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July 1, 2010

Mr. Paresh Khatri  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: Texaco Gasoline Service Station (Formerly Freedom ARCO Station)  
Site Address: 15101 Freedom Avenue, San Leandro, California  
**STID 4473/RO0000473**

Dear Mr. Khatri:

SOMA's "Second Quarter 2010 Groundwater Monitoring and Remediation Progress Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

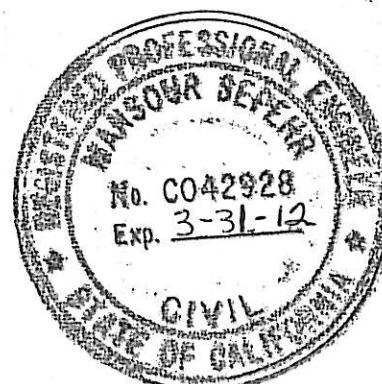
Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mansour Sepehr".

Mansour Sepehr, Ph.D.,PE  
Principal Hydrogeologist

cc: Mr. Mohammad Pazdel w/report enclosure



**Second Quarter 2010  
Groundwater Monitoring and  
Remediation Progress Report  
Freedom Food and Gas**

**15101 Freedom Avenue  
San Leandro, California**

**July 1, 2010**

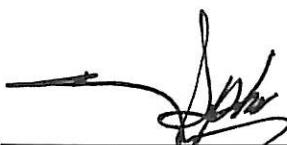
**Project 2551/2555**

**Prepared for**

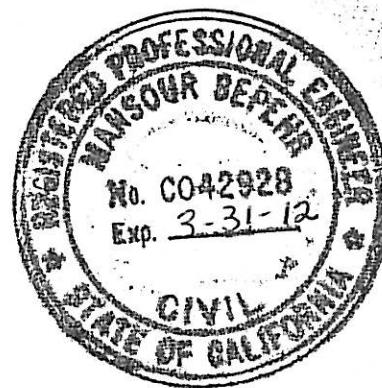
**Mr. Mohammad Pazdel  
1770 Pistacia Court  
Fairfield, California**

## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Mohammad Pazdel, property owner of 15101 Freedom Avenue, San Leandro, California, to comply with Alameda County Health Care Services requirements for the Second Quarter 2010 groundwater monitoring event.



Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



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- Appendix E: Second Quarter 2010 MPE Events Field Data Sheets

## **1. INTRODUCTION**

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Mohammad Pazdel, property owner of 15101 Freedom Avenue, San Leandro, California. The site is located in an area of primarily residential properties and adjacent commercial areas (Figure 1). The property was formerly owned by Mr. Mohammad Pazdel. In late 2009, the property was sold to Mr. Farrokh Hosseinyoun and in early 2010 it was sold to Mr. Mohammad Mashhoon. Under the new management, the site is currently operational with the business name of “Freedom Food and Gas”.

This report summarizes results of the Second Quarter 2010 groundwater monitoring event conducted on June 3 and 4, 2010. It includes physical and chemical properties measured in the field and laboratory analysis results for each groundwater sample. It also presents the remediation progress report for Second Quarter 2010, which includes operation of a groundwater extraction and treatment system and a multi-phase extraction (MPE) event conducted in June 2010.

### **1.1 Field Activities**

On June 3 and 4, 2010, SOMA's field crew conducted a groundwater monitoring event in accordance with procedures and guidelines of Alameda County Health Care Services (ACHCS) and the California Regional Water Quality Control Board (CRWQCB). Figure 2 shows well locations.

On June 3, 2010, the following wells were measured for depth to groundwater: five on-site monitoring wells (MW-1 to MW-5) and two off-site wells (MW-6 and MW-7) in the First water bearing zone (WBZ); two extraction wells (EX-1 and EX-2) and two MPE wells (MPE-1 and MPE-2); and three on-site monitoring wells (MW-1D, MW-3D, and MW-4D) in the Second WBZ. On June 3 and 4, 2010, additional field measurements and grab groundwater samples were collected from all monitoring wells. Grab groundwater samples were also collected from the two extraction wells. Properties measured include pH, temperature, and electrical conductivity (EC). A natural attenuation study was conducted during this event to determine whether petroleum hydrocarbons in groundwater are biodegrading. Dissolved oxygen (DO) and oxidation reduction potential (ORP) measurements were taken for all monitoring wells.

### **1.2 Laboratory Analysis**

Curtis & Tompkins, Ltd., a California state-certified laboratory, analyzed groundwater samples for the following: total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); methyl tertiary-butyl ether (MtBE); and gasoline oxygenates, ethanol and

lead scavengers. Samples were prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

## **2. RESULTS**

Following are results of field measurements and laboratory analysis for the June 2010 groundwater monitoring event.

### **2.1 Field Measurements, First WBZ Wells**

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 13.80 feet in MW-7 to 22.88 feet in MW-1. Corresponding groundwater elevations ranged from 30.10 feet in MW-6 to 31.58 feet in MW-1.

Figure 3 displays the contour map of groundwater elevations. Groundwater flows southwesterly across the site at a gradient of 0.014 feet/feet. A significant capture zone is centered on EX-2. The groundwater flow direction has remained consistent and gradient has decreased since the previous monitoring event (First Quarter 2010).

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the First WBZ ranged from 0.58 mg/L in MW-6 to 1.90 mg/L in MW-4. ORP showed negative redox potentials in all First WBZ monitoring wells. Negative redox potentials indicate that contaminants in groundwater are conducive to anaerobic biodegradation.

Field measurements taken during this monitoring event are included in Appendix B.

### **2.2 Laboratory Analysis, First WBZ Wells**

Appendix C includes the laboratory report and chain-of-custody form for this monitoring event.

Table 1 presents TPH-g, BTEX, and MtBE analysis results for the current and historical groundwater monitoring events.

TPH-g concentrations ranged from 690 µg/L in MW-2 to 31,000 µg/L in MW-3. The TPH-g concentration decreased in MW-6 and MW-7, while it increased in all other wells since the previous monitoring event (First Quarter 2010).

Figure 4 displays the contour map of TPH-g concentrations in groundwater. As illustrated, the highest TPH-g impact is in the vicinity of the dispenser islands and

former underground storage tanks (USTs) around MW-3. High TPH-g concentration was also observed around off-site well MW-6.

The following BTEX concentrations were observed:

- In MW-2 and MW-7, benzene and toluene were below laboratory-reporting limits and ethylbenzene and total xylenes were at low levels.
- The highest benzene, ethylbenzene, and xylene concentrations were detected in MW-3, at 1,200 µg/L, 1,300 µg/L, and 4,400 µg/L, respectively.
- The highest toluene concentration was detected in EX-2 at 400 µg/L.

Figure 5 displays the contour map of benzene concentrations in groundwater. The highest benzene impact is in the vicinity of the dispenser islands and former USTs around MW-3. Since the previous monitoring event (First Quarter 2010), benzene concentrations have decreased in MW-4, MW-6, and EX-2 and increased in MW-1, MW-3, MW-5, and EX-1.

MtBE was below the laboratory-reporting limit in MW-2. Detectable MtBE concentrations ranged from 5.20 µg/L in MW-1 to 83 µg/L in EX-1. Figure 6 displays the contour map of MtBE concentrations in groundwater. The highest MtBE impact was in the vicinity of extraction well EX-1. Since the previous monitoring event (First Quarter 2010), MtBE concentrations increased in MW-1 and MW-5 and decreased in all other wells.

As shown in Table 1, since the previous monitoring event (First Quarter 2010), TPH-g and BTEX increased in the more impacted well MW-3, but decreased in off-site well MW-6; MtBE decreased in both MW-3 and MW-6.

Table 2 shows analysis results for gasoline oxygenate and lead scavenger concentrations for the current as well as historical events.

The following gasoline oxygenate and lead scavenger concentrations were observed:

- In MW-2, MW-3, MW-6, and EX-2, concentrations of all gasoline oxygenates and lead scavengers were below laboratory-reporting limits.
- Tertiary-butyl alcohol (TBA) was detected in MW-1, MW-4, MW-5, MW-7 and EX-1 in concentrations ranging from 20 µg/L in MW-7 to 930 µg/L in MW-4, and was below the laboratory-reporting limit in all other First WBZ wells.

Figure 7 shows the map of TBA concentrations in groundwater. The most TBA-impacted regions were in the vicinity of the dispenser islands and in the southern section of the site, around MW-4 and in the vicinity of EX-1. Due to the high mobility rate of TBA in groundwater, the TBA plume appears to have migrated with the flow of groundwater from the UST cavity and pump islands toward MW-4.

- Ethyl tertiary-butyl ether (ETBE) was detected in MW-4 and EX-1 at 7.7 µg/L and 1.9 µg/L, respectively and was below the laboratory-reporting limit in remaining wells.
- Methyl tertiary-amyl ether (TAME) was detected in MW-7 at 7.1 µg/L and was below the laboratory-reporting limit in remaining wells. Figure 8 displays the map showing concentrations of ETBE and TAME in First WBZ wells.
- Isopropyl ether (DIPE), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), and ethanol concentrations were below laboratory-reporting limits in all groundwater samples. Analysis results for ethanol are shown in Appendix C.

### **2.3 Field Measurements, Second WBZ Wells**

Table 1 presents calculated groundwater elevations and depths to groundwater for each Second WBZ monitoring well. Depths to groundwater ranged from 21.93 feet in MW-4D to 23.10 feet in MW-1D. Corresponding groundwater elevations ranged from 31.19 feet in MW-4D to 31.40 feet in MW-3D.

Figure 9 displays the contour map of groundwater elevations in the Second WBZ. Groundwater flows southwesterly at a gradient of 0.0014 feet/feet. The groundwater flow direction changed direction from north-northwesterly and gradient has slightly decreased since the previous monitoring event (First Quarter 2010).

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the Second WBZ ranged from 0.58 mg/L in MW-1D to 1.30 mg/L in MW-4D. ORP showed positive potential in all wells. The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor.

Field measurements taken during this monitoring event are included in Appendix B.

### **2.4 Laboratory Analysis for Second WBZ Wells**

Appendix C includes the laboratory report and chain-of-custody form for this monitoring event.

Table 1 presents TPH-g, BTEX, and MtBE analysis results for the current and historical groundwater monitoring events.

TPH-g and BTEX have remained below laboratory-reporting limits in all wells since the previous monitoring event (First Quarter 2010).

MtBE was below the laboratory-reporting limit in MW-1D, and was detected in MW-3D and MW-4D at 17 µg/L and 1.10 µg/L, respectively.

Table 2 shows analysis results for gasoline oxygenate and lead scavenger concentrations for the current as well as historical events.

The following gasoline oxygenate and lead scavenger concentrations were observed:

- TBA, DIPE, ETBE, 1,2-DCA, EDB, and ethanol were below laboratory-reporting limits in all groundwater samples from the Second WBZ. (Analysis results for ethanol are included in Appendix C.)
- TAME was detected at low level in MW-3D and was below the laboratory-reporting limit in MW-1D and MW-4D.

Figure 10 displays concentrations of MtBE and TAME in Second WBZ wells.

### **3. OPERATION OF TREATMENT SYSTEM**

SOMA installed a groundwater treatment system at the site in December 2009. The system includes two extraction wells (EX-1 and EX-2), trenching containing influent and effluent lines and electrical conduits, and the treatment system compound. During system operation, extracted groundwater is pumped from extraction wells through underground piping to a fenced treatment compound, adjacent to the existing service station building.

In the treatment compound, groundwater is treated using granular activated carbon (GAC) and subsequently discharged to the sanitary sewer. Two GAC vessels are connected in series. The first unit (1,000 gallons) serves as the primary treatment unit, and the second (55 gallons) provides an additional safety buffer prior to discharge. Effectiveness of the GAC units is monitored by collection and analysis of samples from the system discharge, including a sample collected from water that has passed only through the first GAC unit. When analytical results indicate that the first GAC unit is no longer effectively treating groundwater, the vessel will be removed from the treatment line and refurbished with new carbon.

The treatment system operates under discharge permit issued by Oro Loma Sanitary District (OLSD) in May 2009. Treated groundwater has been discharging to the OLSD sewer since December 9, 2009. Figure 11 shows the schematic diagram of the groundwater treatment system. Treatment system effluent is sampled monthly to comply with OLSD discharge permit requirements. Table 3 includes analytical results and operational history of the treatment system. Appendix E includes laboratory analytical results. Since the system

began discharging in December 2009, approximately 852,158 gallons of groundwater have been treated and discharged at the site (as of June 22, 2010).

## 4. MULTI-PHASE EXTRACTION EVENTS

During Second Quarter 2010, SOMA performed one 5-day MPE event from June 7 to June 11, utilizing MPE-1 and MPE-2.

MPE operational data is presented in Table 4. Extraction data is presented in Table 5. Field data sheets are presented in Appendix F. Representative samples were analyzed from the stack of the thermal oxidizer to show compliance with the BAAQMD permit. Table 6 lists sample identifiers and analysis results.

(Note: Since PID data has proven to be reliable through comparisons with laboratory analytical results of soil vapor, PID data alone will be used to estimate VOC mass removal rates, VOC mass removed, and mass removal efficiency.)

The estimated mass of VOCs removed from soil vapor extraction and VOC mass removal rate for the June 2010 event was 30 lbs at 7 lbs/day.

The overall estimated total mass of VOCs extracted by MPE is 576 pounds; this includes 106 pounds extracted during the November 2007 pilot test, 243 pounds during the October 2009 event, 72 pounds during the November 2009 event, 97 pounds during the December 2009 event, 17 pounds during the February 2010 event, 11 pounds during the March 2010 event, and 30 pounds during the June 2010 event. Figure 12 shows the cumulative mass of VOCs removed in pounds.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Second Quarter 2010 groundwater monitoring and MPE events results are summarized below.

- Groundwater flow direction has remained southwesterly in the First WBZ, and has changed from north-northwesterly to southwesterly in the Second WBZ.
- The hydrocarbon source area remains in the vicinity of the former UST cavity, near MW-3, where a previous release of petroleum hydrocarbons occurred.
- The southerly migration of impacted groundwater from the source area of the former UST cavity is evidenced by high MtBE and TBA concentrations at MW-4 and MW-5. However, in general, the contaminant region appears to be centrally located in the vicinity of the former UST cavity and pump islands, especially at MW-3.

- The groundwater treatment system has created a capture zone in the vicinity of EX-1 and EX-2 and a second source area appears centered on the extraction wells.
- Since the previous quarterly monitoring event (First Quarter 2010), TPH-g concentrations decreased in off-site wells MW-6 and MW-7 and increased in extraction wells EX-1 and EX-2.
- In the Second WBZ, MtBE was detected in MW-3D and MW-4D and TAME in MW-3D at low levels, and concentrations have slightly increased since First Quarter 2010. All other contaminants were below laboratory-reporting limits in Second WBZ wells.
- MPE events conducted since November 2007 have removed an estimated 576 pounds of VOCs.

Based on results of this monitoring event and MPE events conducted during this quarter, SOMA recommends the following action items:

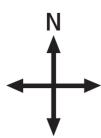
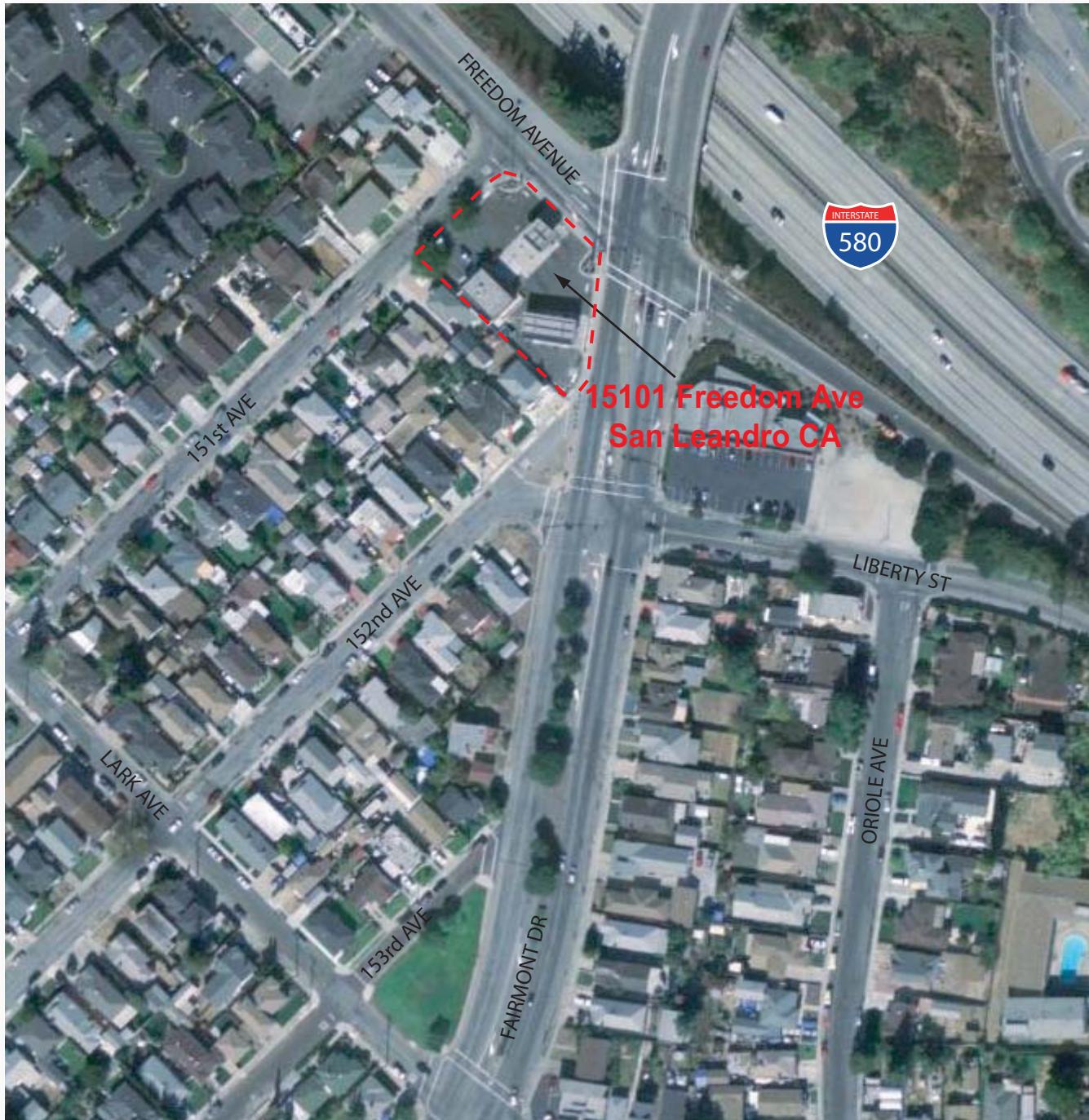
- Continue quarterly groundwater monitoring to increase understanding of seasonal variations in groundwater quality conditions.
- Continue operation of groundwater pump-and-treat system, in order to execute hydraulic control of the dissolved hydrocarbon plume and remediate residual hydrocarbon concentrations.
- As indicated by PID readings in Table 4, contaminant concentrations remained steady during the June 2010 MPE event. This indicates that significant amounts of fuel hydrocarbons are still adsorbed to the subsurface. Therefore, SOMA proposes to extend the duration of MPE events that have been approved by the ACHCS from 5 days to 10 days per event in order to remediate residual contamination within the approved number of events

## 6. REPORT LIMITATIONS

This report is the summary of work done by SOMA, including observations and descriptions of site conditions. It includes analysis results produced by Curtis & Tompkins, Ltd. for the current groundwater-monitoring event. Quantities and locations of wells were selected to provide the required information, but may not be 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 services were provided in accordance with generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

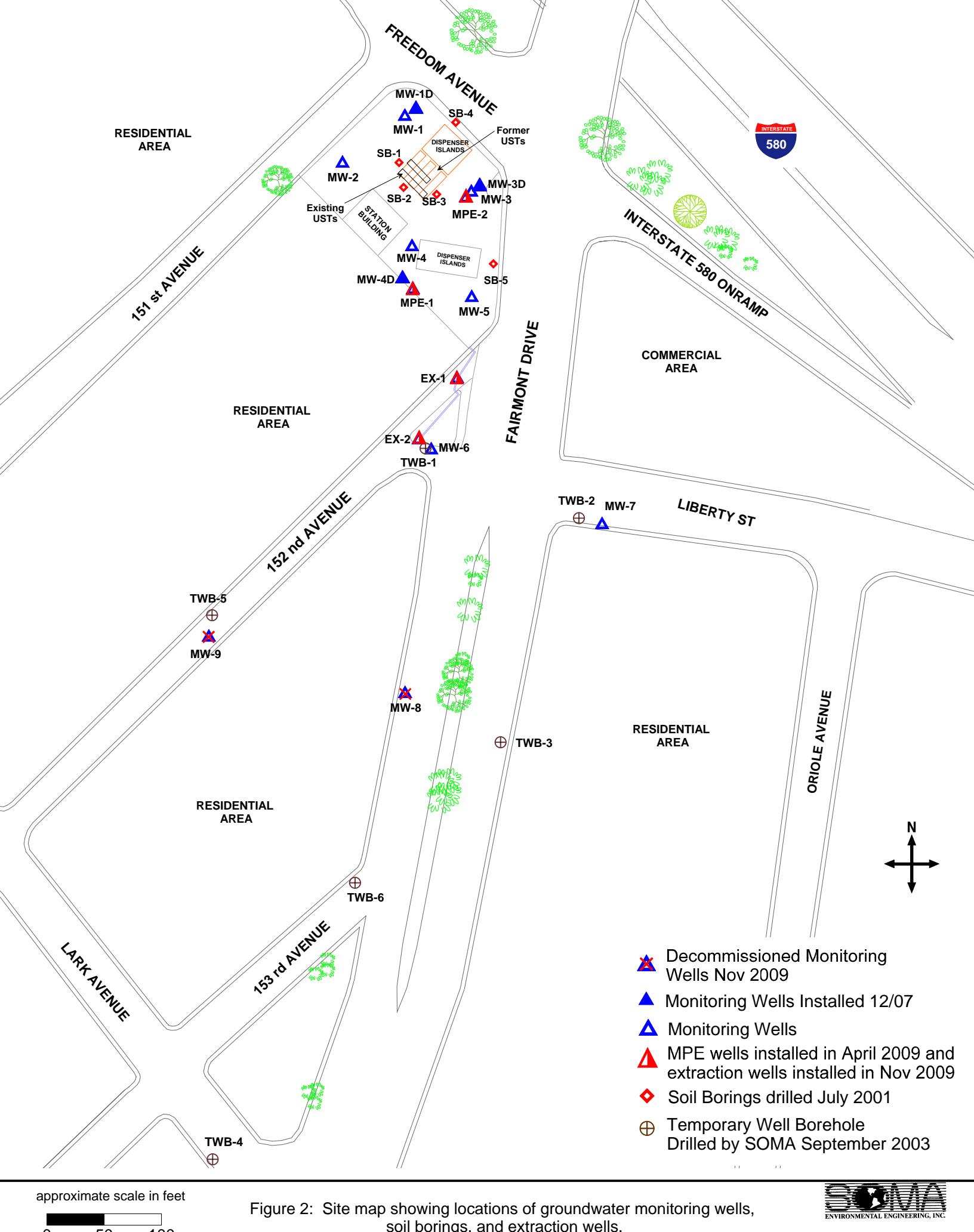
# **Figures**

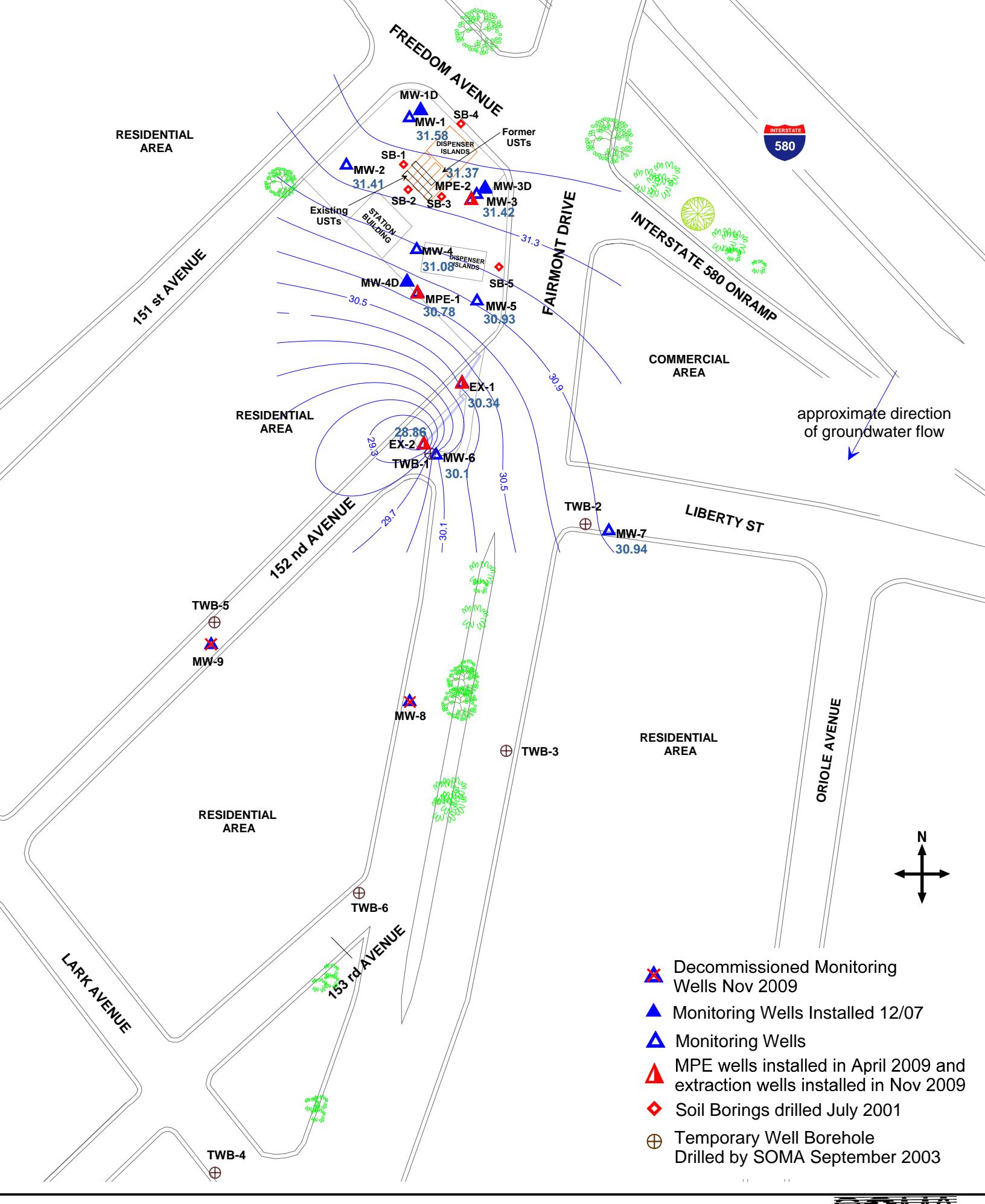


approximate scale in feet

0 150 300

Figure 1: Site vicinity map.



