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**ENVIRONMENTAL ENGINEERING, INC.**  
8620 Owens Drive, Suite A • Pleasanton, CA 94588  
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April 7, 2010

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

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

Dear Mr. Khatri:

SOMA's "First 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", written over a horizontal line.

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist



cc: Mr. Mohammad Pazdel w/report enclosure

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

**15101 Freedom Avenue  
San Leandro, California**

**April 7, 2010**

**Project 2551/2555**

**Prepared for**

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




**ENVIRONMENTAL ENGINEERING, INC.**

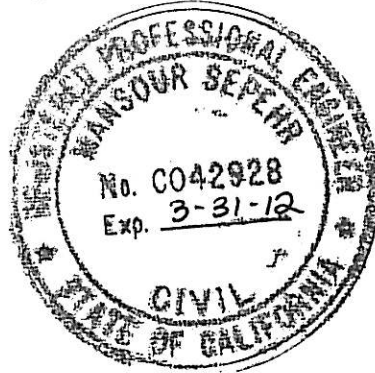
6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 [www.somaenv.com](http://www.somaenv.com)

## 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 First Quarter 2010 groundwater monitoring event.



Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



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# 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 used to belong to Mr. Mohammad Pazdel. In late 2009, the property was sold to Mr. Farrokh Hosseinyoun and in early 2010 it was sold to Mr. Mo Mashhoon. Under the new management the site is currently operation with the business name of "Freedom Food and Gas".

This report summarizes results of the First Quarter 2010 groundwater monitoring event conducted on March 16 and 17, 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 First Quarter 2010, which includes operation of a groundwater extraction and treatment system and two multi-phase extraction (MPE) events.

## 1.1 Field Activities

On March 16 and 17, 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 March 16, 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 newly installed 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 March 16 and 17, 2010, additional field measurements and grab groundwater samples were collected from all monitoring and extraction 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 wells.

## 1.2 Laboratory Analysis

Curtis & Tompkins, Ltd., a California state-certified laboratory, analyzed groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX), methyl tertiary-butyl ether (MtBE), 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 March 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 12.56 feet in MW-7 to 22.32 feet in MW-1. Corresponding groundwater elevations ranged from 31.01 feet in MW-6 to 32.30 feet in MW-2.

Figure 3 displays the contour map of groundwater elevations. Groundwater flows southwesterly across the site at a gradient of 0.022 feet/feet. A significant capture zone is centered on EX-2. The groundwater flow direction has remained consistent and gradient has increased since the previous monitoring event (Fourth Quarter 2009).

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the First WBZ ranged from 0.51 mg/L in MW-2 to 2.30 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 480 µg/L in MW-2 to 31,000 µg/L in MW-6. The TPH-g concentration in MW-6 increased significantly since the previous monitoring event (Fourth Quarter 2009) and was significantly higher than in all other First WBZ wells.



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) and centered on off-site well MW-6. Since the previous monitoring event (Fourth Quarter 2009), detectable TPH-g concentrations have decreased in MW-1, MW-2, MW-3, MW-5, MW-7, and EX-1 and increased in MW-4, MW-6, and EX-2.

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, although they did increase in MW-2 since the previous monitoring event (Fourth Quarter 2009).
- In MW-1, toluene was below the laboratory-reporting limit.
- The highest benzene and ethyl benzene concentrations were detected in MW-3, at 970 µg/L and 1,100 µg/L, respectively.
- The highest toluene and total xylene concentrations were detected in EX-2 and MW-6, respectively, at 360 µg/L, and 4,200 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 and in vicinity of EX-2. Since the previous monitoring event (Fourth Quarter 2009), benzene concentrations have decreased in MW-1, MW-3, MW-4, and MW-5 and increased in MW-6, EX-1, and EX-2. Benzene impact appears to be increasing in off-site wells MW-6, EX-1, and EX-2, but was non-detectable in off-site well MW-7.

Levels of MtBE below the laboratory-reporting limit were observed at MW-2. Detectable MtBE concentrations ranged from 1.70 µg/L at MW-1 to 210 µg/L at 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. High MtBE concentrations were also observed in the vicinity of the dispenser islands and former USTs, around MW-3 and MW-4 and in the vicinity of off-site well MW-7. Since the previous monitoring event (Fourth Quarter 2009) MtBE concentrations have decreased at MW-1, MW-3, MW-4, MW-5, and MW-7 and increased significantly in MW-6, EX-1, and EX-2.

As shown in Table 1, since the previous monitoring event (Fourth Quarter 2009), TPH-g, BTEX and MtBE have decreased in the more impacted well MW-3, but increased in off-site well 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-1, 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-4, MW-5, MW-7 and EX-1 in concentrations ranging from 11 µg/L at MW-7 to 1,900 µg/L at 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 18 µg/L and 2.4 µg/L, respectively and was below the laboratory-reporting limit in remaining wells.
- Methyl tertiary-amyl ether (TAME) was detected in MW-7 and EX-1 at 14 µg/L and 27 µg/L, respectively 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 21.02 feet in MW-4D to 22.60 feet in MW-1D. Corresponding groundwater elevations ranged from 31.82 feet in MW-1D to 32.10 feet in MW-4D.

Figure 9 displays the contour map of groundwater elevations in the Second WBZ. Groundwater flows north northwesterly at a gradient of 0.0019 feet/feet. The groundwater flow direction changed direction from southwesterly and gradient has increased since the previous monitoring event (Fourth Quarter 2009).

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the Second WBZ ranged from 0.57 mg/L in MW-1D to 1.40 mg/L in MW-4D. ORP showed negative potential in all wells. Negative redox potentials indicate that contaminants in the groundwater are conducive to anaerobic biodegradation.

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 was below the laboratory detection limit in all wells. Since the previous monitoring event (Fourth Quarter 2009), TPH-g has decreased in Second WBZ wells.

BTEX was below laboratory-reporting limits in all wells. Ethylbenzene concentrations decreased in MW-1D and MW-4D. Total xylenes concentrations decreased in all Second WBZ wells.

MtBE was below the laboratory-reporting limit in MW-1D, and was detected in MW-3D and MW-4D at 7.1 µg/L and 0.65 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. INSTALLATION AND 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. Groundwater treatment system installation was successfully completed and fully treated groundwater is discharging to the OLSD sewer as of 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 475,245 gallons of groundwater have been treated and discharged at the site (as of March 15, 2010).

#### **4. MULTI-PHASE EXTRACTION EVENTS**

During First Quarter 2010, SOMA performed two three-day MPE events, February 15-17 and March 29-31, 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 rates are as follows: February 2010 event, 17 lbs at 9 lbs/day and March 2010 event, 11 lbs at 5 lbs/day.

The overall estimated total mass of VOCs extracted by MPE is 546 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, and 11 pounds during the March 2010 event. Figure 12 shows the cumulative mass of VOCs removed in pounds.

## 5. CONCLUSIONS AND RECOMMENDATIONS

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

- Groundwater flow direction has remained southwesterly in the First WBZ, but has become north northwesterly 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. However, following five MPE events from October 2009 to March 2010, all contaminant concentrations decreased in MW-3.
- 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 (Fourth Quarter 2009), TPH-g concentrations in off-site well MW-6 and extraction well EX-2 continued to increase while they decreased in MW-7; off-site wells MW-8 and MW-9 were decommissioned in November 2009.
- In the Second WBZ, MtBE was detected in MW-3D and MW-4D and TAME in MW-3D at low levels, and concentrations have decreased since Fourth Quarter 2009. All other contaminants were below laboratory-reporting limits in Second WBZ wells.
- MPE events conducted since November 2007 have removed an estimated 546 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 the recently installed 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 February and March 2010 MPE events, even increasing slightly after the start of the second day of extraction. 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

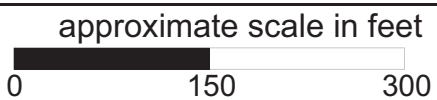
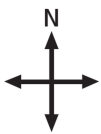
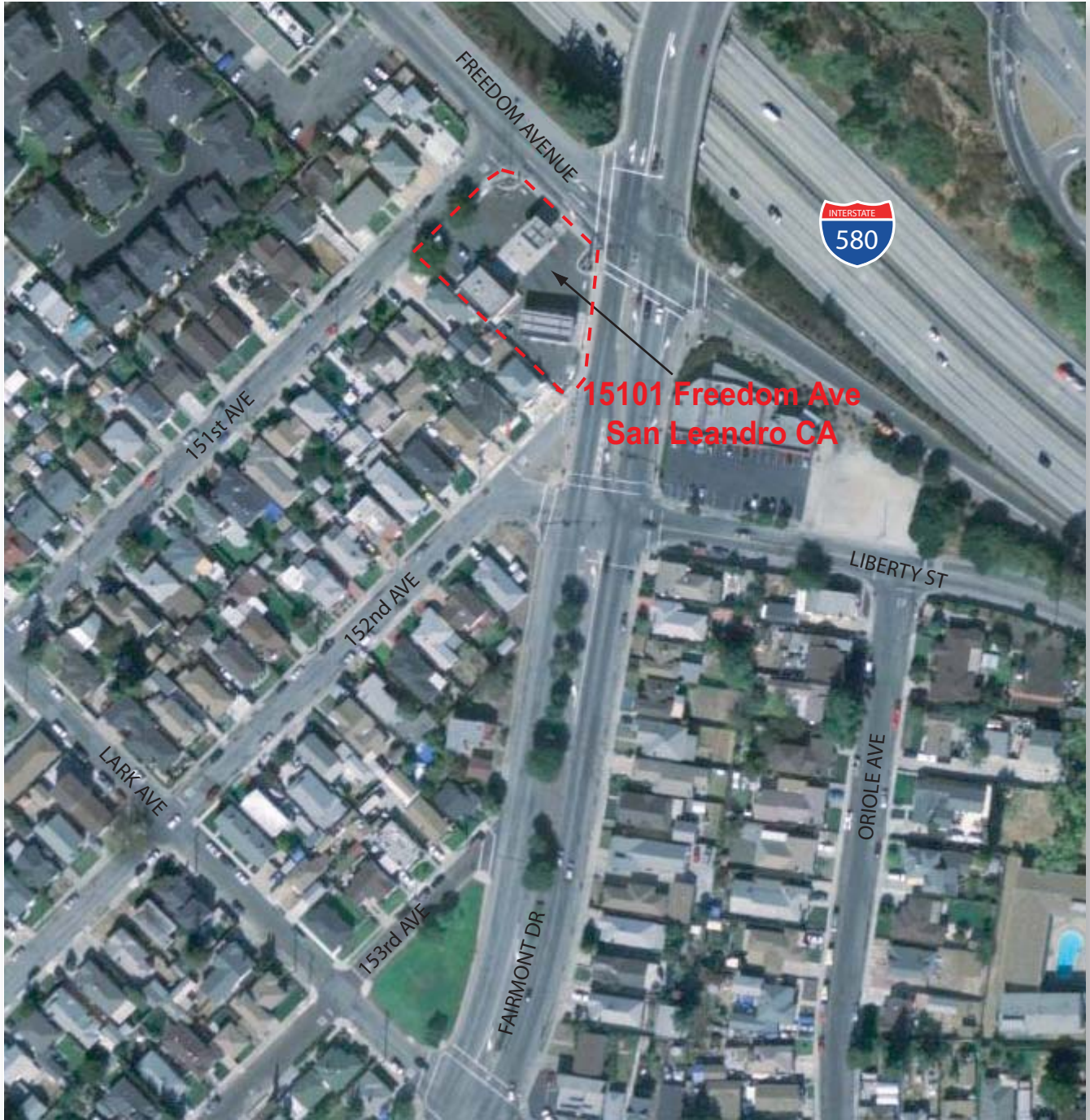
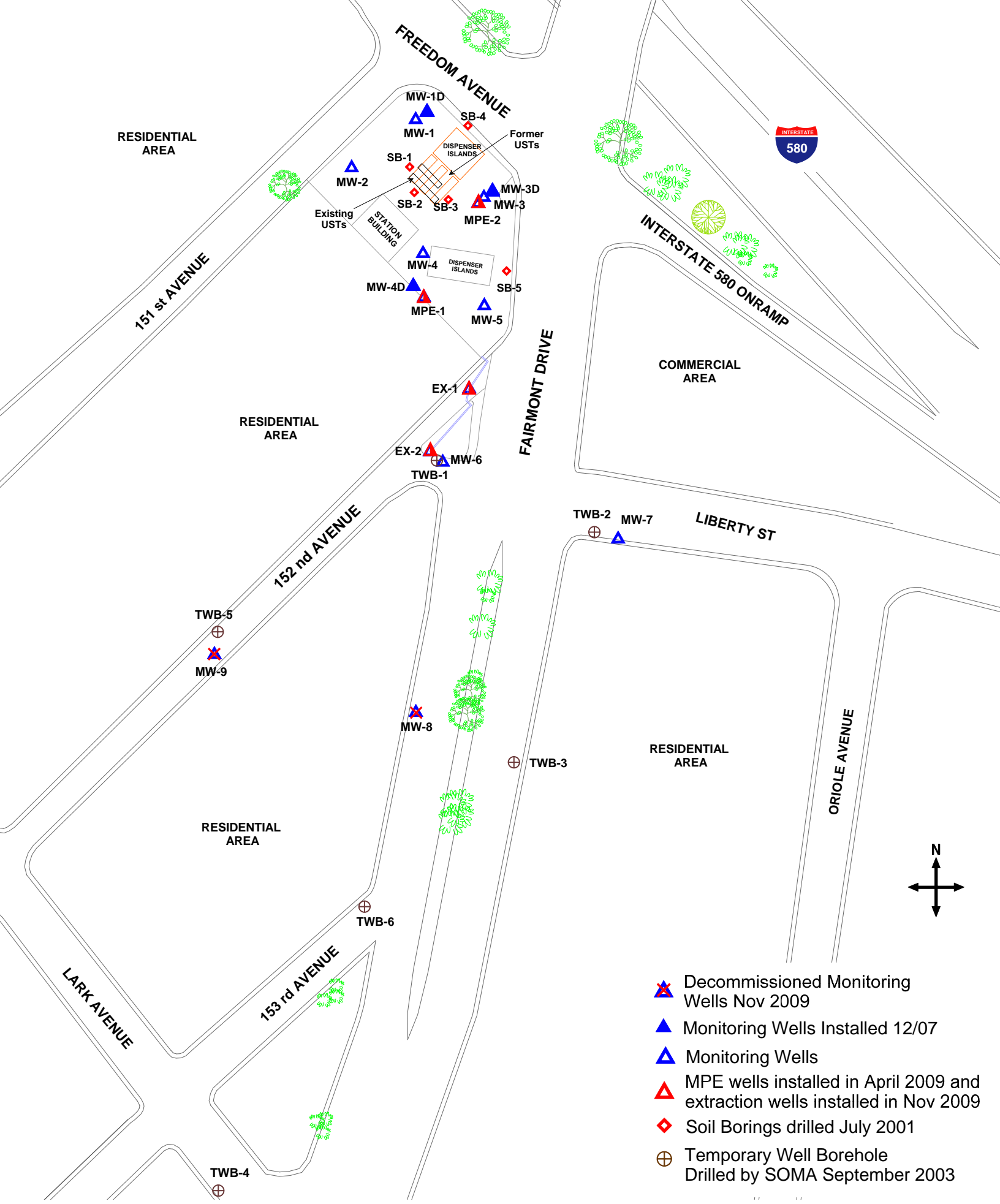


Figure 1: Site vicinity map.

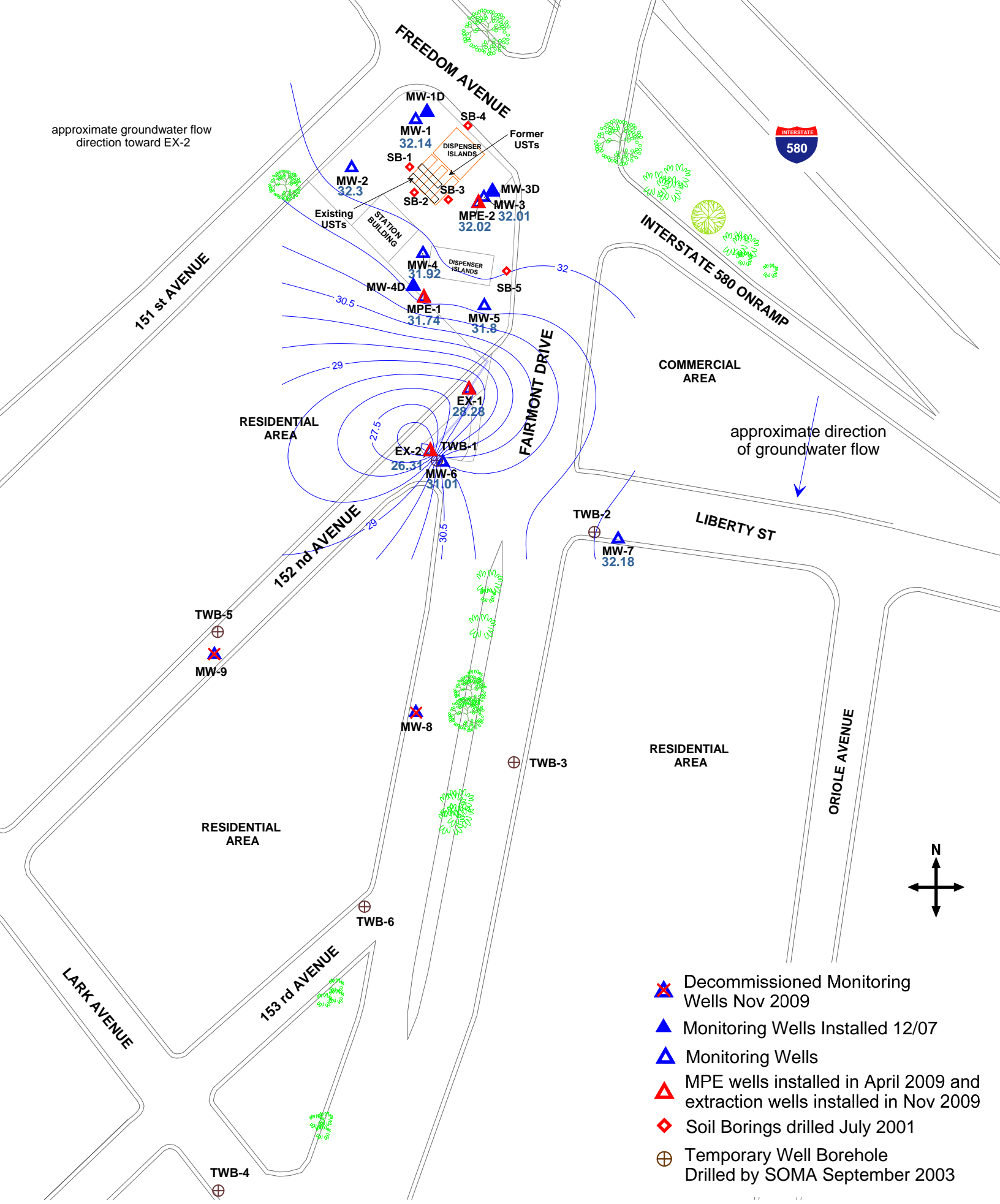




approximate scale in feet  
 0 50 100

Figure 2: Site map showing locations of groundwater monitoring wells and soil borings.





approximate scale in feet

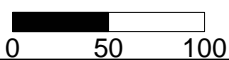
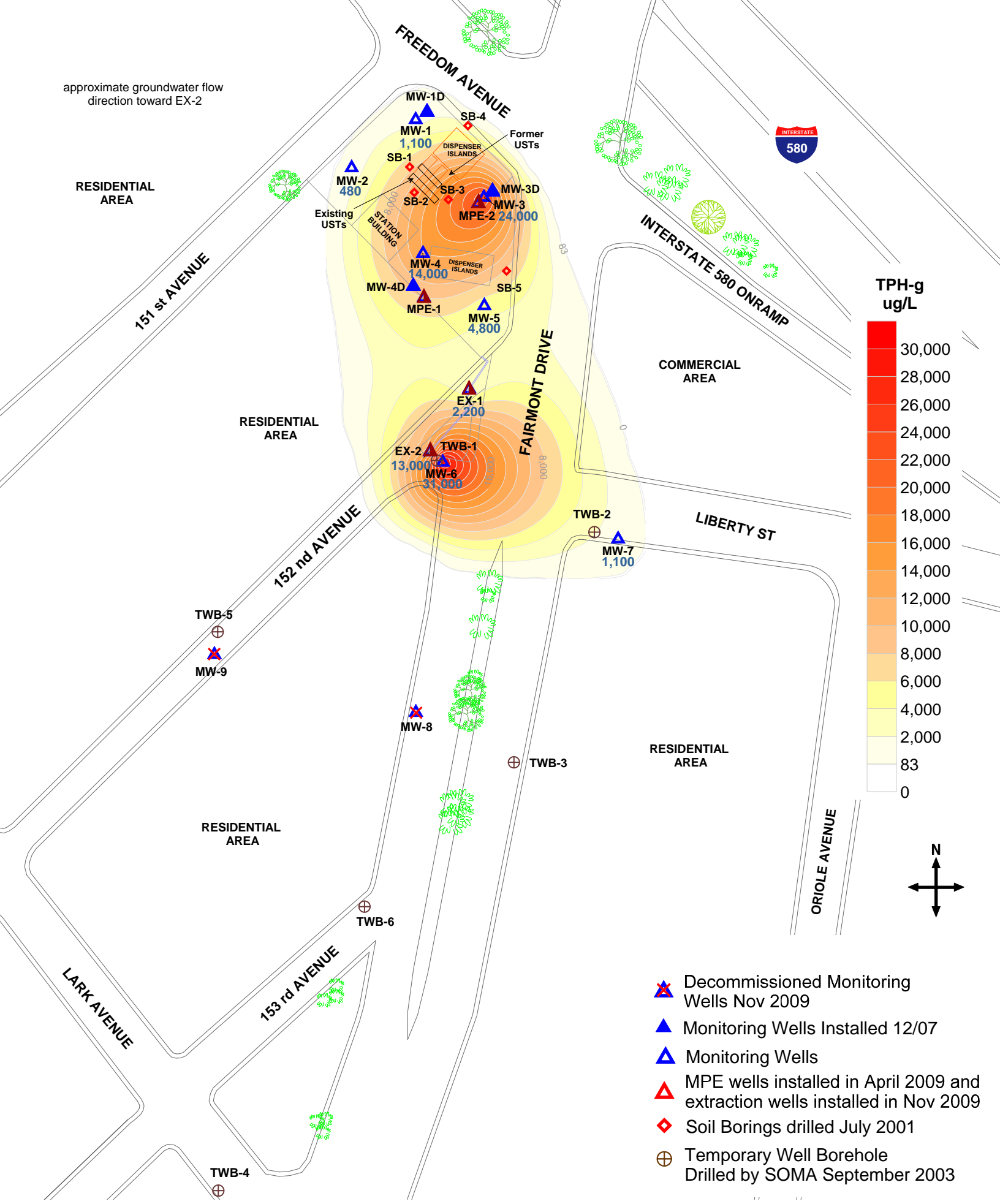


Figure 3: Groundwater elevation contour map in feet, First WBZ  
March 16, 2010



approximate scale in feet

0 50 100

Figure 4: Contour map of TPH-g concentrations in groundwater, First WBZ March 16 and 17, 2010



