SOMA
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January 31, 2014

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

Subject: Freedom Food and Gas (Formerly Freedom ARCO Mini-Mart)
Site Address: 15101 Freedom Avenue, San Leandro, California
STID 4473/RO0000473

Dear Mr. Detterman:

SOMA's "Fourth Quarter 2013 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,

Mansour Sepehr, Ph.D.,PE
Principal Hydrogeologist

cc: Mr. Mohammad Pazdel w/report enclosure

Fourth Quarter 2013
Groundwater Monitoring and
Remediation Progress Report

Freedom Food and Gas
15101 Freedom Avenue
San Leandro, California

January 31, 2014

Project 2551/2553

Prepared for

Mr. Mohammad Pazdel
1770 Pistacia Court
Fairfield, California

SOMA ENVIRONMENTAL ENGINEERING, INC.
6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 www.somaenv.com

PERJURY STATEMENT

Site Location: 15101 Freedom Avenue, San Leandro, California

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

Mohammad Pazdel
1770 Pistacia Court
Fairfield, California 94533
Responsible Party

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of the responsible party, Mr. Mohammad Pazdel, for property located at 15101 Freedom Avenue, San Leandro, California, to comply with Alameda County Health Care Services requirements for the Fourth Quarter 2013 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 the responsible party, Mr. Mohammad Pazdel, for property located at 15101 Freedom Avenue, San Leandro, California. The site is located in an area of primarily residential properties and adjacent commercial areas (Figure 1). The property was formerly owned by Mr. Mohammad Pazdel. In late 2009, the property was sold to DDH, LLC, Assignee and in early 2010 it was sold to Mr. Mohammad Mashhoon. Under the new management, the site is currently operational with the business name "Freedom Food and Gas" (formerly "Freedom Arco Mini-Mart").

This report summarizes results of the Fourth Quarter 2013 groundwater monitoring event conducted on December 5 and 6, 2013. 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 Fourth Quarter 2013, which includes operation of a groundwater extraction and treatment system. During this reporting period, a month-long multi-phase extraction (MPE) event was conducted from October 15 through November 15, 2013.

1.1 Field Activities

In December 2013, 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 December 5, 2013, 2013, the following wells were measured for depth to groundwater: five on-site monitoring wells (MW-1 to MW-5) and two off-site wells (MW-6 and MW-7) in the First water-bearing zone (WBZ); two extraction wells (EX-1 and EX-2), 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 December 5 and 6, 2013, additional field measurements and groundwater samples were collected from all monitoring and MPE wells, except MPE-2 which was not sampled due to the presence of Free-Product (FP). Grab groundwater samples were also collected from extraction wells EX-1 and EX-2. Properties measured include pH, temperature, and electrical conductivity (EC).

A natural attenuation study was conducted during this event to determine whether petroleum hydrocarbons in groundwater are biodegrading. Dissolved oxygen (DO) and oxidation reduction potential (ORP) measurements were taken for all monitoring and MPE wells.

1.2 Laboratory Analysis

Curtis & Tompkins Laboratories, a California state-certified laboratory, analyzed groundwater samples for the following: total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); methyl tertiary-butyl ether (MtBE); and gasoline oxygenates, ethanol and lead scavengers. Samples were prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

2. RESULTS

Following are results of field measurements and laboratory analysis for the Fourth Quarter 2013 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 16.21 feet in MW-7 to 24.16 feet in MW-1. In MPE-2, 0.12 feet of FP was observed during this monitoring event. Appendix A includes the procedure for FP measurement.

Corresponding groundwater elevations ranged from 27.07 feet in MW-6 to 30.30 feet in MW-1. Groundwater elevations at extraction wells EX-1 and EX-2 were 24.83 feet and 22.68 feet, respectively. Groundwater elevation in MPE-2 was corrected for the presence of FP (Table 1).

Figure 3 displays the contour map of groundwater elevations. As illustrated, groundwater flows towards extraction wells, at a gradient of 0.031 feet/feet. Since the previous monitoring event (Third Quarter 2013) the gradient has remained unchanged. Groundwater gradient calculations are attached in Appendix B.

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO in the First WBZ ranged from 0.60 mg/L in MW-5 to 2.76 mg/L in MW-7. ORP showed negative redox potentials in all tested wells except MW-7. Negative redox potentials indicate that contaminants in groundwater are conducive to anaerobic biodegradation. ORP showed positive redox potential in MW-7. Positive redox potentials are more energetically favorable in utilizing electron acceptors during chemical reactions. This promotes the removal of organic mass from the contaminated groundwater by indigenous bacteria in the subsurface during the release of the transfer of electrons.

Field measurements taken during this monitoring event are included in Appendix B (Table A).

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 was detected in concentrations ranging from 290 µg/L in MW-2 to 27,000 µg/L in MPE-1. As mentioned above (Section 1.1), MPE-2 was not sampled due to the presence of FP in this well. Since the previous monitoring event (Third Quarter 2013), TPH-g increased in MW-2, MW-4, MW-7, and EX-1 and decreased in MW-1, MW-3, MW-5, EX-2, and MPE-1. The decrease was significant in MPE-1.

It is to be noted that no comparison could be made for MPE-2 due to the presence of FP during current event and for MW-6 due to presence of FP during previous event.

Figure 4 displays the contour map of TPH-g concentrations in groundwater. As illustrated, the highest TPH-g impact is in the southern portion of the site and in the vicinity of the dispenser islands around MPE-1.

The following BTEX concentrations were observed:

- Benzene was below laboratory-reporting limits in MW-7. Detectable benzene concentrations ranged from 1.4 µg/L in MW-2 to 3,300 µg/L in MW-4.
- Toluene was below laboratory-reporting limits in MW-1, MW-2, MW-4, and MW-7. Detectable toluene concentrations ranged from 2.1 µg/L in MW-5 to 330 µg/L in MW-6.
- Ethylbenzene was detected in concentrations ranging from 1.1 µg/L in MW-2 to 1,700 µg/L in MW-3.
- Total xylenes were below laboratory-reporting limits in MW-2. Detectable concentrations ranged from 3.10 µg/L in MW-7 to 5,000 µg/L in MPE-1.

Figure 5 displays the contour map of benzene in groundwater. The highest benzene impact is in the southern portion of the site and in the vicinity of the dispenser islands around MW-4. Since the previous monitoring event (Third Quarter 2013), benzene has increased in MW-2, MW-4, and EX-1, and decreased in MW-1, MW-3, MW-5, EX-2, and MPE-1.

MtBE was below the laboratory-reporting limit in MW-1, MW-2, and MW-3. Detectable MtBE ranged from 2.5 µg/L in MW-5 to 110 µg/L in MPE-1. Figure 6 displays the contour map of MtBE concentrations in groundwater. The highest MtBE impact is in the southern portion of the site and in the vicinity of the

dispenser islands around MPE-1. Since the previous monitoring event (Third Quarter 2013), MtBE has increased in MW-7, EX-1, and EX-2, and decreased in MW-4, MW-5, and MPE-1.

As shown in Table 1, TPH-g, benzene, toluene, ethylbenzene, and total xylenes all decreased in more impacted well MPE-1 since the previous monitoring event (Third Quarter 2013) while no comparison could be made for MPE-2 due to the presence of FP.

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, and MW-3 all gasoline oxygenates and lead scavengers were below laboratory-reporting limits.
- Tertiary-butyl alcohol (TBA) was below laboratory-reporting limits in MW-5 and MW-7 along with the wells listed above. Detectable TBA concentrations ranged from 30 µg/L in EX-2 to 1,500 µg/L in MW-4 and MPE-1. Figure 7 shows the contour map of TBA concentrations in First WBZ wells. Since the previous monitoring event (Third Quarter 2013), TBA increased in MW-4, EX-2, and MPE-1, decreased in MW-5 and EX-1, and remained below laboratory-reporting limit in MW-1, MW-2, MW-3, and MW-7.
- Methyl tertiary-amyl ether (TAME) was detected in MW-5 at 3.9 µg/L, MW-7 at 0.73 µg/L, EX-1 at 5.5 µg/L, MPE-1 at 30 µg/L, and was below the laboratory-reporting limit in remaining wells. Figure 7 displays the map of TAME concentrations in First WBZ wells.
- Ethyl tertiary-butyl ether (ETBE) was detected in EX-1 at 1.7 µg/L, and was below laboratory-reporting limits in remaining wells. Figure 7 displays the map of ETBE concentrations in First WBZ wells.
- 1,2-dichloroethane (1,2-DCA) was detected in EX-2 at 1.2 µg/L, and was below laboratory-reporting limits in remaining wells. Figure 7 displays the map of ETBE concentrations in First WBZ wells.
- Isopropyl ether (DIPE), 1,2-dibromoethane (EDB), and ethanol 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 23.43

feet in MW-4D to 24.31 feet in MW-1D. Corresponding groundwater elevations ranged from 29.69 feet in MW-4D to 30.13 feet in MW-3D.

Figure 8 displays the contour map of groundwater elevations in the Second WBZ. Groundwater flows from southwesterly at a gradient of 0.004 feet/feet. The groundwater gradient and the flow direction have remained unchanged since the previous monitoring event (Third Quarter 2013). Groundwater gradient calculations are attached in Appendix B.

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO in the Second WBZ ranged from 0.74 mg/L in MW-3D to 1.34 mg/L in MW-4D. ORP showed positive redox potentials in all second WBZ wells. Positive redox potentials are more energetically favorable in utilizing electron acceptors during chemical reactions. This promotes the removal of organic mass from the contaminated groundwater by indigenous bacteria in the subsurface during the release of the transfer of electrons.

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

2.4 Laboratory Analysis for Second WBZ Wells

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

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

TPH-g and BTEX concentrations were below laboratory-reporting limits in second WBZ wells except for total xylenes detected in MW-1D and MW-3D at 1.3 µg/L and 0.53 µg/L, respectively. Since the previous monitoring event (Third Quarter 2013) total xylenes have increased in MW-1D and MW-3D.

MtBE was below the laboratory-reporting limit in MW-1D and was detected in MW-3D and MW-4D at 1.6 µg/L and 3.4 µg/L, respectively. Since the previous monitoring event (Third Quarter 2013), MtBE has decreased in MW-3D and MW-4D. Figure 9 shows the map of MtBE concentrations in Second WBZ.

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

All gasoline oxygenate, lead scavenger, and ethanol concentrations were below laboratory-reporting limits in Second WBZ wells.

3. OPERATION OF TREATMENT SYSTEM

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

In the treatment compound, groundwater is treated using granular activated carbon (GAC) and subsequently discharged to the sanitary sewer. Two GAC vessels are connected in series. The first unit (1,000 gallons) serves as the primary treatment unit, and the second (55 gallons) provides an additional safety buffer prior to discharge. Effectiveness of the GAC units is monitored by collection and analysis of samples from the system discharge, including a sample collected from water that has passed only through the first GAC unit. When analytical results indicate that the first GAC unit is no longer effectively treating groundwater, the vessel will be removed from the treatment line and refurbished with new carbon. Since the system began discharging, approximately 2,835,117 gallons of groundwater have been treated and discharged at the site (as of December 26, 2013).

The treatment system operates under discharge permit issued by Oro Loma Sanitary District (OLSD) in May 2009. This discharge permit was most recently renewed in May 2012. Treated groundwater has been discharging to the OLSD sewer since December 9, 2009. Figure 10 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. As shown in Table 4, as of October 28, 2013, cumulative masses of TPH-g and BTEX extracted from groundwater were approximately 34.41 pounds, 1.33 pounds, 0.35 pounds, 0.86 pounds, and 4.65 pounds, respectively. Appendix D includes laboratory analytical results.

4. MULTI-PHASE EXTRACTION EVENTS

During Fourth Quarter 2013, SOMA performed an MPE event from October 15, 2013 through November 15, 2013 utilizing MPE-1, MPE-2 and MW-6.

The MPE operation was performed using a self-contained mobile treatment system (MTS), equipped with an electrical generator, propane tank, liquid ring vacuum pump rated at 25-horsepower and 428-standard cubic feet per minute (scfm), electrical submersible pumps, air/water separator vessel, discharge hoses and traffic-rated hose ramps, downhole stingers, and a thermal oxidizer for vapor abatement. The oxidizer operates under a valid various locations

BAAQMD permit. Both soil vapor and groundwater were extracted from the subsurface. Extracted groundwater was discharged into an existing treatment system.

Physical and chemical parameters including applied vacuum, soil vapor extraction flow rates, oxidizer temperature, volume of groundwater extracted, VOC concentrations, and depth to groundwater in observation wells, were monitored, measured and recorded. VOC concentrations in the extracted soil vapor stream were continuously monitored using a photoionization detector (PID) calibrated to hexane. MPE operational data is presented in Table 5. Extraction data is presented in Table 6. Field data sheets are presented in Appendix E.

4.1 Smear Zone Dewatering

Steady-state dewatering of the smear zone at wells MPE-1, MPE-2, and MW-6 was achieved and maintained during the MPE event by vacuum. Dewatering was achieved by opening the dilution control valve at the extraction well to allow atmospheric air into the well casing, accelerating the removal of water from the well casing by vacuum. As the stinger was advanced into the well casing, water was removed by vacuum. As water was removed, vacuum was reestablished in the well casing and the stinger was advanced farther into the well casing. When the stinger reached the base of the well casing, and water ceased to be removed by vacuum, the stinger was elevated off the bottom of the well to maintain a steady-state groundwater flow into the well and to maximize mass removal rate out of the well, and then the dilution control valve was closed. During this event a total of 207,635 gallons of groundwater was extracted, treated and discharged into the sanitary sewer system. The estimated groundwater extraction rate for the MPE event based on gallons extracted and elapsed time (Table 5) was 4.77 gpm.

4.2 Soil Vapor Sampling and Analysis

Representative samples were analyzed from the stack of the thermal oxidizer to show compliance with the Bay Area Air Quality Management District permit. Influent soil vapor samples were collected through a sampling port located on the vacuum pump discharge manifold. Thermal oxidizer stack vapor samples were collected through a sampling port located at the top of the stack. The air samples were submitted under chain-of-custody documentation to Curtis and Tompkins Laboratories and analyzed for TPH-g using USEPA Analytical Method TO-3; and for BTEX and MtBE using USEPA Analytical Method TO-15. Soil vapor analytical results and abatement efficiencies are presented in Table 7. Certified laboratory analytical reports and chain-of-custody documentation are included in Appendix F.

Soil vapor samples (one influent and one effluent) were collected on October 16, 2013. These samples were collected during the first 24 hours of operation (Table

7). The effluent vapor sample collected at the oxidizer stack was used to demonstrate compliance with BAAQMD various locations permit.

4.3 Extraction Summary

The MPE event ran from 11:30 on October 15, 2013 to 14:00 on November 15, 2013. The total extraction time was 43,560 minutes or 726 hours.

Applied vacuum ranged from 17 to 20 inches of mercury, and vapor extraction flow rate ranged from 149 to 196 scfm (Tables 5 and 6). VOC concentrations in the extracted soil vapor stream ranged from 281 parts per million vapor (ppmv) as hexane to 1,091 ppmv (Table 6).

4.4 Evaluation of Mass Removal Rate

The total number of the MPE operational days was 30.25 days. The estimated mass of volatile organic compounds (VOCs) removed from soil vapor extraction and VOC mass removal rate was 790 lbs at 26 lbs/day (Table 6).

The overall estimated total mass of VOCs extracted by previous MPE events is 2,737 pounds. Figure 11 shows the extracted mass of VOCs during different MPE events at the site.

5. CONCLUSIONS AND RECOMMENDATIONS

Fourth Quarter 2013 groundwater monitoring and previous MPE events results are summarized below.

- Groundwater flows towards extraction wells in the First WBZ and southwesterly in the Second WBZ.
- The highest hydrocarbon concentrations were observed in the southern portion of the site and in the vicinity of the dispenser islands around MPE extraction well MPE-1 and MW-4. High TPH-g concentration were also observed in MW-3 and FP was observed in extraction well MPE-2.
- Since the previous quarterly monitoring event (Third Quarter 2013), TPH-g, benzene, toluene, ethylbenzene, and total xylenes all decreased in more impacted well MPE-1 while no comparison could be made for MPE-2 due to the presence of FP.
- In the Second WBZ, all TPH-g and BTEX concentrations were below laboratory-reporting limits except total xylenes which were detected in MW-1D and MW-3D at low levels. MtBE was below laboratory-reporting limit in MW-1D and at low levels in other wells. Since the previous monitoring event (Third Quarter 2013), total xylenes increased in MW-1D and MW-3D, and MtBE decreased in MW-3D and MW-4D.

- The total mass of hydrocarbon removed by MPE operations (as of November 2013) is estimated to be 2,737 pounds.

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

- Continue quarterly groundwater monitoring to increase understanding of seasonal variations in groundwater quality conditions.
- Due to increased effectiveness of MPE operation during October-November 2013 event and the presence of FP in MPE-2, SOMA proposes additional MPE operation for mitigating the chemical source areas around MPE-1 and MPE-2.

