge permit. Figure 2 shows the location of EX-1.

Table 2 presents the total volume of treated groundwater and the groundwater analytical results. The table shows that all effluent samples have remained below discharge limits set forth by EBMUD. The most current laboratory reports for the groundwater treatment system are included in Appendix D.

As of July 27, 2007, the treatment system has removed approximately 229 pounds of hydrocarbons and 87.2 pounds of MtBE from the groundwater at the site. Figure 8 shows approximate masses of TPH-g and MtBE removed from impacted groundwater during operation of the treatment system.

#### **4. OPERATION OF AIR SPARGING SYSTEM**

From February 22, 2006 to March 6, 2006, SOMA oversaw installation of the air sparging system, which consists of nine vapor extraction wells and three air sparge wells. The air sparge wells were installed in the vicinity of the UST cavity, pump islands, and near MW-6 (Figure 2). Figures 9 and 10 show the block diagrams of the air sparging and vapor extraction units. The operating permit for the soil vapor extraction (SVE) system was extended to August 2008 by the Bay Area Air Quality Management District.

Prior to installation of the air sparging wells in November 2005, SOMA collected air samples from previously existing SVE wells. Based on sample results, which were non-detectable, the lines from SVE wells P-4 and ISL-1 to the vacuum pump were closed. This allowed for greater vacuum at the more impacted SVE wells.

The air sparging system was initially started on March 15, 2006. However, due to close proximity of the system to a residential area, the system was modified to reduce noise level. Specifically, a timer was installed on the compressor to control operation hours of the air sparging system and limit operation to daytime hours. Currently, the system operates from 8 a.m. to 7 p.m. To further suppress noise, the existing blower unit, installed in 2000, was rebuilt and foam was placed around it as a noise suppressant.

To more effectively increase removal of contaminants in the soil, an additional vacuum blower was installed in series to the existing vacuum blower on July 24, 2006. Rain causes the water table to rise, thereby decreasing the actual layer of the unsaturated zone. Therefore, the actual mass of contaminants in the soil that can be removed by the remedial system is greatly reduced. Based on the

reduction in the unsaturated region, as well as a reduction in the mass of contaminant vapors removed from the soil, the remedial system was shut down on November 7, 2006.

On May 23, 2007, SOMA restarted the SVE and air sparge systems and resumed recording of field readings for these systems. Based on field measurements, it appeared that using both vacuum blowers in series on the same extraction manifold had little effect on the air flow rate into the system or the concentrations of hydrocarbons in the extracted gases. Therefore, the inlet piping from the well field was divided into two manifolds with the intent to use each vacuum pump to extract from a separate set of wells. However, due to alterations made by non-SOMA personnel in the facility's main electrical supply panel without SOMA's knowledge, the operation of both vacuum pumps at the same time was not possible because the resultant electrical load tripped the circuit breaker that includes the SVE system. Subsequent operation of the SVE system has been limited to one blower at a time.

On August 7, 2007, SOMA used a new pressure gauge to confirm previous reading regarding air pressures generated in the air sparge system. The new gauge indicated significantly higher pressures existed at the compressor output and into each well's air supply piping than had been indicated by the existing (faulty) gauges. Therefore, new pressure gauges will be installed in the air sparge system for more accurate monitoring of system performance.

As shown in Table 3, approximately 967.2 pounds of hydrocarbons as vapor have been removed from the impacted soil, as of September 28, 2007. Table 3 also outlines the history of the SVE system.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

Findings of the Third Quarter 2007 groundwater monitoring event are summarized below.

1. In general, based on the low groundwater elevations observed at the French drain, a capture zone remains established at this location. The addition of well EX-1 created additional capture zone around the UST cavity.
2. Groundwater contaminants remained almost the same in comparison with the previous monitoring event. It appears that MW-1 and MW-3 are located within the remaining hotspots of the groundwater chemical plume.
3. It appears that MtBE concentrations in groundwater are diminishing across the site and that current maximum concentrations are below the Environmental Screening Levels (ESLs) for industrial land use type where groundwater is not a potential drinking water source.

4. The bioattenuation study confirmed occurrence of biodegradation beneath the Site. Based on this study, affected areas appear to be in the vicinity of the USTs, around wells MW-1 and MW-3 and the eastern section of the Site, around MW-6.
5. The source area remains in the vicinity of the UST cavity, pump islands, and eastern section of the mechanic shop at wells MW-1, MW-3, and MW-6. However, during this monitoring event the following concentration trends were observed.
  - The maximum benzene concentration was reported in MW-3 at 2,240 µg/L. Benzene concentration was below the laboratory detection limit in MW-2.
  - Toluene was non-detectable in MW-2, MW-4R, MW-5, MW-7, MW-10 and MW-12.
  - Ethylbenzene was non-detectable in MW-2.
  - The highest benzene, toluene, ethylbenzene, and total xylenes were detected at MW-3 at 2,240 µg/L, 119µg/L, 868 µg/L, and 983 µg/L, respectively.
6. In general, the GAC and SVE systems have effectively reduced the peak contaminant levels beneath the Site. Since initial startup, approximately 229 pounds of hydrocarbons and 87.2 pounds of MtBE have been removed from the groundwater (as of July 27, 2007). Approximately 967.2 pounds of petroleum hydrocarbons have been removed from the vadose zone.

Based on results of this monitoring event, SOMA recommends:

1. Continuing operation of the pump-and-treat system to maintain the removal rate of contaminant masses in groundwater.
2. Continuing operation of the SVE and air sparging remedial systems to maintain the removal rate of contaminants in soil in the unsaturated region.
3. Temporary discontinuance of testing for ferrous iron, nitrate, and sulfate parameters. Due to the extent of biodegradation data generated during quarterly monitoring events, SOMA has adequately characterized Site groundwater.
4. Continuing the quarterly monitoring programs to better understand seasonal variations in groundwater quality conditions.

## 6. REPORT LIMITATIONS

This report is the summary of work done by SOMA including observations and descriptions of Site conditions. It includes analytical results produced by Pacific Analytical Laboratory for the current monitoring event and by Curtis & Tompkins, Ltd. for previous events, and summaries of data produced by environmental consultants for previous monitoring events. Numbers and locations of wells were selected to provide the required information, but may not be completely representative of entire Site conditions. All conclusions and recommendations are based on laboratory analysis results. Conclusions beyond those specifically stated in this document should not be inferred from this report.

SOMA warrants that the services were provided in accordance with generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

# **TABLES**

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-1	10/5/1994	97.99	15.39	82.60	320,000	24,000	21,000	2,600	15,000	NA
	12/5/1994	97.99	9.32	88.67	80,000	3,800	6,600	2,300	11,000	NA
	3/2/1995	97.99	8.07	89.92	32,000	190	160	150	490	NA
	6/6/1995	97.99	9.53	88.46	21,000	950	650	570	150	NA
	10/5/1995	97.99	13.29	84.70	59,000	140	130	140	390	NA
	1/2/1996	97.99	10.07	87.92	30,000	71	73	50	120	NA
	4/1/1996	97.99	8.29	89.70	31,000	98	120	63	170	NA
	12/3/1996	97.99	11.67	86.32	NA	NA	NA	NA	NA	NA
	4/9/1997	97.99	11.14	86.85	NA	NA	NA	NA	NA	NA
	12/10/1997	97.99	9.30	88.69	27,000	2,300	2,100	1,400	5,100	NA
	9/10/1998	97.99	13.58	84.41	NA	NA	NA	NA	NA	NA
	12/16/1998	97.99	11.10	86.89	65,000	2,500	2,400	2,300	9,500	160
	3/16/1999	97.99	9.91	88.08	17,000	480	860	850	3,000	190
	6/10/1999	97.99	11.10	86.89	25,000	1,110	1,460	1,330	5,265	77
	8/23/1999	97.99	13.35	84.64	19,750	678	463	893	2,938	38
	11/9/1999	97.99	14.45	83.54	10,000	693	15	<5	3,471	50
	2/7/2000	97.99	11.20	86.79	40,000	2,280	1,380	8	6,130	47
5/31/2000	97.99	11.49	86.50	15,610	610	350	310	1,400	<5	
8/9/2000	97.99	13.36	84.63	11,000	638	<5	<5	<5	17.1	
11/2/2000	97.99	13.20	84.79	7,050	435	52	ND	689	10	



**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-1 cont.	3/13/2001	97.99	8.96	89.03	14,570	1,005	440	108	2,030	16
	5/22/2001	97.99	11.50	86.49	4,900	310	81	82	388	150
	8/8/2001	97.99	13.51	84.48	14,820	852	342	568	1,606	2,000
	11/19/2001	97.99	14.01	83.98	41,000	2,700	5,100	1,000	4,570	74,000
	2/21/2002	97.99	10.11	87.88	260,000	3,700	12,000	3,700	19,200	23,000
	5/7/2002	97.99	10.86	87.13	53,000	4,400	5,100	1300	7,000	32,000
	7/30/2002	40.11	12.80	27.31	29,000	2,400	2,500	920	4,400	13,000
	10/2/2002	40.11	15.50	24.61	27,000	2,200	2,400	950	4,500	34,000
	1/3/2003	40.11	9.73	30.38	62,000	3,500	6,000	1600	9,700	48,000
	5/3/2003	40.11	9.71	30.40	59,000	3,100	2,700	1500	7,000	14,000
	7/24/2003	40.11	12.44	27.67	36,000	4,800	1,800	1300	5,600	25,000
	10/22/2003	40.11	13.89	26.22	630,000 H	3,300	1900 C	3600	27,700	15,000
	1/22/2004	40.11	10.45	29.66	39,000	3,100	1,600	950	4,300	8,500
	4/1/2004	40.11	11.49	28.62	41,000	1,200	350C	830	2,740	4,300
	8/20/2004	40.11	13.81	26.30	22,000	2,000	220	560	3,090	6,900
	12/8/2004	40.11	11.10	29.01	22,790	1,634	319	895	2,851	5,504
	3/16/2005	40.11	8.40	31.71	44,400	3,150	811	1,090	2,856	7,180
	5/16/2005	40.11	9.72	30.39	33,900	3,440	1,700	1,090	2,276	3,210
	7/14/2005	40.11	11.31	28.80	50,100	4,350	1,760	1,500	2,853	3,980
	10/13/2005	40.11	13.51	26.60	43,100	1,960	325	639	3,080	3,000
	1/3/2006	40.11	8.82	31.29	55,000	1,100	510	1,100	4,070	2,200
	4/7/2006	40.11	7.12	32.99	42,500	1,780	1,010	1,610	2,449	2,110
	9/8/2006	40.11	12.64	27.47	37,200	3,280	1,460	1,290	2,685	2,180
	11/29/2006	40.11	12.49	27.62	29,400	2,490	782	1,510	1,815	1,540
	2/27/2007	40.11	9.68	30.43	17,000	1,400	452	989	1,583	1,150
	5/24/2007	40.11	11.58	28.53	8,630	575	121	306	687	235
<b>8/21/2007</b>	<b>40.11</b>	<b>13.34</b>	<b>26.77</b>	<b>7,480</b>	<b>544</b>	<b>87</b>	<b>356</b>	<b>537</b>	<b>172</b>	

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-2	10/1/1994	98.58	15.36	83.22	NA	NA	NA	NA	NA	NA
	12/1/1994	98.58	8.60	89.98	NA	NA	NA	NA	NA	NA
	3/6/1995	98.58	7.68	90.90	490	3	3	3	1	NA
	6/5/1995	98.58	9.59	88.99	8,000	220	330	350	660	NA
	10/2/1995	98.58	13.42	85.16	46,000	160	130	93	240	NA
	1/3/1996	98.58	9.93	88.65	46,000	160	130	93	240	NA
	4/3/1996	98.58	8.13	90.45	27,000	0.1	92	44	13	NA
	12/9/1996	98.58	11.67	86.91	6,200	11	7	2	14	ND
	4/10/1997	98.58	11.40	87.18	53,000	150	110	37	0.12	ND
	12/30/1997	98.58	9.04	89.54	35,000	4,900	4,900	1,600	7,000	NA
	6/30/1998	98.58	NM	NM	25,000	2,000	2,000	1,300	4,300	NA
	9/29/1998	98.58	13.58	85.00	29,000	290	180	160	360	<0.5
	12/16/1998	98.58	10.94	87.64	26,000	1,400	1,600	880	9,500	<5
	3/16/1999	98.58	7.60	90.98	7,600	730	830	610	1,900	55
	6/10/1999	98.58	11.24	87.34	3,500	290	428	211	744	ND
	8/23/1999	98.58	13.50	85.08	60	6	9	4	11	ND
	11/9/1999	98.58	14.10	84.48	<50	<5	<5	<5	<5	<5
	2/7/2000	98.58	9.85	88.73	6,400	372	639	46	134	8
	5/31/2000	98.58	10.88	87.70	2,930	130	330	130	570	<5
	8/9/2000	98.58	13.03	85.55	<50	<5	<5	<5	<5	<5
	11/2/2000	98.58	12.60	85.98	ND	ND	ND	ND	ND	ND
	3/13/2001	98.58	8.55	90.03	932	18	34	1.3	225	ND
	5/22/2001	98.58	11.00	87.58	870	37	75	55	179	2.7
8/8/2001	98.58	13.53	85.05	125	4	4	3	11	ND	
11/19/2001	98.58	13.43	85.15	470	13	64	22	83	14	
2/21/2002	98.58	8.99	89.59	1,700	26	180	95	360	<2	
5/7/2002	98.58	10.59	87.99	1,800	31	140	110	348	<2	
7/30/2002	40.71	12.70	28.01	180	11	6.3	9.4	27	<2.0	
10/2/2002	40.71	14.23	26.48	<50	<0.5	<0.5	<0.5	0.64	<2.0	

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**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-2 cont.	1/3/2003	40.71	8.66	32.05	510	5	30.0	24.0	92	<2.0
	5/3/2003	40.71	9.17	31.54	1,300	14	88.0	78.0	271	<2.0
	7/24/2003	40.71	12.23	28.48	220	3.9	4.3	7	14.5	<2.0
	10/22/2003	40.71	13.65	27.06	170 H	1.9	<0.5	2.2	2.2	<2.0
	1/22/2004	40.71	9.54	31.17	860	7.2	37	50	151	<2.0
	4/1/2004	40.71	10.80	29.91	730	6.6	19	38	87	<2.0
	8/20/2004	40.71	13.54	27.17	220	2.2	1.9	7	11.7	<0.5
	12/8/2004	40.71	10.52	30.19	99	1.7	3.3	8.3	25.1	<0.5
	3/15/2005	40.71	8.06	32.65	5,690	18.7	120	315	876	<1.0
	5/17/2005	40.71	9.10	31.61	6,320	12.5	75	429	557	<2.15
	7/14/2005	40.71	11.10	29.61	7,680	14.1	46.3	522	471	<2.15
	10/13/2005	40.71	13.25	27.46	562	4.25	3.28	15	8.29	<0.50
	1/3/2006	40.71	6.72	33.99	340	2.5	4.4	22	50.2	<0.5
	4/7/2006	40.71	5.75	34.96	6,160	24	84.8	385	474	<2.15
	9/7/2006	40.71	12.58	28.13	114	2.45	<2.0	8.62	6.85	<0.5
	11/29/2006	40.71	12.26	28.45	293	5.02	3.25	24	15.15	<0.5
	2/27/2007	40.71	8.78	31.93	3,190	18.30	49.20	396	466	<1.0
	5/23/2007	40.71	11.09	29.62	<50.0	<0.500	<2.00	6.22	4.68	<0.500
	8/21/2007	40.71	13.31	27.40	241	3.12	<2.00	17.6	7.59	<0.500
MW-3	10/5/1994	97.78	15.79	81.99	3,000,000	190,000	740,000	310,000	130,000	NA
	12/2/1994	97.78	9.79	87.99	250,000	19,000	22,000	4,400	28,000	NA
	3/6/1995	97.78	8.69	89.09	350,000	20,000	42,000	5,800	36,000	NA
	6/5/1995	97.78	10.25	87.53	350,000	20,000	42,000	5,800	36,000	NA
	10/2/1995	97.78	12.91	84.87	150,000	510	410	210	65	NA
	1/3/1996	97.78	10.55	87.23	150,000	510	410	210	650	NA
	4/3/1996	97.78	8.76	89.02	NA	NA	NA	NA	NA	NA
	12/3/1996	97.78	12.02	85.76	NA	NA	NA	NA	NA	NA

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MW-3 cont.	4/1/1997	97.78	11.73	86.05	NA	NA	NA	NA	NA	NA
	12/1/1997	97.78	NM	NM	NA	NA	NA	NA	NA	NA
	9/1/1998	97.78	14.68	83.10	NA	NA	NA	NA	NA	NA
	12/16/1998	97.78	11.55	86.23	51,000	5,700	3,900	1,200	6,300	410
	3/16/1999	97.78	8.44	89.34	45,000	4,100	6,400	1,000	6,100	470
	6/10/1999	97.78	11.8	85.98	46,000	8,245	6,425	1,015	7,173	274
	8/23/1999	97.78	13.85	83.93	64,000	7,484	8,052	1,744	9,749	141
	11/9/1999	97.78	14.7	83.08	26,000	3,218	1,319	<5	6,697	126
	2/7/2000	97.78	10.95	86.83	44,000	6,090	3,360	<5	5,780	276
	5/31/2000	97.78	11.68	86.10	68,000	15,000	8,900	1,500	7,400	<5
	8/9/2000	97.78	13.73	84.05	76,000	8,900	5,636	883	7,356	176
	11/2/2000	97.78	13.4	84.38	48,000	6,789	4,816	676	7,258	83
	3/13/2001	97.78	9.43	88.35	14,754	2,250	140	ND	1,284	110
	5/22/2001	97.78	11.81	85.97	44,000	5,400	3,100	1,400	6,400	200
	8/8/2001	97.78	14.1	83.68	41,750	3,485	2,670	1,255	5,420	52
	11/19/2001	97.78	14.32	83.46	NA	NA	NA	NA	NA	NA
	2/21/2002	97.78	10.01	87.77	62,000	6,000	7,600	1,900	9,200	12,000
	5/7/2002	97.78	11.28	86.50	54,000	6,700	3,200	1,800	7,100	9,100
	7/30/2002	40.91	13.25	27.66	45,000	8,900	1,700	1,600	5,600	2,600
	10/2/2002	40.91	14.98	25.93	70,000	4,900	5,100	2,100	11,900	21,000
	1/3/2003	40.91	9.79	31.12	35,000	2,900	1,300	860	5,200	13,000
	5/3/2003	40.91	10.01	30.90	48,000	5,800	1,400	1,600	7,400	5,900
	7/24/2003	40.91	12.94	27.97	31,000	4,700	990	1,400	5,200	16,000
	10/22/2003	40.91	14.29	26.62	30,000	4,400	930	1,600	5,400	7,400
	1/22/2004	40.91	10.57	30.34	45,000	2,100	850	1,500	5,700	2,900
	4/1/2004	40.91	11.84	29.07	31,000	4,200	590	1,600	4,370	900
	8/20/2004	40.91	14.24	26.67	21,000	3,400	370	1,000	2,350	1,100
	12/8/2004	40.91	11.32	29.59	6,441	978	109	490	941	201
	3/16/2005	40.91	8.87	32.04	22,300	1,280	456	729	1,870	2,400
	5/17/2005	40.91	9.96	30.95	17,600	764	302	735	1,227	1,800
7/14/2005	40.91	11.50	29.41	34,600	1,390	492	1,460	2,054	1,090	
10/13/2005	40.91	13.78	27.13	15,000	1,290	267	675	838	893	

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MW-3 cont.	1/3/2006	40.91	7.50	33.41	8,700	650	98	330	860	280
	4/7/2006	40.91	6.74	34.17	16,800	677	239	802	1,018	564
	9/8/2006	40.91	12.95	27.96	26,400	1,660	381	933	1,545	332
	11/29/2006	40.91	12.78	28.13	15,100	2,080	381	1,290	1,624	247
	2/27/2007	40.91	9.43	31.48	5,950	1,100	116	531	500	170
	5/24/2007	40.91	11.63	29.28	8,240	1,360	116	540	696	37
	8/21/2007	40.91	13.75	27.16	13,200	2,240	119	868	983	36.4
	MW-4	1/3/1996	97.85	10.11	87.74	9,300	230	110	10	29
4/3/1996		97.85	8.35	89.50	1,900	12	8	5	14	NA
12/9/1996		97.85	11.58	86.27	4,000	14	6	4	12	ND
4/10/1997		97.85	11.23	86.62	ND	ND	ND	ND	ND	ND
12/30/1997		97.85	9.43	88.42	2,300	410	270	100	1,500	NA
6/30/1998		97.85	NM	NM	1,700	780	160	54	200	NA
9/29/1998		97.85	13.64	84.21	6,200	910	77	68	200	18
12/16/1998		97.85	11.13	86.72	1,400	590	33	28	94	24
3/16/1999		97.85	8.46	89.39	600	200	35	19	56	11
6/10/1999		97.85	11.30	86.55	1,000	298	44	19	64	13
8/23/1999		97.85	13.20	84.65	660	497	41	54	145	6
11/9/1999		97.85	14.10	83.75	<50	<5	<5	<5	<5	<5
2/7/2000		97.85	11.25	86.60	7,800	1,200	61	<5	781	<5
5/31/2000		97.85	11.46	86.39	552	42	19	16	67	<5
8/9/2000		97.85	13.35	84.50	370	5.08	<5	<5	<5	<5
11/2/2000		97.85	13.05	84.80	ND	5.30	ND	ND	8	ND
3/13/2001		97.85	9.24	88.61	62	ND	ND	3.2	8.7	ND
5/22/2001	97.85	11.50	86.35	80	12	1.9	4.1	9.8	ND	
8/8/2001	97.85	13.80	84.05	133	12	2.2	3.9	9	ND	
11/19/2001	97.85	13.68	84.17	670	180	5	17	53	ND	

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MW-4 cont.	2/21/2002	97.85	9.97	87.88	450	63	4.1	22	28.7	<2
	5/7/2002	97.85	10.81	87.04	570	72	29	27	74	<2
	7/30/2002	40.01	12.62	27.39	450	20	24	19	74	<2.0
	10/2/2002	40.01	14.34	25.67	320	69	0.99	9	5.49	<2.0
	1/3/2003	40.01	9.79	30.22	310	49	2.5	13	26.7	<2.0
	7/24/2003	40.01	12.44	27.57	<50	1	<0.5	<0.5	<0.5	<0.5
	10/22/2003	40.01	13.72	26.29	70	12	<0.5	4.7	3.0	<2.0
	1/22/2004	40.01	10.55	29.46	230	18	2.1	8.1	17.1	<2.0
	4/1/2004	40.01	11.39	28.62	<50	3.8	<0.5	1.6	1.9	<2.0
	8/20/2004	40.01	13.68	26.33	<50	1.6	<0.5	0.66	0.53	<2.0
	12/7/2004	40.01	10.95	29.06	<50	1.3	<0.5	2.80	<1.0	<0.5
	3/15/2005	40.01	8.61	31.40	661	72	4.13	39.7	48.42	<0.5
MW-4R	5/17/2005	40.34	9.88	30.46	7,780	170	11.1	192	121.2	<0.5
	7/14/2005	40.34	11.61	28.73	847	25.3	<2.0	28.2	10.9	<0.5
	10/13/2005	40.34	13.73	26.61	785	35.5	<2.0	48.2	8.35	<0.50
	1/3/2006	40.34	9.18	31.16	2,500	65	3.8	70	62	<0.5
	4/6/2006	40.34	7.70	32.64	852	42.4	2.25	28.4	17.13	<0.5
	9/7/2006	40.34	12.96	27.38	97.7	9.29	<2.0	4.05	1.03	<0.5
	11/28/2006	40.34	12.70	27.64	914	87	<2.0	15.10	10.40	<0.5
	2/26/2007	40.34	9.78	30.56	561	38.4	<2.0	41.30	9.67	<0.5
	5/23/2007	40.34	11.36	28.98	351	35.8	<2.00	23.20	4.82	<0.500
	8/20/2007	40.34	13.45	26.89	223	24.7	<2.00	9.15	2.54	<0.500
MW-5	10/2/1995	99.04	13.57	85.47	1,500	1	1	4	5	NA
	1/3/1996	99.04	10.03	89.01	1,500	1	1	4	5	NA
	4/3/1996	99.04	8.24	90.80	780	1	1	5	4	NA
	12/9/1996	99.04	11.48	87.56	NA	NA	NA	NA	NA	NA
	4/10/1997	99.04	11.35	87.69	NA	NA	NA	NA	NA	NA