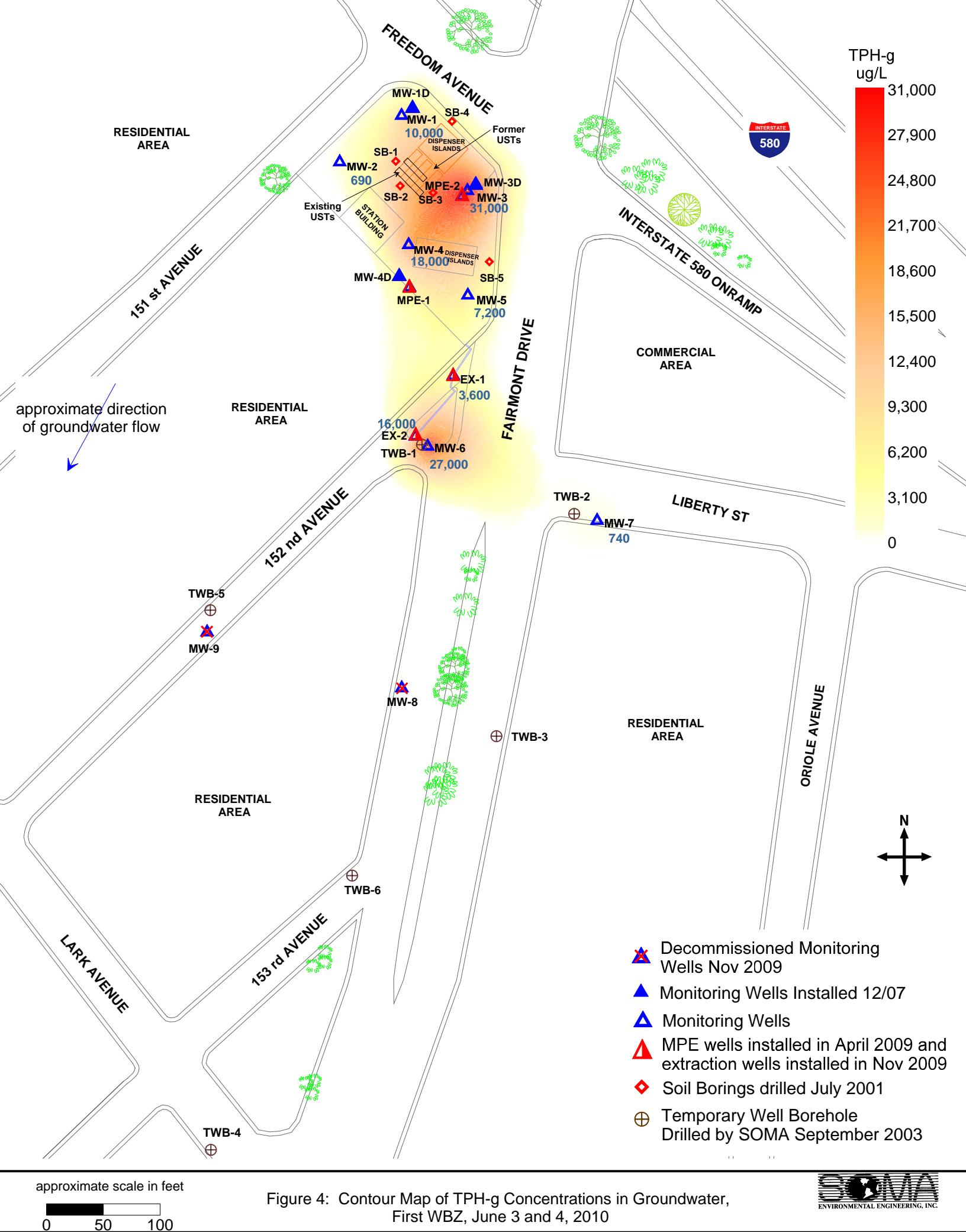


approximate scale in feet

0 50 100

Figure 3: Groundwater Elevation Contour Map in Feet, First WBZ  
June 3, 2010





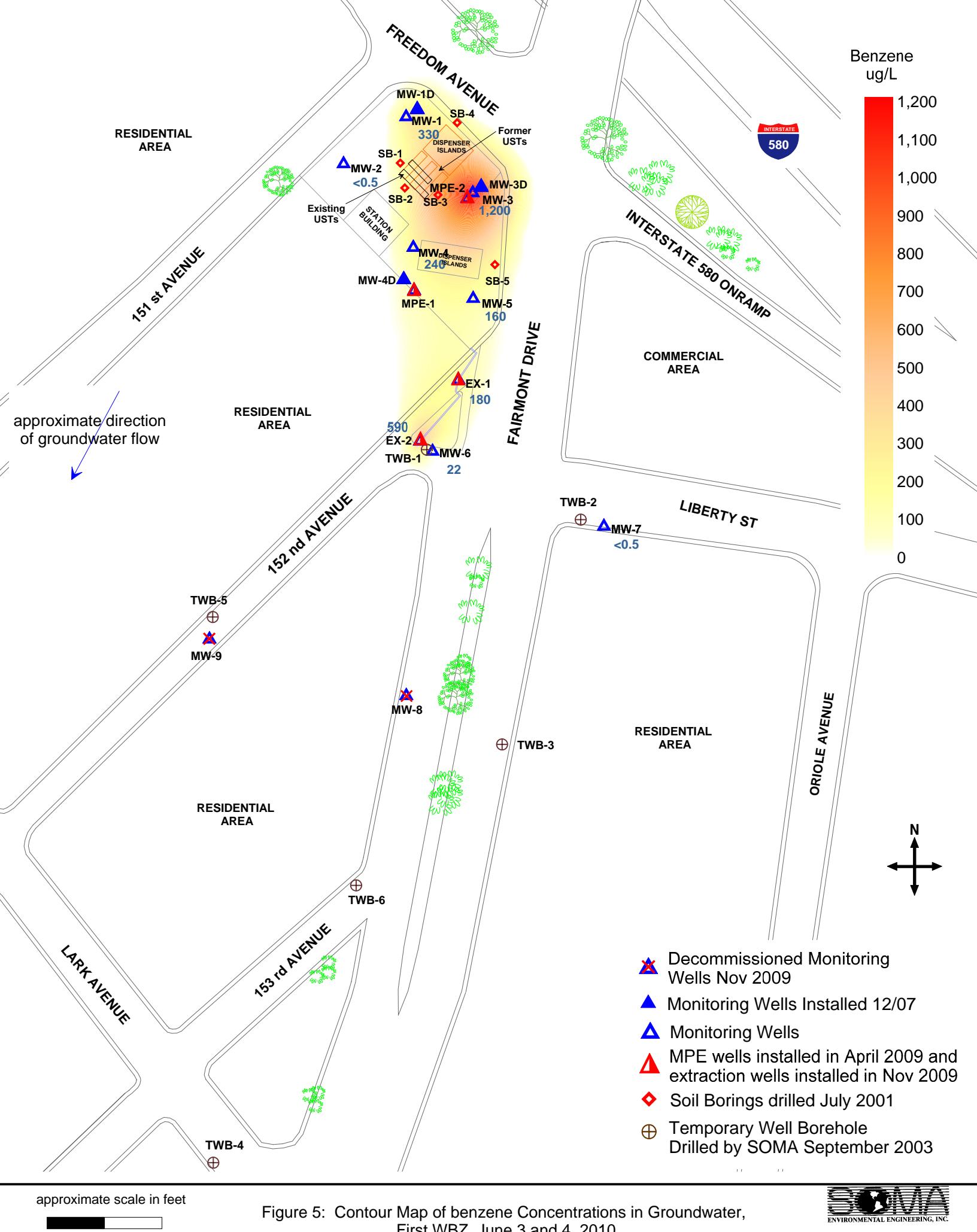
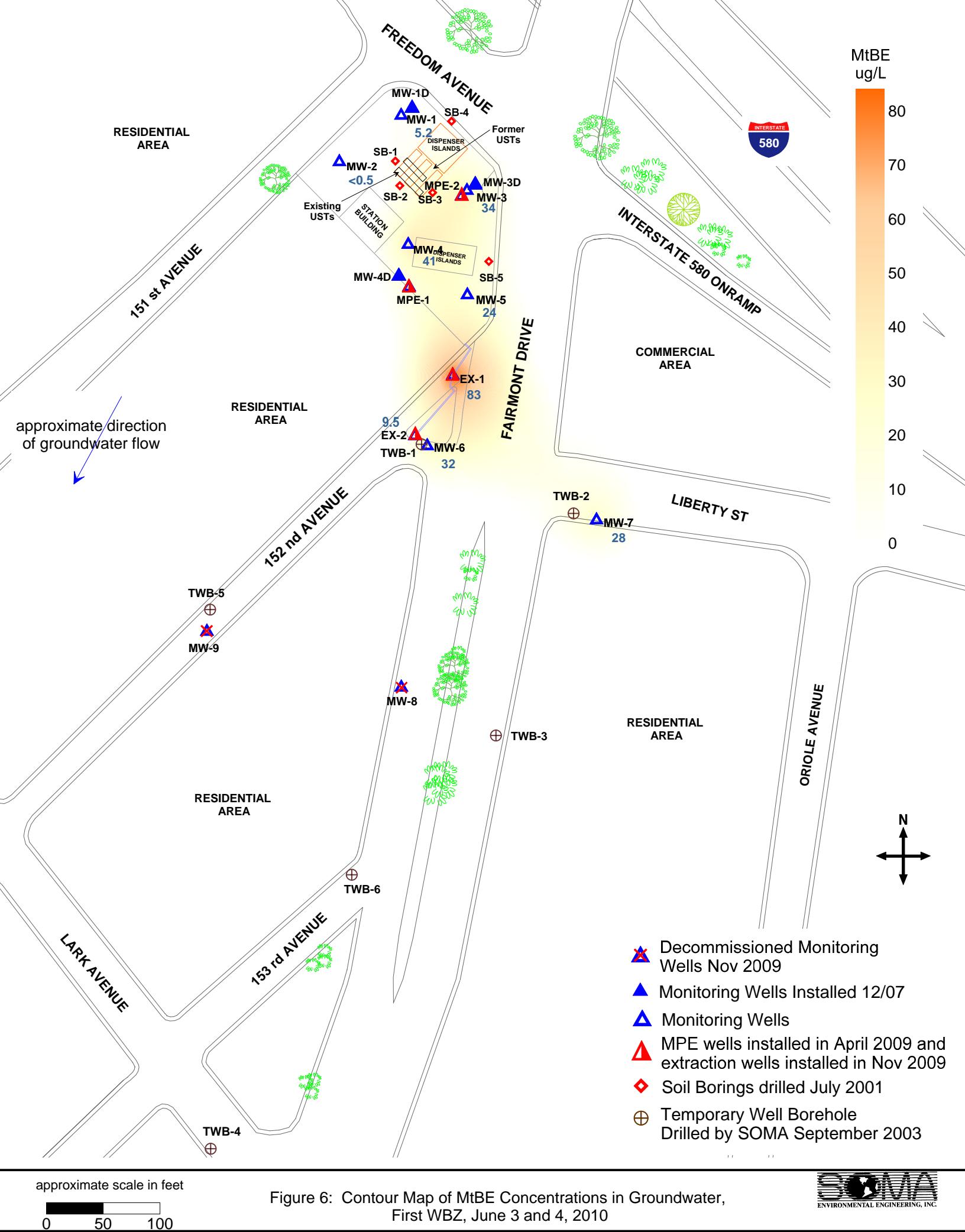
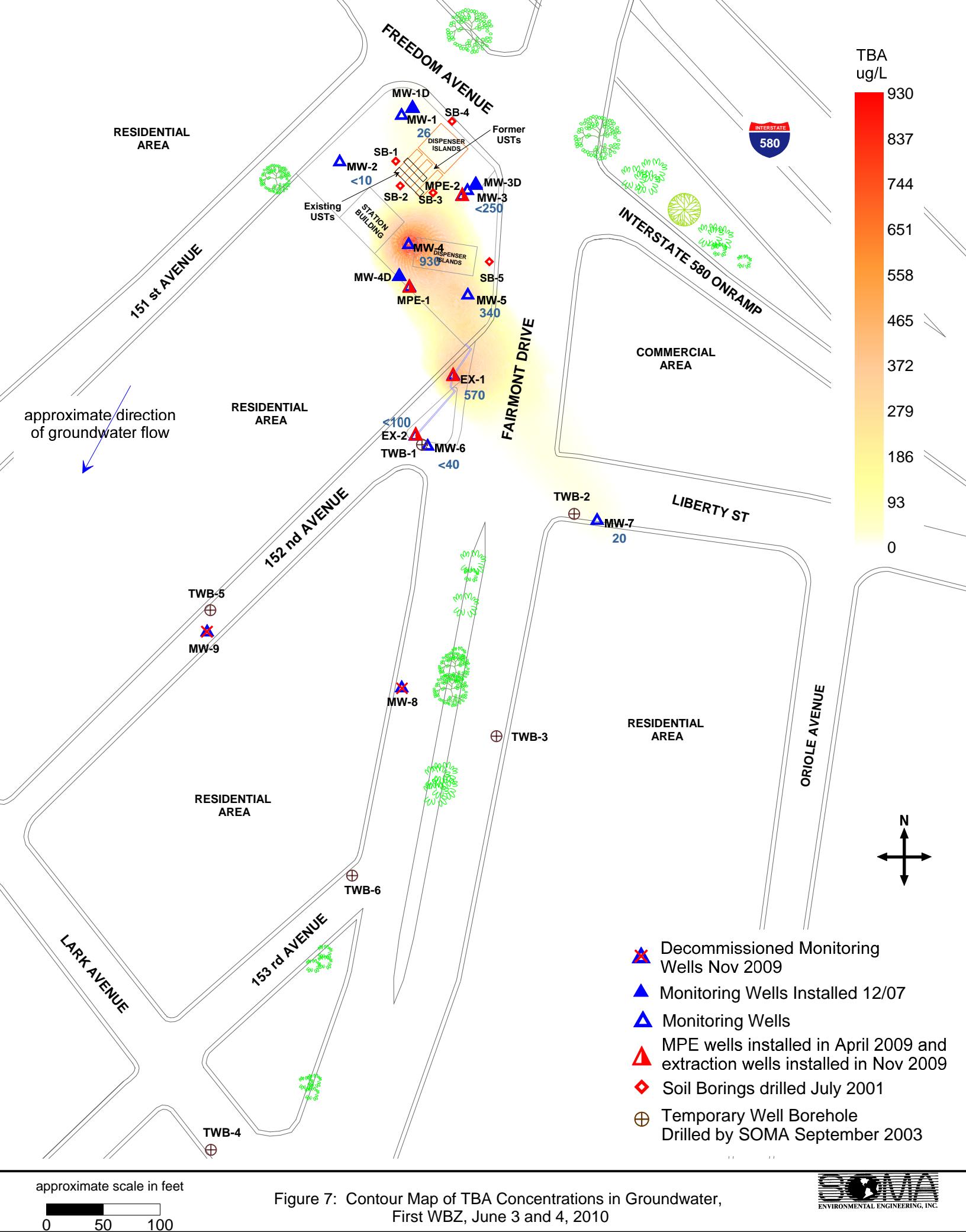


Figure 5: Contour Map of benzene Concentrations in Groundwater, First WBZ, June 3 and 4, 2010







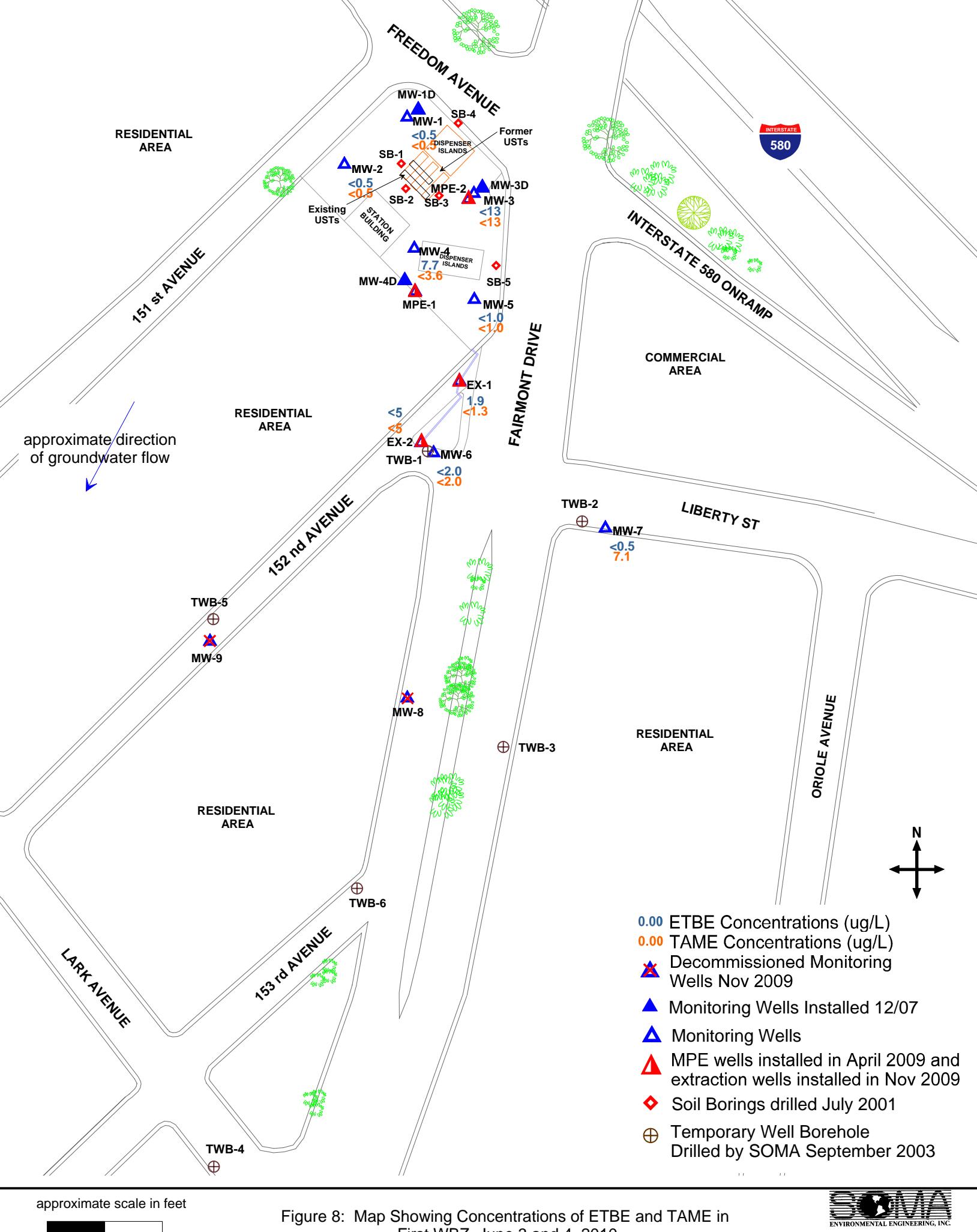
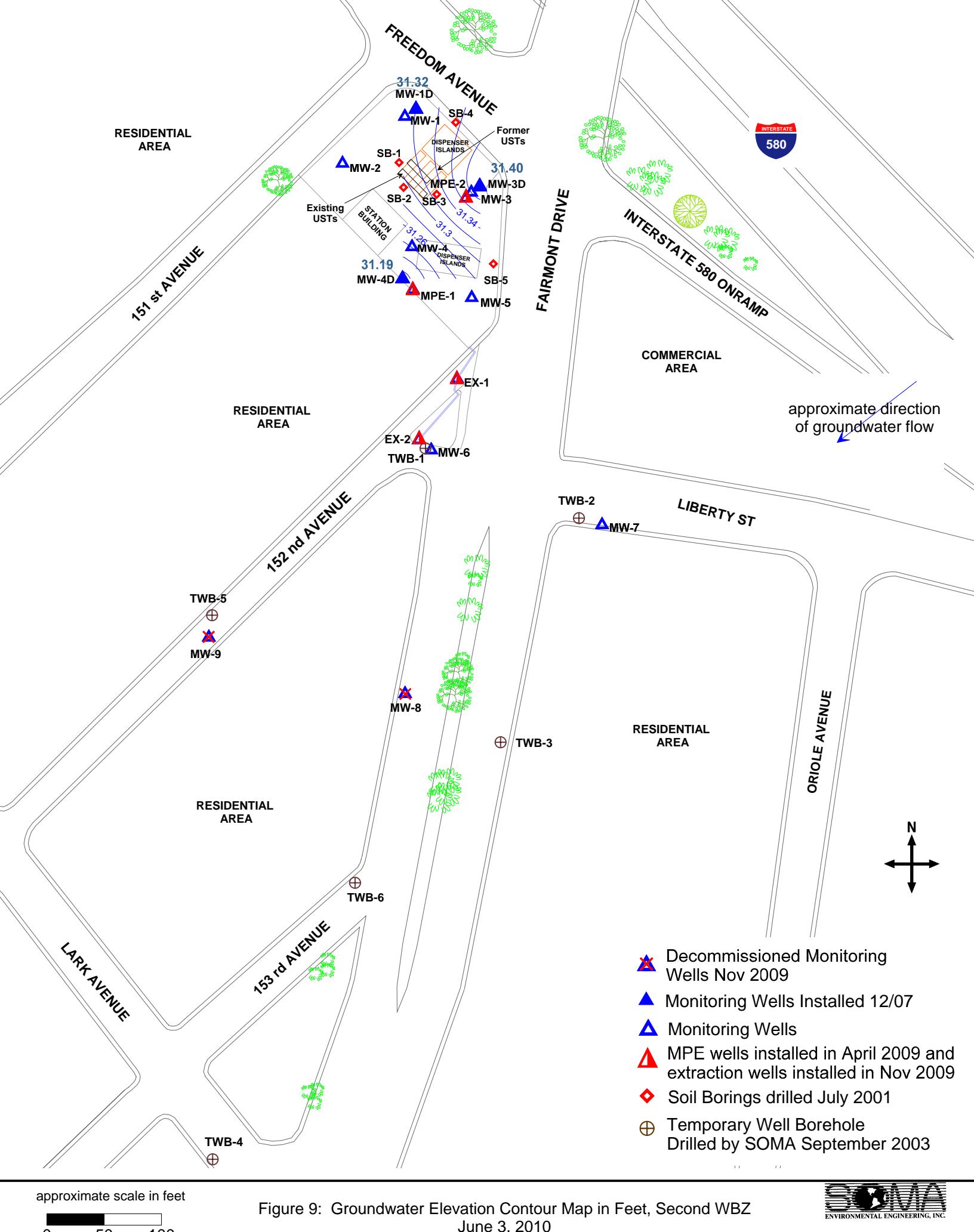
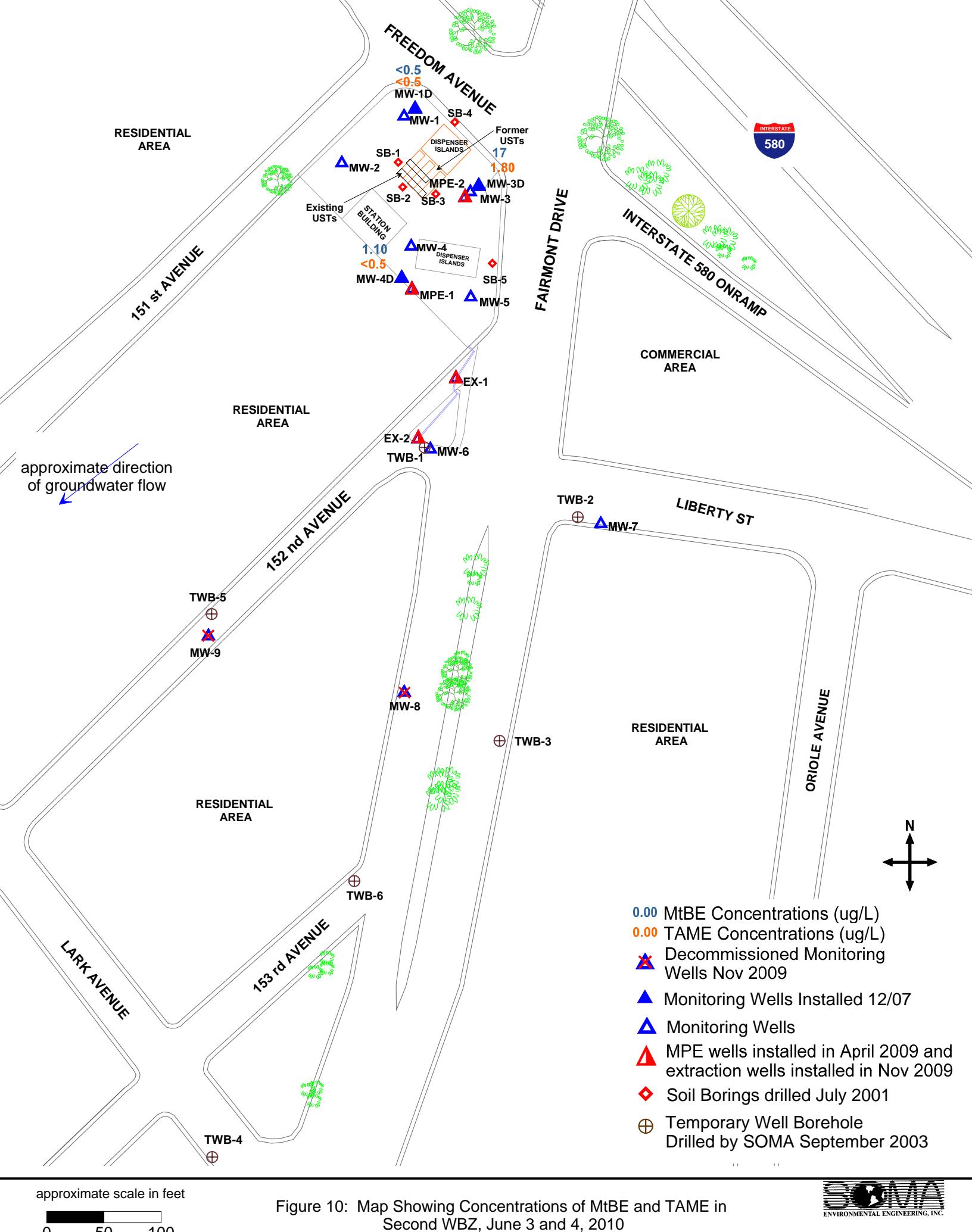


Figure 8: Map Showing Concentrations of ETBE and TAME in First WBZ, June 3 and 4, 2010







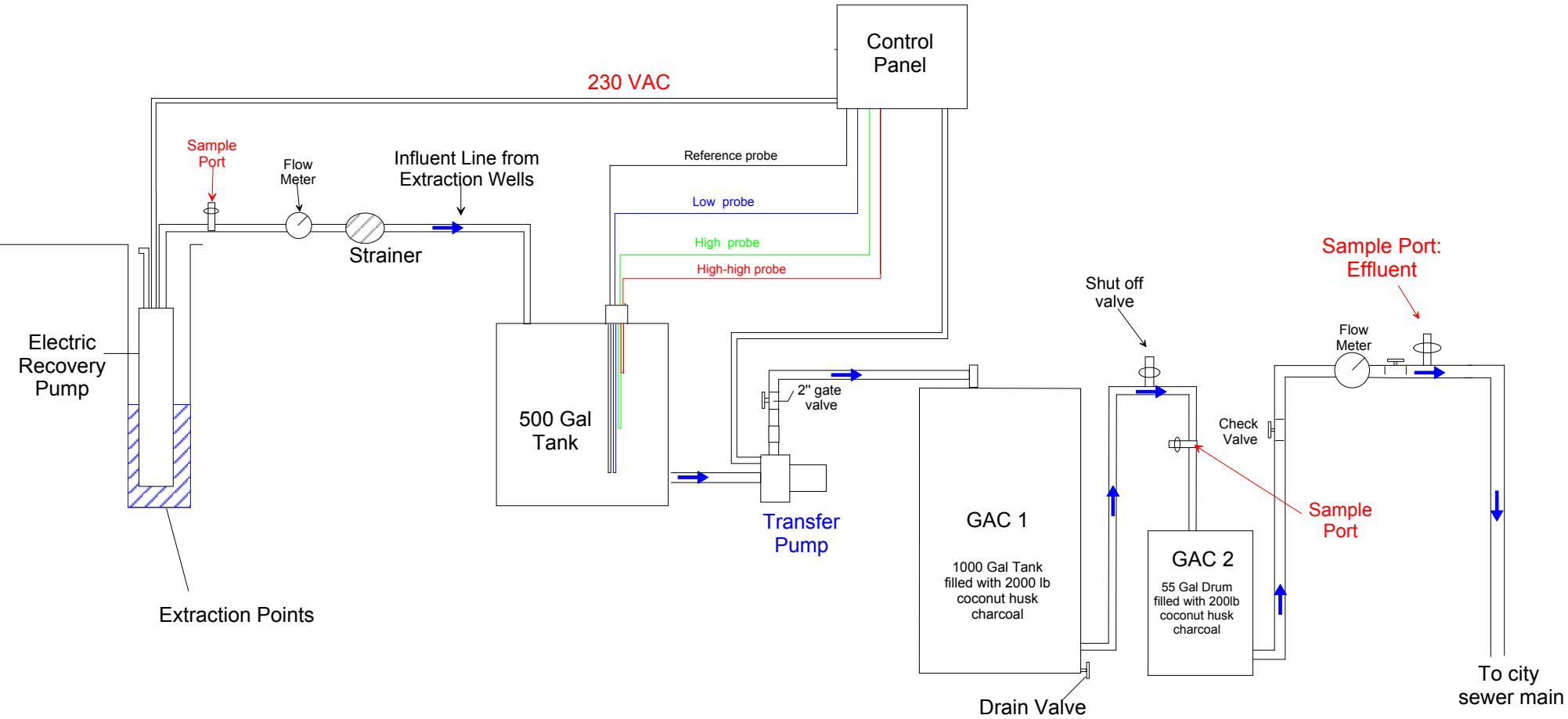


Figure 11: Schematic diagram of Groundwater Remediation System

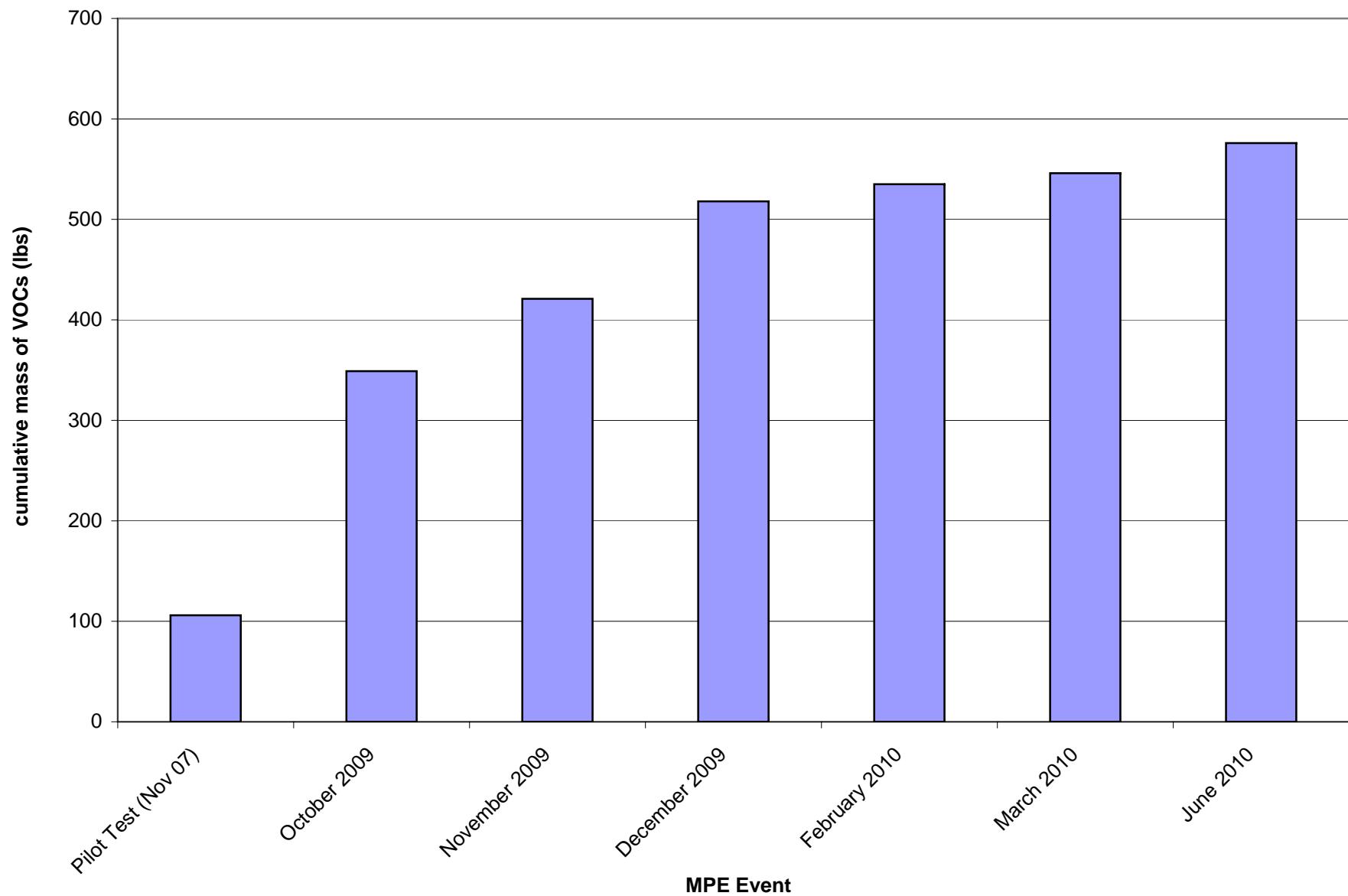


Figure 12: Cumulative mass of VOCs removed

# **Tables**

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Second Quarter 2010 Groundwater Monitoring and Remediation Progress Report

SOMA Environmental Engineering, Inc.