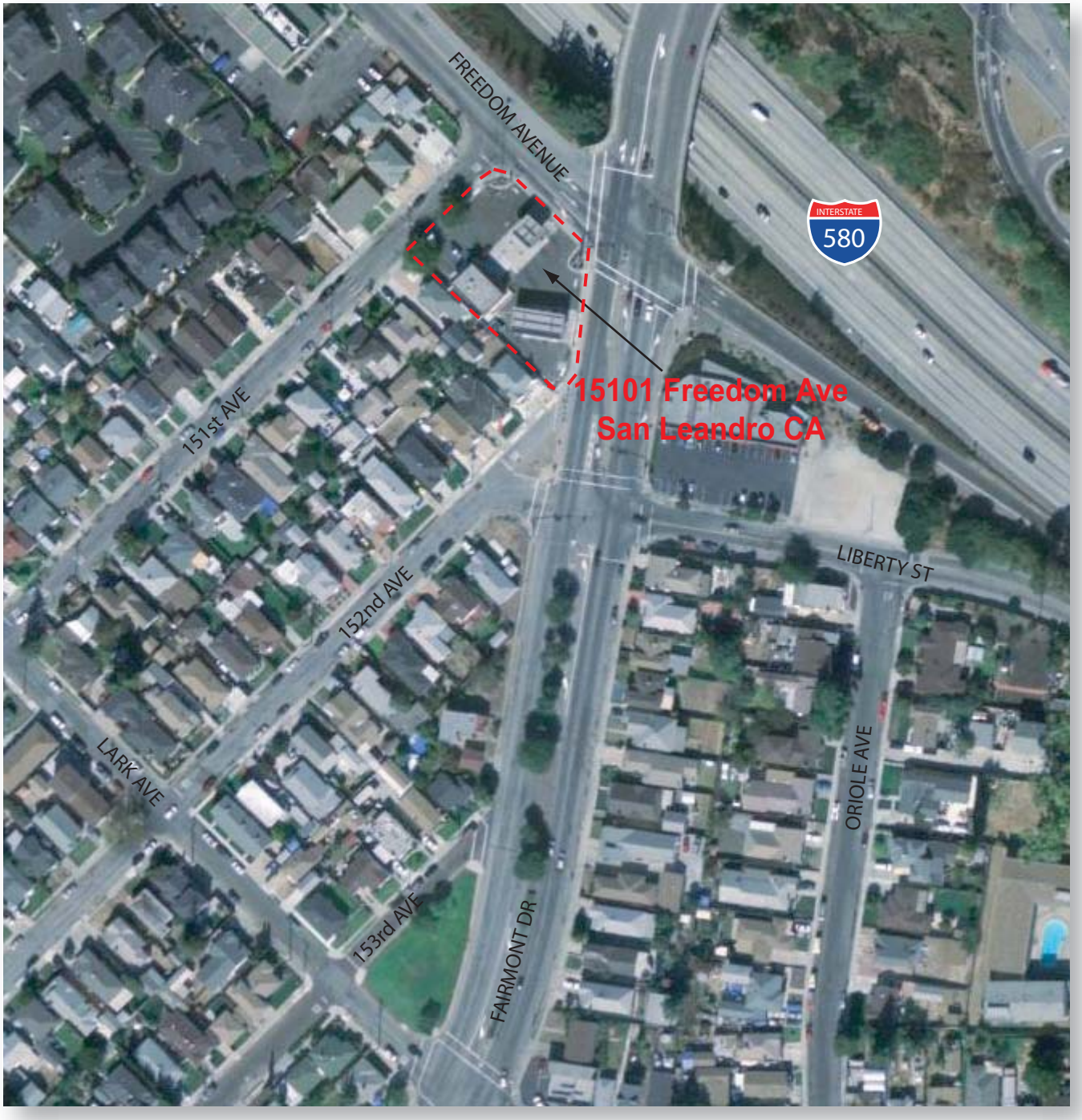
Other ongoing activities: Based on ACHCS' approval dated October 30, 2013 SOMA has recently completed field activities as proposed in our workplan dated July 22, 2013 and addendum dated October 17, 2013. A report documenting results will be submitted shortly.

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 Laboratories 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



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approximate scale in feet

0 150 300

Figure 1: Site vicinity map.

SOMA ENVIRONMENTAL ENGINEERING, INC.

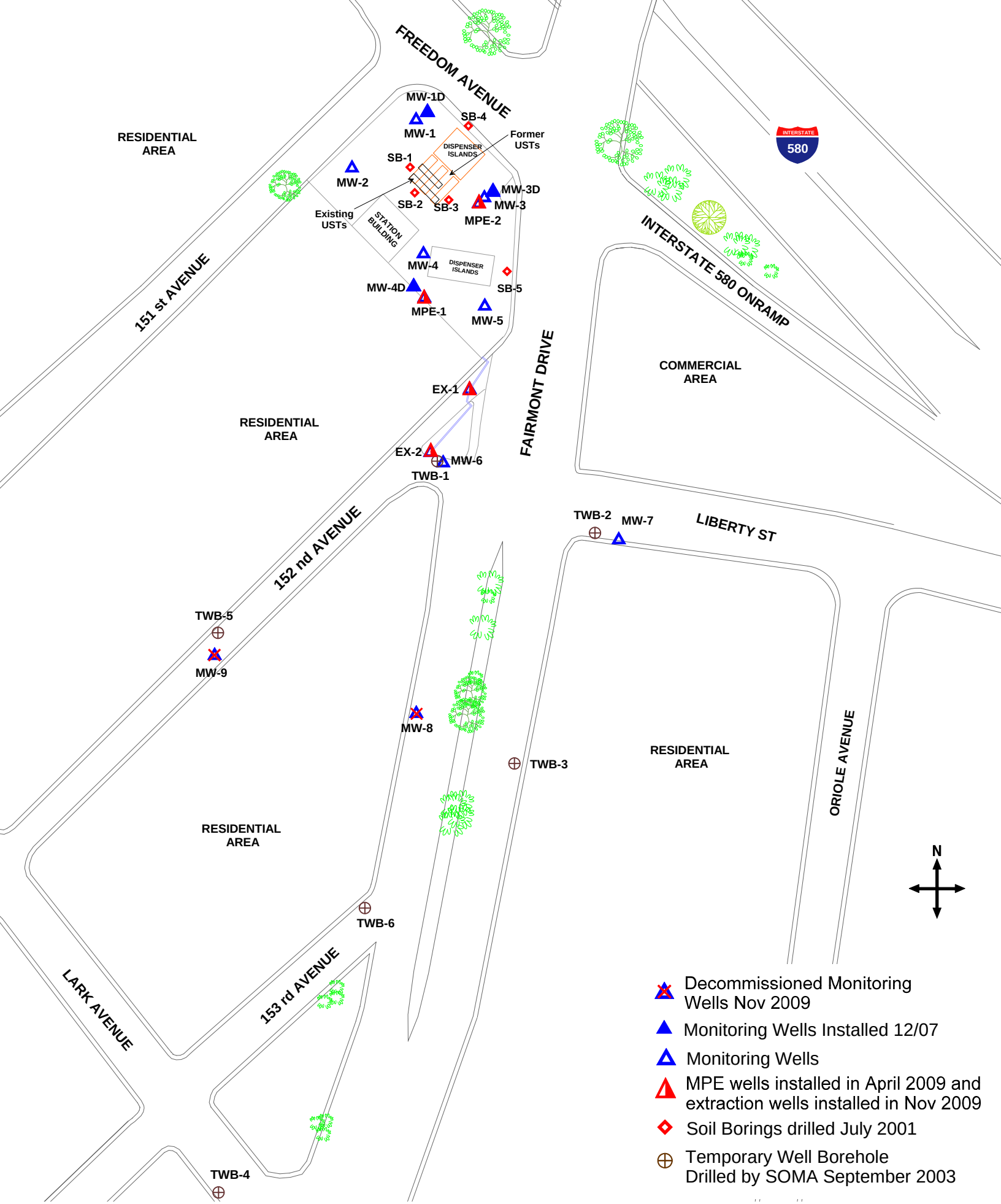

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Figure 2: Site map showing locations of groundwater monitoring wells, soil borings, and extraction wells.

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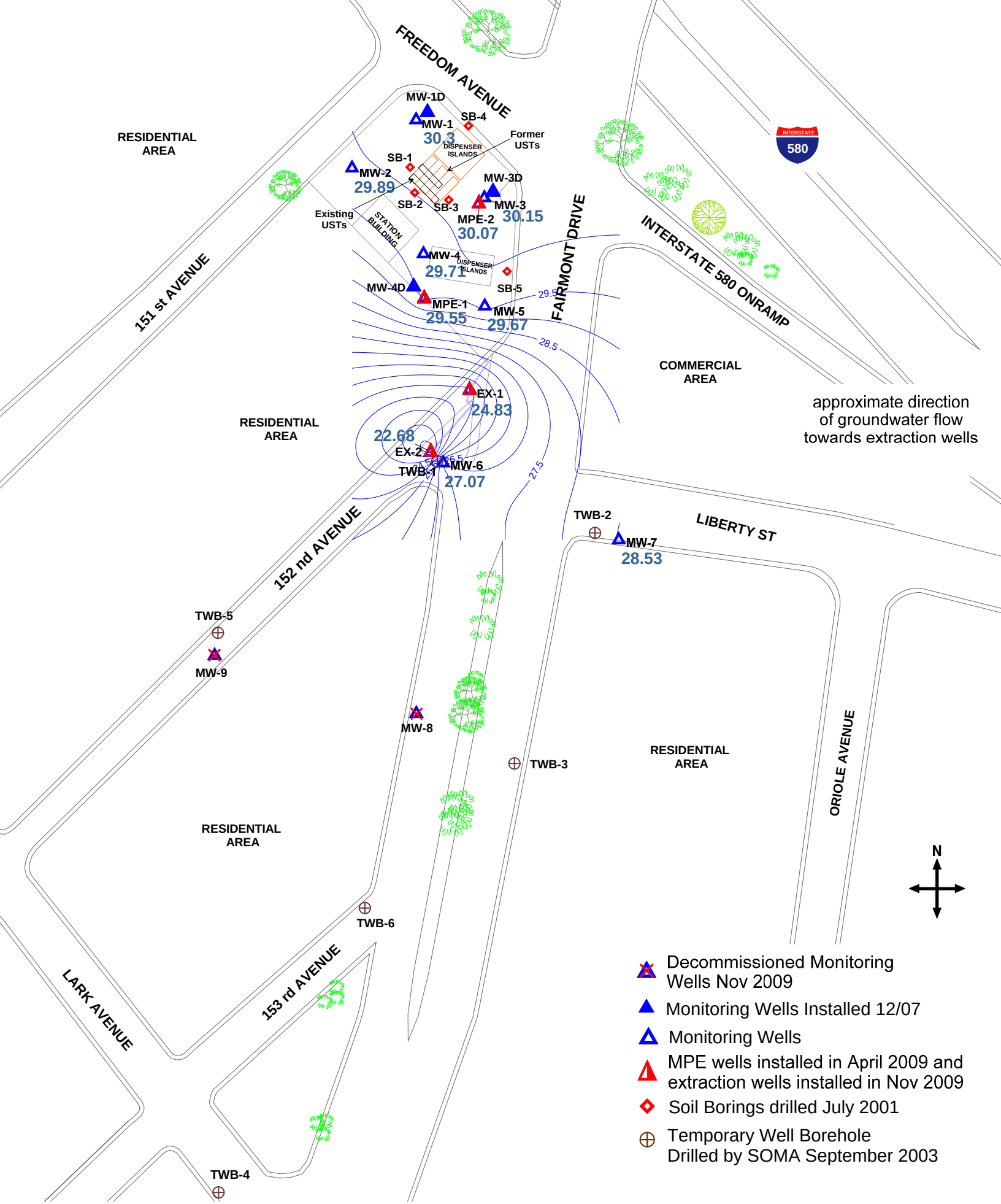

Figure 3: Groundwater Elevation Contour Map in Feet, First WBZ, December 5, 2013

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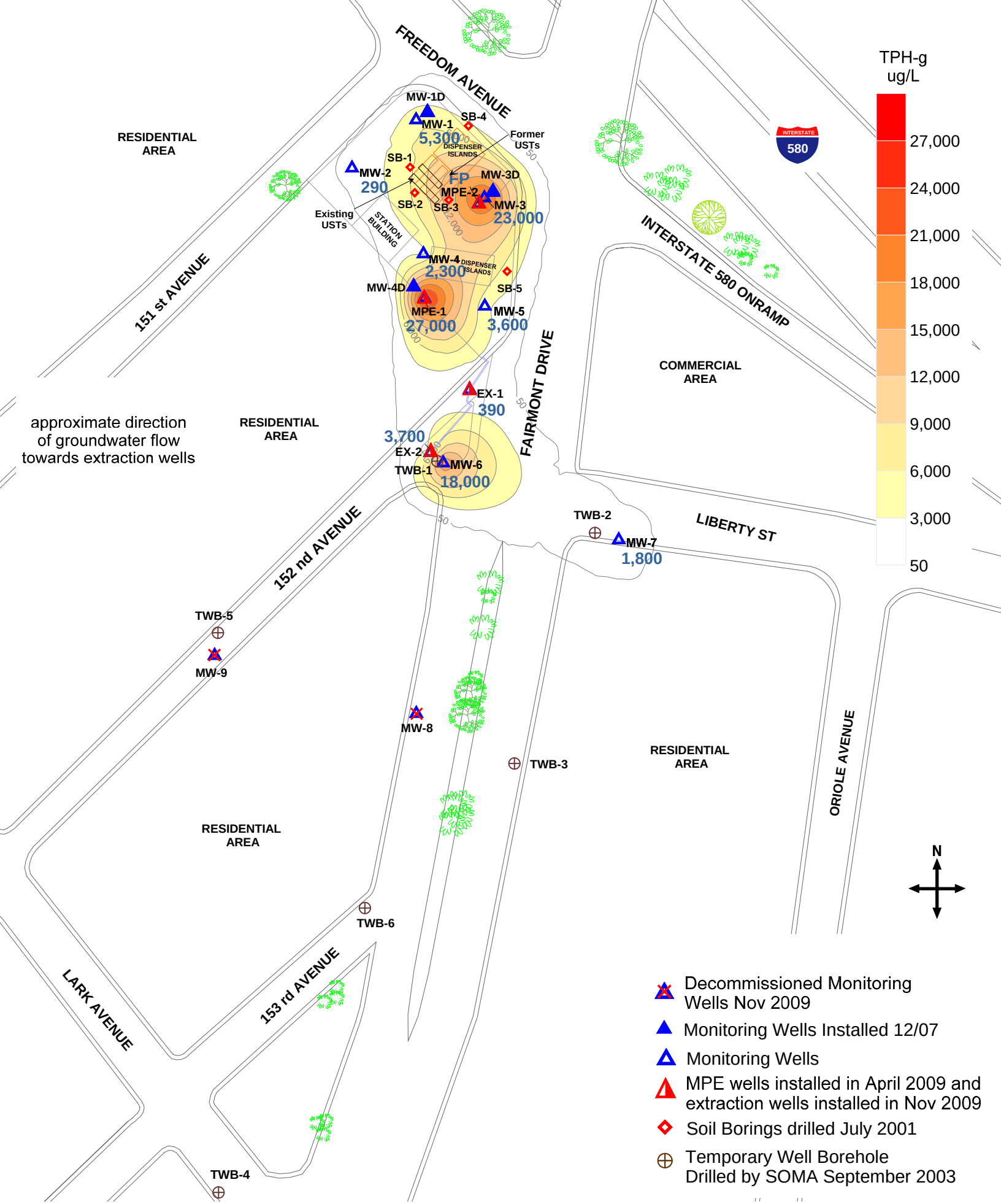

Figure 4: Contour Map of TPH-g Concentrations in Groundwater, First WBZ, December 5 and 6, 2013

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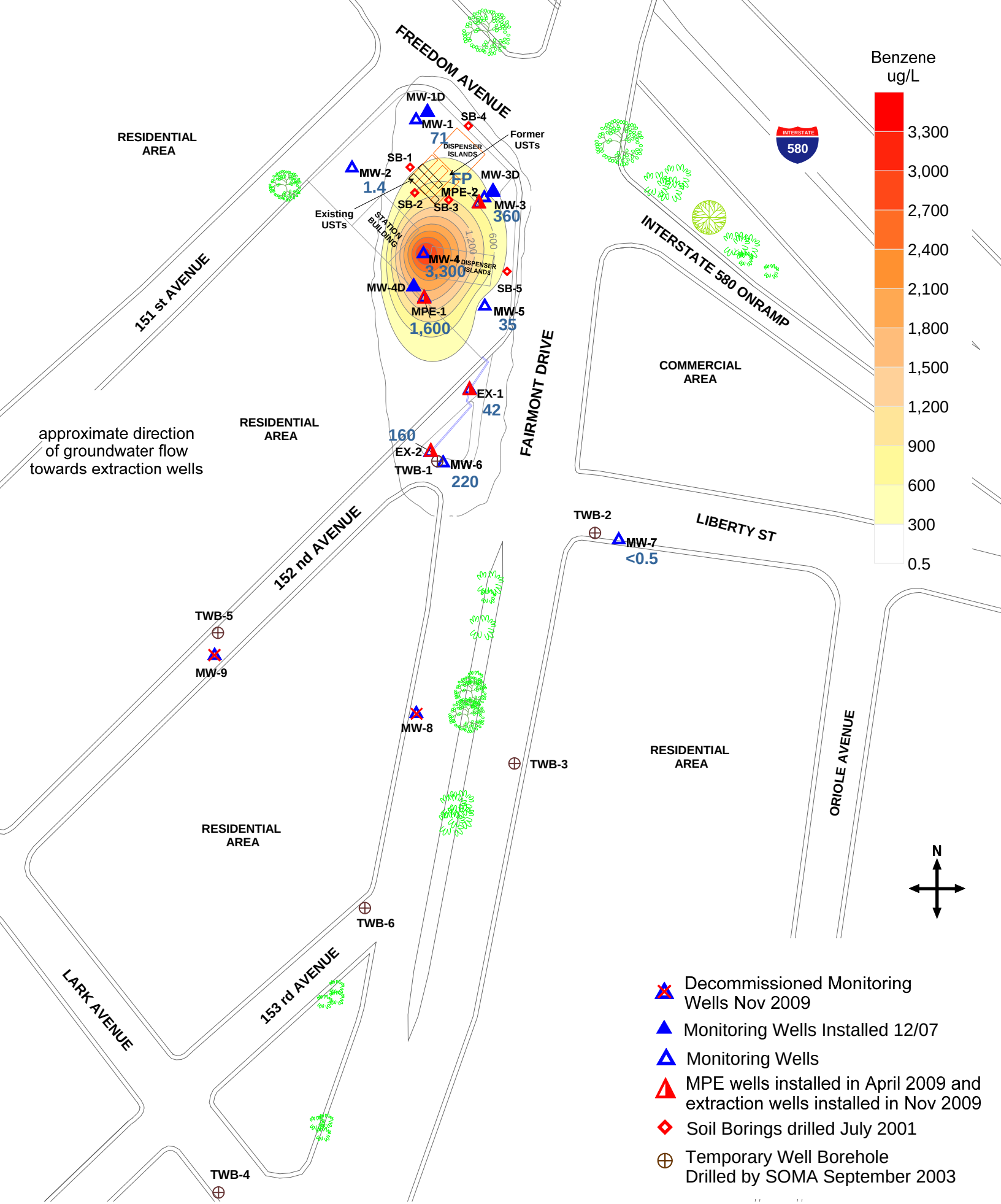