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MW-5 cont.	12/30/1997	99.04	9.15	89.89	790	82	66	59	160	NA
	6/30/1998	99.04	NM	NM	400	<5	<5	15	<10	NA
	9/29/1998	99.04	13.82	85.22	270	2	1	3	3	<.5
	12/16/1998	99.04	11.20	87.84	1,400	1	1	ND	2	ND
	3/16/1999	99.04	7.73	91.31	650	3	1	16	2	10
	6/10/1999	99.04	11.50	87.54	270	4	3	6	4	ND
	8/23/1999	99.04	13.55	85.49	120	ND	4	ND	4	ND
	11/9/1999	99.04	14.30	84.74	<50	<5	<5	<5	<5	<5
	2/7/2000	99.04	9.85	89.19	70	<5	<5	<5	7	<5
	5/31/2000	99.04	11.03	88.01	627.4	7.4	24	12	32.4	<5
	8/9/2000	99.04	13.22	85.82	<50	<5	<5	<5	<5	<5
	11/2/2000	99.04	13.55	85.49	ND	ND	ND	ND	ND	ND
	3/13/2001	99.04	8.67	90.37	382	6.1	1.9	6.6	5.9	ND
	5/22/2001	99.04	11.12	87.92	180	ND	ND	2.1	0.57	4.4
	8/8/2001	99.04	13.79	85.25	258	1	1.1	3.4	7.3	1.4
	11/19/2001	99.04	13.72	85.32	920	17	160	26	135	40
	2/21/2002	99.04	9.04	90.00	290	3.5	2	6.2	6.2	<0.5
	5/7/2002	99.04	10.69	88.35	160	<0.5	0.78 C	2	2.15	2.3
	7/30/2002	41.16	12.94	28.22	110	<0.5	<0.5	0.77	<0.5	<0.5
	10/20/2002	41.16	14.51	26.65	77	<0.5	<0.5	<0.5	<0.5	<2.0
	1/3/2003	41.16	8.73	32.43	450 Y	<0.5	<0.5	4	0.54	2.1
	5/3/2003	41.16	9.24	31.92	130	<0.5	<0.5	1	<0.5	3.1
	7/24/2003	41.16	12.45	28.71	300	<0.5	1.9 C	0.76	<0.5	<2.0
	10/22/2003	41.16	13.89	27.27	460 H	<0.5	<0.5	<0.5	<0.5	1.9
1/22/2004	41.16	9.60	31.56	160	<0.5	<0.5	0.55 C	<0.5	<5.0	
4/1/2004	41.16	11.06	30.10	280	<0.5	0.74C	0.62	<0.5	2.1	
8/20/2004	41.16	13.75	27.41	250	<0.5	<0.5	<0.5	<0.5	2	
12/7/2004	41.16	10.73	30.43	150	<0.5	<0.5	<0.5	<1.0	2.6	

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MW-5 cont.	3/15/2005	41.16	8.18	32.98	496	<0.5	<0.5	<0.5	<1.0	1.91
	5/17/2005	41.16	9.22	31.94	360	<0.5	<0.5	<0.5	<1.0	1.72
	7/14/2005	41.16	11.30	29.86	267	<0.5	<2.0	<0.5	<1.0	1.74
	10/13/2005	41.16	13.57	27.59	404	<0.50	<2.0	<0.50	<1.0	0.93
	1/3/2006	41.16	6.81	34.35	170	2.2	<0.5	1.8	3.1	1.1
	4/7/2006	41.16	5.81	35.35	449	<0.5	<2.0	0.53	<1.0	1.16
	9/7/2006	41.16	12.78	28.38	185	<0.5	<2.0	2.02	<1.0	<0.5
	11/28/2006	41.16	12.62	28.54	158	0.64	<2.0	<0.5	<2.0	<0.5
	2/26/2007	41.16	8.92	32.24	78.2	<0.5	<2.0	<0.5	<2.0	0.52
	5/23/2007	41.16	11.36	29.80	58.4	<0.5	<2.0	4.36	<2.0	<0.5
	8/20/2007	41.16	13.52	27.64	82.4	0.52	<2.0	4.49	2.3	<0.5
MW-6	10/1/1995	98.77	13.94	84.83	NA	NA	NA	NA	NA	NA
	1/1/1996	98.77	10.55	88.22	120,000	350	310	200	610	NA
	4/1/1996	98.77	8.76	90.01	NA	NA	NA	NA	NA	NA
	12/1/1996	98.77	12.04	86.73	NA	NA	NA	NA	NA	NA
	4/1/1997	98.77	11.76	87.01	NA	NA	NA	NA	NA	NA
	12/1/1997	98.77	9.30	89.47	NA	NA	NA	NA	NA	NA
	9/1/1998	98.77	14.10	84.67	NA	NA	NA	NA	NA	NA
	12/1/1998	98.77	11.60	87.17	NA	NA	NA	NA	NA	NA
	3/16/1999	98.77	8.40	90.37	37,000	3,900	4,300	1,600	7,000	180
	6/10/1999	98.77	11.90	86.87	18,500	2,060	1,650	735	3,170	ND
	8/23/1999	98.77	13.90	84.87	42,000	3,806	3,649	1,554	7,996	10
	11/9/1999	98.77	14.75	84.02	40,000	1,084	130	<5	10,940	<5
	2/7/2000	98.77	10.95	87.82	17,000	1,360	521	<5	4,150	6
8/9/2000	98.77	13.78	84.99	24,000	1,306	870	<5	5,162	<5	
11/2/2000	98.77	13.40	85.37	19,000	1,387	618	ND	5,250	ND	



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**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-6 cont.	3/13/2001	98.77	9.49	89.28	15,637	713	459	238	2,363	ND
	5/22/2001	98.77	11.82	86.95	27,000	760	450	1,600	4,270	ND
	8/8/2001	98.77	NM	NM	NA	NA	NA	NA	NA	NA
	11/19/2001	98.77	NM	NM	NA	NA	NA	NA	NA	NA
	2/21/2002	98.77	9.92	88.85	14,000	440	180	750	1,020	<10
	5/7/2002	98.77	11.33	87.44	10,000	400	160	470	970	<2
	7/30/2002	40.92	13.28	27.64	24,000	1,000	410	1,400	3,770	<20
	10/20/2002	40.92	14.93	25.99	22,000	1,200	620	1,300	2,800	<20
	1/3/2003	40.92	9.78	31.14	12,000	730	230	740	1,690	<20
	5/3/2003	40.92	9.92	31.00	150,000 H	1,400	780	2,500	8,700	<40
	7/24/2003	40.92	12.98	27.94	29,000	1,600	520	1,500	4,400	<200
	10/22/2003	40.92	14.35	26.57	36,000	1,300	430	1,600	4,570	<40
	1/22/2004	40.92	10.60	30.32	30,000	1,300	320	1,500	3,040	<50
	4/1/2004	40.92	11.80	29.12	99,000	1,700	580 C	2,200	5,200	<50
	8/20/2004	40.92	14.36	26.56	12,000	580	130	520	1,020	<10
	12/8/2004	40.92	11.22	29.70	12,631	649	134	1,009	2,037	<2.15
	3/16/2005	40.92	8.94	31.98	18,300	546	126	705	1,069	<2.15
	5/17/2005	40.92	10.02	30.90	38,500	1,290	395	1,550	1,652	<5.50
	7/15/2005	40.92	11.78	29.14	50,100	1,510	409	1,900	1,920	<5.50
	10/13/2005	40.92	14.04	26.88	9,620	513	97.4	523	422.3	<2.15
	1/3/2006	40.92	7.86	33.06	13,000	260	79.0	680	750	<4.2
	4/7/2006	40.92	6.93	33.99	18,200	650	151	918	715	<5.5
	9/8/2006	40.92	13.12	27.80	18,600	604	98.80	639	659	<2.15
11/28/2006	40.92	12.95	27.97	20,300	656	96.30	1,060	760	7.86	
2/27/2007	40.92	9.68	31.24	8,440	249	36.30	697	316.8	<2.15	
5/24/2007	40.92	11.59	29.33	11,400	292	34.8	493	278.5	<2.15	
8/21/2007	<b>40.92</b>	<b>13.88</b>	<b>27.04</b>	<b>9,480</b>	<b>727</b>	<b>87.6</b>	<b>761</b>	<b>590</b>	<b>&lt;2.15</b>	

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Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-7	10/2/1995	97.83	12.95	84.88	NA	10	12	17	NA	3,300
	1/3/1996	97.83	9.57	88.26	3,300	9	12	17	45	NA
	4/3/1996	97.83	7.75	90.08	1,900	2	3	5	7	NA
	12/9/1996	97.83	10.97	86.86	NA	NA	NA	NA	NA	NA
	4/10/1997	97.83	12.95	84.88	NA	NA	NA	NA	NA	NA
	12/30/1997	97.83	8.65	89.18	1,400	130	98	75	200	NA
	6/30/1998	97.83	NM	NM	620	4	<5	9	<10	NA
	9/29/1998	97.83	13.09	84.74	1,800	1	1	1	2	68
	12/16/1998	97.83	10.52	87.31	990	5	10	5	20	160
	3/16/1999	97.83	7.00	90.83	300	3	1	1	1	62
	6/10/1999	97.83	10.70	87.13	320	3	7	4	3	26
	8/23/1999	97.83	12.80	85.03	570	5	10	ND	ND	ND
	11/9/1999	97.83	13.25	84.58	290	<5	9	<5	<5	12
	2/7/2000	97.83	9.50	88.33	80	<5	<5	<5	<5	23
	5/31/2000	97.83	10.52	87.31	494.9	4.9	22	4.2	21.9	29
	8/9/2000	97.83	12.63	85.20	80	<5	<5	<5	<5	11.7
	11/2/2000	97.83	11.95	85.88	50	ND	ND	ND	ND	9.1
	3/13/2001	97.83	8.04	89.79	82	0.97	ND	0.76	ND	78
	5/22/2001	97.83	10.60	87.23	370	ND	9.1	1.3	2.3	28
	8/8/2001	97.83	13.02	84.81	610	3.7	3	6.2	18.9	10
	11/19/2001	97.83	12.83	85.00	1,700	24	220	41	205	69
	2/21/2002	97.83	8.91	88.92	380	<0.5	2.5	2	3.8	78
	5/7/2002	97.83	10.13	87.70	560	15	28.0	9.2	44.0	37
	7/30/2002	39.94	12.15	27.79	270	5.3	1.3 C	2.3	8.1	46
	10/20/2002	39.94	13.74	26.20	350	<0.5	2.1 C	<0.5	3.1 C	43
	1/3/2003	39.94	8.45	31.49	220 Y	<0.5	<0.5	0.78	0.55	19
5/3/2003	39.94	7.69	32.25	280	<0.5	<0.5	<0.5	<0.5	11	
7/24/2003	39.94	11.72	28.22	230	<0.5	1.3 C	<0.5	0.63	5.9	
10/22/2003	39.94	13.10	26.84	460	<0.5	<0.5	<0.5	<0.5	5.0	

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Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-7 cont.	1/22/2004	39.94	9.23	30.71	380	<0.5	1.4 C	<0.5	<0.5	<5.0
	4/1/2004	39.94	10.40	29.54	480	<0.5	2.5 C	<0.5	0.90	0.62
	8/20/2004	39.94	12.92	27.02	410	<0.5	.81 C	<0.5	<0.5	1.70
	12/7/2004	39.94	10.28	29.66	96	<0.5	<0.5	<0.5	<1.0	<0.5
	3/16/2005	39.94	7.44	32.50	209	<0.5	<0.5	<0.5	<1.0	1.74
	5/16/2005	39.94	8.53	31.41	262	4.85	2.19	2.36	4.24	0.73
	7/14/2005	39.94	10.61	29.33	753	20.6	11.9	16.8	33.23	2.36
	10/13/2005	39.94	12.80	27.14	1,690	5.3	2.71	12.6	54	1.93
	1/3/2006	39.94	6.39	33.55	250 Y	0.80	<0.5	0.61	<0.5	1.1
	4/7/2006	39.94	8.10	31.84	3,440	0.64	<2.0	17	<1.0	<0.5
	9/7/2006	39.94	14.52	25.42	320	2.87	<2.0	4.76	1.34	<0.5
	11/28/2006	39.94	12.17	27.77	774	1.81	<2.0	6.76	3.03	<0.5
	2/26/2007	39.94	10.41	29.53	1,240	<0.5	<2.0	6.83	<2.0	<0.5
	5/23/2007	39.94	10.16	29.78	265	<0.5	<2.0	5.38	<2.0	<0.5
	<b>8/20/2007</b>	<b>39.94</b>	<b>12.98</b>	<b>26.96</b>	<b>&lt;50.0</b>	<b>0.78</b>	<b>&lt;2.0</b>	<b>4.87</b>	<b>2.36</b>	<b>&lt;0.5</b>
MW-8	10/2/1995	97.25	12.86	84.39	NA	NA	NA	NA	NA	NA
	1/3/1996	97.25	9.79	87.46	94,000	310	250	180	480	NA
	4/3/1996	97.25	7.98	89.27	58,000	250	170	140	330	NA
	12/9/1996	97.25	11.13	86.12	27,000	88	43	44	80	ND
	4/10/1997	97.25	12.95	84.30	24,000	86	55	50	100	ND
	12/30/1997	97.25	8.95	88.30	28,000	6,000	1,600	2,100	4,700	NA
	6/30/1998	97.25	NM	NM	54,000	4,600	2,800	3,500	7,300	NA
	9/29/1998	97.25	13.02	84.23	NA	NA	NA	NA	NA	NA
	12/16/1998	97.25	10.75	86.50	61,000	6,300	1,700	2,200	4,400	1,300
	3/16/1999	97.25	7.58	89.67	22,000	1,800	470	2,000	2,000	820
	6/10/1999	97.25	10.80	86.45	39,500	3,610	1,635	2,175	5,913	988
	8/23/1999	97.25	12.75	84.50	58,000	5,379	2,438	3,001	6,960	639
	11/9/1999	97.25	13.65	83.60	10,500	92	<5	<5	3,414	769
	2/7/2000	97.25	10.85	86.40	44,200	1,080	617	<5	4,160	240
5/31/2000	97.25	11.15	86.10	25,940	940	130	1,600	3,960	75	
8/9/2000	97.25	12.87	84.38	22,000	632	5.38	<5	2,686	37.3	
11/2/2000	97.25	12.55	84.70	3,000	278	350	209	980	21	

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MW-8 cont.	3/13/2001	97.25	8.75	88.50	2,360	81	16	71	270	221
	8/8/2001	97.25	12.97	84.28	5,620	153	46	373	345	174
	11/19/2001	97.25	13.19	84.06	13,000	600	270	750	1,200	400
	2/21/2002	97.25	9.88	87.37	240,000	1,400	<25	4,200	6,560	<100
	5/7/2002	97.25	10.32	86.93	9,000	360	56	560	622	2,100
	7/30/2002	39.38	11.79	27.59	8,400	340	78	530	517	1,200
	10/20/2002	39.38	13.80	25.58	18,000	950	75	1,400	1,269	700
	1/3/2003	39.38	9.48	29.90	8,100	300	29	370	302	1,100
	5/3/2003	39.38	9.48	29.90	18,000	380	33 C	1,000	516	540
	7/24/2003	39.38	11.92	27.46	12,000	460	54 C	910	435	890
	10/22/2003	39.38	13.09	26.29	16,000	830	87	2,000	675	280
	1/22/2004	39.38	10.32	29.06	18,000	330	37 C	860	239	500
	4/1/2004	39.38	11.23	28.15	12,000	240	26 C	650	128.8 C	<4
	8/20/2004	39.38	13.02	26.36	6,000	310	27	660	56.8 C	<4
	12/8/2004	39.38	10.79	28.59	6,650	171	15	360	35	166
	3/15/2005	39.38	7.62	31.76	11,400	125	21	418	55.3	865
	5/16/2005	39.38	9.15	30.23	10,100	122	13.2	440	34.73	406
	7/14/2005	39.38	10.81	28.57	11,600	213	27.8	854	71.51	184
	10/13/2005	39.38	12.81	26.57	6,590	256	27.7	655	48.50	375
	1/3/2006	39.38	7.40	31.98	4,800	53	5.2	130	21	210
	4/6/2006	39.38	6.04	33.34	8,240	82.5	14.6	364	28.06	771
	9/7/2006	39.38	12.15	27.23	4,130	86.80	7.32	173	19.73	48.60
	11/28/2006	39.38	11.92	27.46	3,680	198	15.10	313	23.82	149
2/27/2007	39.38	8.52	30.86	5,690	122	15.10	455	33.62	203	
5/24/2007	39.38	10.79	28.59	3,400	32.60	4.35	177	14.65	69.5	
8/20/2007	39.38	12.71	26.67	1,310	58.60	4.22	106	7.20	26.8	
MW-10	12/1/1996	94.54	10.44	84.10	NA	NA	NA	NA	NA	NA
	4/10/1997	94.54	10.07	84.47	1,000	21	9	3	3	ND
	12/30/1997	94.54	8.78	85.76	10,000	5,300	76	1,100	780	NA

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MW-10 cont.	9/29/1998	94.54	11.93	82.61	9,900	5,400	66	970	620	2,600
	12/16/1998	94.54	10.19	84.35	8,700	3,800	51	790	420	1,800
	3/16/1999	94.54	7.30	87.24	4,100	15	28	420	250	2,800
	6/10/1999	94.54	9.95	84.59	4,200	1,168	34	264	154	1,195
	8/23/1999	94.54	11.60	82.94	3,250	2,135	97	600	248	1,800
	11/9/1999	94.54	12.50	82.04	2,950	1,134	20	<5	70	652
	2/7/2000	94.54	9.25	85.29	<50	<5	<5	<5	<5	448
	5/31/2000	94.54	9.45	85.09	4,400	1,500	25	390	107.1	580
	8/9/2000	94.54	11.52	83.02	6,800	1,055	26	54	53.8	1,283
	11/2/2000	94.54	11.35	83.19	ND	ND	ND	ND	ND	145
	3/13/2001	94.54	8.07	86.47	4,935	969	18	41	72	630
	5/22/2001	94.54	9.80	84.74	2,900	630	11	200	31	270
	8/8/2001	94.54	11.64	82.90	242	35	1	11	2	64
	11/19/2001	94.54	12.06	82.48	3,500	900	260	310	258	410
	2/21/2002	94.54	8.28	86.26	4,700	1,100	20	370	63.7	500
	5/7/2002	94.54	9.49	85.05	3,400	660	13	260	48.0	270
	7/30/2002	36.71	10.93	25.78	160	26	0.55	8.1	1.0	72
	10/20/2002	36.71	12.54	24.17	550	130	3.00	31.0	2.7	70
	1/3/2003	36.71	8.23	28.48	17,000	870	11	290	27	270
	5/3/2003	36.71	8.30	28.41	2,500	650	10	190	15.81 C	180
7/24/2003	36.71	10.76	25.95	750	160	4	58	6.66 C	79	
10/22/2003	36.71	11.91	24.80	2,000	410	11	170	9.14 C	110	
1/22/2004	36.71	8.91	27.80	4,000	600	15	280	15.3 C	110	
4/1/2004	36.71	9.62	27.09	5,100	580	<1	330	26.4	160	
8/20/2004	36.71	11.50	25.21	3,400	550	13	240	17.0	100	
12/7/2004	36.71	9.29	27.42	2,524	556	10	184	16.0	144	

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MW-10 cont.	3/15/2005	36.71	7.48	29.23	4,340	354	6.07	166	17.1	258	
	5/16/2005	36.71	8.24	28.47	4,750	415	6.87	254	10.4	126	
	7/14/2005	36.71	9.78	26.93	6,050	594	9.53	297	10.7	190	
	10/13/2005	36.71	11.32	25.39	6,230	811	11.3	355	5.6	167	
	1/3/2006	36.71	6.81	29.90	2,000	350	6.0	210	16	88	
	4/6/2006	36.71	6.03	30.68	600	86.5	<2.0	59.1	2.36	30.4	
	9/7/2006	36.71	10.90	25.81	6,960	360	<8.60	253	11.30	103	
	11/28/2006	36.71	10.92	25.79	2,800	305	<8.6	228	<8.6	72.8	
	2/26/2007	36.71	8.02	28.69	9,470	1,400	29.3	1,260	32.60	263.0	
	5/23/2007	36.71	9.54	27.17	860	138	2.45	69.2	4.65	30.9	
	8/20/2007	36.71	11.47	25.24	86.6	2.88	<2.00	5.98	2.30	2.68	
	MW-11	12/1/1996	95.94	11.99	83.95	NA	NA	NA	NA	NA	NA
		4/1/1997	95.94	11.47	84.47	NA	NA	NA	NA	NA	NA
12/30/1997		95.94	10.40	85.54	710	66	97	59	190	NA	
6/30/1998		95.94	NM	NM	1,100	45	24	71	100	NA	
9/29/1998		95.94	13.24	82.70	170	7	1	4	9	22	
12/16/1998		95.94	11.58	84.36	650	27	4	25	33	>0.5	
3/16/1999		95.94	8.81	87.13	710	30	6	53	84	8	
6/10/1999		95.94	11.50	84.44	4,600	1,240	35	290	159	1,291	
8/23/1999		95.94	12.75	83.19	170	4	4	ND	6	ND	
11/9/1999		95.94	13.85	82.09	<50	<5	<5	<5	<5	<5	
2/7/2000		95.94	13.60	82.34	700	20	15	<5	35	<5	
8/9/2000		95.94	14.87	81.07	590	10.5	5.94	<5	7.75	<5	
11/2/2000		95.94	12.55	83.39	60	ND	ND	ND	ND	ND	
3/13/2001		95.94	9.61	86.33	273	8.6	2.1	10	14	ND	
5/22/2001		95.94	11.15	84.79	280	12	8.3	3.3	9.8	12	
8/8/2001		95.94	13.04	82.90	NA	NA	NA	NA	NA	NA	
11/19/2001		95.94	13.48	82.46	300	7.9	26	5.1	28.9	ND	
2/21/2002	95.94	9.69	86.25	560	34	20	32	37.3	< 0.5		
5/7/2002	95.94	10.99	84.95	280	16	3	7.6	7.6	<2		
7/30/2002	NS	13.24	NC	120	5.6	<0.5	0.61	0.53	<2.0		
10/20/2002	NS	NM	NC	NA	NA	NA	NA	NA	NA		

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MW-11 cont.	1/3/2003	NS	9.76	NC	700	32	5.7	25	14.10	<2.0
	5/3/2003	NS	9.66	NC	280	17	1.5 C	8	4.10	<2.0
	7/24/2003	NS	12.30	NC	340	19 C	3.2	0.58	0.89	<2.0
	10/22/2003	NS	13.38	NC	210	5.0 C	<0.5	<0.5	<0.5	<0.5
	1/22/2004	NS	NM	NC	NA	NA	NA	NA	NA	NA
	4/1/2004	NS	NM	NC	NA	NA	NA	NA	NA	NA
	8/20/2004	NS	NM	NC	NA	NA	NA	NA	NA	NA
	12/7/2004	NS	10.54	NC	486	24	3.0	18	4.00	<0.5
	3/15/2005	NS	NM	NC	NA	NA	NA	NA	NA	NA
	5/16/2005	NS	NM	NC	NA	NA	NA	NA	NA	NA
	7/14/2005	NS	NM	NC	NA	NA	NA	NA	NA	NA
	10/13/2005	NS	NM	NC	NA	NA	NA	NA	NA	NA
	1/3/2006	NS	NM	NC	NA	NA	NA	NA	NA	NA
	4/6/2006	NS	7.72	NC	872	19.8	3.63	37.5	3.28	<0.5
MW-12	11/9/1999	94.84	13.20	81.64	80	<5	<5	<5	<5	229
	2/7/2000	94.84	10.20	84.64	4,000	351	37	<5	24	513
	5/31/2000	94.84	10.48	84.36	3,930	230	10	34	12	200
	8/9/2000	94.84	12.07	82.77	1,730	15.4	12.4	<5	<5	185
	11/2/2000	94.84	12.05	82.79	1,010	9.3	19.0	ND	7.40	215
	3/13/2001	94.84	9.04	85.80	1,517	13	5.6	5.5	11	214
	5/22/2001	94.84	10.52	84.32	31,000	1,200	ND	95	165	1,900
	8/8/2001	94.84	12.24	82.60	2,090	71	1.8	3	4	142
	11/19/2001	94.84	12.76	82.08	3,000	81	69	13	73	120
	2/21/2002	94.84	8.78	86.06	2,500	77	<0.5	5.7	7.4	95
	5/7/2002	94.84	10.26	84.58	2,700	74	<0.5	20	5.1	94
	7/30/2002	36.84	10.93	25.91	2,200	57	<0.5	11	2.6	100
	10/20/2002	36.84	13.13	23.71	2,600	71	<0.5	<0.5	10.3	84