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
1st WBZ										
MW-1	5/10/2002	51.71	22.85	28.86	5,700	360	4.5	340	450	2
	8/8/2002	51.71	23.31	28.40	9,100	590	2.6	830	362	<1.3
	11/8/2002	51.71	23.58	28.13	7,900	570	3.1	680	392	<1.0
	2/21/2003	51.71	22.62	29.09	2,900	160	1.6 C	170	211	<0.5
	5/28/2003	51.71	22.43	29.28	1,700	55	<0.5	90	115	2.00
	8/12/2003	51.71	21.30	30.41	2,600	2.5	<0.5	190	130	<0.5
	10/9/2003	51.71	23.49	28.22	9,200	560.0	2.7 C	670	648	<1.0
	1/15/2004	51.71	22.43	29.28	5,500	190	<1.0	220	124.4	<0.5
	5/25/2004	51.71	22.94	28.77	8,000	400	1.50	420	393	3.40
	9/21/2004	54.46	23.49	30.97	9,300	580	9.30	690	683	4.60
	12/14/2004	54.46	23.01	31.45	7,360	337	<4.3	731	633	<4.3
	3/11/2005	54.46	21.48	32.98	2,510	45.2	<0.5	23.2	39.63	2.80
	6/15/2005	54.46	22.42	32.04	1,690	36.3	<2.0	59.5	28.73	2.01
	8/26/2005	54.46	23.00	31.46	7,310	318	<8.60	475	316	5.15
	11/11/2005	54.46	21.40	33.06	9,640	341	<8.6	467	329.7	6.04
	2/9/2006	54.46	21.81	32.65	775	14	<2.0	12.6	10.32	4.01
	5/9/2006	54.46	21.68	32.78	444	7.80	<2.0	12.1	6.31	1.75
	8/10/2006	54.46	22.79	31.67	5,090	324	<8.60	108	59.9	8.24
	10/26/2006	54.46	23.19	31.27	6,950	556	<4.0	190	136.09	8.61
	1/25/2007	54.46	22.82	31.64	2,640	196	<2.0	105	25.5	7.92
	4/26/2007	54.46	22.67	31.79	861	95.5	<2.0	17	6.36	4.00
	7/25/2007	54.46	23.25	31.21	4,520	412	<4.0	182	77.9	7.48
	10/23/2007	54.46	23.42	31.04	3,900	117	<2.0	87.1	23.87	4.54

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-1 cont</b>	1/22/2008	54.46	22.59	31.87	2,260	81.3	<2.0	17.5	<2.0	4.23
	4/16/2008	54.46	22.89	31.57	2,320	248	<2.0	54.1	37.3	<0.5
	7/3/2008	54.46	23.33	31.13	5,240	414	<2.0	168	94	6.56
	10/15/2008	54.46	23.76	30.70	4,500 <sup>Y</sup>	260	<1.0	150	130	3.40
	1/7/2009	54.46	23.25	31.21	4,800	140	<1.3	48	32	1.70
	4/14/2009	54.46	22.52	31.94	1,800 <sup>Y</sup>	78	<0.5	35	18	2.50
	8/27/2009	54.46	23.6	30.86	4,500	330	<2.0	97	42	4.60
	12/2/2009	54.46	23.43	31.03	3,800 <sup>Y</sup>	250	<2.0	110	25	2.50
	3/17/2010	54.46	22.32	32.14	1,100	33	<0.50	46	18	1.70
	6/3/2010	<b>54.46</b>	<b>22.88</b>	<b>31.58</b>	<b>10,000</b>	<b>330</b>	<b>4.3</b>	<b>680</b>	<b>841.5</b>	<b>5.20</b>
<b>MW-2</b>	5/10/2002	49.66	22.83	26.83 *	3,100	67	8	250	215	56
	8/8/2002	49.66	21.41	28.25	2,700	4.6	<0.5	310	140	<0.5
	11/8/2002	49.66	21.79	27.87	3,400	4.6	<0.5	310	160	<0.5
	2/21/2003	49.66	20.51	29.15	890	1.7 C	0.80 C	68	38.92 C	<0.5
	5/28/2003	49.66	20.33	29.33	2,700	5.2 C	<0.5	120	140	1.2
	8/12/2003	49.66	23.18	26.48*	8,500	640	<2.5	560	659	<0.8
	10/9/2003	49.66	21.71	27.95	3100 H	4.3 C	<0.5	210	160	<0.5
	1/15/2004	49.66	20.31	29.35	660 H	1.5 C	<0.5	8.9	25	<0.5
	5/25/2004	49.66	21.09	28.57	4,500	5.1 C	<0.5	190	230	0.70
	9/21/2004	52.41	21.71	30.70	370	0.76 C	<0.5	25	16	0.50
	12/14/2004	52.41	21.20	31.21	880	1.0	<0.5	66	52	<0.5
	3/11/2005	52.41	19.15	33.26	564	<0.5	<0.5	21	11.9	<0.5
	6/15/2005	52.41	20.30	32.11	2,040	1.2	<2.0	78.2	22	<0.5
	8/26/2005	52.41	20.97	31.44	1,500	0.930	<2.00	87.6	21	0.86
	11/11/2005	52.41	25.30	27.11	2,140	1.08	<2.0	104	29	0.79

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-2 cont.</b>	2/9/2006	52.41	19.41	33.00	1,410	<0.5	<2.0	99.6	21.4	0.72
	5/9/2006	52.41	19.41	33.00	1,100	<0.5	<2.0	86.5	17	<0.5
	8/10/2006	52.41	20.8	31.61	3,180	2.87	<2.0	88.9	24.8	<0.50
	10/26/2006	52.41	21.22	31.19	1,200	<0.5	<2.0	23.5	4.79	0.6
	1/25/2007	52.41	20.89	31.52	623	0.64	<2.0	42.4	4.37	0.66
	4/26/2007	52.41	20.65	31.76	169	<0.5	<2.0	15.2	2.3	<0.5
	7/25/2007	52.41	21.43	30.98	276	0.78	<2.0	22.1	4.04	<0.5
	10/23/2007	52.41	21.59	30.82	535	<0.5	<2.0	18	5.11	<0.5
	1/22/2008	52.31	20.45	31.86	132	<0.5	<2.0	12.2	<2.0	<0.5
	4/15/2008	52.41	20.89	31.52	852	<0.5	<2.0	27.2	4.78	<0.5
	7/2/2008	52.41	21.5	30.91	98.3	<0.5	<2.0	2.76	<2.0	<0.5
	10/15/2008	52.41	22.06	30.35	1,400 <sup>y</sup>	<0.5	<0.5	60	17	<0.5
	1/7/2009	52.41	21.35	31.06	93	<0.5	<0.5	2.1	0.74	<0.5
	4/13/2009	52.41	20.52	31.89	480 <sup>y</sup>	<0.5	<0.5	20	5.5	<0.5
	8/27/2009	52.41	21.85	30.56	130	<0.5	<0.5	2.5	0.61	<0.5
	12/1/2009	52.41	21.59	30.82	760 <sup>y</sup>	<0.5	<0.5	14	1.5	<0.5
<b>MW-3</b>	5/10/2002	51.16	22.28	28.88	44,000	6,000	900	1,500	6,200	2,400
	8/8/2002	51.16	22.88	28.28	40,000	5,800	1,100	1,600	6,500	1,300
	11/8/2002	51.16	23.19	27.97	47,000	5,300	1,200	2,200	8,600	1,000
	2/21/2003	51.16	22.02	29.14	39,000	5,500	1,500	2,000	8,600	1,300
	5/28/2003	51.16	21.89	29.27	52,000	7,300	3,000	2,800	12,700	2,100
	8/12/2003	51.16	22.66	28.50	31,000	6,100	860	1,500	6,900	1,200
	10/9/2003	51.16	23.06	28.10	41,000	6,100	1,100	2,200	10,200	960

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	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 8260B <sup>2</sup> (µg/L)
MW-3 cont.	1/15/2004	51.16	21.85	29.31	51,000	4,100	1,100	2,000	8,400	590
	5/25/2004	51.16	22.55	28.61	65,000	4,300	1,300	2,500	10,500	720
	9/21/2004	53.91	23.08	30.83	42,000	4,900	890	2,200	8,700	480
	12/14/2004	53.91	22.52	31.39	35,151	4,066	972	2,942	13,032	491
	3/11/2005	53.91	20.90	33.01	42,600	3,040	1,100	1,530	6,670	968
	6/15/2005	53.91	21.85	32.06	84,100	5,110	2,160	3,030	8,800	2,670
	8/26/2005	53.91	22.49	31.42	43,500	3,630	1,080	2,500	6,830	1,440
	11/11/2005	53.91	22.81	31.10	47,700	4,240	520	2,170	6,320	1,390
	2/9/2006	53.91	21.12	32.79	44,500	5,070	1,360	1,920	4,840	3,280
	5/9/2006	53.91	21.09	32.82	48,100	2,510	1,140	1,950	5,030	2,210
	8/10/2006	53.91	22.26	31.65	42,100	3,450	869	1,760	5,650	3,570
	10/26/2006	53.91	22.73	31.18	33,400	4,800	331	1,170	3,510	4,790
	1/25/2007	53.91	22.34	31.57	19,300	4,820	167	1,540	3,740	3,430
	4/26/2007	53.91	22.24	31.67	30,700	2,350	158	1,470	4,320	1,330
	7/25/2007	53.91	22.83	31.08	34,900	5,400	364	2,080	6,360	1,980
	10/23/2007	53.91	23.01	30.9	22,600	4,070	<86	1,120	3,095	970
	1/22/2008	53.96	22.04	31.92	22,100	1,280	453	1,330	3,520	490
	4/16/2008	53.91	22.4	31.51	20,700	2,790	182	860	3,389	263
	7/3/2008	53.91	22.9	31.01	48,500	3,760	346	3,130	12,980	573
	10/16/2008	53.91	23.36	30.55	50,000	3,900	300	3,100	11,000	460
	1/8/2009	53.91	22.82	31.09	54,000	2,600	180	2,500	8,800	220
	4/13/2009	53.91	22.06	31.85	49,000	2,900	170	2,100	8,100	490
	8/27/2009	53.91	23.11	30.80	43,000	2,500	160	1,900	7,000	210
	12/2/2009	53.91	23.00	30.91	30,000	2,100	180	1,600	5,600	91
	3/17/2010	53.91	21.90	32.01	24,000	970	81	1,100	3,700	38
	6/3/2010	53.91	22.49	31.42	31,000	1,200	110	1,300	4,400	34
MW-4	5/10/2002	50.54	21.78	28.76	880	25	1.0C	110	52	12,000
	8/8/2002	50.54	22.50	28.04	3,800	70	<5.0	300	115	4,800
	11/8/2002	50.54	22.81	27.73	5,100	150	10	460	258	2,400

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
MW-4 cont.	2/21/2003	50.54	21.48	29.06	3,200	98	66	220	360	6,600
	5/28/2003	50.54	21.24	29.30	6,200	140	46	200	790	2,300
	8/12/2003	50.54	22.32	28.22	7,500	180	57	220	1450	1,900
	10/9/2003	50.54	22.74	27.80	5,800	250	32	300	970	7,800
	1/15/2004	50.54	21.19	29.35	5,900	270	17 C	150	640	7,300
	5/25/2004	50.54	22.03	28.51	9,100	210	51	200	1190	1800
	9/21/2004	53.31	22.76	30.55	5,200	290	12	370	600	7300
	12/14/2004	53.31	21.99	31.32	8,937	538	114	416	2379	5021
	3/11/2005	53.31	20.01	33.30	12,300	225	39.6	80.1	1465	3870
	6/15/2005	53.31	21.25	32.06	7,690	114	32.6	77.1	555	1150
	8/26/2005	53.31	22.03	31.28	8,850	175	24.6	150	851	1380
	11/11/2005	53.31	22.43	30.88	9,990	356	<43	196	700	3,640
	2/9/2006	53.31	20.31	33.00	6,850	205	<43	67.2	255.2	5,120
	5/9/2006	53.31	20.33	32.98	1,290	18.1	<8.6	12.9	25.87	799
	8/10/2006	53.31	21.74	31.57	7,830	118	<8.60	25.3	174.6	919
	10/26/2006	53.31	22.29	31.02	1,540	81.9	<43	96	46.4	3,610
	1/25/2007	53.31	21.86	31.45	4,370	163	<8.6	85.1	269.1	1,050
	4/26/2007	53.31	21.63	31.68	4,380	140	<8.6	67	276.8	576
	7/25/2007	53.31	22.49	30.82	4,970	220	<8.60	198	241.5	1,040
	10/23/2007	53.31	22.69	30.62	4,200	267	<8.6	147	155.5	1,220
	1/22/2008	53.36	21.39	31.97	2,180	133	<22.0	43.1	32.2	1,800
	4/15/2008	53.31	21.9	31.41	4,240	90.4	<22.0	107	380	674
	7/2/2008	53.31	22.55	30.76	2,300	193	<22.0	212	183	4,050
	10/16/2008	53.31	23.13	30.18	8,900	320	3.7	430	1,160	450
	1/8/2009	53.31	22.42	30.89	19,000	430	44	590	3,380	440
	4/13/2009	53.31	21.51	31.80	21,000	400	38	450	2,880	330
	8/27/2009	53.31	22.94	30.37	16,000	960	64	560	2,120	290
	12/2/2009	53.31	22.36	30.95	4,400	480	6	170	640	110
	3/17/2010	53.31	21.39	31.92	14,000	260	6	230	1,220	93
	6/3/2010	53.31	22.23	31.08	18,000	240	4	310	770	41

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**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
MW-5	5/10/2002	47.79	19.02	28.77	25,000	1,000	1200	1,100	3,060	1,800
	8/8/2002	47.79	19.80	27.99	18,000	1,000	660	950	1,720	1,500
	11/8/2002	47.79	20.14	27.65	16,000	1,300	380	930	1,550	1,200
	2/21/2003	47.79	18.70	29.09	12,000	390	71	770	1,100	860
	5/28/2003	47.79	18.52	29.27	9,100	210	31	560	790	600
	8/12/2003	47.79	19.54	28.25	12,000	660	75	660	1,110	1,000
	10/9/2003	47.79	20.06	27.73	15,000	1,000	130	1,000	1,430	1,700
	1/15/2004	47.79	18.42	29.37	9,900	450 C	16	500	431	1,100
	5/25/2004	47.79	19.30	28.49	9,200	380	24	490	536	720
	9/21/2004	50.53	20.15	30.38	10,000	980	71	560	770	1200
	12/14/2004	50.53	19.30	31.23	10,502	587	64	1040	1133	1015
	3/11/2005	50.53	17.20	33.33	8,390	407	<5.5	83	42.5	1530
	6/15/2005	50.53	18.54	31.99	9,350	147	18.3	435	146.2	573
	8/26/2005	50.53	19.31	31.22	9,500	261	<22	726	321.3	749
	11/11/2005	50.53	19.75	30.78	10,000	443	41.5	527	278.5	1,430
	2/9/2006	50.53	17.58	32.95	7,640	237	<22	187	50.2	2,050
	5/9/2006	50.53	17.54	32.99	8,360	111	<8.6	300	75.84	566
	8/10/2006	50.53	19.02	31.51	16,100	250	<22	455	187.4	1,590
	10/26/2006	50.53	19.61	30.92	10,100	430	<22	375	192.6	3,060
	1/25/2007	50.53	19.19	31.34	3,960	340	<22	323	150.1	1,740
	4/26/2007	50.53	18.89	31.64	4,590	187	<8.6	307	116.5	861
	7/25/2007	50.53	19.81	30.72	6,490	419	21.8	413	223.2	913
	10/23/2007	50.53	19.98	30.55	6,120	550	11	284	141.4	433
	1/22/2008	50.18	18.69	31.49	9,810	572	22	574	184.1	126
	4/15/2008	50.18	19.16	31.02	8,890	335	15.1	477	397.5	136
	7/3/2008	50.53	19.88	30.65	13,100	949	34.4	875	825.5	176
	10/16/2008	50.53	20.45	30.08	11,000	870	25	820	668	160

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-5 cont.</b>	1/8/2009	50.53	19.72	30.81	12,000	490	21	690	456	76
	4/13/2009	50.53	18.81	31.72	9,000 <sup>Y</sup>	200	11	390	198	44
	8/27/2009	50.53	21.30	29.23	7,400	610	15	320	185	66
	12/2/2009	50.53	20.00	30.53	8,400 <sup>Y</sup>	400	12	540	296	45
	3/17/2010	50.53	18.73	31.80	4,800	120	8.7	120	107	14
	<b>6/4/2010</b>	<b>50.53</b>	<b>19.60</b>	<b>30.93</b>	<b>7,200</b>	<b>160</b>	<b>5.7</b>	<b>190</b>	<b>149.2</b>	<b>24</b>
<b>MW-6</b>	9/21/2004	45.82	17.64	28.18	34,000	150	130	2200	8100	0.6
	12/14/2004	45.82	15.75	30.07	5,161	137	7	436	1136	<5.5
	3/11/2005	45.82	13.80	32.02	6,040	125	3.22	260	722.1	4.94
	6/15/2005	45.82	14.78	31.04	5,590	44.3	6.60	272	382	5.85
	8/26/2005	45.82	15.91	29.91	6,130	99	<8.6	378	492.9	5.66
	11/11/2005	45.82	16.55	29.27	11,400	101	<8.6	645	834.7	4.33
	2/9/2006	45.82	13.92	31.90	2,790	32.3	<8.6	131	131.22	7.30
	5/9/2006	45.82	13.95	31.87	3,730	25	<2.0	213	207.82	5.87
	8/10/2006	45.82	15.28	30.54	4,800	41.9	<2.0	201	189	10.4
	10/26/2006	45.82	16.11	29.71	6,080	37.4	<2.0	116	183	9.78
	1/25/2007	45.82	15.76	30.06	3,220	25.2	<2.0	219	174	14.7
	4/26/2007	45.82	15.18	30.64	3,110	28	<2.0	165	138.47	14.6
	7/25/2007	45.82	16.82	29.00	4,960	54.1	<2.0	199	255.87	8.05
	10/23/2007	45.82	16.91	28.91	9,610	64.3	<2.0	188	302.6	5.81
	1/21/2008	45.82	15.36	30.46	3,290	33	<2.0	149	131.31	3.86
	4/15/2008	45.82	15.73	30.09	2,070	10.8	<2.0	51.1	67	<0.5
	7/2/2008	45.82	16.9	28.92	7,900	42.4	<2.0	194	296	3.58
	10/15/2008	45.82	17.21	28.61	18,000 <sup>Y</sup>	42	1.4	320	673	1.7
	1/7/2009	45.82	17.08	28.74	13,000	47	<3.1	210	425	<3.1
	4/13/2009	45.82	15.52	30.30	7,200 <sup>Y</sup>	26	<1.3	170	312.6	2.6
	8/26/2009	45.82	17.82	28.00	10,000 <sup>Y</sup>	25	<2.0	130	294	2.2
	12/1/2009	45.82	17.34	28.48	11,000 <sup>Y</sup>	31	6.1	220	539	<2.0
	3/16/2010	45.82	14.81	31.01	31,000	63	140	970	4,200	64
	<b>6/3/2010</b>	<b>45.82</b>	<b>15.72</b>	<b>30.10</b>	<b>27,000</b>	<b>22</b>	<b>67</b>	<b>840</b>	<b>3,100</b>	<b>32</b>

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<hr/>										
MW-7	9/21/2004	44.74	15.21	29.53	2,900	<0.5	<0.5	52	61	8.1
	12/14/2004	44.74	13.90	30.84	<50	1.6	<0.5	29	58	6.0
	3/11/2005	44.74	11.46	33.28	2,230	<2.5	<2.5	39.4	51.4	12.4
	6/15/2005	44.74	12.97	31.77	2,940	0.85	<2.0	50.6	31.9	13.7
	8/26/2005	44.74	14.10	30.64	2,310	<0.50	<2.0	55.7	29.6	4.01
	11/11/2005	44.74	14.59	30.15	3,030	<0.5	<2.0	66.5	42.3	9.76
	2/9/2006	44.74	NM	NM	NA	NA	NA	NA	NA	NA
	5/9/2006	44.74	12.02	32.72	1,400	<0.5	<2.0	19.8	12.4	2.30
	8/10/2006	44.74	13.72	31.02	604	<0.50	<2.0	6.2	4.63	1.42
	10/26/2006	44.74	14.38	30.36	1350	<0.50	<2.0	16.6	10.8	1.87
	1/25/2007	44.74	13.93	30.81	340	<0.5	<2.0	6.84	2.44	1.63
	4/26/2007	44.74	14.44	30.30	552	<0.5	<2.0	11.4	6.11	4.12
	7/25/2007	44.74	14.79	29.95	1,230	<0.5	<2.0	27	19.24	3.2
	10/23/2007	44.74	14.88	29.86	1,730	0.67	<2.0	20.7	17.31	8.44
	1/21/2008	44.74	13.34	31.40	610	1.15	<2.0	8.4	4.34	17.2
	4/15/2008	44.74	13.91	30.83	1,460	<0.5	<2.0	15.9	19.7	17.3
	7/2/2008	44.74	14.87	29.87	1,450	<0.5	<2.0	11	6.8	22.1
	10/15/2008	44.74	15.68	29.06	1,900 <sup>Y</sup>	0.56	1.2	27	39.5	55
	1/7/2009	44.74	14.72	30.02	2,700	1.2	2.9	11	25	39
	4/13/2009	44.74	13.54	31.20	2,300 <sup>Y</sup>	<0.5	<0.5	15	6.3	63
	8/26/2009	44.74	15.84	28.90	2,700 <sup>Y</sup>	<0.5	<0.5	48	53	140
	12/1/2009	44.74	15.03	29.71	1,800 <sup>Y</sup>	<0.5	<0.5	22	15	120
	3/16/2010	44.74	12.56	32.18	1,100	<0.5	<0.5	3.2	1.4	65
	6/3/2010	44.74	13.80	30.94	740	<0.5	<0.5	1.8	0.62	28
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MW-8	9/21/2004	41.14	12.98	28.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	41.14	11.22	29.92	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	41.14	NM	NM	NA	NA	NA	NA	NA	NA
	6/15/2005	41.14	10.46	30.68	<200	0.53	<2.0	<0.5	<1.0	<0.5
	8/26/2005	41.14	11.53	29.61	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	41.14	11.92	29.22	<50	<0.5	<2.0	1.36	1.8	<0.5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-8 cont.</b>	2/9/2006	41.14	9.74	31.40	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	5/9/2006	41.14	9.90	31.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	41.14	10.9	30.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	41.14	11.68	29.46	<50	<0.50	<2.0	3.37	<1.0	<0.50
	1/25/2007	41.14	11.44	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	41.14	10.81	30.33	<50	<0.5	<2.0	4.29	<2.0	<0.5
	7/25/2007	41.14	12.31	28.83	<50	<0.5	<2.0	4.39	<2.0	<0.5
	10/23/2007	41.14	12.37	28.77	<50	<0.5	<2.0	4.31	<2.0	<0.5
	1/21/2008	41.14	11.02	30.12	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	41.14	11.44	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	41.14	12.39	28.75	94.8	<0.5	<2.0	1	<2.0	<0.5
	10/15/2008	41.14	13.42	27.72	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	41.14	12.50	28.64	<50	<0.5	<0.5	<0.5	0.6	<0.5
	4/13/2009	41.14	11.23	29.91	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	41.14	13.24	27.90	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Well Decommissioned 11/13/2009										
<b>MW-9</b>	9/21/2004	40.26	12.18	28.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	40.26	10.91	29.35	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	40.26	10.52	29.74	<200	<0.5	<0.5	<0.5	<1.0	<0.5
	6/15/2005	40.26	14.73	25.53	<200	<0.5	<2.0	<0.5	<1.0	<0.5
	8/26/2005	40.26	10.59	29.67	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	40.26	11.25	29.01	<50	<0.5	<2.0	<0.5	<1.0	<0.5
	2/9/2006	40.26	10.05	30.21	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	5/9/2006	40.26	9.06	31.20	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	40.26	10.01	30.25	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	40.26	10.81	29.45	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	1/25/2007	40.26	10.67	29.59	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	40.26	10.05	30.21	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/25/2007	40.26	11.44	28.82	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	10/23/2007	40.26	11.59	28.67	<50	<0.5	<2.0	<0.5	<2.0	<0.5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	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 8260B <sup>2</sup> (µg/L)
<b>MW-9 cont.</b>	1/21/2008	40.26	10.37	29.89	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	40.26	10.56	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	40.26	11.95	28.31	161	<0.5	<2.0	2.15	<2.0	<0.5
	10/15/2008	40.26	12.64	27.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	40.26	11.75	28.51	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	40.26	10.89	29.37	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	40.26	12.50	27.76	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Well Decommissioned 11/13/2009									
<b>Extraction Wells</b>										
<b>EX-1</b>	12/2/2009	47.36	17.02	30.34	2,900	120	4	64	410	25
	3/16/2010	47.36	19.08	28.28	2,200	150	18	94	326	210
	<b>6/3/2010</b>	<b>47.36</b>	<b>17.02</b>	<b>30.34</b>	<b>3,600</b>	<b>180</b>	<b>6.3</b>	<b>150</b>	<b>428</b>	<b>83</b>
<b>EX-2</b>	12/2/2009	45.96	17.56	28.4	7,100 <sup>Y</sup>	9.3	3.2	440	770	<3.1
	3/16/2010	45.96	19.65	26.31	13,000	600	360	770	2,250	15
	<b>6/3/2010</b>	<b>45.96</b>	<b>17.10</b>	<b>28.86</b>	<b>16,000</b>	<b>590</b>	<b>400</b>	<b>700</b>	<b>2,500</b>	<b>9.5</b>
<b>MPE Wells</b>										
<b>MPE-1</b>	12/1/2009	51.96	21.41	30.55	NA	NA	NA	NA	NA	NA
	3/16/2010	51.96	20.22	31.74	NA	NA	NA	NA	NA	NA
	<b>6/3/2010</b>	<b>51.96</b>	<b>21.18</b>	<b>30.78</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>MPE-2</b>	12/1/2009	53.72	22.87	30.85	NA	NA	NA	NA	NA	NA
	3/16/2010	53.72	21.7	32.02	NA	NA	NA	NA	NA	NA
	<b>6/3/2010</b>	<b>53.72</b>	<b>22.35</b>	<b>31.37</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>2nd WBZ</b>										
<b>MW-1D</b>	1/3/2008	54.42		-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	54.42	22.85	31.57	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	4/16/2008	54.42	23.10	31.32	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/3/2008	54.42	23.44	30.98	75.9	<0.5	<2.0	0.54	<2.0	<0.5
	10/15/2008	54.42	23.82	30.60	120.0	1.6	<0.5	2.8	3.6	<0.5
	1/8/2009	54.42	23.44	30.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	54.42	23.06	31.36	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	54.42	23.73	30.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	54.42	23.59	30.83	330 <sup>Y</sup>	<0.5	<0.5	1.3	2.2	<0.5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-1D cont.</b>	3/16/2010	54.42	22.60	31.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	<b>6/4/2010</b>	<b>54.42</b>	<b>23.10</b>	<b>31.32</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<b>MW-3D</b>	1/3/2008	54.10	-	<50	<0.50	<2.0	<0.50	<2.0	87.6	
	1/22/2008	54.10	22.31	31.79	<50	<0.50	<2.0	<0.50	<2.0	88.3
	4/16/2008	54.10	22.64	31.46	<50	<0.5	<2.0	<0.5	<2.0	71.1
	7/3/2008	54.10	23.17	30.93	<50	<0.5	<2.0	<0.5	<2.0	67.4
	10/16/2008	54.10	23.62	30.48	<50	<0.5	<0.5	<0.5	<0.5	37
	1/8/2009	54.10	23.07	31.03	<50	<0.5	<0.5	<0.5	<0.5	29
	4/14/2009	54.10	22.36	31.74	<50	<0.5	<0.5	<0.5	<0.5	44
	8/26/2009	54.10	23.41	30.69	<50	<0.5	<0.5	<0.5	<0.5	20
	12/1/2009	54.10	23.27	30.83	110 Y	<0.5	<0.5	<0.5	0.52	24
	3/16/2010	54.10	22.10	32.00	<50	<0.5	<0.5	<0.5	<0.5	7.1
	<b>6/4/2010</b>	<b>54.10</b>	<b>22.70</b>	<b>31.40</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>17</b>
<b>MW-4D</b>	1/4/2008	53.12	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50	
	1/22/2008	53.12	21.11	32.01	91.5	18.7	<2.0	7.08	11.42	219
	4/15/2008	53.12	21.67	31.45	<50	<0.5	<2.0	<0.5	<2.0	27
	7/3/2008	53.12	22.39	30.73	<50	<0.5	<2.0	<0.5	<2.0	6.27
	10/16/2008	53.12	22.98	30.14	<50	<0.5	<0.5	<0.5	<0.5	1.9
	1/8/2009	53.12	22.25	30.87	<50	<0.5	<0.5	<0.5	<0.5	2
	4/14/2009	53.12	21.34	31.78	<50	<0.5	<0.5	<0.5	<0.5	2.2
	8/27/2009	53.12	22.79	30.33	<50	<0.5	<0.5	<0.5	<0.5	2.2
	12/1/2009	53.12	22.49	30.63	120 Y	<0.5	<0.5	1.4	2.3	2.3
	3/16/2010	53.12	21.02	32.10	<50	<0.5	<0.5	<0.5	<0.5	0.65
	<b>6/4/2010</b>	<b>53.12</b>	<b>21.93</b>	<b>31.19</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1.1</b>
<b>1573 153 RD</b>	7/2/2008	NS	NM	NC	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2008	NS	NM	NC	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>EB-PMP</b>	1/21/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PRB</b>	1/21/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PMP2</b>	1/22/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PRB2</b>	1/22/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>ESL (ug/L)</b>	-	-	-	-	100	1	40	30	20	5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g}/\text{L}$ )	Benzene ( $\mu\text{g}/\text{L}$ )	Toluene ( $\mu\text{g}/\text{L}$ )	Ethyl-benzene ( $\mu\text{g}/\text{L}$ )	Total Xylenes ( $\mu\text{g}/\text{L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g}/\text{L}$ )
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Notes:

The first time SOMA monitored this Site was in May 2002.