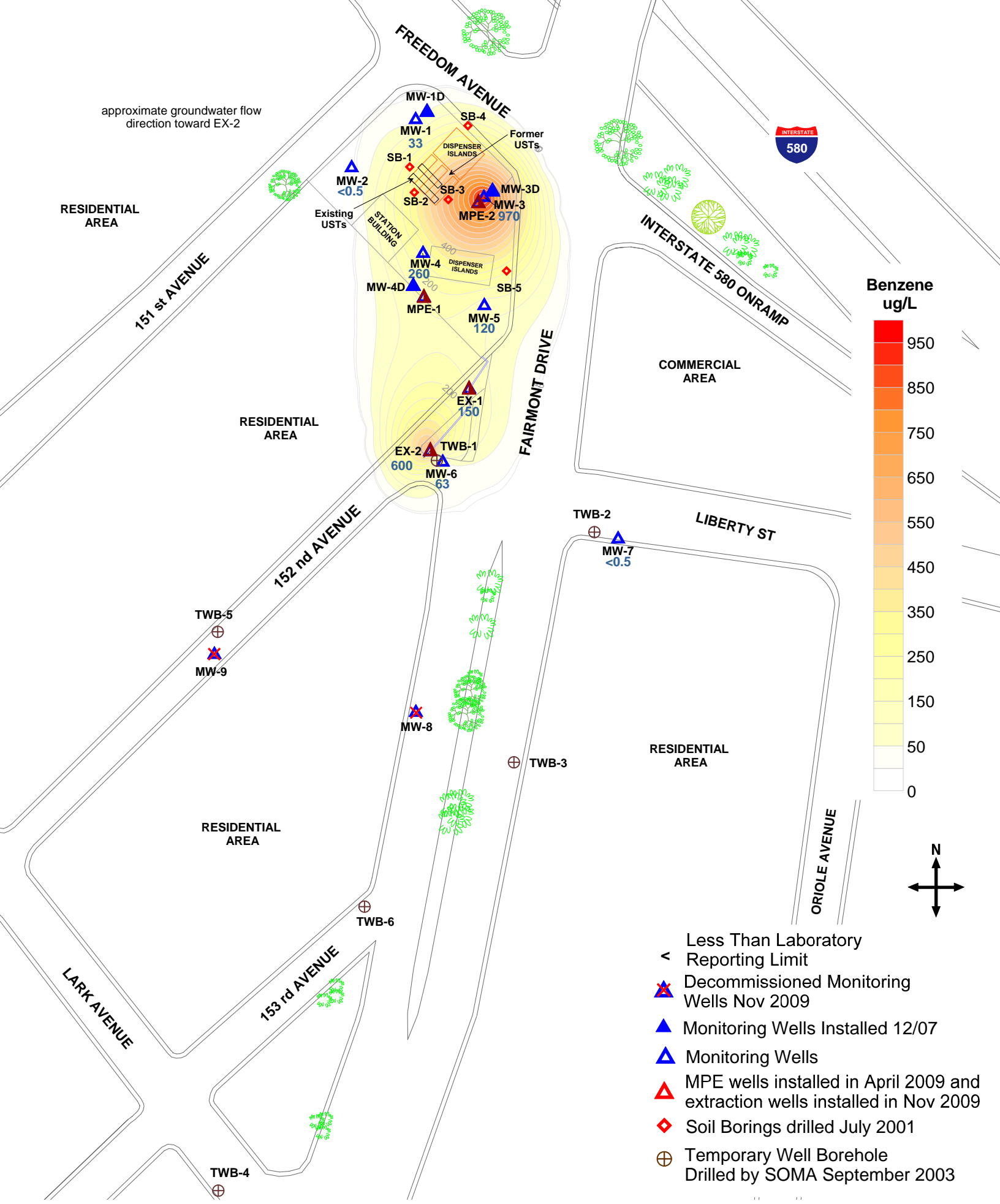
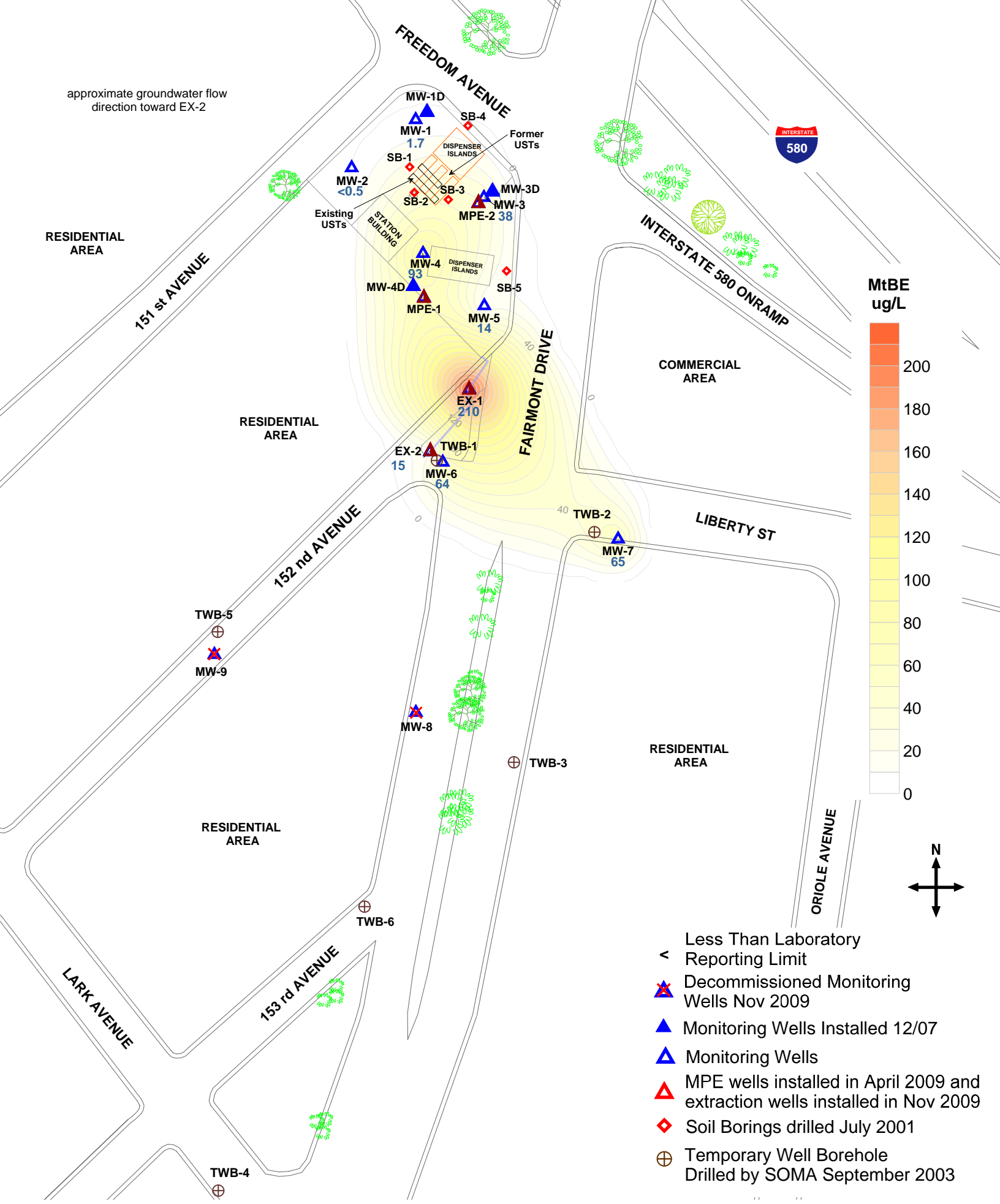


Figure 5: Contour map of benzene concentrations in groundwater, First WBZ  
March 16 and 17, 2010



approximate groundwater flow direction toward EX-2

RESIDENTIAL AREA

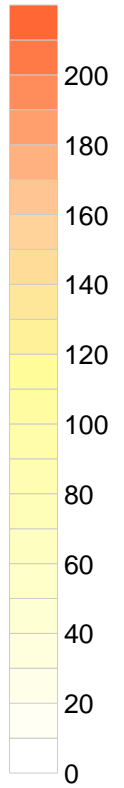
151 st AVENUE

FREEDOM AVENUE



INTERSTATE 580 ONRAMP

MtBE ug/L



RESIDENTIAL AREA

152 nd AVENUE

FAIRMONT DRIVE

COMMERCIAL AREA

LIBERTY ST

TWB-5  
MW-9

MW-8

TWB-3

RESIDENTIAL AREA

RESIDENTIAL AREA

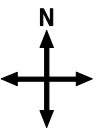
153 rd AVENUE

TWB-6

LARK AVENUE

TWB-4

- Less Than Laboratory Reporting Limit
- < Reporting Limit
- Decommissioned Monitoring Wells Nov 2009
- Monitoring Wells Installed 12/07
- Monitoring Wells
- MPE wells installed in April 2009 and extraction wells installed in Nov 2009
- Soil Borings drilled July 2001
- Temporary Well Borehole Drilled by SOMA September 2003



approximate scale in feet

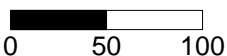
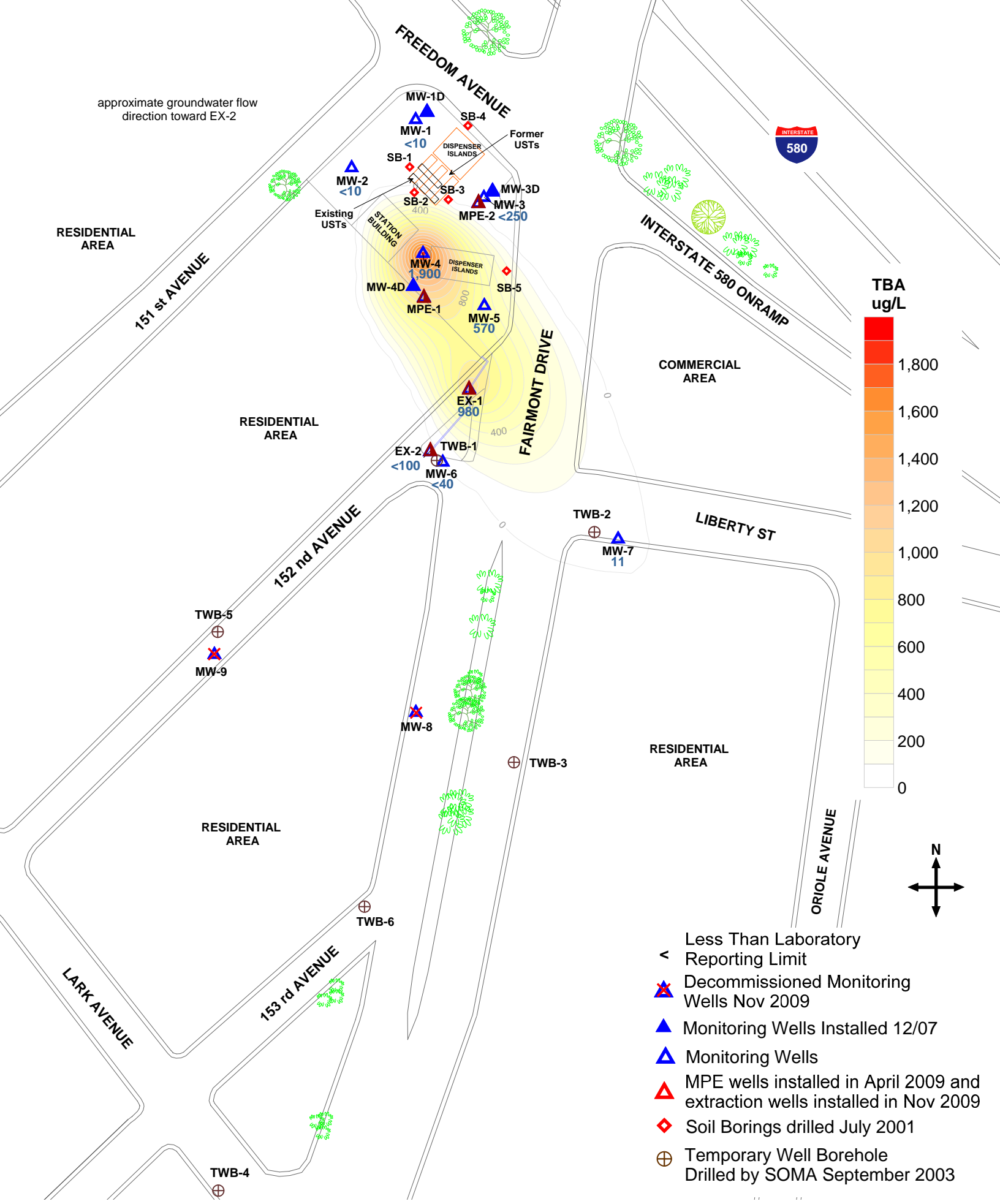


Figure 6: Contour map of MtBE concentrations in groundwater (EPA Method 8260B), First WBZ. March 16 and 17, 2010





approximate groundwater flow direction toward EX-2

RESIDENTIAL AREA

151 st AVENUE

FREEDOM AVENUE



INTERSTATE 580 ONRAMP

MW-2 <10

MW-1 <10

SB-4

MW-3D

MW-3

SB-3

SB-2

SB-1

MPE-2 <250

Existing USTs

STATION BUILDING

MW-4 1,900

MW-4D

MPE-1

MW-5 570

SB-5

EX-1 980

TWB-1

EX-2 <100

MW-6 <40

FAIRMONT DRIVE

COMMERCIAL AREA

RESIDENTIAL AREA

152 nd AVENUE

LIBERTY ST

TWB-5

MW-9

MW-8

TWB-2

MW-7 11

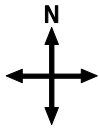
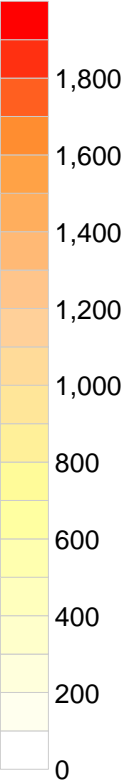
TWB-3

RESIDENTIAL AREA

RESIDENTIAL AREA

ORIOLE AVENUE

TBA ug/L



- Less Than Laboratory Reporting Limit
- < Reporting Limit
- Decommissioned Monitoring Wells Nov 2009
- Monitoring Wells Installed 12/07
- Monitoring Wells
- MPE wells installed in April 2009 and extraction wells installed in Nov 2009
- Soil Borings drilled July 2001
- Temporary Well Borehole Drilled by SOMA September 2003

approximate scale in feet

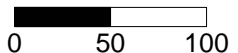


Figure 7: Contour map of TBA concentrations in groundwater, First WBZ March 16 and 17, 2010



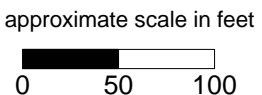
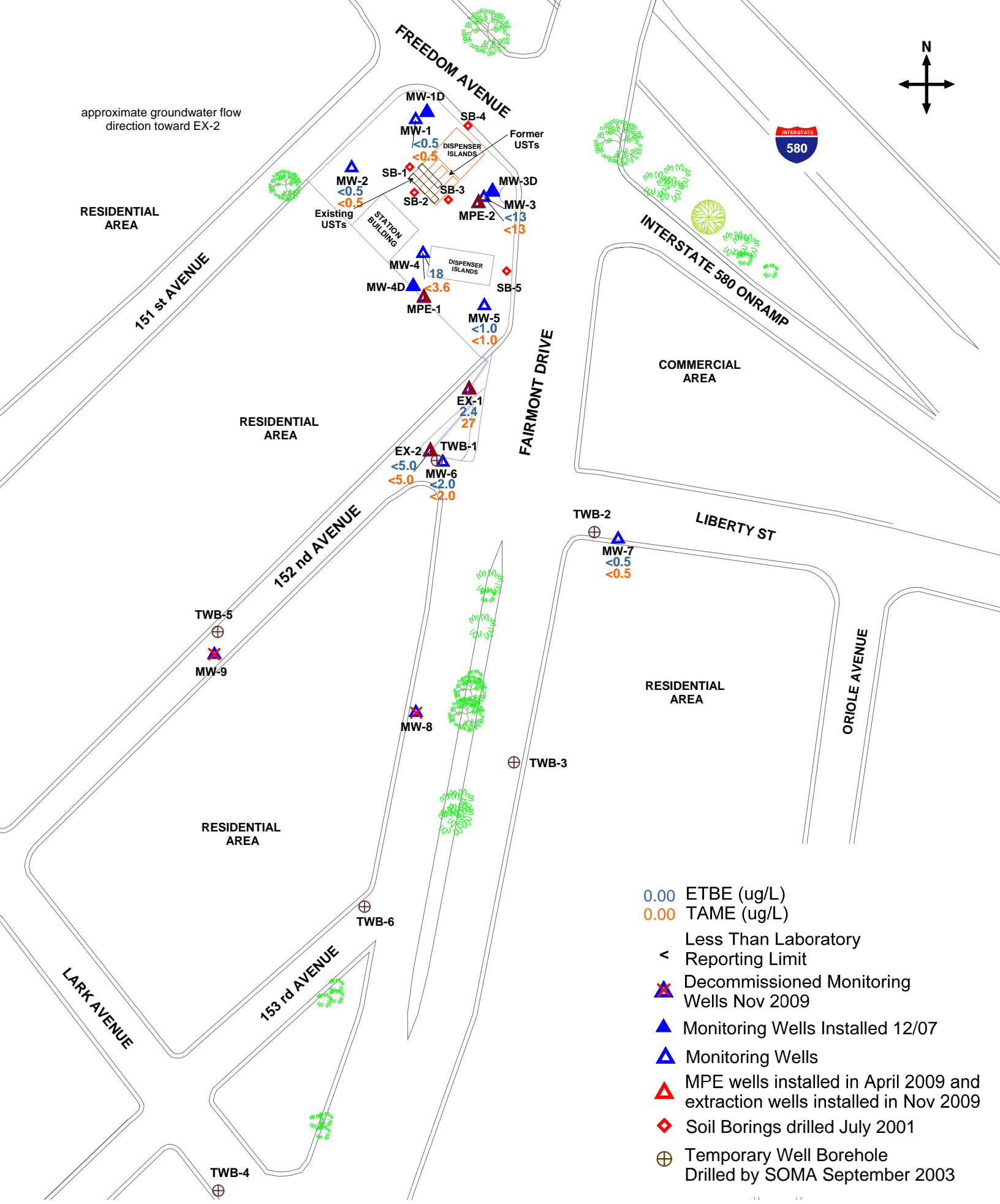


Figure 8: Map showing concentrations of ETBE and TAME in First WBZ  
March 16 and 17, 2010



- 0.00 ETBE (ug/L)
- 0.00 TAME (ug/L)
- < Less Than Laboratory Reporting Limit
- Decommissioned Monitoring Wells Nov 2009
- Monitoring Wells Installed 12/07
- Monitoring Wells
- MPE wells installed in April 2009 and extraction wells installed in Nov 2009
- Soil Borings drilled July 2001
- Temporary Well Borehole Drilled by SOMA September 2003

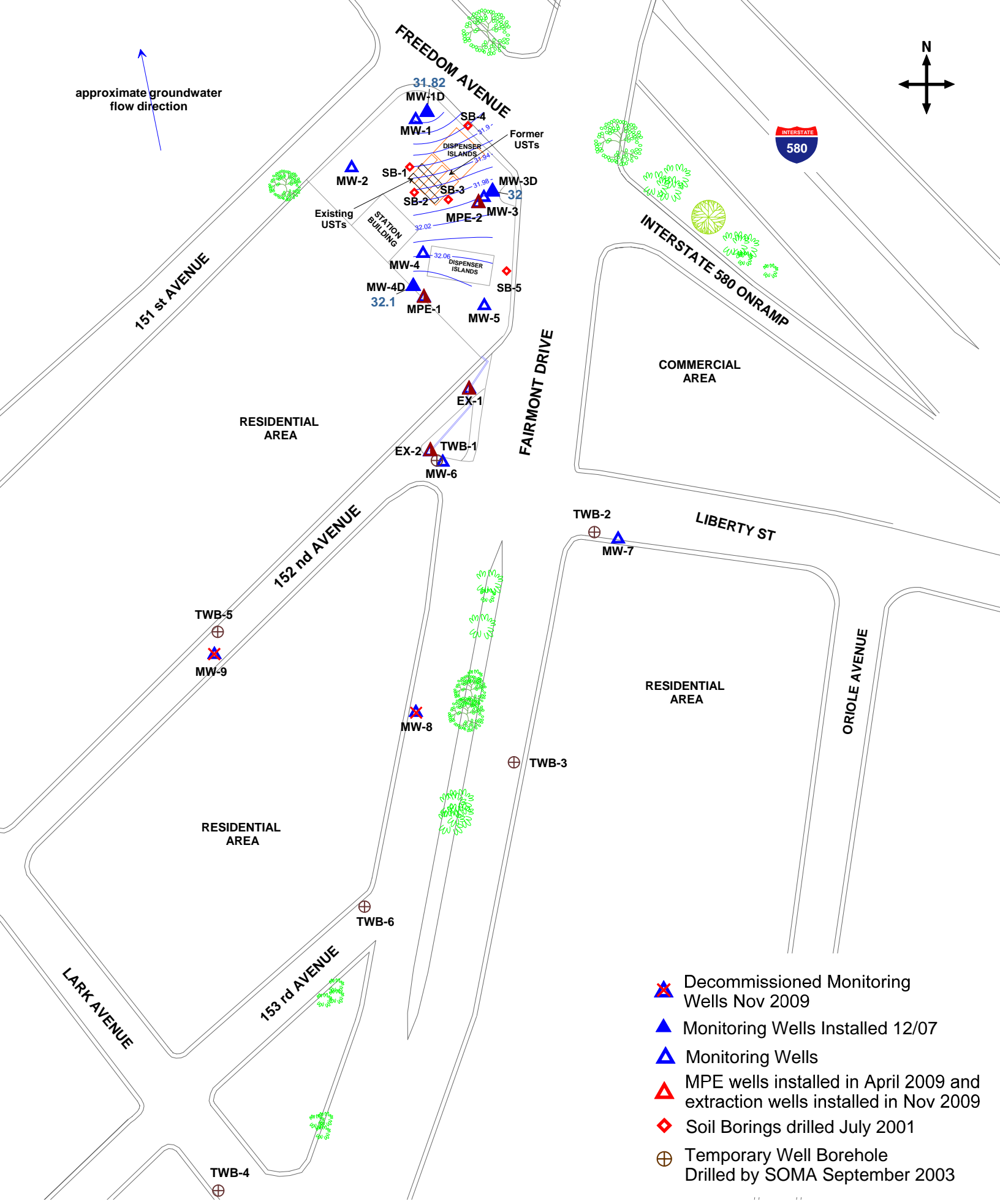


Figure 9: Groundwater elevation contour map in feet, Second WBZ  
March 16 and 17, 2010