Figure 5: Contour Map of Benzene Concentrations in Groundwater, First WBZ, December 5 and 6, 2013

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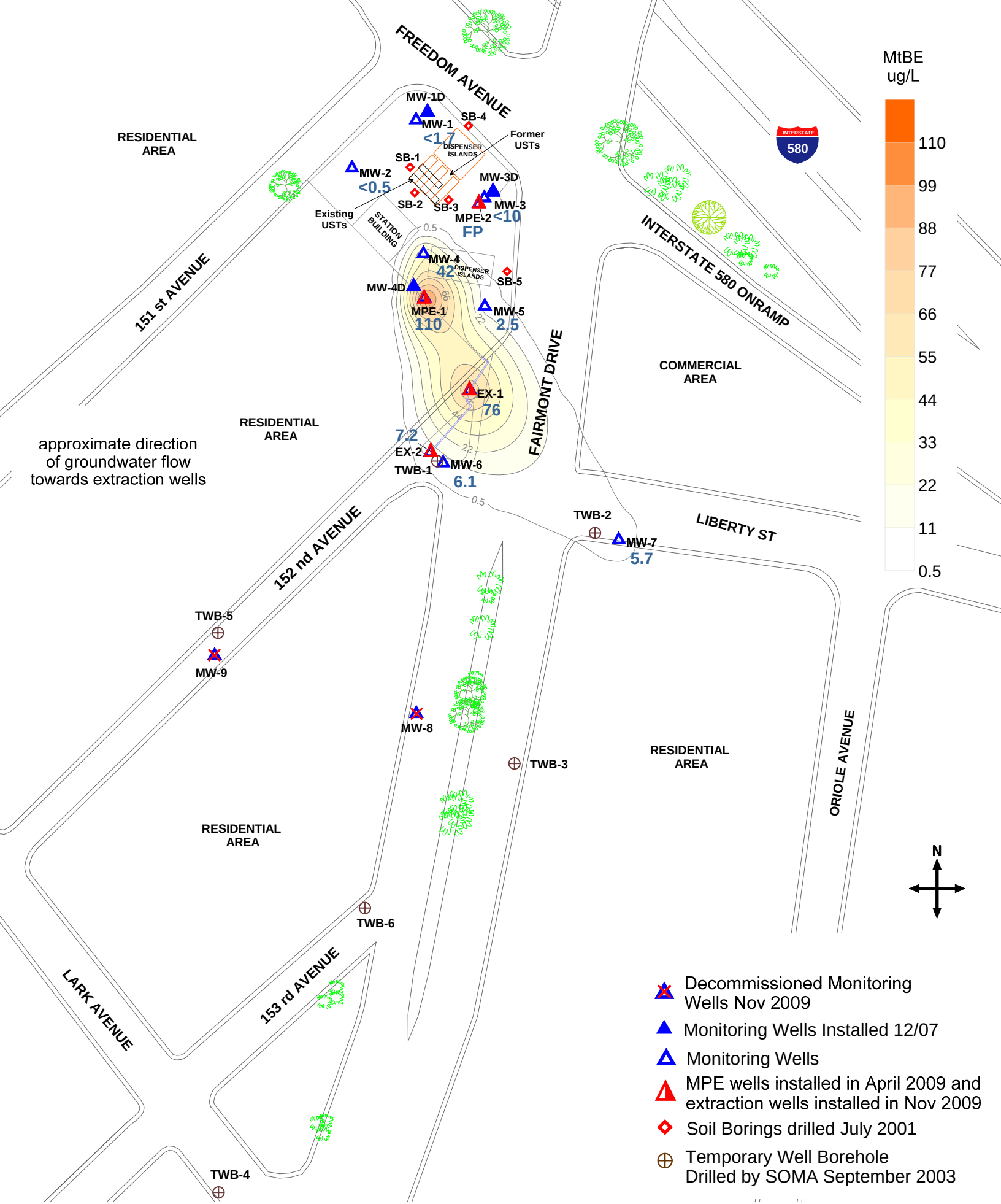

Figure 6: Contour Map of MtBE Concentrations in Groundwater, First WBZ, December 5 and 6, 2013

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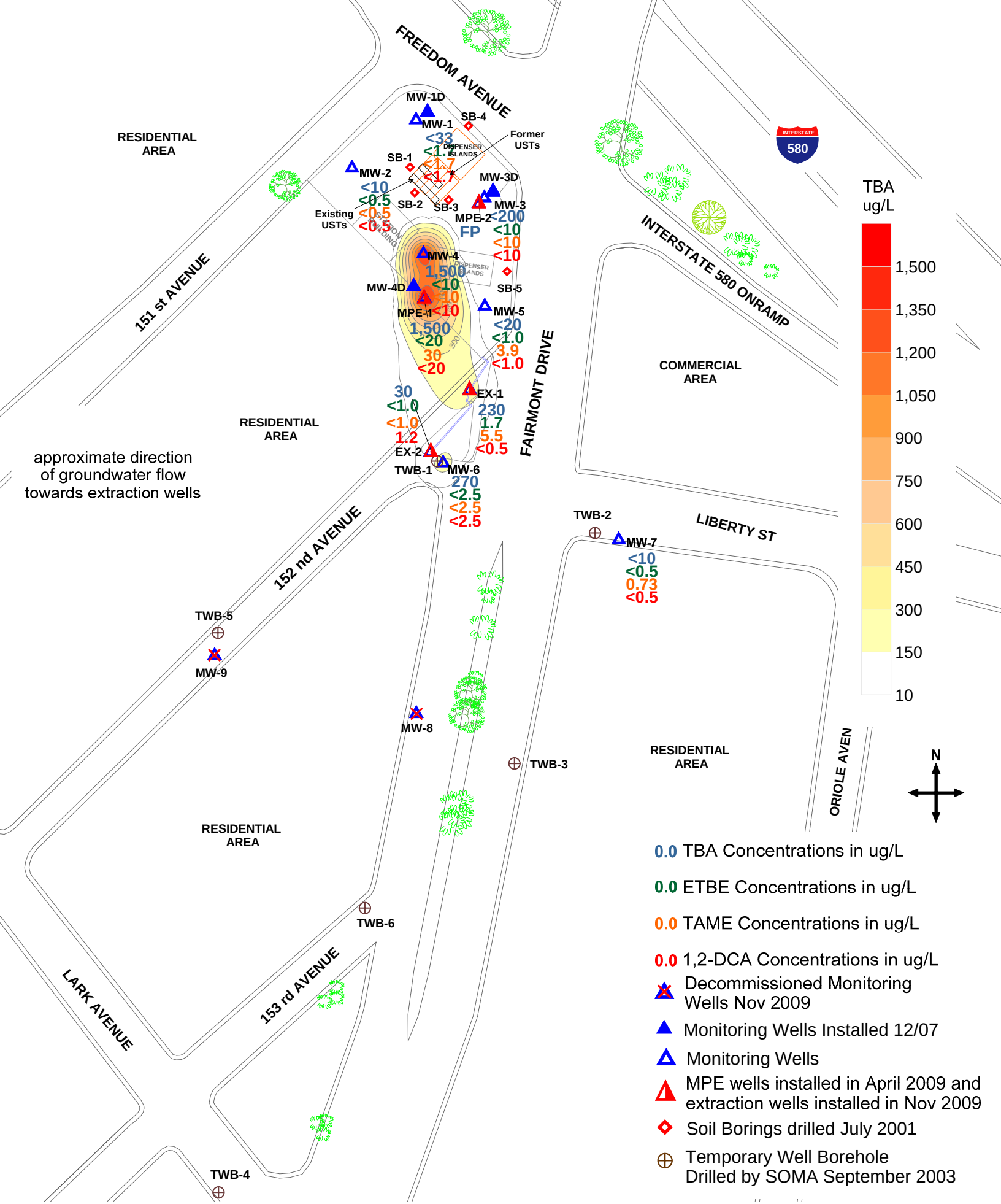

Figure 7: Contour Map of TBA and map of ETBE, TAME, and 1,2-DCA Concentrations in Groundwater, First WBZ, December 5 and 6, 2013

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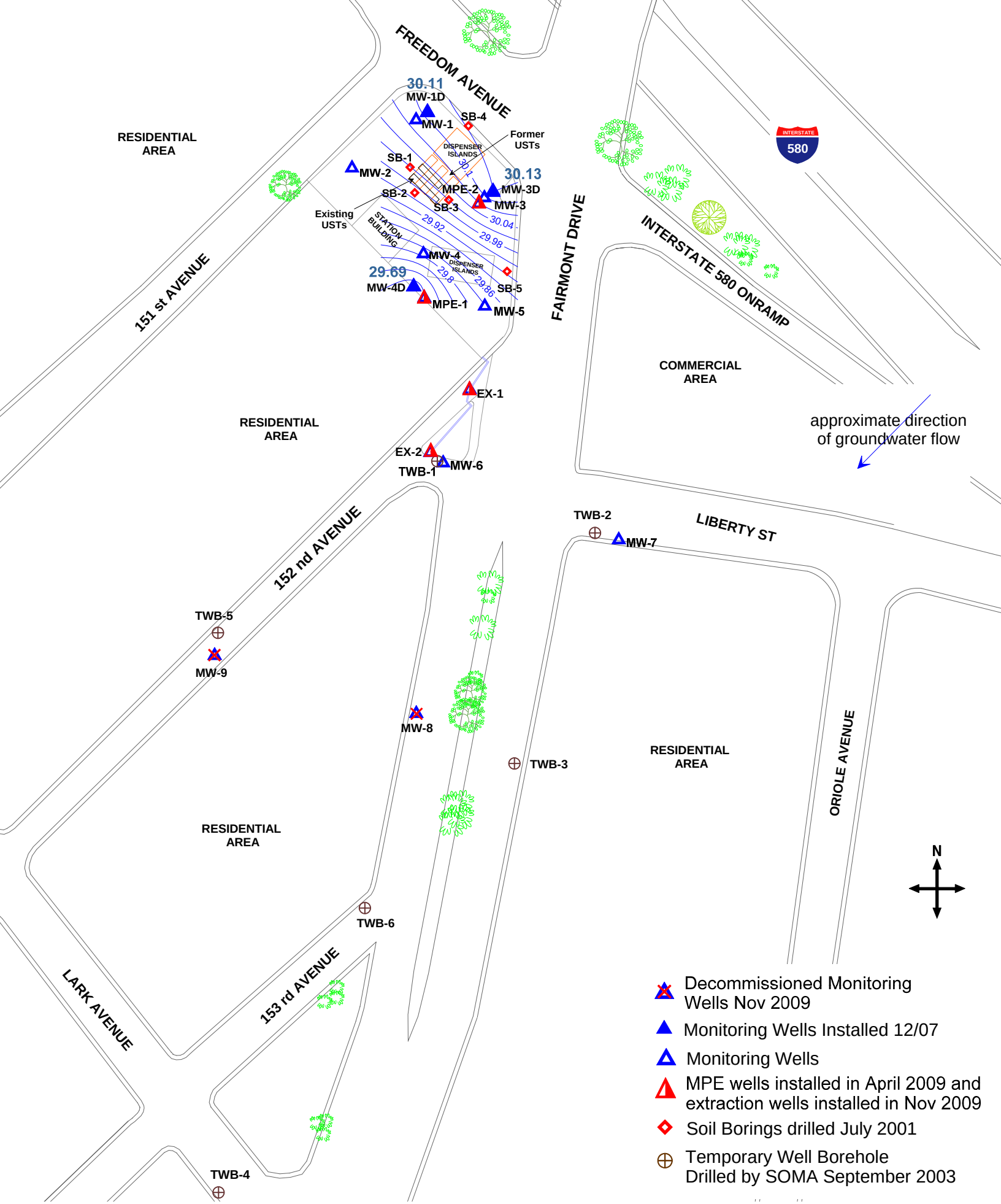

approximate scale in feet

0 50 100

Figure 8: Groundwater Elevation Contour Map in Feet, Second WBZ, December 5, 2013

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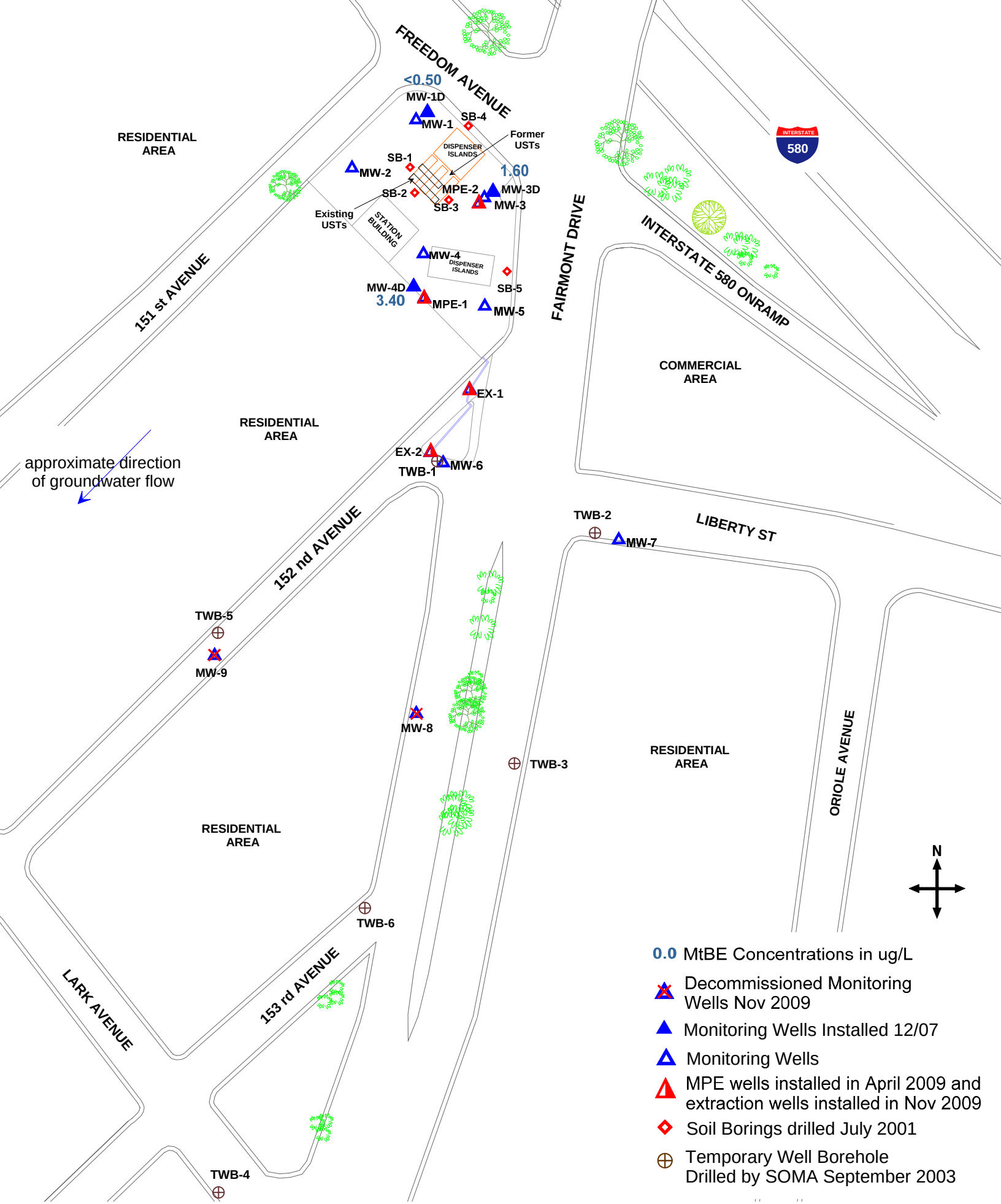

approximate scale in feet

0 50 100

Figure 9: Map Showing Concentrations of MtBE in Groundwater, Second WBZ, December 5 and 6 2013