\*: Due to minimal recharge rates in well MW-2, the groundwater elevation recorded on these dates did not match the overall site conditions, May 2002 & August 2003.

NC: Not Calculated

<sup>1</sup>: Top of casing elevations were surveyed to a datum of 67.07 M.S.L by Kier & Wright Civil Engineers & Land Surveyors on May 7, 2002.

On October 11, 2004, the site was re-surveyed by Harrington Surveys, Inc. of Walnut Creek, CA to a datum of California Coordinate System, Zone 3, NAD 83.

<sup>2</sup>: MtBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.

<: Not detected above the laboratory reporting limit.

Y: Sample exhibits chromatographic pattern which does not resemble standard

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

C: Presence confirmed, but RPD between columns exceeds 40%.

H: Heavier hydrocarbons contributed to the quantitation.

NA: Not Analyzed. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Analyzed. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

NM: Not Measured. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Measured. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

The first time SOMA monitored wells MW-6 to MW-9 was in September 2004.

EB-PMP/EB-PRB: Equipment Blanks for Pump and Probe

ESL: Environmental Screening Levels per CRWQCB SFBay Region Interim Final Nov. 2007 (Revised May 2008);

Table F-1a,Groundwater Screening Levels (groundwater is a current or potential drinking water resource)

MW-8 and MW-9 were decommissioned November 13, 2009

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
<b>1st WBZ</b>							
MW-1	8/8/2002	78	<1.3	<1.3	<1.3	NA	NA
	11/1/2002	42	< 1.0	< 1.0	< 1.0	NA	NA
	2/21/2003	47	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	25	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	<10	<0.5	<0.5	<0.5	NA	NA
	10/9/2003	70	<1.0	<1.0	<1.0	NA	NA
	1/15/2004	55	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	62	<0.7	<0.7	<0.7	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<21.5	<4.3	<4.3	<17.2	NA	NA
	3/11/2005	81	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	68.9	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	46	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	11.3	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	0.51	<0.5
	8/10/2006	<43	<2.15	<2.15	<8.60	3.37	<2.15
	10/26/2006	39.4	<1.0	<1.0	<4.0	2.92	<1.0
	1/25/2007	41.4	<0.5	<0.5	<2.0	1.36	<0.5
	4/26/2007	39.6	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	46.5	<1.0	<1.0	<4.0	<1.0	<1.0
	10/23/2007	53.7	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	23.8	<0.5	<0.5	2.16	<0.5	<0.5
	4/16/2008	8.36	<0.5	<0.5	<2.0	164	<0.5
	7/3/2008	30.5	<0.5	<0.5	<2.0	1.08	<0.5
	10/15/2008	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	1/7/2009	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	4/14/2009	15	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	12/2/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	26	<0.5	<0.5	<0.5	<0.5	<0.5
<b>2nd WBZ</b>							
MW-2	8/8/2002	21	<0.5	<0.5	<0.5	NA	NA
	11/1/2002	15	<0.5	<0.5	<0.5	NA	NA
	2/21/2003	12	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	31	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	69	<0.8	<0.8	<0.8	NA	NA
	10/9/2003	12	<0.5	<0.5	<0.5	NA	NA
	1/15/2004	<10	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	14	<0.5	<0.5	<0.5	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>TBA (µg/L)</b>	<b>DIPE (µg/L)</b>	<b>ETBE (µg/L)</b>	<b>TAME (µg/L)</b>	<b>1,2-DCA (µg/L)</b>	<b>EDB (µg/L)</b>
<b>MW-2 cont.</b>	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	2.44	<0.5
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-3</b>	8/8/2002	<330	<8.3	<8.3	330	NA	NA
	11/1/2002	85	<1.3	<1.3	220	NA	NA
	2/21/2003	140	<5.0	<5.0	320	NA	NA
	5/28/2003	520	<10	<10	530	NA	NA
	8/12/2003	180	<4.2	<4.2	270	NA	NA
	10/9/2003	<170	<8.3	<8.3	200	NA	NA
	1/15/2004	<100	<5.0	<5.0	150	NA	NA
	5/25/2004	<100	<5.0	<5.0	270	NA	NA
	9/21/2004	<140	<7.1	<7.1	110	NA	NA
	12/14/2004	<100	<20	<20	154	NA	NA
	3/11/2005	<215	<43	<43	256	NA	NA
	6/15/2005	<215	<10.8	<10.8	374	NA	NA
	8/26/2005	699	<21.5	<21.5	277	NA	NA
	11/11/2005	<430	<21.5	<21.5	171	NA	NA
	2/9/2006	<430	<21.5	<21.5	620	NA	NA
	5/9/2006	367	<10.8	<10.8	594	<10.8	<10.8
	8/10/2006	365	<10.8	<10.8	727	<10.8	<10.8
	10/26/2006	591	<10.8	<10.8	899	<10.8	<10.8
	1/25/2007	711	<10.8	<10.8	768	<10.8	<10.8
	4/26/2007	690	<10.8	<10.8	369	<10.8	<10.8
	7/25/2007	1,340	<10.8	<10.8	565	<10.8	<10.8
	10/23/2007	1,050	<21.5	<21.5	301	<21.5	<21.5
	1/22/2008	373	<10.8	<10.8	170	<0.5	<0.5
	4/16/2008	881	<5.50	<5.50	<22.0	1,850	12.1
	7/3/2008	426	<10.8	<10.8	124	<10.8	<10.8
	10/16/2008	<400	<20	<20	<20	<20	<20
	1/8/2009	<500	<25	<25	<25	<25	<25
	4/13/2009	<500	<25	<25	<25	<25	<25
	8/27/2009	<500	<25	<25	<25	<25	<25
	12/2/2009	270	<13	<13	<13	<13	<13
	3/17/2010	<250	<13	<13	<13	<13	<13
	6/3/2010	<250	<13	<13	<13	<13	<13

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-4	8/8/2002	1500	<17	<17	18	NA	NA
	11/1/2002	580	< 5.0	6	13	NA	NA
	2/21/2003	1600	<20	22	<20	NA	NA
	5/28/2003	690	<8.3	<8.3	17	NA	NA
	8/12/2003	550	<7.1	7.3	18	NA	NA
	10/9/2003	1400	<31	50	<31	NA	NA
	1/15/2004	1,300	<20	25	21	NA	NA
	5/25/2004	560	<8.3	<8.3	24	NA	NA
	9/21/2004	1,300	<50	<50	<50	NA	NA
	12/14/2004	826	<10.75	21	49	NA	NA
	3/11/2005	1,110	<10.8	12.1	<43	NA	NA
	6/15/2005	<110	<5.5	<5.5	22.9	NA	NA
	8/26/2005	902	<5.50	<5.50	37.4	NA	NA
	11/11/2005	884	<10.8	<10.8	<43	NA	NA
	2/9/2006	769	<10.8	16.4	45.6	NA	NA
	5/9/2006	405	<2.15	2.95	31.3	<2.15	<2.15
	8/10/2006	306	<2.15	<2.15	35.3	<2.15	<2.15
	10/26/2006	3430	<10.8	13.8	<43	<10.8	<10.8
	1/25/2007	822	<2.15	2.4	28	2.25	<2.15
	4/26/2007	556	<2.15	2.28	29.2	<2.15	<2.15
	7/25/2007	1,860	<2.15	9.94	24	<2.15	<2.15
	10/23/2007	3,400	<2.15	18.4	25.9	<2.15	<2.15
MW-5	1/22/2008	2,580	<5.50	64.7	<22	<0.5	<0.5
	4/15/2008	1,100	<5.50	11.7	<22	39.9	<5.50
	7/2/2008	8,720	<5.50	75.2	<22	<5.50	<5.50
	10/16/2008	700	<3.6	4.2	37	5.4	<3.6
	1/8/2009	1,500	<3.6	9.9	41	3.6	<3.6
	4/13/2009	1,100	<8.3	<8.3	28	<8.3	<8.3
	8/27/2009	4,900	<5.0	24	<5.0	<5.0	<5.0
	12/2/2009	6,800	<5.0	69	<5.0	<5.0	<5.0
	3/17/2010	1,900	<3.6	18	<3.6	<3.6	<3.6
	6/3/2010	930	<3.6	7.7	<3.6	<3.6	<3.6

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**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>TBA (µg/L)</b>	<b>DIPE (µg/L)</b>	<b>ETBE (µg/L)</b>	<b>TAME (µg/L)</b>	<b>1,2-DCA (µg/L)</b>	<b>EDB (µg/L)</b>
<b>MW-5 cont.</b>	1/25/2007	878	<5.50	<5.50	552	<5.50	<5.50
	4/26/2007	708	<2.15	<2.15	310	<2.15	<2.15
	7/25/2007	1,020	<2.15	<2.15	356	<2.15	<2.15
	10/23/2007	1,510	<2.15	<2.15	181	<2.15	<2.15
	1/22/2008	470	<0.5	4.56	62.1	<0.5	<0.5
	4/15/2008	566	<1.0	<1.0	29.6	231	5.66
	7/3/2008	2,320	<2.15	<2.15	53.3	<2.15	<2.15
	10/16/2008	990	<5.0	<5.0	82	<5.0	<5.0
	1/8/2009	360	<6.3	<6.3	51	<6.3	<6.3
	4/13/2009	280	<3.1	<3.1	<3.1	<3.1	<3.1
	8/27/2009	1,300	<5.0	<5.0	<5.0	<5.0	<5.0
	12/2/2009	320	<5.0	<5.0	25	<5.0	<5.0
	3/17/2010	570	<1.0	<1.0	<1.0	<1.0	<1.0
	<b>6/4/2010</b>	<b>340</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>
<b>MW-6</b>	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<5.5	<5.5	<5.5	<22	NA	NA
	3/11/2005	2.54	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<20	<1.0	<1.0	<4.0	NA	NA
	8/26/2005	<43	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	<43	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	<43	<2.15	<2.15	<8.6	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	7.21	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	5.66	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	6.68	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	13.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	6.78	1.49
	7/2/2008	4.54	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-7</b>	1/7/2009	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	4/13/2009	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	8/26/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	12/1/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	3/16/2010	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	<b>6/3/2010</b>	<b>&lt;40</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>

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**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>TBA (µg/L)</b>	<b>DIPE (µg/L)</b>	<b>ETBE (µg/L)</b>	<b>TAME (µg/L)</b>	<b>1,2-DCA (µg/L)</b>	<b>EDB (µg/L)</b>
<b>MW-7 contd.</b>	1/21/2008	<2.0	<0.5	<0.5	6.01	<0.5	<0.5
	4/15/2008	8.8	<0.5	<0.5	<2.0	<0.5	1.26
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	14	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	11	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	16	<0.5	<0.5
	8/26/2009	<33	<0.5	<0.5	33	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	30	<0.5	<0.5
	3/16/2010	11	<0.5	<0.5	<0.5	<0.5	<0.5
	<b>6/3/2010</b>	<b>20</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>7.1</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<hr/>							
<b>MW-8</b>	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	NA	NA	NA	NA	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Well Decommissioned 11/13/2009</b>							
<b>MW-9</b>	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	2.8	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	1.83	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	3.07	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	2.92	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	<2.0	<0.5	<0.5	<2.0	1.18	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/2/2008	<2.0	<0.5	<0.5	<2.0	2.07	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	1.5	<0.5

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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-9 contd.	1/7/2009	<10	<0.5	<0.5	<0.5	1.4	<0.5
	4/13/2009	<10	<0.5	<0.5	<0.5	0.97	<0.5
	8/26/2009	<10	<0.5	<0.5	<0.5	2.6	<0.5
Well Decommissioned 11/13/2009							
EX-1	12/2/2009	150	<1.3	<1.3	<1.3	<1.3	<1.3
	3/16/2010	980	<1.3	2.4	27	<1.3	<1.3
	6/3/2010	570	<1.3	1.9	<1.3	<1.3	<1.3
EX-2	12/2/2009	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	3/16/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/3/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
2nd WBZ							
MW-1D	1/3/2008	111	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	12.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/16/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3D	1/3/2008	37.3	<0.5	3.12	15.3	NA	NA
	1/22/2008	15.6	<0.5	3.1	15.3	<0.5	<0.5
	4/16/2008	17.7	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	<2.0	<0.5	<0.5	7.45	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	4.7	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	3.4	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	5	<0.5	<0.5
	8/26/2009	<10	<0.5	<0.5	1.6	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	2.2	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	0.65	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	1.8	<0.5	<0.5
MW-4D	1/4/2008	25	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	124	<0.5	4.9	3.32	<0.5	<0.5
	4/15/2008	25.7	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	3.38	<0.5	<0.5	<2.0	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
1573 153 RD	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5

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**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
EB-PMP	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PRB	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PMP2	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PRB2	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
ESL	12	NE	NE	NE	NE	0.5	0.05

Notes:

August 8, 2002 was the first time that samples were analyzed for Gasoline Oxygenates

<: Not detected above the laboratory reporting limit.

NA: Not Analyzed. Well MW-8 was inaccessible during the 1Q05  
& well MW-7 (1Q06) car was parked over each well.

NE: Not Established

TBA: tert-Butyl Alcohol

DIPE: Isopropyl Ether

ETBE: Ethyl tert-Butyl Ether

TAME: Methyl tert-Amyl Ether

ESL: Environmental Screening Levels per CRWQCB SFBay Region Interim Final Nov. 2007 (Revised May 2008);

Table F-1a, Groundwater Screening Levels (groundwater is a current or potential drinking water resource)

MW-8 and MW-9 were decommissioned November 13, 2009

**Table 3**  
**Effluent Chemical Analytical Results**  
**and Operational History of Remediation System**  
 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	COD (mg/L)	TSS (mg/L)	pH
<b>2009</b>											
8-Oct-2009	15,351	<50	120 <sup>Y</sup>	NA	NA	NA	NA	NA	NA	NA	NA
19-Nov-2009	8,287	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.7
9-Dec-2009	0										
16-Dec-2009	20,000	<50	<50	<300	<0.5	0.65 C	<0.5	0.84 C	<10	<5	7.4
<b>2010</b>											
18-Jan-2010	215,453	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.4
15-Feb-2010	297,560	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	11	<5	6.7
15-Mar-2010	475,245	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5.0	6.5
19-Apr-2010	621,180	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.6
17-May-2010	705,770	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.7
<b>16-Jun-2010</b>	<b>825,200</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>17</b>	<b>9</b>	<b>6.8</b>

Note:

NA: Not Available/Not Applicable

< : Less than Laboratory-reporting limit

In October and November 2009 discharge occurred only during MPE events

GWETS and totalizer installed in December 2009.

Week # 1 sampling conducted on Oct 8, 2009

C: Presence confirmed, but RPD between column exceeds 40%

Volume discharged during the October 2009 MPE event was 18,669 gallons

Volume discharged during the November 2009 MPE event was 10,507 gallons

Volume discharged during the December 2009 MPE event was 20,298 gallons

Volume discharged during the February 2010 MPE event was 6,339 gallons

Volume discharged during the March 2010 MPE event was 3,810 gallons

Volume discharged during the June 2010 MPE event was 15, 600 gallons

Table 4

**Second Quarter 2010 MPE Event**  
**Operational Data : June 2010**

15101 Freedom Avenue,  
 San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	PITOT TUBE (In of H2O)	EFFLUENT TEMPERATURE (°F)	CALCULATED FLOW RATE USING PITOT TUBE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
6/7/2010	900								0	
	1030								0	
	1100	615	23.6	1,511	0.08	134	35	25.8	100	
	1200	660	23.4	1,509	0.08	136	34	25.6	300	
	1300	693	23.4	1,515	0.08	142	34	25.6	400	
	1330								500	
	1400	672	23.2	1,503	0.08	146	34	25.6	600	
	1500	666	23.0	1,507	0.08	146	34	25.4	800	
	1600	705	23.0	1,505	0.08	146	34	25.4	1,000	
	800	IN 665: EFF 3	22.6	1,505	0.08	136	34	25.4	3,700	
	900		22.8	1,500	0.08	132	35	25.4	3,900	
	930								3,950	
	1000		22.8	1,508	0.08	132	35	25.2	4,000	
	1100		22.8	1,498	0.08	134	35	25.2	4,200	
	1200		22.8	1,515	0.08	136	34	25.2	4,300	
	1300		22.8	1,498	0.08	140	34	25.2	4,500	
	1315								4,550	
	1430		22.8	1,498	0.08	138	34	25.2	4,700	
	1530	648	22.8	1,498	0.08	138	34	25.2	4,900	
	1630	639	22.8	1,498	0.08	138	34	25.2	5,100	
	800	6/9/2010	22.6	1,500	0.08	144	34	25.2	7,500	
	1000		22.6	1,510	0.08	144	34	25.2	7,800	
	1100		22.6	1,514	0.08	140	34	25.2	7,900	
	1200		22.8	1,501	0.08	142	34	25.2	8,100	
	1300		22.8	1,510	0.08	142	34	25.2	8,200	
	1400		22.8	1,502	0.08	144	34	25.2	8,400	
	1500		22.6	1,500	0.08	144	34	25.2	8,500	
	1600		22.4	1,506	0.10	148	38	25.2	8,700	
	1700		22.6	1,498	0.10	144	38	25.2	8,800	
	800		22.6	1,500	0.08	144	34	25.2	11,100	
	900	6/10/2010	22.6	1,520	0.10	148	38	25.2	11,200	
	1000		22.4	1,500	0.10	144	38	25.2	11,300	
	1100		22.4	1,499	0.10	146	38	25	11,500	
	1200		22.4	1,512	0.10	146	38	25	11,700	
	1300		22.4	1,498	0.10	146	38	25.2	11,800	
	1400		22.4	1,498	0.10	152	38	25	12,000	
	1430								12,100	
	1800		22.4	1,497	0.10	154	38	25	12,500	
	830		22.4	1,503	0.08	142	34	25.2	14,700	
	930		22.4	1,503	0.08	148	34	25.2	14,900	
	1030		22.4	1,500	0.08	150	34	25.2	15,000	
	1130	662	22.4	1,497	0.08	150	34	25	15,100	
	1230	647	22.4	1,502	0.10	152	38	25	15,300	
	1330	669	22.4	1,499	0.10	152	38	25	15,400	
	1430	667	22.4	1,502	0.08	154	34	25	15,600	
										End Extraction

Totalizer readings = 15,600 gallons.

Total time of test = 6,000 minutes = 100 hours

Notes

ppmv parts per million vapor  
 In of Hg inches of mercury  
 In of H<sub>2</sub>O inches of water  
 °F degrees Fahrenheit  
 scfm standard cubic feet per minute

**Table 5**

**Second Quarter 2010 MPE Event**  
**Extraction Data and VOC Mass Removal Rate**  
**June 2010**  
 15101 Freedom Avenue  
 San Leandro, California

WELL	COMMENT	DATE	CLOCK	INCREMENTAL	ELAPSED	Q		PID		MASS REMOVAL			
			TIME	TIME	TIME	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppm as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
MPE-1/2	START	6/7/2010	900	0									
			1030	0	0								
			1100	30	30	35	1,037	2.7354	615	0.0006	0.1450	0.0048	7
			1200	60	90	34	2,070	5.4617	660	0.0007	0.3107	0.0052	7
			1300	60	150	34	2,060	5.4344	693	0.0007	0.3246	0.0054	8
			1330	30	180		0	0.0000		0.0000	0.0000	0.0000	0
			1400	30	210	34	1,026	2.7082	672	0.0007	0.1569	0.0052	8
			1500	60	270	34	2,053	5.4164	666	0.0007	0.3110	0.0052	7
			1600	60	330	34	2,053	5.4164	705	0.0007	0.3292	0.0055	8
			800	960	1,290	34	33,120	87.3868	665	0.0007	5.0093	0.0052	8
		6/8/2010	900	60	1,350	35	2,077	5.4801	674	0.0007	0.3184	0.0053	8
			930	30	1,380		0	0.0000		0.0000	0.0000	0.0000	0
			1000	30	1,410	35	1,038	2.7400	677	0.0007	0.1599	0.0053	8
			1100	60	1,470	35	2,073	5.4709	678	0.0007	0.3197	0.0053	8
			1200	60	1,530	34	2,070	5.4617	669	0.0007	0.3150	0.0052	8
			1300	60	1,590	34	2,063	5.4434	663	0.0007	0.3111	0.0052	7
			1315	15	1,605		0	0.0000		0.0000	0.0000	0.0000	0
			1430	75	1,680	34	2,583	6.8157	647	0.0006	0.3801	0.0051	7
			1530	60	1,740	34	2,067	5.4525	648	0.0006	0.3046	0.0051	7
			1630	60	1,800	34	2,067	5.4525	639	0.0006	0.3003	0.0050	7
		6/9/2010	800	930	2,730	34	31,871	84.0934	620	0.0006	4.4943	0.0048	7
			1000	120	2,850	34	4,112	10.8508		0.0000	0.0000	0.0000	0
			1100	60	2,910	34	2,063	5.4434		0.0000	0.0000	0.0000	0
			1200	60	2,970	34	2,060	5.4344		0.0000	0.0000	0.0000	0
			1300	60	3,030	34	2,060	5.4344	767	0.0008	0.3593	0.0060	9
			1400	60	3,090	34	2,056	5.4254	774	0.0008	0.3620	0.0060	9
			1500	60	3,150	34	2,056	5.4254	730	0.0007	0.3414	0.0057	8
			1600	60	3,210	38	2,291	6.0458	690	0.0007	0.3596	0.0060	9
			1700	60	3,270	38	2,299	6.0658	699	0.0007	0.3655	0.0061	9
			800	900	4,170	34	30,843	81.3807	696	0.0007	4.8825	0.0054	8
		6/10/2010	900	60	4,230	38	2,291	6.0458	656	0.0007	0.3419	0.0057	8
			1000	60	4,290	38	2,299	6.0658	694	0.0007	0.3629	0.0060	9
			1100	60	4,350	38	2,295	6.0557	658	0.0007	0.3435	0.0057	8
			1200	60	4,410	38	2,295	6.0557	667	0.0007	0.3482	0.0058	8
			1300	60	4,470	38	2,295	6.0557	692	0.0007	0.3612	0.0060	9
			1400	60	4,530	38	2,284	6.0260	663	0.0007	0.3444	0.0057	8
			1430	30	4,560		0	0.0000		0.0000	0.0000	0.0000	0

**Table 5**  
**Second Quarter 2010 MPE Event**  
**Extraction Data and VOC Mass Removal Rate**  
**June 2010**  
15101 Freedom Avenue  
San Leandro, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min
<b>STOP</b>	<b>6/11/2010</b>	1800	210	4,770	38	7,980	21.0566	639	0.0006	1.1598	0.0055	8	
		830	870	5,640	34	29,865	78.7986	687	0.0007	4.6664	0.0054	8	
		930	60	5,700	34	2,049	5.4075	686	0.0007	0.3198	0.0053	8	
		1030	60	5,760	34	2,046	5.3986	667	0.0007	0.3104	0.0052	7	
		1130	60	5,820	34	2,046	5.3986	662	0.0007	0.3081	0.0051	7	
		1230	60	5,880	38	2,284	6.0260	647	0.0006	0.3361	0.0056	8	
		1330	60	5,940	38	2,284	6.0260	669	0.0007	0.3475	0.0058	8	
		1430	60	6,000	34	2,039	5.3810	667	0.0007	0.3094	0.0052	7	
		<b>TOTAL</b>			<b>6,000</b>	<b>34</b>	<b>205,522</b>	<b>542</b>	<b>668</b>	<b>0.0007</b>	<b>30</b>	<b>0.0050</b>	<b>7</b>
		<b>MEDIAN</b>											

Notes

Q volumetric flow rate  
 SCFM standard cubic feet per minute  
 ft<sup>3</sup> cubic feet per minute  
 VOC volatile organic compounds  
 PID photo-ionization detector  
 ppmv parts per million vapor

#### DERIVATION OF MASS REMOVAL RATE

ppmv as hexane/1,000,000 = VOC mole %  
 ft<sup>3</sup> of extracted air/(379 ft<sup>3</sup> air/lb-mole air) = moles of extracted air  
 (moles of extracted air)(VOC mole %)(86.2 lb/lb-mole hexane) = lbs of VOC removed as hexane  
 (lbs of VOC removed as hexane)(elapsed time) = lbs/min of VOC removed as hexane  
 (lbs/min of VOC removed as hexane)(60 min/1 hour)(24 hours/1 day) = lbs/day of VOC removed as hexane

**Table 6**

**Second Quarter 2010 MPE Event(s)**  
**Mass Removal**

15101 Freedom Avenue  
 San Leandro, California

Extraction Well	Vapor Sample ID	Collection Date/Time	PID	Q (CFM)	Mass Removal Rate (lbs/day) (VOCs)	Total Test time (minutes/days)	Total Mass Removed (lbs) (VOCs)
			ppmv (hexane)				
MPE-1,2	Influent	6/8/2010 @ 0800	665(a)	34	7	6,000/4.17	<b>30 (b)</b>
MPE-1,2	Stack	6/8/2010 @ 0750	3(a)	34	7	N/A	N/A
<b>REMOVAL EFFICIENCIES</b>			99.5489%				

**Notes**

- CFM cubic feet per minute  
 lbs/day pounds per day  
 (a) dilution factor 1  
 (b) average value

**DERIVATION OF MASS REMOVAL RATE**  
**DERIVATION OF TOTAL MASS REMOVED**  
 Extraction Data and VOC Mass Removal Rate Tables

**DERIVATION OF REMOVAL EFFICIENCIES**  
 INFLUENT sample concentration / STACK concentration

# **Appendix A**

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

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

## **Water Level Measurements**

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.

## **Purging and Field Measurements**

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.

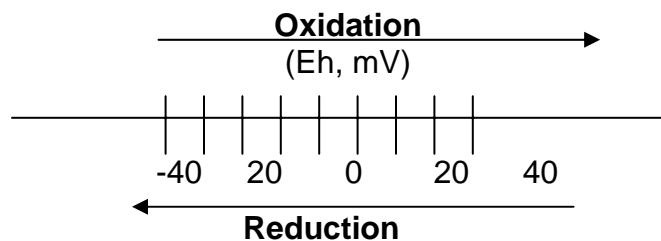
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

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.

## Sampling

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 air bubbles from developing 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 for all samples is prepared to accompany the samples, which are promptly delivered to a California state-certified analytical laboratory.

# **Appendix B**

Table of Elevations and Coordinates on Monitoring Wells  
and Field Measurements of Physical and Chemical  
Parameters of Groundwater Samples

**AMMENDED REPORT  
15101 FREEDOM AVE  
SAN LEANDRO, CA.**

**HARRINGTON SURVEYS INC.**  
**2278 LARKEY LANE**  
**WALNUT CREEK, CA. 94597**  
**925-935-7228 FAX. 935-5118**

JOB NO. 2445  
DATE: FEB. 21, 2008

DATE: 1/08/2008  
JOB NUMBER 0208101  
DATE OF SURVEY 1/03/08  
INSTRUMENT LIECA SR520

TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS  
SOMA ENVIRONMENTAL, PROJECT 15101 FREEDOM DRIVE - SAN LEANDRO

WELL ID#	NORTHING (ft.) LATITUDE	EASTING (ft.) LONGITUDE	ELEVATION (ft.)	DESCRIPTION
MW-1D	2084371.23	6092127.90	54.42	MW-1D NOTCH
	37.708104856	122.123200912	54.94	MW-1D RIM
	37° 42' 29.1" N	122° 07' 23" W	54.74	PAVEMENT
MW-3D	2084303.98	6092183.53	54.10	MW-3D NOTCH
	37.707922851	122.123004590	54.56	MW-3D RIM
	37° 42' 28.5" N	122° 07' 22" W	54.47	PAVEMENT
MW-4D	2084222.77	6092116.37	53.12	MW-4D NOTCH
	37.707696648	122.123231858	53.37	MW-4D RIM
	37° 42' 27.7" N	122° 07' 23" W	53.39	PAVEMENT

BENCH MARK: NGS BENCH MARK NO. HT1871

3.0 KM (1.85 MI) NORTH FROM SAM LORENZO. 1.85 MILES NORTH ALONG INTERSTATE HIGHWAY 580 FROM THE JUNCTION OF STATE HIGHWAY 238 IN SAN LORENZO, IN THE WEST CORNER OF THE CROSSING OF 150TH AVENUE, IN TOP OF THE CONCRETE BRIDGE DECK, 15.5 FEET NORTHWEST OF THE SOUTHWEST BOUND LANES OF THE AVENUE, 10.9 FEET NORTHEAST OF THE SOUTH CORNER OF THE SOUTHWEST END OF THE NORTHWEST CONCRETE GUARDRAIL, 0.7 FOOT NORTHEAST OF THE SOUTHWEST EDGE OF THE DECK, 0.9 FOOT SOUTHEAST OF THE NORTHWEST CONCRETE GUARDRAIL, AND ABOUT LEVEL WITH THE HIGHWAY.