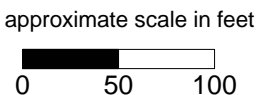
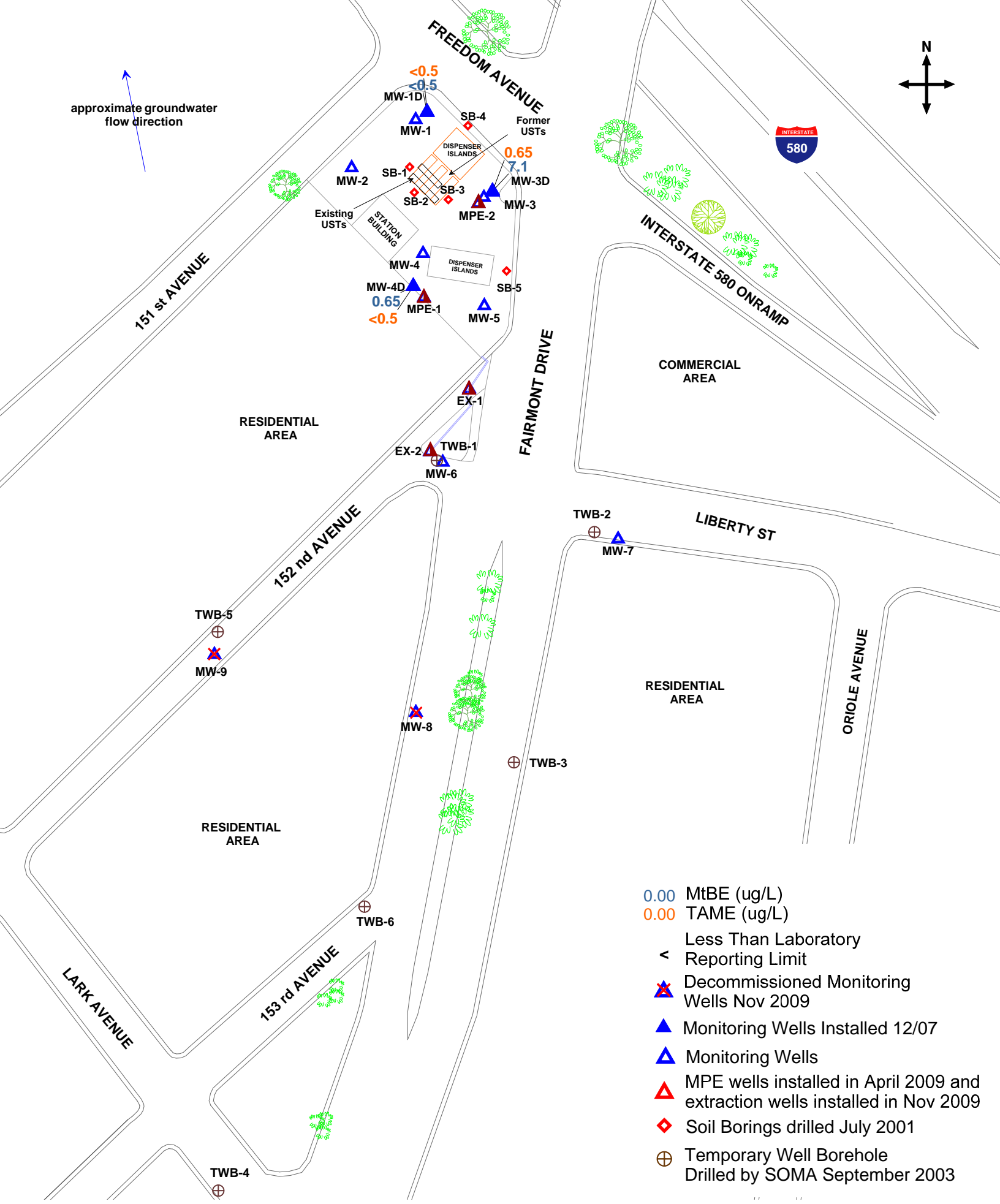
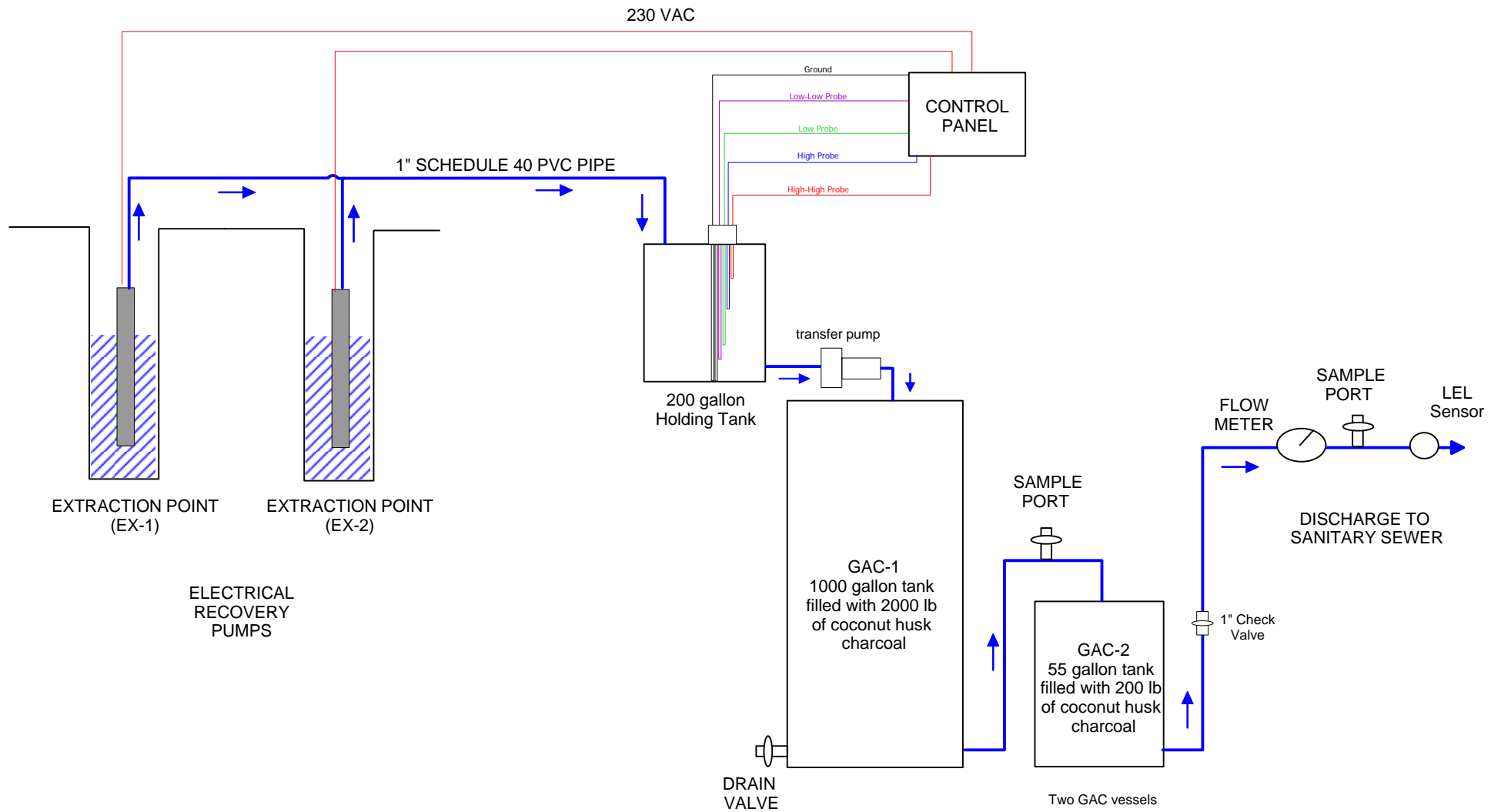


Figure 10: Map showing concentrations of MtBE and TAME, Second WBZ. March 16 and 17, 2010





Notes: S level control sensors in holding tank  
(ground, 1-high-high probe, 1-low-low probe,  
1-high probe, 1-low probe)

Figure 11: Schematic diagram of groundwater remediation system

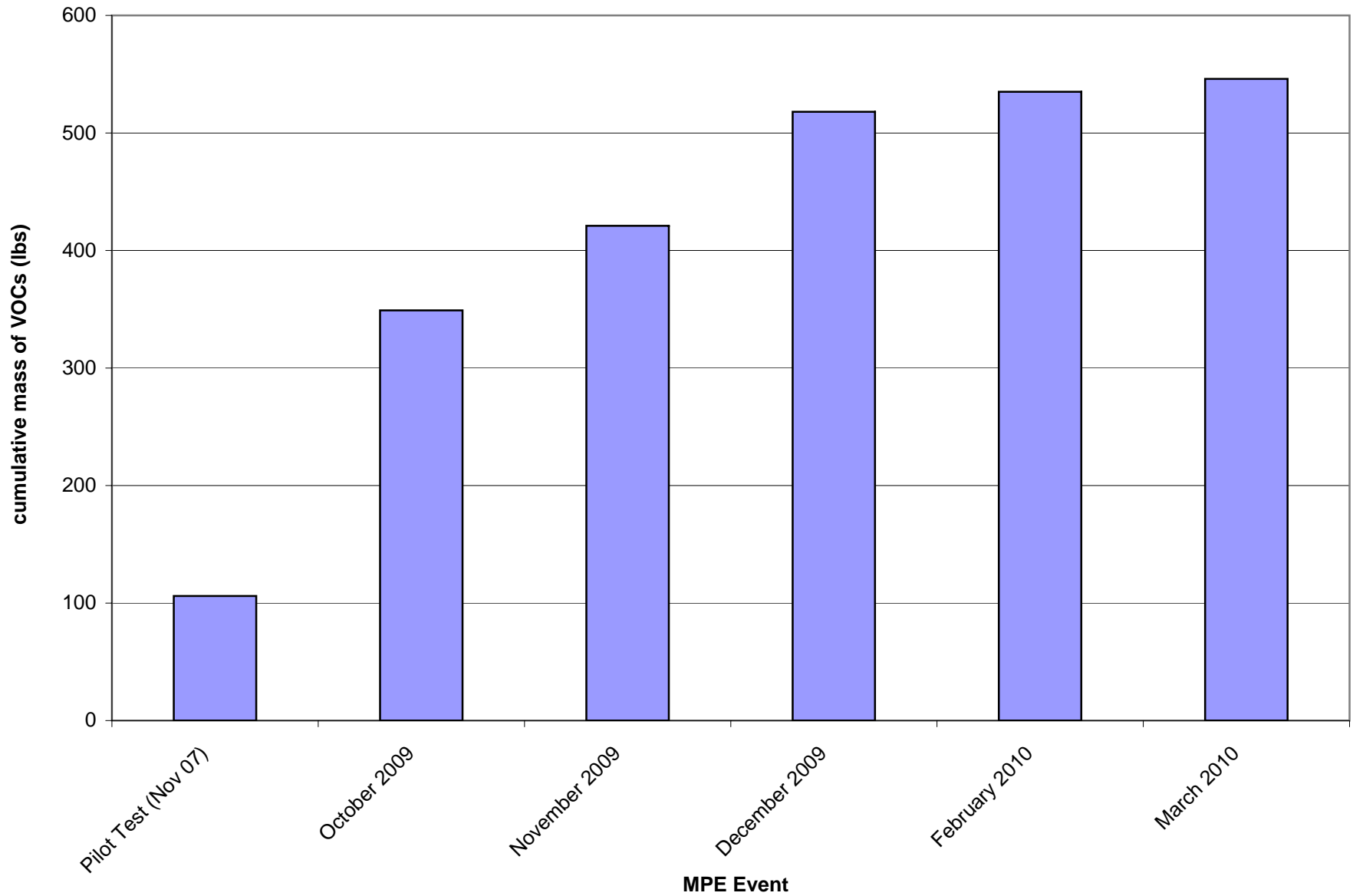


Figure 12: Cumulative mass of VOCs removed

# Tables

**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)
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 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-1 cont	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
MW-2	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 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-2 cont.	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>3/17/2010</b>	<b>52.41</b>	<b>20.11</b>	<b>32.30</b>	<b>480</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>30</b>	<b>6.9</b>	<b>&lt;0.5</b>	
MW-3	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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**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)	Ethylbenzene (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	1360	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	
<b>3/17/2010</b>	<b>53.91</b>	<b>21.90</b>	<b>32.01</b>	<b>24,000</b>	<b>970</b>	<b>81</b>	<b>1,100</b>	<b>3,700</b>	<b>38</b>	
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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**15101 Freedom Avenue, San Leandro, CA**

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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	
<b>3/17/2010</b>	<b>53.31</b>	<b>21.39</b>	<b>31.92</b>	<b>31.92</b>	<b>14,000</b>	<b>260</b>	<b>6</b>	<b>230</b>	<b>1,220</b>	<b>93</b>

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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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/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	

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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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-5 cont.	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
	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
	<b>3/17/2010</b>	<b>50.53</b>	<b>18.73</b>	<b>31.80</b>	<b>4,800</b>	<b>120</b>	<b>8.7</b>	<b>120</b>	<b>107</b>	<b>14</b>
	MW-6	9/21/2004	45.82	17.64	28.18	34,000	150	130	2200	8100
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	

**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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-6 contd.	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
	<b>3/16/2010</b>	<b>45.82</b>	<b>14.81</b>	<b>31.01</b>	<b>31,000</b>	<b>63</b>	<b>140</b>	<b>970</b>	<b>4,200</b>	<b>64</b>
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	
<b>3/16/2010</b>	<b>44.74</b>	<b>12.56</b>	<b>32.18</b>	<b>1,100</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>3.2</b>	<b>1.4</b>	<b>65</b>	
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

**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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-8 cont.	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
	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
	<b>Well Decommissioned 11/13/2009</b>									
MW-9	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

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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 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-9 cont.	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
	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
	<b>Well Decommissioned 11/13/2009</b>									
<b>Extraction Wells</b>										
EX-1	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
EX-2	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>MPE Wells</b>										
MPE-1	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
MPE-2	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>2nd WBZ</b>										
MW-1D	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
	3/16/2010	54.42	22.60	31.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5

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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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<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
	<b>3/16/2010</b>	<b>54.10</b>	<b>22.10</b>	<b>32.00</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>7.1</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
	<b>3/16/2010</b>	<b>53.12</b>	<b>21.02</b>	<b>32.10</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>0.65</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>	-	-	-	-	<b>100</b>	<b>1</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>5</b>

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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 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/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

<sup>c</sup> 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>							
<b>MW-1</b>	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	
<b>3/17/2010</b>	<b>&lt;10</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>&lt;0.5</b>
<b>MW-2</b>							
<b>MW-2</b>	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
<b>3/17/2010</b>	<b>&lt;10</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>&lt;0.5</b>
<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	
<b>3/17/2010</b>	<b>&lt;250</b>	<b>&lt;13</b>	<b>&lt;13</b>	<b>&lt;13</b>	<b>&lt;13</b>	<b>&lt;13</b>	<b>&lt;13</b>

**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>MW-4</b>	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
	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	
<b>3/17/2010</b>	<b>1,900</b>	<b>&lt;3.6</b>	<b>18</b>	<b>&lt;3.6</b>	<b>&lt;3.6</b>	<b>&lt;3.6</b>	
<b>MW-5</b>	8/8/2002	<250	<6.3	<6.3	510	NA	NA
	11/1/2002	66	<2.0	<2.0	560	NA	NA
	2/21/2003	<63	<3.1	<3.1	280	NA	NA
	5/28/2003	<33	<1.7	<1.7	110	NA	NA
	8/12/2003	130	<3.6	<3.6	270	NA	NA
	10/9/2003	<100	<5.0	<5.0	740	NA	NA
	1/15/2004	<63	<3.1	<3.1	300	NA	NA
	5/25/2004	<100	<5.0	<5.0	210	NA	NA
	9/21/2004	<130	<6.3	<6.3	550	NA	NA
	12/14/2004	40	<5.5	<5.5	444	NA	NA
	3/11/2005	88.8	<5.5	<5.5	448	NA	NA
	6/15/2005	<43	<2.15	<2.15	88.1	NA	NA
	8/26/2005	274	<5.50	<5.50	195	NA	NA
	11/11/2005	192	<5.50	<5.50	360	NA	NA
	2/9/2006	218	<5.50	<5.50	523	NA	NA
	5/9/2006	91.8	<2.15	<2.15	163	<2.15	<2.15
	8/10/2006	138	<5.50	<5.50	342	<5.50	<5.50
10/26/2006	322	<5.50	<5.50	712	<5.50	<5.50	

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**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-5 cont.	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
	<b>3/17/2010</b>	<b>570</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>
	MW-6	9/21/2004	<10	<0.5	<0.5	<0.5	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
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	
<b>3/16/2010</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>	
MW-7	9/21/2004	<10	<0.5	<0.5	1.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	<12.5	<2.5	<2.5	<10	NA	NA
	6/15/2005	<10	<0.5	<0.5	2.23	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	NA	NA	NA	NA	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	6.49	<0.5	<0.5	2.58	<0.5	<0.5
	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	

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**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-7 contd.	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>Well Decommissioned 11/13/2009</b>							
MW-8	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>							
MW-9	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
	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	
<b>Well Decommissioned 11/13/2009</b>							
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

**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)
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
<b>2nd WBZ</b>							
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
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
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
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
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
<b>ESL</b>		<b>12</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.5</b>	<b>0.05</b>

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	Installation of GWETS									
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
<b>15-Mar-2010</b>	<b>475,245</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>&lt;10</b>	<b>&lt;5</b>	<b>6.5</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

**Table 4**

**First Quarter 2010 MPE Event  
Operational Data : February 2010**

15101 Freedom Avenue,  
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	PITOT TUBE (In of H <sub>2</sub> O)	EFFLUENT TEMPERATURE (°F)	CALCULATED FLOW RATE USING PITOT TUBE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
2/15/2010	1030								0	
	1230	2,400	24.0	1,590	0.08	120	35	25.6	209	begin extraction from MPE-1 and 2
	1430	2,140	24.0	1,571	0.08	130	35	26.2	463	
	1630	1,390	23.4	1,591	0.08	144	34	25.8	904	
2/16/2010	730	701	23.4	1,531	0.08	140	34	25.6	3,276	eff=4; inf=701
	1030	650	23.0	1,522	0.10	144	38	25.8	3,674	
	1200	663	23.0	1,504	0.10	140	38	25.6	3,870	
	1330	625	22.8	1,560	0.10	128	39	25.6	4,132	
	1430	515	23.0	1,517	0.10	130	39	25.4	4,256	
	1630	575	22.8	1,557	0.10	130	39	25.6	4,505	
2/17/2010	500	500	23.0	1,600	0.10	140	38	25.4	6,339	

Totalizer readings = 6,339 gallons

Total time of test = 2,550 minutes = 42.5 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 4**

**First Quarter 2010 MPE Event  
Operational Data : March 2010**

15101 Freedom Avenue,  
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (°F)	PITOT TUBE (In of H <sub>2</sub> O)	EFFLUENT TEMPERATURE (°F)	CALCULATED FLOW RATE USING PITOT TUBE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
3/29/2010	1100								0	
	1200	2,000	24.4	1,516	0.06	120	30	26.2	70	begin extraction from MPE-1 and 2
	1400	1,059	22.2	1,499	0.08	130	35	25	357	
	1600	753	22.2	1,481	0.10	150	38	25	480	
	1700	775	22.2	1,490	0.10	150	38	25	517	
3/30/2010	700	386	22.4	1,451	0.10	148	38	25	1,654	
	1030	336	22.4	1,450	0.10	120	39	25	1,809	
	1200	371	22.4	1,455	0.10	120	39	25	1,900	
	1600	342	22.4	1,467	0.10	160	38	25	2,156	
	1700	360	22.4	1,477	0.10	144	38	25	2,237	
3/31/2010	700	310	22.4	1,475	0.10	150	38	25	3,300	
	930	365	22.1	1,483	0.10	142	38	24.8	3,530	
	1030	376	22.1	1,475	0.10	144	38	24.8	3,580	
	1130	382	22.0	1,484	0.10	146	38	24.8	3,670	
	1230	386	22.2	1,485	0.10	146	38	24.8	3,770	
	1330	398	22.0	1,474	0.10	144	38	24.8	3,810	

Totalizer readings = 3810 gallons

Total time of test = 3,030 minutes = 50.5 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**

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

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane
MPE-1/2	START	2/15/2010	1030	0										
			1230	120	120	35	4,197	11.0730	2,400	0.0024	2.2908	0.0191	27	
			1430	120	240	35	4,161	10.9787	2,140	0.0021	2.0252	0.0169	24	
	2/16/2010			1630	120	360	34	4,112	10.8508	1,390	0.0014	1.3001	0.0108	16
				730	900	1,260	34	30,946	81.6516	701	0.0007	4.9339	0.0055	8
				1030	180	1,440	38	6,897	18.1973	650	0.0007	1.0196	0.0057	8
				1200	90	1,530	38	3,460	9.1289	663	0.0007	0.5217	0.0058	8
				1330	90	1,620	39	3,495	9.2216	625	0.0006	0.4968	0.0055	8
				1430	60	1,680	39	2,326	6.1373	515	0.0005	0.2725	0.0045	7
				1630	120	1,800	39	4,652	12.2746	575	0.0006	0.6084	0.0051	7
				500	750	2,550	38	28,832	76.0744	500	0.0005	3.2788	0.0044	6
				TOTAL MEDIAN					2,550	38	93,078	246	657	0.0007

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**

$$\begin{aligned} &\text{ppmv as hexane}/1,000,000 = \text{VOC mole \%} \\ &\text{ft}^3 \text{ of extracted air}/(379 \text{ ft}^3 \text{ air/lb-mole air}) = \text{moles of extracted air} \\ &(\text{moles of extracted air})(\text{VOC mole \%})(86.2 \text{ lb/lb-mole hexane}) = \text{lbs of VOC removed as hexane} \\ &(\text{lbs of VOC mass removed as hexane})/(\text{elapsed time}) = \text{lbs/min of VOC removed as hexane} \\ &(\text{lbs/min of VOC removed as hexane})(60 \text{ min/1 hour})(24 \text{ hours/1 day}) = \text{lbs/day of VOC removed as hexane} \end{aligned}$$

**Table 5**

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

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane
MPE-1/2	START	3/29/2010	1100	0										
			1200	60	60	30	1,817	4.7947	2,000	0.0020	0.8266	0.0138	20	
			1400	120	180	35	4,161	10.9787	1,059	0.0011	1.0022	0.0084	12	
				1600	120	300	38	4,575	12.0717	753	0.0008	0.7836	0.0065	9
				1700	60	360	38	2,288	6.0359	775	0.0008	0.4032	0.0067	10
		3/30/2010	700	840	1,200	38	32,079	84.6409	386	0.0004	2.8163	0.0034	5	
			1030	210	1,410	39	8,211	21.6650	336	0.0003	0.6275	0.0030	4	
			1200	90	1,500	39	3,519	9.2850	371	0.0004	0.2969	0.0033	5	
			1600	240	1,740	38	9,076	23.9479	342	0.0003	0.7060	0.0029	4	
			1700	60	1,800	38	2,299	6.0658	360	0.0004	0.1882	0.0031	5	
		3/31/2010	700	840	2,640	38	32,026	84.5020	310	0.0003	2.2581	0.0027	4	
			930	150	2,790	38	5,757	15.1896	365	0.0004	0.4779	0.0032	5	
			1030	60	2,850	38	2,299	6.0658	376	0.0004	0.1966	0.0033	5	
			1130	60	2,910	38	2,295	6.0557	382	0.0004	0.1994	0.0033	5	
			1230	60	2,970	38	2,295	6.0557	386	0.0004	0.2015	0.0034	5	
		STOP		1330	60	3,030	38	2,299	6.0658	398	0.0004	0.2081	0.0035	5
			<b>TOTAL</b>				<b>3,030</b>							
	<b>MEDIAN</b>					<b>38</b>	<b>114,996</b>	<b>303</b>	<b>382</b>	<b>0.0004</b>	<b>11</b>	<b>0.0037</b>	<b>5</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**

$$\begin{aligned} \text{ppmv as hexane}/1,000,000 &= \text{VOC mole \%} \\ \text{ft}^3 \text{ of extracted air}/(379 \text{ ft}^3 \text{ air/lb-mole air}) &= \text{moles of extracted air} \\ (\text{moles of extracted air})(\text{VOC mole \%})(86.2 \text{ lb/lb-mole hexane}) &= \text{lbs of VOC removed as hexane} \\ (\text{lbs of VOC mass removed as hexane})/(\text{elapsed time}) &= \text{lbs/min of VOC removed as hexane} \\ (\text{lbs/min of VOC removed as hexane})(60 \text{ min/1 hour})(24 \text{ hours/1 day}) &= \text{lbs/day of VOC removed as hexane} \end{aligned}$$