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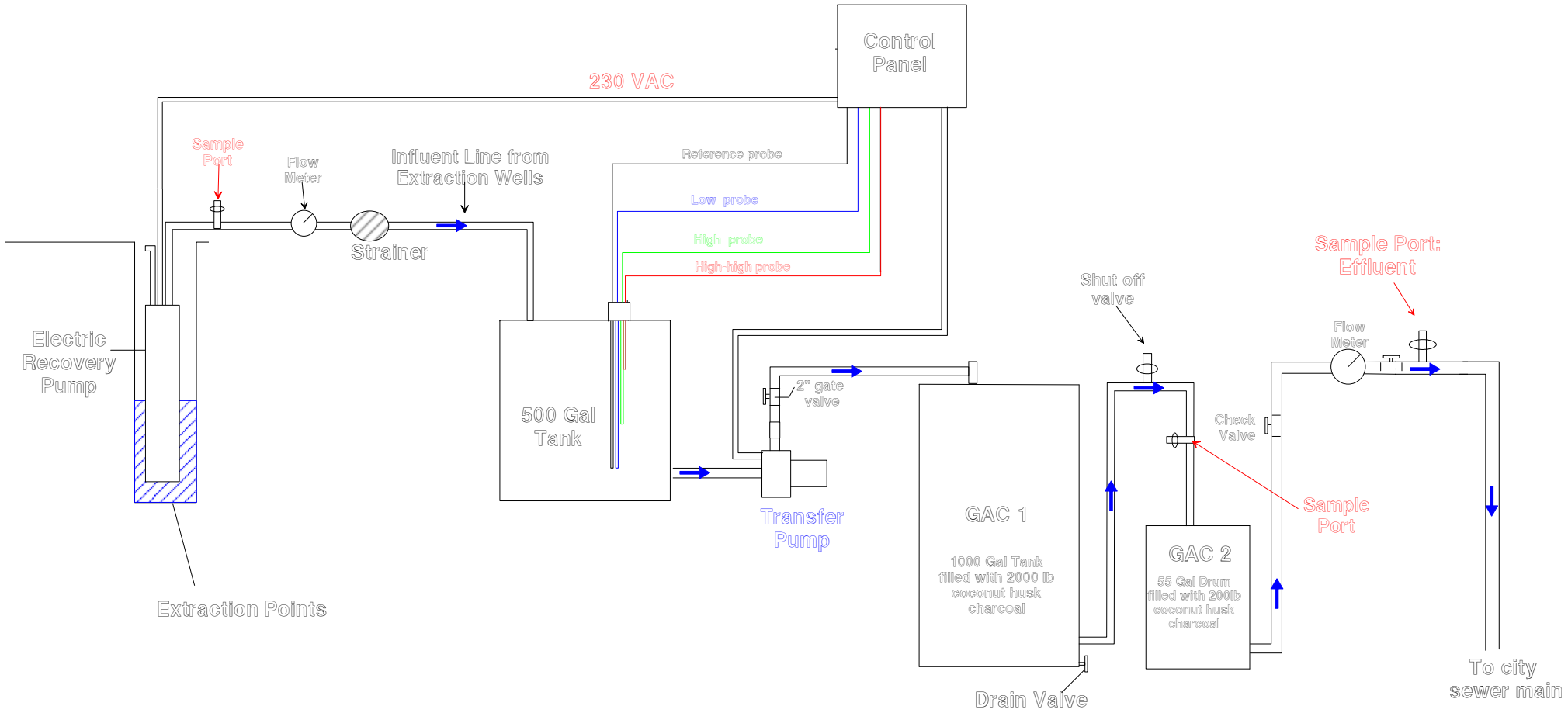

Figure 10: Schematic diagram of Groundwater Remediation System

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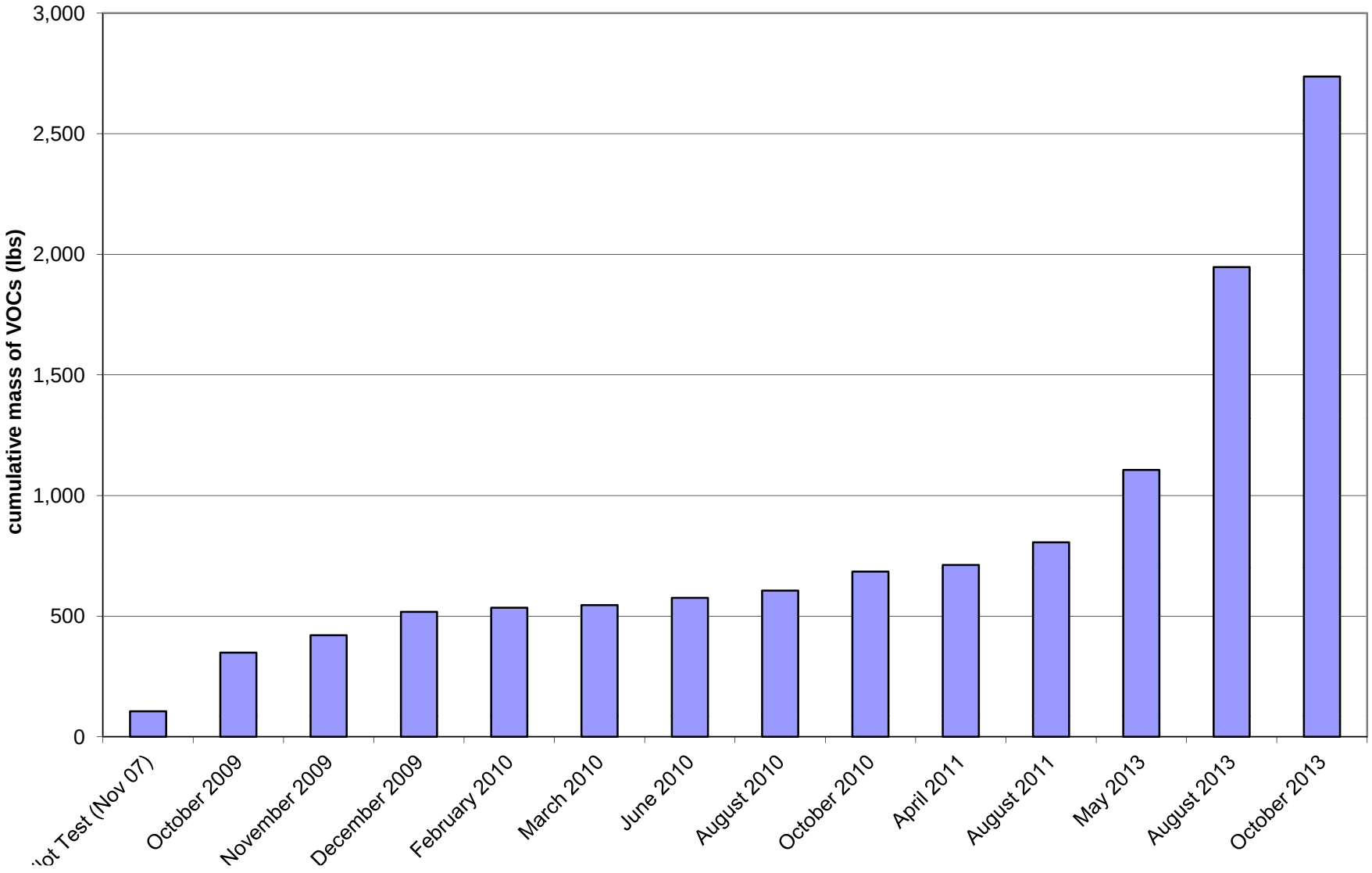

Figure 11: Cumulative mass of VOCs removed

Tables

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (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
	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 Y	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 Y	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 Y	250	<2.0	110	25	2.50

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-1 cont	3/17/2010	54.46	22.32	-	32.14	1,100	33	<0.50	46	18	1.70
	6/3/2010	54.46	22.88	-	31.58	10,000	330	4.3	680	841.5	5.20
	9/2/2010	54.46	23.28	-	31.18	8,900	440	<5.0	510	310	<5.0
	12/2/2010	54.46	23.21	-	31.25	7,400	250	<3.1	390	180	<3.1
	3/4/2011	54.46	21.95	N	32.51	2,400	67	<0.5	45	8.4	2.20
	5/20/2011	54.46	22.8	N	31.66	9,500	260	6.2	970	480	<3.6
	9/9/2011	54.46	22.81	N	31.65	6,400	220	<1.3	380	160	2.30
	12/2/2011	54.46	21.97	N	32.49	4,700 [x]	96	<1.7	310	200	<3.3
	3/2/2012	54.46	22.82	N	31.64	6,800	320	<2.5	430	120	<2.5
	6/7/2012	54.46	22.92	N	31.54	5,600	130	<2.5	360	160	2.9
	9/21/2012	54.46	23.56	N	30.90	8,000	300	<2.5	410	340	2.6
	12/14/2012	54.46	22.77	N	31.69	5,900	130	<2.5	320	97	<2.5
	3/28/2013	54.46	23.15	N	31.31	5,100	230	<2.5	280	48	3.6
	6/11/2013	54.46	23.48	N	30.98	6,800	200	<2.5	300	120	<2.5
	9/17/2013	54.46	23.84	N	30.62	7,500	120	<2.5	410	260	<2.5
	12/6/2013	**54.46**	**24.16**	**N**	**30.30**	**5,300**	**71**	**<1.7**	**240**	**84**	**<1.7**
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

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-2 cont.	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
	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 [Y]	<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 [Y]	<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 [Y]	<0.5	<0.5	14	1.5	<0.5
	3/17/2010	52.41	20.11	-	32.30	480	<0.5	<0.5	30	6.9	<0.5
	6/3/2010	52.41	21	-	31.41	690	<0.5	<0.5	14	2.6	<0.5
	9/2/2010	52.41	21.42	-	30.99	470	<0.5	<0.5	7.6	1	<0.5
	12/2/2010	52.41	21.44	-	30.97	470	<0.5	<0.5	7.6	3.3	<0.5
	3/4/2011	52.41	19.65	N	32.76	240	<0.5	<0.5	6.6	0.8	<0.5
	5/20/2011	52.41	20.75	N	31.66	310	<0.5	<0.5	4.8	<0.5	<0.5
	9/9/2011	52.41	21.05	N	31.36	1,000	<0.5	<0.5	12	0.76	<0.5
	12/2/2011	52.41	20.14	N	32.27	900 [X]	<2.9	<1.7	14	1.9	<3.3

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-2 cont.	3/2/2012	52.41	19.98	N	32.43	880	<0.5	<0.5	5.3	0.58	<0.5
	6/7/2012	52.41	21.04	N	31.37	720	<0.5	<0.5	7.9	0.79	<0.5
	9/21/2012	52.41	21.78	N	30.63	1,400	<0.5	<0.5	11	<0.5	<0.5
	12/14/2012	52.41	20.71	N	31.70	760	<0.5	<0.5	10	1.5	<0.5
	3/28/2013	52.41	21.24	N	31.17	890	<0.5	<0.5	4.3	<0.5	<0.5
	6/11/2013	52.41	21.67	N	30.74	510	150	<0.5	15	12.3	3.1
	9/16/2013	52.41	22.15	N	30.26	210	<0.5	<0.5	1.1	<0.5	<0.5
	12/6/2013	**52.41**	**22.52**	**N**	**29.89**	**290**	**1.4**	**<0.5**	**1.1**	**<0.5**	**<0.5**
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
	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

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-3 cont.	1/25/2007	53.91	22.34	-	31.57	19,300	4,820	167	1,540	3,740	3,430
	4/26/2007	53.91	22.24	-	31.67	30,700	2,350	158	1,470	4,320	1,330
	7/25/2007	53.91	22.83	-	31.08	34,900	5,400	364	2,080	6,360	1,980
	10/23/2007	53.91	23.01	-	30.9	22,600	4,070	<86	1,120	3,095	970
	1/22/2008	53.96	22.04	-	31.92	22,100	1,280	453	1,330	3,520	490
	4/16/2008	53.91	22.4	-	31.51	20,700	2,790	182	860	3,389	263
	7/3/2008	53.91	22.9	-	31.01	48,500	3,760	346	3,130	12,980	573
	10/16/2008	53.91	23.36	-	30.55	50,000	3,900	300	3,100	11,000	460
	1/8/2009	53.91	22.82	-	31.09	54,000	2,600	180	2,500	8,800	220
	4/13/2009	53.91	22.06	-	31.85	49,000	2,900	170	2,100	8,100	490
	8/27/2009	53.91	23.11	-	30.80	43,000	2,500	160	1,900	7,000	210
	12/2/2009	53.91	23.00	-	30.91	30,000	2,100	180	1,600	5,600	91
	3/17/2010	53.91	21.90	-	32.01	24,000	970	81	1,100	3,700	38
	6/3/2010	53.91	22.49	-	31.42	31,000	1,200	110	1,300	4,400	34
	9/2/2010	53.91	22.76	-	31.15	26,000	1,100	81	1,200	3,810	26
	12/2/2010	53.91	22.86	-	31.05	18,000	830	47	780	2,360	14
	3/4/2011	53.91	21.44	N	32.47	18,000	410	32	850	2,480	16
	5/20/2011	53.91	22.36	N	31.55	12,000	710	24	620	1,460	11
	9/9/2011	53.91	22.44	N	31.47	11,000	1,100	26	580	1,430	7.8
	12/2/2011	53.91	21.60	N	32.31	5,100 [x]	280	12	370	740	<1.7
	3/2/2012	53.91	22.39	N	31.52	13,000	440	23	690	1,570	<5.0
	6/7/2012	53.91	22.50	N	31.41	9,000	290	9.3	520	900	<5.0
	9/21/2012	53.91	23.17	N	30.74	12,000	710	26	630	1,230	8.2
	12/14/2012	53.91	22.32	Y	31.59	8,500	350	8.7	550	1,003	<5
	3/28/2013	53.91	22.69	Y	31.22	9,300	790	8.2	760	974	8.7
	6/11/2013	53.91	23.06	Y	30.85	14,000	700	26	860	1,630	6.1
	9/17/2013	53.91	23.41	Y	30.50	28,000	570	37	1,800	3,560	<10
	12/6/2013	**53.91**	**23.76**	**Y**	**30.15**	**23,000**	**360**	**26**	**1,700**	**3,330**	**<10**
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

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

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

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

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-4 cont.	3/17/2010	53.31	21.39	-	31.92	14,000	260	6	230	1,220	93
	6/3/2010	53.31	22.23	-	31.08	18,000	240	4	310	770	41
	9/2/2010	53.31	22.51	-	30.80	1,800	800	<3.6	150	25	33
	12/2/2010	53.31	22.71	-	30.60	3,800	1,500	<10	200	115	29
	3/3/2011	53.31	20.64	N	32.67	2,400	28	<0.71	28	17	3
	5/19/2011	53.31	21.84	N	31.47	1,800	27	<0.5	29	11.2	4.8
	9/8/2011	53.31	22.11	N	31.20	3,600	300	2.6	270	68.5	59
	12/1/2011	53.31	21.38	N	31.93	1,400 [x]	370	<0.84	110	30.6	110
	3/2/2012	53.31	22.02	N	31.29	3,100	780	<2.0	150	59.6	50
	6/7/2012	53.31	22.24	N	31.07	2,000	290	<2.5	66	23	29
	9/21/2012	53.31	22.87	N	30.44	2,900	820	<2.5	75	17	72
	12/14/2012	53.31	21.84	N	31.47	840	48	<0.5	14	4.5	2.5
	3/28/2013	53.31	22.24	N	31.07	790	650	<5.0	26	<5.0	15
	6/11/2013	53.31	22.71	N	30.60	1,100	860	<5.0	64	<5.0	35
	9/17/2013	53.31	23.23	N	30.08	<1,000	1,300	<10	22	<10	44
	12/6/2013	**53.31**	**23.6**	**N**	**29.71**	**2,300**	**3,300**	**<10**	**78**	**199**	**42**
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

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-5 cont.	2/9/2006	50.53	17.58	-	32.95	7,640	237	<22	187	50.2	2,050
	5/9/2006	50.53	17.54	-	32.99	8,360	111	<8.6	300	75.84	566
	8/10/2006	50.53	19.02	-	31.51	16,100	250	<22	455	187.4	1,590
	10/26/2006	50.53	19.61	-	30.92	10,100	430	<22	375	192.6	3,060
	1/25/2007	50.53	19.19	-	31.34	3,960	340	<22	323	150.1	1,740
	4/26/2007	50.53	18.89	-	31.64	4,590	187	<8.6	307	116.5	861
	7/25/2007	50.53	19.81	-	30.72	6,490	419	21.8	413	223.2	913
	10/23/2007	50.53	19.98	-	30.55	6,120	550	11	284	141.4	433
	1/22/2008	50.18	18.69	-	31.49	9,810	572	22	574	184.1	126
	4/15/2008	50.18	19.16	-	31.02	8,890	335	15.1	477	397.5	136
	7/3/2008	50.53	19.88	-	30.65	13,100	949	34.4	875	825.5	176
	10/16/2008	50.53	20.45	-	30.08	11,000	870	25	820	668	160
	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 [Y]	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 [Y]	400	12	540	296	45
	3/17/2010	50.53	18.73	-	31.80	4,800	120	8.7	120	107	14
	6/4/2010	50.53	19.60	-	30.93	7,200	160	5.7	190	149.2	24
	9/2/2010	50.53	19.82	-	30.71	9,200	110	12	270	318	35
	12/2/2010	50.53	20.10	-	30.43	9,100	170	6.7	350	442	23
	3/4/2011	50.53	18.00	N	32.53	2,600	18	0.62	54	18.1	3
	5/20/2011	50.53	19.18	N	31.35	4,000	91	8.5	110	106	33
Pre-MPE	8/4/2011	50.53	NM	-	NC	3,000	23	0.95	92	43.7	5.4
	9/9/2011	50.53	19.41	N	31.12	4,200	120	2.8	140	61.1	22
	12/2/2011	50.53	18.59	N	31.94	6,900 [X]	96	12	220	104	32
	3/2/2012	50.53	19.30	N	31.23	5,400	43	1.8	110	85	7
	6/7/2012	50.53	19.45	N	31.08	3,700	32	<1.0	100	59	4.4
	9/21/2012	50.53	20.17	N	30.36	3,900	68	1.5	140	88.5	9.8
	12/14/2012	50.53	19.12	N	31.41	3,100	48	6.7	100	62.3	5.2
	3/28/2013	50.53	19.47	N	31.06	1,900	30	<1.0	59	48.4	4.5
	6/11/2013	50.53	20.03	N	30.50	2,900	22	3.9	110	131	3.0
	9/17/2013	50.53	20.54	N	29.99	4,200	55	7.9	180	229	5.2
	12/6/2013	**50.53**	**20.86**	**N**	**29.67**	**3,600**	**35**	**2.1**	**160**	**241**	**2.5**