ELEVATION = 58.50 NAVD 88 DATUM

HORIZONTAL AND VERTICAL CONTROL BASED ON HARRINGTON SURVEY DATED 10-12-2004

FD CHABOT A, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,088,584.99 EAST 6,093,351.39. LAT N 37°43'11.04190" LONG W 122°07'09.20691", ELEVATION 492.08 NAVD 88.

FD CHABOT B, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,087,731.02 EAST 6,094,039.23. . LAT N 37°43'02.71762" LONG W 122°07'00.46339", ELEVATION 442.77 NAVD 88.

					DATE: 12/11/2009 JOB# 09039
<b>TABLE OF ELEVATIONS &amp; COORDINATES</b>					
<b>ON MONITORING WELLS</b>					
SOMA ENVIRONMENTAL ENGINEERING					
					15101 FREEDOM AVENUE SAN LEANDRO, CA 94579
WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION	
EX-1	2084135.454 37.707459134	6092163.720 122.123062972	47.36 47.61 47.60	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE	
EX-2	2084082.018 37.707310806	6092130.224 122.123175540	45.96 47.04 47.00	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE	
MPE-1	2084213.168 37.707670702	6092125.258 122.123200567	51.96 52.49 52.51	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE	
MPE-2	2084293.133 37.707892479	6092171.374 122.123045970	53.72 54.29 54.27	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE	
<b>HORIZONTAL AND VERTICAL CONTROL</b>					
SURVEY BASED ON PREVIOUS SURVEY BY HARRINGTON SURVEY INC. DATED: 2/21/2008					
COORDINATE VALUES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD83.					
ELEVATIONS ARE NAVD 88 DATUM.					
MW-2, PUNCH NORTHING 2,084323.44, EASTING 6,092063.77, ELEVATION 52.92					
MW-4 PUNCH NORTHING 2,084250.55, EASTING 6,092124.46, ELEVATION 53.74					
EQUIPMENT USED: TRIMBLE S6					

Edgis Land Surveying  
 Land Surveying and mapping  
 1374 Garland Avenue, Clovis, CA 93612  
 Phone (559) 906-3554 Fax (559) 292-0560  
 email: edgis@aol.com





## ENVIRONMENTAL ENGINEERING, INC

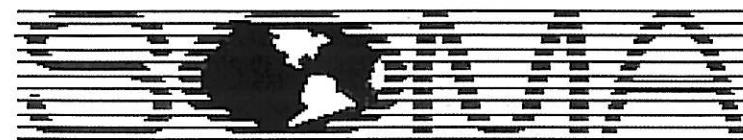
Well No.: MW-1 Project No.: 2551  
Casing Diameter: 4 inches Address: 15101 Freedom Avenue  
Depth of Well: 30.50 feet San Leandro, CA  
Top of Casing Elevation: 54.44 feet Date: June 3, 2010  
Depth to Groundwater: 22.88 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 31.58 feet Erica Fisker  
Water Column Height: 7.62 feet  
Purged Volume: 10 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

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

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
13:36	Started purging well						
13:37	2	1.15	6.17	20.82	1204	2.43	-126.0
13:39	6	1.03	6.11	20.81	1263	2.21	-131.5
13:41	10	0.91	6.11	20.81	1285	2.49	-131.6
	Sampled						



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-2 Project No.: 2551  
Casing Diameter: 4 inches Address: 15101 Freedom Avenue  
Depth of Well: 30.15 feet San Leandro, CA  
Top of Casing Elevation: 52.41 feet Date: June 3, 2010  
Depth to Groundwater: 21.00 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 31.41 feet *Erica Fisker*  
Water Column Height: 9.15 feet  
Purged Volume: 14 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

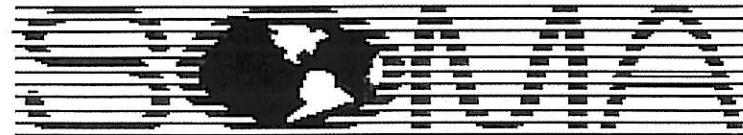
Color: Yes  No  Describe: \_\_\_\_\_

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

Odor: Yes  No  Describe: Slight Petro

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
13:11	Started purging well						
13:12	2	0.88	6.42	20.83	859	5.76	-139.8
13:14	6	0.73	6.31	20.82	763	7.00	-147.7
13:16	10	0.67	6.29	20.82	897	2.66	-150.1
13:18	14	0.62	6.28	20.84	930		-150.2
13:23	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3  
Casing Diameter: 4 inches  
Depth of Well: 29.90 feet  
Top of Casing Elevation: 53.91 feet  
Depth to Groundwater: 22.49 feet  
Groundwater Elevation: 31.42 feet  
Water Column Height: 7.41 feet  
Purged Volume: 12 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 3, 2010  
Sampler: Lizzie Hightower  
Erica Fisher

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

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

Sheen: Yes  No  Describe: Slight Rainbow Sheen

Odor: Yes  No  Describe: Petro Odor

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
14:14	Started purging well						
14:15	2	1.8	6.41	21.17	1143	9.67	-59.2
14:17	6	1.39	6.29	21.17	1102	5.18	-99.0
14:19	10	0.27	6.26	21.17	1110	2.41	-126.0
14:20	12	1.05	6.24	21.16	1130	2.03	-134.8
14:25	Sampled						



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4  
Casing Diameter: 4 inches  
Depth of Well: 30.20 feet  
Top of Casing Elevation: 53.31 feet  
Depth to Groundwater: 22.23 feet  
Groundwater Elevation: 31.08 feet  
Water Column Height: 7.97 feet  
Purged Volume: 12 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 3, 2010  
Sampler: Lizzie Hightower  
Erica Fisker

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

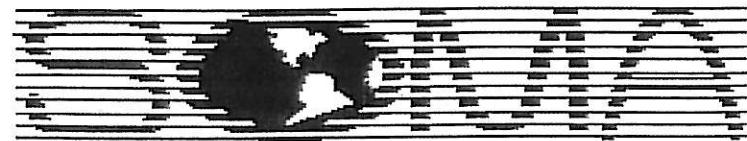
Color: Yes  No  Describe: \_\_\_\_\_

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

Odor: Yes  No  Describe: Petro Odor

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
13:56	Started purging well						
13:57	2	3.5 (0.316)	6.17	20.47	1236	8.96	-115.7
13:59	6	2.6	6.17	20.45	1385	2.67	-134.6
14:01	10	2.2	6.15	20.44	1408	2.30	-133.5
14:02	12	1.9	6.14	20.45	1418	1.56	-131.8
14:07	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-5  
Casing Diameter: 4 inches  
Depth of Well: 29.80 feet  
Top of Casing Elevation: 50.53 feet  
Depth to Groundwater: 19.60 feet  
Groundwater Elevation: 30.93 feet  
Water Column Height: 10.20 feet  
Purged Volume: 12 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 4, 2010  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

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

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
10:12	Started purging well						
10:13	2	1.7	6.03	20.81	1127	20.0	-13.3
10:15	6	1.5	6.01	20.83	1129	18.5	-24.9
10:17	10	1.4	5.99	20.87	1126	7.18	-31.6
10:18	12	1.1	5.99	20.87	1128	3.84	-33.8
10:23	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-6  
Casing Diameter: 4 inches  
Depth of Well: 27.30 feet  
Top of Casing Elevation: 45.82 feet  
Depth to Groundwater: 15.72 feet  
Groundwater Elevation: 30.10 feet  
Water Column Height: 11.58 feet  
Purged Volume: 14 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 3, 2010  
Sampler: Lizzie Hightower  
Erica Fisher

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

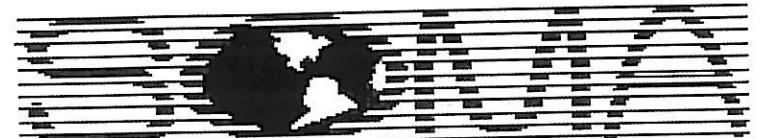
Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: Slight Rainbow Sheen

Odor: Yes  No  Describe: Slight Petro

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
11:38	Started purging well						
11:39	2	0.97	6.50	20.68	1327	23.9	-64.6
11:41	6	0.82	6.44	20.73	1338	2.86	-90.6
11:43	10	0.66	6.40	20.74	1341	4.28	-104.8
11:44	12	0.60	6.39	20.74	1346	3.42	-112.5
11:45	14	0.58	6.38	20.74	1346	2.61	-114.4
11:50	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7  
Casing Diameter: 2 inches  
Depth of Well: 21.00 feet  
Top of Casing Elevation: 44.74 feet  
Depth to Groundwater: 13.80 feet  
Groundwater Elevation: 30.94 feet  
Water Column Height: 7.20 feet  
Purged Volume: 3.5 gallons

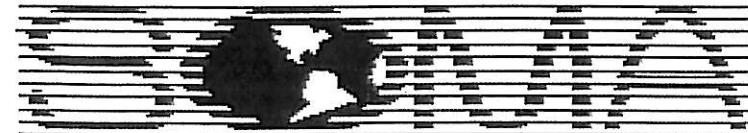
Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 3, 2010  
Sampler: Lizzie Hightower  
Erica Fisker

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Cloudy  
Sheen: Yes  No  Describe:  
Odor: Yes  No  Describe: Slight Petro

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
11:13	Started purging well				280		
11:14	1	1.15	6.69	19.16	1171	280	-56.1
11:17	2	0.95	6.53	21.08	1127	476	-48.5
11:21	3	0.86	6.44	18.74	1198	697	-37.0
11:22	3.5	0.77	6.46	18.67	1199	873	-30.4
11:27	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW - 1D  
Casing Diameter: 2 inches  
Depth of Well: 59.81 feet  
Top of Casing Elevation: 54.42 feet  
Depth to Groundwater: 23.10 feet  
Groundwater Elevation: 31.32 feet  
Water Column Height: 36.71 feet  
Purged Volume: 12 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 4, 2010  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

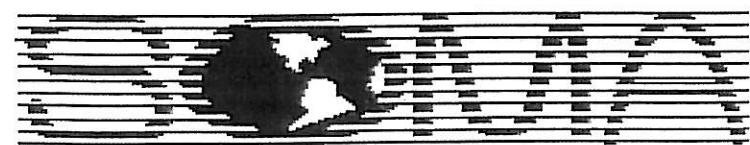
Color: Yes  No  Describe: \_\_\_\_\_

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

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

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
08:33	Started purging well						
08:34	2	0.83	6.72	20.02	1327	24.0	+90.7
08:36	6	0.76	6.68	19.89	1332	6.63	+95.0
08:38	10	0.61	6.67	19.88	1335	5.17	+97.6
08:39	12	0.58	6.66	19.88	1336	3.85	+97.7
08:44	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3D  
Casing Diameter: 2 inches  
Depth of Well: 58.59 feet  
Top of Casing Elevation: 54.10 feet  
Depth to Groundwater: 22.70 feet  
Groundwater Elevation: 31.40 feet  
Water Column Height: 35.89 feet  
Purged Volume: 14 gallons

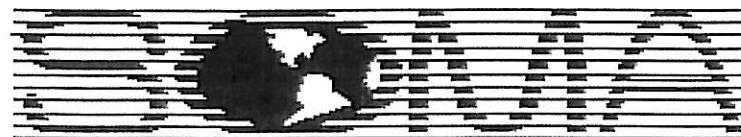
Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 4, 2010  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

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

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
09:03	Started purging well						
09:04	2	2.7	6.68	20.26	1238	4.10	+88.5
09:06	6	1.6	6.58	20.22	1249	0.97	+85.7
09:08	10	0.98	6.55	20.21	1251	0.54	+81.1
09:09	12	0.83	6.54	20.21	1252	0.63	+79.7
09:10	14	0.71	6.54	20.20	1254	0.42	+78.1
09:15	Sampled						



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4D  
Casing Diameter: 2 inches  
Depth of Well: 58.79 feet  
Top of Casing Elevation: 53.12 feet  
Depth to Groundwater: 21.93 feet  
Groundwater Elevation: 31.19 feet  
Water Column Height: 36.86 feet  
Purged Volume: 12 gallons

Project No.: 2551  
Address: 15101 Freedom Avenue  
San Leandro, CA  
Date: June 4, 2010  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

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

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
09:35	Started purging well						
09:36	2	3.2	6.62	19.49	1257	31.4	+97.9
09:38	6	2.5	6.56	19.48	1263	10.7	+102.7
09:40	10	1.8	6.54	19.48	1260	11.0	+102.2
09:41	12	1.3	6.53	19.49	1259	5.10	+115.8
09:46	Sampled						



**ENVIRONMENTAL ENGINEERING, INC.**

Well No.:	<u>MPE -1</u>		Project No.:	2551
Casing Diameter:	<u>4</u>	inches	Address:	15101 Freedom Avenue
Depth of Well:	<u>30.00</u> feet		San Leandro, CA	
Top of Casing Elevation:	<u>51.96</u> feet		Date:	June <u>3</u> , 2010
Depth to Groundwater:	<u>21.18</u> feet		Sampler:	Lizzie Hightower
Groundwater Elevation:	<u>30.78</u> feet		<u>Erica Fisker</u>	
Water Column Height:	<u>8.82</u> feet			
Purged Volume:	<u>—</u> gallons			
<u>Not purged</u>				
Purging Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/>
Sampling Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/> <u>Not sampled</u>
Color:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>
Sheen:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>
Odor:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>

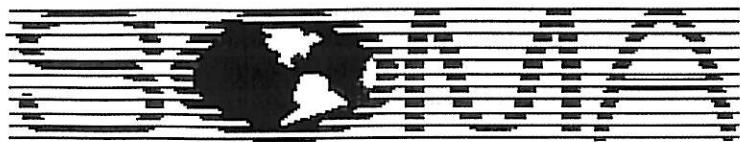
#### **Field Measurements:**



## ENVIRONMENTAL ENGINEERING, INC.

Well No.:	<u>MPE-2</u>		Project No.:	2551
Casing Diameter:	<u>4</u>	inches	Address:	15101 Freedom Avenue
Depth of Well:	<u>30.00</u>	feet		San Leandro, CA
Top of Casing Elevation:	<u>53.72</u>	feet	Date:	June <u>3</u> , 2010
Depth to Groundwater:	<u>22.35</u>	feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	<u>31.37</u>	feet		<u>Erica Fisker</u>
Water Column Height:	<u>7.65</u>	feet		
Purged Volume:	<u>—</u>	gallons		
	<u>Not purged</u>			
Purging Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/>
Sampling Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/> Not Sampled
Color:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>
Sheen:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>
Odor:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Describe:	<u>Unknown</u>

#### **Field Measurements:**



## ENVIRONMENTAL ENGINEERING, INC.

Well No.:	<u>EX-1</u>	Project No.:	2551
Casing Diameter:	<u>6</u> inches	Address:	15101 Freedom Avenue
Depth of Well:	<u>—</u> feet		San Leandro, CA
Top of Casing Elevation:	<u>47.36</u> feet	Date:	June <u>3</u> , 2010
Depth to Groundwater:	<u>17.02</u> feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	<u>30.34</u> feet		<u>Erica Fisher</u>
Water Column Height:	<u>NC</u> feet		
Purged Volume:	<u>—</u> gallons		

Purging Method: Bailer  Pump

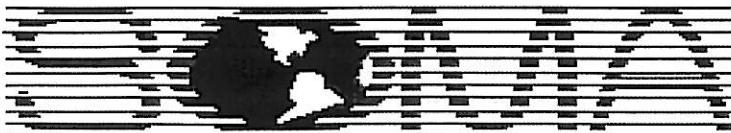
Sampling Method: Bailer ✓ Pump □

Color: Yes  No  Describe: clear w/ particulates

**Sheen:** Yes  No  **Describe:**

**Order:** Yes  No  **Describe:**

#### **Field Measurements:**



## ENVIRONMENTAL ENGINEERING, INC.

Well No.:	<u>EX-2</u>
Casing Diameter:	<u>6</u> inches
Depth of Well:	<u>—</u> feet
Top of Casing Elevation:	<u>45.96</u> feet
Depth to Groundwater:	<u>17.10</u> feet
Groundwater Elevation:	<u>28.86</u> feet
Water Column Height:	<u>NC</u> feet
Purged Volume:	<u>—</u> gallons

**Project No.:** 2551  
**Address:** 15101 Freedom Avenue  
San Leandro, CA  
**Date:** June 3, 2010  
**Sampler:** Lizzie Hightower  
*Erica Fisher*

Purging Method: Bailer  Pump 

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Clear w/particulates

**Sheen:** Yes  No  **Describe:**

Odor: Yes  No  Describe:

#### **Field Measurements:**

# **Appendix C**

Laboratory Report and Chain of Custody Form  
for the Second Quarter 2010 Monitoring Event



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 220556  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2551  
Location : 15101 Freedom Avenue  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-1	220556-001
MW-2	220556-002
MW-3	220556-003
MW-4	220556-004
MW-5	220556-005
MW-6	220556-006
MW-7	220556-007
MW-1D	220556-008
MW-3D	220556-009
MW-4D	220556-010
EX-1	220556-011
EX-2	220556-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Troy Barber  
Project Manager

Date: 06/10/2010

NELAP # 01107CA

**CASE NARRATIVE**

Laboratory number: **220556**  
Client: **SOMA Environmental Engineering Inc.**  
Project: **2551**  
Location: **15101 Freedom Avenue**  
Request Date: **06/04/10**  
Samples Received: **06/04/10**

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 06/04/10. The samples were received cold and intact.

**Volatile Organics by GC/MS (EPA 8260B):**  
No analytical problems were encountered.

# **CHAIN OF CUSTODY**

Page \_\_\_\_\_ of \_\_\_\_\_

# **Curtis & Tompkins, Ltd.**

Analytical Laboratory Since 1878

2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

Project No: 2551

C&T LOGIN # 200356

## **Analyses**

**Project Name:** 15101 Freedom Ave., San Leandro Company : SOMA Environmental

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

---

**Fax:** 925-734-6401

Lab No.	Sample ID.	Sampling Date		Soil	Water	Waste	# of Containers	Matrix			Preservative		
		Time						HCl	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE		
1	MW-1	6 3 10	13:46	*			3-VOAs	*			*		
2	MW-2	6 3 10	13:23	*			3-VOAs	*			*		
3	MW-3	6 3 10	14:25	*			3-VOAs	*			*		
4	MW-4	6 3 10	14:07	*			3-VOAs	*			*		
5	MW-5	6 4 10	10:23	*			3-VOAs	*			*		
6	MW-6	6 3 10	11:50	*			3-VOAs	*			*		
7	MW-7	6 3 10	11:27	*			3-VOAs	*			*		
8	MW-1D	6 4 10	08:44	*			3-VOAs	*			*		
9	MW-3D	6 4 10	09:15	*			3-VOAs	*			*		
10	MW-4D	6 4 10	09:46	*			3-VOAs	*			*		
11	EX-1	6 3 10	12:08	*			3-VOAs	*			*		
12	EX-2	6 3 10	11:57	*			3-VOAs	*			*		

**Notes: EDF OUTPUT REQUIRED**

## Ethanol

**RELINQUISHED BY:**

E. Agusto 11:37  
6/4/10 DATE/TIME

RECEIVED BY

*me do* 6/4/10 11:37 DATE/TIME

Digitized by srujanika@gmail.com

DATE/TIME

DATE/TIME

## **COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 220556 Date Received 6/4/10 Number of coolers 1  
Client 80ML Project 15101 FREREDOM AVE; 3L

Date Opened 6/4/10 By (print) M. JILL DWYER (sign)   
Date Logged in   By (print)   (sign)

- |   |   |
|---|---|
| 1. Did cooler come with a shipping slip (airbill, etc) _____  | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>     |
| Shipping info _____   |   |
| 2A. Were custody seals present? ... <input type="checkbox"/> YES (circle) on cooler      on samples <input type="checkbox"/> NO |   |
| How many _____  | Name _____ Date _____   |
| 2B. Were custody seals intact upon arrival? _____   | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A |
| 3. Were custody papers dry and intact when received? _____  | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>     |
| 4. Were custody papers filled out properly (ink, signed, etc)? _____  | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>     |
| 5. Is the project identifiable from custody papers? (If so fill out top of form) _____  | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>     |
| 6. Indicate the packing in cooler: (if other, describe)   |   |

Bubble Wrap       Foam blocks       Bags       None  
 Cloth material       Cardboard       Styrofoam       Paper towels

7. Temperature documentation:

Type of ice used:  Wet     Blue/Gel     None    Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO

If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES  NO

10. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES  NO

11. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES  NO

12. Do the sample labels agree with custody papers? \_\_\_\_\_ YES  NO

13. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES  NO

14. Are the samples appropriately preserved? \_\_\_\_\_ YES  NO N/A

15. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES  NO N/A

16. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES  NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

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SOP Volume: Client Services  
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Rev. 6 Number 1 of 3  
Effective: 23 July 2008

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1	Units:	ug/L
Lab ID:	220556-001	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	10,000	500	10.00	163824	06/10/10
tert-Butyl Alcohol (TBA)	26	10	1.000	163744	06/07/10
Isopropyl Ether (DIPE)	ND	0.50	1.000	163744	06/07/10
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	1.000	163744	06/07/10
Methyl tert-Amyl Ether (TAME)	ND	0.50	1.000	163744	06/07/10
Ethanol	ND	1,000	1.000	163744	06/07/10
MTBE	5.2	0.50	1.000	163744	06/07/10
1,2-Dichloroethane	ND	0.50	1.000	163744	06/07/10
Benzene	330	5.0	10.00	163824	06/10/10
Toluene	4.3	0.50	1.000	163744	06/07/10
1,2-Dibromoethane	ND	0.50	1.000	163744	06/07/10
Ethylbenzene	680	5.0	10.00	163824	06/10/10
m,p-Xylenes	840	5.0	10.00	163824	06/10/10
o-Xylene	1.5	0.50	1.000	163744	06/07/10

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	95	80-122	1.000	163744	06/07/10
1,2-Dichloroethane-d4	101	71-140	1.000	163744	06/07/10
Toluene-d8	101	80-120	1.000	163744	06/07/10
Bromofluorobenzene	102	80-121	1.000	163744	06/07/10

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	163783
Lab ID:	220556-002	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/08/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	690	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	14	0.50
m,p-Xylenes	2.6	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-122
1,2-Dichloroethane-d4	112	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	163783
Lab ID:	220556-003	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	25.00		

Analyte	Result	RL
Gasoline C7-C12	31,000	1,300
tert-Butyl Alcohol (TBA)	ND	250
Isopropyl Ether (DIPE)	ND	13
Ethyl tert-Butyl Ether (ETBE)	ND	13
Methyl tert-Amyl Ether (TAME)	ND	13
Ethanol	ND	25,000
MTBE	34	13
1,2-Dichloroethane	ND	13
Benzene	1,200	13
Toluene	110	13
1,2-Dibromoethane	ND	13
Ethylbenzene	1,300	13
m,p-Xylenes	3,200	13
o-Xylene	1,200	13

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-122
1,2-Dichloroethane-d4	104	71-140
Toluene-d8	97	80-120
Bromofluorobenzene	93	80-121

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	163824
Lab ID:	220556-004	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	7.143		

Analyte	Result	RL
Gasoline C7-C12	18,000	360
tert-Butyl Alcohol (TBA)	930	71
Isopropyl Ether (DIPE)	ND	3.6
Ethyl tert-Butyl Ether (ETBE)	7.7	3.6
Methyl tert-Amyl Ether (TAME)	ND	3.6
Ethanol	ND	7,100
MTBE	41	3.6
1,2-Dichloroethane	ND	3.6
Benzene	240	3.6
Toluene	4.0	3.6
1,2-Dibromoethane	ND	3.6
Ethylbenzene	310	3.6
m,p-Xylenes	610	3.6
o-Xylene	160	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-122
1,2-Dichloroethane-d4	114	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-121

ND= Not Detected

RL= Reporting Limit

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**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-5	Units:	ug/L
Lab ID:	220556-005	Sampled:	06/04/10
Matrix:	Water	Received:	06/04/10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	7,200	250	5.000	163824	06/10/10
tert-Butyl Alcohol (TBA)	340	20	2.000	163783	06/08/10
Isopropyl Ether (DIPE)	ND	1.0	2.000	163783	06/08/10
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	2.000	163783	06/08/10
Methyl tert-Amyl Ether (TAME)	ND	1.0	2.000	163783	06/08/10
Ethanol	ND	2,000	2.000	163783	06/08/10
MTBE	24	1.0	2.000	163783	06/08/10
1,2-Dichloroethane	ND	1.0	2.000	163783	06/08/10
Benzene	160	1.0	2.000	163783	06/08/10
Toluene	5.7	1.0	2.000	163783	06/08/10
1,2-Dibromoethane	ND	1.0	2.000	163783	06/08/10
Ethylbenzene	190	1.0	2.000	163783	06/08/10
m,p-Xylenes	140	1.0	2.000	163783	06/08/10
o-Xylene	9.2	1.0	2.000	163783	06/08/10

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	93	80-122	2.000	163783	06/08/10
1,2-Dichloroethane-d4	107	71-140	2.000	163783	06/08/10
Toluene-d8	99	80-120	2.000	163783	06/08/10
Bromofluorobenzene	97	80-121	2.000	163783	06/08/10

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-6	Units:	ug/L
Lab ID:	220556-006	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	27,000	1,000	20.00	163824	06/10/10
tert-Butyl Alcohol (TBA)	ND	40	4.000	163783	06/08/10
Isopropyl Ether (DIPE)	ND	2.0	4.000	163783	06/08/10
Ethyl tert-Butyl Ether (ETBE)	ND	2.0	4.000	163783	06/08/10
Methyl tert-Amyl Ether (TAME)	ND	2.0	4.000	163783	06/08/10
Ethanol	ND	4,000	4.000	163783	06/08/10
MTBE	32	2.0	4.000	163783	06/08/10
1,2-Dichloroethane	ND	2.0	4.000	163783	06/08/10
Benzene	22	2.0	4.000	163783	06/08/10
Toluene	67	2.0	4.000	163783	06/08/10
1,2-Dibromoethane	ND	2.0	4.000	163783	06/08/10
Ethylbenzene	840	10	20.00	163824	06/10/10
m,p-Xylenes	2,500	10	20.00	163824	06/10/10
o-Xylene	600	10	20.00	163824	06/10/10

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	90	80-122	4.000	163783	06/08/10
1,2-Dichloroethane-d4	108	71-140	4.000	163783	06/08/10
Toluene-d8	98	80-120	4.000	163783	06/08/10
Bromofluorobenzene	96	80-121	4.000	163783	06/08/10

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	163824
Lab ID:	220556-007	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	740	50
tert-Butyl Alcohol (TBA)	20	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	7.1	0.50
Ethanol	ND	1,000
MTBE	28	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	1.8	0.50
m,p-Xylenes	0.62	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-122
1,2-Dichloroethane-d4	112	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-121

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1D	Batch#:	163824
Lab ID:	220556-008	Sampled:	06/04/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-122
1,2-Dichloroethane-d4	114	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-121

ND= Not Detected

RL= Reporting Limit

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**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3D	Batch#:	163824
Lab ID:	220556-009	Sampled:	06/04/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	1.8	0.50
Ethanol	ND	1,000
MTBE	17	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-122
1,2-Dichloroethane-d4	113	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-121

ND= Not Detected

RL= Reporting Limit

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**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4D	Batch#:	163824
Lab ID:	220556-010	Sampled:	06/04/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	1.1	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-122
1,2-Dichloroethane-d4	112	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-121

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-1	Batch#:	163824
Lab ID:	220556-011	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	2.500		

Analyte	Result	RL
Gasoline C7-C12	3,600	130
tert-Butyl Alcohol (TBA)	570	25
Isopropyl Ether (DIPE)	ND	1.3
Ethyl tert-Butyl Ether (ETBE)	1.9	1.3
Methyl tert-Amyl Ether (TAME)	ND	1.3
Ethanol	ND	2,500
MTBE	83	1.3
1,2-Dichloroethane	ND	1.3
Benzene	180	1.3
Toluene	6.3	1.3
1,2-Dibromoethane	ND	1.3
Ethylbenzene	150	1.3
m,p-Xylenes	370	1.3
o-Xylene	58	1.3

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-122
1,2-Dichloroethane-d4	107	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-121

ND= Not Detected

RL= Reporting Limit

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-2	Batch#:	163824
Lab ID:	220556-012	Sampled:	06/03/10
Matrix:	Water	Received:	06/04/10
Units:	ug/L	Analyzed:	06/10/10
Diln Fac:	10.00		

Analyte	Result	RL
Gasoline C7-C12	16,000	500
tert-Butyl Alcohol (TBA)	ND	100
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
Ethanol	ND	10,000
MTBE	9.5	5.0
1,2-Dichloroethane	ND	5.0
Benzene	590	5.0
Toluene	400	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	700	5.0
m,p-Xylenes	1,900	5.0
o-Xylene	600	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-122
1,2-Dichloroethane-d4	106	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC547488	Batch#:	163744
Matrix:	Water	Analyzed:	06/07/10
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-122
1,2-Dichloroethane-d4	117	71-140
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-121

ND= Not Detected

RL= Reporting Limit

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**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163744
Units:	ug/L	Analyzed:	06/07/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547489

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	112.5	107.1	95	45-152
Isopropyl Ether (DIPE)	22.50	23.38	104	56-134
Ethyl tert-Butyl Ether (ETBE)	22.50	22.73	101	60-124
Methyl tert-Amyl Ether (TAME)	22.50	21.13	94	66-120
MTBE	22.50	20.30	90	66-120
1,2-Dichloroethane	22.50	25.63	114	70-135
Benzene	22.50	23.73	105	80-122
Toluene	22.50	23.56	105	80-120
1,2-Dibromoethane	22.50	22.52	100	80-120
Ethylbenzene	22.50	24.32	108	80-123
m,p-Xylenes	45.00	49.04	109	80-126
o-Xylene	22.50	23.83	106	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	115	71-140
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-121