**Table 6**  
**First 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	2/16/2010 @ 0730	701(a)	38	9	2,550/1.77	17 (b)
MPE-1,2	Stack	2/16/2010 @ 0720	4(a)	38	9	N/A	N/A
			<b>REMOVAL EFFICIENCIES</b>	99.4294%			

**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.

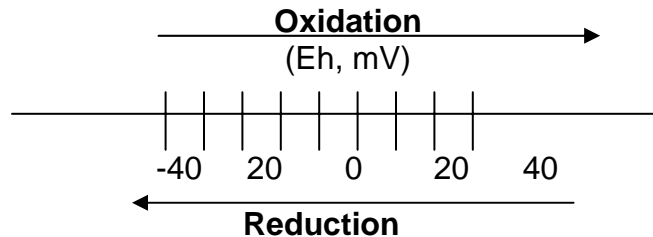
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

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



DATE: 12/11/2009

JOB# 09039

**TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS**

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	6092163.720	47.36	4" PVC NOTCH NORTH SIDE
	37.707459134	122.123062972	47.61	SET PUNCH NORTH SIDE RIM
			47.60	PAVEMENT NORTH SIDE
EX-2	2084082.018	6092130.224	45.96	4" PVC NOTCH NORTH SIDE
	37.707310806	122.123175540	47.04	SET PUNCH NORTH SIDE RIM
			47.00	CONCRETE NORTH SIDE
MPE-1	2084213.168	6092125.258	51.96	4" PVC NOTCH NORTH SIDE
	37.707670702	122.123200567	52.49	SET PUNCH NORTH SIDE RIM
			52.51	CONCRETE NORTH SIDE
MPE-2	2084293.133	6092171.374	53.72	4" PVC NOTCH NORTH SIDE
	37.707892479	122.123045970	54.29	SET PUNCH NORTH SIDE RIM
			54.27	PAVEMENT NORTH SIDE

## HORIZONTAL AND VERTICAL CONTROL

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

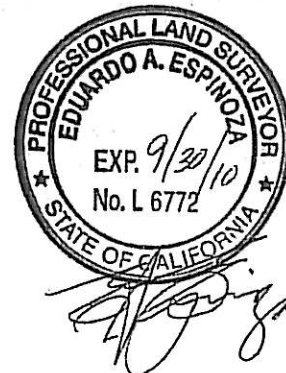
NORTHING 2,084323.44, EASTING 6,092063.77, ELEVATION 52.92

## 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





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

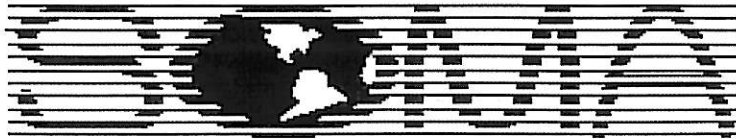
3.0 KM (1.85 MI) NORTH FROM SAM LORENZO. 1.85 MILES NORTH ALONG INTERSTATE HIGHWAY 580 FROM THE JUNCTION OF STATE HIGHWAY 238 IN SAN LORENZO, IN THE WEST CORNER OF THE CROSSING OF 150TH AVENUE, IN TOP OF THE CONCRETE BRIDGE DECK, 15.5 FEET NORTHWEST OF THE SOUTHWEST BOUND LANES OF THE AVENUE, 10.9 FEET 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.



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-1  
 Casing Diameter: 4 inches  
 Depth of Well: 30.50 feet  
 Top of Casing Elevation: 54.46 feet  
 Depth to Groundwater: 22.32 feet  
 Groundwater Elevation: 32.14 feet  
 Water Column Height: 8.18 feet  
 Purged Volume: 14 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 17, 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: Slight Petro

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
08:50	Started purging well						
08:51	2	1.01	5.70	20.99	1206	9.85	-123.9
08:53	6	0.93	5.68	21.02	1195	8.47	-143.5
08:55	10	0.87	5.68	21.01	1193	7.91	-154.7
08:57	14	0.58	5.68	20.97	1186	7.00	-155.9
09:02	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: 21.90 feet  
 Groundwater Elevation: 32.01 feet  
 Water Column Height: 8.00 feet  
 Purged Volume: 14 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 17, 2010  
 Sampler: Lizzie Hightower  
Erica Fisker

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

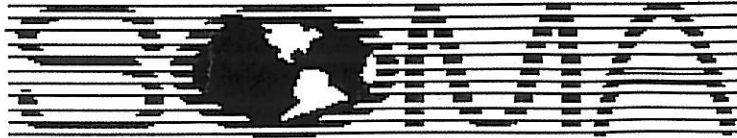
Color: Yes  No  Describe: \_\_\_\_\_

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
10:02	Started purging well						
10:03	2	2.7	5.84	21.35	845	8.62	-169.5
10:05	6	2.2	5.78	21.31	995	7.45	-167.0
10:07	10	1.9	5.77	21.29	1090	6.92	-168.2
10:09	14	1.4	5.78	21.28	1080	5.37	-166.4
10:14	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: 21.39 feet  
 Groundwater Elevation: 31.92 feet  
 Water Column Height: 8.81 feet  
 Purged Volume: 14 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 17, 2010  
 Sampler: Lizzie Hightower  
Erica Fisker

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

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

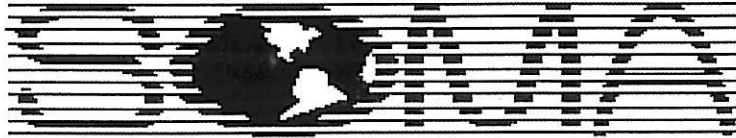
Sheen: Yes  No  Describe: \_\_\_\_\_

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
09:19	Started purging well						
09:20	2	3.7	5.67	20.42	1504	14.0	-95.6
09:22	6	2.8	5.64	20.41	1497	9.82	-110.0
09:24	10	2.5	5.63	20.40	1494	5.71	-118.5
09:26	14	2.3	5.63	20.39	1506	4.01	-119.4
09:31	Sampled						





ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-5 Project No.: 2551  
 Casing Diameter: 4 inches Address: 15101 Freedom Avenue  
 Depth of Well: 29.80 feet San Leandro, CA  
 Top of Casing Elevation: 50.53 feet Date: March 17, 2010  
 Depth to Groundwater: 18.73 feet Sampler: Lizzie Hightower  
 Groundwater Elevation: 31.80 feet Erica Fisker  
 Water Column Height: 11.07 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: Petroleum

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
09:41	Started purging well						
09:42	2	1.9	5.96	21.29	1154	25.9	-25.6
09:44	6	1.7	5.86	21.33	1157	41.5	-35.7
09:46	10	1.3	5.84	21.32	1152	82.8	-49.0
09:48	14	1.1	5.82	21.28	1150	75.3	-60.7
09:53	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: 14.81 feet  
 Groundwater Elevation: 31.01 feet  
 Water Column Height: 12.49 feet  
 Purged Volume: 12 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 16, 2010  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

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

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
10:59	Started pumping well						
11:00	2	1.2	5.98	21.22	1341	19.2	-94.8
11:02	6	0.93	5.93	21.23	1352	8.62	-132.7
11:04	10	0.78	5.92	21.24	1346	6.15	-155.2
11:06	12	0.63	5.91	21.26	1344	6.72	-168.2
11:11	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: 12.56 feet  
 Groundwater Elevation: 32.18 feet  
 Water Column Height: 8.44 feet  
 Purged Volume: 4 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 16, 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
10:27	Started purging well						
10:28	1	1.10	5.89	18.59	1221	160	-72.0
10:29	2	0.95	5.88	18.63	1240	168	-51.3
10:30	3	0.88	5.89	18.56	1261	351	-44.2
10:31	4	0.83	5.88	18.37	1266	382	-37.9
10:36	Sampled						





ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3D Project No.: 2551  
 Casing Diameter: 2 inches Address: 15101 Freedom Avenue  
 Depth of Well: 58.59 feet San Leandro, CA  
 Top of Casing Elevation: 54.10 feet Date: March 16, 2010  
 Depth to Groundwater: 22.10 feet Sampler: Lizzie Hightower  
 Groundwater Elevation: 32.00 feet Erica Fisker  
 Water Column Height: 36.49 feet  
 Purged Volume: 14 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

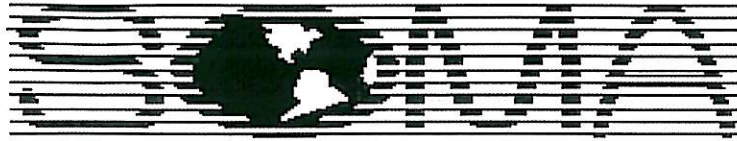
Color: Yes  No  Describe: \_\_\_\_\_

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

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

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
12:56	Started purging well						
12:57	2	2.5	6.39	20.30	1277	1000	-7.6
12:59	6	1.8	6.36	20.27	1279	38.1	-12.8
13:01	10	0.79	6.35	20.28	1276	15.1	-17.8
13:03	12	0.71	6.37	20.29	1273	9.45	-24.8
13:04	14	0.69	6.38	20.29	1272	2.05	-27.8
13:09	Sampled						



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4D  
 Casing Diameter: 2 inches  
 Depth of Well: \_\_\_\_\_ feet  
 Top of Casing Elevation: 53.12 feet  
 Depth to Groundwater: 21.02 feet  
 Groundwater Elevation: 32.10 feet  
 Water Column Height: 37.77 feet  
 Purged Volume: 14 gallons

Project No.: 2551  
 Address: 15101 Freedom Avenue  
 San Leandro, CA  
 Date: March 16, 2010  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Slightly Cloudy

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
13:22	started purging						
13:23	2	3.3	6.39	19.54	1257	67.1	-7.4
13:25	6	2.8	6.37	19.55	1268	57.3	-11.2
13:27	10	1.6	6.36	19.55	1275	34.5	-14.7
13:29	14	1.4	6.36	19.58	1283	24.8	-16.7
13:34	sampled						











# Appendix C

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



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

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

Laboratory Job Number 218910  
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	218910-001
MW-2	218910-002
MW-3	218910-003
MW-4	218910-004
MW-5	218910-005
MW-6	218910-006
MW-7	218910-007
MW-1D	218910-008
MW-3D	218910-009
MW-4D	218910-010
EX-1	218910-011
EX-2	218910-012

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:   
Project Manager

Date: 03/29/2010

NELAP # 01107CA

**CASE NARRATIVE**

Laboratory number: 218910  
Client: SOMA Environmental Engineering Inc.  
Project: 2551  
Location: 15101 Freedom Avenue  
Request Date: 03/17/10  
Samples Received: 03/17/10

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 03/17/10. The samples were received cold and intact.

**Volatile Organics by GC/MS (EPA 8260B):**

EX-2 (lab # 218910-012) was analyzed with more than 1 mL of headspace in the VOA vial. No other analytical problems were encountered.

# CHAIN OF CUSTODY

## Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878  
 2233 Fifth Street  
 Berkeley, CA 94710  
 (510)486-0900 Phone  
 (510)486-0532 Fax

C&T LOGIN # 210910

## Analyses

Sampler: Lizzie Hightower/ Erica Fisker

Project No: 2551

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

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				TPHg, BTEX, MtBE 8260B	Gasoline Oxygenates & Lead Scavengers
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE		
1	MW-1	3/17/10 09:02	*			3-VOAs	*			*		
2	MW-2	3/17/10 08:41	*			3-VOAs	*			*		
3	MW-3	3/17/10 10:14	*			3-VOAs	*			*		
4	MW-4	3/17/10 09:31	*			3-VOAs	*			*		
5	MW-5	3/17/10 09:53	*			3-VOAs	*			*		
6	MW-6	3/16/10 11:11	*			3-VOAs	*			*		
7	MW-7	3/16/10 10:36	*			3-VOAs	*			*		
8	MW-1D	3/16/10 12:46	*			3-VOAs	*			*		
9	MW-3D	3/16/10 13:09	*			3-VOAs	*			*		
10	MW-4D	3/16/10 13:34	*			3-VOAs	*			*		
11	EX-1	3/16/10 11:33	*			3-VOAs	*			*		
12	EX-2	3/16/10 11:20	*			3-VOAs	*			*		

Notes: **EDF OUTPUT REQUIRED**  
 Ethanol

<b>RELINQUISHED BY:</b>	<b>RECEIVED BY:</b>
<i>E. Ajlito</i> 3/17/10 11:15 DATE/TIME	<i>Pat Langley</i> 11:15 3/17/10 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 218910 Date Received 3/17/10 Number of coolers 1  
 Client DOMA Project 15101 FREEDOM AVE. SAN JEROME LEANING  
 Date Opened 3/17/10 By (print) M. VILLANUEVA (sign) [Signature]  
 Date Logged in 3/18/10 By (print) [Signature] (sign) [Signature]

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  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

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	161274
Lab ID:	218910-001	Sampled:	03/17/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/25/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,100	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	1.7	0.50
1,2-Dichloroethane	ND	0.50
Benzene	33	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	46	0.50
m,p-Xylenes	18	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	92	73-140
Toluene-d8	104	88-113
Bromofluorobenzene	102	80-127

ND= Not Detected  
 RL= Reporting Limit



Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	161196
Lab ID:	218910-002	Sampled:	03/17/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/24/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	480	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	30	0.50
m,p-Xylenes	6.9	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	81-124
1,2-Dichloroethane-d4	110	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	98	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	161274
Lab ID:	218910-003	Sampled:	03/17/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/26/10
Diln Fac:	25.00		

Analyte	Result	RL
Gasoline C7-C12	24,000	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	38	13
1,2-Dichloroethane	ND	13
Benzene	970	13
Toluene	81	13
1,2-Dibromoethane	ND	13
Ethylbenzene	1,100	13
m,p-Xylenes	2,700	13
o-Xylene	1,000	13

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	104	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	161274
Lab ID:	218910-004	Sampled:	03/17/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/26/10
Diln Fac:	7.143		

Analyte	Result	RL
Gasoline C7-C12	14,000	360
tert-Butyl Alcohol (TBA)	1,900	71
Isopropyl Ether (DIPE)	ND	3.6
Ethyl tert-Butyl Ether (ETBE)	18	3.6
Methyl tert-Amyl Ether (TAME)	ND	3.6
Ethanol	ND	7,100
MTBE	93	3.6
1,2-Dichloroethane	ND	3.6
Benzene	260	3.6
Toluene	6.0	3.6
1,2-Dibromoethane	ND	3.6
Ethylbenzene	230	3.6
m,p-Xylenes	960	3.6
o-Xylene	260	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	98	81-124
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	105	88-113
Bromofluorobenzene	103	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	161274
Lab ID:	218910-005	Sampled:	03/17/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/26/10
Diln Fac:	2.000		

Analyte	Result	RL
Gasoline C7-C12	4,800	100
tert-Butyl Alcohol (TBA)	570	20
Isopropyl Ether (DIPE)	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
Ethanol	ND	2,000
MTBE	14	1.0
1,2-Dichloroethane	ND	1.0
Benzene	120	1.0
Toluene	8.7	1.0
1,2-Dibromoethane	ND	1.0
Ethylbenzene	120	1.0
m,p-Xylenes	95	1.0
o-Xylene	12	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	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:	218910-006	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	31,000	2,000	40.00	161274	03/26/10
tert-Butyl Alcohol (TBA)	ND	40	4.000	161232	03/25/10
Isopropyl Ether (DIPE)	ND	2.0	4.000	161232	03/25/10
Ethyl tert-Butyl Ether (ETBE)	ND	2.0	4.000	161232	03/25/10
Methyl tert-Amyl Ether (TAME)	ND	2.0	4.000	161232	03/25/10
Ethanol	ND	4,000	4.000	161232	03/25/10
MTBE	64	2.0	4.000	161232	03/25/10
1,2-Dichloroethane	ND	2.0	4.000	161232	03/25/10
Benzene	63	2.0	4.000	161232	03/25/10
Toluene	140	2.0	4.000	161232	03/25/10
1,2-Dibromoethane	ND	2.0	4.000	161232	03/25/10
Ethylbenzene	970	20	40.00	161274	03/26/10
m,p-Xylenes	3,400	20	40.00	161274	03/26/10
o-Xylene	800	20	40.00	161274	03/26/10

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	94	81-124	4.000	161232	03/25/10
1,2-Dichloroethane-d4	95	73-140	4.000	161232	03/25/10
Toluene-d8	106	88-113	4.000	161232	03/25/10
Bromofluorobenzene	115	80-127	4.000	161232	03/25/10

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	161274
Lab ID:	218910-007	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/25/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,100	50
tert-Butyl Alcohol (TBA)	11	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	65	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	3.2	0.50
m,p-Xylenes	1.4	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	92	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	105	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1D	Batch#:	161196
Lab ID:	218910-008	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/24/10
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	97	81-124
1,2-Dichloroethane-d4	108	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	96	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3D	Batch#:	161196
Lab ID:	218910-009	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/24/10
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)	0.65	0.50
Ethanol	ND	1,000
MTBE	7.1	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	81-124
1,2-Dichloroethane-d4	108	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	97	80-127

ND= Not Detected  
 RL= Reporting Limit



Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4D	Batch#:	161196
Lab ID:	218910-010	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/24/10
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	0.65	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	98	81-124
1,2-Dichloroethane-d4	109	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	98	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-1	Batch#:	161232
Lab ID:	218910-011	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10
Units:	ug/L	Analyzed:	03/24/10
Diln Fac:	2.500		

Analyte	Result	RL
Gasoline C7-C12	2,200	130
tert-Butyl Alcohol (TBA)	980	25
Isopropyl Ether (DIPE)	ND	1.3
Ethyl tert-Butyl Ether (ETBE)	2.4	1.3
Methyl tert-Amyl Ether (TAME)	27	1.3
Ethanol	ND	2,500
MTBE	210	1.3
1,2-Dichloroethane	ND	1.3
Benzene	150	1.3
Toluene	18	1.3
1,2-Dibromoethane	ND	1.3
Ethylbenzene	94	1.3
m,p-Xylenes	280	1.3
o-Xylene	46	1.3

Surrogate	%REC	Limits
Dibromofluoromethane	99	81-124
1,2-Dichloroethane-d4	95	73-140
Toluene-d8	105	88-113
Bromofluorobenzene	103	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-2	Units:	ug/L
Lab ID:	218910-012	Sampled:	03/16/10
Matrix:	Water	Received:	03/17/10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	13,000	500	10.00	161274	03/25/10
tert-Butyl Alcohol (TBA)	ND	100	10.00	161274	03/25/10
Isopropyl Ether (DIPE)	ND	5.0	10.00	161274	03/25/10
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	10.00	161274	03/25/10
Methyl tert-Amyl Ether (TAME)	ND	5.0	10.00	161274	03/25/10
Ethanol	ND	10,000	10.00	161274	03/25/10
MTBE	15	5.0	10.00	161274	03/25/10
1,2-Dichloroethane	ND	5.0	10.00	161274	03/25/10
Benzene	600	5.0	10.00	161274	03/25/10
Toluene	360	5.0	10.00	161274	03/25/10
1,2-Dibromoethane	ND	5.0	10.00	161274	03/25/10
Ethylbenzene	770	5.0	10.00	161274	03/25/10
m,p-Xylenes	1,800	25	50.00	161367	03/27/10
o-Xylene	450	5.0	10.00	161274	03/25/10

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	102	81-124	10.00	161274	03/25/10
1,2-Dichloroethane-d4	102	73-140	10.00	161274	03/25/10
Toluene-d8	108	88-113	10.00	161274	03/25/10
Bromofluorobenzene	98	80-127	10.00	161274	03/25/10

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Gasoline by GC/MS</b>			
Lab #:	218910	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:	QC537178	Batch#:	161196
Matrix:	Water	Analyzed:	03/23/10
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	106	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	96	80-127

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161196
Units:	ug/L	Analyzed:	03/23/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537179

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	122.8	98	36-156
Isopropyl Ether (DIPE)	25.00	21.35	85	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	21.95	88	64-133
Methyl tert-Amyl Ether (TAME)	25.00	23.22	93	73-124
MTBE	25.00	21.33	85	61-123
1,2-Dichloroethane	25.00	26.65	107	66-141
Benzene	25.00	25.80	103	81-122
Toluene	25.00	26.00	104	82-122
1,2-Dibromoethane	25.00	26.95	108	81-122
Ethylbenzene	25.00	27.11	108	86-125
m,p-Xylenes	50.00	54.39	109	83-127
o-Xylene	25.00	26.49	106	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	107	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	96	80-127

Type: BSD Lab ID: QC537180

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	121.8	97	36-156	1	23
Isopropyl Ether (DIPE)	25.00	20.09	80	54-139	6	11
Ethyl tert-Butyl Ether (ETBE)	25.00	21.40	86	64-133	3	11
Methyl tert-Amyl Ether (TAME)	25.00	22.97	92	73-124	1	11
MTBE	25.00	21.15	85	61-123	1	11
1,2-Dichloroethane	25.00	26.02	104	66-141	2	12
Benzene	25.00	24.94	100	81-122	3	12
Toluene	25.00	24.87	99	82-122	4	12
1,2-Dibromoethane	25.00	26.79	107	81-122	1	11
Ethylbenzene	25.00	26.16	105	86-125	4	12
m,p-Xylenes	50.00	51.49	103	83-127	5	13
o-Xylene	25.00	25.62	102	81-122	3	12

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	108	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	96	80-127

RPD= Relative Percent Difference

## Batch QC Report

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161196
Units:	ug/L	Analyzed:	03/23/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537181

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	997.4	100	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	109	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	95	80-127

Type: BSD Lab ID: QC537182

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,032	103	74-124	3	13

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	111	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	94	80-127

RPD= Relative Percent Difference

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161232
Units:	ug/L	Analyzed:	03/24/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537341

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	96.43	77	36-156
Isopropyl Ether (DIPE)	25.00	23.43	94	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	22.69	91	64-133
Methyl tert-Amyl Ether (TAME)	25.00	20.79	83	73-124
MTBE	25.00	20.51	82	61-123
1,2-Dichloroethane	25.00	21.52	86	66-141
Benzene	25.00	26.30	105	81-122
Toluene	25.00	28.45	114	82-122
1,2-Dibromoethane	25.00	24.84	99	81-122
Ethylbenzene	25.00	28.57	114	86-125
m,p-Xylenes	50.00	58.78	118	83-127
o-Xylene	25.00	29.50	118	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	100	80-127