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-6	9/21/2004	45.82	17.64	-	28.18	34,000	150	130	2200	8100	0.6
	12/14/2004	45.82	15.75	-	30.07	5,161	137	7	436	1136	<5.5
	3/11/2005	45.82	13.80	-	32.02	6,040	125	3.22	260	722.1	4.94
	6/15/2005	45.82	14.78	-	31.04	5,590	44.3	6.60	272	382	5.85
	8/26/2005	45.82	15.91	-	29.91	6,130	99	<8.6	378	492.9	5.66
	11/11/2005	45.82	16.55	-	29.27	11,400	101	<8.6	645	834.7	4.33
	2/9/2006	45.82	13.92	-	31.90	2,790	32.3	<8.6	131	131.22	7.30
	5/9/2006	45.82	13.95	-	31.87	3,730	25	<2.0	213	207.82	5.87
	8/10/2006	45.82	15.28	-	30.54	4,800	41.9	<2.0	201	189	10.4
	10/26/2006	45.82	16.11	-	29.71	6,080	37.4	<2.0	116	183	9.78
	1/25/2007	45.82	15.76	-	30.06	3,220	25.2	<2.0	219	174	14.7
	4/26/2007	45.82	15.18	-	30.64	3,110	28	<2.0	165	138.47	14.6
	7/25/2007	45.82	16.82	-	29.00	4,960	54.1	<2.0	199	255.87	8.05
	10/23/2007	45.82	16.91	-	28.91	9,610	64.3	<2.0	188	302.6	5.81
	1/21/2008	45.82	15.36	-	30.46	3,290	33	<2.0	149	131.31	3.86
	4/15/2008	45.82	15.73	-	30.09	2,070	10.8	<2.0	51.1	67	<0.5
	7/2/2008	45.82	16.9	-	28.92	7,900	42.4	<2.0	194	296	3.58
	10/15/2008	45.82	17.21	-	28.61	18,000 [Y]	42	1.4	320	673	1.7
	1/7/2009	45.82	17.08	-	28.74	13,000	47	<3.1	210	425	<3.1
	4/13/2009	45.82	15.52	-	30.30	7,200 [Y]	26	<1.3	170	312.6	2.6
	8/26/2009	45.82	17.82	-	28.00	10,000 [Y]	25	<2.0	130	294	2.2
	12/1/2009	45.82	17.34	-	28.48	11,000 [Y]	31	6.1	220	539	<2.0
	3/16/2010	45.82	14.81	-	31.01	31,000	63	140	970	4,200	64
	6/3/2010	45.82	15.72	-	30.10	27,000	22	67	840	3,100	32
	9/1/2010	45.82	16.86	-	28.96	33,000	24	34	1,100	3,780	12
	12/2/2010	45.82	16.98	-	28.84	70,000	32	55	1,700	5,670	18

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15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-6 cont.	3/3/2011	45.82	14.35	Y	31.47	7,000	18	<2.5	97	237	11
	5/20/2011	45.82	14.95	Y	30.87	14,000	14	<2.5	300	823	7.2
	9/8/2011	45.82	16.14	Y	29.68	23,000	28	<2.5	360	812	3.4
	12/1/2011	45.82	16.17	16.15	29.66	FP	FP	FP	FP	FP	FP
	3/2/2012	45.82	16.11	Y	29.71	14,000	23	<4.2	400	694.4	<4.2
	6/6/2012	45.82	16.31	Y	29.51	9,200	12	<1.7	210	320	<1.7
	9/20/2012*	45.82	17.36	17.32	28.49	FP	FP	FP	FP	FP	FP
	12/13/2012	45.82	15.46	Y	30.36	13,000	22	<0.71	83	62.8	5.1
	3/27/2013	45.82	16.3	Y	29.52	7,400	27	<1.3	190	221.8	<1.3
	6/10/2013	45.82	17.37	Y	28.45	12,000	20	<2.5	280	230	<2.5
	9/16/2013	45.82	18.11	18.06	27.74	FP	FP	FP	FP	FP	FP
	12/5/2013	**45.82**	**18.75**	**Y**	**27.07**	**18,000**	**220**	**330**	**460**	**2,030**	**6.1**
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 [Y]	0.56	1.2	27	39.5	55

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15101 Freedom Avenue, San Leandro, CA

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MW-7 cont.	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 [Y]	<0.5	<0.5	15	6.3	63
	8/26/2009	44.74	15.84	-	28.90	2,700 [Y]	<0.5	<0.5	48	53	140
	12/1/2009	44.74	15.03	-	29.71	1,800 [Y]	<0.5	<0.5	22	15	120
	3/16/2010	44.74	12.56	-	32.18	1,100	<0.5	<0.5	3.2	1.4	65
	6/3/2010	44.74	13.80	-	30.94	740	<0.5	<0.5	1.8	0.62	28
	9/1/2010	44.74	14.84	-	29.90	1,200	<0.5	<0.5	10	3.2	29
	12/2/2010	44.74	14.74	-	30.00	1,400	<0.5	<0.5	8	0.74	21
	3/3/2011	44.74	13.31	N	31.43	1,000	<0.5	<0.5	1.8	<0.5	16
	5/19/2011	44.74	13.43	N	31.31	810	<0.5	<0.5	2.2	0.79	7.8
	9/8/2011	44.74	14.38	N	30.36	1,000	<0.5	<0.5	8.3	2.9	5.4
	12/1/2011	44.74	13.57	N	31.17	1,500 [x]	<0.33	<0.19	12	5.7	13
	3/2/2012	44.74	14.16	N	30.58	1,000	<0.5	<0.5	4	1.1	5.1
	6/6/2012	44.74	14.00	N	30.74	780	<0.5	<0.5	2.9	1.0	2.6
	9/20/2012	44.74	15.26	N	29.48	1,200	<0.5	<0.5	4.3	0.92	2.7
	12/13/2012	44.74	13.34	N	31.40	1,100	<0.5	<0.5	0.99	<0.5	3.4
	3/27/2013	44.74	14.30	N	30.44	680	<0.5	<0.5	1.8	<0.5	4.2
	6/10/2013	44.74	15.06	N	29.68	890	<0.5	<0.5	2.6	<0.5	2.3
	9/16/2013	44.74	15.78	N	28.96	1,400	<0.5	<0.5	7.9	2.70	4.1
	12/5/2013	**44.74**	**16.21**	**N**	**28.53**	**1,800**	**<0.5**	**<0.5**	**8**	**3.10**	**5.7**
MW-8	9/21/2004	41.14	12.98	-	28.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	41.14	11.22	-	29.92	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	41.14	NM	-	NM	NA	NA	NA	NA	NA	NA
	6/15/2005	41.14	10.46	-	30.68	<200	0.53	<2.0	<0.5	<1.0	<0.5
	8/26/2005	41.14	11.53	-	29.61	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	41.14	11.92	-	29.22	<50	<0.5	<2.0	1.36	1.8	<0.5
	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

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MW-8 cont.	1/25/2007	41.14	11.44	-	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	41.14	10.81	-	30.33	<50	<0.5	<2.0	4.29	<2.0	<0.5
	7/25/2007	41.14	12.31	-	28.83	<50	<0.5	<2.0	4.39	<2.0	<0.5
	10/23/2007	41.14	12.37	-	28.77	<50	<0.5	<2.0	4.31	<2.0	<0.5
	1/21/2008	41.14	11.02	-	30.12	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	41.14	11.44	-	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	41.14	12.39	-	28.75	94.8	<0.5	<2.0	1	<2.0	<0.5
	10/15/2008	41.14	13.42	-	27.72	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	41.14	12.50	-	28.64	<50	<0.5	<0.5	<0.5	0.6	<0.5
	4/13/2009	41.14	11.23	-	29.91	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	41.14	13.24	-	27.90	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Well Decommissioned 11/13/2009										
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
	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

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-9 cont.	1/7/2009	40.26	11.75	-	28.51	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	40.26	10.89	-	29.37	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	40.26	12.50	-	27.76	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Well Decommissioned 11/13/2009										
Extraction Wells											
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
	6/3/2010	47.36	17.02	-	30.34	3,600	180	6.3	150	428	83
	9/1/2010	47.36	16.88	-	30.48	550	6.5	0.5	6.9	31.7	38
	12/2/2010	47.36	19.84	-	27.52	<200	3.1	<2.0	<2.0	<2.0	210
	3/3/2011	47.36	14.96	N	32.4	530	51	0.94	15	31.3	110
	5/19/2011	47.36	16.12	N	31.24	370	42	<0.71	7.6	17.2	110
	9/8/2011	47.36	16.47	N	30.89	110	5	<0.5	2.2	6.4	12
	12/1/2011	47.36	16.1	N	31.26	780 [x]	91	3	29	85	150
	3/2/2012	47.36	16.35	N	31.01	140	6	<0.5	3.5	8	14
	6/6/2012	47.36	24.76	N	22.6	250	22	<0.5	4.7	20	71
	9/20/2012	47.36	17.26	N	30.1	95	24	<0.5	<0.5	2.61	36
	12/13/2012	47.36	16.55	N	30.81	1,000	73	2.3	47	110	48
	3/27/2013	47.36	16.15	N	31.21	69	4.1	<0.5	3.3	10	1.8
	6/10/2013	47.36	24.25	N	23.11	340	37	<0.5	5.9	15.1	62
	9/16/2013	47.36	22.54	N	24.82	97	14	<0.5	<0.5	<0.5	65
	12/5/2013	**47.36**	**22.53**	**N**	**24.83**	**390**	**42**	**2.5**	**9.8**	**32.6**	**76**
EX-2	12/2/2009	45.96	17.56	-	28.4	7,100 [Y]	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
	6/3/2010	45.96	17.10	-	28.86	16,000	590	400	700	2,500	9.5
	9/1/2010	45.96	16.99	-	28.97	6,100	230	74	200	890	11
	12/2/2010	45.96	20.87	-	25.09	14,000	510	270	640	2,170	15
	3/3/2011	45.96	14.61	N	31.35	8,600	340	52	460	1,350	13
	5/19/2011	45.96	15.08	N	30.88	7,500	260	65	390	1,080	11
	9/8/2011	45.96	16.34	N	29.62	3,400	190	28	160	451	5.4
	12/1/2011	45.96	22.60	N	23.36	9,900 [x]	630	200	690	1,760	<3.3

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
EX-2 cont.	3/2/2012	45.96	16.48	N	29.48	5,000	220	25	200	600	7.1
	6/6/2012	45.96	18.90	N	27.06	6,900	290	97	310	790	5.2
	9/20/2012	45.96	17.49	N	28.47	1,800	170	14	62	204	5.0
	12/13/2012	45.96	15.96	N	30	7,300	490	180	610	1,290	5.2
	3/27/2013	45.96	16.59	N	29.37	2,200	130	9.6	100	288	4.3
	6/10/2013	45.96	23.11	N	22.85	2,600	190	20	100	248	6.8
	9/20/2013	45.96	23.11	N	22.85	3,900	210	37	170	450	6.3
	12/5/2013	**45.96**	**23.28**	**N**	**22.68**	**3,700**	**160**	**46**	**110**	**394**	**7.2**
MPE Wells											
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
	6/3/2010	51.96	21.18	-	30.78	NA	NA	NA	NA	NA	NA
	9/1/2010	51.96	21.25	-	30.71	NA	NA	NA	NA	NA	NA
	12/2/2010	51.96	21.64	-	30.32	NA	NA	NA	NA	NA	NA
	3/3/2011	51.96	19.33	-	32.63	NA	NA	NA	NA	NA	NA
	5/19/2011	51.96	20.6	-	31.36	NA	NA	NA	NA	NA	NA
Pre-MPE	8/4/2011	51.96	NM	-	NC	49,000	210	100	840	7,070	45
	9/8/2011	51.96	20.83	-	31.13	NA	NA	NA	NA	NA	NA
Post-MPE	9/26/2011	51.96	20.94	Y	31.02	62,000	6,300	3,700	1,800	9,400	1,200
	12/2/2011	51.96	20.14	Y	31.82	56,000	9,000	7,700	2,200	10,800	2,600
	3/2/2012	51.96	20.73	Y	31.23	97,000	11,000	11,000	2,600	12,600	2,700
	6/6/2012	51.96	20.96	Y	31.00	78,000	4,500	4,900	2,300	10,700	750
	9/20/2012	51.96	21.58	Y	30.38	89,000	8,600	9,200	3,400	14,800	1,900
	12/14/2012	51.96	20.57	Y	31.39	98,000	7,400	9,600	2,900	13,300	1,300
	3/27/2013	51.96	20.91	Y	31.05	61,000	6,600	4,500	2,200	9,400	1,500
	6/10/2013	51.96	21.47	Y	30.49	42,000	1,900	980	630	4,400	670
	9/17/2013	51.96	21.98	Y	29.98	45,000	2,400	1,400	1,200	8,000	150
	12/6/2013	**51.96**	**22.41**	**Y**	**29.55**	**27,000**	**1,600**	**220**	**990**	**5,000**	**110**
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
	6/3/2010	53.72	22.35	-	31.37	NA	NA	NA	NA	NA	NA
	9/1/2010	53.72	23.7	-	30.02	NA	NA	NA	NA	NA	NA
	12/2/2010	53.72	22.7	-	31.02	NA	NA	NA	NA	NA	NA

Table 1

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15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MPE-2 cont.	3/3/2011	53.72	21.25	-	32.47	NA	NA	NA	NA	NA	NA
	5/19/2011	53.72	22.19	-	31.53	NA	NA	NA	NA	NA	NA
Pre-MPE	8/4/2011	53.72	NM	-	NC	46,000	2,100	80	1,900	5,300	75
	9/8/2011	53.72	22.31	-	31.41	NA	NA	NA	NA	NA	NA
Post-MPE	9/26/2011	53.72	22.38	N	31.34	37,000	1,800	33	1,700	2,760	<17
	12/2/2011	53.72	21.44	N	32.28	26,000	1,600	43	1,800	3,370	<17
	3/2/2012	53.72	22.24	N	31.48	36,000	1,100	19	1,700	2,970	<17
	6/7/2012	53.72	22.35	N	31.37	33,000	1,800	27	1,600	2,700	29
	9/21/2012	53.72	23.03	N	30.69	31,000	1,700	13	1,900	2,747	14
	12/14/2012	53.72	22.17	N	31.55	31,000	1,700	20	1,800	2,490	16
	3/28/2013	53.72	22.53	N	31.19	20,000	2,200	<20	1,300	960	<20
	6/11/2013	53.72	22.9	N	30.82	26,000	920	<13	1,500	1,352	<13
	9/17/2013	53.72	23.29	N	30.43	23,000	680	15	1,400	1,059	<13
	12/5/2013	**53.72**	**23.73**	**23.61**	**30.07**	**FP**	**FP**	**FP**	**FP**	**FP**	**FP**
2nd WBZ											
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	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 [Y]	<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
	6/4/2010	54.42	23.10	-	31.32	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	54.42	23.51	-	30.91	<50	<0.5	<0.5	0.52	1.8	<0.5
	12/3/2010	54.42	23.41	-	31.01	61	<0.5	<0.5	1.0	3.73	<0.5
	3/3/2011	54.42	22.27	N	32.15	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	54.42	22.89	N	31.53	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	54.42	23.08	N	31.34	220	<0.5	<0.5	0.6	1.4	<0.5
	12/1/2011	54.42	22.26	N	32.16	<22	<0.33	<0.19	<0.15	<0.20	<0.38

Table 1

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15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-1D cont.	3/2/2012	54.42	23.01	N	31.41	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	54.42	23.18	N	31.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	54.42	23.76	N	30.66	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	54.42	23.04	N	31.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	54.42	23.34	N	31.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	54.42	23.69	N	30.73	110	<0.5	<0.5	0.55	<0.5	<0.5
	9/16/2013	54.42	24.02	N	30.40	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	**54.42**	**24.31**	**N**	**30.11**	**<50**	**<0.5**	**<0.5**	**<0.5**	**1.3**	**<0.5**
MW-3D	1/3/2008	54.10		-	-	<50	<0.50	<2.0	<0.50	<2.0	87.6
	1/22/2008	54.10	22.31	-	31.79	<50	<0.50	<2.0	<0.50	<2.0	88.3
	4/16/2008	54.10	22.64	-	31.46	<50	<0.5	<2.0	<0.5	<2.0	71.1
	7/3/2008	54.10	23.17	-	30.93	<50	<0.5	<2.0	<0.5	<2.0	67.4
	10/16/2008	54.10	23.62	-	30.48	<50	<0.5	<0.5	<0.5	<0.5	37
	1/8/2009	54.10	23.07	-	31.03	<50	<0.5	<0.5	<0.5	<0.5	29
	4/14/2009	54.10	22.36	-	31.74	<50	<0.5	<0.5	<0.5	<0.5	44
	8/26/2009	54.10	23.41	-	30.69	<50	<0.5	<0.5	<0.5	<0.5	20
	12/1/2009	54.10	23.27	-	30.83	110 Y	<0.5	<0.5	<0.5	0.52	24
	3/16/2010	54.10	22.10	-	32.00	<50	<0.5	<0.5	<0.5	<0.5	7.1
	6/4/2010	54.10	22.70	-	31.40	<50	<0.5	<0.5	<0.5	<0.5	17
	9/1/2010	54.10	23.09	-	31.01	78	<0.5	<0.5	1.1	4.71	24
	12/3/2010	54.10	22.90	-	31.20	<50	<0.5	<0.5	0.56	1.4	13
	3/3/2011	54.10	21.66	N	32.44	<50	1.3	<0.5	<0.5	0.59	14
	5/19/2011	54.10	22.61	N	31.49	<50	<0.5	<0.5	<0.5	<0.5	5.2
	9/8/2011	54.10	22.68	N	31.42	69	<0.5	<0.5	<0.5	0.62	4.8
	12/1/2011	54.10	22.86	N	31.24	<22	<0.33	<0.19	<0.15	<0.20	10
	3/2/2012	54.10	22.60	N	31.50	<50	<0.5	<0.5	<0.5	<0.5	4.2
	6/6/2012	54.10	22.77	N	31.33	<50	<0.5	<0.5	<0.5	<0.5	4.8
	9/20/2012	54.10	23.42	N	30.68	<50	<0.5	<0.5	<0.5	<0.5	5.1
	12/13/2012	54.10	22.57	N	31.53	<50	<0.5	<0.5	<0.5	<0.5	4.4
	3/27/2013	54.10	22.87	N	31.23	<50	<0.5	<0.5	<0.5	<0.5	4.4
	6/10/2013	54.10	23.27	N	30.83	<50	<0.5	<0.5	<0.5	<0.5	3.5
	9/16/2013	54.10	23.65	N	30.45	<50	<0.5	<0.5	<0.5	<0.5	2.1
	12/5/2013	**54.10**	**23.97**	**N**	**30.13**	**<50**	**<0.5**	**<0.5**	**<0.5**	**0.53**	**1.6**