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
MW-12 cont.	1/3/2003	36.84	9.23	27.61	2,300	65	<0.5	1	4.00	86
	5/3/2003	36.84	9.24	27.60	2,200	58	<0.5	4.2 C	4.1 C	96
	7/24/2003	36.84	11.44	25.40	2,200	32 C	16 C	<0.5	9.20	66
	10/22/2003	36.84	12.50	24.34	2200 H	31 C	<0.5	<0.5	3.5 C	49
	1/22/2004	36.84	9.56	27.28	1,700	24 C	14 C	3	5.00	72
	4/1/2004	36.84	10.21	26.63	2,000	11 C	<0.5	<0.5	5 C	36
	8/20/2004	36.84	12.00	24.84	1,900	8.9 C	<0.5	<0.5	1.1 C	26
	12/7/2004	36.84	10.03	26.81	1,018	2	<0.5	<0.5	<1.0	26
	3/15/2005	36.84	8.49	28.35	1,890	4.25	<0.5	6.38	<1.0	30.6
	5/16/2005	36.84	9.07	27.77	1,080	<0.5	<0.5	<0.5	<1.0	20.6
	7/14/2005	36.84	10.43	26.41	1,580	2.71	<2.0	3.33	<1.0	29.3
	10/13/2005	36.84	12.08	24.76	1,560	0.74	<2.0	<0.50	<1.0	28.1
	1/3/2006	36.84	7.89	28.95	480 Y	13	<0.5	<0.5	<0.5	30
	4/6/2006	36.84	7.92	28.92	1,310	<0.5	<2.0	<0.5	<1.0	31.1
	9/7/2006	36.84	11.44	25.40	1,220	0.61	<2.0	2.69	<1.0	23.7
	11/28/2006	36.84	11.61	25.23	543	2.15	<2.0	1.72	<2.0	27.6
	2/26/2007	36.84	9.04	27.80	5,580	9.81	11	8.52	31.3	14.2
5/23/2007	36.84	10.37	26.47	350	<0.5	<2.0	4.74	2.32	18.9	
8/20/2007	<b>36.84</b>	<b>12.03</b>	<b>24.81</b>	<b>556</b>	<b>0.68</b>	<b>&lt;2.0</b>	<b>4.81</b>	<b>2.41</b>	<b>20.3</b>	
FDC	2/7/2000	97.10	15.40	81.70	NA	NA	NA	NA	NA	NA
	5/31/2000	97.10	12.41	84.69	NA	NA	NA	NA	NA	NA
	8/9/2000	97.10	15.70	81.40	NA	NA	NA	NA	NA	NA
	11/2/2000	97.10	16.85	80.25	NA	NA	NA	NA	NA	NA
	3/13/2001	97.10	9.39	87.71	NA	NA	NA	NA	NA	NA
	5/22/2001	97.10	15.85	81.25	NA	NA	NA	NA	NA	NA
	8/8/2001	97.10	13.30	83.80	NA	NA	NA	NA	NA	NA
	11/19/2001	97.10	17.82	79.28	NA	NA	NA	NA	NA	NA



**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
FDC cont.	2/21/2002	97.10	16.74	80.36	NA	NA	NA	NA	NA	NA
	5/7/2002	97.10	10.36	86.74	NA	NA	NA	NA	NA	NA
	7/30/2002	39.35	11.93	27.42	NA	NA	NA	NA	NA	NA
	10/20/2002	39.35	13.74	25.61	NA	NA	NA	NA	NA	NA
	1/3/2003	39.35	15.18	24.17	NA	NA	NA	NA	NA	NA
	5/3/2003	39.35	16.20	23.15	NA	NA	NA	NA	NA	NA
	7/24/2003	39.35	16.45	22.90	NA	NA	NA	NA	NA	NA
	10/22/2003	39.35	16.53	22.82	NA	NA	NA	NA	NA	NA
	1/22/2004	39.35	13.74	25.61	NA	NA	NA	NA	NA	NA
	4/1/2004	39.35	16.30	23.05	NA	NA	NA	NA	NA	NA
	8/20/2004	39.35	16.05	23.30	NA	NA	NA	NA	NA	NA
	12/7/2004	39.35	14.56	24.79	NA	NA	NA	NA	NA	NA
	3/16/2005	39.35	13.55	25.80	NA	NA	NA	NA	NA	NA
	5/17/2005	39.35	14.88	24.47	NA	NA	NA	NA	NA	NA
	7/14/2005	39.35	14.32	25.03	NA	NA	NA	NA	NA	NA
	10/13/2005	39.35	14.99	24.36	NA	NA	NA	NA	NA	NA
	1/3/2006	39.35	11.82	27.53	NA	NA	NA	NA	NA	NA
	4/6/2006	39.35	13.60	25.75	NA	NA	NA	NA	NA	NA
	9/7/2006	39.35	15.05	24.30	NA	NA	NA	NA	NA	NA
	11/28/2006	39.35	15.47	23.88	NA	NA	NA	NA	NA	NA
2/26/2007	39.35	13.01	26.34	NA	NA	NA	NA	NA	NA	
5/23/2007	39.35	14.23	25.12	NA	NA	NA	NA	NA	NA	
<b>8/20/2007</b>	<b>39.35</b>	<b>15.92</b>	<b>23.43</b>	<b>23.43</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
FDE	5/31/2000	97.90	13.22	84.68	NA	NA	NA	NA	NA	NA
	8/9/2000	97.90	NM	NM	NA	NA	NA	NA	NA	NA
	11/2/2000	97.90	12.75	85.15	NA	NA	NA	NA	NA	NA
	3/13/2001	97.90	9.14	88.76	NA	NA	NA	NA	NA	NA
	5/22/2001	97.90	13.05	84.85	NA	NA	NA	NA	NA	NA
	8/8/2001	97.90	13.69	84.21	NA	NA	NA	NA	NA	NA
	11/19/2001	97.90	13.92	83.98	NA	NA	NA	NA	NA	NA

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**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
FDE cont.	2/21/2002	97.90	13.18	84.72	NA	NA	NA	NA	NA	NA
	5/7/2002	97.90	11.18	86.72	NA	NA	NA	NA	NA	NA
	7/30/2002	40.06	12.81	27.25	NA	NA	NA	NA	NA	NA
	10/20/2002	40.06	14.53	25.53	NA	NA	NA	NA	NA	NA
	1/3/2003	40.06	13.13	26.93	NA	NA	NA	NA	NA	NA
	5/3/2003	40.06	11.79	28.27	NA	NA	NA	NA	NA	NA
	7/24/2003	40.06	13.10	26.96	NA	NA	NA	NA	NA	NA
	10/22/2003	40.06	13.85	26.21	NA	NA	NA	NA	NA	NA
	1/22/2004	40.06	13.27	26.79	NA	NA	NA	NA	NA	NA
	4/1/2004	40.06	13.20	26.86	NA	NA	NA	NA	NA	NA
	8/20/2004	40.06	14.97	25.09	NA	NA	NA	NA	NA	NA
	12/7/2004	40.06	14.25	25.81	NA	NA	NA	NA	NA	NA
	3/16/2005	40.06	12.50	27.56	NA	NA	NA	NA	NA	NA
	5/17/2005	40.06	13.93	26.13	NA	NA	NA	NA	NA	NA
	7/14/2005	40.06	13.98	26.08	NA	NA	NA	NA	NA	NA
	10/13/2005	40.06	13.60	26.46	NA	NA	NA	NA	NA	NA
	1/3/2006	40.06	9.83	30.23	NA	NA	NA	NA	NA	NA
	4/6/2006	40.06	11.30	28.76	NA	NA	NA	NA	NA	NA
	9/7/2006	40.06	13.52	26.54	NA	NA	NA	NA	NA	NA
	11/28/2006	40.06	13.73	26.33	NA	NA	NA	NA	NA	NA
2/26/2007	40.06	11.20	28.86	NA	NA	NA	NA	NA	NA	
5/23/2007	40.06	12.72	27.34	NA	NA	NA	NA	NA	NA	
8/20/2007	40.06	13.49	26.57	NA	NA	NA	NA	NA	NA	
FDW	5/31/2000	96.90	12.20	84.70	NA	NA	NA	NA	NA	NA
	8/9/2000	96.90	NM	NM	NA	NA	NA	NA	NA	NA
	11/2/2000	96.90	15.50	81.40	NA	NA	NA	NA	NA	NA
	3/13/2001	96.90	10.12	86.78	NA	NA	NA	NA	NA	NA
	5/22/2001	96.90	13.50	83.40	NA	NA	NA	NA	NA	NA
	8/8/2001	96.90	13.08	83.82	NA	NA	NA	NA	NA	NA
	11/19/2001	96.90	14.31	82.59	NA	NA	NA	NA	NA	NA

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**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
FDW cont.	2/21/2002	96.90	12.78	84.12	NA	NA	NA	NA	NA	NA
	5/7/2002	96.90	10.14	86.76	NA	NA	NA	NA	NA	NA
	7/30/2002	39.16	11.79	27.37	NA	NA	NA	NA	NA	NA
	10/20/2002	39.16	13.50	25.66	NA	NA	NA	NA	NA	NA
	1/3/2003	39.16	12.13	27.03	NA	NA	NA	NA	NA	NA
	5/3/2003	39.16	10.84	28.32	NA	NA	NA	NA	NA	NA
	7/24/2003	39.16	12.12	27.04	NA	NA	NA	NA	NA	NA
	10/22/2003	39.16	13.48	25.68	NA	NA	NA	NA	NA	NA
	1/22/2004	39.16	13.58	25.58	NA	NA	NA	NA	NA	NA
	4/1/2004	39.16	13.90	25.26	NA	NA	NA	NA	NA	NA
	8/20/2004	39.16	15.69	23.47	NA	NA	NA	NA	NA	NA
	12/7/2004	39.16	14.85	24.31	NA	NA	NA	NA	NA	NA
	3/16/2005	39.16	13.10	26.06	NA	NA	NA	NA	NA	NA
	5/17/2005	39.16	14.60	24.56	NA	NA	NA	NA	NA	NA
	7/14/2005	39.16	15.10	24.06	NA	NA	NA	NA	NA	NA
	10/13/2005	39.16	13.34	25.82	NA	NA	NA	NA	NA	NA
	1/3/2006	39.16	12.61	26.55	NA	NA	NA	NA	NA	NA
	4/6/2006	39.16	12.80	26.36	NA	NA	NA	NA	NA	NA
	9/7/2006	39.16	15.80	23.36	NA	NA	NA	NA	NA	NA
	11/28/2006	39.16	14.10	25.06	NA	NA	NA	NA	NA	NA
2/26/2007	39.16	10.21	28.95	NA	NA	NA	NA	NA	NA	
5/23/2007	39.16	12.44	26.72	NA	NA	NA	NA	NA	NA	
8/20/2007	<b>39.16</b>	<b>15.08</b>	<b>24.08</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
EX-1	2/27/2007	40.51	9.05	31.46	15,900	1,400	1,190	725	2,880	185
	5/23/2007	40.51	15.37	25.14	NA	NA	NA	NA	NA	NA
	8/20/2007	<b>40.51</b>	<b>17.42</b>	<b>23.09</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**3609 International Boulevard, Oakland, California**

Monitoring Well	Date	Top Of Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE <sup>2</sup> EPA 8260B (µg/L)
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Notes:

<sup>1</sup> Top of casing elevations were re-surveyed to comply with the EDF requirements for electronic reporting of data to the State Water Resources Control Board Database on August 9, 2002.

<sup>2</sup> MtBE was analyzed using the EPA Method 8021B and confirmed using 8260B.

C Presence confirmed, but confirmation concentration differed by more than a factor of two.

H: Heavier hydrocarbons may have contributed to the quantitation.

NA: Not Analyzed

NA: Not Applicable, Well/Drain did not exist at time of sampling

NC: Not calculated. No top of casing elevation was available for MW-11.

ND, < : Not Detected above laboratory reporting limits.

NM: Not Measured

NS: Not Surveyed.

Y: Sample exhibits fuel pattern which does not resemble standard.

FDC: French drain center riser.

FDE: French drain east riser.

FDW: French drain west riser.

Well MW-4R replaced damaged well MW-4 on April 11, 2005. The first time well MW-4R was monitored was in the Second Quarter 2005

NS: Not surveyed. Well MW-11 was not surveyed due to obstructions surrounding well.

Well EX-1 was installed in the First Quarter 2007 and initially monitored in February 2007.

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For <b>PSP #1</b> <sup>1</sup> and <b>GAC-1</b> Samples					
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
<b>2007</b>								
July	7/27/2007	3,643,880	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
May	5/17/2007	3,590,070	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
April	4/27/2007	3,561,230	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
	4/20/2007	3,546,800	Startup of groundwater extraction from the new extraction well EX-1. As of this date, groundwater is being extracted from three wells at the site (EX-1, West Riser, and Center Riser).					
March	3/16/2007	3,528,090	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
February	2/22/2007	3,510,560	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
	2/19/2007	3,508,300	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
January	1/16/2007	3,488,140	<0.5 1.37	<50 <50	<0.5 1.68	<2.0 <2.0	<0.5 1.25	<2.0 <2.0
<b>2006</b>								
December	12/22/2006	3,469,890	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
November	11/20/2006	3,455,980	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<2.0 <2.0
October	10/18/2006	3,447,850	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
September	9/27/2006	3,441,500	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
August	8/14/2006	3,425,340	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
July	7/24/2006	3,414,800	<0.5 <0.5	<50 <50	<0.5 0.94	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
June	6/15/2006	3,387,940	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
	6/7/2006	3,379,880	<0.5 2.89	<50 <50	<0.5 5.3	<2.0 <2.0	<0.5 1.24	<1.0 4.91
May	5/18/2006	3,350,260	replaced existing 200 gallon holding tank with newer 200 gallon tank					

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For PSP #1 <sup>1</sup> and GAC-1 Samples					
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
<b>2006</b>								
May	5/11/2006	3,337,750	<0.5 0.61	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
April	4/19/2006	3,268,110	<0.5 1.66	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
	4/10/2006	3,236,770	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
March	3/10/2006	3,220,570	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
February	2/10/2006	3,186,590	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
January	1/4/2006	3,122,610	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
<b>2005</b>								
December	12/9/2005	3,081,750	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
November	11/14/2005	3,072,540	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
October	10/17/2005	3,065,260	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
September	9/29/2005	3,060,640	Replaced existing 2000 lb carbon vessel with newer 2000 lb vessel, also replaced 55 gallon polishing vessel					
	9/12/2005	3,055,676	<0.5 <0.5	<50 <50	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
August	8/8/2005	3,042,586	<0.5 0.51	<200 <200	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
July	7/7/2005	3,026,010	<0.5 <0.5	<200 <200	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
June	6/9/2005	3,000,386	<0.5 0.61	<200 <200	<0.5 <0.5	<2.0 <2.0	<0.5 <0.5	<1.0 <1.0
May	5/9/2005	2,971,430	<0.5 <0.5	<200 <200	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1.0 <1.0
	5/4/2005	2,964,270	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel totalizer changed at meter reading of 2,189,270					
April	4/4/2005	2,904,500	<0.5 <0.5	<200 <200	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1.0 <1.0

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For PSP #1 <sup>1</sup> and GAC-1 Samples					
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
<b>2005</b>								
March	3/21/2005	2,874,170	<0.5 <0.5	<200 <200	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1.0 <1.0
February	2/14/2005	2,828,000	55 Gallon Drum Changed Out					
	2/7/2005	2,819,000	<5.0 <5.0	<50 <50	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0
January	1/19/2005	2,775,000	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
	1/3/2005	2,730,480	3.6 3.8	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
<b>2004</b>								
December	12/6/2004	2,667,620	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1.0 <1.0
November	11/8/2004	2,631,600	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
October	10/13/2004	2,606,420	< 2.0 <2.0	< 50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
September	9/13/2004	2,594,390	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
August	8/25/2004	2,586,010	55 Gallon Drum Changed Out					
	8/9/2004	2,581,250	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
July	7/13/2004	2,568,830	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
	7/21/2004	2,564,710	55 Gallon Drum Changed Out					
June	6/14/2004	2,549,470	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
May	5/26/2004 5/10/2004 5/17/2004 5/5/2004	2,530,000 2,488,760 2,518,910 2,500,650	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel Semi Annual Treatment System Meeting With Ebmud Replaced 55-gallon polishing vessel and restarted the system Carbon Changed Out and 55 Gallon Drum Changed Out					
	5/3/2004	2,497,350	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
April	4/15/2004	2,436,190	< 5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For <b>PSP #1</b> <sup>1</sup> and <b>GAC-1</b> Samples					
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
<b>2004</b>								
March	3/17/2004	2,376,200	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
February	2/24/2004	2,276,770	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
January	1/27/2004	2,165,220	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	1/13/2004	2,116,720	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
<b>2003</b>								
December	12/8/2003	2,092,330	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
November	11/17/2003	2,087,670	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	11/3/2003	2,079,460	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
October	10/13/2003	2,073,060	5.3 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	10/1/2003	2,072,610	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
September	9/15/2003	2,056,910	<5.0 6	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	9/2/2003	2,040,040	<5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
August	8/19/2003	2,021,040	<5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
July	7/21/2003	1,995,240	< 5.0 40	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	7/9/2003	1,990,260	< 5.0 36	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
June	6/18/2003	1,978,560	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
	6/10/2003	1,972,780	< 5.0 <5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
May	5/21/2003	1,951,830	< 5.0 < 5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	5/1/2003	1,918,270	< 5.0 < 5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
April	4/11/2003	1,882,440	< 5.0 < 5.0	< 5.0 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0



**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For <b>PSP #1</b> <sup>1</sup> and <b>GAC-1</b> Samples						
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)	
<b>2003</b>									
March	3/19/2003	1,846,490	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
February	2/25/2003 2/19/2003	1,804,960 1,791,720	replaced 55-gallon polishing vessel with new 55 gallon carbon drum						< 5.0 < 5.0
January	1/27/2003	1,733,500	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	1/2/2003	1,675,600	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
<b>2002</b>									
December	12/10/2002	1,672,870	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
November	11/22/2002	1,668,650	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	11/13/2002	1,664,780	replaced gasket on top of 2000 lb GAC vessel, slight leak was detected						
	11/7/2002	1,663,880	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel						
October	10/16/02 <sup>3</sup>	1,661,590	< 310 < 0.5	2,000 Y Z < 50	< 310 < 0.5	< 310 < 0.5	< 310 < 0.5	< 310 < 0.5	
September	9/19/2002	1,653,600	< 5 < 5	< 50 < 50	< 5 < 5	< 5 < 5	< 5 < 5	< 5 < 5	
August	8/23/2002	1,641,650	1 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	
July	7/23/2002	1,632,834	<5.0 < 5.0	< 50 < 50	<5.0 < 5.0	<5.0 < 5.0	<5.0 < 5.0	<5.0 < 5.0	
June	6/24/2002	1,610,050	1.7 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	
May	5/30/2002	1,571,630	< 0.5 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	
	5/20/2002	1,548,000	removed newly installed compressor, installed another compressor						
	5/8/2002	1,538,850	installed new compressor						
	5/1/2002	1,529,650	installed new 55 gallon GAC Vessel						
April	4/24/2002	1,528,740	< 0.5 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	
	4/1/2002	1,478,500	repaired valve plate assembly on compressor						

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For <b>PSP #1</b> <sup>1</sup> and <b>GAC-1</b> Samples					
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
<b>2002</b>								
March	3/25/2002 3/18/2002 3/14/2002	1,478,420 NR 1,478,330	performed carbon change-out on treatment system replaced piston on compressor compressor not building up pressure					
February	2/27/2002	1,449,830	< 0.5 1.1	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
January	1/22/2002	1,381,370	< 2.0 < 2.0	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
<b>2001</b>								
December	12/12/2001	1,311,340	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
November	11/2/2001	1,272,660	ND 0.6	ND ND	ND ND	ND ND	ND ND	ND ND
September	9/28/2001	NA	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
August	8/22/2001	1,243,100	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
July	7/26/2001  7/11/2001	1,227,270  1,226,730	ND ND NA NA	ND ND NA NA	ND ND NA NA	ND ND NA NA	ND ND NA NA	ND ND NA NA
June	6/29/2001  6/26/2001 6/16/2001  6/7/2001	1,224,600  NR 1,216,580  1,216,580	NA ND NA NA	NA ND NA NA	NA ND NA NA	NA ND NA NA	NA ND NA NA	NA ND NA NA
			installed new compressor compressor not working, repaired compressor					
May	5/30/2001  5/23/2001  5/17/2001  5/10/2001  5/5/2001	1,205,198  1,194,390  1,182,360  1,166,850  1,151,600	NA NA NA ND ND NA NA	NA NA NA ND ND NA NA	NA NA NA ND ND NA NA	NA NA NA ND ND NA NA	NA NA NA ND ND NA NA	NA NA NA ND ND NA NA
April	4/28/2001  4/21/2001  4/11/2001  4/6/2001	1,135,690  1,113,570  1,082,700  1,065,540	NA NA NA ND NA NA	NA NA NA ND NA NA	NA NA NA ND NA NA	NA NA NA ND NA NA	NA NA NA ND NA NA	NA NA NA ND NA NA

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For PSP #1 <sup>1</sup> and GAC-1 Samples						
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)	
<b>2001</b>									
March	3/29/2001	1,036,330	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
	3/21/2001	1,036,070	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
	system was re-started								
	3/17/2001	1,035,100	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
	belt replaced on compressor								
	3/13/2001	1,032,500	ND NA	ND NA	ND NA	ND NA	ND NA	ND NA	
	3/2/2001	996,520	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
	3/1/2001	NR	system re-started after carbon change-out						
February	2/28/2001	NR	Carbon Change-out was performed on GAC-1, washed algae from holding tank, cleaned 2000 lb GAC, re-started system System shut down for maintenance and cleaning.						
	2/10/2001	975,490							
January	1/29/2001	957,880	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	
<b>2000</b>									
December	12/5/2000	883,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	
November	11/24/2000	NR	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	
	11/1/2000	842,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	
October	10/1/2000	809,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	
August	8/27/2000	781,000	ND	ND	ND	ND	ND	ND	
	8/24/2000	778,000	totalizer changed at meter reading of 775,000						
July	7/26/2000	726,000	ND	ND	ND	ND	ND	ND	
	7/19/2000	718,000	ND	ND	ND	ND	ND	ND	
	7/13/2000	712,000	ND	ND	ND	ND	ND	ND	
	7/7/2000	706,000	ND	ND	ND	ND	ND	ND	

**Table 2**  
**Total Volume of Water Treated, Historical Operational Data,**  
**and Laboratory Analytical Results for PSP #1 and GAC-1 Samples**  
**3609 International Boulevard, Oakland, California**

Month	Date	Effluent Totalizer Reading (gallons)	Lab Results For <b>PSP #1</b> <sup>1</sup> and <b>GAC-1</b> Samples						
			MtBE <sup>2</sup> (ug/L)	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)	
<b>2000</b>									
June	6/29/2000	700,000	ND	ND	ND	ND	ND	ND	
	6/21/2000	682,220	ND	ND	ND	ND	ND	ND	
May	6/16/2000	669,720	ND	ND	ND	ND	ND	ND	
	6/10/2000	651,200	ND	ND	ND	ND	ND	ND	
	5/31/2000	629,000	ND	ND	ND	ND	ND	ND	
	5/23/2000	603,700	ND	ND	ND	ND	ND	ND	
	5/18/2000	570,000	ND	ND	ND	ND	ND	ND	
	5/10/2000	530,400	ND	ND	ND	ND	ND	ND	
April	4/30/2000	488,300	ND	ND	ND	ND	ND	ND	
	4/18/2000	485,300	ND	ND	ND	ND	ND	0.51	
	compressor stopped, system shut down until April 29, 2000								
	4/10/2000	440,200	ND	ND	ND	ND	ND	ND	
	4/4/2000	390,100	ND	ND	ND	ND	ND	ND	
	4/2/2000	NR	performed a carbon change-out on GAC-1						
March	3/31/2000	NR	replaced GAC-2 with a special GAC designed for removal of MtBE						
	3/24/2000	388,000	ND	ND	ND	ND	ND	ND	
	3/17/2000	357,100	ND	ND	ND	ND	ND	ND	
	3/10/2000	329,000	ND	ND	ND	ND	ND	ND	
	3/3/2000	300,000	transfer overheated, repaired pump, restarted system 3/6/00						
February	2/25/2000	274,000	ND	ND	ND	ND	ND	ND	
	2/18/2000	233,000	ND	ND	ND	ND	ND	ND	
	2/11/2000	190,000	ND	ND	ND	ND	ND	ND	
	2/4/2000	160,800	ND	ND	ND	ND	ND	ND	
January	1/28/2000	130,600	ND	ND	ND	ND	ND	ND	
	1/21/2000	103,435	ND	ND	ND	ND	ND	ND	
	1/17/2000	NR	GAC-1 was replaced with 2,000 lb GAC unit						
	1/14/2000	83,500	185	ND	ND	ND	ND	ND	
<b>1999</b>									
December	12/23/1999	51,680	1486	NA	ND	ND	ND	ND	
			ND	NA	ND	ND	ND	ND	
	12/16/1999	30,450	963	NA	ND	ND	ND	ND	
			ND	NA	ND	ND	ND	ND	
	12/9/1999	9,000	230	ND	ND	ND	ND	ND	
Pumping began on December 6, 1999									

Notes:

- The designator "Effluent" used on sampling and laboratory documents refers to samples collected from PSP #1.
  - MTBE was analyzed using EPA Method 8260B, prior to the September 2003. After September 2003, MtBE was only analyzed by EPA Method 8021B.
  - Lab data as shown for Oct. 2002 is erroneous data. During lab analysis a high detection of 2-Butanone was detected in only the effluent sample. The influent sample for 2-Butanone was at only 20 ppb. This caused a high dilution factor causing a high non-detectable value. The high TPH-g value was misrepresentative due to the Y and Z flags.
- ND, < : Not Detected above laboratory reporting limits  
 NA: Not Analyzed  
 NR: Not recorded. Totalizer reading not recorded.  
 Y: Sample exhibits fuel pattern which does not resemble standard  
 Z: Sample exhibits unknown single peak or peaks

**Table 3**  
**Total Mass of Petroleum Hydrocarbons Removed**  
**by the Vapor Extraction System & Historical Operational Data**  
**3609 International Boulevard, Oakland, California**