Type: BSD Lab ID: QC537342

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	99.19	79	36-156	3	23
Isopropyl Ether (DIPE)	25.00	22.12	88	54-139	6	11
Ethyl tert-Butyl Ether (ETBE)	25.00	22.21	89	64-133	2	11
Methyl tert-Amyl Ether (TAME)	25.00	21.04	84	73-124	1	11
MTBE	25.00	20.99	84	61-123	2	11
1,2-Dichloroethane	25.00	21.43	86	66-141	0	12
Benzene	25.00	25.44	102	81-122	3	12
Toluene	25.00	29.17	117	82-122	3	12
1,2-Dibromoethane	25.00	26.78	107	81-122	8	11
Ethylbenzene	25.00	28.93	116	86-125	1	12
m,p-Xylenes	50.00	59.30	119	83-127	1	13
o-Xylene	25.00	29.26	117	81-122	1	12

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	109	88-113
Bromofluorobenzene	101	80-127

RPD= Relative Percent Difference

Batch QC Report

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161232
Units:	ug/L	Analyzed:	03/24/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537343

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,101	110	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	95	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	99	80-127

Type: BSD Lab ID: QC537344

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,056	106	74-124	4	13

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	96	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

RPD= Relative Percent Difference



**Batch QC Report**

<b>Gasoline by GC/MS</b>			
Lab #:	218910	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:	QC537345	Batch#:	161232
Matrix:	Water	Analyzed:	03/24/10
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	97	73-140
Toluene-d8	103	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	161232
MSS Lab ID:	218841-006	Sampled:	03/15/10
Matrix:	Water	Received:	03/16/10
Units:	ug/L	Analyzed:	03/25/10
Diln Fac:	1.000		

Type: MS Lab ID: QC537438

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.458	125.0	103.5	83	39-152
Isopropyl Ether (DIPE)	<0.1000	25.00	22.12	88	57-139
Ethyl tert-Butyl Ether (ETBE)	<0.1000	25.00	22.20	89	65-138
Methyl tert-Amyl Ether (TAME)	0.4232	25.00	21.38	84	72-128
MTBE	12.99	25.00	32.74	79	59-128
1,2-Dichloroethane	<0.1000	25.00	21.38	86	64-149
Benzene	<0.1000	25.00	25.25	101	75-130
Toluene	<0.1000	25.00	27.76	111	79-129
1,2-Dibromoethane	<0.1000	25.00	26.35	105	80-127
Ethylbenzene	<0.1561	25.00	28.29	113	81-130
m,p-Xylenes	<0.1000	50.00	57.26	115	77-133
o-Xylene	<0.09974	25.00	27.81	111	82-123

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	89	73-140
Toluene-d8	104	88-113
Bromofluorobenzene	101	80-127

Type: MSD Lab ID: QC537439

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	109.7	88	39-152	6	23
Isopropyl Ether (DIPE)	25.00	22.98	92	57-139	4	12
Ethyl tert-Butyl Ether (ETBE)	25.00	23.05	92	65-138	4	11
Methyl tert-Amyl Ether (TAME)	25.00	21.98	86	72-128	3	10
MTBE	25.00	35.09	88	59-128	7	12
1,2-Dichloroethane	25.00	21.30	85	64-149	0	13
Benzene	25.00	24.65	99	75-130	2	11
Toluene	25.00	27.37	109	79-129	1	12
1,2-Dibromoethane	25.00	25.38	102	80-127	4	11
Ethylbenzene	25.00	26.73	107	81-130	6	12
m,p-Xylenes	50.00	54.80	110	77-133	4	12
o-Xylene	25.00	26.77	107	82-123	4	11

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	100	80-127

RPD= Relative Percent Difference

**Batch QC Report**

<b>Gasoline by GC/MS</b>			
Lab #:	218910	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:	QC537520	Batch#:	161274
Matrix:	Water	Analyzed:	03/25/10
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	97	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	98	80-127

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161274
Units:	ug/L	Analyzed:	03/25/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537521

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	104.2	83	36-156
Isopropyl Ether (DIPE)	25.00	24.27	97	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	23.67	95	64-133
Methyl tert-Amyl Ether (TAME)	25.00	21.89	88	73-124
MTBE	25.00	21.87	87	61-123
1,2-Dichloroethane	25.00	23.59	94	66-141
Benzene	25.00	26.34	105	81-122
Toluene	25.00	28.28	113	82-122
1,2-Dibromoethane	25.00	25.56	102	81-122
Ethylbenzene	25.00	29.05	116	86-125
m,p-Xylenes	50.00	60.63	121	83-127
o-Xylene	25.00	29.58	118	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	98	81-124
1,2-Dichloroethane-d4	96	73-140
Toluene-d8	104	88-113
Bromofluorobenzene	101	80-127

Type: BSD Lab ID: QC537522

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	95.68	77	36-156	9	23
Isopropyl Ether (DIPE)	25.00	23.16	93	54-139	5	11
Ethyl tert-Butyl Ether (ETBE)	25.00	22.60	90	64-133	5	11
Methyl tert-Amyl Ether (TAME)	25.00	21.16	85	73-124	3	11
MTBE	25.00	20.29	81	61-123	7	11
1,2-Dichloroethane	25.00	20.82	83	66-141	12	12
Benzene	25.00	25.18	101	81-122	5	12
Toluene	25.00	26.39	106	82-122	7	12
1,2-Dibromoethane	25.00	23.79	95	81-122	7	11
Ethylbenzene	25.00	27.25	109	86-125	6	12
m,p-Xylenes	50.00	55.18	110	83-127	9	13
o-Xylene	25.00	26.99	108	81-122	9	12

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	95	73-140
Toluene-d8	105	88-113
Bromofluorobenzene	97	80-127

RPD= Relative Percent Difference

## Batch QC Report

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161274
Units:	ug/L	Analyzed:	03/25/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537523

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	900.0	1,031	115	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	93	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	101	80-127

Type: BSD Lab ID: QC537524

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	900.0	951.8	106	74-124	8	13

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	92	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	99	80-127

RPD= Relative Percent Difference

**Batch QC Report**

<b>Gasoline by GC/MS</b>			
Lab #:	218910	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:	QC537899	Batch#:	161367
Matrix:	Water	Analyzed:	03/27/10
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	106	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	94	80-127

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161367
Units:	ug/L	Analyzed:	03/27/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537900

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	112.3	90	36-156
Isopropyl Ether (DIPE)	25.00	19.82	79	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	20.76	83	64-133
Methyl tert-Amyl Ether (TAME)	25.00	22.30	89	73-124
MTBE	25.00	20.46	82	61-123
1,2-Dichloroethane	25.00	25.63	103	66-141
Benzene	25.00	24.80	99	81-122
Toluene	25.00	25.14	101	82-122
1,2-Dibromoethane	25.00	26.10	104	81-122
Ethylbenzene	25.00	26.34	105	86-125
m,p-Xylenes	50.00	51.63	103	83-127
o-Xylene	25.00	25.51	102	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	104	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	95	80-127

Type: BSD Lab ID: QC537901

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	105.8	85	36-156	6	23
Isopropyl Ether (DIPE)	25.00	19.84	79	54-139	0	11
Ethyl tert-Butyl Ether (ETBE)	25.00	20.31	81	64-133	2	11
Methyl tert-Amyl Ether (TAME)	25.00	21.58	86	73-124	3	11
MTBE	25.00	19.78	79	61-123	3	11
1,2-Dichloroethane	25.00	25.14	101	66-141	2	12
Benzene	25.00	24.30	97	81-122	2	12
Toluene	25.00	25.17	101	82-122	0	12
1,2-Dibromoethane	25.00	26.33	105	81-122	1	11
Ethylbenzene	25.00	25.76	103	86-125	2	12
m,p-Xylenes	50.00	50.80	102	83-127	2	13
o-Xylene	25.00	25.27	101	81-122	1	12

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	103	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	96	80-127

RPD= Relative Percent Difference

## Batch QC Report

Gasoline by GC/MS			
Lab #:	218910	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161367
Units:	ug/L	Analyzed:	03/27/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537902

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,013	101	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	96	80-127

Type: BSD Lab ID: QC537903

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	974.7	97	74-124	4	13

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	106	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	95	80-127

RPD= Relative Percent Difference



Date : 25-MAR-2010 17:27

Client ID: DYNA P&T

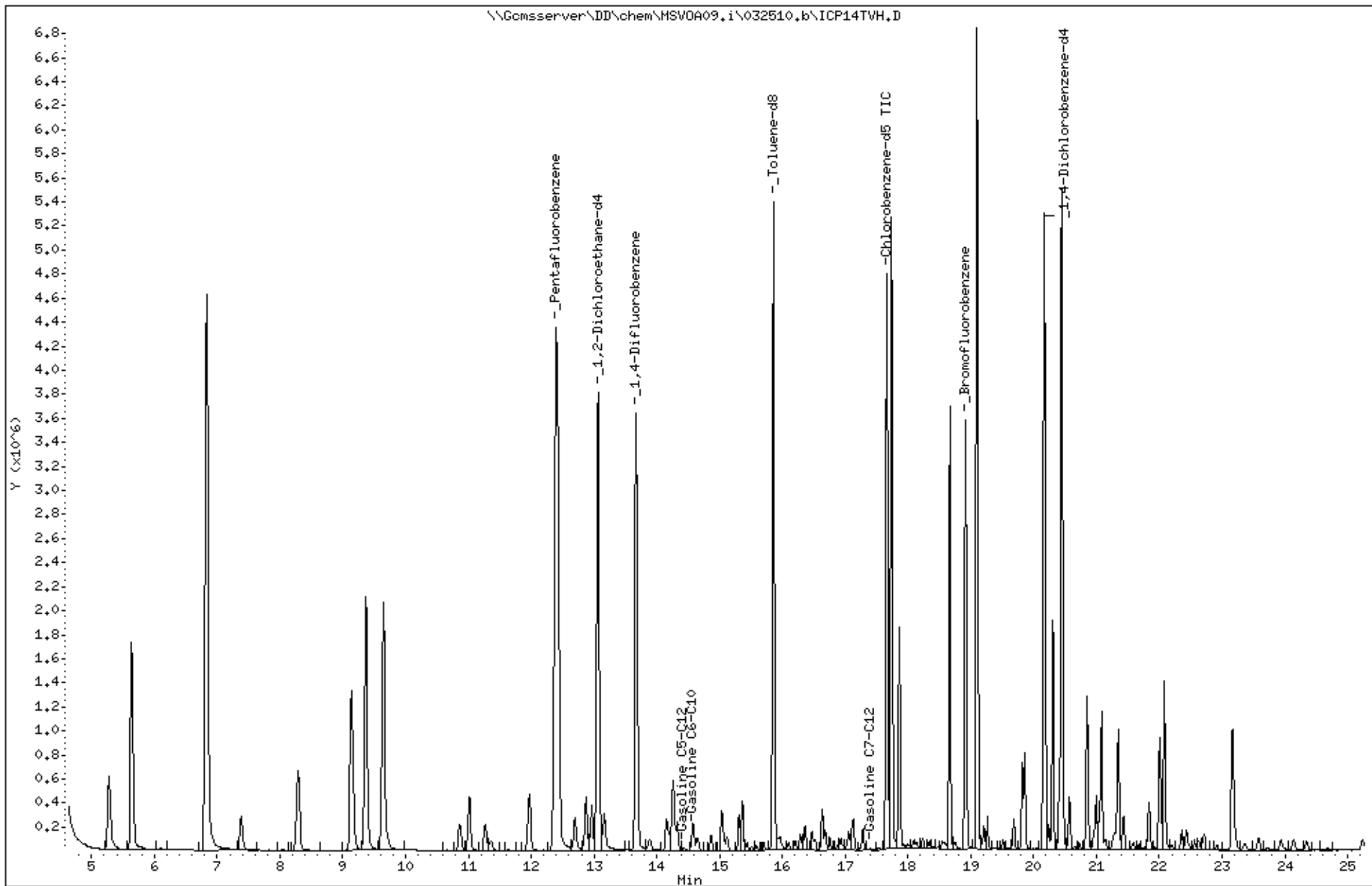
Sample Info: S,218910-001

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:



Date : 24-MAR-2010 07:11

Client ID: DYNA P&T

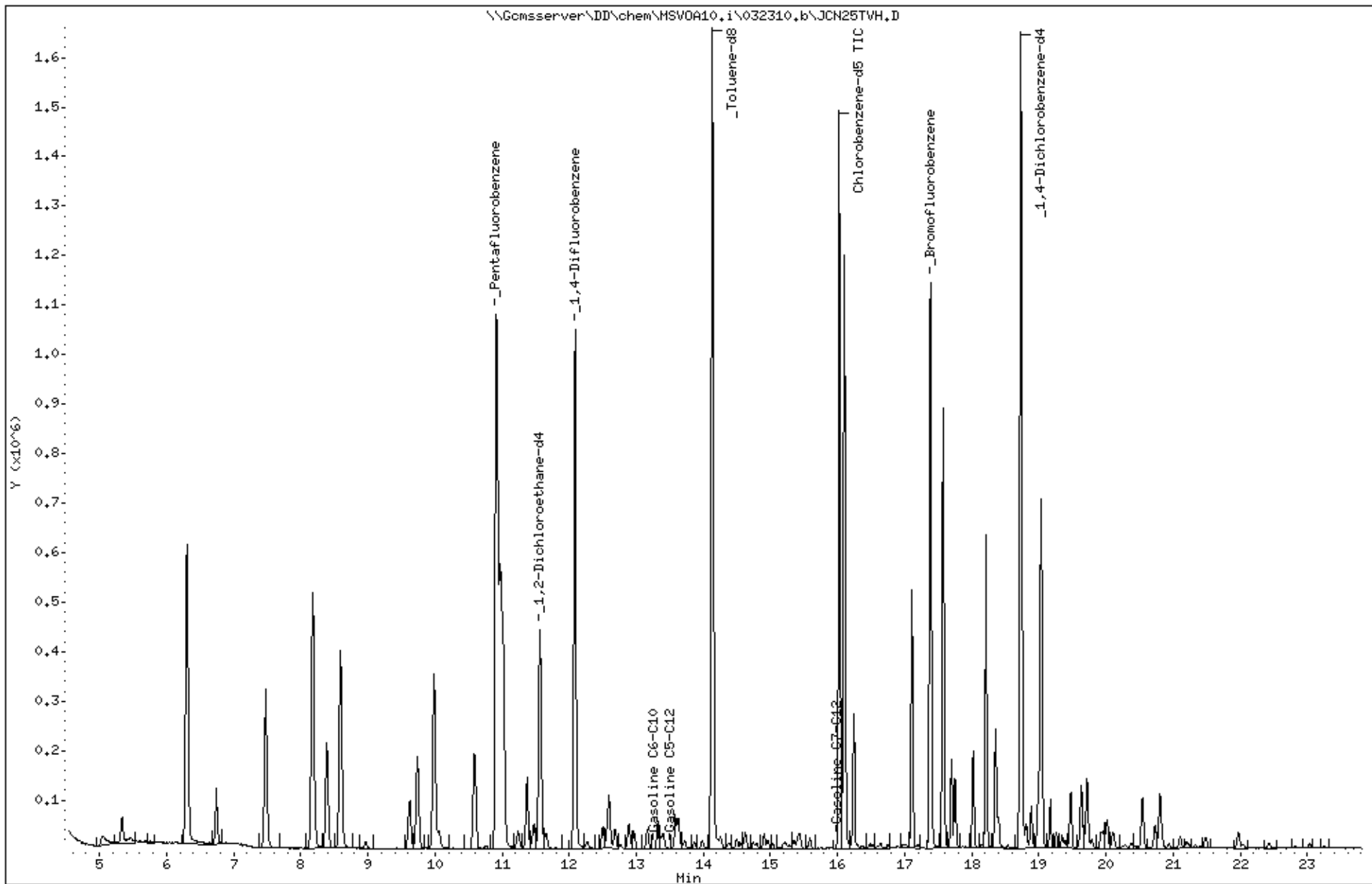
Sample Info: S,218910-002

Instrument: MSV0A10.i

Operator: VOA

Column diameter: 2.00

Column phase:



Date : 26-MAR-2010 02:25

Client ID: DYNA P&T

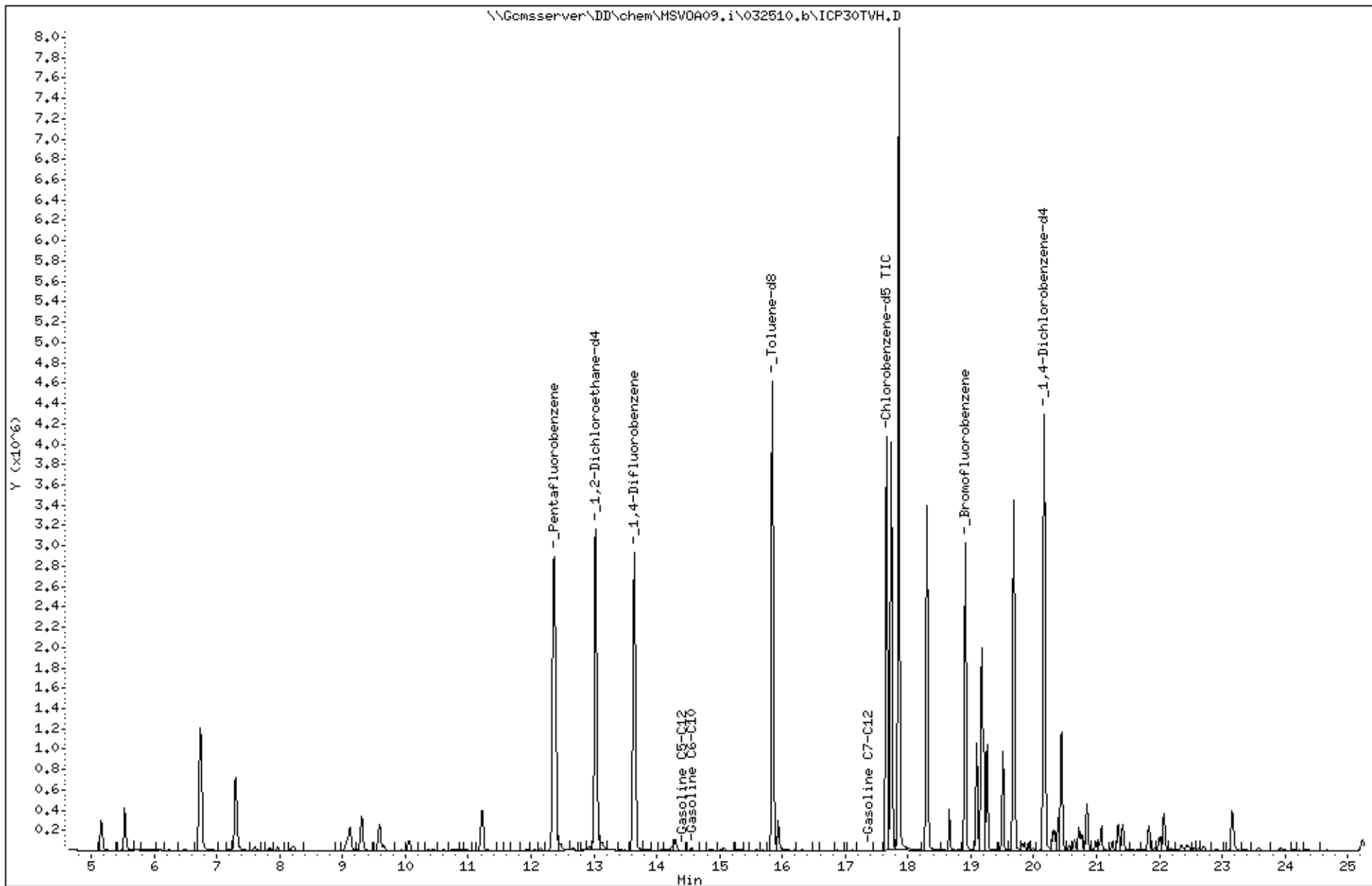
Sample Info: S,218910-003

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:



Date : 26-MAR-2010 00:45

Client ID: DYNA P&T

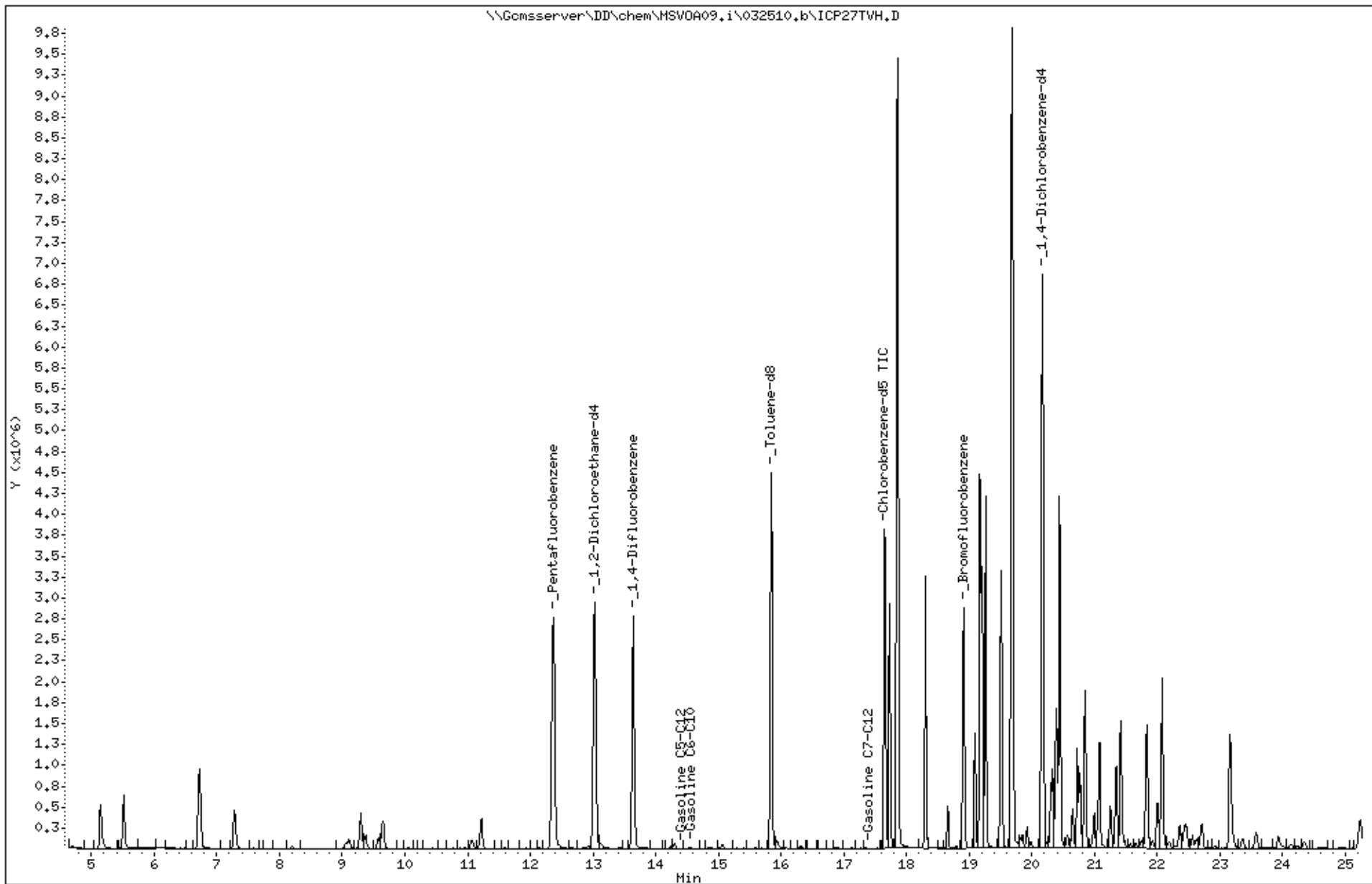
Sample Info: S,218910-004

Instrument: MSV0A09,i

Operator: VOC

Column diameter: 2,00

Column phase:



Date : 26-MAR-2010 01:18

Client ID: DYNA P&T

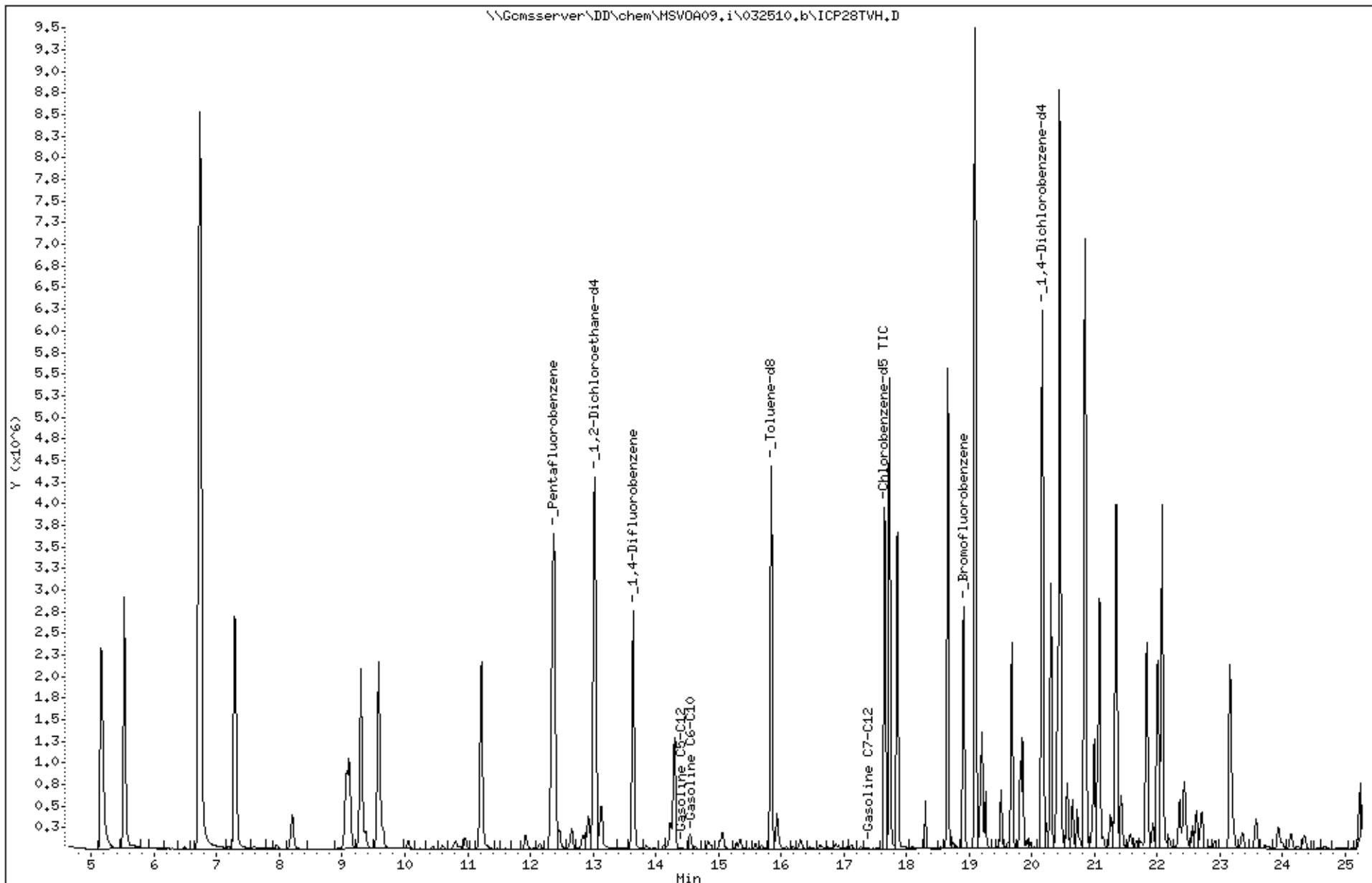
Sample Info: S,218910-005

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:

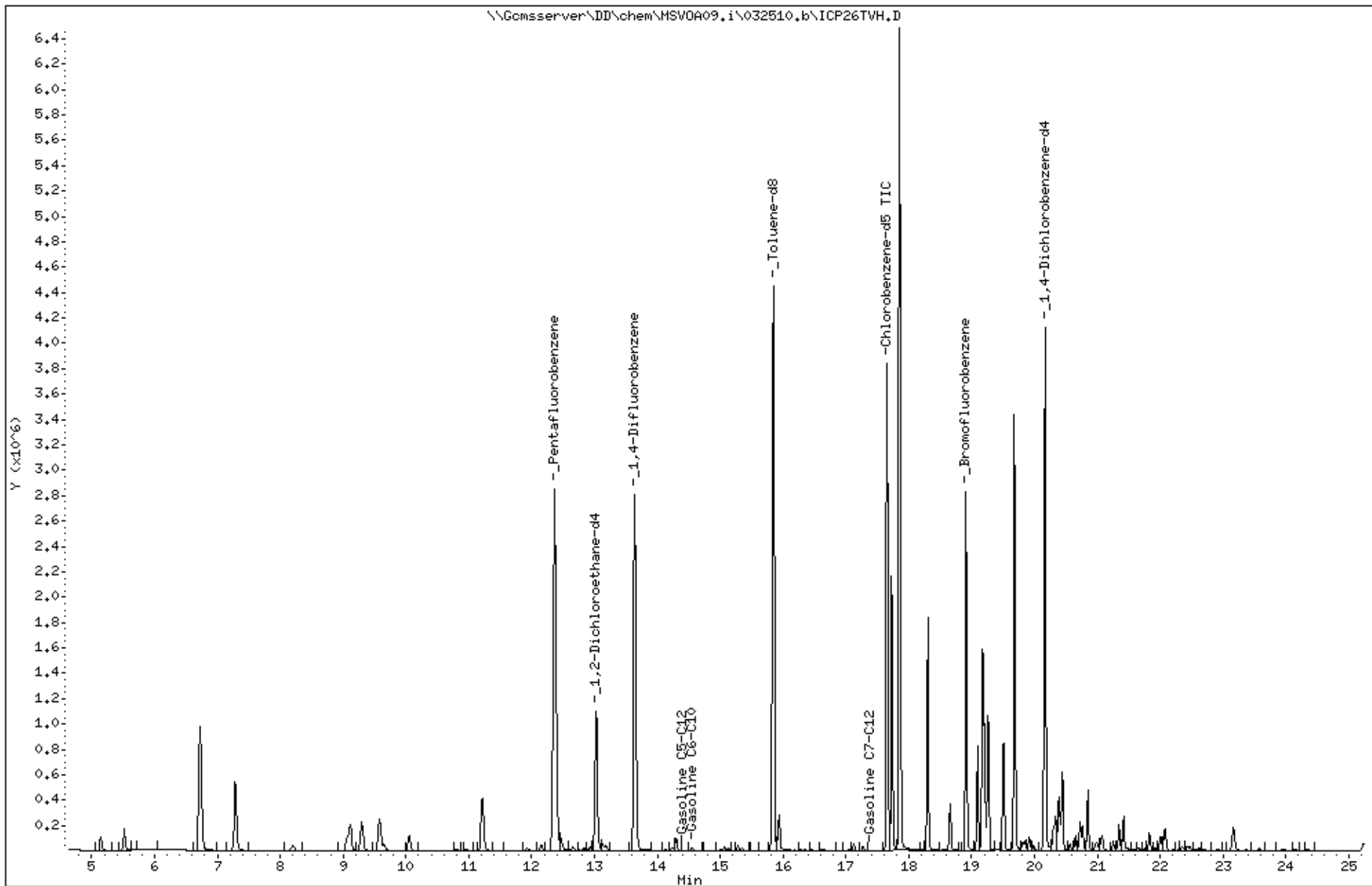


Date : 26-MAR-2010 00:10  
Client ID: DYNA P&T  
Sample Info: S,218910-006

Instrument: MSV0A09.i

Operator: VOC  
Column diameter: 2.00

Column phase:



Date : 25-MAR-2010 18:00

Client ID: DYNA P&T

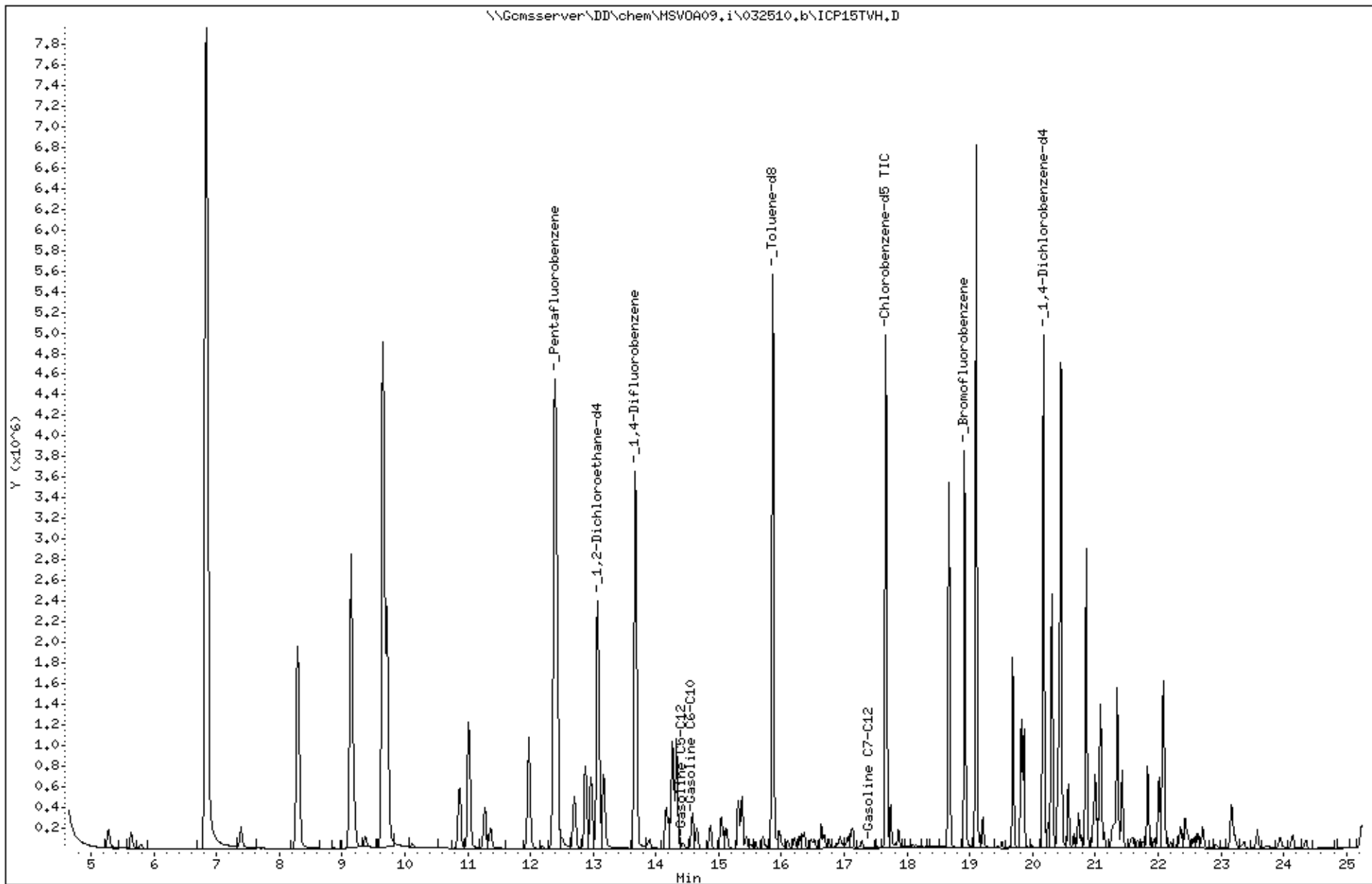
Sample Info: S,218910-007

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:



Date : 24-MAR-2010 23:42

Client ID: DYNA P&T

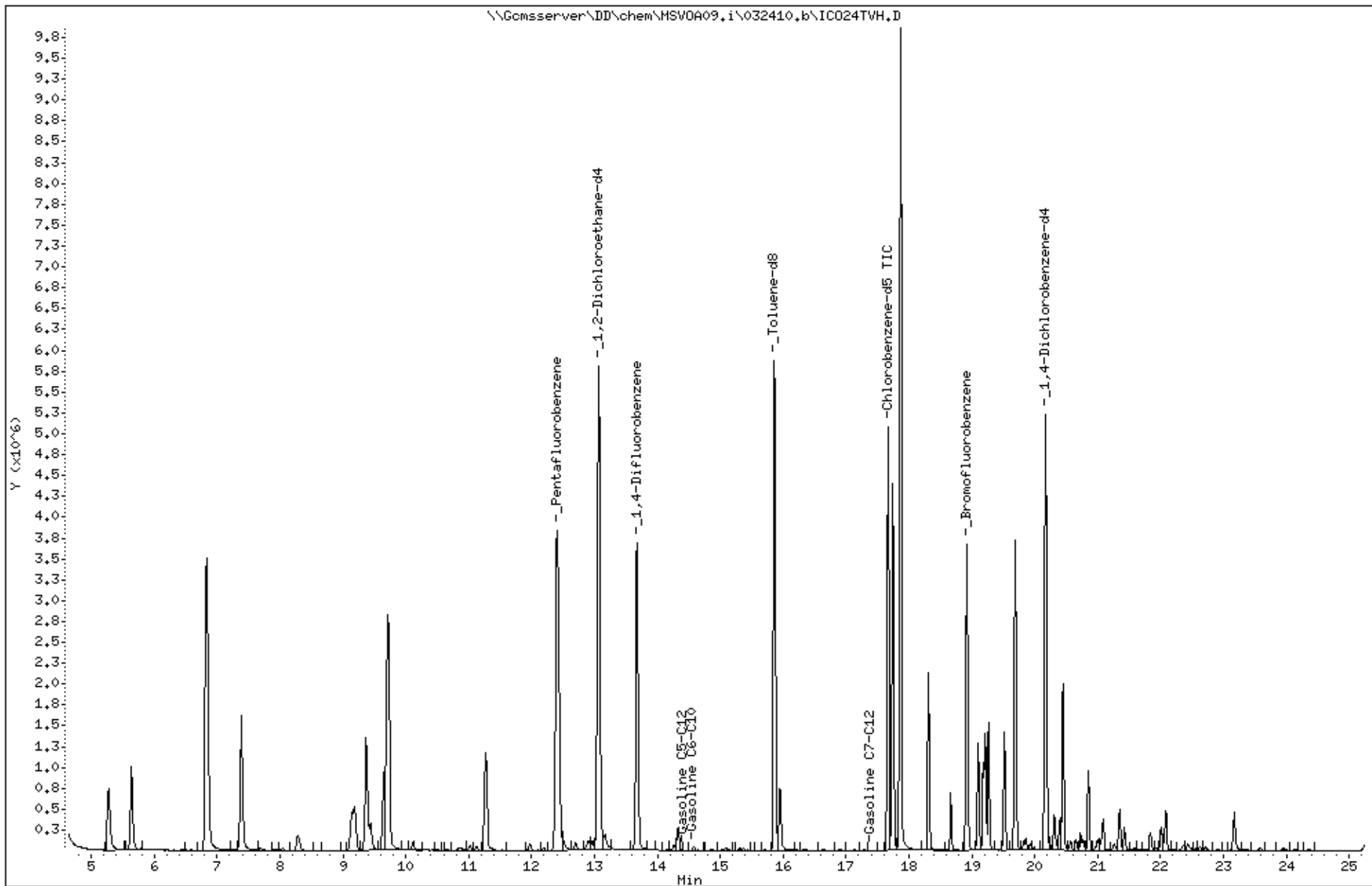
Sample Info: S,218910-011

Instrument: MSV0A09,i

Operator: VOC

Column diameter: 2,00

Column phase:





Date : 25-MAR-2010 23:37

Client ID: DYNA P&T

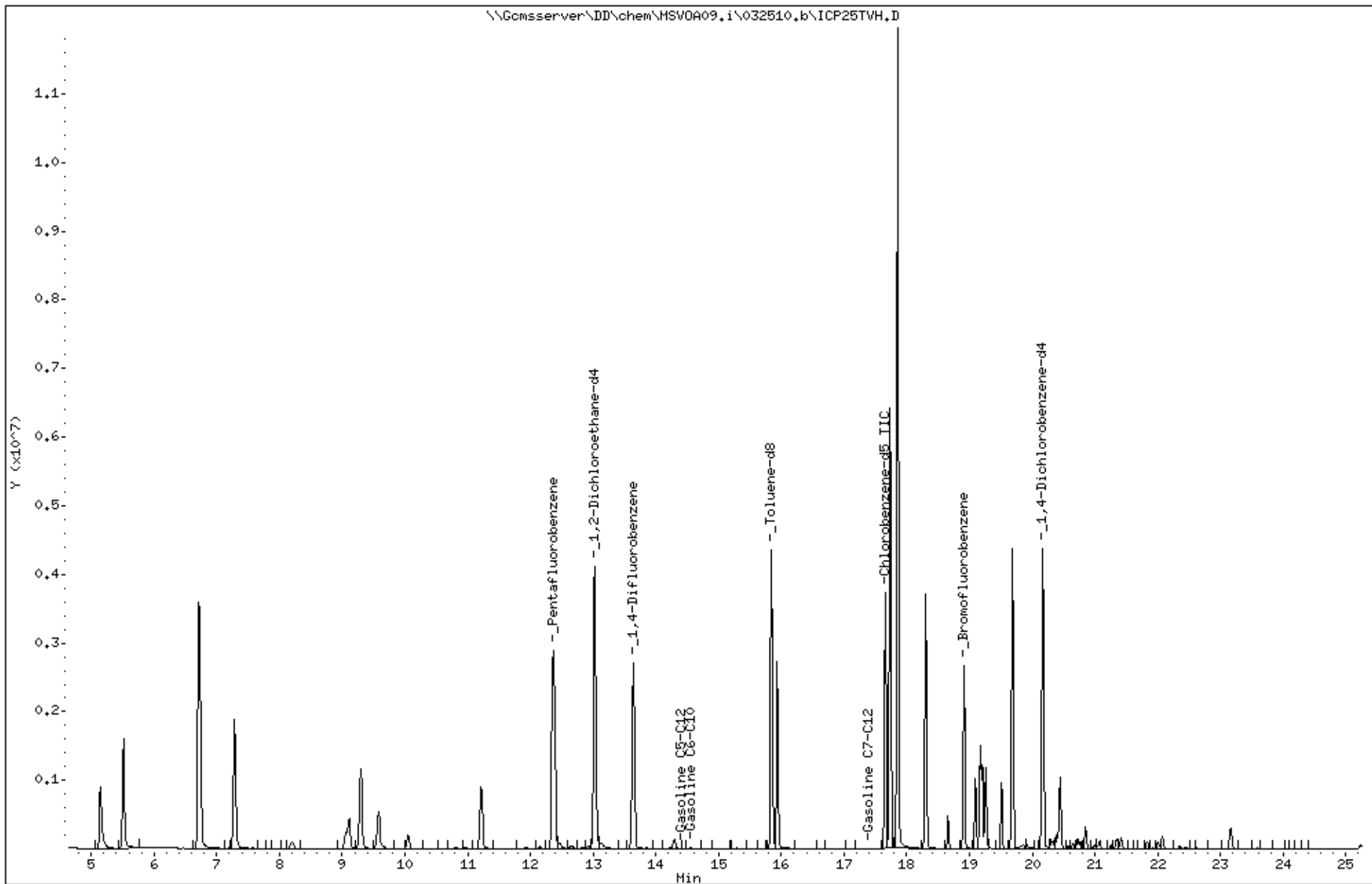
Sample Info: S,218910-012

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:



Date : 24-MAR-2010 13:36

Client ID: DYNA P&T

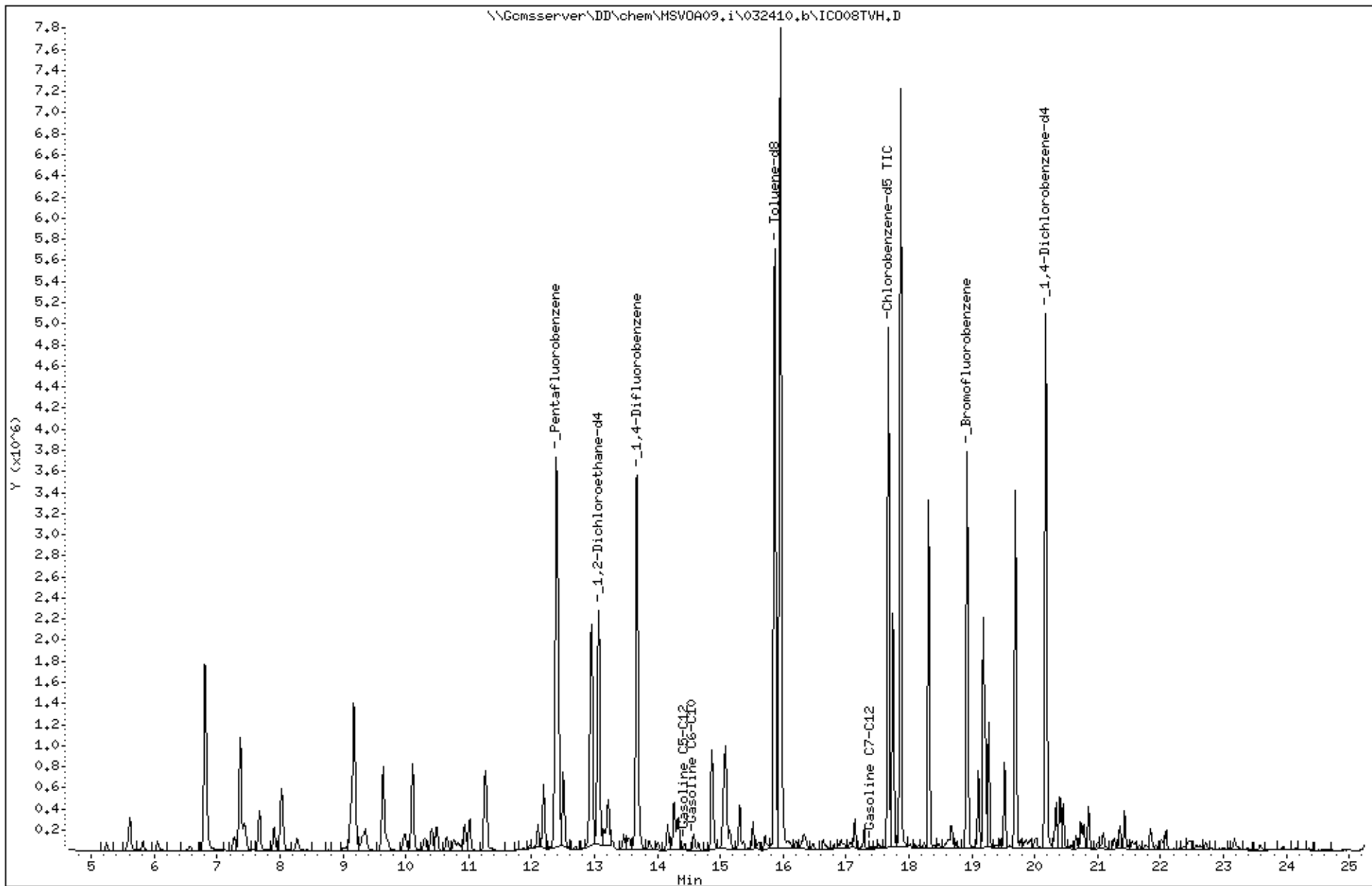
Sample Info: CCV/BS,QC537343,161232,

Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:



# 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 217491  
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  
217491-001

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:

Project Manager

Date: 01/06/2010

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 217491  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 12/29/09  
Samples Received: 12/29/09

This data package contains sample and QC results for one water sample, requested for the above referenced project on 12/29/09. 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

**Curtis & Tompkins, Ltd**

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

**Analyses**

LOGIN # 217491

Sampler: Jesse Acadillo

Project No: 2553

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

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
	Effluent	12/29/99 1230	*			6 VOAs	*			*
			*			2-1L Amber				*
			*			250 mL Poly		*		*
			*			500 mL Poly				*

TPH-g, TPH-d, TPH-mo 8015	BTEX 8020	COD	pH, TSS																	
*	*																			
*																				
		*																		
			*																	

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:	RECEIVED BY:
<i>[Signature]</i> 12/29/99 1307 DATE/TIME	<i>[Signature]</i> 12/29/99 1307 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 217491 Date Received 12-29 Number of coolers 1
Client Spring Environmental Project 15101 Freedom Ave.