Type: BSD Lab ID: QC547490

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	112.5	106.2	94	45-152	1	30
Isopropyl Ether (DIPE)	22.50	21.67	96	56-134	8	20
Ethyl tert-Butyl Ether (ETBE)	22.50	21.05	94	60-124	8	20
Methyl tert-Amyl Ether (TAME)	22.50	20.21	90	66-120	4	20
MTBE	22.50	18.90	84	66-120	7	20
1,2-Dichloroethane	22.50	24.50	109	70-135	4	20
Benzene	22.50	21.62	96	80-122	9	20
Toluene	22.50	21.04	93	80-120	11	20
1,2-Dibromoethane	22.50	21.95	98	80-120	3	20
Ethylbenzene	22.50	21.63	96	80-123	12	20
m,p-Xylenes	45.00	43.41	96	80-126	12	20
o-Xylene	22.50	21.71	96	80-122	9	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-122
1,2-Dichloroethane-d4	114	71-140
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-121

RPD= Relative Percent Difference

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## Batch QC Report

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163744
Units:	ug/L	Analyzed:	06/07/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547501

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	750.0	819.3	109	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-122
1,2-Dichloroethane-d4	116	71-140
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-121

Type: BSD Lab ID: QC547502

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	750.0	842.6	112	80-120	3 20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-122
1,2-Dichloroethane-d4	113	71-140
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-121

RPD= Relative Percent Difference

Page 1 of 1

17.0

**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163783
Units:	ug/L	Analyzed:	06/08/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547644

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	94.00	75	45-152
Isopropyl Ether (DIPE)	25.00	21.02	84	56-134
Ethyl tert-Butyl Ether (ETBE)	25.00	19.86	79	60-124
Methyl tert-Amyl Ether (TAME)	25.00	20.56	82	66-120
MTBE	25.00	18.26	73	66-120
1,2-Dichloroethane	25.00	24.18	97	70-135
Benzene	25.00	22.85	91	80-122
Toluene	25.00	23.44	94	80-120
1,2-Dibromoethane	25.00	23.21	93	80-120
Ethylbenzene	25.00	24.37	97	80-123
m,p-Xylenes	50.00	48.76	98	80-126
o-Xylene	25.00	24.32	97	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-122
1,2-Dichloroethane-d4	106	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	94	80-121

Type: BSD Lab ID: QC547645

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	90.90	73	45-152	3	30
Isopropyl Ether (DIPE)	25.00	21.67	87	56-134	3	20
Ethyl tert-Butyl Ether (ETBE)	25.00	20.67	83	60-124	4	20
Methyl tert-Amyl Ether (TAME)	25.00	21.83	87	66-120	6	20
MTBE	25.00	18.85	75	66-120	3	20
1,2-Dichloroethane	25.00	25.57	102	70-135	6	20
Benzene	25.00	24.92	100	80-122	9	20
Toluene	25.00	25.27	101	80-120	8	20
1,2-Dibromoethane	25.00	25.29	101	80-120	9	20
Ethylbenzene	25.00	26.38	106	80-123	8	20
m,p-Xylenes	50.00	52.94	106	80-126	8	20
o-Xylene	25.00	25.95	104	80-122	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-122
1,2-Dichloroethane-d4	109	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-121

RPD= Relative Percent Difference

Page 1 of 1

18.0

**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC547646	Batch#:	163783
Matrix:	Water	Analyzed:	06/08/10
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-122
1,2-Dichloroethane-d4	110	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

19.0

## Batch QC Report

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163783
Units:	ug/L	Analyzed:	06/08/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547702

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,126	113	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-122
1,2-Dichloroethane-d4	110	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-121

Type: BSD Lab ID: QC547703

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	1,026	103	80-120	9 20

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-122
1,2-Dichloroethane-d4	106	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-121

RPD= Relative Percent Difference

Page 1 of 1

20.0

**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163824
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547785

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	92.63	74	45-152
Isopropyl Ether (DIPE)	25.00	21.48	86	56-134
Ethyl tert-Butyl Ether (ETBE)	25.00	20.32	81	60-124
Methyl tert-Amyl Ether (TAME)	25.00	21.32	85	66-120
MTBE	25.00	18.89	76	66-120
1,2-Dichloroethane	25.00	25.76	103	70-135
Benzene	25.00	24.43	98	80-122
Toluene	25.00	25.10	100	80-120
1,2-Dibromoethane	25.00	24.32	97	80-120
Ethylbenzene	25.00	25.76	103	80-123
m,p-Xylenes	50.00	50.91	102	80-126
o-Xylene	25.00	25.35	101	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-122
1,2-Dichloroethane-d4	106	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	95	80-121

Type: BSD Lab ID: QC547786

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	93.91	75	45-152	1	30
Isopropyl Ether (DIPE)	25.00	20.11	80	56-134	7	20
Ethyl tert-Butyl Ether (ETBE)	25.00	19.15	77	60-124	6	20
Methyl tert-Amyl Ether (TAME)	25.00	20.17	81	66-120	6	20
MTBE	25.00	17.85	71	66-120	6	20
1,2-Dichloroethane	25.00	24.32	97	70-135	6	20
Benzene	25.00	23.03	92	80-122	6	20
Toluene	25.00	23.45	94	80-120	7	20
1,2-Dibromoethane	25.00	24.17	97	80-120	1	20
Ethylbenzene	25.00	25.29	101	80-123	2	20
m,p-Xylenes	50.00	49.57	99	80-126	3	20
o-Xylene	25.00	24.65	99	80-122	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-122
1,2-Dichloroethane-d4	105	71-140
Toluene-d8	101	80-120
Bromofluorobenzene	96	80-121

RPD= Relative Percent Difference

Page 1 of 1

21.0

## Batch QC Report

**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	163824
Units:	ug/L	Analyzed:	06/09/10
Diln Fac:	1.000		

Type: BS Lab ID: QC547825

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	750.0	819.5	109	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-122
1,2-Dichloroethane-d4	106	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-121

Type: BSD Lab ID: QC547826

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	750.0	775.6	103	80-120	6 20

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-122
1,2-Dichloroethane-d4	108	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-121

RPD= Relative Percent Difference

Page 1 of 1

23.0

**Batch QC Report**
**Gasoline by GC/MS**

Lab #:	220556	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC547855	Batch#:	163824
Matrix:	Water	Analyzed:	06/09/10
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-122
1,2-Dichloroethane-d4	111	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-121

ND= Not Detected

RL= Reporting Limit

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24.0

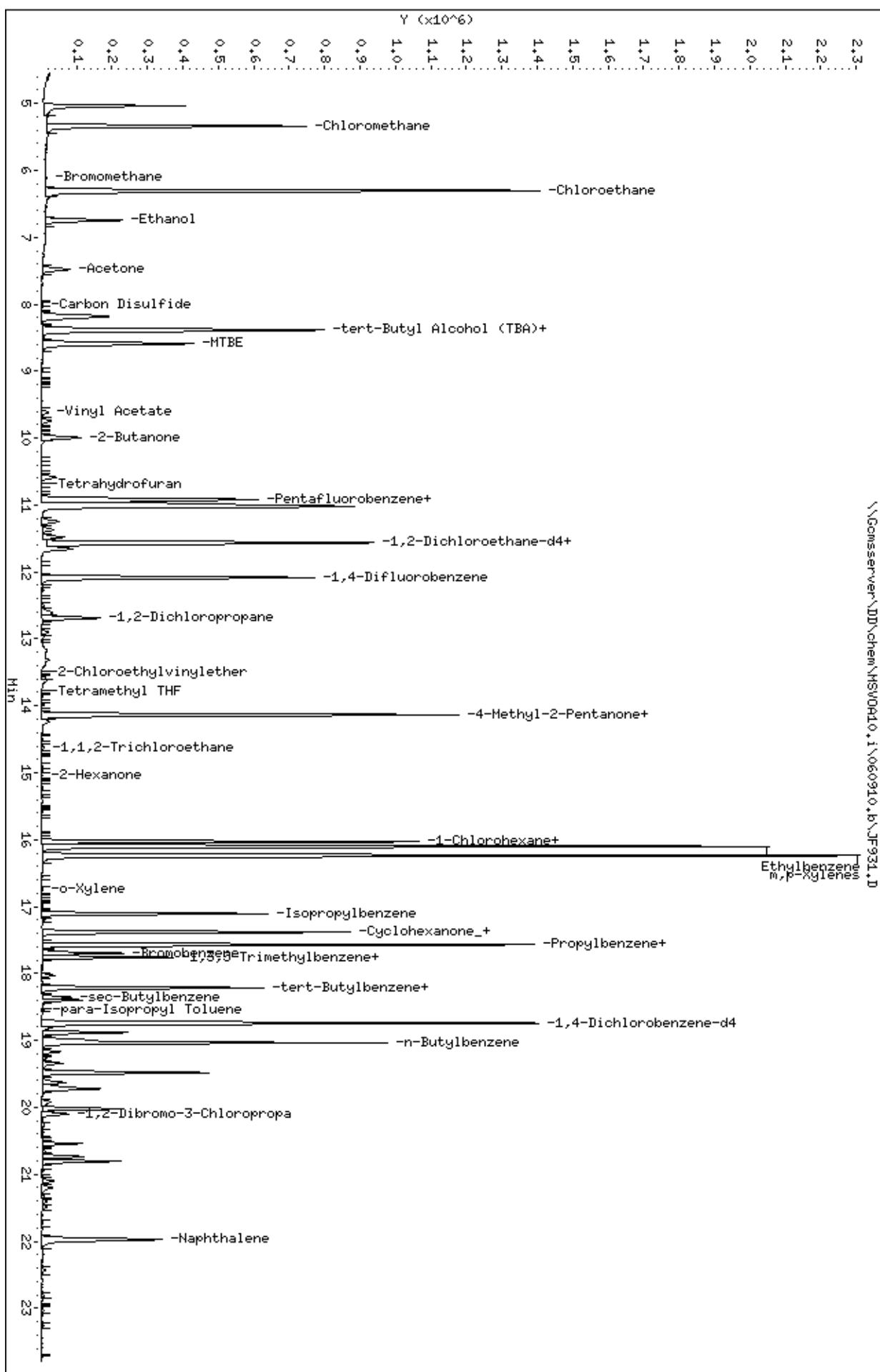
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Column phase: RTx Volatiles

Instrument: MSWD10.i

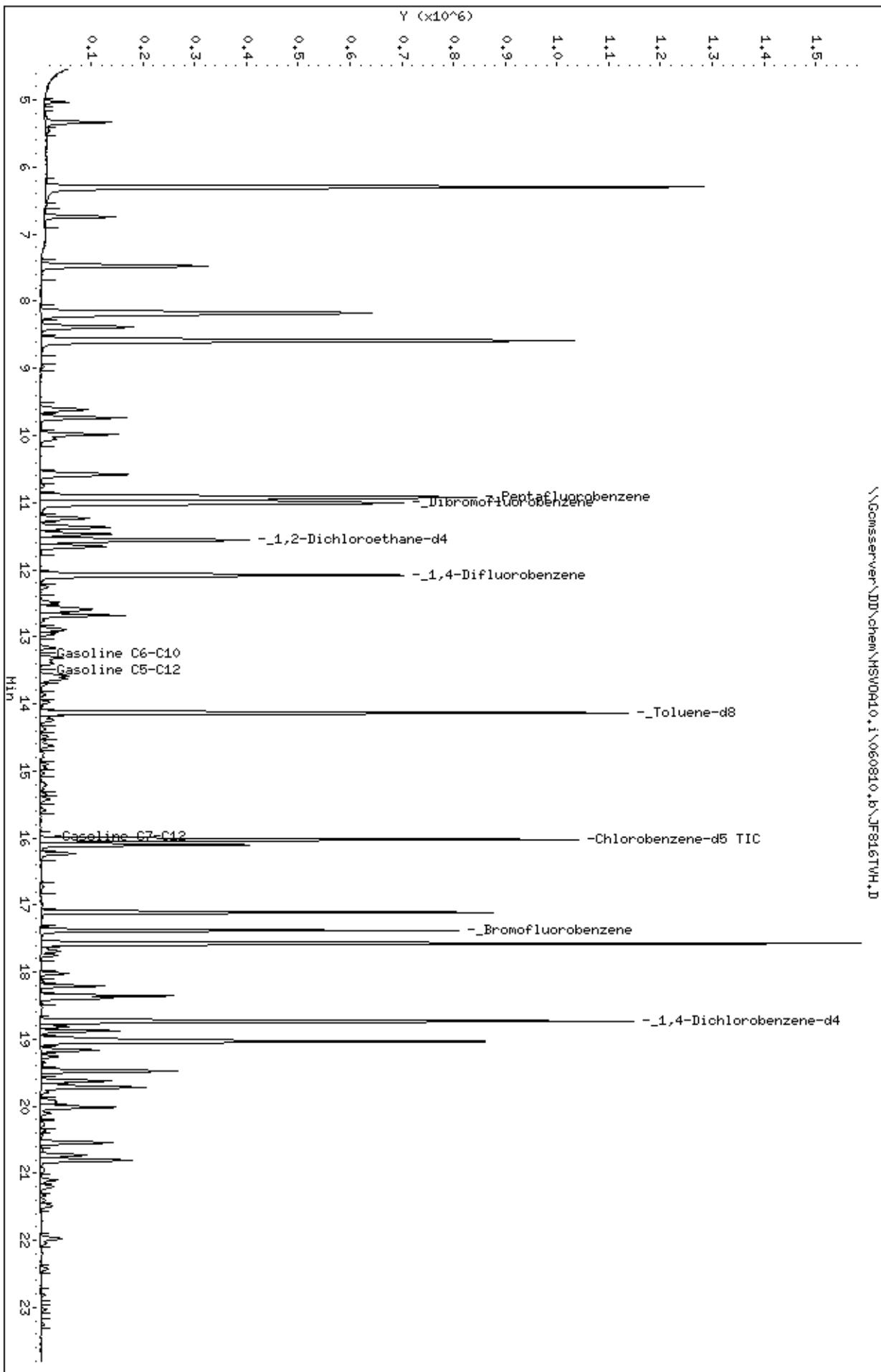
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Column diameter: 0.32

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Instrument: MSWD10.i  
Operator: WOA  
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Column phase:  
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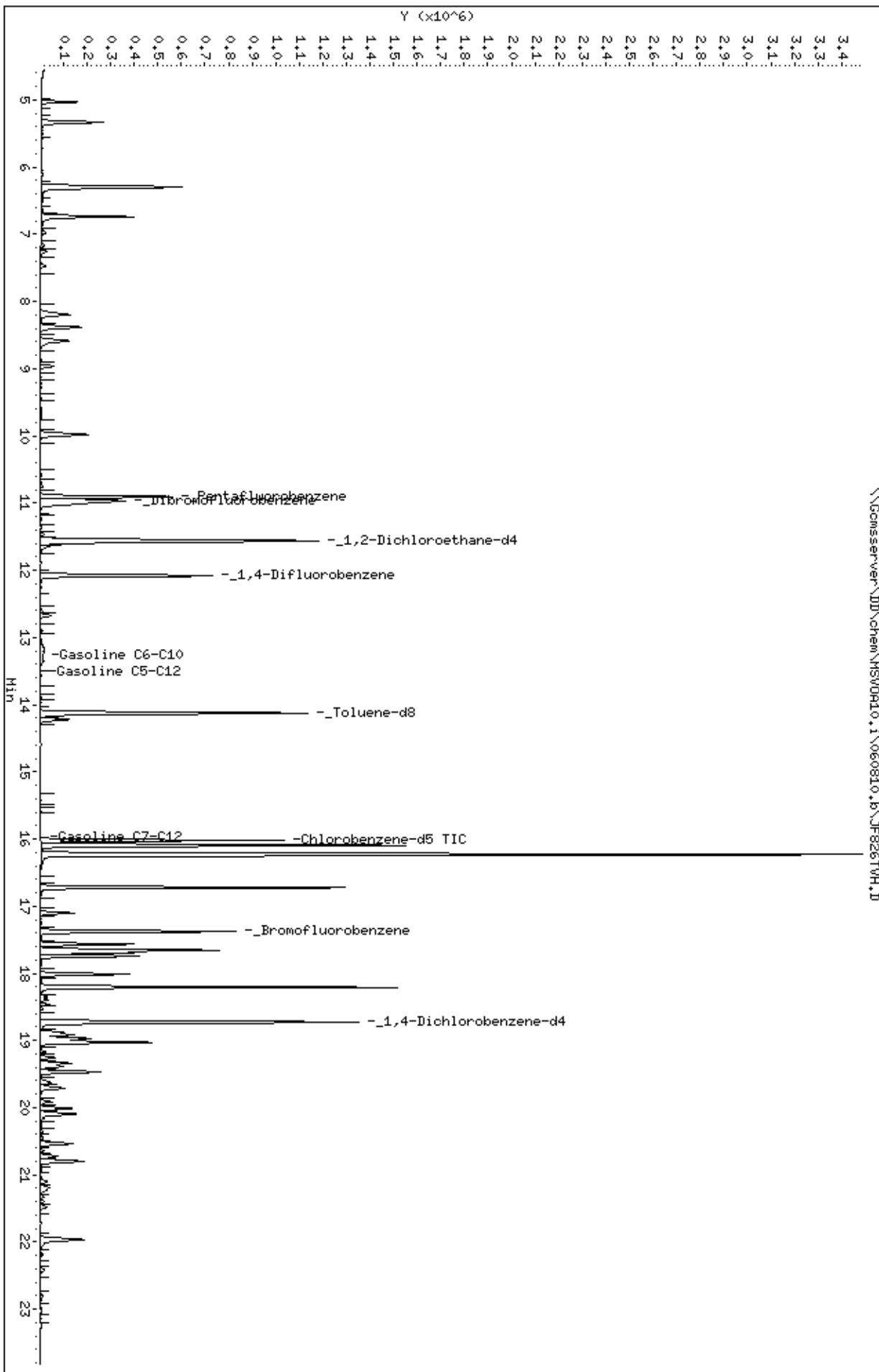
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Sample Info: s,220556-003

Column phase:

Instrument: MSW0A10.i  
Operator: WOA  
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Client ID: DYN P&T  
Sample Info: s,220556-004  
Purge Volume: 5.0

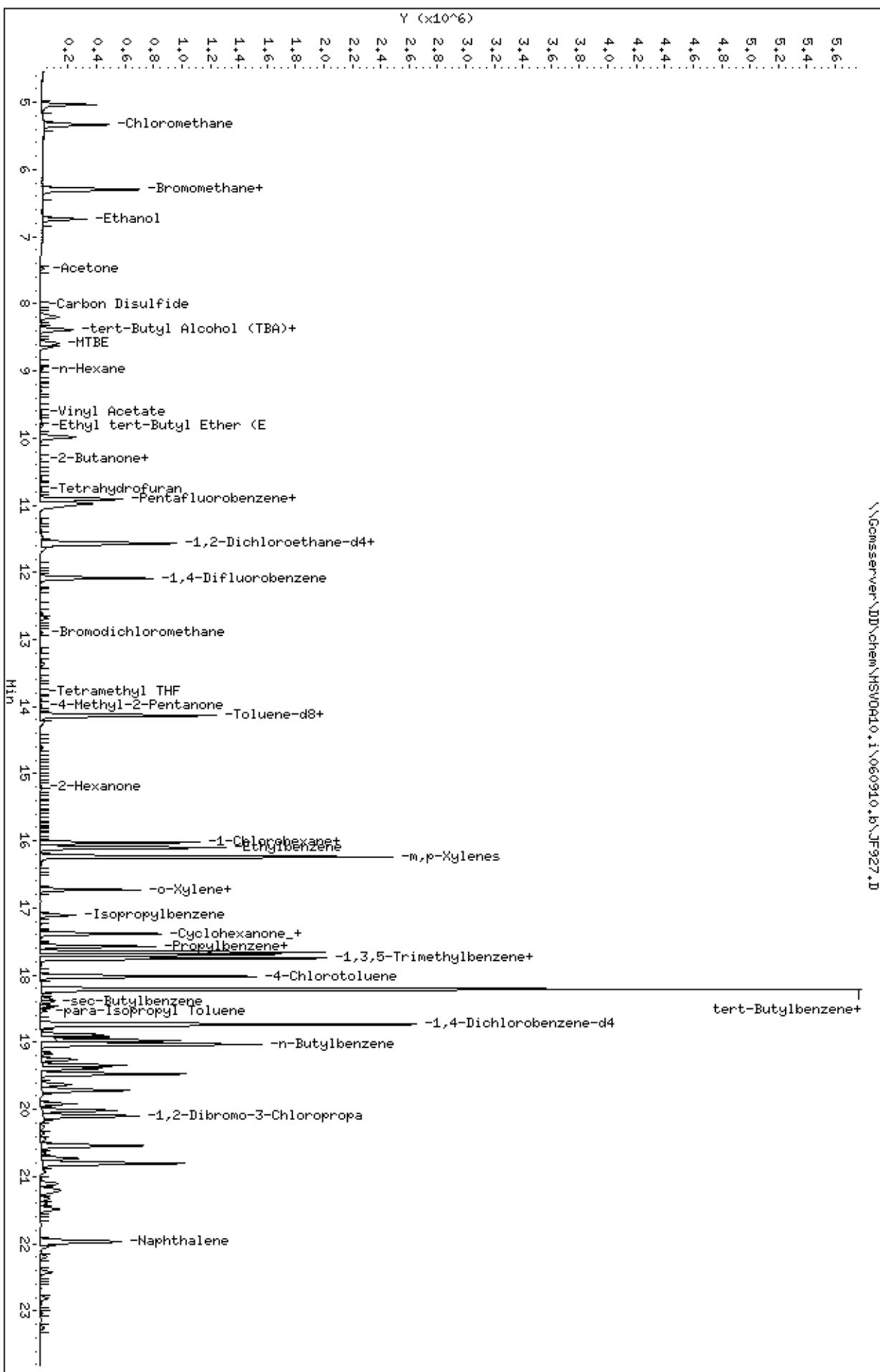
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Instrument: MSWD10.i

Operator: WOA

Column diameter: 0.32

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Sample Info: s,220556-005

Purge Volume: 5.0

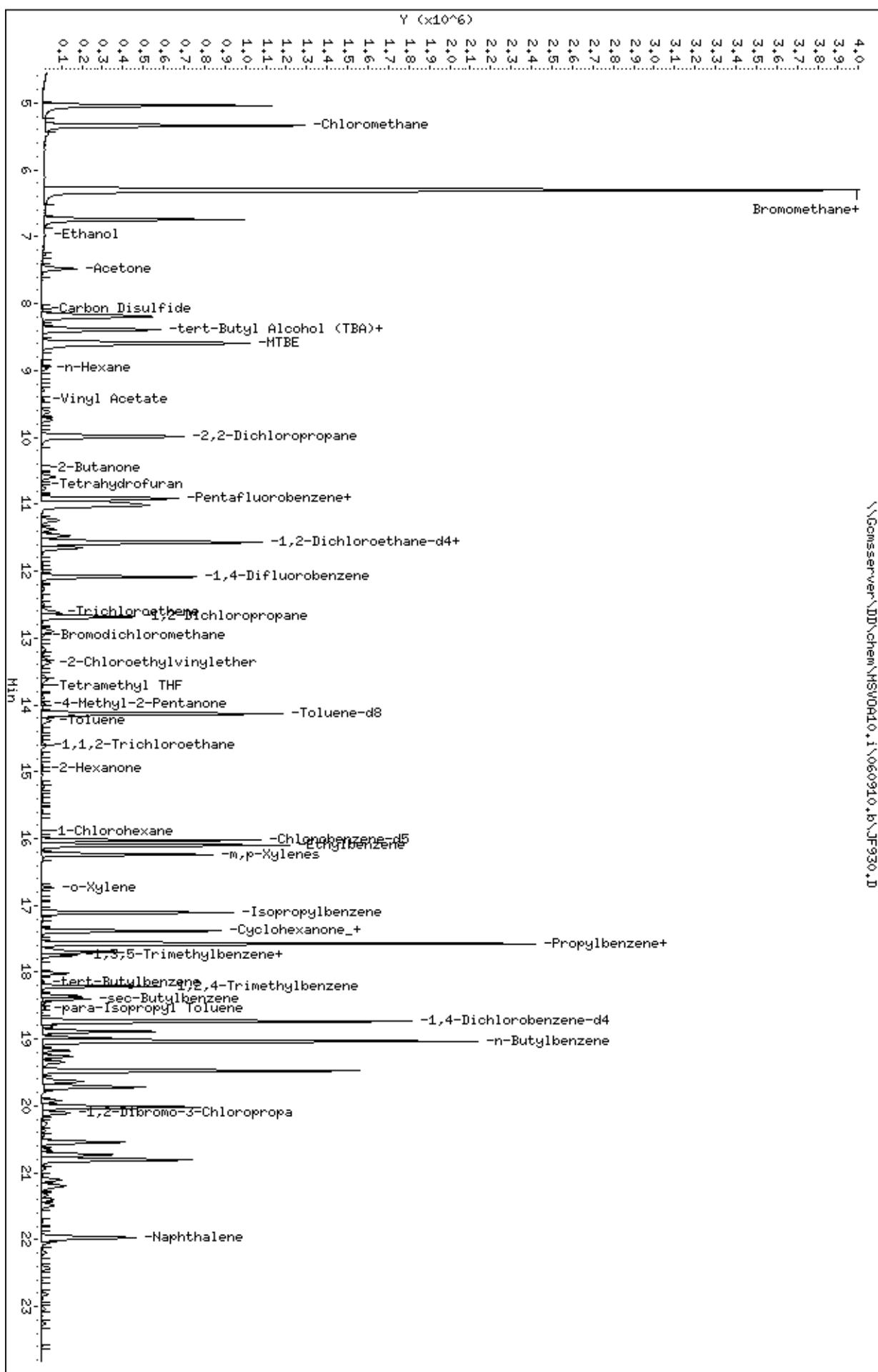
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Instrument: MSWA10.i

Operator: WOA

Column diameter: 0.32

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Sample Info: s,220556-006

Purge Volume: 5.0

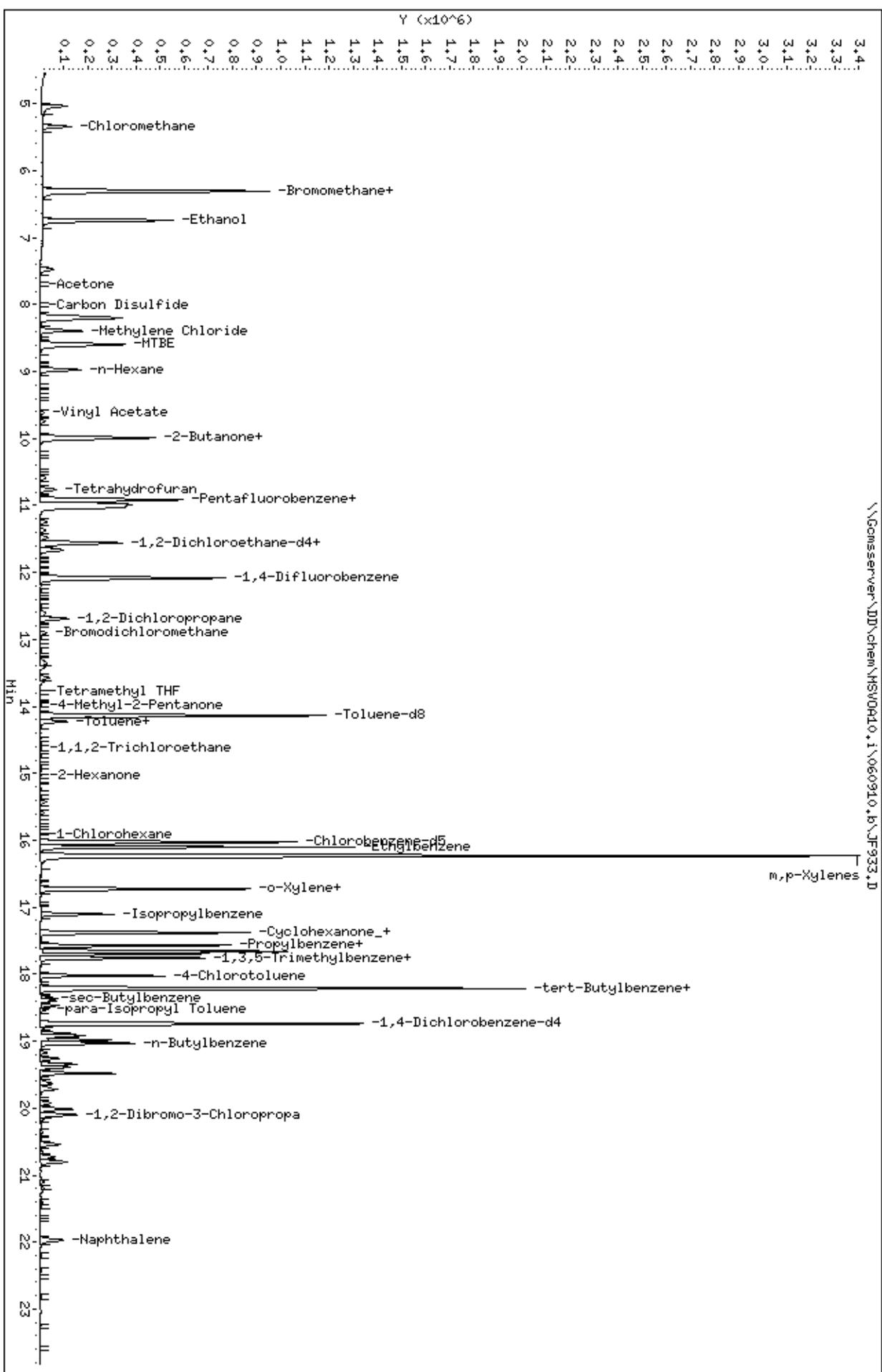
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Instrument: MSWD10.i