Date	Time	PID (ppmv)		Flow Rate (ft <sup>3</sup> /min)	Time Elapsed (Hours)	Air Flow (Liters)	Air Flow (ft <sup>3</sup> )	Mass Removed <sup>1</sup> (Pounds)
		Influent	Effluent					
<b>2000</b>								
7/24/2000	5:00 PM	394	0	85	0.0	0	0	0.00
7/25/2000	5:15 PM	38	2	95	24.3	3,911,768	138,225	1.35
7/26/2000	5:05 PM	207	1	80	24.0	3,260,160	115,200	6.15
7/27/2000	9:00 AM	160	5	92	16.0	2,499,456	88,320	3.64
7/28/2000	4:30 PM	141	7	87	31.5	4,653,369	164,430	5.98
7/29/2000	1:30 PM	225	8	85	21.0	3,030,930	107,100	6.21
7/30/2000	9:00 AM	226	12	85	19.5	2,814,435	99,450	5.79
7/31/2000	3:00 PM	141	5	85	30.0	4,329,900	153,000	5.56
8/1/2000	5:00 PM	135	4	80	26.0	3,531,840	124,800	4.34
8/2/2000	4:00 PM	80	4	80	23.0	3,124,320	110,400	2.28
8/3/2000	5:00 PM	60	5	85	25.0	3,608,250	127,500	1.97
8/4/2000	3:00 PM	57	4	85	22.0	3,175,260	112,200	1.65
8/5/2000	2:00 PM	97	8	87	23.0	3,397,698	120,060	3.00
8/6/2000	12:00 PM	114	8	80	22.0	2,988,480	105,600	3.10
8/7/2000	12:00 PM	93	9	85	24.0	3,463,920	122,400	2.93
8/8/2000	4:30 PM	152	10	85	28.5	4,113,405	145,350	5.70
8/10/2000	10:00 AM	173	1	85	41.5	5,989,695	211,650	9.44
8/11/2000	7:00 AM	78	4	70	21.0	2,496,060	88,200	1.77
8/12/2000	9:00 AM	100	6	70	26.0	3,090,360	109,200	2.82
8/13/2000	5:00 PM	107	9	70	32.0	3,803,520	134,400	3.71
8/14/2000	12:30 PM	122	5	70	19.5	2,317,770	81,900	2.58
8/15/2000	6:00 PM	103	12	70	29.5	3,506,370	123,900	3.29
8/16/2000	12:30 PM	112	0	70	18.5	2,198,910	77,700	2.24
8/18/2000	9:00 AM	90	0	75	44.5	5,667,075	200,250	4.65
8/21/2000	12:00 PM	74	5	80	75.0	10,188,000	360,000	6.87
8/24/2000	12:00 PM	68	13	80	72.0	9,780,480	345,600	6.06
8/27/2000	12:30 PM	68.5	2	80	72.5	9,848,400	348,000	6.15
8/31/2000	1:30 PM	52	6	80	97.0	13,176,480	465,600	6.24

**Table 3**  
**Total Mass of Petroleum Hydrocarbons Removed**  
**by the Vapor Extraction System & Historical Operational Data**  
**3609 International Boulevard, Oakland, California**

Date	Time	PID (ppmv)		Flow Rate (ft <sup>3</sup> /min)	Time Elapsed (Hours)	Air Flow (Liters)	Air Flow (ft <sup>3</sup> )	Mass Removed <sup>1</sup> (Pounds)
		Influent	Effluent					
<b>2000</b>								
9/4/2000	12:30 PM	54	5	80	95.0	12,904,800	456,000	6.35
9/7/2000	12:00 PM	55	3	80	71.5	9,712,560	343,200	4.87
9/11/2000	4:30 PM <sup>2</sup>	141	0	80	100.5	13,651,920	482,400	17.54
9/14/2000	9:30 AM	56	5	80	65.0	8,829,600	312,000	4.50
9/18/2000	2:00 PM	46	9.5	80	100.5	13,651,920	482,400	5.72
9/18/2000	4:30 PM <sup>3</sup>	34	0	80	2.5	339,600	12,000	0.11
9/21/2000	4:30 PM	43	1	80	72.0	9,780,480	345,600	3.83
9/25/2000	5:30 PM	55	6	80	97.0	13,176,480	465,600	6.60
9/28/2000	9:00 AM	47.5	7.5	80	63.5	8,625,840	304,800	3.73
10/1/2000	1:00 PM	38.5	6	80	76.0	10,323,840	364,800	3.62
10/5/2000	3:00 PM <sup>4</sup>	28.5	3	80	98.0	13,312,320	470,400	3.46
10/5/2000	5:00 PM	36	0	80	2.0	271,680	9,600	0.09
10/8/2000	3:00 PM	28.5	3	80	70.0	9,508,800	336,000	2.47
10/14/2000	3:00 PM	24.5	2.5	80	144.0	19,560,960	691,200	4.37
10/17/2000	2:00 PM	36.5	3.5	80	71.0	9,644,640	340,800	3.21
10/20/2000	8:30 AM	18.5	3.5	80	66.5	9,033,360	319,200	1.52
10/25/2000	2:00 PM	38	3.7	80	125.5	17,047,920	602,400	5.90
10/29/2000	10:00 AM	35	4	80	93.0	12,633,120	446,400	4.03
11/2/2000	4:00 PM	30.5	4	80	102.0	13,855,680	489,600	3.85
11/7/2000	4:00 PM	30	6	80	120.0	16,300,800	576,000	4.46
11/19/2000	12:00 PM	92.7	5.5	80	284.0	38,578,560	1,363,200	32.57
11/24/2000	1:30 PM	25	6.5	80	121.5	16,504,560	583,200	3.76
11/29/2000	3:00 PM	14.5	3.5	80	121.5	16,504,560	583,200	2.18
12/4/2000	4:30 PM	10.7	1	80	121.5	16,504,560	583,200	1.61
12/13/2000	3:30 PM	24	3	80	263.0	35,725,920	1,262,400	7.81
12/28/2000	2:30 PM	10	6	85	359.0	51,814,470	1,830,900	4.72

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Date	Time	PID (ppmv)		Flow Rate (ft <sup>3</sup> /min)	Time Elapsed (Hours)	Air Flow (Liters)	Air Flow (ft <sup>3</sup> )	Mass Removed <sup>1</sup> (Pounds)
		Influent	Effluent					
<b>2001</b>								
1/4/2001 <sup>5</sup>	2:00 PM	8.7	3.7	85	167.5	24,175,275	854,250	1.92
8/8/2001	3:00 PM	217	0	85	0.5	72,165	2,550	0.14
9/6/2001	12:00 PM	85	0	85	693.0	100,020,690	3,534,300	77.45
9/13/2001	4:00 PM	186	8	85	172.0	24,824,760	877,200	42.07
9/18/2001	3:00 PM	184	9	85	119.0	17,175,270	606,900	28.79
9/21/2001 <sup>6</sup>		--	--	--	NC	NC	NC	NC
10/12/01 <sup>7</sup>		--	--	--	NC	NC	NC	NC
10/23/2001	5:00 PM	114	58	87	0.5	73,863	2,610	0.08
10/25/01 <sup>4</sup>	3:00 PM	133	0	85	46.0	6,639,180	234,600	8.04
10/29/2001 <sup>8</sup>	1:20 PM	569	0	85	94.5	13,639,185	481,950	70.70
11/7/2001	3:30 PM	177	0	87	218.0	32,204,268	1,137,960	51.93
11/16/2001	3:00 PM	117	0	87	215.5	31,834,953	1,124,910	33.93
11/21/01 <sup>9</sup>	12:00 PM	85	72	87	117.0	17,283,942	610,740	13.38
<b>2002</b>								
2/15/02 <sup>10</sup>	4:30 PM	49	0	80	0.5	67,920	2,400	0.03
2/16/2002	3:45 PM	50	0	80	23.3	3,158,280	111,600	1.44
2/21/2002	4:00 PM	37	4	80	120.3	16,334,760	577,200	5.51
2/27/2002	10:30 AM	11	0	83	138.5	19,519,359	689,730	1.96
3/7/02 <sup>11</sup>	12:20 PM	10		80	194.0	26,352,960	931,200	2.40
6/12/2002 <sup>12</sup>	4:15 PM	53	2	75	NA	NA	NA	NA
6/17/2002	11:00 AM	28	2	80	120.0	16,306,560	576,204	4.16
6/24/2002	11:20 AM	24	3.1	80	168.3	22,866,400	808,000	5.00
7/5/2002	1:25 PM	20	5	80	266.0	36,133,440	1,276,800	6.58
7/11/2002	3:30 PM	26	8.0	80	146.0	19,832,640	700,800	4.70
7/23/2002	10:10 AM	28	7.5	83	282.8	39,849,089	1,408,095	10.16
8/9/2002	12:20 PM	7.5	0	80	410.3	55,728,360	1,969,200	3.81
8/15/2002 <sup>11</sup>	3:00 PM	7.0	1	80	146.5	19,900,560	703,200	1.27
8/23/2002 <sup>13</sup>	3:20 PM	NC	NC	NC	NC	NC	NC	NC
8/26/2002	11:15 AM	14.0	2.0	80	71.0	9,644,640	340,800	1.23
9/11/2002	10:10 AM	34.4	0	80	383.0	52,020,588	1,838,183	16.30
9/19/2002	10:55 AM	8.8	1.1	80	192.8	26,183,160	925,200	2.10
9/25/2002	10:30 AM	18.8	1.8	80	143.5	19,493,040	688,800	3.34

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		Influent	Effluent					
<b>2002</b>								
10/2/2002	8:10 AM	17.1	2.5	80	165.70	22,508,688	795,360	3.51
10/9/2002		PID malfunction		80	NC	NC	NC	NC
10/16/2002	1:45 PM	17.0	4.0	80	341.50	46,389,360	1,639,200	7.18
10/24/2002	10:00 AM	16.5	6.4	80	188.25	25,571,880	903,600	3.84
11/1/2002	10:00 AM	21.1	0.0	85	192.00	27,711,360	979,200	5.33
11/6/2002	10:12 AM	PID malfunction		87	NC	NC	NC	NC
11/7/2002	11:00 AM	17.5	0.0	85	24.75	3,572,168	126,225	0.57
11/13/2002	11:30 AM	15.0	0.0	85	144.50	20,855,685	736,950	2.85
11/22/2002	2:30 PM	6.6	0.0	80	219.00	29,748,960	1,051,200	1.79
11/22/2002		system shut-down due to rainy season and low influent readings						
<b>2003</b>								
5/9/2003	10:30 AM	0.1	0.0	82	0.5	69,618	2,460	0.00
5/12/2003	10:30 AM	0.4	0.3	85	72.00	10,391,760	367,200	0.04
5/21/2003	11:00 AM	2.2	2.2	83	216.50	30,512,211	1,078,170	0.61
6/4/2003	10:30 AM	2.5	0.1	82	335.50	46,713,678	1,650,660	1.06
6/10/2003	10:30 AM	2.2	0.08	82	144.00	20,049,984	708,480	0.40
6/16/2003	12:15 PM	2.1	0.07	82	146.25	20,363,265	719,550	0.39
6/24/2003	4:55 PM	2.6	0.08	82	196.75	27,394,683	968,010	0.65
6/30/2003	11:30 AM	2.2	0.1	82	138.50	19,284,186	681,420	0.39
7/16/2003	12:00 PM	2.2	0.22	82	384.50	53,536,242	1,891,740	1.07
7/21/2003	10:50 AM	2.1	0.21	82	119.00	16,569,084	585,480	0.32
7/28/2003	11:15 AM	2.2	0.22	82	168.25	23,426,457	827,790	0.47
8/11/2003	12:15 PM	2.1	0.21	82	337.00	46,922,532	1,658,040	0.90
8/19/2003	10:05 AM	2.1	0.22	82	190.00	26,454,840	934,800	0.51
8/25/2003	11:30 AM	2.2	0.23	81	145.50	20,011,779	707,130	0.40
9/2/2003	10:50 AM	2.1	0.21	80	191.50	26,013,360	919,200	0.50
9/8/2003	2:10 PM	9.1	3.19	83	147.30	20,759,578	733,554	1.72
9/11/2003	10:00 AM	All 4 SVE carbon drums changed-out						
9/22/2003	1:30 PM	7	0.2	88	334.25	49,944,972	1,764,840	3.19



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		Influent	Effluent					
<b>2003</b>								
10/1/2003	10:30 AM	6.5	0.2	85	213.00	30,742,290	1,086,300	1.82
10/6/2003	11:00 AM	7	0.3	85	120.50	17,391,765	614,550	1.11
10/13/2003	11:15 AM	5	0.2	85	168.25	24,283,523	858,075	1.11
10/29/2003	10:00 AM	2.4	0	85	382.75	55,242,308	1,952,025	1.21
11/3/2003	11:30 AM	3	0	85	121.50	17,536,095	619,650	0.48
11/10/2003	11:10 AM	3.5	0	85	167.67	24,199,330	855,100	0.77
11/17/2003	1:50 PM	4.1	0	85	170.70	24,637,131	870,570	0.92
11/24/2003	11:00 AM	3.8	0	85	165.20	23,843,316	842,520	0.83
11/24/2003	system shut-down due to rainy season and low influent readings							
<b>2004</b>								
4/5/2004	1:00 PM	5.6	0.11	85	0.5	72165	2550	0.004
4/12/2004	10:30 AM	6.5	0.2	83	165.5	23,324,577	824,190	1.38
4/20/2004	12:00 PM	7.1	0.9	84	193.5	27,599,292	975,240	1.79
4/23/2004	11:00 AM	7.2	2.3	80	71	9,644,640	340,800	0.63
5/3/2004	12:00 PM	7.1	3.4	80	241	32,737,440	1,156,800	2.12
5/5/2004	11:00 PM	All 4 SVE carbon drums changed-out						
5/17/2004	12:00 PM	2.7	0.8	82	336	46,783,296	1,653,120	1.15
5/26/2004	11:00 AM	3.8	0.5	82	215	29,935,740	1,057,800	1.04
6/1/2004	1:00 PM	3.6	0.9	82	146	20,328,456	718,320	0.67
6/7/2004	11:50 AM	3.2	0	82	142.75	19,875,939	702,330	0.58
6/14/2004	11:50 AM	10.9	0	86	168	24,532,704	866,880	2.44
6/21/2004	10:50: AM	13.5	0	83	167	23,535,978	831,660	2.89
6/28/2004	11:50 AM	10.9	0.5	85	169	24,391,770	861,900	2.42
7/2/2004	11:30 AM	8.7	0	85	95.8	13,826,814	488,580	1.10
7/13/2004	2:00 PM	9.1	0.22	85	266.5	38,463,945	1,359,150	3.19
7/21/2004	12:00 PM	8.9	0.5	85	190	27,422,700	969,000	2.22
7/26/2004	11:50 AM	8.5	0.4	85	119.5	17,247,435	609,450	1.34
8/2/2004	11:30 AM	4.9	0.1	85	167.8	24,218,574	855,780	1.08
8/9/2004	11:50 AM	5.6	0.2	85	168.3	24,290,739	858,330	1.24
8/16/2004	12:00 PM	6	0.4	85	168.1	24,261,873	857,310	1.33
8/24/2004	11:50 AM	6.2	1.2	85	191.9	27,696,927	978,690	1.56
8/30/2004	11:30 AM	6	0.4	85	143.66	20,734,448	732,666	1.13
9/7/2004	1:05 PM	5.5	0.8	85	193.5	27,927,855	986,850	1.40
9/13/2004	12:05 PM	5.3	0.9	85	143	20,639,190	729,300	1.00
9/20/2004	11:08 AM	7	2.9	85	167	24,103,110	851,700	1.54
9/27/2004	2:50 PM	6.5	2.1	85	171.75	24,788,678	875,925	1.47

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		Influent	Effluent					
<b>2004</b>								
10/4/2004	11:30 AM	6.9	3	85	164.55	23,749,502	839,205	1.49
10/13/2004	10:30 AM	6.5	2.9	85	215	31,030,950	1,096,500	1.84
10/18/2004	2:30 PM	6	1.5	85	124	17,896,920	632,400	0.98
10/28/2004	2:00 PM	3.1	0.9	85	239.5	34,567,035	1,221,450	0.98
10/28/2004	system shut-down due to rainy season and low influent readings							
<b>2005</b>								
4/11/2005	system re-started, all four vapor phase carbon drums replaced with new carbon							
4/18/2005	10:50 AM	6.5	0.8	85	167.83	24,223,481	855,953	1.43
4/25/2005	5:30 PM	6	0.7	85	174.33	25,161,626	889,103	1.38
5/4/2005	11:20 AM	0.4	0	85	209.83	30,285,341	1,070,153	0.11
5/9/2005	11:00 AM	1	0.4	85	119.67	17,271,538	610,302	0.16
5/16/2005	10:15 AM	3	0	85	167.25	24,139,193	852,975	0.66
5/23/2005	11:05 AM	0.4	0	90	168.83	25,801,110	911,700	0.09
6/3/2005	3:30 PM	0.2	0	90	268.48	41,029,114	1,449,792	0.07
6/9/2005	3:00 PM	0.2	0	90	143.50	21,929,670	774,900	0.04
6/15/2005	2:15 PM	1	0	85	143.25	20,675,273	730,575	0.19
6/20/2005	12:00 PM	0.6	0	88	117.75	17,594,676	621,720	0.10
6/26/2005	12:00 PM	0.5	0	85	144.00	20,783,520	734,400	0.09
7/7/2005	2:45 PM	0.2	0	90	266.75	40,764,735	1,440,450	0.07
7/11/2005	3:00 PM	0.3	0	90	96.25	14,708,925	519,750	0.04
7/18/2005	1:00 PM	1	0	85	166.00	23,958,780	846,600	0.22
7/25/2005	12:00 PM	1.5	0	87	167.00	24,670,242	871,740	0.34
8/1/2005	1:30 PM	1	0	85	169.50	24,463,935	864,450	0.22
8/8/2005	11:50 AM	0.7	0	80	166.40	22,603,776	798,720	0.14
8/15/2005	1:30 PM	0.9	0	83	169.60	23,902,406	844,608	0.20
8/24/2005	12:00 PM	0.8	0	85	214.50	30,958,785	1,093,950	0.23
8/29/2005	11:45 AM	0.7	0	85	119.75	17,283,518	610,725	0.11
9/6/2005	12:15 PM	0.8	0	85	192.50	27,783,525	981,750	0.20
9/12/2005	12:10 PM	1.2	0	85	144.00	20,783,520	734,400	0.23
9/20/2005	11:30 AM	1.1	0	84	192.60	27,470,923	970,704	0.28

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		Influent	Effluent						
<b>2005</b>									
10/6/2005	3:00 PM	all 4 vapor phase carbon drums replaced with new carbon drums							
10/14/2005	3:30 PM	33	5	83	192.5	27,129,795	958,650	8.16	
10/17/2005	12:00 PM	33	5	86	68.5	10,002,918	353,460	3.01	
10/28/2005	11:00 AM	77	1.5	83	263	37,065,642	1,309,740	26.00	
11/1/2005	9:40 AM	33	7	86	94.75	13,836,153	488,910	4.16	
11/3/2005	3:30 PM	33	7	87	54	7,977,204	281,880	2.40	
11/9/2005	3:15 PM	all 4 vapor phase carbon drums replaced with new carbon drums							
11/14/2005	11:30 AM	0.3	0	89	260	39,291,720	1,388,400	0.11	
11/22/2005	2:40 PM	0.8	0	88	195	29,137,680	1,029,600	0.21	
11/17/2005-11/23/2005		3 new vapor wells installed onsite							
<b>2006</b>									
1/6/2006	10:00 AM	System shut-down due to rainy conditions							
2/22/2006-3/6/2006		Air Sparge and Additional SVE system installed							
4/8/2006		Existing vacuum eductor, which was built and installed in 2000, was rebuilt. To reduce the noise level, foam was placed around the vacuum eductor to act as a noise suppressant							
4/14/2006	2:00 PM	system re-started, all 4 vapor phase carbon drums replaced with new carbon drums							
4/14/2006	2:30 PM	33	0	85	0.5	72,165	2,550	0.02	
5/18/2006	12:00 PM	14	0	87	813.5	120,175,101	4,246,470	15.33	
5/31/2006	12:30 PM	15	2	83	312.5	44,041,875	1,556,250	6.02	
6/7/2006	10:00 AM	17.7	5.8	85	165.5	23,886,615	844,050	3.85	
6/14/2006	10:00 AM	8.2	0	89	168	25,388,496	897,120	1.90	
6/19/2006	2:30 PM	220	0	88	124.5	18,603,288	657,360	37.29	
6/22/2006	11:00 AM	18	0	85	68.5	9,886,605	349,350	1.62	
7/6/2006	2:45 PM	3.2	0	80	339.75	46,151,640	1,630,800	1.35	
7/24/2006	2:00 PM	Additional vacuum eductor installed in series with the existing blower							
8/2/2006	11:00 AM	25	0	65	644.25	71,105,873	2,512,575	16.19	
8/9/2006	11:30 AM	7.3	3.5	110	168.5	31,472,430	1,112,100	2.09	
8/14/2006	12:00 PM	8	2.3	100	120.5	20,460,900	723,000	1.49	
8/25/2006	12:30 PM	2	0	100	264.5	44,912,100	1,587,000	0.82	
8/28/2006	2:30 PM	2.5	0	110	74.5	13,915,110	491,700	0.32	
9/7/2006	2:30 PM	1.4	0	105	240	42,789,600	1,512,000	0.55	
9/13/2006	12:45 PM	1.6	0	105	142.25	25,361,753	896,175	0.37	
9/22/2006	3:00 PM	1.3	0	115	219.25	42,812,948	1,512,825	0.51	
9/27/2006	2:15 PM	5.6	1.1	110	119.25	22,273,515	787,050	1.14	

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		Influent	Effluent						
<b>2006</b>									
10/4/2006	11:15 AM	5.9	1.6	105	165	29,417,850	1,039,500	1.58	
10/10/2006	11:30 AM	0.9	0	105	144.25	25,718,333	908,775	0.21	
10/18/2006	3:15 PM	0.9	0	105	195.75	34,900,268	1,233,225	0.29	
10/27/2006	10:00 AM	303	0	60	210.75	21,471,210	758,700	59.27	
11/1/2006	10:00 AM	0.2	0	90	120	18,338,400	648,000	0.03	
11/7/2006	12:00 PM	0.2	0	80	146	19,832,640	700,800	0.04	
11/7/2006	12:00 PM	System shut-down due to rainy conditions							
<b>2007</b>									
5/23/2007	System Re-started								
5/23/2007	10:45 AM	31.3	0	85	1	144,330	5,100	0.04	
5/29/2007	11:00 AM	11.2	1.7	80	144.25	19,594,920	692,400	2.00	
6/11/2007	12:00 PM	8.1	1.1	80	313	42,517,920	1,502,400	3.14	
6/20/2007	3:00 PM	1.4	0.5	75	219	27,889,650	985,500	0.36	
7/3/2007	12:00 PM	1.5	0.4	75	1	127,350	4,500	0.00	
7/12/2007	12:00 PM	8	0.3	80	144.25	19,594,920	692,400	1.43	
7/27/2007	9:30 AM	8.5	0.4	85	313	45,175,290	1,596,300	3.50	
8/7/2007	3:30 PM	14	0.9	105	219	39,045,510	1,379,700	4.98	
8/21/2007	2:00 PM	16.5	0	110	1	186,780	6,600	0.03	
9/7/2007	12:30 PM	12.2	0.1	105	144.25	25,718,333	908,775	2.86	
9/21/2007	10:00 AM	1.9	0.3	84	313	44,643,816	1,577,520	0.77	
9/28/2007	11:00 AM	1.9	0.3	85	219	31,608,270	1,116,900	0.55	
<b>Total Mass of Petroleum Hydrocarbons Removed =</b>								<b>967.20</b>	
<b>Average Daily Removal Rate (pounds / day)=</b>								<b>0.37</b>	

Notes:

- <sup>1</sup> The representative molecular weight of hydrocarbons was assumed to be 150 gram/mole and use the measured temperature of Vapor (25°C) in converting ppm-v to ppm on mass basis.
- <sup>2</sup> System accidentally shut down from main box, readings taken 30 minutes after startup
- <sup>3</sup> GAC Replaced
- <sup>4</sup> GAC-1 removed, new GAC installed at effluent end
- <sup>5</sup> SVE System turned off for rainy season due to low influent concentration
- <sup>6</sup> system down, hoses disconnected and GAC moved for replacement
- <sup>7</sup> system down for electrical repair
- <sup>8</sup> Carbon change-out of three drums, moved new effluent drum on 10/25/01 to GAC-
- <sup>9</sup> system shut-down due to high effluent value
- <sup>10</sup> System re-started (since November 21, 2001), installed new 4-55 gallon vapor phase carbon vessels, repaired blow
- <sup>11</sup> System was shut-down due to low influent reading
- <sup>12</sup> System was restarted on 6/12/02
- <sup>13</sup> System was re-started but no readings were taken