Date Opened 12-29 By (print) Elms Tsadik (sign) Elms Tsadik
Date Logged in [initials] By (print) [initials] (sign) [initials]

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)

- 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

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 217491

Sample	pH: <2	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	_____
g	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
h	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
i	<input type="checkbox"/>	<input type="checkbox"/>	_____
j	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: Elias Tsadic  
Date: 12-29-09



**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	158749
Matrix:	Water	Sampled:	12/29/09
Units:	ug/L	Received:	12/29/09
Diln Fac:	1.000	Analyzed:	12/30/09

Type: SAMPLE                      Lab ID: 217491-001

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
Trifluorotoluene (FID)	80	48-162	EPA 8015B
Bromofluorobenzene (FID)	81	52-158	EPA 8015B
Trifluorotoluene (PID)	78	21-180	EPA 8021B
Bromofluorobenzene (PID)	78	26-167	EPA 8021B

Type: BLANK                      Lab ID: QC527622

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)	82	48-162	EPA 8015B
Bromofluorobenzene (FID)	80	52-158	EPA 8015B
Trifluorotoluene (PID)	76	21-180	EPA 8021B
Bromofluorobenzene (PID)	77	26-167	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit

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

Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	158749
Units:	ug/L	Analyzed:	12/30/09
Diln Fac:	1.000		

Type: BS Lab ID: QC527623

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.682	97	69-121
Toluene	10.00	9.788	98	64-132
Ethylbenzene	10.00	9.712	97	64-136
m,p-Xylenes	10.00	9.947	99	63-138
o-Xylene	10.00	9.540	95	64-135

Surrogate	%REC	Limits
Trifluorotoluene (PID)	67	21-180
Bromofluorobenzene (PID)	64	26-167

Type: BSD Lab ID: QC527624

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	9.024	90	69-121	7	24
Toluene	10.00	9.095	91	64-132	7	27
Ethylbenzene	10.00	9.348	93	64-136	4	27
m,p-Xylenes	10.00	9.374	94	63-138	6	32
o-Xylene	10.00	8.997	90	64-135	6	27

Surrogate	%REC	Limits
Trifluorotoluene (PID)	78	21-180
Bromofluorobenzene (PID)	72	26-167

RPD= Relative Percent Difference

## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217491	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:	QC527625	Batch#:	158749
Matrix:	Water	Analyzed:	12/30/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,040	104	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	89	48-162
Bromofluorobenzene (FID)	71	52-158

## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	ZZZZZZZZZZ	Batch#:	158749
MSS Lab ID:	217443-007	Sampled:	12/22/09
Matrix:	Water	Received:	12/23/09
Units:	ug/L	Analyzed:	12/30/09
Diln Fac:	1.000		

Type: MS Lab ID: QC527626

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	<6.172	2,000	1,852	93	49-129	EPA 8015B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	102	48-162	EPA 8015B
Bromofluorobenzene (FID)	82	52-158	EPA 8015B
Trifluorotoluene (PID)	86	21-180	EPA 8021B
Bromofluorobenzene (PID)	67	26-167	EPA 8021B

Type: MSD Lab ID: QC527627

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	2,207	110	49-129	17	19	EPA 8015B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	48-162	EPA 8015B
Bromofluorobenzene (FID)	116	52-158	EPA 8015B
Trifluorotoluene (PID)	96	21-180	EPA 8021B
Bromofluorobenzene (PID)	72	26-167	EPA 8021B

RPD= Relative Percent Difference

Total Extractable Hydrocarbons			
Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	158757
Matrix:	Water	Sampled:	12/29/09
Units:	ug/L	Received:	12/29/09
Diln Fac:	1.000	Prepared:	12/30/09

Type: SAMPLE Analyzed: 01/04/10  
 Lab ID: 217491-001

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

Surrogate	%REC	Limits
o-Terphenyl	117	39-150

Type: BLANK Analyzed: 12/31/09  
 Lab ID: QC527650

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

Surrogate	%REC	Limits
o-Terphenyl	113	39-150

ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	158757
Units:	ug/L	Prepared:	12/30/09
Diln Fac:	1.000	Analyzed:	01/04/10

Type: BS Lab ID: QC527651

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,704	108	34-144

Surrogate	%REC	Limits
o-Terphenyl	124	39-150

Type: BSD Lab ID: QC527652

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,748	110	34-144	2	48

Surrogate	%REC	Limits
o-Terphenyl	126	39-150

RPD= Relative Percent Difference

Chemical Oxygen Demand			
Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	158869
Field ID:	EFFLUENT	Sampled:	12/29/09 12:30
Matrix:	Water	Received:	12/29/09
Units:	mg/L	Prepared:	01/05/10 14:00
Diln Fac:	1.000	Analyzed:	01/05/10 16:00

Type	Lab ID	Result	RL
SAMPLE	217491-001	ND	10
BLANK	QC528092	ND	10

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Chemical Oxygen Demand			
Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	158869
Field ID:	EFFLUENT	Sampled:	12/29/09 12:30
MSS Lab ID:	217491-001	Received:	12/29/09
Matrix:	Water	Prepared:	01/05/10 14:00
Units:	mg/L	Analyzed:	01/05/10 16:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC528093		100.0	93.46	93	90-110		
MS	QC528094	<10.00	100.0	91.29	91	41-150		
MSD	QC528095		100.0	95.63	96	41-150	5	29

RPD= Relative Percent Difference



pH			
Lab #:	217491	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#:	158725
Lab ID:	217491-001	Sampled:	12/29/09 12:30
Matrix:	Water	Received:	12/29/09
Units:	SU	Analyzed:	12/29/09 18:40

Result	RL
7.5	1.0

RL= Reporting Limit

## Batch QC Report

pH	
Lab #: 217491	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#: 158725
MSS Lab ID: 217491-001	Sampled: 12/29/09 12:30
Lab ID: QC527524	Received: 12/29/09
Matrix: Water	Analyzed: 12/29/09 18:40

MSS Result	Result	RL	RPD	Lim
7.490	7.500	1.000	0	1

RL= Reporting Limit

RPD= Relative Percent Difference

**Total Suspended Solids (TSS)**

Lab #:	217491	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	158850
Field ID:	EFFLUENT	Sampled:	12/29/09
Matrix:	Water	Received:	12/29/09
Units:	mg/L	Analyzed:	01/05/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	217491-001	ND	5
BLANK	QC528019	ND	5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Total Suspended Solids (TSS)</b>			
Lab #:	217491	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#:	158850
MSS Lab ID:	217491-001	Sampled:	12/29/09
Matrix:	Water	Received:	12/29/09
Units:	mg/L	Analyzed:	01/05/10

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC528020		50.00	49.00		98	87-110		
BSD	QC528021		50.00	51.00		102	87-110	4	5
SSPIKE	QC528022	<5.000	50.00	48.00		96	34-152		
SDUP	QC528023	<5.000		<5.000	5.000			NC	5

NC= Not Calculated

RL= Reporting Limit

RPD= Relative Percent Difference



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

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

**Laboratory Job Number 217832  
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	217832-001
EFFLUENT	217832-002
GAC-1	217832-003
INFLUENT	217832-004

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: \_\_\_\_\_

Project Manager

Date: 01/27/2010

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 217832  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 01/19/10  
Samples Received: 01/19/10

This data package contains sample and QC results for four water samples, requested for the above referenced project on 01/19/10. 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

## Curtis & Tompkins, Ltd

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

## Analyses

LOGIN # 217832

Sampler: Masoud Sepehr

Project No: 2553

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

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
1	EFFLUENT	1/18/10 2:30	*			6 VOAs	*			*
		2:30	*			2-1L Amber				*
		2:30	*			250 mL Poly		*		*
		5:00	*			500 mL Poly				*
2	GAC-1	1/18/10 3:00	*			6 VOAs	*			*
3	INFLUENT	1/18/10 3:30	*			6 VOAs	*			*

TPH-g 8015	TPH-d, TPH-mo 8015	BTEX 8020	COD	pH, TSS															
*		*																	
	*																		
			*																
				*															
*		*																	
*		*																	

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:

RECEIVED BY:

*[Signature]*  
 1/18/10 5:30  
 DATE/TIME  
*[Signature]*  
 1/19/10 12:30  
 DATE/TIME  
 DATE/TIME

*[Signature]* 1/18/10 5:30  
 DATE/TIME  
*[Signature]* 1/19/10 12:30  
 DATE/TIME  
 DATE/TIME

intact cold RC

COOLER RECEIPT CHECKLIST



Login # 217832 Date Received 1/19/10 Number of coolers 1
Client GOMA ENV. Project 1510 FREEDOM AVE, SL

Date Opened 1/19/10 By (print) M. VILLANUEVA (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

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)
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
[Blank lines for comments]



Curtis & Tompkins Sample Preservation for 217832

Sample	pH: <2	>12	Other
-001a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[ ]	[ ]	_____
e	[ ]	[ ]	_____
f	[ ]	[ ]	_____
g	[ / ]	[ ]	_____
h	[ ]	[ ]	_____
i	[ ]	[ ]	_____
-002a	[ ]	[ ]	_____
-003a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[ ]	[ ]	_____
e	[ ]	[ ]	_____
f	[ ]	[ ]	_____
-004a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[ ]	[ ]	_____
e	[ ]	[ ]	_____
f	[ ]	[ ]	_____

Analyst: MV  
Date: 1/19/10

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Matrix:	Water	Sampled:	01/18/10
Units:	ug/L	Received:	01/19/10
Diln Fac:	1.000	Analyzed:	01/21/10
Batch#:	159359		

Field ID:           EFFLUENT                                  Lab ID:                       217832-001  
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)	110	48-162	EPA 8015B
Bromofluorobenzene (FID)	113	52-158	EPA 8015B
Trifluorotoluene (PID)	107	21-180	EPA 8021B
Bromofluorobenzene (PID)	114	26-167	EPA 8021B

Field ID:           GAC-1                                        Lab ID:                       217832-003  
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)	109	48-162	EPA 8015B
Bromofluorobenzene (FID)	111	52-158	EPA 8015B
Trifluorotoluene (PID)	107	21-180	EPA 8021B
Bromofluorobenzene (PID)	114	26-167	EPA 8021B

ND= Not Detected  
RL= Reporting Limit

### Curtis & Tompkins Laboratories Analytical Report

Lab #: 217832	Location: 15101 Freedom Ave. San Leandro
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2553	
Matrix: Water	Sampled: 01/18/10
Units: ug/L	Received: 01/19/10
Diln Fac: 1.000	Analyzed: 01/21/10
Batch#: 159359	

Field ID: INFLUENT                      Lab ID: 217832-004  
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	1,900	50	EPA 8015B
Benzene	79	0.50	EPA 8021B
Toluene	32	0.50	EPA 8021B
Ethylbenzene	2.4	0.50	EPA 8021B
m,p-Xylenes	180	0.50	EPA 8021B
o-Xylene	80	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	134	48-162	EPA 8015B
Bromofluorobenzene (FID)	111	52-158	EPA 8015B
Trifluorotoluene (PID)	123	21-180	EPA 8021B
Bromofluorobenzene (PID)	117	26-167	EPA 8021B

Type: BLANK                              Lab ID: QC529889

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)	90	48-162	EPA 8015B
Bromofluorobenzene (FID)	85	52-158	EPA 8015B
Trifluorotoluene (PID)	87	21-180	EPA 8021B
Bromofluorobenzene (PID)	86	26-167	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit

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

Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	159359
Units:	ug/L	Analyzed:	01/21/10
Diln Fac:	1.000		

Type: BS Lab ID: QC529890

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.698	97	69-121
Toluene	10.00	9.483	95	64-132
Ethylbenzene	10.00	9.505	95	64-136
m,p-Xylenes	10.00	9.469	95	63-138
o-Xylene	10.00	9.439	94	64-135

Surrogate	%REC	Limits
Trifluorotoluene (PID)	109	21-180
Bromofluorobenzene (PID)	111	26-167

Type: BSD Lab ID: QC529891

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	9.654	97	69-121	0	24
Toluene	10.00	9.981	100	64-132	5	27
Ethylbenzene	10.00	9.658	97	64-136	2	27
m,p-Xylenes	10.00	9.771	98	63-138	3	32
o-Xylene	10.00	9.652	97	64-135	2	27

Surrogate	%REC	Limits
Trifluorotoluene (PID)	108	21-180
Bromofluorobenzene (PID)	110	26-167

RPD= Relative Percent Difference

## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217832	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:	QC529892	Batch#:	159359	
Matrix:	Water	Analyzed:	01/21/10	
Units:	ug/L			

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,095	110	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	123	48-162
Bromofluorobenzene (FID)	106	52-158

Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	159359
MSS Lab ID:	217841-002	Sampled:	01/19/10
Matrix:	Water	Received:	01/19/10
Units:	ug/L	Analyzed:	01/22/10
Diln Fac:	1.000		

Type: MS Lab ID: QC529893

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	116.8	2,000	2,294	109	49-129

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	48-162
Bromofluorobenzene (FID)	112	52-158

Type: MSD Lab ID: QC529894

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,288	109	49-129	0	19

Surrogate	%REC	Limits
Trifluorotoluene (FID)	140	48-162
Bromofluorobenzene (FID)	115	52-158

RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\021.seq  
 Sample Name: 217832-004,159359,btxe+tvh  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\021\_011  
 Instrument: GC07 (Offline) Vial: N/A Operator: RSK-175 Analyst (lims2k3\rsk175)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\thbtxe018.met

Software Version 3.1.7  
 Run Date: 1/21/2010 9:56:01 PM  
 Analysis Date: 1/22/2010 10:15:02 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a7.0

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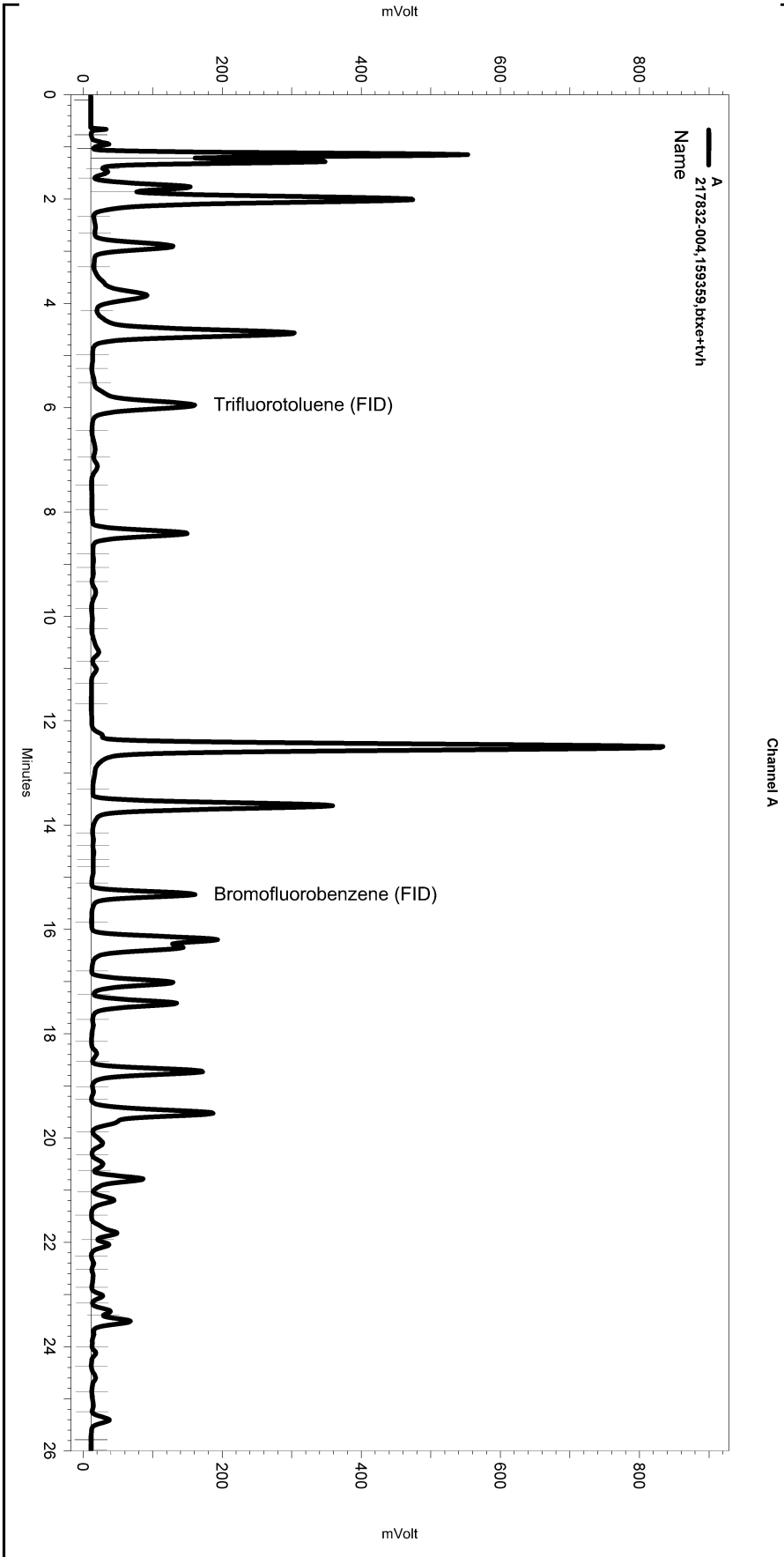
Integration Events

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

Manual Integration Fixes

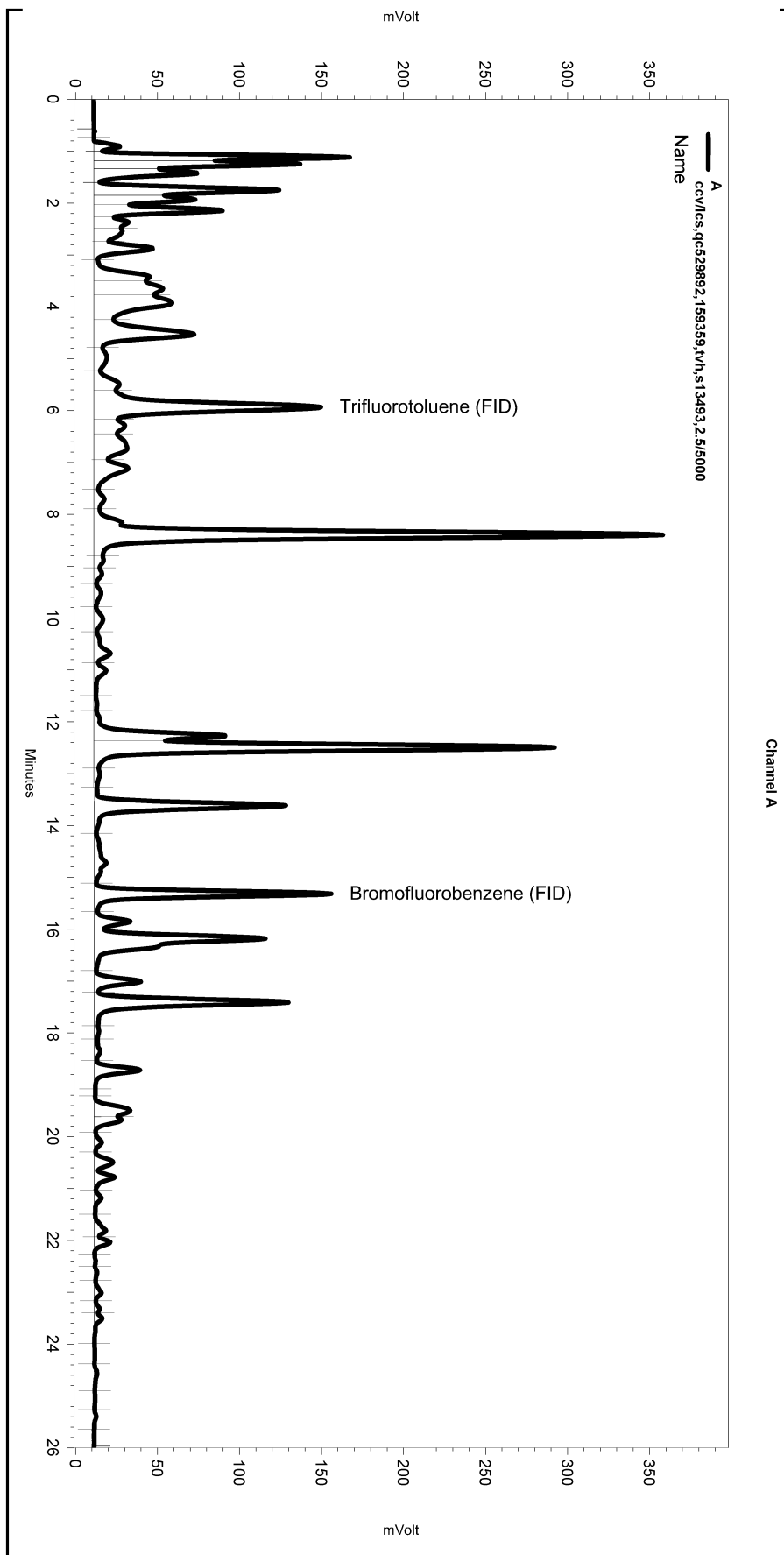
Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\021\_011

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	5.514	0	0



Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\021.seq  
 Sample Name: ccv/lcs,qc529892,159359,tvh,s13493,2.5/5000  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\021\_003  
 Instrument: GC07 (Offline) Vial: N/A Operator: RSK-175 Analyst (lims2k3\rsk175)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\lvhbtxe018.met

Software Version 3.1.7  
 Run Date: 1/21/2010 9:22:00 AM  
 Analysis Date: 1/22/2010 9:55:06 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\021\_003