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Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-4D	1/4/2008	53.12		-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	53.12	21.11	-	32.01	91.5	18.7	<2.0	7.08	11.42	219
	4/15/2008	53.12	21.67	-	31.45	<50	<0.5	<2.0	<0.5	<2.0	27
	7/3/2008	53.12	22.39	-	30.73	<50	<0.5	<2.0	<0.5	<2.0	6.27
	10/16/2008	53.12	22.98	-	30.14	<50	<0.5	<0.5	<0.5	<0.5	1.9
	1/8/2009	53.12	22.25	-	30.87	<50	<0.5	<0.5	<0.5	<0.5	2
	4/14/2009	53.12	21.34	-	31.78	<50	<0.5	<0.5	<0.5	<0.5	2.2
	8/27/2009	53.12	22.79	-	30.33	<50	<0.5	<0.5	<0.5	<0.5	2.2
	12/1/2009	53.12	22.49	-	30.63	120 [Y]	<0.5	<0.5	1.4	2.3	2.3
	3/16/2010	53.12	21.02	-	32.10	<50	<0.5	<0.5	<0.5	<0.5	0.65
	6/4/2010	53.12	21.93	-	31.19	<50	<0.5	<0.5	<0.5	<0.5	1.1
	9/1/2010	53.12	23.32	-	29.80	<50	<0.5	<0.5	0.85	3.76	2.2
	12/3/2010	53.12	22.46	-	30.66	<50	<0.5	<0.5	<0.5	0.67	<0.5
	3/3/2011	53.12	20.45	N	32.67	<50	<0.5	<0.5	<0.5	<0.5	0.58
	5/19/2011	53.12	21.57	N	31.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	53.12	21.92	N	31.20	59	<0.5	<0.5	<0.5	0.51	1.7
	12/1/2011	53.12	21.19	N	31.93	<22	<0.33	<0.19	<0.15	<0.20	4.2
	3/2/2012	53.12	21.8	N	31.32	<50	<0.5	<0.5	0.85	1.2	2.7
	6/6/2012	53.12	22.00	N	31.12	<50	<0.5	<0.5	<0.5	<0.5	1.3
	9/20/2012	53.12	22.67	N	30.45	<50	<0.5	<0.5	<0.5	<0.5	1.6
	12/13/2012	53.12	21.55	N	31.57	<50	<0.5	<0.5	<0.5	<0.5	0.94
	3/27/2013	53.12	21.98	N	31.14	<50	<0.5	<0.5	<0.5	<0.5	2.1
	6/10/2013	53.12	22.55	N	30.57	<50	<0.5	<0.5	<0.5	<0.5	1.7
	9/16/2013	53.12	23.05	N	30.07	<50	<0.5	<0.5	<0.5	<0.5	4.6
	12/6/2013	**53.12**	**23.43**	**N**	**29.69**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**3.4**
1573 153 RD	1/3/2008	NS	NM	-	NC	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	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

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Monitoring Well	Date	Casing Elevation [1] (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
Equipment Blanks											
EB-PMP	1/21/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PRB	1/21/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PMP2	1/22/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PRB2	1/22/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
ESL (ug/L)	-	-	-	-	-	**100**	**1**	**40**	**30**	**20**	**5**

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

[1]: 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.

[2] MtBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.

<: Not detected above the laboratory reporting limit.

Y: Sample exhibits chromatographic pattern which does not resemble standard

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

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

H: Heavier hydrocarbons contributed to the quantitation.

x: Does not match pattern of reference Gasoline Standard. Hydrocarbons in the range of C5-C12 quantified as gasoline (possibly aged gasoline)

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

FP: Groundwater not sampled due to presence of free-product
Groundwater elevation corrected upon presence of FP as follows:
Corrected depth to groundwater is equal to (measured depth)- 0.68(free product thickness)
The correction factor is derived by the following: specific gravity of gas at 20^{0}C is 0.68, then specific gravity is multiplied by the thickness of free product

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)
			1st WBZ				
MW-1	8/8/2002	78	<1.3	<1.3	<1.3	NA	NA
	11/1/2002	42	< 1.0	< 1.0	< 1.0	NA	NA
	2/21/2003	47	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	25	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	<10	<0.5	<0.5	<0.5	NA	NA
	10/9/2003	70	<1.0	<1.0	<1.0	NA	NA
	1/15/2004	55	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	62	<0.7	<0.7	<0.7	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<21.5	<4.3	<4.3	<17.2	NA	NA
	3/11/2005	81	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	68.9	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	46	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	11.3	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	0.51	<0.5
	8/10/2006	<43	<2.15	<2.15	<8.60	3.37	<2.15
	10/26/2006	39.4	<1.0	<1.0	<4.0	2.92	<1.0
	1/25/2007	41.4	<0.5	<0.5	<2.0	1.36	<0.5
	4/26/2007	39.6	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	46.5	<1.0	<1.0	<4.0	<1.0	<1.0
	10/23/2007	53.7	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	23.8	<0.5	<0.5	2.16	<0.5	<0.5
	4/16/2008	8.36	<0.5	<0.5	<2.0	164	<0.5
	7/3/2008	30.5	<0.5	<0.5	<2.0	1.08	<0.5
	10/15/2008	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	1/7/2009	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	4/14/2009	15	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	12/2/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	26	<0.5	<0.5	<0.5	<0.5	<0.5
	9/2/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	12/2/2010	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	3/4/2011	40	<0.5	<0.5	<0.5	<0.5	<0.5
	5/20/2011	<71	<3.6	<3.6	<3.6	<3.6	<3.6
	9/9/2011	33	<1.3	<1.3	<1.3	<1.3	<1.3
	12/2/2011	49	<3.2	<3.5	<2.8	<2.4	<1.7
	3/2/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/7/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/21/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/14/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	3/28/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/11/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/17/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/6/2013	**<33**	**<1.7**	**<1.7**	**<1.7**	**<1.7**	**<1.7**
MW-2	8/8/2002	21	<0.5	<0.5	<0.5	NA	NA
	11/1/2002	15	<0.5	<0.5	<0.5	NA	NA
	2/21/2003	12	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	31	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	69	<0.8	<0.8	<0.8	NA	NA
	10/9/2003	12	<0.5	<0.5	<0.5	NA	NA
	1/15/2004	<10	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	14	<0.5	<0.5	<0.5	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA

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

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-2 cont.	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	2.44	<0.5
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/2/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/2/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/4/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/20/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/9/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/2/2011	<13	<3.2	<3.5	<2.8	<2.4	<1.7
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/7/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/28/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/11/2013	150	<0.5	1.6	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/6/2013	**<10**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-3	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

Table 2
Historical Gasoline Oxygenates Results
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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-3 cont.	3/17/2010	<250	<13	<13	<13	<13	<13
	6/3/2010	<250	<13	<13	<13	<13	<13
	9/2/2010	<250	<13	<13	<13	<13	<13
	12/2/2010	<130	<6.3	<6.3	<6.3	<6.3	<6.3
	3/4/2011	<170	<8.3	<8.3	<8.3	<8.3	<8.3
	5/20/2011	<130	<6.3	<6.3	<6.3	<6.3	<6.3
	9/9/2011	<140	<7.1	<7.1	<7.1	<7.1	<7.1
	12/2/2011	<6.6	<1.6	<1.7	<1.4	<1.2	<0.86
	3/2/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/7/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/21/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	12/14/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	3/28/2013	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/11/2013	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/17/2013	<200	<10	<10	<10	<10	<10
	12/6/2013	**<200**	**<10**	**<10**	**<10**	**<10**	**<10**
MW-4	8/8/2002	1500	<17	<17	18	NA	NA
	11/1/2002	580	< 5.0	6	13	NA	NA
	2/21/2003	1600	<20	22	<20	NA	NA
	5/28/2003	690	<8.3	<8.3	17	NA	NA
	8/12/2003	550	<7.1	7.3	18	NA	NA
	10/9/2003	1400	<31	50	<31	NA	NA
	1/15/2004	1,300	<20	25	21	NA	NA
	5/25/2004	560	<8.3	<8.3	24	NA	NA
	9/21/2004	1,300	<50	<50	<50	NA	NA
	12/14/2004	826	<10.75	21	49	NA	NA
	3/11/2005	1,110	<10.8	12.1	<43	NA	NA
	6/15/2005	<110	<5.5	<5.5	22.9	NA	NA
	8/26/2005	902	<5.50	<5.50	37.4	NA	NA
	11/11/2005	884	<10.8	<10.8	<43	NA	NA
	2/9/2006	769	<10.8	16.4	45.6	NA	NA
	5/9/2006	405	<2.15	2.95	31.3	<2.15	<2.15
	8/10/2006	306	<2.15	<2.15	35.3	<2.15	<2.15
	10/26/2006	3430	<10.8	13.8	<43	<10.8	<10.8
	1/25/2007	822	<2.15	2.4	28	2.25	<2.15
	4/26/2007	556	<2.15	2.28	29.2	<2.15	<2.15
	7/25/2007	1,860	<2.15	9.94	24	<2.15	<2.15
	10/23/2007	3,400	<2.15	18.4	25.9	<2.15	<2.15
	1/22/2008	2,580	<5.50	64.7	<22	<0.5	<0.5
	4/15/2008	1,100	<5.50	11.7	<22	39.9	<5.50
	7/2/2008	8,720	<5.50	75.2	<22	<5.50	<5.50
	10/16/2008	700	<3.6	4.2	37	5.4	<3.6
	1/8/2009	1,500	<3.6	9.9	41	3.6	<3.6
	4/13/2009	1,100	<8.3	<8.3	28	<8.3	<8.3
	8/27/2009	4,900	<5.0	24	<5.0	<5.0	<5.0
	12/2/2009	6,800	<5.0	69	<5.0	<5.0	<5.0
	3/17/2010	1,900	<3.6	18	<3.6	<3.6	<3.6
	6/3/2010	930	<3.6	7.7	<3.6	<3.6	<3.6
	9/2/2010	7,200	<3.6	57	<3.6	<3.6	<3.6
	12/2/2010	3,800	<10	30	<10	<10	<10
	3/3/2011	410	<0.71	3.2	<0.71	<0.71	<0.71
	5/19/2011	130	<0.5	1.4	<0.5	<0.5	<0.5
	9/8/2011	380	<0.5	3.5	<0.5	1.1	<0.5
	12/1/2011	790	<1.6	5.4	8.2	<1.2	<0.86
	3/2/2012	920	<2.0	5.9	24	<2.0	<2.0
	6/7/2012	1,000	<2.5	13	<2.5	<2.5	<2.5
	9/21/2012	1,300	<2.5	14	<2.5	<2.5	<2.5
	12/14/2012	36	<0.5	0.65	<0.5	<0.5	<0.5
	3/28/2013	2,500	<5.0	29	<5.0	<5.0	<5.0
	6/11/2013	890	<5.0	12	<5.0	<5.0	<5.0
	9/17/2013	1,100	<10	<10	<10	<10	<10
	12/6/2013	**1,500**	**<10**	**<10**	**<10**	**<10**	**<10**
MW-5	8/8/2002	<250	<6.3	<6.3	510	NA	NA
	11/1/2002	66	< 2.0	< 2.0	560	NA	NA

Table 2
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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-5 cont.	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
	1/25/2007	878	<5.50	<5.50	552	<5.50	<5.50
	4/26/2007	708	<2.15	<2.15	310	<2.15	<2.15
	7/25/2007	1,020	<2.15	<2.15	356	<2.15	<2.15
	10/23/2007	1,510	<2.15	<2.15	181	<2.15	<2.15
	1/22/2008	470	<0.5	4.56	62.1	<0.5	<0.5
	4/15/2008	566	<1.0	<1.0	29.6	231	5.66
	7/3/2008	2,320	<2.15	<2.15	53.3	<2.15	<2.15
	10/16/2008	990	<5.0	<5.0	82	<5.0	<5.0
	1/8/2009	360	<6.3	<6.3	51	<6.3	<6.3
	4/13/2009	280	<3.1	<3.1	<3.1	<3.1	<3.1
	8/27/2009	1,300	<5.0	<5.0	<5.0	<5.0	<5.0
	12/2/2009	320	<5.0	<5.0	25	<5.0	<5.0
	3/17/2010	570	<1.0	<1.0	<1.0	<1.0	<1.0
	6/4/2010	340	<1.0	<1.0	<1.0	<1.0	<1.0
	9/2/2010	320	<2.5	<2.5	13	<2.5	<2.5
	12/2/2010	200	<3.1	<3.1	<3.1	<3.1	<3.1
	3/4/2011	180	<0.5	<0.5	<0.5	<0.5	<0.5
	5/20/2011	480	<1.0	<1.0	<1.0	<1.0	<1.0
Pre- MPE	8/4/2011	110	<0.71	<0.71	2.6	<0.71	<0.71
	9/9/2011	260	<1.0	<1.0	11	<1.0	<1.0
	12/2/2011	95	<3.2	<3.5	14	<2.4	<1.7
	3/2/2012	59	<1.0	<1.0	4.1	<1.0	<1.0
	6/7/2012	22	<1.0	<1.0	2.8	<1.0	<1.0
	9/21/2012	66	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2012	<20	<1.0	<1.0	4.2	<1.0	<1.0
	3/28/2013	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	6/11/2013	<20	<1.0	<1.0	2.5	<1.0	<1.0
	9/17/2013	20	<1.0	<1.0	5.7	<1.0	<1.0
	12/6/2013	**<20**	**<1.0**	**<1.0**	**3.9**	**<1.0**	**<1.0**
MW-6	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<5.5	<5.5	<5.5	<22	NA	NA
	3/11/2005	2.54	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<20	<1.0	<1.0	<4.0	NA	NA
	8/26/2005	<43	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	<43	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	<43	<2.15	<2.15	<8.6	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	7.21	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	5.66	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	6.68	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	13.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	6.78	1.49
	7/2/2008	4.54	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	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

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

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-6 cont.	3/16/2010	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	6/3/2010	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	9/1/2010	<200	<10	<10	<10	<10	<10
	12/2/2010	<330	<17	<17	<17	<17	<17
	3/3/2011	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	5/20/2011	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/8/2011	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/1/2011	NA	NA	NA	NA	NA	NA
	3/2/2012	<83	<4.2	<4.2	<4.2	<4.2	<4.2
	6/6/2012	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	9/20/2012	NA	NA	NA	NA	NA	NA
	12/13/2012	29	<0.71	<0.71	<0.71	<0.71	<0.71
	3/27/2013	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	6/10/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/16/2013	FP	FP	FP	FP	FP	FP
	12/5/2013	**270**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**<2.5**
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
	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
	6/3/2010	20	<0.5	<0.5	7.1	<0.5	<0.5
	9/1/2010	47	<0.5	<0.5	7.2	<0.5	<0.5
	12/2/2010	22	<0.5	<0.5	4.9	<0.5	<0.5
	3/4/2011	14	<0.5	<0.5	4.0	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	2.1	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	1.6	<0.5	<0.5
	12/1/2011	15	<0.36	<0.40	2.4	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	0.82	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	**<10**	**<0.5**	**<0.5**	**0.73**	**<0.5**	**<0.5**
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

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

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-8 cont.	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
	Well Decommissioned 11/13/2009						
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
	Well Decommissioned 11/13/2009						
EX-1	12/2/2009	150	<1.3	<1.3	<1.3	<1.3	<1.3
	3/16/2010	980	<1.3	2.4	27	<1.3	<1.3
	6/3/2010	570	<1.3	1.9	<1.3	<1.3	<1.3
	9/1/2010	470	<0.5	1.4	2	<0.5	<0.5
	12/2/2010	1,300	<2.0	3.6	15	<2.0	<2.0
	3/3/2011	690	<0.71	2.5	12	<0.71	<0.71
	5/19/2011	370	<0.71	1.9	13	<0.71	<0.71
	9/8/2011	32	<0.5	<0.5	0.53	<0.5	<0.5
	12/1/2011	1,200	<1.6	8.3	6.8	<1.2	<0.86
	3/2/2012	31	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	390	<0.5	2.9	4.8	0.57	<0.5
	9/20/2012	170	<0.5	1.5	<0.5	<0.5	<0.5
	12/13/2012	210	<0.5	2.7	5.2	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	280	<0.5	4.0	1.6	<0.5	<0.5
	9/16/2013	450	<0.5	2.4	1.9	<0.5	<0.5
	12/5/2013	**230**	**<0.5**	**1.7**	**5.5**	**<0.5**	**<0.5**
EX-2	12/2/2009	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	3/16/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/3/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/1/2010	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/2/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	3/3/2011	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	5/19/2011	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/8/2011	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	12/1/2011	74	<3.2	<3.5	<2.8	<2.4	<1.7

Table 2
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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)
EX-2 cont.	3/2/2012	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	6/6/2012	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	9/20/2012	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	12/13/2012	<71	<3.6	<3.6	<3.6	<3.6	<3.6
	3/27/2013	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	6/10/2013	32	<1.0	<1.0	<1.0	<1.0	<1.0
	9/20/2013	<20	<1.0	<1.0	<1.0	1.4	<1.0
	12/5/2013	**30**	**<1.0**	**<1.0**	**<1.0**	**1.2**	**<1.0**
MPE Wells							
MPE-1	8/4/2011	<500	<25	<25	<25	<25	<25
	9/26/2011	<500	<25	<25	600	<25	<25
	12/2/2011	830	<32	<35	750	<24	<17
	3/2/2012	<710	<36	<36	1,200	<36	<36
	6/6/2012	<630	<31	<31	430	<31	<31
	9/20/2012	<1,300	<63	<63	1,200	<63	<63
	12/14/2012	<1,300	<63	<63	940	<63	<63
	3/27/2013	<710	<36	<36	890	<36	<36
	6/10/2013	660	<13	<13	380	<13	<13
	9/17/2013	1,400	<13	<13	<13	<13	<13
	12/6/2013	**1,500**	**<20**	**<20**	**30**	**<20**	**<20**
MPE-2	8/4/2011	<330	<17	<17	<17	<17	<17
	9/26/2011	<330	<17	<17	<17	<17	<17
	12/2/2011	<66	<16	<17	<14	<12	<8.6
	3/2/2012	<330	<17	<17	<17	<17	<17
	6/7/2012	<250	<13	<13	<13	<13	<13
	9/21/2012	<250	<13	<13	<13	<13	<13
	12/14/2012	<250	<13	<13	<13	<13	<13
	3/28/2013	<400	<20	<20	<20	<20	<20
	6/11/2013	<250	<13	<13	<13	<13	<13
	9/17/2013	<250	<13	<13	<13	<13	<13
	12/5/2013	**FP**	**FP**	**FP**	**FP**	**FP**	**FP**
2nd WBZ							
MW-1D	1/3/2008	111	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	12.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/16/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	<0.32	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	**<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