Data for October 28, 2005 based on lab data

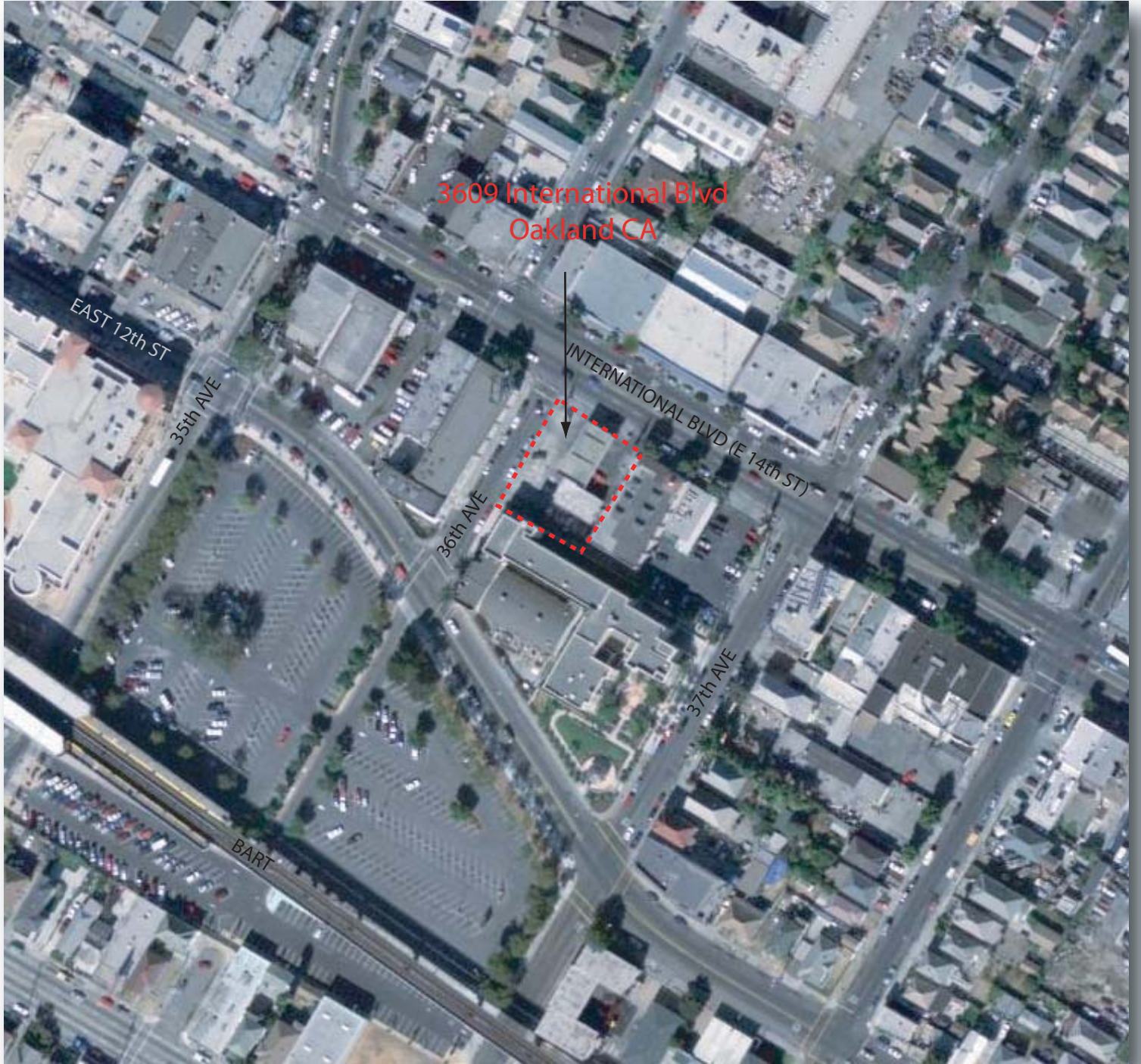
NC: Not Calculated

Calculations

Airflow: Flowrate (ft<sup>3</sup>/min) \* 60 min \* Time Elapsed (hrs) \* 28.3 liters/ft<sup>3</sup>

Mass Removed: Time Elapsed (hrs) \* 60 min \* Flowrate (ft<sup>3</sup>/min) \* (28.3 m<sup>3</sup>/ft<sup>3</sup>) \* ((PID reading \* (102 grams TPH-g /mole) \* (1 mole / 24.4 L)) \* (1/1000 m<sup>3</sup>)) \* (1 lb/454 grams)

# FIGURES



3609 International Blvd  
Oakland CA

EAST 12th ST

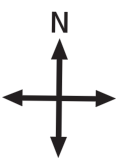
35th AVE

36th AVE

37th AVE

INTERNATIONAL BLVD (E 14th ST)

BART



approximate scale in feet

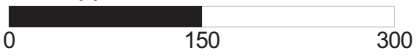
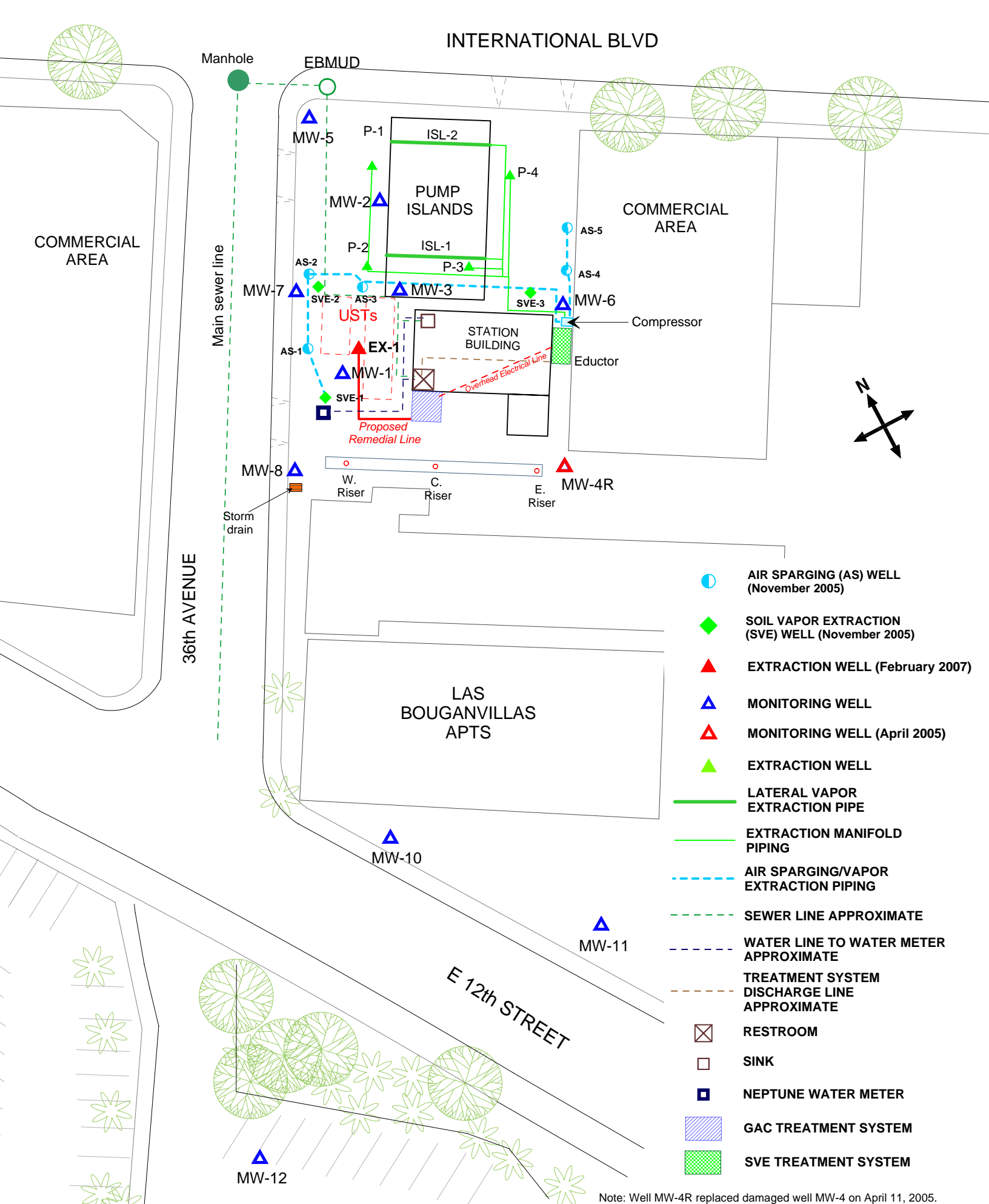


Figure 1: Site vicinity map.



Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

approximate scale in feet

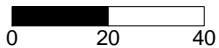


Figure 2: Site map showing locations of air sparging wells, groundwater monitoring wells, additional soil vapor wells, GAC system, & SVE system.

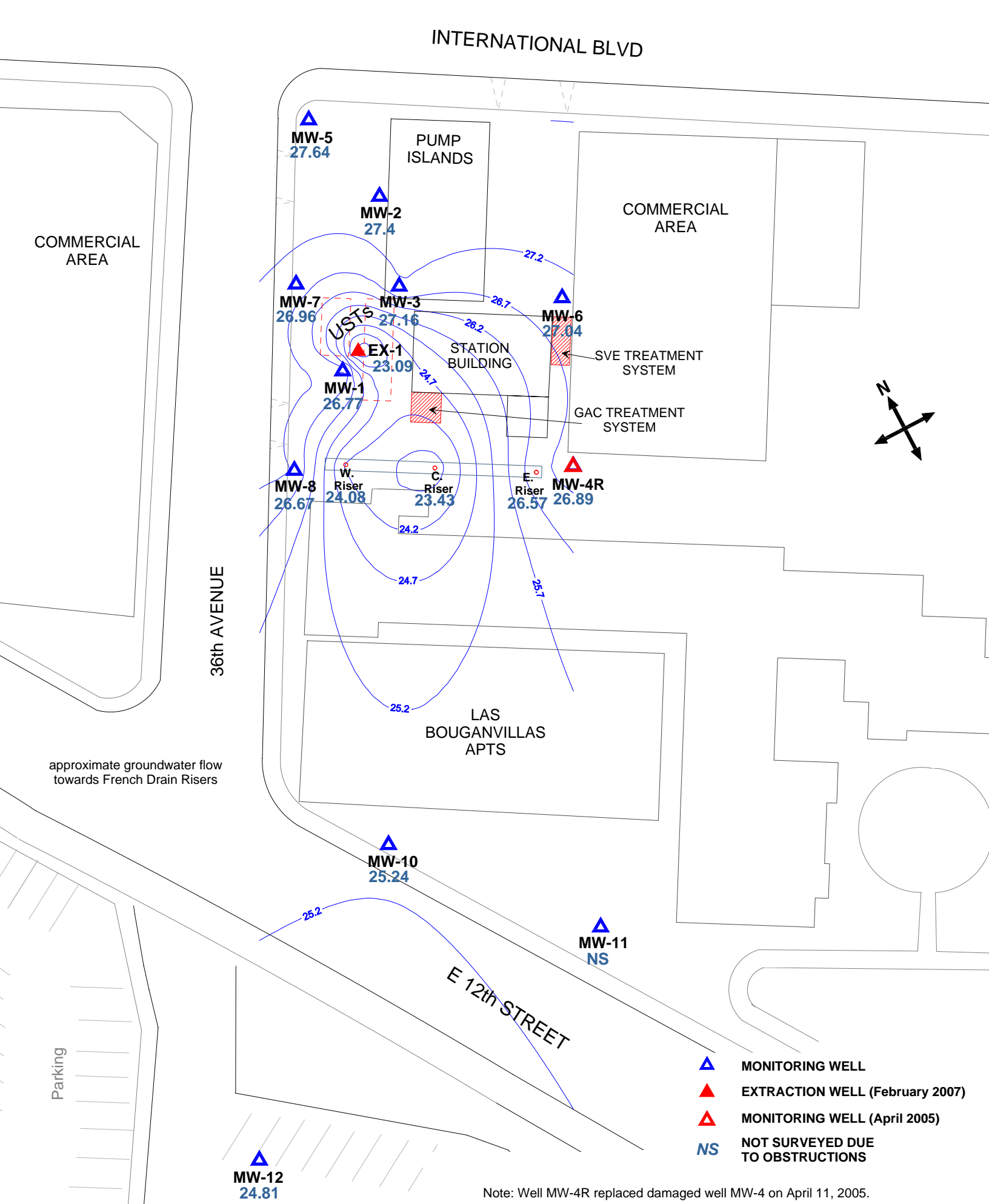
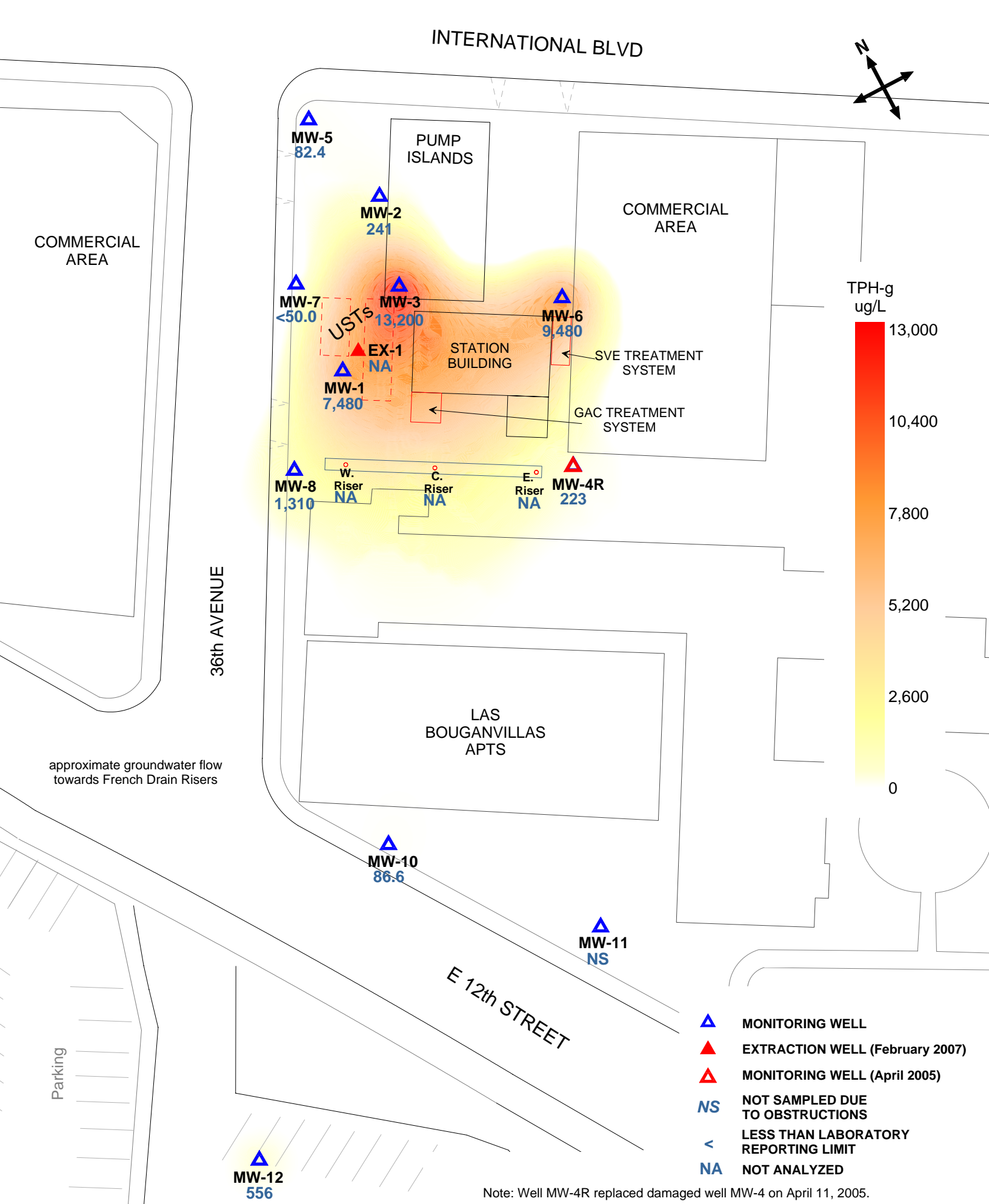


Figure 3: Groundwater elevation contour map in feet, August 20, 2007.







approximate groundwater flow towards French Drain Risers

Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

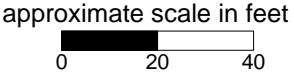
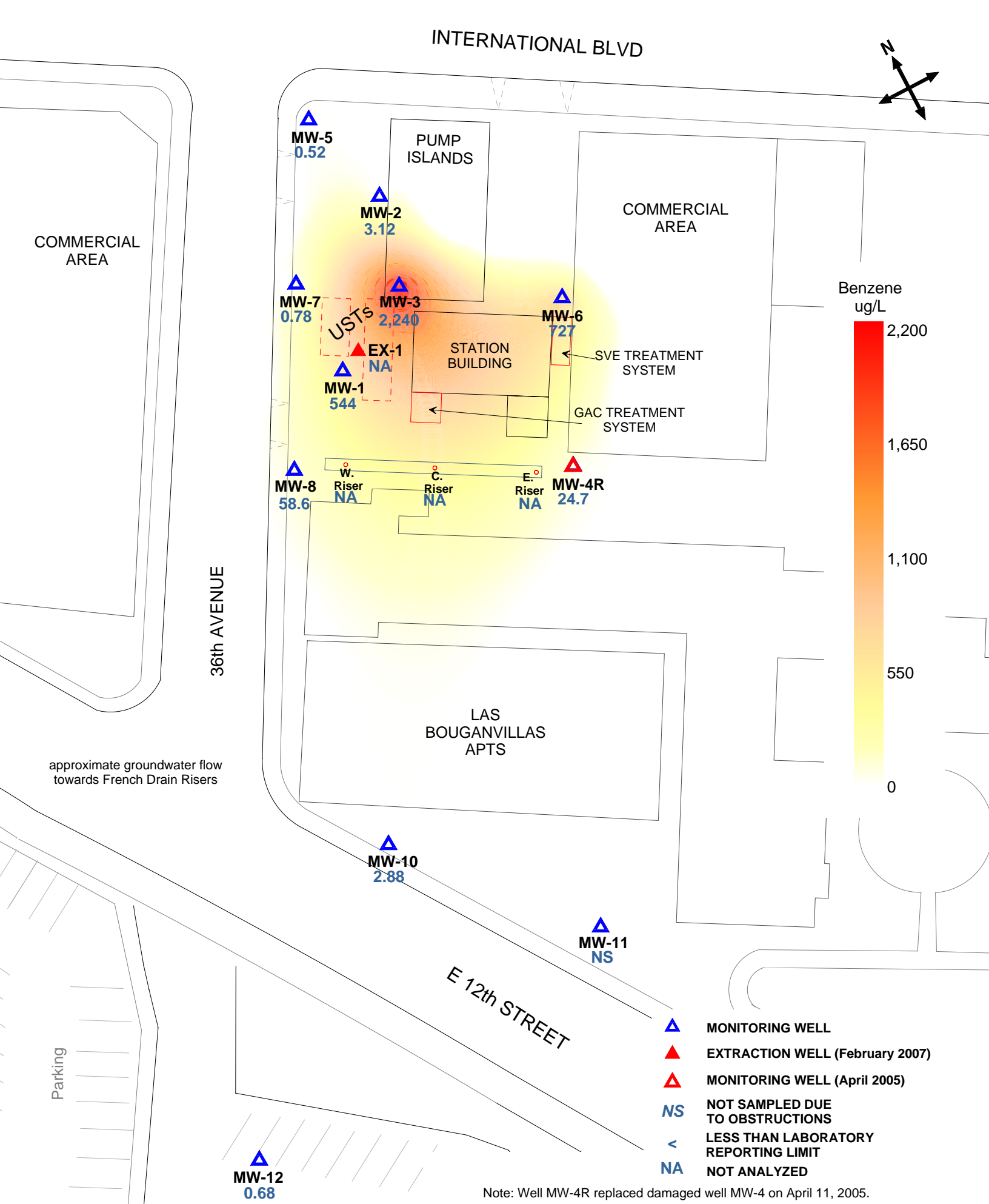


Figure 4: Contour map of TPH-g concentrations in the groundwater. August 20 and 21, 2007.





Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

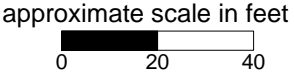
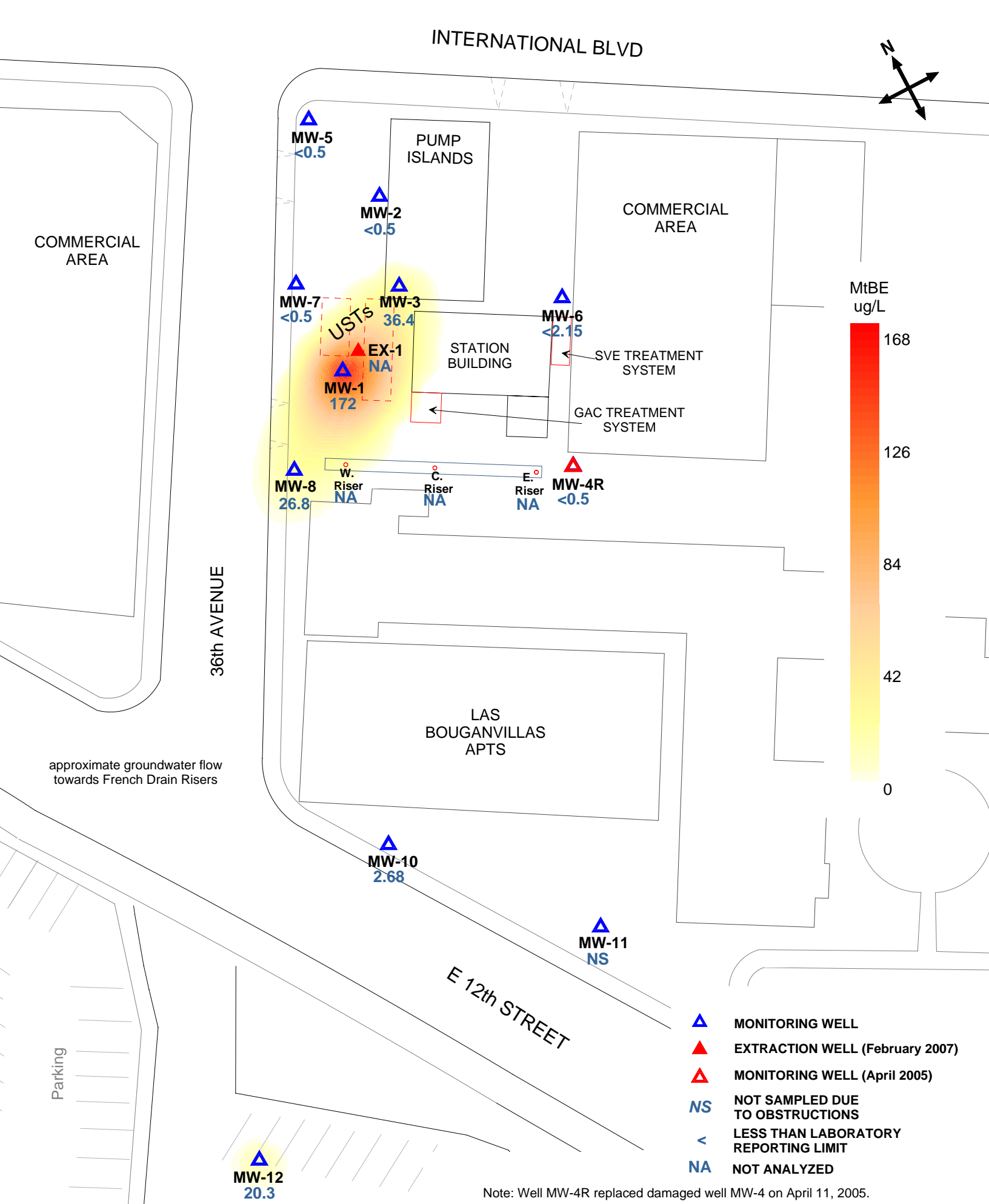


Figure 5: Contour map of benzene concentrations in the groundwater. August 20 and 21, 2007.





approximate groundwater flow towards French Drain Risers

Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

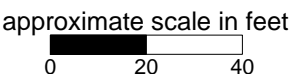
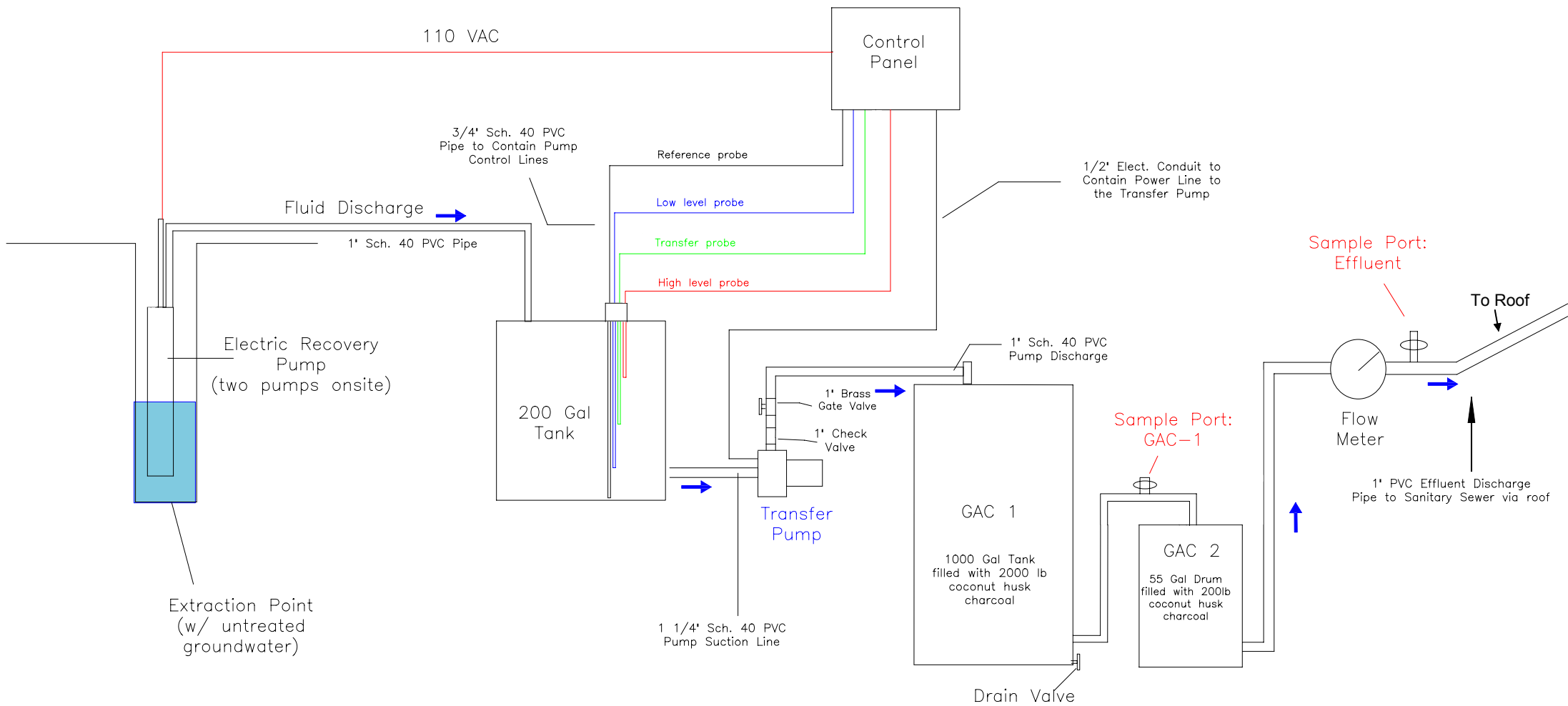


Figure 6: Contour map of MtBE concentrations in the groundwater (EPA Method 8260B). August 20 and 21, 2007.