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				



Total Extractable Hydrocarbons			
Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	01/18/10
Matrix:	Water	Received:	01/19/10
Units:	ug/L	Prepared:	01/20/10
Diln Fac:	1.000	Analyzed:	01/21/10
Batch#:	159295		

Type: SAMPLE Lab ID: 217832-001

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

Surrogate	%REC	Limits
o-Terphenyl	94	39-150

Type: BLANK Lab ID: QC529664

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

Surrogate	%REC	Limits
o-Terphenyl	99	39-150

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons				
Lab #:	217832	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:	QC529665	Batch#:	159295	
Matrix:	Water	Prepared:	01/20/10	
Units:	ug/L	Analyzed:	01/21/10	

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,467	99	34-144

Surrogate	%REC	Limits
o-Terphenyl	112	39-150

Batch QC Report

Total Extractable Hydrocarbons					
Lab #:	217832	Location:	15101 Freedom Ave. San Leandro		
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C		
Project#:	2553	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Batch#:	159295		
MSS Lab ID:	217841-002	Sampled:	01/19/10		
Matrix:	Water	Received:	01/19/10		
Units:	ug/L	Prepared:	01/20/10		
Diln Fac:	1.000	Analyzed:	01/22/10		

Type: MS Cleanup Method: EPA 3630C  
 Lab ID: QC529666

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	339.3	2,500	1,789	58	21-160

Surrogate	%REC	Limits
o-Terphenyl	63	39-150

Type: MSD Cleanup Method: EPA 3630C  
 Lab ID: QC529667

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,967	65	21-160	9	58

Surrogate	%REC	Limits
o-Terphenyl	69	39-150

RPD= Relative Percent Difference

Chemical Oxygen Demand			
Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	159508
Field ID:	EFFLUENT	Sampled:	01/18/10 14:30
Matrix:	Water	Received:	01/19/10
Units:	mg/L	Prepared:	01/27/10 12:30
Diln Fac:	1.000	Analyzed:	01/27/10 14:30

Type	Lab ID	Result	RL
SAMPLE	217832-001	ND	10
BLANK	QC530524	ND	10

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Chemical Oxygen Demand			
Lab #:	217832	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	159508
Field ID:	EFFLUENT	Sampled:	01/18/10 14:30
MSS Lab ID:	217832-001	Received:	01/19/10
Matrix:	Water	Prepared:	01/27/10 12:30
Units:	mg/L	Analyzed:	01/27/10 14:30
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC530525		75.00	69.55	93	90-110		
MS	QC530526	<10.00	150.0	143.5	96	41-150		
MSD	QC530527		150.0	143.5	96	41-150	0	29

RPD= Relative Percent Difference

pH			
Lab #:	217832	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#:	159260
Lab ID:	217832-002	Sampled:	01/18/10 17:00
Matrix:	Water	Received:	01/19/10
Units:	SU	Analyzed:	01/19/10 16:45

Result	RL
7.4	1.0

RL= Reporting Limit

## Batch QC Report

pH	
Lab #: 217832	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#: 159260
MSS Lab ID: 217812-001	Sampled: 01/18/10 10:15
Lab ID: QC529507	Received: 01/19/10
Matrix: Water	Analyzed: 01/19/10 16:45

MSS Result	Result	RL	RPD	Lim
7.020	7.010 b	1.000	0	1

b= See narrative

RL= Reporting Limit

RPD= Relative Percent Difference

**Total Suspended Solids (TSS)**

Lab #:	217832	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#:	159338
Matrix:	Water	Sampled:	01/18/10
Units:	mg/L	Received:	01/19/10

Type	Lab ID	Result	RL	Analyzed
SAMPLE	217832-002	ND	5	01/21/10
BLANK	QC529819	ND	5	01/20/10

ND= Not Detected  
 RL= Reporting Limit



**Batch QC Report**

<b>Total Suspended Solids (TSS)</b>			
Lab #:	217832	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#:	159338
MSS Lab ID:	217832-002	Sampled:	01/18/10
Matrix:	Water	Received:	01/19/10
Units:	mg/L	Analyzed:	01/20/10

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC529820		50.00	50.00		100	87-110		
BSD	QC529821		50.00	49.00		98	87-110	2	5
SSPIKE	QC529822	<5.000	50.00	51.00		102	34-152		
SDUP	QC529823	<5.000		<5.000	5.000			NC	5

NC= Not Calculated

RL= Reporting Limit

RPD= Relative Percent Difference



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

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

**Laboratory Job Number 218308**  
**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  
218308-001

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: \_\_\_\_\_

Project Manager

Date: 02/23/2010

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 218308  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 02/16/10  
Samples Received: 02/16/10

This data package contains sample and QC results for one water sample, requested for the above referenced project on 02/16/10. The sample was received cold and intact.

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

High response was observed for m,p-xylenes in the CCV analyzed 02/16/10 21:12; affected data was qualified with "b". No other analytical problems were encountered.

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

No analytical problems were encountered.

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

High RPD was observed for total suspended solids in the MS/MSD for batch 160122; the parent sample was not a project sample, and this analyte was not detected at or above the RL in the associated sample. No other analytical problems were encountered.

**pH (EPA 9040C):**

High RPD was observed for pH in the SDUP of EFFLUENT (lab # 218308-001). No other analytical problems were encountered.

**Chemical Oxygen Demand (SM5220D):**

No analytical problems were encountered.

# CHAIN OF CUSTODY

## Analyses

### Curtis & Tompkins, Ltd

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

LOGIN # 219308

Sampler: MASOUD - Sepehr

Project No: 2553

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

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE	
	Effluent	2,15,10 - 12,30	*			6 VOAs	*			*	
		↕ 12,30	*			2-1L Amber				*	
			*			250 mL Poly		*		*	
			*			500 mL Poly				*	

TPH-g, TPH-d, TPH-mo 8015	BTEX 8020	COD	pH, TSS							
*	*									
*										
		*								
			*							

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:

RECEIVED BY:

*[Signature]*  
2,15,10 - 12,30 DATE/TIME  
DATE/TIME  
DATE/TIME

*[Signature]*  
2-16-10  
DATE/TIME  
DATE/TIME  
DATE/TIME

*[Signature]*

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 218308 Date Received 2-16-10 Number of coolers 1
Client SOMA ENV. Project 1510 FREEDOM AVE, SAN LEOBARDO

Date Opened 2-16-10 By (print) S. EVANS (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

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) \_\_\_\_\_

- 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

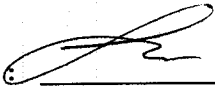
16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 218308

<u>Sample</u>	<u>pH: &lt;2</u>	<u>&gt;12</u>	<u>Other</u>
-001a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[ ]	[ ]	_____
e	[ ]	[ ]	_____
f	[ ]	[ ]	_____
g	<input checked="" type="checkbox"/>	[ ]	_____
h	[ ]	[ ]	_____
i	[ ]	[ ]	_____
j	[ ]	[ ]	_____

Analyst:   
Date: 2-16-10

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	160081
Matrix:	Water	Sampled:	02/15/10
Units:	ug/L	Received:	02/16/10
Diln Fac:	1.000	Analyzed:	02/16/10

Type: SAMPLE                      Lab ID: 218308-001

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
Trifluorotoluene (FID)	111	48-162	EPA 8015B
Bromofluorobenzene (FID)	113	52-158	EPA 8015B
Trifluorotoluene (PID)	100	21-180	EPA 8021B
Bromofluorobenzene (PID)	105	26-167	EPA 8021B

Type: BLANK                      Lab ID: QC532783

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)	101	48-162	EPA 8015B
Bromofluorobenzene (FID)	96	52-158	EPA 8015B
Trifluorotoluene (PID)	93	21-180	EPA 8021B
Bromofluorobenzene (PID)	93	26-167	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	160081
Units:	ug/L	Analyzed:	02/16/10
Diln Fac:	1.000		

Type: BS Lab ID: QC532784

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	10.50	105	69-121
Toluene	10.00	10.78	108	64-132
Ethylbenzene	10.00	10.84	108	64-136
m,p-Xylenes	10.00	10.50	105	63-138
o-Xylene	10.00	10.76	108	64-135

Surrogate	%REC	Limits
Trifluorotoluene (PID)	96	21-180
Bromofluorobenzene (PID)	103	26-167

Type: BSD Lab ID: QC532785

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	10.44	104	69-121	1	24
Toluene	10.00	10.82	108	64-132	0	27
Ethylbenzene	10.00	10.72	107	64-136	1	27
m,p-Xylenes	10.00	10.85 b	109	63-138	3	32
o-Xylene	10.00	10.87	109	64-135	1	27

Surrogate	%REC	Limits
Trifluorotoluene (PID)	100	21-180
Bromofluorobenzene (PID)	107	26-167

b= See narrative

RPD= Relative Percent Difference



## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218308	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:	QC532786	Batch#:	160081	
Matrix:	Water	Analyzed:	02/16/10	
Units:	ug/L			

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	929.6	93	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	129	48-162
Bromofluorobenzene (FID)	114	52-158

Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	160081
MSS Lab ID:	218308-001	Sampled:	02/15/10
Matrix:	Water	Received:	02/16/10
Units:	ug/L	Analyzed:	02/16/10
Diln Fac:	1.000		

Type: MS Lab ID: QC532787

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	12.14	2,000	1,945	97	49-129

Surrogate	%REC	Limits
Trifluorotoluene (FID)	125	48-162
Bromofluorobenzene (FID)	115	52-158

Type: MSD Lab ID: QC532788

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,987	99	49-129	2	19

Surrogate	%REC	Limits
Trifluorotoluene (FID)	133	48-162
Bromofluorobenzene (FID)	119	52-158

RPD= Relative Percent Difference

Total Extractable Hydrocarbons			
Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	02/15/10
Matrix:	Water	Received:	02/16/10
Units:	ug/L	Prepared:	02/17/10
Diln Fac:	1.000	Analyzed:	02/18/10
Batch#:	160124		

Type: SAMPLE Lab ID: 218308-001

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

Surrogate	%REC	Limits
o-Terphenyl	105	39-150

Type: BLANK Lab ID: QC532972

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

Surrogate	%REC	Limits
o-Terphenyl	105	39-150

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	160124
Units:	ug/L	Prepared:	02/17/10
Diln Fac:	1.000	Analyzed:	02/19/10

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC532973

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,853	74	34-144

Surrogate	%REC	Limits
o-Terphenyl	86	39-150

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC532974

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,254	90	34-144	19	48

Surrogate	%REC	Limits
o-Terphenyl	106	39-150

RPD= Relative Percent Difference

Chemical Oxygen Demand			
Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	160258
Field ID:	EFFLUENT	Sampled:	02/15/10 12:30
Matrix:	Water	Received:	02/16/10
Units:	mg/L	Prepared:	02/22/10 12:30
Diln Fac:	1.000	Analyzed:	02/22/10 14:30

Type	Lab ID	Result	RL
SAMPLE	218308-001	11	10
BLANK	QC533457	ND	10

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Chemical Oxygen Demand</b>			
Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	160258
Field ID:	EFFLUENT	Sampled:	02/15/10 12:30
MSS Lab ID:	218308-001	Received:	02/16/10
Matrix:	Water	Prepared:	02/22/10 12:30
Units:	mg/L	Analyzed:	02/22/10 14:30
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC533458		75.00	76.07	101	90-110		
MS	QC533459	10.87	150.0	152.1	94	41-150		
MSD	QC533460		150.0	156.5	97	41-150	3	29

RPD= Relative Percent Difference

pH			
Lab #:	218308	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#:	160064
Lab ID:	218308-001	Sampled:	02/15/10 12:30
Matrix:	Water	Received:	02/16/10
Units:	SU	Analyzed:	02/16/10 10:25

Result	RL
6.7	1.0

RL= Reporting Limit

Batch QC Report

pH			
Lab #:	218308	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#:	160064
MSS Lab ID:	218308-001	Sampled:	02/15/10 12:30
Lab ID:	QC532712	Received:	02/16/10
Matrix:	Water	Analyzed:	02/16/10 10:25

MSS Result	Result	RL	RPD	Lim
6.730	6.850	1.000	2 *	1

\*= Value outside of QC limits; see narrative

RL= Reporting Limit

RPD= Relative Percent Difference



**Total Suspended Solids (TSS)**

Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	160122
Field ID:	EFFLUENT	Sampled:	02/15/10
Matrix:	Water	Received:	02/16/10
Units:	mg/L	Prepared:	02/17/10
Diln Fac:	1.000	Analyzed:	02/18/10

Type	Lab ID	Result	RL
SAMPLE	218308-001	ND	5
BLANK	QC532964	ND	5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Total Suspended Solids (TSS)</b>			
Lab #:	218308	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	160122
Field ID:	ZZZZZZZZZZ	Sampled:	02/10/10
MSS Lab ID:	218243-001	Received:	02/10/10
Matrix:	Water	Prepared:	02/17/10
Units:	mg/L	Analyzed:	02/18/10
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC532965		50.00	49.00	98	87-110		
MS	QC532966	15.00	50.00	59.00	118	34-152		
MSD	QC532967		50.00	65.00	100	34-152	10 * 5	

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



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

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

**Laboratory Job Number 218812**  
**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  
218812-001

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: \_\_\_\_\_

Project Manager

Date: 03/22/2010

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 218812  
Client: SOMA Environmental Engineering Inc.  
Project: 2553  
Location: 15101 Freedom Ave. San Leandro  
Request Date: 03/15/10  
Samples Received: 03/15/10

This data package contains sample and QC results for one water sample, requested for the above referenced project on 03/15/10. 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

## Analyses

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

LOGIN # 218812

Sampler: MASOUD - SEPEHR

Project No: 2553

Report To: Joyce Bobek

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

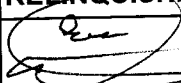
Turnaround Time: Standard

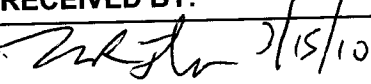
Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				TPH-g, TPH-d, TPH-mo 8015	BTEX 8020	COD	pH, TSS	
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE					
	Effluent	3,15,10-2	*			6 VOAs	*				*				
		↕	*			2-1L Amber					*				
			*			250 mL Poly		*				*			
			*			500 mL Poly						*			

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:  
  
3,15,10-2 DATE/TIME  
 DATE/TIME  
 DATE/TIME

RECEIVED BY:  
  
3/15/10 16:24 DATE/TIME  
 DATE/TIME  
 DATE/TIME

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 218812 Date Received 3-15-10 Number of coolers 1  
Client SOMA Project 15101 FREEDOM AVE. SAN LEANARDO

Date Opened 3-15-10 By (print) SENA (sign) [Signature]  
Date Logged in 3 By (print) [Signature] (sign) [Signature]

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) \_\_\_\_\_

- 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 Laboratories Analytical Report**

Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	161016
Matrix:	Water	Sampled:	03/15/10
Units:	ug/L	Received:	03/15/10
Diln Fac:	1.000	Analyzed:	03/17/10

Type: SAMPLE                      Lab ID: 218812-001

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
Trifluorotoluene (FID)	87	48-162	EPA 8015B
Bromofluorobenzene (FID)	101	52-158	EPA 8015B
Trifluorotoluene (PID)	81	21-180	EPA 8021B
Bromofluorobenzene (PID)	87	26-167	EPA 8021B

Type: BLANK                      Lab ID: QC536427

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)	88	48-162	EPA 8015B
Bromofluorobenzene (FID)	97	52-158	EPA 8015B
Trifluorotoluene (PID)	85	21-180	EPA 8021B
Bromofluorobenzene (PID)	92	26-167	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218812	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:	QC536428	Batch#:	161016	
Matrix:	Water	Analyzed:	03/17/10	
Units:	ug/L			

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	940.3	94	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	48-162
Bromofluorobenzene (FID)	94	52-158



## Batch QC Report

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	161016
MSS Lab ID:	218813-001	Sampled:	03/15/10
Matrix:	Water	Received:	03/15/10
Units:	ug/L	Analyzed:	03/17/10
Diln Fac:	1.000		

Type: MS Lab ID: QC536429

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<6.172	2,000	2,032	102	49-129

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	48-162
Bromofluorobenzene (FID)	106	52-158

Type: MSD Lab ID: QC536430

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,962	98	49-129	3	19

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	48-162
Bromofluorobenzene (FID)	101	52-158

RPD= Relative Percent Difference

## Batch QC Report

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	161016
Units:	ug/L	Analyzed:	03/17/10
Diln Fac:	1.000		

Type: BS Lab ID: QC536431

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.215	92	69-121
Toluene	10.00	9.621	96	64-132
Ethylbenzene	10.00	8.520	85	64-136
m,p-Xylenes	10.00	8.869	89	63-138
o-Xylene	10.00	9.162	92	64-135

Surrogate	%REC	Limits
Trifluorotoluene (PID)	85	21-180
Bromofluorobenzene (PID)	86	26-167

Type: BSD Lab ID: QC536432

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	9.502	95	69-121	3	24
Toluene	10.00	9.875	99	64-132	3	27
Ethylbenzene	10.00	8.745	87	64-136	3	27
m,p-Xylenes	10.00	9.038	90	63-138	2	32
o-Xylene	10.00	9.393	94	64-135	2	27

Surrogate	%REC	Limits
Trifluorotoluene (PID)	81	21-180
Bromofluorobenzene (PID)	81	26-167

RPD= Relative Percent Difference

Total Extractable Hydrocarbons			
Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	03/15/10
Matrix:	Water	Received:	03/15/10
Units:	ug/L	Prepared:	03/16/10
Diln Fac:	1.000	Analyzed:	03/18/10
Batch#:	160979		

Type: SAMPLE Lab ID: 218812-001

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

Surrogate	%REC	Limits
o-Terphenyl	107	39-150

Type: BLANK Lab ID: QC536266

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

Surrogate	%REC	Limits
o-Terphenyl	98	39-150

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	218812	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:	QC536267	Batch#:	160979
Matrix:	Water	Prepared:	03/16/10
Units:	ug/L	Analyzed:	03/18/10

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,456	98	34-144

Surrogate	%REC	Limits
o-Terphenyl	109	39-150

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	160979
MSS Lab ID:	218730-007	Sampled:	03/10/10
Matrix:	Water	Received:	03/11/10
Units:	ug/L	Prepared:	03/16/10
Diln Fac:	1.000		

Type: MS Analyzed: 03/19/10  
 Lab ID: QC536268

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	47.45	2,500	2,593	102	21-160

Surrogate	%REC	Limits
o-Terphenyl	115	39-150

Type: MSD Analyzed: 03/18/10  
 Lab ID: QC536269

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,639	104	21-160	2	58

Surrogate	%REC	Limits
o-Terphenyl	114	39-150

RPD= Relative Percent Difference

Chemical Oxygen Demand			
Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	161089
Field ID:	EFFLUENT	Sampled:	03/15/10 13:00
Matrix:	Water	Received:	03/15/10
Units:	mg/L	Prepared:	03/19/10 11:15
Diln Fac:	1.000	Analyzed:	03/19/10 13:15

Type	Lab ID	Result	RL
SAMPLE	218812-001	ND	10
BLANK	QC536725	ND	10

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Chemical Oxygen Demand			
Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM5220D
Analyte:	Chemical Oxygen Demand	Batch#:	161089
Field ID:	EFFLUENT	Sampled:	03/15/10 13:00
MSS Lab ID:	218812-001	Received:	03/15/10
Matrix:	Water	Prepared:	03/19/10 11:15
Units:	mg/L	Analyzed:	03/19/10 13:15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC536726		75.00	71.72	96	90-110		
MS	QC536727	<10.00	150.0	134.8	90	41-150		
MSD	QC536728		150.0	139.1	93	41-150	3	29

RPD= Relative Percent Difference

pH			
Lab #:	218812	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#:	160944
Lab ID:	218812-001	Sampled:	03/15/10 13:00
Matrix:	Water	Received:	03/15/10
Units:	SU	Analyzed:	03/15/10 18:10

Result	RL
6.5	1.0

RL= Reporting Limit



## Batch QC Report

pH	
Lab #: 218812	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#: 160944
MSS Lab ID: 218813-001	Sampled: 03/15/10 15:00
Lab ID: QC536126	Received: 03/15/10
Matrix: Water	Analyzed: 03/15/10 18:10

MSS Result	Result	RL	RPD	Lim
7.380	7.350	1.000	0	1

RL= Reporting Limit

RPD= Relative Percent Difference

**Total Suspended Solids (TSS)**

Lab #:	218812	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2553	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	161045
Field ID:	EFFLUENT	Sampled:	03/15/10
Matrix:	Water	Received:	03/15/10
Units:	mg/L	Analyzed:	03/18/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	218812-001	ND	5
BLANK	QC536540	ND	5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Total Suspended Solids (TSS)</b>			
Lab #:	218812	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#:	161045
MSS Lab ID:	218775-001	Sampled:	03/12/10
Matrix:	Water	Received:	03/12/10
Units:	mg/L	Analyzed:	03/18/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC536541		50.00	49.00	98	87-110		
MS	QC536542	19.00	50.00	66.00	94	34-152		
MSD	QC536543		50.00	65.00	92	34-152	2	5

RPD= Relative Percent Difference

# Appendix E

## First 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)	EFFLUENT FLOW (IN-H <sub>2</sub> O)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
2/15/2010	1030	begin extraction from MPE-1 and 2, stinger depth ~ 19'										0
	1230	1590	173	24	25.6	60	0	60	0.08	120	2,400	209
	1430	1571	173	24	26.2	50	0	50	0.08	130	2,140	463
	1630	1591	174	23.4	25.8	57	0	57	0.08	144	1,390	904
2/16/2010	730	1531	176	23.4	25.6	60	0	60	0.08	140	eff=4; inf=701	3,276
	1030	1522	181	23	25.8	57	0	57	0.10	144	650	3,674
	1200	1504	179	23	25.6	60	0	60	0.10	140	663	3,870
	1330	1560	173	22.8	25.6	60	0	60	0.10	128	625	4,132
	1430	1517	175	23	25.4	63	0	63	0.10	130	515	4,256
	1630	1557	173	22.8	25.6	60	0	60	0.10	130	575	4,505
2/17/2010	500	1600	180	23	25.4	63	10	53	0.10	140	500	6,339



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
3/29/2010	1100	begin extraction from MPE-1 and 2										311,630
	1200	1516	172	24.4	26.2	50	20	30	0.06	120	2,000	311700
	1400	1499	177	22.2	25	70	0	70	0.08	130	1,059	311987
	1600	1481	185	22.2	25	70	0	70	0.10	150	753	312110
	1700	1490	181	22.2	25	70	0	70	0.10	150	775	312,147
3/30/2010	700	1451	180	22.4	25	70	0	70	0.10	148	386	313,284
	1030	1450	173	22.4	25	70	0	70	0.10	120	336	313,439
	1200	1455	173	22.4	25	70	0	70	0.10	120	371	313,530
	1600	1467	199	22.4	25	70	0	70	0.10	160	342	313,786
	1700	1477	173	22.4	25	70	0	70	0.10	144	360	313,867
3/31/2010	700	1475	190	22.4	25	70	0	70	0.10	150	310	314,936
	930	1483	173	22.1	24.8	73	0	73	0.10	142	365	315,160
	1030	1475	183	22.1	24.8	73	0	73	0.10	144	376	315,210
	1130	1484	185	22	24.8	73	0	73	0.10	146	382	315,300
	1230	1485	188	22.2	24.8	73	0	73	0.10	146	386	315,400
	1330	1474	187	22	24.8	73	0	73	0.10	144	398	315,440