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Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-3D cont.	3/16/2010	<10	<0.5	<0.5	0.65	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	1.8	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	0.93	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	1.0	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	0.52	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	**<10**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-4D	1/4/2008	25	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	124	<0.5	4.9	3.32	<0.5	<0.5
	4/15/2008	25.7	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	3.38	<0.5	<0.5	<2.0	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	<0.32	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/6/2013	**<10**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
1573 153 RD	1/3/2008	21	<0.5	<0.5	<2.0	<0.5	<2.0
	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
ESL		**12**	**NE**	**NE**	**NE**	**0.5**	**0.05**

Notes:
August 8, 2002 was the first time that samples were analyzed for Gasoline Oxygenates
<: Not detected above the laboratory reporting limit.
NA: Not Analyzed. Well MW-8 was inaccessible during the 1Q05 & well MW-7 (1Q06) car was parked over each well.
NE: Not Established
TBA: tert-Butyl Alcohol
DIPE: Isopropyl Ether
ETBE: Ethyl tert-Butyl Ether
TAME: Methyl tert-Amyl Ether
ESL: Environmental Screening Levels per CRWQCB SFBay Region Interim Final Nov. 2007 (Revised May 2008); Table F-1a,Groundwater Screening Levels (groundwater is a current or potential drinking water resource)
MW-8 and MW-9 were decommissioned November 13, 2009
FP: Groundwater not sampled due to presence of free-product in MW-6

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
2009											
8-Oct-2009	15,351	<50	120 [Y]	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
2010											
18-Jan-2010	215,453	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.4
15-Feb-2010	297,560	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	11	<5	6.7
15-Mar-2010	475,245	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5.0	6.5
19-Apr-2010	621,180	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.6
17-May-2010	705,770	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.7
16-Jun-2010	825,200	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	17	9	6.8
19-Jul-2010	910,652	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.6
16-Aug-2010	939,935	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6
28-Sep-2010	970,450	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	10	6.8
26-Oct-2010	1,013,700	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.2
15-Nov-2010	1,052,591	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.5
7-Dec-2010	1,100,492	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6
2011											
11-Jan-2011	1,179,075	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	12	6	6.6
10-Feb-2011	1,249,569	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.6
14-Mar-2011	1,336,784	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.5
11-Apr-2011	1,364,272	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.5
10-May-2011	1,466,472	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	12	7	6.6
7-Jun-2011	1,532,263	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6

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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
28-Jul-2011	1,573,295	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	5	6.3
25-Aug-2011	1,613,935	77	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.1
23-Sep-2011	1,631,273	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.7
27-Oct-2011	1,642,277	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	7	7.1
18-Nov-2011	1,676,170	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.8
1-Dec-2011	1,694,889	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.97
2012											
19-Jan-2012	1,715,163	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.02
23-Feb-2012	1,794,185	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.98
20-Mar-2012	1,803,832	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	7	7.02
17-Apr-2012	1,876,439	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.95
29-May-2012	1,900,111	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.89
11-Jun-2012	1,914,130	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.1
12-Jul-2012	1,943,456	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.3
17-Aug-2012	1,955,438	<50	<52	<310	<0.5	<0.5	<0.5	<0.5	NA	NA	7.04
17-Sep-2012	1,979,852	<50	<54	<330	<0.5	<0.5	<0.5	<0.5	NA	NA	7.02
23-Oct-2012	1,989,022	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.95
12-Nov-2012	1,995,170	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.90
4-Dec-2012	2,024,040	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.86
2013											
7-Jan-2013	2,099,002	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.01
14-Feb-2013	2,186,595	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.08
14-Mar-2013	2,193,121	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.98
12-Apr-2013	2,198,793	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.83
10-Jun-2013	2,273,686	<50	<58	<350	<0.5	<0.5	<0.5	<0.5	NA	NA	6.91

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
5-Jul-2013	2,282,444	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.87
15-Aug-2013	2,403,250	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.64
24-Sep-2013	2,449,583	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.59
28-Oct-2013	2,551,538	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.71
14-Nov-2013	2,665,016	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.53
6-Dec-2013	**2,770,675**	**<50**	**<49**	**<290**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**6.44**

Note:
NA: Not Available/Not Applicable
< : Less than Laboratory-reporting limit
In October and November 2009 discharge occurred only during MPE events
GWETS and totalizer installed in December 2009.
Week # 1 sampling conducted on Oct 8, 2009
C: Presence confirmed, but RPD between column exceeds 40%
Volume discharged during the October 2009 MPE event was 18,669 gallons
Volume discharged during the November 2009 MPE event was 10,507 gallons
Volume discharged during the December 2009 MPE event was 20,298 gallons
Volume discharged during the February 2010 MPE event was 6,339 gallons
Volume discharged during the March 2010 MPE event was 3,810 gallons
Volume discharged during the June 2010 MPE event was 15, 600 gallons
Volume discharged during the August 2010 MPE event was 1,421 gallons
Volume discharged during the October 2010 MPE event was 13,282 gallons
SOMA ceased COD and TSS testing based on a request from OLSD dated April 5, 2012

Table 4

Cumulative Masses of Petroleum Hydrocarbons Removed from the Groundwater Since Installation of the Treatment System

15101 Freedom Ave, San Leandro, CA

Date	Volume	Influent Concentration (µg/L)					Mass removed (pounds)				
	(gallons)	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes
2009											
9-Dec-2009	0	Installation of GWETS, began discharging treated groundwater to site sewer main									
2010											
18-Jan-2010	215,453	1,900	79	32.00	2.4	260	3.41	0.14	0.06	0.00	0.47
19-Apr-2010	621,180	2,100	75	28	56	332	10.50	0.40	0.15	0.19	1.59
19-Jul-2010	910,652	56 Y	<0.5	<0.5	<0.5	<0.5	10.64	0.40	0.15	0.19	1.59
26-Oct-2010	1,013,700	2,600	200	25	68	405	12.87	0.57	0.17	0.25	1.94
2011											
11-Jan-2011	1,179,075	1,700	80	19	50	295	15.21	0.68	0.20	0.32	2.34
11-Apr-2011	1,364,272	1,200	41	3.3	23	185	17.06	0.75	0.20	0.36	2.63
28-Jul-2011	1,573,295	540	21	2.8	5.4	49	18.00	0.78	0.21	0.37	2.71
27-Oct-2011	1,642,277	<50	1.50	<0.5	<0.5	2.9	18.00	0.78	0.21	0.37	2.71
2012											
19-Jan-2012	1,715,163	110 Y	<0.5	<0.5	<0.5	<0.5	18.07	0.78	0.21	0.37	2.71
17-Apr-2012	1,876,439	1,100	60	6.8	24	161	19.54	0.87	0.22	0.40	2.93
12-Jul-2012	1,943,456	320	30	1.6	15	34	19.72	0.88	0.22	0.41	2.95
23-Oct-2012	1,989,022	1,400 Y	130	12	42	153	20.25	0.93	0.22	0.42	3.01
2013											
7-Jan-2013	2,099,002	1,500	66	9.8	37	228	21.63	0.99	0.23	0.46	3.22
12-Apr-2013	2,198,793	1,600	110	3.8	64	131	22.96	1.08	0.24	0.51	3.32
5-Jul-2013	2,282,444	680	71	1.8	22	33.9	23.43	1.13	0.24	0.52	3.35
28-Oct-2013	**2,551,538**	**4,900**	**88**	**49**	**150**	**583**	**34.41**	**1.33**	**0.35**	**0.86**	**4.65**

Notes:

< : Below laboratory-reporting limit

Y : sample exhibits chromatographic pattern which does not resmeble standard

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
10/15/2013	1130								0	begin extraction from MPE-1, MPE-2, and MW-6
	1200	1,030	13.7	1498	149	149	0	20		
	1230	1,011	13.7	1499	149	149	0	20		
	1300	989	13.7	1501	149	149	0	20		
	1330	956	13.7	1498	149	149	0	20		
	1400	928	13.6	1500	149	149	0	20		
	1430	907	13.6	1497	150	150	0	19.9		
	1500	885	13.6	1501	150	150	0	19.9		
	1600	852	13.6	1498	150	150	0	19.9		
	1700	823	13.7	1499	149	149	0	20		
	1800	796	13.7	1501	149	149	0	20		
10/16/2013	800	738	13.7	1500	149	149	0	20		Extracting from MPE-1 and MW-6
	900	706	13.6	1498	149	149	0	20		
	1000	697	13.7	1501	149	149	0	20		
	1100	671	13.7	1499	149	149	0	20		
	1200	783	9.5	1498	192	192	0	17.3		Extracting from MPE-1, MPE-2, and MW-6
	1300	751	9.5	1500	193	193	0	17.2		
	1400	740	9.4	1501	193	193	0	17.2		
	1500	731	9.4	1498	193	193	0	17.2		
	1600	706	9.5	1499	192	192	0	17.3		
	1700	681	9.5	1501	192	192	0	17.3		
10/17/2013	800	547	9.8	1499	192	192	0	17.3		
	900	539	9.8	1500	192	192	0	17.3		
	1000	530	9.8	1499	192	192	0	17.3		
	1100	559	9.7	1501	192	192	0	17.3		
	1200	551	9.7	1500	192	192	0	17.3		
	1300	558	9.7	1499	192	192	0	17.3		
	1400	554	9.7	1501	192	192	0	17.3		
	1500	549	9.7	1499	192	192	0	17.3		
	1600	545	9.7	1501	192	192	0	17.3		
	1700	544	9.7	1500	192	192	0	17.3		
10/18/2013	800	595	9.8	1501	192	192	0	17.3	15,972	
	900	594	9.8	1499	192	192	0	17.3		
	1000	592	9.8	1501	192	192	0	17.3		
	1100	588	9.8	1500	192	192	0	17.3		
	1200	581	9.8	1498	192	192	0	17.3		
	1300	568	9.7	1501	192	192	0	17.3		
	1400	577	9.7	1499	192	192	0	17.3		
	1500	582	9.7	1500	192	192	0	17.3		
	1600	571	9.7	1498	192	192	0	17.3		
	1700	560	9.7	1500	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
10/19/2013	800	542	10	1500	158	158	0	19.4	28,239	
	1000	549	10	1499	165	165	0	19		
	1130	656	10	1500	196	196	0	17		
	1400	650	9.4	1501	193	193	0	17.2		
	1600	672	9.6	1503	193	193	0	17.2		
10/20/2013	800	609	9.6	1498	192	192	0	17.3	33,593	
	900	621	9.6	1500	192	192	0	17.3		
	1000	647	10.1	1499	189	189	0	17.5		
	1100	653	10	1500	189	189	0	17.5		
	1200	659	10	1498	189	189	0	17.5		
	1300	655	10	1501	189	189	0	17.5		
	1400	688	9.9	1500	190	190	0	17.4		
	1500	703	10	1498	190	190	0	17.4		
	1600	694	9.9	1499	192	192	0	17.3		
	1700	687	9.9	1498	192	192	0	17.3		
10/21/2013	800	650	10	1499	192	192	0	17.3	39,158	
	900	655	10	1500	192	192	0	17.3		
	1000	489	10.2	1498	157	157	0	19.5		
	1100	483	10.2	1501	157	157	0	19.5		
	1200	478	10.2	1499	157	157	0	19.5		
	1300	497	10.2	1501	157	157	0	19.5		
	1400	721	10	1500	192	192	0	17.3		
	1500	704	9.8	1498	192	192	0	17.3		
	1600	873	9.8	1501	192	192	0	17.3		
	1700	895	9.8	1500	192	192	0	17.3		
10/22/2013	800	1,091	10.4	1502	182	182	0	17.9	46,005	
	900	1,069	10.4	1500	182	182	0	17.9		
	1000	1,007	10.3	1502	184	184	0	17.8		
	1100	935	9.9	1502	184	184	0	17.8		
	1200	901	9.9	1500	184	184	0	17.8		
	1300	845	9.8	1498	193	193	0	17.2		
	1400	826	9.8	1502	193	193	0	17.2		
	1500	798	9.8	1499	192	192	0	17.3		
	1600	753	9.7	1501	193	193	0	17.2		
	1700	724	9.7	1500	193	193	0	17.2		
10/23/2013	800	598	10.2	1500	189	189	0	17.5	53,059	
	900	586	10.2	1499	189	189	0	17.5		
	1000	571	10.2	1501	192	192	0	17.3		
	1100	574	10.2	1498	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
	1200	577	10.2	1502	192	192	0	17.3		
	1300	570	10	1500	192	192	0	17.3		
	1400	562	9.9	1501	193	193	0	17.2		
	1500	557	9.9	1499	193	193	0	17.2		
	1600	554	9.9	1500	193	193	0	17.2		
	1700	548	9.9	1500	193	193	0	17.2		
10/24/2013	800	494	9.8	1501	192	192	0	17.3	59,974	
	900	489	9.8	1499	192	192	0	17.3		
	1000	485	9.8	1498	192	192	0	17.3		
	1100	472	9.8	1501	192	192	0	17.3		
	1200	474	9.8	1502	192	192	0	17.3		
	1300	470	9.8	1498	192	192	0	17.3		
	1400	467	9.8	1500	192	192	0	17.3		
	1500	472	9.8	1499	192	192	0	17.3		
	1600	465	9.8	1500	192	192	0	17.3		
	1700	461	9.8	1502	192	192	0	17.3		
10/25/2013	800	435	10	1500	189	189	0	17.5	66,953	
	900	429	10	1501	189	189	0	17.5		
	1000	420	10	1499	189	189	0	17.5		
	1100	428	10	1502	189	189	0	17.5		
	1200	425	10	1500	190	190	0	17.4		
	1300	427	10	1501	192	192	0	17.3		
	1400	432	10	1500	192	192	0	17.3		
	1500	429	10	1501	193	193	0	17.2		
	1600	418	10	1500	193	193	0	17.2		
	1700	417	10	1501	193	193	0	17.2		
10/26/2013	800	407	10	1500	193	193	0	17.2	73,499	
	900	414	10	1500	193	193	0	17.2		
	1000	406	10	1502	193	193	0	17.2		
	1100	401	10	1499	192	192	0	17.3		
	1200	395	10	1500	192	192	0	17.3		
	1300	403	10	1502	192	192	0	17.3		
	1400	401	10	1502	192	192	0	17.3		
	1500	402	10	1500	193	193	0	17.2		
	1600	399	10	1502	193	193	0	17.2		
	1700	395	10	1500	193	193	0	17.2		
10/27/2013	800	374	10	1501	192	192	0	17.3	80,628	
	900	367	10	1499	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
	1000	364	10	1500	192	192	0	17.3		
	1100	368	10	1498	192	192	0	17.3		
	1200	364	10	1499	192	192	0	17.3		
	1300	371	10	1499	192	192	0	17.3		
	1400	368	10	1501	192	192	0	17.3		
	1500	367	10	1502	192	192	0	17.3		
	1600	368	10	1500	192	192	0	17.3		
	1700	365	10	1501	192	192	0	17.3		
10/28/2013	800	358	10	1502	192	192	0	17.3	87,685	
	900	355	10	1500	192	192	0	17.3		
	1000	351	10	1501	192	192	0	17.3		
	1100	347	10	1501	192	192	0	17.3		
	1200	342	10	1500	192	192	0	17.3		
	1300	350	10	1499	192	192	0	17.3		
	1400	347	10	1499	192	192	0	17.3		
	1500	354	9.9	1501	193	193	0	17.2		
	1600	346	9.9	1498	193	193	0	17.2		
	1700	343	9.9	1499	193	193	0	17.2		
10/29/2013	800	334	10	1499	189	189	0	17.5	94,519	
	900	330	10	1501	189	189	0	17.5		
	1000	328	10	1498	189	189	0	17.5		
	1100	326	10	1500	189	189	0	17.5		
	1200	325	10	1501	190	190	0	17.4		
	1300	331	10	1500	190	190	0	17.4		
	1400	327	10	1498	190	190	0	17.4		
	1500	337	10	1501	192	192	0	17.3		
10/30/2013	1200	371	10	1501	192	192	0	17.3	99,583	
	1300	360	9.9	1499	192	192	0	17.3		
	1400	356	9.9	1502	192	192	0	17.3		
	1500	355	9.9	1500	192	192	0	17.3		
	1600	347	9.8	1500	192	192	0	17.3		
	1700	341	9.8	1501	192	192	0	17.3		
10/31/2013	800	319	9.8	1498	192	192	0	17.3	106,172	
	900	311	9.8	1501	192	192	0	17.3		
	1000	306	9.8	1499	192	192	0	17.3		
	1100	314	9.8	1498	192	192	0	17.3		
	1200	317	9.8	1501	192	192	0	17.3		
	1300	312	9.8	1500	192	192	0	17.3		
	1400	314	9.8	1499	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
	1500	310	9.8	1501	192	192	0	17.3		
	1600	307	9.8	1499	192	192	0	17.3		
	1700	303	9.8	1500	192	192	0	17.3		
11/1/2013	800	331	9.9	1499	190	190	0	17.4	113,164	
	900	317	9.9	1501	190	190	0	17.4		
	1000	327	9.9	1500	192	192	0	17.3		
	1100	322	9.9	1498	192	192	0	17.3		
	1200	316	9.9	1499	192	192	0	17.3		
	1300	330	9.9	1500	192	192	0	17.3		
	1400	319	9.9	1501	192	192	0	17.3		
	1500	317	9.8	1500	192	192	0	17.3		
	1600	341	9.8	1502	192	192	0	17.3		
	1700	346	9.8	1501	192	192	0	17.3		
11/2/2013	800	334	9.9	1500	192	192	0	17.3	119,674	
	900	332	9.9	1501	192	192	0	17.3		
	1000	336	9.9	1500	192	192	0	17.3		
	1100	339	9.9	1501	192	192	0	17.3		
	1200	342	9.9	1499	192	192	0	17.3		
	1300	346	9.9	1501	192	192	0	17.3		
	1400	345	9.8	1502	192	192	0	17.3		
	1500	342	9.8	1501	192	192	0	17.3		
	1600	334	9.8	1499	192	192	0	17.3		
	1700	343	9.8	1498	192	192	0	17.3		
11/3/2013	800	330	9.9	1500	192	192	0	17.3	126,970	
	900	323	9.9	1501	192	192	0	17.3		
	1000	326	9.9	1502	192	192	0	17.3		
	1100	334	9.9	1500	192	192	0	17.3		
	1200	336	9.9	1502	192	192	0	17.3		
	1300	335	9.9	1501	192	192	0	17.3		
	1400	334	9.9	1500	192	192	0	17.3		
	1500	330	9.9	1500	192	192	0	17.3		
	1600	332	9.8	1501	192	192	0	17.3		
	1700	330	9.8	1502	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
11/4/2013	800	302	9.9	1499	192	192	0	17.3	134,153	
	900	311	9.9	1500	192	192	0	17.3		
	1000	319	9.9	1502	192	192	0	17.3		
	1100	328	9.9	1501	192	192	0	17.3		
	1200	334	9.9	1500	192	192	0	17.3		
	1300	329	9.9	1490	192	192	0	17.3		
	1400	356	9.9	1501	192	192	0	17.3		
	1500	324	9.9	1502	192	192	0	17.3		
	1600	321	9.9	1500	192	192	0	17.3		
	1700	320	9.9	1501	192	192	0	17.3		
11/5/2013	800	316	9.9	1500	192	192	0	17.3	141,067	
	900	321	9.9	1499	192	192	0	17.3		
	1000	317	9.9	1501	192	192	0	17.3		
	1100	331	9.9	1499	192	192	0	17.3		
	1200	332	9.9	1500	192	192	0	17.3		
	1300	335	9.9	1502	192	192	0	17.3		
	1400	324	9.8	1498	192	192	0	17.3		
	1500	318	9.8	1502	192	192	0	17.3		
	1600	315	9.8	1500	192	192	0	17.3		
	1700	317	9.8	1501	192	192	0	17.3		
11/6/2013	800	311	9.9	1500	192	192	0	17.3	147,951	
	900	306	9.9	1499	192	192	0	17.3		
	1000	303	9.9	1501	192	192	0	17.3		
	1100	312	9.9	1498	192	192	0	17.3		
	1200	321	9.9	1500	192	192	0	17.3		
	1300	319	9.9	1502	192	192	0	17.3		
	1400	315	9.9	1499	192	192	0	17.3		
	1500	296	9.9	1501	192	192	0	17.3		
	1600	289	9.9	1499	192	192	0	17.3		
	1700	304	9.9	1500	192	192	0	17.3		
11/7/2013	800	297	10	1499	189	189	0	17.5	154,804	
	900	305	10	1501	189	189	0	17.5		
	1000	308	10	1498	189	189	0	17.5		
	1100	311	10	1499	189	189	0	17.5		
	1200	314	10	1501	189	189	0	17.5		
	1300	316	10	1500	189	189	0	17.5		
	1400	328	10	1499	189	189	0	17.5		
	1500	319	10	1500	190	190	0	17.4		
	1600	315	10	1499	190	190	0	17.4		
	1700	311	10	1500	190	190	0	17.4		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
11/8/2013	800	301	10	1501	190	190	0	17.4	161,203	
	900	292	10	1499	190	190	0	17.4		
	1000	303	10	1502	190	190	0	17.4		
	1100	311	10	1500	190	190	0	17.4		
	1200	313	10	1498	190	190	0	17.4		
	1300	312	9.9	1500	190	190	0	17.4		
	1400	317	9.9	1501	192	192	0	17.3		
	1500	310	9.9	1499	192	192	0	17.3		
	1600	309	9.9	1500	192	192	0	17.3		
	1700	321	9.9	1501	192	192	0	17.3		
11/9/2013	800	302	9.9	1500	192	192	0	17.3	168,020	
	900	308	9.9	1500	192	192	0	17.3		
	1000	300	9.9	1500	192	192	0	17.3		
	1100	305	9.9	1499	192	192	0	17.3		
	1200	311	9.9	1498	192	192	0	17.3		
	1300	309	9.9	1499	192	192	0	17.3		
	1400	310	9.9	1500	192	192	0	17.3		
	1500	306	9.9	1501	192	192	0	17.3		
	1600	304	9.8	1500	192	192	0	17.3		
	1700	305	9.8	1500	192	192	0	17.3		
11/10/2013	800	288	9.9	1498	192	192	0	17.3	174,710	
	900	285	9.9	1500	192	192	0	17.3		
	1000	286	9.9	1501	192	192	0	17.3		
	1100	294	9.9	1500	192	192	0	17.3		
	1200	301	9.9	1499	192	192	0	17.3		
	1300	300	9.9	1499	192	192	0	17.3		
	1400	299	9.9	1500	192	192	0	17.3		
	1500	297	9.9	1499	192	192	0	17.3		
	1600	295	9.9	1498	192	192	0	17.3		
	1700	298	9.9	1500	192	192	0	17.3		
11/11/2013	800	307	9.9	1499	192	192	0	17.3	181,649	
	1700	301	9.9	1501	192	192	0	17.3		
11/12/2013	800	308	9.9	1500	192	192	0	17.3	187,965	
	900	304	9.9	1499	192	192	0	17.3		
	1000	307	9.9	1501	192	192	0	17.3		
	1100	308	9.9	1501	192	192	0	17.3		
	1200	310	9.9	1499	192	192	0	17.3		
	1300	309	9.9	1500	192	192	0	17.3		
	1400	311	9.9	1501	192	192	0	17.3		
	1500	316	9.9	1499	192	192	0	17.3		