(Discharge permit No: 504-27421)  
 Tony's Express Auto Service. November 14, 2011 permit expires

Figure 7: Schematic of the Groundwater Remediation System.  
 3609 International Blvd., Oakland, CA

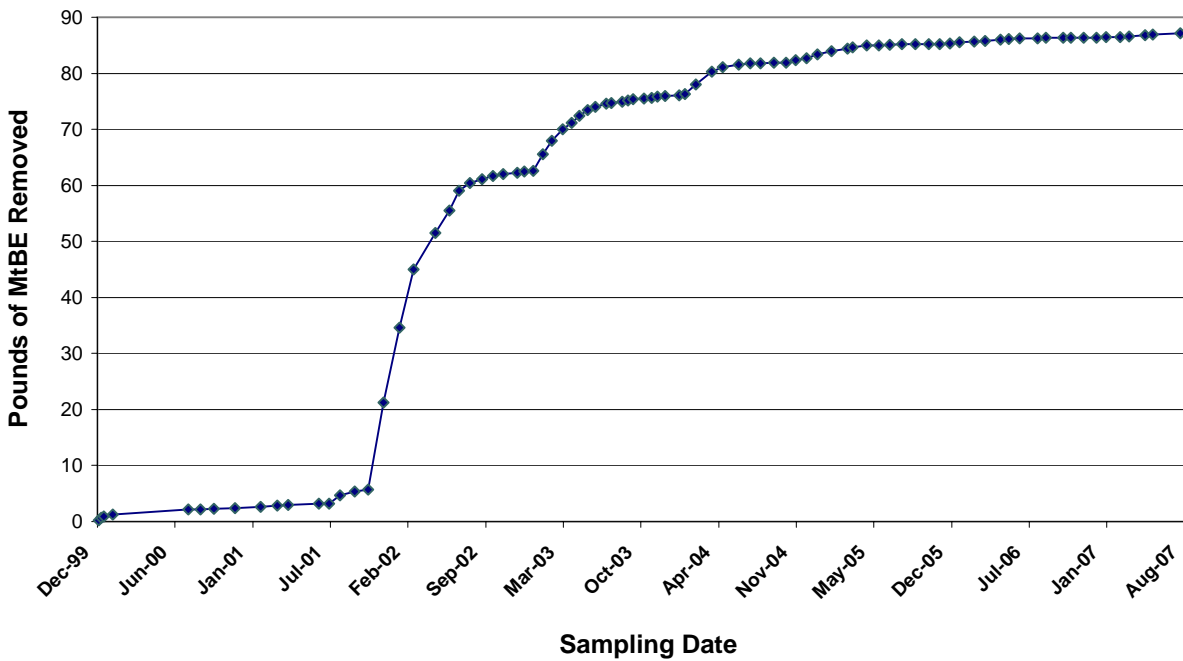
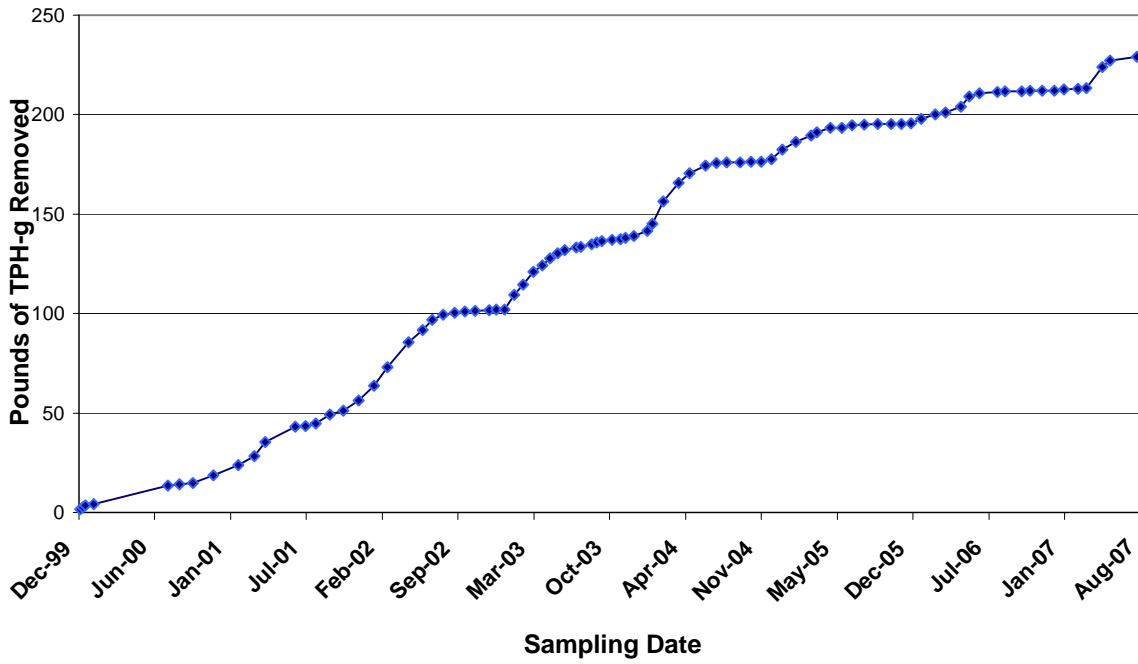


Figure 8. Cumulative mass of TPH-g and MtBE removed from groundwater since the installation of the treatment system.



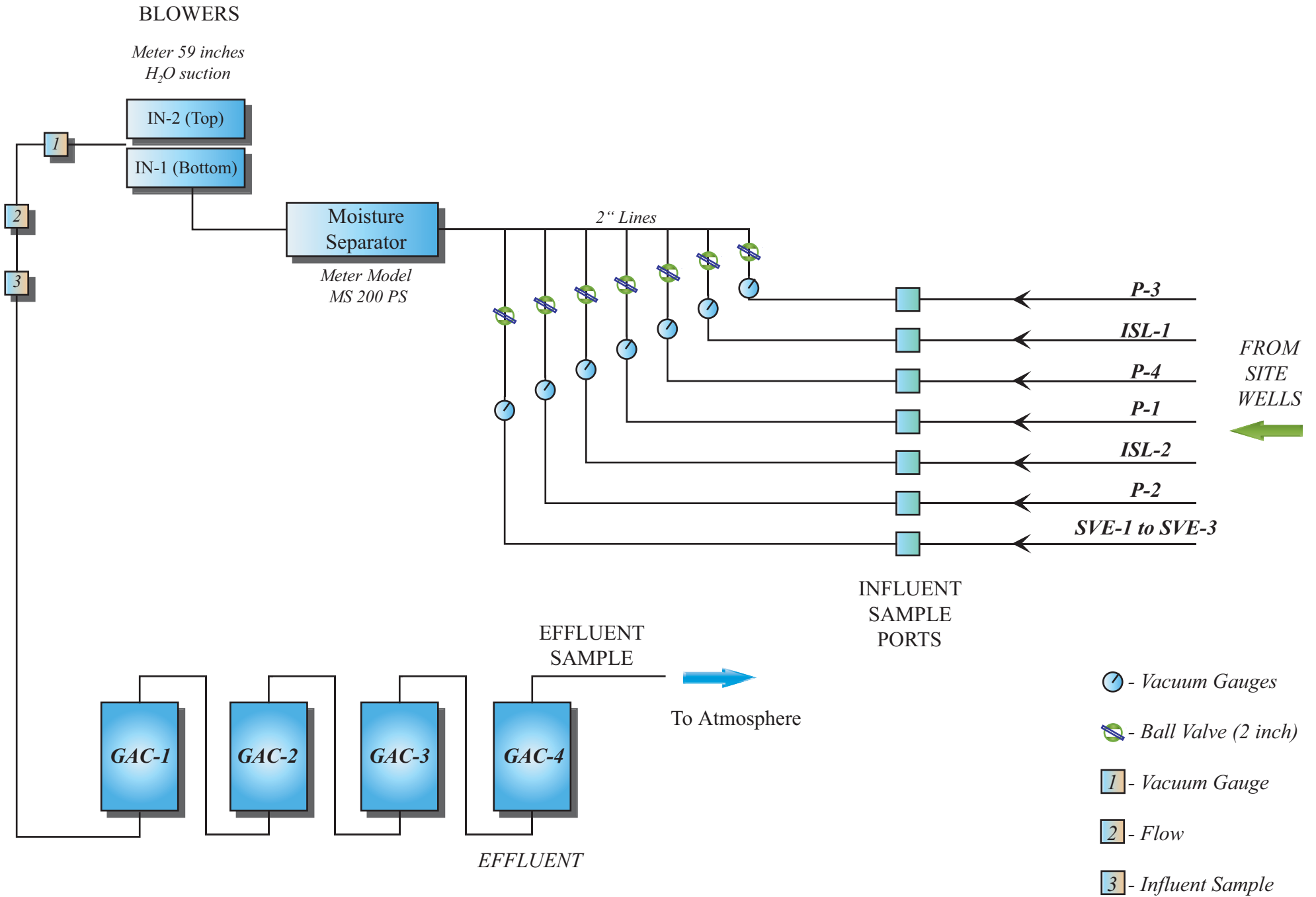


Figure 9: Block Diagram of SVE System

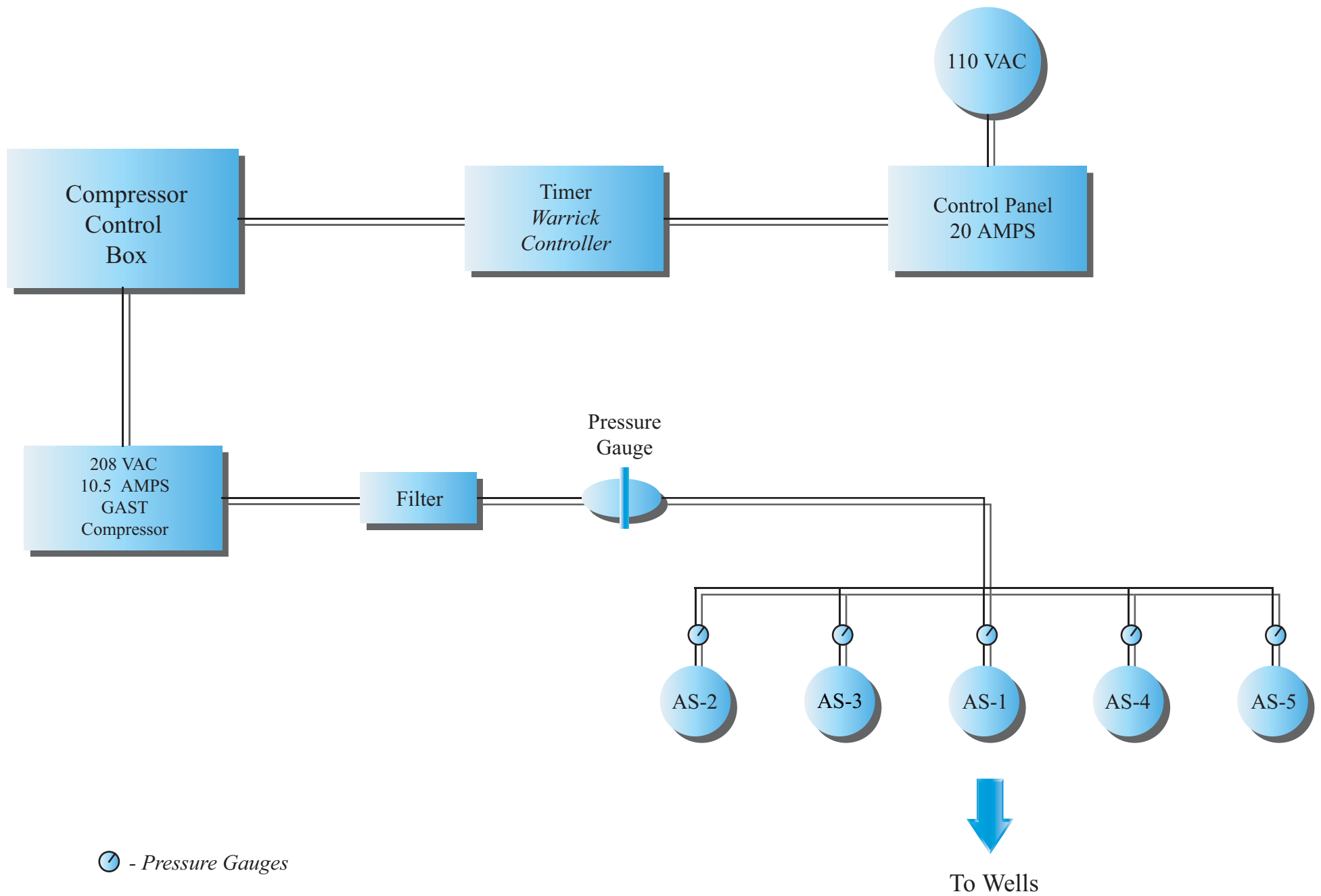


Figure 10: Block diagram of the Air Sparge System

# **APPENDIX A**

## **Standard Operating Procedures for Conducting Groundwater Monitoring Activities**



## Standard Operating Procedures for Conducting Groundwater Monitoring Activities

Prior to measurement of groundwater depth at each well, equalization with the surrounding aquifer must be achieved. Initially, the well cap is removed and the pressure is allowed to dissipate, creating a more stable water table level within the well. After about 10-15 minutes, once the water level in the well stabilizes, the depth to groundwater is measured from the top of the casing to the nearest 0.01 foot using an electric sounder.

Prior to sample collection, each well is purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC). During purging, groundwater is measured for parameters such as dissolved oxygen (DO), pH, temperature, electrical conductivity (EC), and oxygen-reduction potential (ORP) using a Hanna HI-9828 multi-parameter instrument. Turbidity is measured using a Hanna HI-98703 portable turbidimeter. The equipment is calibrated at the Site using standard solutions and procedures provided by the manufacturer.

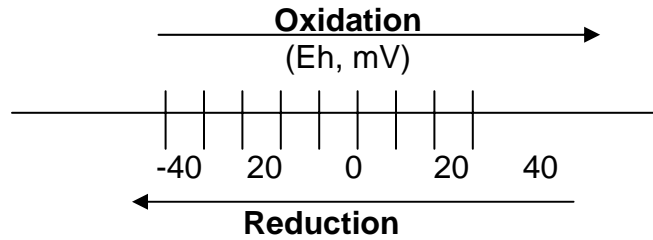
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

There is a strong correlation between the turbidity level and the biological oxygen demand of natural water bodies. The main purpose for checking the turbidity level is to provide a general overview of the extent of the suspended solids in the groundwater.

ORP is the measure of the potential for an oxidation or reduction process to occur. In the oxidation process, a molecule or ion loses one or several electrons. In the reduction process, a molecule or ion gains one or several electrons. The unit of the redox potential is the volt or millivolt. The most important redox reaction in petroleum-contaminated groundwater is the oxidation of petroleum hydrocarbons in the presence of bacteria and free molecular oxygen. Because the solubility of O<sub>2</sub> in water is low (9 mg/L at 25 °C and 11 mg/L at 5 °C), and because the rate of O<sub>2</sub> replenishment in subsurface environments is limited, DO can be entirely consumed when the oxidation of only a small amount of petroleum hydrocarbons occurs.

Oxidation of petroleum hydrocarbons can still occur when all the dissolved O<sub>2</sub> in the groundwater is consumed; however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO<sub>3</sub><sup>-</sup>, MnO<sub>2</sub>, Fe (OH)<sub>3</sub>, SO<sub>4</sub><sup>2-</sup> and others (Freeze and Cherry, 1979). As these oxidizing agents are consumed, the groundwater environment becomes more and more reduced. If the process advances far enough, the environment may become so strongly reduced that the

petroleum hydrocarbons undergo anaerobic degradation, resulting in the production of methane and carbon dioxide. The concept of oxidation and reduction in terms of changes in oxidation states is illustrated below.



Purging of wells continues until the parameters for DO, pH, temperature, EC, turbidity, and redox stabilize, or three casing volumes are purged.

Once stabilization occurs, the groundwater samples are also tested on-site for ferrous iron ( $\text{Fe}^{+2}$ ), nitrate ( $\text{NO}_3^-$ ), and sulfate ( $\text{SO}_4^{-2}$ ) concentrations.

$\text{Fe}^{+2}$ ,  $\text{NO}_3^-$ , and  $\text{SO}_4^{-2}$  are measured colorimetrically using the Hach Colorimeter Model 890, a microprocessor-controlled photometer suitable for colorimetric testing in the laboratory or the field. The required reagents for each specific test are provided in AccuVac ampuls.

For sampling purposes, after purging a disposable polyethylene bailer is used to collect sufficient samples from each monitoring well for laboratory analyses. Groundwater samples are transferred into 40-mL VOA vials and preserved with hydrochloric acid. The vials are sealed to prevent development of air bubbles within the headspace. For TPH-d analysis, groundwater samples are collected using 1-L, amber, nonpreserved glass containers. Samples are placed in an ice-filled cooler and maintained at 4°C. A chain of custody form is prepared to be delivered with the samples, which are delivered promptly to a California state-certified analytical laboratory.

# Appendix B

Table of Elevations and Coordinates on Monitoring Wells  
Surveyed by Kier Wright Civil Engineers Surveyors, Inc.  
and Harrington Surveys, Inc.

and

Field Measurements of Physical, Chemical, and  
Biodegradation Parameters of Groundwater

DATE: 8/17/05

Job No. 07-014

DATE OF SURVEY 3/8/07

INSTRUMENTS: Leica SR530 L530, Leica -

TCRA 1102 - Total Station,

Leica - NA 3003 - Level

### TABLE OF ELEVATIONS & COORDINATES

**3609 International Blvd., Oakland**  
SOMA ENVIRONMENTAL, PROJECT # 2331

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
EX-1	2109341.80	6064034.13	40.51	Casing
			40.93	Vault
EX-1 DECIMAL DEGREES	37.7752931	-122.2218880		

#### LOCAL CONTROL

MW-7	2109368.62	6064025.48	39.94	Casing
	37.7753663	-122.2219197	40.54	Vault
MW-8	2109321.68	6064000.47	39.38	Casing
	37.7752361	-122.2220033	39.72	Vault

**NOTE**

THE VALUES FOR EX-1 ARE DERIVED FROM LOCAL CONTROL BASED UPON CONTROL VALUES  
USED FROM THE PREVIOUS SITE SURVEY AS PROVIDED BY KIER AND WRIGHT DATED 08-27-2002

**BENCH MARK:** NGS Bench mark No.M 554

TO REACH THE STATION FROM THE INTERSECTION OF INTERSTATE HIGHWAY 880 AND HEGENBERGER RD IN SOUTH OAKLAND  
GO NORTHEAST ON HEGENBERGER ROAD FOR 0.5MI TO A SITE ROAD RIGHT BALDWIN ST. TURN RIGHT AND GO SOUTH ON BALDWIN ST.  
FOR 0.35MI TO A T-INTERSECTION, 85TH AVE. FOR 0.1MI TO A SIDE ROAD RIGHT, RAILROAD AVE. TURN RIGHT AND GO  
SOUTH ON RAILROAD AVE. FOR 0.1MI TO THE STATION ON THE LEFT, EAST, SIDE OF THE ROAD IN A LARGE CONCRETE HEADWALL FOR A  
CULVERT.

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.  
Elevation =14.20 FEET NAVD88 Datum



PLS Surveys, Inc.  
2220 Livingston Street, Suite 202  
Oakland, CA 94606  
510.261.0900

PRINTED: 3/19/2007  
9:24 AM

**Harrington Surveys Inc.**  
**Land Surveying & Mapping**

2278 Larkey Lane, Walnut Creek, Ca. 94597 Phone (925)935-7228 Fax (925)935-5118  
Cell (925)788-7359 E-Mail (ben5132@pacbell.net)

SOMA ENVIRONMENTAL ENGINEERING  
2680 BISHOP DR. # 203  
SAN RAMON, CA. 94583

MAY 20, 2005

ATTN: ELENA

3609 INTERNATIONAL BLVD.  
OAKLAND CA.

**SURVEY REPORT**

CONTROLLING POINTS FROM SURVEY BY KIER & WRIGHT, DATED 08-27-02:

MW-5 NOTCH, CALIFORNIA COORDINATE SYSTEM, ZONE 3. NAD 83.  
NORTH 2,109,410.84 - EAST 6,064,058.45, LAT. N37°46'17.42024"  
W122°13'18.51054".  
ELEVATION 41.06, NAVD 88,

MW-7 NOTCH, CALIFORNIA COORDINATE SYSTEM, ZONE 3,  
NORTH 2,109,368.19 - EAST 6,064,025.54. LAT N37°46'30.32592",  
W122°13'18.88771"  
ELEVATION 39.94 NAVD 88,

INSTRUMENTATION:  
TRIMBLE GPS, MODEL 5800 AND LEICA TCA 1800, 1" HORZ. & VERT.  
OBSERVATION: EPOCH = 180.

FIELD SURVEY: APRIL 20, 2005.

  
BEN HARRINGTON  
PLS 5132





**TABLE OF ELEVATIONS & COORDINATES  
 ON MONITORING WELLS**  
 SOMA ENVIRONMENTAL  
 Oakland-E. 14 the St. "International Blvd"

WELL NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
FD-C	2109299.85	6064039.85	39.35 40.25	Notch on north side of PVC Punch north rim of box
FD-E	2109281.13	6064067.87	40.06 40.55	Notch on north side of PVC Punch north rim of box
FD-W	2109314.99	6064017.59	39.16 39.95	Notch on north side of PVC Punch north rim of box
MW-1	2109338.74	6064025.97	40.11 40.76	Notch on north side of PVC Punch north rim of box
MW-2	2109383.20	6064073.06	40.71 41.61	Notch on north side of PVC Punch north rim of box
MW-3	2109351.11	6064064.63	40.91 41.68	Notch on north side of PVC Punch north rim of box
MW-4	2109278.18	6064076.40	40.01 40.67	Notch on north side of PVC Punch north rim of box
MW-5	2109410.84	6064058.46	41.16 41.60	Notch on south side of PVC Punch south rim of box
MW-6	2109320.46	6064105.06	40.92 41.52	Notch on north side of PVC Punch north rim of box
MW-7	2109368.19	6064025.54	39.94 40.54	Notch on north side of PVC Punch north rim of box
MW-8	2109321.68	6064000.46	39.38 39.72	Notch on north side of PVC Punch north rim of box

**Kier Wright Civil Engineers Surveyors, Inc.**  
 1233 Quarry Lane, Suite 145, Pleasanton, CA 94566  
 (925) 249-6555 (925) 249-6563

**TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS**SOMA ENVIRONMENTAL  
Oakland-E. 14 the St. "International Blvd"

WELL NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
MW-10	2109193.97	6063957.39	36.71 37.70	Notch on north side of PVC Punch north rim of box
MW-11	2109125.26	6064007.52	XXXX	NO ELEVATION , BOAT ON TOP
MW-12	2109121.85	6063865.00	36.84 36.87	Notch on north side of PVC

Bench mark: NGS Bench mark No.M 554. To reach the station from the intersection of Interstate Highway 880 and Hegenberger Rd in South Oakland go northeast on Hegenberger Rd for 0.5 MI to a side road right Baldwin St. Turn right and go south on Baldwin St for 0.35 MI to a T-intersection, 85th Ave. for 0.1 MI to a side road right, Railroad Ave. Turn right and go south on Railroad Ave. for 0.1 MI to the station on the left, east, side of the road in a large concrete headwall for a culvert.