Operator: WOA

Column diameter: 0.32

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Client ID: DYNH P&T  
Sample Info: s,220556-007

Purge Volume: 5.0

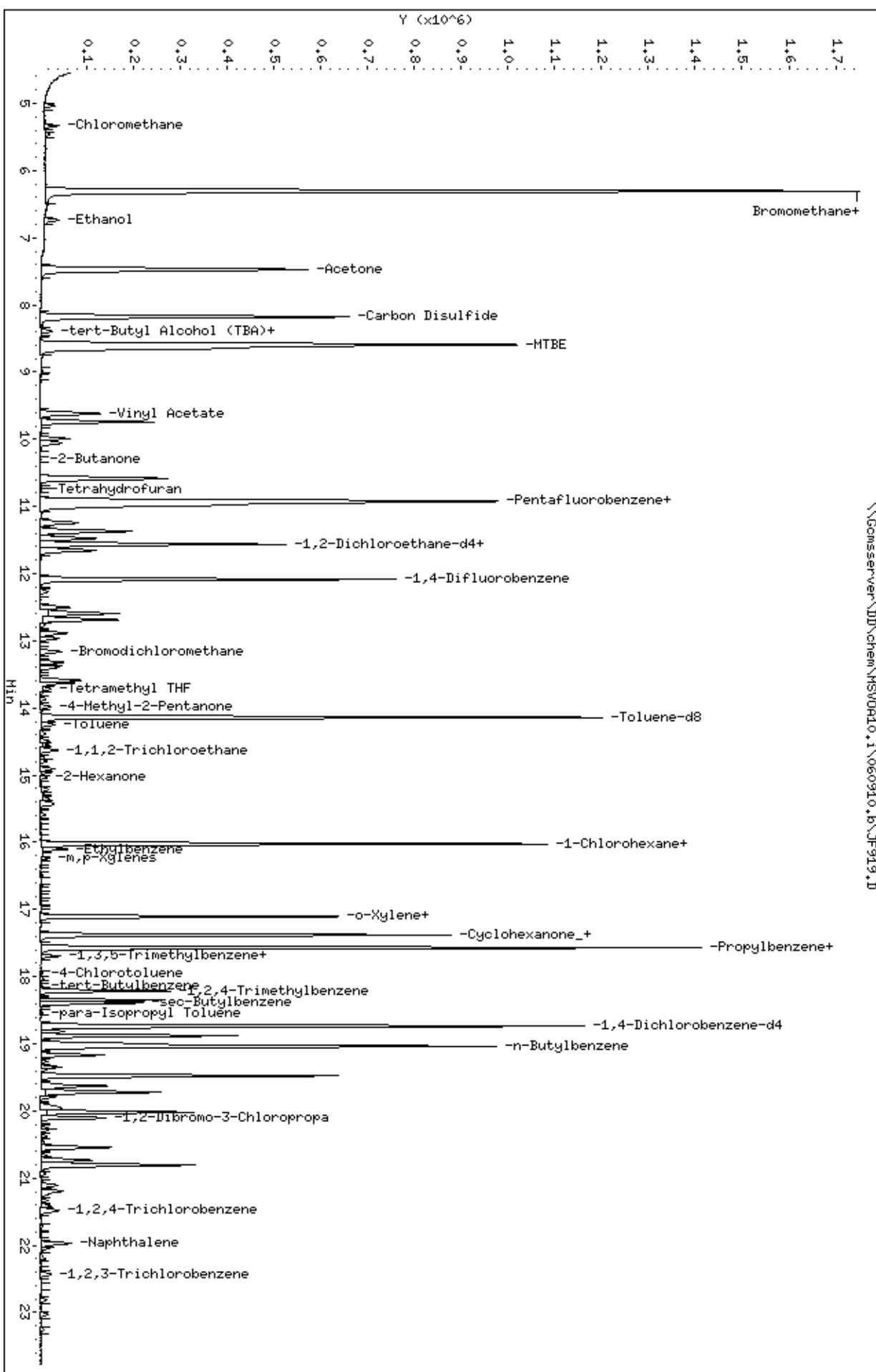
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Instrument: MSWDAT0.i

Operator: WOA

Column diameter: 0.32

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Client ID: DYN P&T

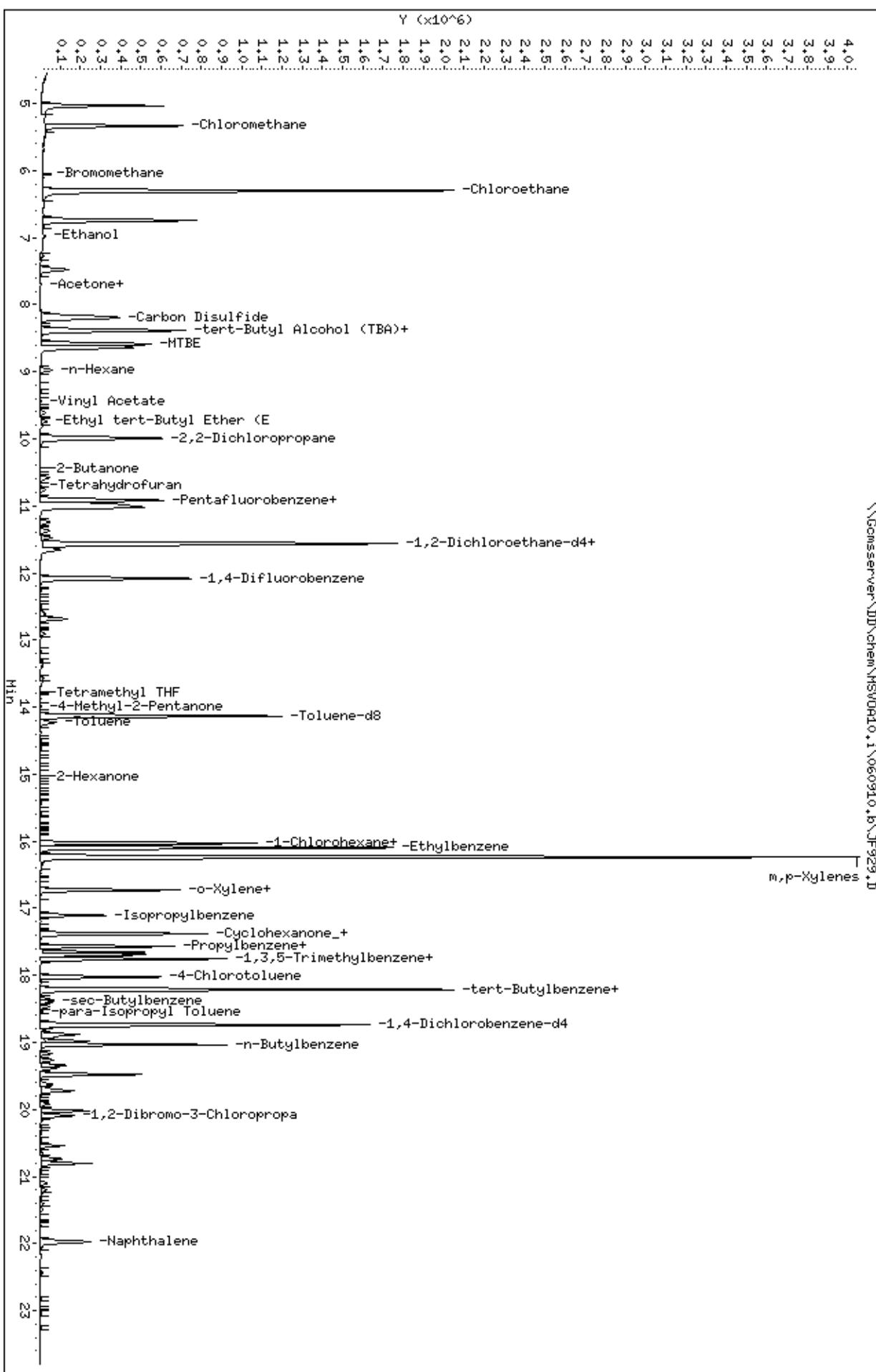
Sample Info: s,220556-011

Purge Volume: 5.0

Column phase: RTx Volatiles

Instrument: MSWD10.i  
Operator: WOA  
Column diameter: 0.32

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Client ID: DYNH P&T  
Sample Info: s,220556-012  
Purge Volume: 5.0

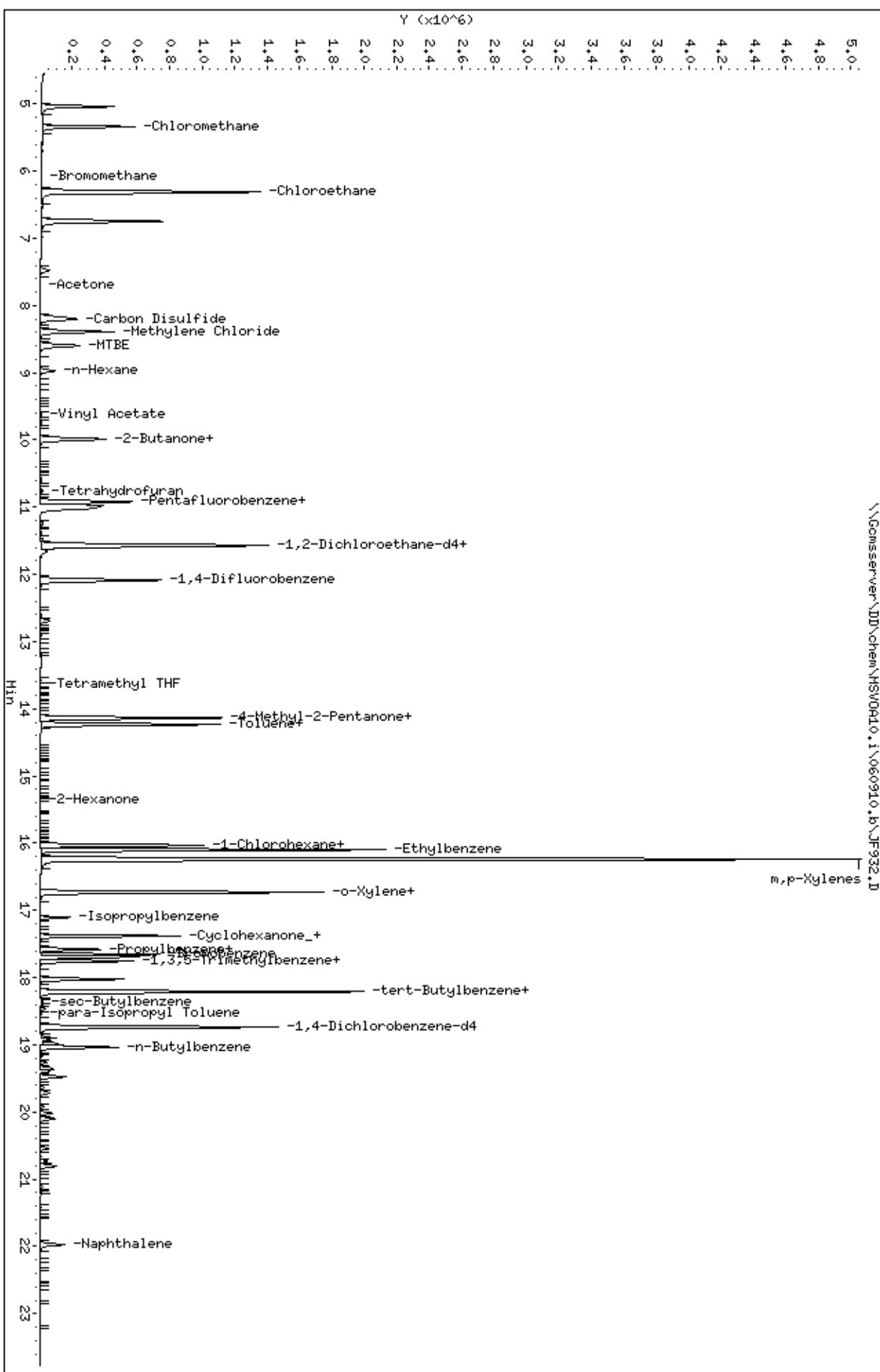
Column phase: RTx Volatiles

Instrument: MSWDAT10.i

Operator: WOA

Column diameter: 0.32

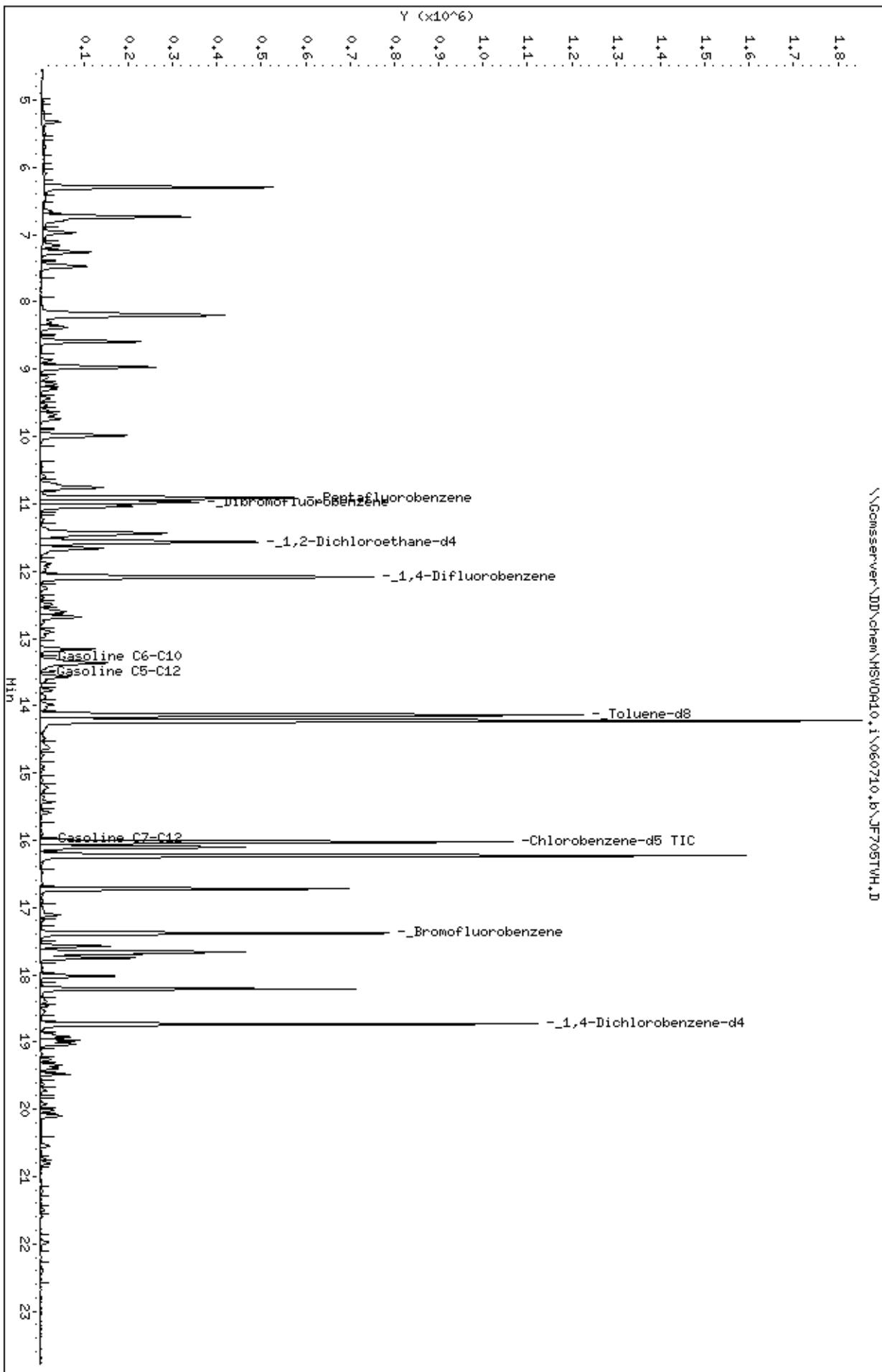
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Client ID: DYNH P&T  
Sample Info: CCW/BS, QC547501,163744,S14540.,0075/100

Page 2

Column phase:  
\\Gomserver\DD\chem\MSWDA10.i\060710.b\JF705TWH.D  
Instrument: MSWDA10.i  
Operator: WOA  
Column diameter: 2.00



# **Appendix D**

**Laboratory report and Chain of Custody  
Form for the Treatment System**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 219573  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2553  
Location : 15101 Freedom Ave. San Leandro  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
EFFLUENT	219573-001
GAC-1	219573-002
INFLUENT	219573-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Troy Baker  
Project Manager

Date: 04/26/2010

NELAP # 01107CA

## CASE NARRATIVE

Laboratory number: 219573  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 04/19/10  
Samples Received: 04/19/10

This data package contains sample and QC results for three water samples, requested for the above referenced project on 04/19/10. The samples were received cold and intact.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

No analytical problems were encountered.

**Total Suspended Solids (TSS) (SM2540D):**

No analytical problems were encountered.

**pH (EPA 9040C):**

No analytical problems were encountered.

**Chemical Oxygen Demand (SM5220D):**

No analytical problems were encountered.

# **CHAIN OF CUSTODY**

Page 1 of 1

# **Curtis & Tompkins, Ltd**

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

Project No: 2553

**Project Name:** 15101 Freedom Ave, San Leandro Company : SOMA Environmental

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

LOGIN # Z19573

Sampler: MASOUD - SEPTEHR

## **Report To: Joyce Bobek**

**Notes: EDF OUTPUT REQUIRED**

**RELINQUISHED BY:**

MASQUD / Sept 14

4/19/20 - 12

**DATE/TIME**

RECEIVED BY:

*R. A. M.* / 4/19/10 2:05  
DATE/TIME

DATE/TIME

— 1 —

**DATE/TIME**

**DATE/TIME**

## **COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 219573 Date Received 4/19/10 Number of coolers 1  
Client SOMA Project 15101 FREEDOM AVE, SAN LEANDRO

Date Opened 4/9/10 By (print) M.VILLANUEVA (sign)   
Date Logged in X By (print) D (sign) 

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO NA

3. Were custody papers dry and intact when received?  YES NO

4. Were custody papers filled out properly (ink, signed, etc)?  YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form)  YES NO

6. Indicate the packing in cooler: (if other, describe)

Bubble Wrap       Foam blocks       Bags       None  
 Cloth material       Cardboard       Styrofoam       Paper towels

7. Temperature documentation:

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO

If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES  NO

10. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES  NO

11. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES  NO

12. Do the sample labels agree with custody papers? \_\_\_\_\_ YES  NO

13. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES  NO

14. Are the samples appropriately preserved? \_\_\_\_\_ YES  NO N/A

15. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES  NO N/A

16. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES  NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

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Curtis & Tompkins Sample Preservation for 219573

Sample	pH:	<2	>12	Other
-001a		[ ]	[ ]	_____
b		[ ]	[ ]	_____
c		[ ]	[ ]	_____
d		[ ]	[ ]	_____
e		[ ]	[ ]	_____
f		[ ]	[ ]	_____
g		[ ]	[ ]	_____
h		[ ]	[ ]	_____
i		[ ]	[ ]	_____
j		[ ]	[ ]	_____
k		[ ]	[ ]	_____
-002a		[ ]	[ ]	_____
b		[ ]	[ ]	_____
c		[ ]	[ ]	_____
d		[ ]	[ ]	_____
e		[ ]	[ ]	_____
f		[ ]	[ ]	_____
-003a		[ ]	[ ]	_____
b		[ ]	[ ]	_____
c		[ ]	[ ]	_____
d		[ ]	[ ]	_____
e		[ ]	[ ]	_____
f		[ ]	[ ]	_____

Analyst: MJ  
Date: 4/19/10

Page 1 of 1

### Curtis & Tompkins Laboratories Analytical Report

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Matrix:	Water	Sampled:	04/19/10
Units:	ug/L	Received:	04/19/10
Diln Fac:	1.000	Analyzed:	04/21/10
Batch#:	162276		

Field ID: **EFFLUENT** Lab ID: **219573-001**  
 Type: **SAMPLE**

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	48-162	EPA 8015B
Bromofluorobenzene (FID)	99	52-158	EPA 8015B
Trifluorotoluene (PID)	78	21-180	EPA 8021B
Bromofluorobenzene (PID)	82	26-167	EPA 8021B

Field ID: **GAC-1** Lab ID: **219573-002**  
 Type: **SAMPLE**

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	48-162	EPA 8015B
Bromofluorobenzene (FID)	98	52-158	EPA 8015B
Trifluorotoluene (PID)	80	21-180	EPA 8021B
Bromofluorobenzene (PID)	83	26-167	EPA 8021B

ND= Not Detected

RL= Reporting Limit



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 219573 Location: 15101 Freedom Ave. San Leandro  
Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
Project#: 2553  
Matrix: Water Sampled: 04/19/10  
Units: ug/L Received: 04/19/10  
Diln Fac: 1.000 Analyzed: 04/21/10  
Batch#: 162276

Field ID: INFLUENT Lab ID: 219573-003  
Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	2,100	50	EPA 8015B
Benzene	75	0.50	EPA 8021B
Toluene	28	0.50	EPA 8021B
Ethylbenzene	56	0.50	EPA 8021B
m,p-Xylenes	260	0.50	EPA 8021B
o-Xylene	72	0.50	EPA 8021B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Trifluorotoluene (FID)	110	48-162	EPA 8015B
Bromofluorobenzene (FID)	99	52-158	EPA 8015B
Trifluorotoluene (PID)	90	21-180	EPA 8021B
Bromofluorobenzene (PID)	84	26-167	EPA 8021B

Type: BLANK Lab ID: QC541495

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Trifluorotoluene (FID)	93	48-162	EPA 8015B
Bromofluorobenzene (FID)	95	52-158	EPA 8015B
Trifluorotoluene (PID)	78	21-180	EPA 8021B
Bromofluorobenzene (PID)	80	26-167	EPA 8021B

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC541496	Batch#:	162276
Matrix:	Water	Analyzed:	04/21/10
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	919.1	92	73-121	EPA 8015B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	105	48-162	EPA 8015B
Bromofluorobenzene (FID)	90	52-158	EPA 8015B
Trifluorotoluene (PID)	95	21-180	EPA 8021B
Bromofluorobenzene (PID)	86	26-167	EPA 8021B



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 219573 Location: 15101 Freedom Ave. San Leandro  
Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
Project#: 2553

---

Field ID: ZZZZZZZZZZ Batch#: 162276  
MSS Lab ID: 219380-007 Sampled: 04/08/10  
Matrix: Water Received: 04/09/10  
Units: ug/L Analyzed: 04/21/10  
Diln Fac: 1.000

Type: MS Lab ID: QC541497

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	13.30	2,000	2,107	105	49-129	EPA 8015B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Trifluorotoluene (FID)	122	48-162	EPA 8015B
Bromofluorobenzene (FID)	104	52-158	EPA 8015B
Trifluorotoluene (PID)	123	21-180	EPA 8021B
Bromofluorobenzene (PID)	99	26-167	EPA 8021B

Type: MSD Lab ID: QC541498

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	2,128	106	49-129	1	19	EPA 8015B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Trifluorotoluene (FID)	123	48-162	EPA 8015B
Bromofluorobenzene (FID)	105	52-158	EPA 8015B
Trifluorotoluene (PID)	127	21-180	EPA 8021B
Bromofluorobenzene (PID)	101	26-167	EPA 8021B

RPD= Relative Percent Difference

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Matrix:	Water	Batch#:	162276
Units:	ug/L	Analyzed:	04/21/10
Diln Fac:	1.000		

Type: BS Lab ID: QC541499

Analyte	Spiked	Result	%REC	Limits	Analysis
Benzene	10.00	9.072	91	69-121	EPA 8021B
Toluene	10.00	9.301	93	64-132	EPA 8021B
Ethylbenzene	10.00	9.200	92	64-136	EPA 8021B
m,p-Xylenes	10.00	9.901	99	63-138	EPA 8021B
o-Xylene	10.00	9.764	98	64-135	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	48-162	EPA 8015B
Bromofluorobenzene (FID)	98	52-158	EPA 8015B
Trifluorotoluene (PID)	81	21-180	EPA 8021B
Bromofluorobenzene (PID)	84	26-167	EPA 8021B

Type: BSD Lab ID: QC541500

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Benzene	10.00	9.438	94	69-121	4	24	EPA 8021B
Toluene	10.00	9.632	96	64-132	3	27	EPA 8021B
Ethylbenzene	10.00	9.242	92	64-136	0	27	EPA 8021B
m,p-Xylenes	10.00	9.866	99	63-138	0	32	EPA 8021B
o-Xylene	10.00	9.418	94	64-135	4	27	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	48-162	EPA 8015B
Bromofluorobenzene (FID)	95	52-158	EPA 8015B
Trifluorotoluene (PID)	81	21-180	EPA 8021B
Bromofluorobenzene (PID)	81	26-167	EPA 8021B

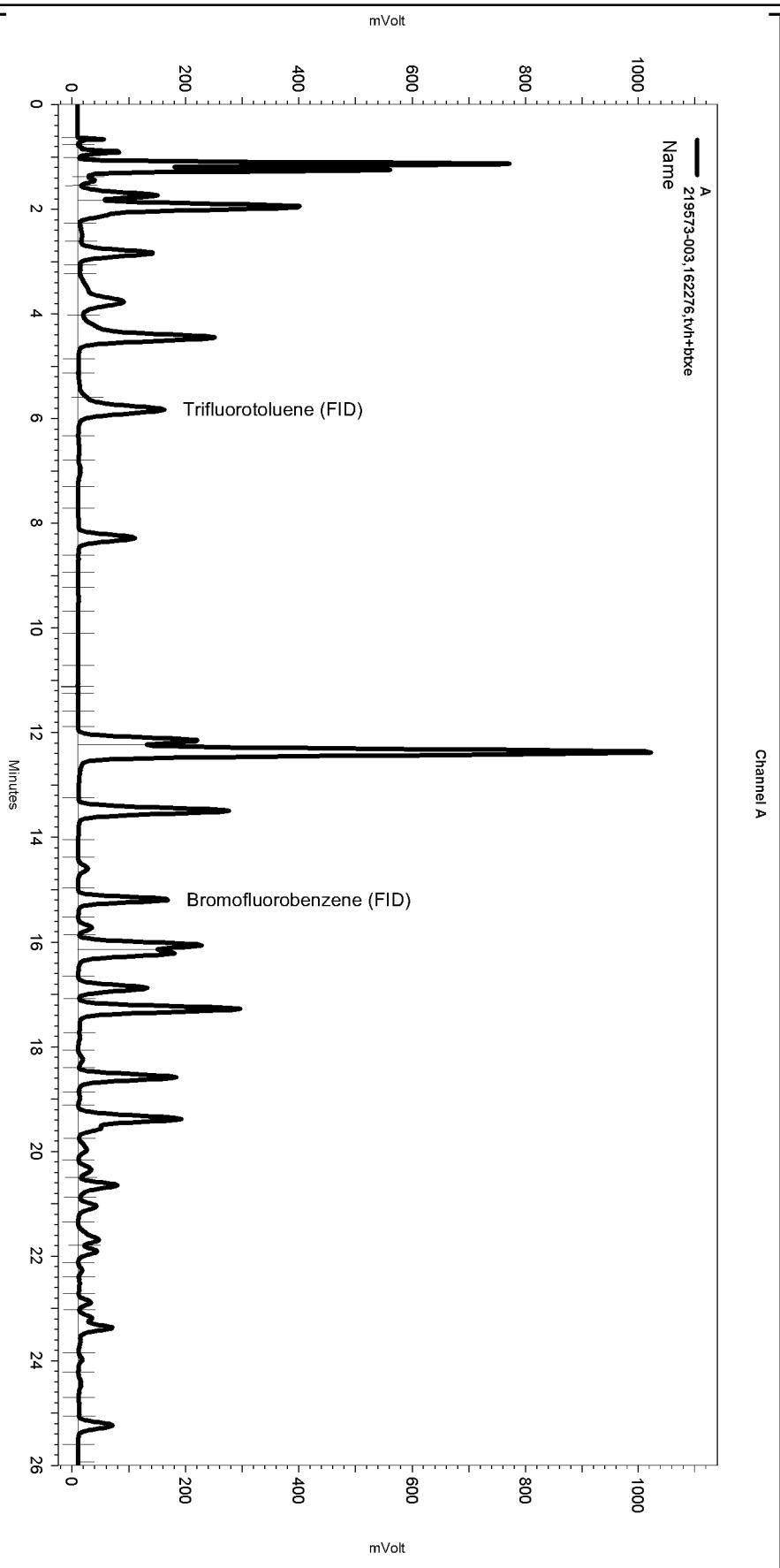
RPD= Relative Percent Difference

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6.0

Sequence File: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Sequence\\111.seq  
Sample Name: 219573-003,162276,tvh+btxe  
Data File: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Data\\111\_012  
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3)tvh2  
Method Name: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Method\\tvhbtxe091.met

Software Version 3.1.7  
Run Date: 4/21/2010 9:20:06 PM  
Analysis Date: 4/22/2010 11:31:49 AM  
Sample Amount: 5 Multiplier: 5  
Vial & pH or Core ID: a1.0