Elevation = 14.20 NAVD88 Datum

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.





Well No.: MW-1  
 Casing Diameter: 2 inch  
 Depth of Well: 30.00 ft  
 Top of Casing Elevation: 40.11 ft  
 Depth to Groundwater: 13.34 ft  
 Groundwater Elevation: 26.77 ft  
 Water Column Height: 16.66 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August ~~20~~-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe slight petro odor

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. NTU	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)	
1011 AM	started purging well										
1013 AM	2	0.38	6.62	20.69	549	55.4	-7.7				
1015 AM	5	0.30	6.37	20.77	546	20.9	-54				
1017 AM	7	0.73	6.21	20.54	557	59.1	-44				
1019 AM	9	1.02	6.23	20.59	566	59.5	-35				
1022 AM	samples							1.52	3.0	8	

Notes:



Well No.: MW-2  
 Casing Diameter: 4 inch  
 Depth of Well: 31.00 ft  
 Top of Casing Elevation: 40.91 ft  
 Depth to Groundwater: 13.31 ft  
 Groundwater Elevation: 27.40 ft  
 Water Column Height: 17.69 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August ~~20~~-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe cloudy

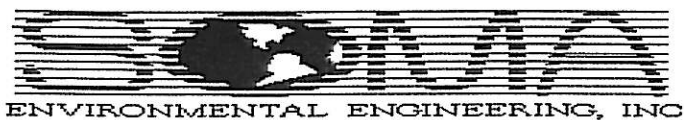
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
940 AM	<i>started purging well</i>									
943 AM	4	0.98	5.87	19.83	569	72.1	+204			
946 AM	8	0.94	5.81	19.84	569	60.7	+209			
950 AM	12	0.92	5.89	19.89	569	71.2	+204			
953 AM	16	0.96	5.92	19.93	568	73.0	+195			
955 AM	<i>sampled</i>							0.19	2.1	17

Notes:



Well No.: MW-3  
 Casing Diameter: 4 inch  
 Depth of Well: 31.50 ft  
 Top of Casing Elevation: 40.91 ft  
 Depth to Groundwater: 13.75 ft  
 Groundwater Elevation: 27.16 ft  
 Water Column Height: 17.75 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August ~~20~~-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

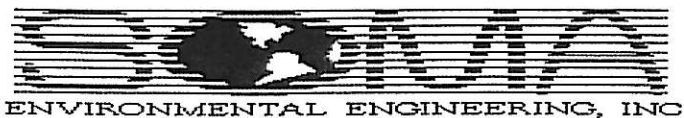
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_  
 Sheen: No  Yes  Describe light sheen  
 Odor: No  Yes  Describe petro odor

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
1040 AM	Started purging well									
1043 AM	3	0.10	5.98	19.77	713	10.3	-50.1			
1046 AM	6	0.08	5.90	19.86	701	9.5	-52.9			
1049 AM	10	0.09	5.98	19.98	682	17.7	-57			
1052 AM	14	0.10	6.07	19.98	675	39.6	-60			
1055 AM	18	0.10	6.15	19.91	670	45.8	-63.6			
1058 AM	22	0.11	6.15	19.88	666	34.3	-63.6			

Notes: 11 AM sampled 3.30 | 0 | 0



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4R  
 Casing Diameter: 2 inch  
 Depth of Well: 26.00 ft  
 Top of Casing Elevation: 40.34 ft  
 Depth to Groundwater: 13.45 ft  
 Groundwater Elevation: 26.89 ft  
 Water Column Height: 12.55 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-~~21~~, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe Muddy

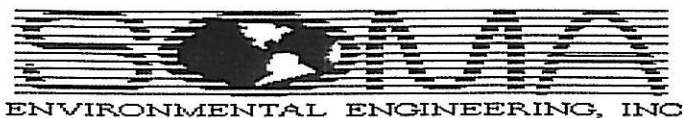
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe Slight Petro odor

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. NTU	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
<del>340</del> 341 PM	<del>2</del> 5									
<del>340</del> 341 PM	2	1.25	6.75	21.13	601	999	+34			
342 PM	5	0.48	5.94	18.85	591	530	+51			
344 PM	8	0.43	5.81	18.77	585	999	+36			
347 PM	Sampled							1.67	0	0

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-5  
 Casing Diameter: 2 inch  
 Depth of Well: 26.20 ft  
 Top of Casing Elevation: 41.16 ft  
 Depth to Groundwater: 13.52 ft  
 Groundwater Elevation: 27.64 ft  
 Water Column Height: 12.68 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-24, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

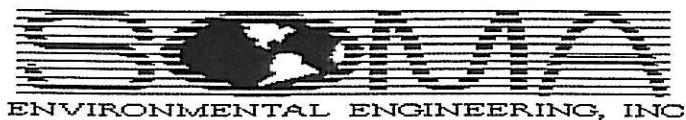
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
201 PM	Started purging well									
203 PM	2	0.25	6.05	20.83	633	19.1	+92			
205 PM	5	0.20	5.98	20.52	638	9.98	+40			
207 PM	7	0.21	5.94	20.37	634	6.45	+39			
210 PM	samples							0.28	0.4	14

Notes:



Well No.: MW-6  
 Casing Diameter: 2 inch  
 Depth of Well: 2500 ft  
 Top of Casing Elevation: 40.92 ft  
 Depth to Groundwater: 13.88 ft  
 Groundwater Elevation: 27.04 ft  
 Water Column Height: 12.88 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August ~~20~~-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

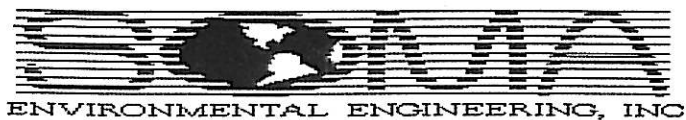
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe Grayish  
 Sheen: No  Yes  Describe Slight rainbow sheen  
 Odor: No  Yes  Describe Slight petro odor

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
1120 AM	Started purging well									
1122 AM	2	0.43	6.67	19.33	536	40.9	+24			
1124 AM	4	0.60	6.03	19.34	541	40.9	+34			
1126 AM	6	0.63	5.94	19.32	553	103	+26			
1128 AM	8	0.65	5.95	19.30	560	66.8	+21			
1131 AM	Sampled							3.30	5.0	1

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7  
 Casing Diameter: 2 inch  
 Depth of Well: 26.00 ft  
 Top of Casing Elevation: 39.94 ft  
 Depth to Groundwater: 12.98 ft  
 Groundwater Elevation: 26.96 ft  
 Water Column Height: 14.02 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-~~21~~, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe cloudy

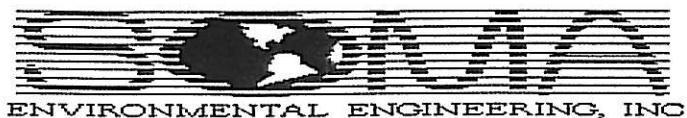
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
<del>2:52</del> 2:52 PM	Started									
2:44 PM	2	0.57	6.20	20.90	575	331	+136			
2:46 PM	5	0.90	6.16	22.02	579	384	+131			
2:50 PM	samples							0.73	0	11

Notes:



Well No.: MW-8  
 Casing Diameter: 2 inch  
 Depth of Well: 26.50 ft  
 Top of Casing Elevation: 39.38 ft  
 Depth to Groundwater: 12.71 ft  
 Groundwater Elevation: 26.67 ft  
 Water Column Height: 13.79 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-~~21~~, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

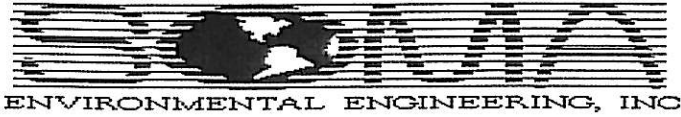
Color: No  Yes  Describe grayish  
 Sheen: No  Yes  Describe slight sheen  
 Odor: No  Yes  Describe slight petro odor

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
307 pm	Started									
309 pm	3	0.15	6.25	20.07	598	999	-67			
311 pm	5	0.48	5.97	20.00	597	65	-29			
313 pm	7	0.45	5.95	20.09	599	26.9	-20			
317 pm	Sampled							1.86	0	7

Notes:





Well No.: MW-10  
 Casing Diameter: 2 inch  
 Depth of Well: 23.40 ft  
 Top of Casing Elevation: 36.71 ft  
 Depth to Groundwater: 11.47 ft  
 Groundwater Elevation: 25.24 ft  
 Water Column Height: 11.93 ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20~~01~~, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

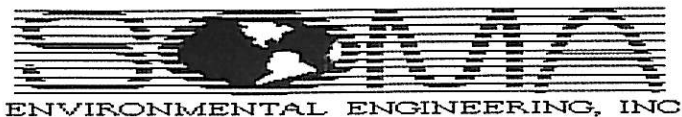
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe Musty

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
12:29 pm	Started Purging well									
130 pm	1	0.15	7.39	19.60	610	61.5	+77			
134 pm	3	0.38	6.36	19.31	594	14.4	+128			
136 pm	6	0.50	5.89	19.24	593	44	+144			
139 pm	Sampled									
								0	0	10

Notes:



Well No.: MW-12  
 Casing Diameter: 4 inch  
 Depth of Well: 30.00 ft  
 Top of Casing Elevation: 36.84 ft  
 Depth to Groundwater: 12.03 ft  
 Groundwater Elevation: 24.81 ft  
 Water Column Height: 17.97 ft  
 Purged Volume: 22 gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20~~21~~, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe slight petro odor

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)
1246 PM	Started									
1249 PM	4	0.14	5.91	19.20	615	30.5	+37			
1252 PM	7	0.08	5.77	19.23	606	21.3	+45			
1255 PM	11	0.07	5.86	19.31	600	10.8	+39			
1258 PM	15	0.06	6.00	19.36	597	15	+27			
101 PM	18	0.06	6.10	19.39	595	17.8	+20			
104 PM	22	0.06	6.15	19.40	594	7.8	+14			

Notes: 107 PM samples | 1.72 | 0 | 0



Well No.: FDW  
 Casing Diameter: \_\_\_\_\_ inch  
 Depth of Well: \_\_\_\_\_ ft  
 Top of Casing Elevation: 39.16 ft  
 Depth to Groundwater: 15.08 ft  
 Groundwater Elevation: 24.08 ft  
 Water Column Height: \_\_\_\_\_ ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_  
 Sheen: No  Yes  Describe \_\_\_\_\_  
 Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)

Notes:



Well No.: FDE  
 Casing Diameter: \_\_\_\_\_ inch  
 Depth of Well: \_\_\_\_\_ ft  
 Top of Casing Elevation: 40.06 ft  
 Depth to Groundwater: 13.49 ft  
 Groundwater Elevation: 26.57 ft  
 Water Column Height: \_\_\_\_\_ ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

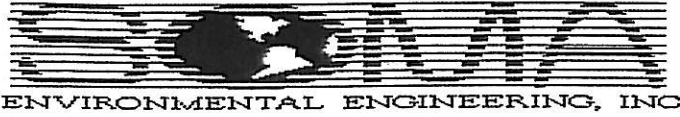
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)

Notes:



Well No.: FDC  
 Casing Diameter: \_\_\_\_\_ inch  
 Depth of Well: \_\_\_\_\_ ft  
 Top of Casing Elevation: 39.35 ft  
 Depth to Groundwater: 15.92 ft  
 Groundwater Elevation: 23.43 ft  
 Water Column Height: \_\_\_\_\_ ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

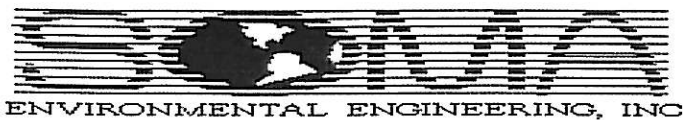
Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. (mg/L)	pH	Temp (°C)	E.C. (µS/cm)	Turb. (NTU)	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)

Notes:



Well No.: EX-1  
 Casing Diameter: \_\_\_\_\_ inch  
 Depth of Well: \_\_\_\_\_ ft  
 Top of Casing Elevation: 40.51 ft  
 Depth to Groundwater: 17.42 ft  
 Groundwater Elevation: 23.09 ft  
 Water Column Height: \_\_\_\_\_ ft  
 Purged Volume: \_\_\_\_\_ gallons

Project No.: 2331  
 Address: Tony's Express Auto Service  
 3609 International Blvd  
 Oakland, CA  
 Date: August 20-21, 2007  
 Sampler: Tony Perini  
 Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP	Fe <sup>+2</sup> (mg/L)	NO <sub>3</sub> <sup>-</sup> (mg/L)	SO <sub>4</sub> <sup>-2</sup> (mg/L)

Notes:

# **Appendix C**

Chain of Custody Form and Laboratory Report  
for the  
Third Quarter 2007 Monitoring Event

# CHAIN OF CUSTODY FORM

**PAL** Pacific Analytical Laboratory  
 851 West Midway Ave., Suite 201B  
 Alameda, CA 94501  
 510-864-0364 Telephone  
 510-864-0365 Fax

PAL  
 Login# 7080007

Project No: 2331				Sampler: <del>John Lehman / Mohan Newrozi</del> <i>Wade Hightower / Tony Perini</i>								Analyses/Method																			
Project Name: 3609 International Blvd Oakland				Report To: Tony Perini								TPHg, BTEX, MIBE 8260B																			
				Company: SOMA Environmental Engineering, Inc.																											
Turnaround Time: Standard				Tel: 925-734-6400 Fax: 925-734-6401																											
		Sampling Date/Time		Matrix			# of Containers	Preservatives				Field Notes																			
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE																				
	MW-1	8/21/07	10:22 AM	X			3 VOAS	X			X	Grab Sample																			
	MW-2	8/21/07	9:55 AM	X			3 VOAS	X			X																				
	MW-3	8/21/07	11 AM	X			3 VOAS	X			X																				
	MW-4R	8/20/07	3:47 PM	X			3 VOAS	X			X																				
	MW-5	8/20/07	2:10 PM	X			3 VOAS	X			X																				
	MW-6	8/21/07	11:31 AM	X			3 VOAS	X			X																				
	MW-7	8/20/07	2:50 PM	X			3 VOAS	X			X																				
	MW-8	8/20/07	3:17 PM	X			3 VOAS	X			X																				
	MW-10	8/20/07	1:39 PM	X			3 VOAS	X			X																				
	<del>MW-11</del>			X			<del>3 VOAS</del>	X			X																				
	MW-12	8/20/07	10:27 PM	X			4 VOAS	X			X	Grab Sample																			
Sampler Remarks:				Relinquished by:				Date/Time:				Received by:				Date/Time:															
EDF REQUIRED				<i>Tony Perini</i>				8/21/07 11:00 PM								8.21.07 1:27															



06 September 2007

Mansour Sepehr  
SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton, CA 94588

RE: 3609 International Blvd, Oakland

Work Order Number: 7080007

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



---

Maiid Akhavan  
Laboratory Director



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

**Reported:**  
06-Sep-07 19:42

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	7080007-01	Water	21-Aug-07 10:22	21-Aug-07 13:50
MW-2	7080007-02	Water	21-Aug-07 09:55	21-Aug-07 13:50
MW-3	7080007-03	Water	21-Aug-07 11:00	21-Aug-07 13:50
MW-4R	7080007-04	Water	20-Aug-07 15:47	21-Aug-07 13:50
MW-5	7080007-05	Water	20-Aug-07 14:10	21-Aug-07 13:50
MW-6	7080007-06	Water	21-Aug-07 11:31	21-Aug-07 13:50
MW-7	7080007-07	Water	20-Aug-07 14:50	21-Aug-07 13:50
MW-8	7080007-08	Water	20-Aug-07 15:17	21-Aug-07 13:50
MW-10	7080007-09	Water	20-Aug-07 13:39	21-Aug-07 13:50
MW-12	7080007-10	Water	20-Aug-07 13:07	21-Aug-07 13:50



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

Reported:  
06-Sep-07 19:42

**Volatile Organic Compounds by EPA Method 8260B**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (708007-01RE1) Water    Sampled: 21-Aug-07 10:22    Received: 21-Aug-07 13:50</b>									
<b>Gasoline (C6-C12)</b>	<b>7480</b>	215	ug/l	4.3	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>544</b>	2.15	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>356</b>	2.15	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>390</b>	8.60	"	"	"	"	"	"	
<b>o-xylene</b>	<b>147</b>	2.15	"	"	"	"	"	"	
<b>Toluene</b>	<b>87.0</b>	8.60	"	"	"	"	"	"	
<b>MTBE</b>	<b>172</b>	2.15	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		115 %		70-130	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		95.0 %		70-130	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		106 %		70-130	"	"	"	"	
<b>MW-2 (708007-02) Water    Sampled: 21-Aug-07 09:55    Received: 21-Aug-07 13:50</b>									
<b>Gasoline (C6-C12)</b>	<b>241</b>	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>3.12</b>	0.500	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>17.6</b>	0.500	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>4.73</b>	2.00	"	"	"	"	"	"	
<b>o-xylene</b>	<b>2.86</b>	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.6 %		70-130	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		89.6 %		70-130	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		97.2 %		70-130	"	"	"	"	
<b>MW-3 (708007-03RE1) Water    Sampled: 21-Aug-07 11:00    Received: 21-Aug-07 13:50</b>									
<b>Gasoline (C6-C12)</b>	<b>13200</b>	550	ug/l	11	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>2240</b>	5.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>868</b>	5.50	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>733</b>	22.0	"	"	"	"	"	"	
<b>o-xylene</b>	<b>250</b>	5.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>119</b>	22.0	"	"	"	"	"	"	
<b>MTBE</b>	<b>36.4</b>	5.50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		118 %		70-130	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		96.6 %		70-130	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		109 %		70-130	"	"	"	"	

Pacific Analytical Laboratory

*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.*



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

Reported:  
06-Sep-07 19:42

### Volatile Organic Compounds by EPA Method 8260B

#### Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4R (7080007-04) Water</b> <b>Sampled: 20-Aug-07 15:47</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	223	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
Benzene	24.7	0.500	"	"	"	"	"	"	
Ethylbenzene	9.15	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	2.54	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	70-130		"	"	"	"	
Surrogate: Dibromofluoromethane		88.6 %	70-130		"	"	"	"	
Surrogate: Perdeuterotoluene		103 %	70-130		"	"	"	"	
<b>MW-5 (7080007-05) Water</b> <b>Sampled: 20-Aug-07 14:10</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	82.4	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
Benzene	0.520	0.500	"	"	"	"	"	"	
Ethylbenzene	4.49	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	2.30	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	70-130		"	"	"	"	
Surrogate: Dibromofluoromethane		91.4 %	70-130		"	"	"	"	
Surrogate: Perdeuterotoluene		102 %	70-130		"	"	"	"	
<b>MW-6 (7080007-06RE1) Water</b> <b>Sampled: 21-Aug-07 11:31</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	9480	215	ug/l	4.3	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
Benzene	727	2.15	"	"	"	"	"	"	
Ethylbenzene	761	2.15	"	"	"	"	"	"	
m&p-Xylene	497	8.60	"	"	"	"	"	"	
o-xylene	93.0	2.15	"	"	"	"	"	"	
Toluene	87.6	8.60	"	"	"	"	"	"	
MTBE	ND	2.15	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	70-130		"	"	"	"	
Surrogate: Dibromofluoromethane		91.6 %	70-130		"	"	"	"	
Surrogate: Perdeuterotoluene		110 %	70-130		"	"	"	"	



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

Reported:  
06-Sep-07 19:42

**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-7 (7080007-07) Water</b> <b>Sampled: 20-Aug-07 14:50</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>0.780</b>	0.500	"	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>4.87</b>	0.500	"	"	"	"	"	"	"
m&p-Xylene	ND	2.00	"	"	"	"	"	"	"
<b>o-xylene</b>	<b>2.36</b>	0.500	"	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"	"
MTBE	ND	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %		70-130	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		90.0 %		70-130	"	"	"	"	"
<i>Surrogate: Perdeuterotoluene</i>		101 %		70-130	"	"	"	"	"
<b>MW-8 (7080007-08) Water</b> <b>Sampled: 20-Aug-07 15:17</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	1310	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>58.6</b>	0.500	"	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>106</b>	0.500	"	"	"	"	"	"	"
<b>m&amp;p-Xylene</b>	<b>4.43</b>	2.00	"	"	"	"	"	"	"
<b>o-xylene</b>	<b>2.77</b>	0.500	"	"	"	"	"	"	"
<b>Toluene</b>	<b>4.22</b>	2.00	"	"	"	"	"	"	"
<b>MTBE</b>	<b>26.8</b>	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		128 %		70-130	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		89.0 %		70-130	"	"	"	"	"
<i>Surrogate: Perdeuterotoluene</i>		120 %		70-130	"	"	"	"	"
<b>MW-10 (7080007-09) Water</b> <b>Sampled: 20-Aug-07 13:39</b> <b>Received: 21-Aug-07 13:50</b>									
Gasoline (C6-C12)	86.6	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>2.88</b>	0.500	"	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>5.98</b>	0.500	"	"	"	"	"	"	"
m&p-Xylene	ND	2.00	"	"	"	"	"	"	"
<b>o-xylene</b>	<b>2.30</b>	0.500	"	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"	"
<b>MTBE</b>	<b>2.68</b>	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %		70-130	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		88.2 %		70-130	"	"	"	"	"
<i>Surrogate: Perdeuterotoluene</i>		102 %		70-130	"	"	"	"	"



SOMA Environmental Engineering Inc. 6620 Owens Drive, Suite A Pleasanton CA, 94588	Project: 3609 International Blvd, Oakland Project Number: 2331 Project Manager: Mansour Sepehr	<b>Reported:</b> 06-Sep-07 19:42
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**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-12 (7080007-10) Water    Sampled: 20-Aug-07 13:07    Received: 21-Aug-07 13:50</b>									
<b>Gasoline (C6-C12)</b>	<b>556</b>	50.0	ug/l	1	BH72301	21-Aug-07	27-Aug-07	EPA 8260B	
<b>Benzene</b>	<b>0.680</b>	0.500	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>4.81</b>	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
<b>o-xylene</b>	<b>2.41</b>	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
<b>MTBE</b>	<b>20.3</b>	0.500	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		123 %		70-130	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		89.2 %		70-130	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		113 %		70-130	"	"	"	"	



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

Reported:  
06-Sep-07 19:42

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BH72301 - EPA 5030 Water MS**

**Blank (BH72301-BLK1)**

Prepared & Analyzed: 23-Aug-07

Surrogate: 4-Bromofluorobenzene	41.9		ug/l	50.0		83.8	70-130			
Surrogate: Dibromofluoromethane	51.2		"	50.0		102	70-130			
Surrogate: Perdeuterotoluene	46.0		"	50.0		92.0	70-130			
Gasoline (C6-C12)	ND	50.0	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	2.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
MTBE	ND	0.500	"							

**LCS (BH72301-BS1)**

Prepared & Analyzed: 23-Aug-07

Surrogate: 4-Bromofluorobenzene	51.9		ug/l	50.0		104	70-130			
Surrogate: Dibromofluoromethane	45.9		"	50.0		91.8	70-130			
Surrogate: Perdeuterotoluene	50.9		"	50.0		102	70-130			
Gasoline (C6-C12)	1970	50.0	"	2000		98.5	70-130			
Benzene	96.3	0.500	"	100		96.3	70-130			
Toluene	96.2	2.00	"	100		96.2	70-130			
MTBE	99.5	0.500	"	100		99.5	70-130			

**LCS Dup (BH72301-BSD1)**

Prepared & Analyzed: 23-Aug-07

Surrogate: 4-Bromofluorobenzene	50.8		ug/l	50.0		102	70-130			
Surrogate: Dibromofluoromethane	48.6		"	50.0		97.2	70-130			
Surrogate: Perdeuterotoluene	50.3		"	50.0		101	70-130			
Gasoline (C6-C12)	2090	50.0	"	2000		104	70-130	5.91	20	
Benzene	107	0.500	"	100		107	70-130	10.5	20	
Toluene	105	2.00	"	100		105	70-130	8.75	20	
MTBE	103	0.500	"	100		103	70-130	3.46	20	



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2331  
Project Manager: Mansour Sepehr