-----< General Method Parameters >-----

No items selected for this section

-----< A >-----

No items selected for this section

Integration Events

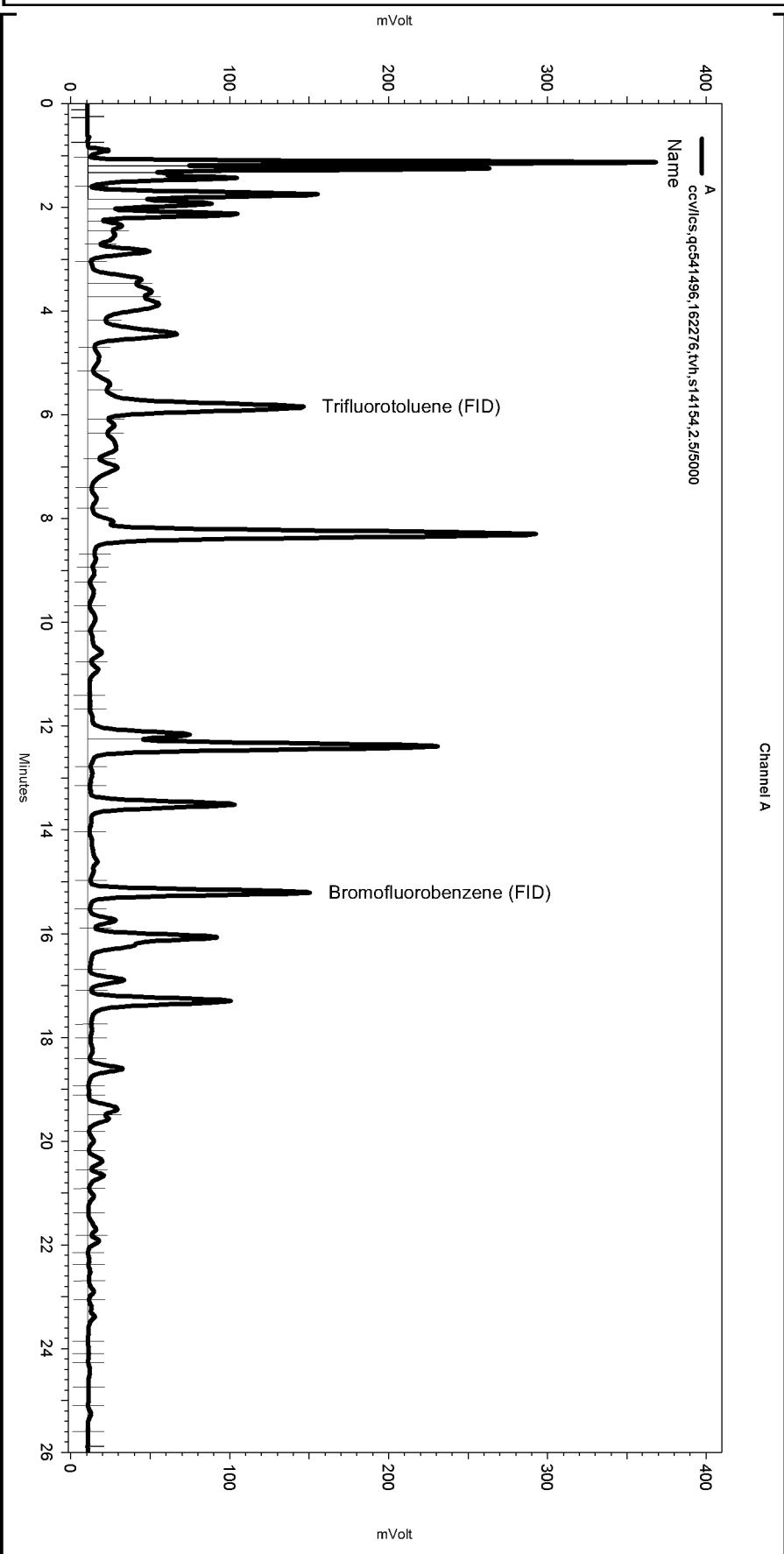
Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

Data File:	Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
\\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Data\\111_012	Yes	Split Peak	5.6	0	0

Sequence File: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Sequence\\111.seq  
Sample Name: ccv\\lcs,qc541496,162276,tvh,s14154,2.5\\5000  
Data File: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Data\\111\_003  
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (\\ims2k3\\tvh2)  
Method Name: \\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Method\\tvhtxe091.met

Software Version 3.1.7  
Run Date: 4/21/2010 11:07:41 AM  
Analysis Date: 4/22/2010 10:45:58 AM  
Sample Amount: 5 Multiplier: 5  
Vial & pH or Core ID: {Data Description}



-----< General Method Parameters >-----

No items selected for this section

-----< A >-----

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

Data File:	\\Lims\\gdrive\\ezchrom\\Projects\\GC07\\Data\\111_003			
Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

### Total Extractable Hydrocarbons

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	162210
Matrix:	Water	Sampled:	04/19/10
Units:	ug/L	Received:	04/19/10
Diln Fac:	1.000	Prepared:	04/20/10

Type: SAMPLE Analyzed: 04/23/10  
 Lab ID: 219573-001

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	92	39-150

Type: BLANK Analyzed: 04/22/10  
 Lab ID: QC541245

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	97	39-150

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

**Total Extractable Hydrocarbons**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC541246	Batch#:	162210
Matrix:	Water	Prepared:	04/20/10
Units:	ug/L	Analyzed:	04/22/10

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,285	91	34-144

Surrogate	%REC	Limits
o-Terphenyl	95	39-150

## Batch QC Report

**Total Extractable Hydrocarbons**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	162210
MSS Lab ID:	219559-003	Sampled:	04/16/10
Matrix:	Water	Received:	04/16/10
Units:	ug/L	Prepared:	04/20/10
Diln Fac:	1.000	Analyzed:	04/22/10

Type: MS Cleanup Method: EPA 3630C  
 Lab ID: QC541247

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<12.24	2,500	2,061	82	21-160

Surrogate	%REC	Limits
o-Terphenyl	89	39-150

Type: MSD Cleanup Method: EPA 3630C  
 Lab ID: QC541248

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,031	81	21-160	1	58

Surrogate	%REC	Limits
o-Terphenyl	87	39-150

RPD= Relative Percent Difference

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### Chemical Oxygen Demand

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	162312
Field ID:	EFFLUENT	Sampled:	04/19/10 12:00
Matrix:	Water	Received:	04/19/10
Units:	mg/L	Prepared:	04/22/10 13:00
Diln Fac:	1.000	Analyzed:	04/22/10 15:00

Type	Lab ID	Result	RL
SAMPLE	219573-001	ND	10
BLANK	QC541629	ND	10

ND= Not Detected

RL= Reporting Limit

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## Batch QC Report

## Chemical Oxygen Demand

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	162312
Field ID:	ZZZZZZZZZZ	Sampled:	04/19/10 11:00
MSS Lab ID:	219574-001	Received:	04/19/10
Matrix:	Water	Prepared:	04/22/10 13:00
Units:	mg/L	Analyzed:	04/22/10 15:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC541630		75.00	78.25	104	90-110		
MS	QC541631	10.87	150.0	165.2	103	41-150		
MSD	QC541632		150.0	165.2	103	41-150	0	29

RPD= Relative Percent Difference

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10.0

**pH**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	162174
Lab ID:	219573-001	Sampled:	04/19/10 12:00
Matrix:	Water	Received:	04/19/10
Units:	SU	Analyzed:	04/19/10 18:50

Result	RL
6.6	1.0

## Batch QC Report

**pH**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Units:	SU
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	162174
MSS Lab ID:	219574-001	Sampled:	04/19/10 11:00
Lab ID:	QC541071	Received:	04/19/10
Matrix:	Water	Analyzed:	04/19/10 18:50

MSS	Result	Result	RL	RPD	Lim
	7.050	7.090	1.000	1	1

RL= Reporting Limit

RPD= Relative Percent Difference

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### Total Suspended Solids (TSS)

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	162199
Field ID:	EFFLUENT	Sampled:	04/19/10
Matrix:	Water	Received:	04/19/10
Units:	mg/L	Analyzed:	04/20/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	219573-001	8	5
BLANK	QC541194	ND	5

ND= Not Detected

RL= Reporting Limit

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14.0

## Batch QC Report

**Total Suspended Solids (TSS)**

Lab #:	219573	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	162199
MSS Lab ID:	219573-001	Sampled:	04/19/10
Matrix:	Water	Received:	04/19/10
Units:	mg/L	Analyzed:	04/20/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC541195		50.00	47.00	94	87-110		
MS	QC541196	8.000	50.00	54.00	92	34-152		
MSD	QC541197		50.00	53.00	90	34-152	2	5

RPD= Relative Percent Difference

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15.0



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 220181  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2553  
Location : 15101 Freedom Ave. San Leandro  
Level : II

Sample ID  
EFFLUENT

Lab ID  
220181-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Troy Baker  
Project Manager

Date: 05/24/2010

NELAP # 01107CA

## CASE NARRATIVE

Laboratory number: 220181  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 05/17/10  
Samples Received: 05/17/10

This data package contains sample and QC results for one water sample, requested for the above referenced project on 05/17/10. The sample was received cold and intact.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

No analytical problems were encountered.

**Total Suspended Solids (TSS) (SM2540D):**

No analytical problems were encountered.

**pH (EPA 9040C):**

No analytical problems were encountered.

**Chemical Oxygen Demand (SM5220D):**

No analytical problems were encountered.

# CHAIN OF CUSTODY

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## **Curtis & Tompkins, Ltd**

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

**Project No: 2553**

Project Name: 15101 Freedom Ave, San Leandro Company : SOMA Environmental

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

**Fax:** 925-734-6401

<b>Matrix</b>	<b>Preservative</b>
---------------	---------------------

**Notes: EDE OUTPUT REQUIRED**

**REINFORCED BY-**

RECEIVED BY

*Don* 5-17-10 - 113° DATE/TIME

RECEIVED BY: *C* 3/20  
ME 5/17/10 DATE/TIME

*[Signature]* 5/11/10 9:22  
DATE/TIME

ME Pat Koenig DATE/TIME  
ME DATE/TIME

**DATE/TIME**

## **Analyses**

## COOLER RECEIPT CHECKLIST



Login # 720181 Date Received 5/17/10 Number of coolers 1  
 Client SOMA Project 15101 FREEDOM AVE, SL

Date Opened 5/17/10 By (print) M. VILLENAUVE (sign) Mark Miller  
 Date Logged in V By (print) J (sign) J

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ...  YES (circle) on cooler  on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES  NO  N/A

3. Were custody papers dry and intact when received? \_\_\_\_\_ YES  NO

4. Were custody papers filled out properly (ink, signed, etc)? \_\_\_\_\_ YES  NO

5. Is the project identifiable from custody papers? (If so fill out top of form) \_\_\_\_\_ YES  NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

<input type="checkbox"/> Bubble Wrap	<input checked="" type="checkbox"/> Foam blocks	<input type="checkbox"/> Bags	<input type="checkbox"/> None
<input type="checkbox"/> Cloth material	<input type="checkbox"/> Cardboard	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Paper towels

7. Temperature documentation:

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES   
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES  NO

10. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES  NO

11. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES  NO

12. Do the sample labels agree with custody papers? \_\_\_\_\_ YES  NO

13. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES  NO

14. Are the samples appropriately preserved? \_\_\_\_\_ YES  NO  N/A

15. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES  NO  N/A

16. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES  NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

SOMA POLY REC'D w/ 2 LBSPLS. SAMPLES SPLIT FROM 1L & 1/2L  
 FOR TSS & PHT

Curtis & Tompkins Sample Preservation for 220181

Sample	pH:	<2	>12	Other
-001a		[ ]	[ ]	_____
b		[ ]	[ ]	_____
c		[ ]	[ ]	_____
d		[ ]	[ ]	_____
e		[ ]	[ ]	_____
f		[ ]	[ ]	_____
g		[ <u>1</u> ]	[ ]	_____
h		[ ]	[ ]	_____
i		[ ]	[ ]	_____
j		[ ]	[ ]	_____

Analyst: NW  
Date: 5/17/10

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### **Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	163187
Matrix:	Water	Sampled:	05/17/10
Units:	ug/L	Received:	05/17/10
Diln Fac:	1.000	Analyzed:	05/19/10

Type: SAMPLE Lab ID: 220181-001

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	103	52-158	EPA 8015B
Bromofluorobenzene (PID)	93	26-167	EPA 8021B

Type: BLANK Lab ID: QC545213

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	101	52-158	EPA 8015B
Bromofluorobenzene (PID)	89	26-167	EPA 8021B

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	163187
Units:	ug/L	Analyzed:	05/19/10
Diln Fac:	1.000		

Type: BS Lab ID: QC545214

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
Benzene	10.00	9.287	93	69-121
Toluene	10.00	9.066	91	64-132
Ethylbenzene	10.00	9.252	93	64-136
m,p-Xylenes	10.00	9.131	91	63-138
o-Xylene	10.00	9.079	91	64-135

Surrogate	Result	%REC	Limits
Bromofluorobenzene (FID)	NA		
Bromofluorobenzene (PID)		86	26-167

Type: BSD Lab ID: QC545215

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12		NA			
Benzene	10.00	9.629	96	69-121	4 24
Toluene	10.00	9.675	97	64-132	7 27
Ethylbenzene	10.00	9.536	95	64-136	3 27
m,p-Xylenes	10.00	9.564	96	63-138	5 32
o-Xylene	10.00	9.378	94	64-135	3 27

Surrogate	Result	%REC	Limits
Bromofluorobenzene (FID)	NA		
Bromofluorobenzene (PID)		88	26-167

NA= Not Analyzed

RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

## Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZ	Batch#:	163187
MSS Lab ID:	220193-001	Sampled:	05/15/10
Matrix:	Water	Received:	05/17/10
Units:	ug/L	Analyzed:	05/19/10
Diln Fac:	1.000		

Type: MS Lab ID: QC545216

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	18.76	2,000	2,171	108	49-129
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

<b>Surrogate</b>	<b>Result</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene (FID)		105	52-158
Bromofluorobenzene (PID)	NA		

Type : MSD Lab ID : QC545217

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,162	107	49-129	0	19
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

<b>Surrogate</b>	<b>Result</b>	<b>%REC</b>	<b>Limits</b>
Bromofluorobenzene (FID)		106	52-158
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC545223	Batch#:	163187
Matrix:	Water	Analyzed:	05/19/10
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,034	103	73-121
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Bromofluorobenzene (FID)		99	52-158
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

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### Total Extractable Hydrocarbons

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	05/17/10
Matrix:	Water	Received:	05/17/10
Units:	ug/L	Prepared:	05/18/10
Diln Fac:	1.000	Analyzed:	05/19/10
Batch#:	163132		

Type: SAMPLE Lab ID: 220181-001

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	102	39-150

Type: BLANK Lab ID: QC545002

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	101	39-150

ND= Not Detected

RL= Reporting Limit

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**Batch QC Report**
**Total Extractable Hydrocarbons**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	163132
Units:	ug/L	Prepared:	05/18/10
Diln Fac:	1.000	Analyzed:	05/19/10

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC545003

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,912	76	34-144

Surrogate	%REC	Limits
o-Terphenyl	81	39-150

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC545004

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,859	74	34-144	3	48

Surrogate	%REC	Limits
o-Terphenyl	78	39-150

RPD= Relative Percent Difference

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11.0

### Chemical Oxygen Demand

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	163264
Field ID:	EFFLUENT	Sampled:	05/17/10 11:50
Matrix:	Water	Received:	05/17/10
Units:	mg/L	Prepared:	05/21/10 09:45
Diln Fac:	1.000	Analyzed:	05/21/10 11:45

Type	Lab ID	Result	RL
SAMPLE	220181-001	ND	10
BLANK	QC545543	ND	10

ND= Not Detected

RL= Reporting Limit

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## Batch QC Report

## Chemical Oxygen Demand

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	163264
Field ID:	ZZZZZZZZZZ	Sampled:	05/11/10 12:25
MSS Lab ID:	220060-007	Received:	05/11/10
Matrix:	Water	Prepared:	05/21/10 09:45
Units:	mg/L	Analyzed:	05/21/10 11:45
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC545544		75.00	76.07	101	90-110		
MS	QC545545	21.73	150.0	165.2	96	41-150		
MSD	QC545546		150.0	169.5	99	41-150	3	29

RPD= Relative Percent Difference

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**pH**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	163107
Lab ID:	220181-001	Sampled:	05/17/10 11:50
Matrix:	Water	Received:	05/17/10
Units:	SU	Analyzed:	05/17/10 18:45

Result	RL
6.7	1.0

## Batch QC Report

**pH**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Units:	SU
Field ID:	EFFLUENT	Diln Fac:	1.000
Type:	SDUP	Batch#:	163107
MSS Lab ID:	220181-001	Sampled:	05/17/10 11:50
Lab ID:	QC544895	Received:	05/17/10
Matrix:	Water	Analyzed:	05/17/10 18:45

MSS	Result	Result	RL	RPD	Lim
	6.650	6.660	1.000	0	1

RL= Reporting Limit

RPD= Relative Percent Difference

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### Total Suspended Solids (TSS)

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	163128
Field ID:	EFFLUENT	Sampled:	05/17/10
Matrix:	Water	Received:	05/17/10
Units:	mg/L	Analyzed:	05/18/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	220181-001	8	5
BLANK	QC544986	ND	5

ND= Not Detected

RL= Reporting Limit

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## Batch QC Report

**Total Suspended Solids (TSS)**

Lab #:	220181	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	163128
MSS Lab ID:	220075-001	Sampled:	05/12/10
Matrix:	Water	Received:	05/12/10
Units:	mg/L	Analyzed:	05/18/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC544987		50.00	53.00	106	87-110		
MS	QC544988	18.00	50.00	61.00	86	34-152		
MSD	QC544989		50.00	63.00	90	34-152	3	5

RPD= Relative Percent Difference

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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 220766  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2553  
Location : 15101 Freedom Ave. San Leandro  
Level : II

Sample ID  
EFFLUENT

Lab ID  
220766-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Troy Baker  
Project Manager

Date: 06/23/2010

NELAP # 01107CA

## CASE NARRATIVE

Laboratory number: 220766  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 06/16/10  
Samples Received: 06/16/10

This data package contains sample and QC results for one water sample, requested for the above referenced project on 06/16/10. The sample was received cold and intact.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

No analytical problems were encountered.

**Total Suspended Solids (TSS) (SM2540D):**

No analytical problems were encountered.

**pH (EPA 9040C):**

No analytical problems were encountered.

**Chemical Oxygen Demand (SM5220D):**

No analytical problems were encountered.

# **CHAIN OF CUSTODY**

Page 1 of 1

**Curtis & Tompkins, Ltd**

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

Project No: 2553

**LOGIN #** *1010*

Sampler: MSUD - Sepehr

**Report To: Joyce Bobek**

**Project Name:** 15101 Freedom Ave, San Leandro Company : **SOMA Environmental**

**Turnaround Time: Standard**      **Telephone:** 925-734-6400

**Fax:** 925-734-6401

**Notes: EDE OUTPUT REQUIRED**

**RELINQUISHED BY:**

RECEIVED BY

a  
~~6/16/10~~

12,30 DATE/TIME

6/16/10 12:30

— 1 —

**DATE/TIME**

DATE/TIME

—  
—

**DATE/TIME**

**DATE/TIME**

[View Details](#)

**DATE/TIME**

**DATE/TIME**

## **COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 720766 Date Received 6-16-10 Number of coolers 1  
Client SOMA ENV. Project 15101 FREEDOM AVE SAN. LEE.

Date Opened 6-16-10 By (print) S. EVANS (sign) .  
Date Logged in J By (print) J (sign) J

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ...  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO  A

3. Were custody papers dry and intact when received?  YES NO

4. Were custody papers filled out properly (ink, signed, etc)?  YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form)  YES NO

6. Indicate the packing in cooler: (if other, describe)

Bubble Wrap       Foam blocks       Bags       None  
 Cloth material       Cardboard       Styrofoam       Paper towels

- #### 7. Temperature documentation:

Type of ice used:  Wet       Blue/Gel       None      Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO  
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES  NO

10. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES  NO

11. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES  NO

12. Do the sample labels agree with custody papers? \_\_\_\_\_ YES  NO

13. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES  NO

14. Are the samples appropriately preserved? \_\_\_\_\_ YES  NO N/A

15. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES  NO N/A

16. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES  NO  
 If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

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SOP Volume: Client Services  
Section: 1.1.2  
Page: 1 of 1

Rev. 6 Number 1 of 3  
Effective: 23 July 2008

### **Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	164142
Matrix:	Water	Sampled:	06/16/10
Units:	ug/L	Received:	06/16/10
Diln Fac:	1.000	Analyzed:	06/17/10

Type: SAMPLE Lab ID: 220766-001

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	101	70-140	EPA 8015B
Bromofluorobenzene (PID)	107	54-134	EPA 8021B

Type: BLANK Lab ID: QC549059

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	91	70-140	EPA 8015B
Bromofluorobenzene (PID)	95	54-134	EPA 8021B

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC549060	Batch#:	164142
Matrix:	Water	Analyzed:	06/17/10
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	996.5	100	73-127

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	92	70-140



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 220766 Location: 15101 Freedom Ave. San Leandro  
Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
Project#: 2553  
Field ID: ZZZZZZZZZZ Batch#: 164142  
MSS Lab ID: 220760-002 Sampled: 06/15/10  
Matrix: Water Received: 06/16/10  
Units: ug/L Analyzed: 06/18/10  
Diln Fac: 1.000

Type: MS Lab ID: QC549061

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	24.75	2,000	1,750	86	68-120	EPA 8015B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Bromofluorobenzene (FID)	101	70-140	EPA 8015B
Bromofluorobenzene (PID)	113	54-134	EPA 8021B

Type: MSD Lab ID: QC549062

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	1,735	85	68-120	1	20	EPA 8015B

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>	<b>Analysis</b>
Bromofluorobenzene (FID)	94	70–140	EPA 8015B
Bromofluorobenzene (PID)	106	54–134	EPA 8021B

RPD= Relative Percent Difference

**Batch QC Report**
**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	164142
Units:	ug/L	Analyzed:	06/17/10
Diln Fac:	1.000		

Type: BS Lab ID: QC549063

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.082	91	70-122
Toluene	10.00	8.644	86	72-125
Ethylbenzene	10.00	8.947	89	72-126
m,p-Xylenes	10.00	8.918	89	73-126
o-Xylene	10.00	8.884	89	71-127

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	92	54-134

Type: BSD Lab ID: QC549064

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	10.46	105	70-122	14	33
Toluene	10.00	9.781	98	72-125	12	25
Ethylbenzene	10.00	9.875	99	72-126	10	26
m,p-Xylenes	10.00	9.922	99	73-126	11	25
o-Xylene	10.00	9.667	97	71-127	8	25

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	97	54-134

RPD= Relative Percent Difference

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6.0

### Total Extractable Hydrocarbons

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	06/16/10
Matrix:	Water	Received:	06/16/10
Units:	ug/L	Prepared:	06/17/10
Diln Fac:	1.000	Analyzed:	06/21/10
Batch#:	164145		

Type: SAMPLE Lab ID: 220766-001

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	101	60-129

Type: BLANK Lab ID: QC549073

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	120	60-129

ND= Not Detected

RL= Reporting Limit

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**Batch QC Report**
**Total Extractable Hydrocarbons**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	164145
Units:	ug/L	Prepared:	06/17/10
Diln Fac:	1.000	Analyzed:	06/22/10

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC549074

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,919	77	54-125

Surrogate	%REC	Limits
o-Terphenyl	90	60-129

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC549075

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,167	87	54-125	12	53

Surrogate	%REC	Limits
o-Terphenyl	102	60-129

RPD= Relative Percent Difference

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12.0

### Chemical Oxygen Demand

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	164231
Field ID:	EFFLUENT	Sampled:	06/16/10 11:45
Matrix:	Water	Received:	06/16/10
Units:	mg/L	Prepared:	06/21/10 12:30
Diln Fac:	1.000	Analyzed:	06/21/10 14:30

Type	Lab ID	Result	RL
SAMPLE	220766-001	17	10
BLANK	QC549415	ND	10

ND= Not Detected

RL= Reporting Limit

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7.0

## Batch QC Report

## Chemical Oxygen Demand

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	164231
Field ID:	ZZZZZZZZZZ	Sampled:	06/15/10 15:05
MSS Lab ID:	220762-001	Received:	06/16/10
Matrix:	Water	Prepared:	06/21/10 12:30
Units:	mg/L	Analyzed:	06/21/10 14:30
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC549416		75.00	80.01	107	90-110		
MS	QC549417	<10.00	150.0	168.0	112	67-130		
MSD	QC549418		150.0	155.5	104	67-130	8	20

RPD= Relative Percent Difference

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8.0

**pH**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	164131
Lab ID:	220766-001	Sampled:	06/16/10 11:45
Matrix:	Water	Received:	06/16/10
Units:	SU	Analyzed:	06/17/10 11:55

Result	RL
6.8	1.0

## Batch QC Report

**pH**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	EPA 9040C
Analyte:	pH	Units:	SU
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	164131
MSS Lab ID:	220771-020	Sampled:	06/16/10 15:00
Lab ID:	QC549025	Received:	06/16/10
Matrix:	Water	Analyzed:	06/17/10 11:55

MSS	Result	Result	RL	RPD	Lim
	8.210	8.180	1.000	0	20

RL= Reporting Limit

RPD= Relative Percent Difference

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16.0

### Total Suspended Solids (TSS)

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	164171
Field ID:	EFFLUENT	Sampled:	06/16/10
Matrix:	Water	Received:	06/16/10
Units:	mg/L	Analyzed:	06/18/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	220766-001	9	5
BLANK	QC549159	ND	5

ND= Not Detected

RL= Reporting Limit

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13.0

## Batch QC Report

**Total Suspended Solids (TSS)**

Lab #:	220766	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	164171
MSS Lab ID:	220782-001	Sampled:	06/16/10
Matrix:	Water	Received:	06/16/10
Units:	mg/L	Analyzed:	06/18/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC549160		50.00	51.00	102	80-120		
MS	QC549161	16.00	50.00	57.00	82	53-132		
MSD	QC549162		50.00	58.00	84	53-132	2	38

RPD= Relative Percent Difference

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14.0

# **Appendix E**

## **Second Quarter 2010 MPE Events Field Data Sheets**



ADDRESS: 15101 Freedom Avenue, San Leandro, CA.  
PROJECT #: 2555

MTS OPERATIONAL DATA												
DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	EFFLUEN T FLOW (IN-H <sub>2</sub> O)	EFFLUENT TEMPERATUR E (F)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
6/7/2010	900	start up										0
	1030	start extraction at MPE-1 and MW-5										0
	1100	1511	173	23.6	25.8	57	0	57	0.08		615	100
	1200	1509	184	23.4	25.6	60	0	60	0.08		660	300
	1300	1515	179	23.4	25.6	60	0	60	0.08		693	400
	1330	propane filled										500
	1400	1503	193	23.2	25.6	60	0	60	0.08		672	600
	1500	1507	181	23	25.4	63	0	63	0.08		666	800
	1600	1505	184	23	25.4	63	0	63	0.08		705	1,000
6/8/2010	800	1505	174	22.6	25.4	63	0	63	0.08	136	IN 665: EFF 3	3,700
	900	1500	174	22.8	25.4	63	0	63	0.08	132	674	3,900
	930	diesel refueled										3,950
	1000	1508	173	22.8	25.2	66	0	66	0.08	132	677	4,000
	1100	1498	174	22.8	25.2	66	0	66	0.08	134	678	4,200
	1200	1515	177	22.8	25.2	66	0	66	0.08	136	669	4,300
	1300	1498	179	22.8	25.2	66	0	66	0.08	140	663	4,500
	1315	propane filled										4,550
	1430	1498	174	22.8	25.2	66	0	66	0.08	138	647	4,700



ADDRESS: 15101 Freedom Avenue, San Leandro, CA.  
PROJECT #: 2555

MTS OPERATIONAL DATA												
DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	EFFLUENT FLOW (IN-H <sub>2</sub> O)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1530	1498	176	22.8	25.2	66	0	66	0.08	138	648	4,900
	1630	1498	178	22.8	25.2	66	0	66	0.08	138	639	5,100
6/9/2010	800	1500	182	22.6	25.2	66	0	66	0.08	144	620	7,500
	1000	1510	182	22.6	25.2	66	0	66	0.08	144		7,800
	1100	1514	183	22.6	25.2	66	0	66	0.08	140		7,900
	1200	1501	185	22.8	25.2	66	0	66	0.08	142		8,100
	1300	1510	184	22.8	25.2	66	0	66	0.08	142	767	8,200
	1400	1502	189	22.8	25.2	66	0	66	0.08	144	774	8,400
	1500	1500	186	22.6	25.2	66	0	66	0.08	144	730	8,500
	1600	1506	185	22.4	25.2	66	0	66	0.10	148	690	8,700
	1700	1498	185	22.6	25.2	66	0	66	0.10	144	699	8,800
6/10/2010	800	1500	187	22.6	25.2	66	0	66	0.08	144	696	11,100
	900	1520	187	22.6	25.2	66	0	66	0.10	148	656	11,200
	1000	1500	183	22.4	25.2	66	0	66	0.10	144	694	11,300
	1100	1499	189	22.4	25	70	0	70	0.10	146	658	11,500
	1200	1512	187	22.4	25.2	66	0	66	0.10	146	667	11,700
	1300	1498	191	22.4	25.2	66	0	66	0.10	146	692	11,800
	1400	1498	194	22.4	25	70	0	70	0.10	152	663	12,000
	1430	propane filled										12,100
	1800	1497	190	22.4	25	70	0	70	0.10	154	639	12,500



ADDRESS: 15101 Freedom Avenue, San Leandro, CA.  
PROJECT #: 2555

MTS OPERATIONAL DATA												
DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	EFFLUENT FLOW (IN-H <sub>2</sub> O)	EFFLUENT TEMPERATURE (F)	INFILUENT CONCENTRATION (PPMV)	WATER TOTALIZER
6/11/2010	830	1503	184	22.4	25.2	66	0	66	0.08	142	687	14,700
	930	1503	190	22.4	25.2	66	0	66	0.08	148	686	14,900
	1030	1500	192	22.4	25.2	66	0	66	0.08	150	667	15,000
	1130	1497	192	22.4	25	70	0	70	0.08	150	662	15,100
	1230	1502	195	22.4	25	70	0	70	0.10	152	647	15,300
	1330	1499	197	22.4	25	70	0	70	0.10	152	669	15,400
	1430	1502	197	22.4	25	70	0	70	0.08	154	667	15,600
		End Extraction										