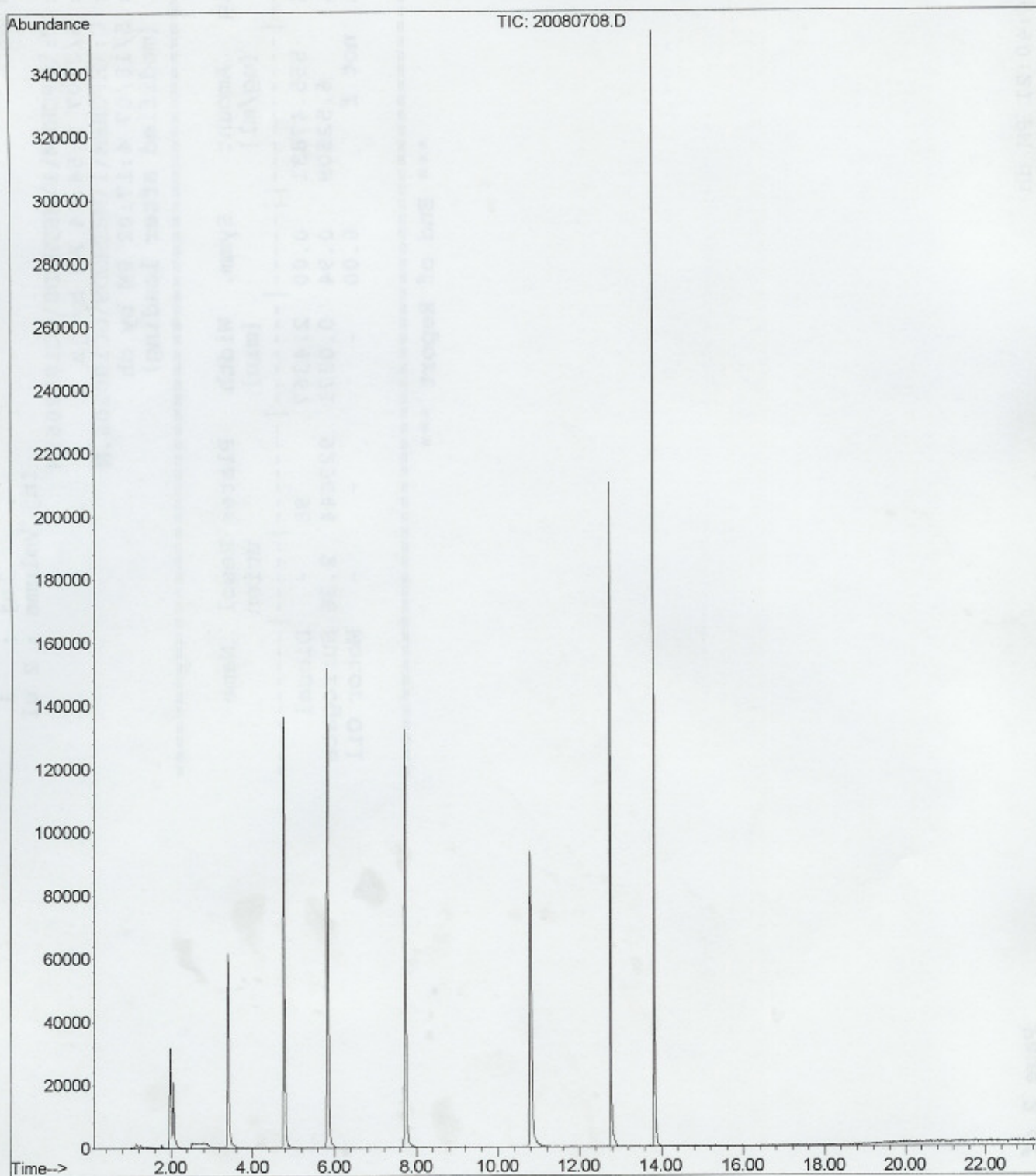
**Reported:**  
06-Sep-07 19:42

### Notes and Definitions

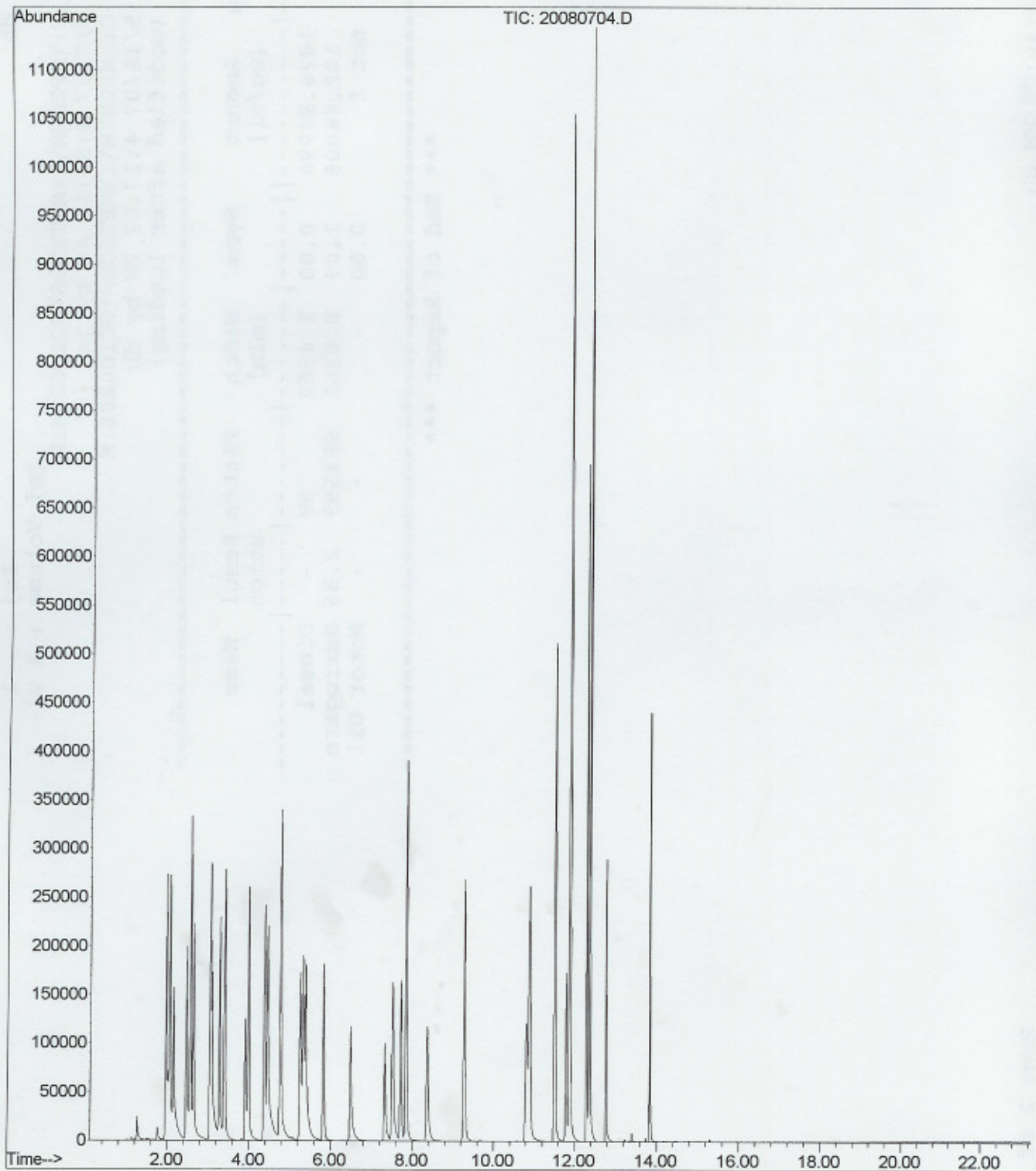
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ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



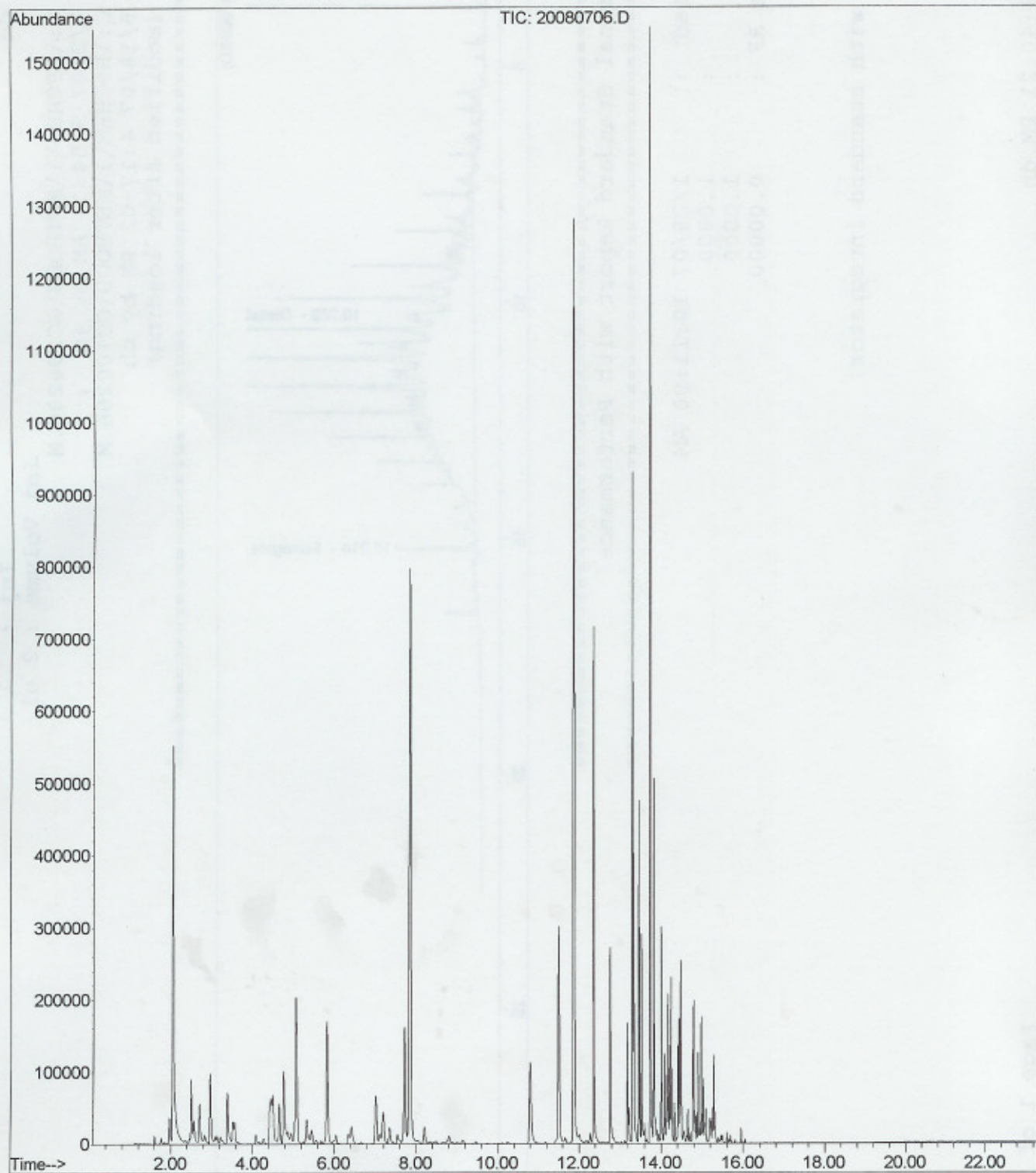
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Operator : MA  
Acquired : 20 Aug 2007 10:04 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH72301-BLK1  
Misc Info :  
Vial Number: 8



File : C:\MSDCHEM\1\DATA\2007-Aug-20-1801.b\20080704.D  
Operator : MA  
Acquired : 20 Aug 2007 7:54 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH72301-BS1@voc  
Misc Info :  
Vial Number: 4



File : C:\MSDCHEM\1\DATA\2007-Aug-20-1801.b\20080706.D  
Operator : MA  
Acquired : 20 Aug 2007 8:59 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH72301-BS1@gas  
Misc Info :  
Vial Number: 6



# **Appendix D**

Chain of Custody Forms and Laboratory Reports  
for the  
Groundwater Extraction Treatment System

# CHAIN OF CUSTODY FORM

**PAL** Pacific Analytical Laboratory  
 851 West Midway Ave., Suite 201B  
 Alameda, CA 94501  
 510-864-0364 Telephone  
 510-864-0365 Fax

PAL  
 Login# 7070013

Project No: 2333				Sampler: <i>B. Bassett</i>								Analyses/Method								
Project Name: 3609 International Blvd. Oakland				Report To: Bill Bassett								TPHg, BTEX, MtBE 8260B								
Turnaround Time: Standard				Company: SOMA Environmental Engineering, Inc.																
				Tel: 925-734-6400 Fax: 925-734-6401																
		Sampling Date/Time		Matrix			# of Containers	Preservatives				Field Notes								
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H <sub>2</sub> So4	HNO <sub>3</sub>	ICE									
	Influent	<i>7/27/07</i>	<i>1245</i>		*		3-VOAs	*			*	Grab Sample								
	GAC-1	<i>↓</i>	<i>1230</i>		*		3-VOAs	*			*	Grab Sample								
	PSP-1	<i>↓</i>	<i>1215</i>		*		3-VOAs	*			*	Grab Sample								
Sampler Remarks: EDF Output Required				Relinquished by: <i>[Signature]</i>				Date/Time: <i>7/30/07</i> <i>9:44</i>		Received by: <i>[Signature]</i>				Date/Time: <i>7.30.07</i> <i>9:45</i>						

07 August 2007

Mansour Sepehr  
SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton, CA 94588

RE: 3609 International Blvd, Oakland

Work Order Number: 7070013

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



---

Maiid Akhavan  
Laboratory Director



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2333  
Project Manager: Mansour Sepehr

**Reported:**  
07-Aug-07 18:56

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Influent	7070013-01	Water	27-Jul-07 12:45	30-Jul-07 12:02
GAC-1	7070013-02	Water	27-Jul-07 12:30	30-Jul-07 12:02
PSP-1	7070013-03	Water	27-Jul-07 12:15	30-Jul-07 12:02



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2333  
Project Manager: Mansour Sepehr

Reported:  
07-Aug-07 18:56

**Volatile Organic Compounds by EPA Method 8260B**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Influent (7070013-01RE1) Water</b> <b>Sampled: 27-Jul-07 12:45</b> <b>Received: 30-Jul-07 12:02</b>									
Gasoline (C6-C12)	4420	215	ug/l	4.3	BH70201	30-Jul-07	01-Aug-07	EPA 8260B	
Benzene	249	2.15	"	"	"	"	"	"	
Ethylbenzene	20.3	2.15	"	"	"	"	"	"	
m&p-Xylene	534	8.60	"	"	"	"	"	"	
o-xylene	318	2.15	"	"	"	"	"	"	
Toluene	31.8	8.60	"	"	"	"	"	"	
MTBE	449	2.15	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %		70-130	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %		70-130	"	"	"	"	
Surrogate: Perdeuterotoluene		91.4 %		70-130	"	"	"	"	
<b>GAC-1 (7070013-02) Water</b> <b>Sampled: 27-Jul-07 12:30</b> <b>Received: 30-Jul-07 12:02</b>									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BH70201	30-Jul-07	31-Jul-07	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		80.4 %		70-130	"	"	"	"	
Surrogate: Dibromofluoromethane		106 %		70-130	"	"	"	"	
Surrogate: Perdeuterotoluene		91.4 %		70-130	"	"	"	"	
<b>PSP-1 (7070013-03) Water</b> <b>Sampled: 27-Jul-07 12:15</b> <b>Received: 30-Jul-07 12:02</b>									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BH70201	30-Jul-07	31-Jul-07	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		79.4 %		70-130	"	"	"	"	
Surrogate: Dibromofluoromethane		105 %		70-130	"	"	"	"	
Surrogate: Perdeuterotoluene		90.6 %		70-130	"	"	"	"	

Pacific Analytical Laboratory

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.





SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland

Project Number: 2333

Project Manager: Mansour Sepehr

**Reported:**  
07-Aug-07 18:56

**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

Project: 3609 International Blvd, Oakland  
Project Number: 2333  
Project Manager: Mansour Sepehr

Reported:  
07-Aug-07 18:56

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BH70201 - EPA 5030 Water MS**

**Blank (BH70201-BLK1)**

Prepared & Analyzed: 02-Aug-07

Surrogate: 4-Bromofluorobenzene	40.3		ug/l	50.0		80.6	70-130			
Surrogate: Dibromofluoromethane	49.7		"	50.0		99.4	70-130			
Surrogate: Perdeuterotoluene	45.5		"	50.0		91.0	70-130			
Gasoline (C6-C12)	ND	50.0	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	2.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
MTBE	ND	0.500	"							

**LCS (BH70201-BS1)**

Prepared & Analyzed: 02-Aug-07

Surrogate: 4-Bromofluorobenzene	51.3		ug/l	50.0		103	70-130			
Surrogate: Dibromofluoromethane	41.8		"	50.0		83.6	70-130			
Surrogate: Perdeuterotoluene	51.9		"	50.0		104	70-130			
Gasoline (C6-C12)	1610	50.0	"	2000		80.5	70-130			
Benzene	92.9	0.500	"	100		92.9	70-130			
Toluene	95.1	2.00	"	100		95.1	70-130			
MTBE	85.0	0.500	"	100		85.0	70-130			

**LCS Dup (BH70201-BSD1)**

Prepared & Analyzed: 02-Aug-07

Surrogate: 4-Bromofluorobenzene	51.8		ug/l	50.0		104	70-130			
Surrogate: Dibromofluoromethane	49.6		"	50.0		99.2	70-130			
Surrogate: Perdeuterotoluene	52.4		"	50.0		105	70-130			
Gasoline (C6-C12)	1960	50.0	"	2000		98.0	70-130	19.6	20	
Benzene	101	0.500	"	100		101	70-130	8.35	20	
Toluene	102	2.00	"	100		102	70-130	7.00	20	
MTBE	101	0.500	"	100		101	70-130	17.2	20	



SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton CA, 94588

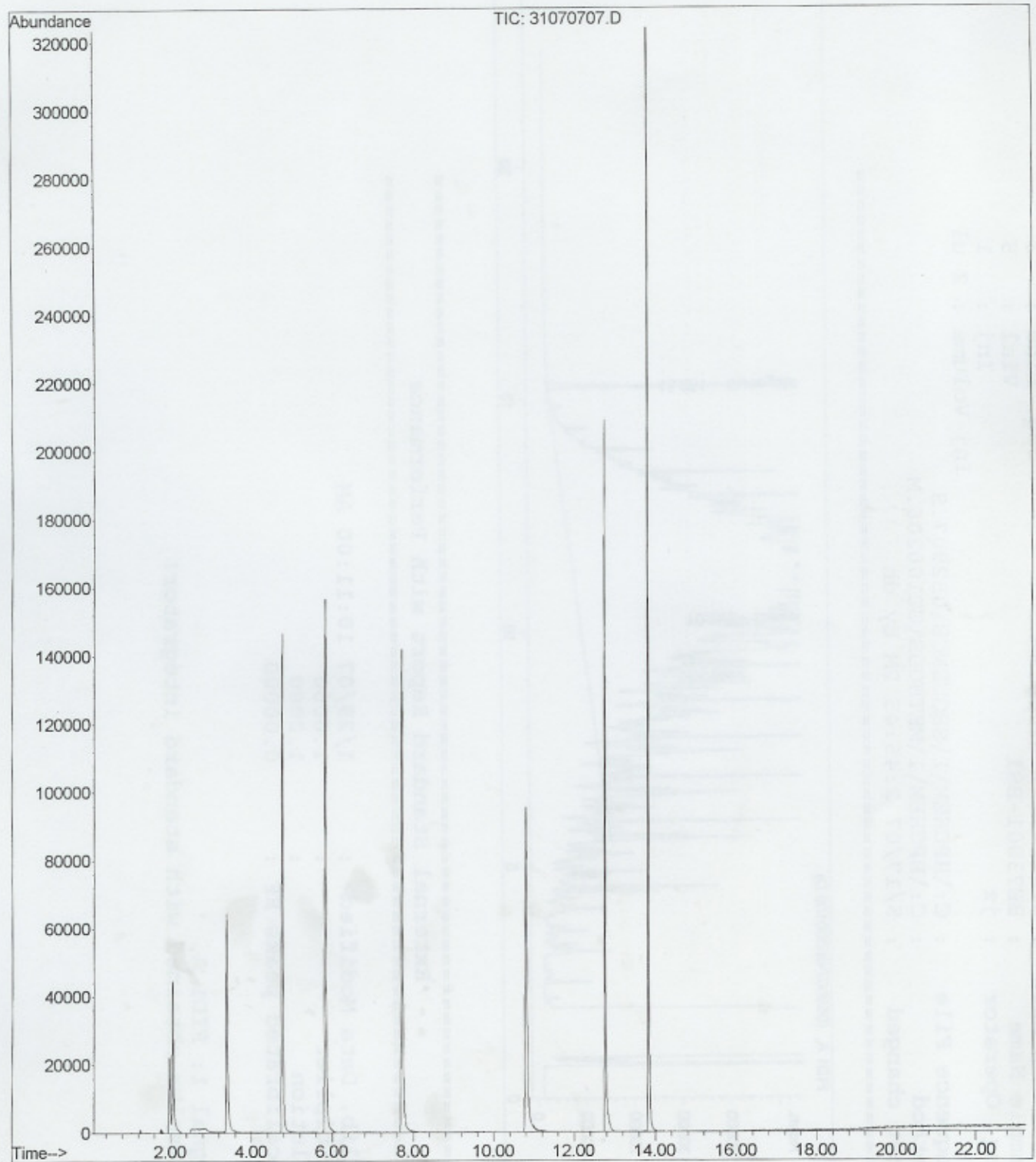
Project: 3609 International Blvd, Oakland  
Project Number: 2333  
Project Manager: Mansour Sepehr

**Reported:**  
07-Aug-07 18:56

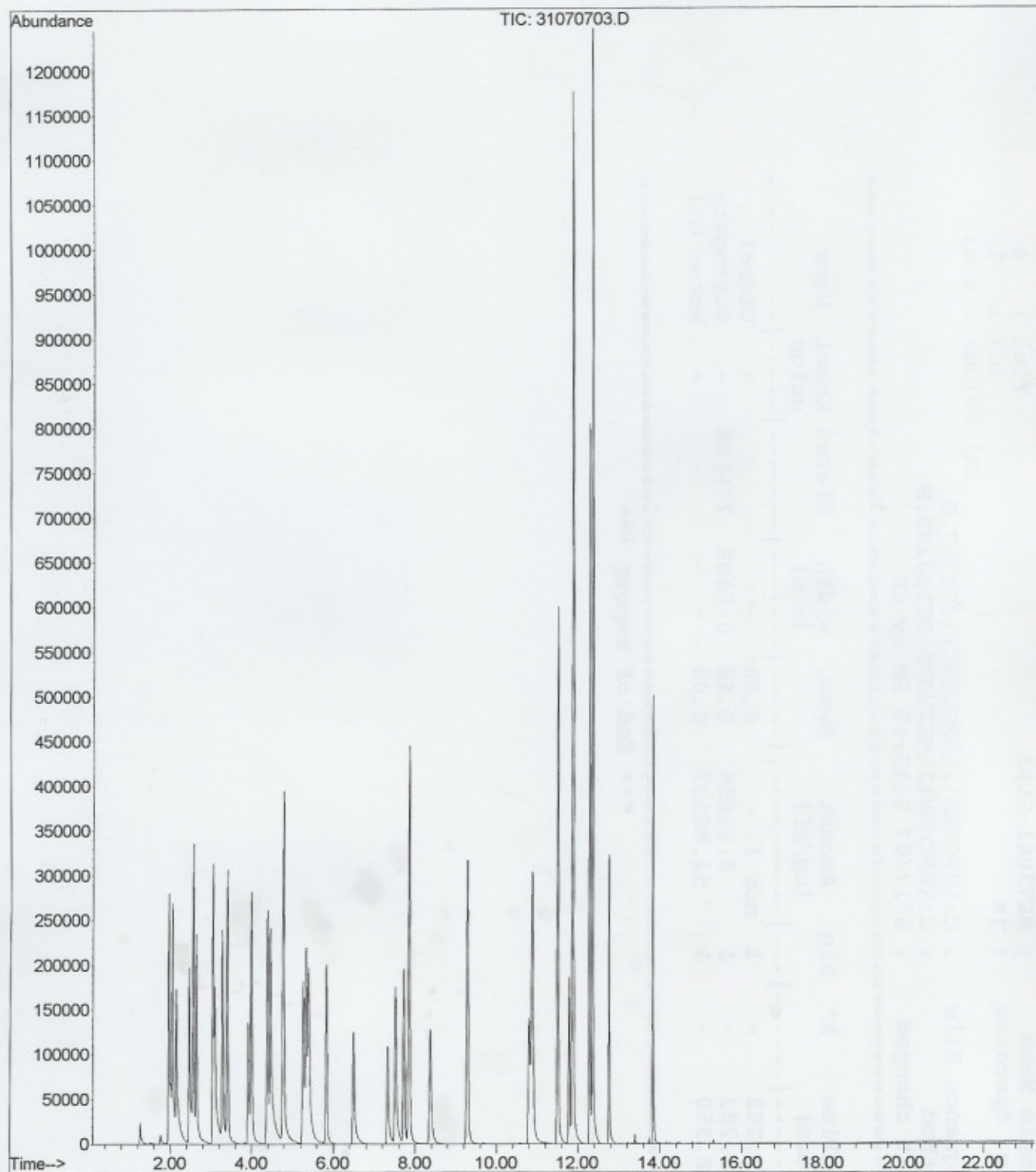
### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

File :C:\MSDChem\1\DATA\2007-Jul-31-1755.b\31070707.D  
Operator : MA  
Acquired : 31 Jul 2007 9:23 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH70201-BLK1  
Misc Info :  
Vial Number: 7



File :C:\MSDCHEM\1\DATA\2007-Jul-31-1755.b\31070703.D  
Operator : MA  
Acquired : 31 Jul 2007 7:13 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH70201-BS1@voc  
Misc Info :  
Vial Number: 3



File :C:\MSDCHEM\1\DATA\2007-Jul-31-1755.b\31070717.D  
Operator : MA  
Acquired : 1 Aug 2007 7:25 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BH70201-BS1@gas  
Misc Info :  
Vial Number: 17