Table 5

MPE Event
Operational Data : October-November 2013

15101 Freedom Ave.
San Leandro, California

DATE	TIME	PID (ppmv)	WELL MANIFOLD VACUUM (In of Hg)	OXIDIZER TEMPERATURE (^{0}F)	WELL FIELD FLOW VAPOR RATE (scfm)	TOTAL SYSTEM VAPOR FLOW RATE (scfm)	DILUTION AIR FLOW RATE (scfm)	SYSTEM (BLOWER) VACUUM (In of Hg)	SYSTEM TOTALIZER READING (gallons)	COMMENTS
	1600	310	9.9	1499	192	192	0	17.3		
	1700	308	9.9	1501	192	192	0	17.3		
11/13/2013	800	302	9.9	1500	192	192	0	17.3	194,520	
	900	298	9.9	1498	192	192	0	17.3		
	1000	293	9.9	1499	192	192	0	17.3		
	1100	305	9.9	1500	192	192	0	17.3		
	1200	314	9.9	1499	192	192	0	17.3		
	1300	310	9.9	1500	192	192	0	17.3		
	1400	306	9.9	1501	192	192	0	17.3		
	1500	298	9.9	1499	192	192	0	17.3		
	1600	305	9.9	1502	192	192	0	17.3		
	1700	315	9.9	1499	192	192	0	17.3		
11/14/2013	800	312	10.1	1502	190	190	0	17.4	201,163	
	900	323	10.1	1500	190	190	0	17.4		
	1000	309	10	1501	190	190	0	17.4		
	1100	302	10	1498	190	190	0	17.4		
	1200	314	10	1500	190	190	0	17.4		
	1300	309	10	1499	190	190	0	17.4		
	1400	307	10	1501	192	192	0	17.3		
	1500	302	10	1502	192	192	0	17.3		
	1600	308	10	1499	192	192	0	17.3		
	1700	305	10	1500	192	192	0	17.3		
11/15/2013	800	284	10	1501	192	192	0	17.3		
	900	287	10	1499	192	192	0	17.3		
	1000	281	10	1498	192	192	0	17.3		
	1100	290	10	1500	192	192	0	17.3		
	1200	287	10	1501	192	192	0	17.3		
	1300	294	10	1499	192	192	0	17.3		
	1400	296	10	1501	192	192	0	17.3	207,635	End Extraction

Totalizer readings = 207,635 gallons = 4.77 gpm

Total time of test = 43,560 minutes = 726 hours = 30.25 days

Notes

ppmv	parts per million vapor
In of Hg	inches of mercury
In of H_20	inches of water
^{0}F	degrees Fahrenheit
scfm	standard cubic feet per minute

Table 6

MPE Event
Extraction Data and VOC Mass Removal Rate
October-November 2013

15101 Freedom Avenue
San Leandro, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
MPE-1,MPE-2,MW-6	**START**	**10/15/2013**	1130	0	0								
			1200	30	30	149	4,465	11.7815	1,030	0.0010	1.0460	0.0349	50
			1230	30	60	149	4,465	11.7815	1,011	0.0010	1.0267	0.0342	49
			1300	30	90	149	4,465	11.7815	989	0.0010	1.0044	0.0335	48
			1330	30	120	149	4,465	11.7815	956	0.0010	0.9709	0.0324	47
			1400	30	150	149	4,465	11.7815	928	0.0009	0.9424	0.0314	45
			1430	30	180	150	4,513	11.9071	907	0.0009	0.9309	0.0310	45
			1500	30	210	150	4,513	11.9071	885	0.0009	0.9084	0.0303	44
			1600	60	270	150	9,026	23.8143	852	0.0009	1.7490	0.0291	42
			1700	60	330	149	8,930	23.5631	823	0.0008	1.6716	0.0279	40
			1800	60	390	149	8,930	23.5631	796	0.0008	1.6168	0.0269	39
MPE-1, MW-6		**10/16/2013**	800	840	1,230	149	125,026	329.8828	738	0.0007	20.9857	0.0250	36
			900	60	1,290	149	8,930	23.5631	706	0.0007	1.4340	0.0239	34
			1000	60	1,350	149	8,930	23.5631	697	0.0007	1.4157	0.0236	34
			1100	60	1,410	149	8,930	23.5631	671	0.0007	1.3629	0.0227	33
MPE-1,MPE-2,MW-6			1200	60	1,470	192	11,501	30.3457	783	0.0008	2.0482	0.0341	49
			1300	60	1,530	193	11,596	30.5969	751	0.0008	1.9807	0.0330	48
			1400	60	1,590	193	11,596	30.5969	740	0.0007	1.9517	0.0325	47
			1500	60	1,650	193	11,596	30.5969	731	0.0007	1.9280	0.0321	46
			1600	60	1,710	192	11,501	30.3457	706	0.0007	1.8468	0.0308	44
			1700	60	1,770	192	11,501	30.3457	681	0.0007	1.7814	0.0297	43
		10/17/2013	800	900	2,670	192	172,515	455.1853	547	0.0005	21.4626	0.0238	34
			900	60	2,730	192	11,501	30.3457	539	0.0005	1.4099	0.0235	34
			1000	60	2,790	192	11,501	30.3457	530	0.0005	1.3864	0.0231	33
			1100	60	2,850	192	11,501	30.3457	559	0.0006	1.4622	0.0244	35
			1200	60	2,910	192	11,501	30.3457	551	0.0006	1.4413	0.0240	35
			1300	60	2,970	192	11,501	30.3457	558	0.0006	1.4596	0.0243	35
			1400	60	3,030	192	11,501	30.3457	554	0.0006	1.4492	0.0242	35
			1500	60	3,090	192	11,501	30.3457	549	0.0005	1.4361	0.0239	34
			1600	60	3,150	192	11,501	30.3457	545	0.0005	1.4256	0.0238	34
			1700	60	3,210	192	11,501	30.3457	544	0.0005	1.4230	0.0237	34
		10/18/2013	800	900	4,110	192	172,515	455.1853	595	0.0006	23.3460	0.0259	37
			900	60	4,170	192	11,501	30.3457	594	0.0006	1.5538	0.0259	37
			1000	60	4,230	192	11,501	30.3457	592	0.0006	1.5486	0.0258	37
			1100	60	4,290	192	11,501	30.3457	588	0.0006	1.5381	0.0256	37
			1200	60	4,350	192	11,501	30.3457	581	0.0006	1.5198	0.0253	36
			1300	60	4,410	192	11,501	30.3457	568	0.0006	1.4858	0.0248	36

Table 6

MPE Event
Extraction Data and VOC Mass Removal Rate
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15101 Freedom Avenue
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MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1400	60	4,470	192	11,501	30.3457	577	0.0006	1.5093	0.0252	36
			1500	60	4,530	192	11,501	30.3457	582	0.0006	1.5224	0.0254	37
			1600	60	4,590	192	11,501	30.3457	571	0.0006	1.4936	0.0249	36
			1700	60	4,650	192	11,501	30.3457	560	0.0006	1.4648	0.0244	35
		10/19/2013	800	900	5,550	158	142,525	376.0547	542	0.0005	17.5694	0.0195	28
			1000	120	5,670	165	19,765	52.1503	549	0.0005	2.4679	0.0206	30
			1130	90	5,760	196	17,680	46.6490	656	0.0007	2.6379	0.0293	42
			1400	150	5,910	193	28,991	76.4922	650	0.0007	4.2859	0.0286	41
			1600	120	6,030	193	23,192	61.1938	672	0.0007	3.5447	0.0295	43
		10/20/2013	800	960	6,990	192	184,016	485.5310	609	0.0006	25.4883	0.0266	38
			900	60	7,050	192	11,501	30.3457	621	0.0006	1.6244	0.0271	39
			1000	60	7,110	189	11,311	29.8433	647	0.0006	1.6644	0.0277	40
			1100	60	7,170	189	11,311	29.8433	653	0.0007	1.6798	0.0280	40
			1200	60	7,230	189	11,311	29.8433	659	0.0007	1.6953	0.0283	41
			1300	60	7,290	189	11,311	29.8433	655	0.0007	1.6850	0.0281	40
			1400	60	7,350	190	11,406	30.0945	688	0.0007	1.7848	0.0297	43
			1500	60	7,410	190	11,406	30.0945	703	0.0007	1.8237	0.0304	44
			1600	60	7,470	192	11,501	30.3457	694	0.0007	1.8154	0.0303	44
			1700	60	7,530	192	11,501	30.3457	687	0.0007	1.7971	0.0300	43
		10/21/2013	800	900	8,430	192	172,515	455.1853	650	0.0007	25.5040	0.0283	41
			900	60	8,490	192	11,501	30.3457	655	0.0007	1.7133	0.0286	41
MPE-1, MPE-2			1000	60	8,550	157	9,406	24.8191	489	0.0005	1.0462	0.0174	25
			1100	60	8,610	157	9,406	24.8191	483	0.0005	1.0333	0.0172	25
			1200	60	8,670	157	9,406	24.8191	478	0.0005	1.0226	0.0170	25
			1300	60	8,730	157	9,406	24.8191	497	0.0005	1.0633	0.0177	26
MPE-1, MPE-2, MW-6			1400	60	8,790	192	11,501	30.3457	721	0.0007	1.8860	0.0314	45
			1500	60	8,850	192	11,501	30.3457	704	0.0007	1.8415	0.0307	44
			1600	60	8,910	192	11,501	30.3457	873	0.0009	2.2836	0.0381	55
			1700	60	8,970	192	11,501	30.3457	895	0.0009	2.3411	0.0390	56
		10/22/2013	800	900	9,870	182	163,947	432.5766	1,091	0.0011	40.6813	0.0452	65
			900	60	9,930	182	10,930	28.8384	1,069	0.0011	2.6574	0.0443	64
			1000	60	9,990	184	11,025	29.0896	1,007	0.0010	2.5251	0.0421	61
			1100	60	10,050	184	11,025	29.0896	935	0.0009	2.3445	0.0391	56
			1200	60	10,110	184	11,025	29.0896	901	0.0009	2.2593	0.0377	54
			1300	60	10,170	193	11,596	30.5969	845	0.0008	2.2286	0.0371	53
			1400	60	10,230	193	11,596	30.5969	826	0.0008	2.1785	0.0363	52
			1500	60	10,290	192	11,501	30.3457	798	0.0008	2.0874	0.0348	50

Table 6

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MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1600	60	10,350	193	11,596	30.5969	753	0.0008	1.9860	0.0331	48
			1700	60	10,410	193	11,596	30.5969	724	0.0007	1.9095	0.0318	46
		10/23/2013	800	900	11,310	189	169,659	447.6491	598	0.0006	23.0752	0.0256	37
			900	60	11,370	189	11,311	29.8433	586	0.0006	1.5075	0.0251	36
			1000	60	11,430	192	11,501	30.3457	571	0.0006	1.4936	0.0249	36
			1100	60	11,490	192	11,501	30.3457	574	0.0006	1.5015	0.0250	36
			1200	60	11,550	192	11,501	30.3457	577	0.0006	1.5093	0.0252	36
			1300	60	11,610	192	11,501	30.3457	570	0.0006	1.4910	0.0249	36
			1400	60	11,670	193	11,596	30.5969	562	0.0006	1.4822	0.0247	36
			1500	60	11,730	193	11,596	30.5969	557	0.0006	1.4691	0.0245	35
			1600	60	11,790	193	11,596	30.5969	554	0.0006	1.4611	0.0244	35
			1700	60	11,850	193	11,596	30.5969	548	0.0005	1.4453	0.0241	35
		10/24/2013	800	900	12,750	192	172,515	455.1853	494	0.0005	19.3831	0.0215	31
			900	60	12,810	192	11,501	30.3457	489	0.0005	1.2791	0.0213	31
			1000	60	12,870	192	11,501	30.3457	485	0.0005	1.2687	0.0211	30
			1100	60	12,930	192	11,501	30.3457	472	0.0005	1.2347	0.0206	30
			1200	60	12,990	192	11,501	30.3457	474	0.0005	1.2399	0.0207	30
			1300	60	13,050	192	11,501	30.3457	470	0.0005	1.2294	0.0205	30
			1400	60	13,110	192	11,501	30.3457	467	0.0005	1.2216	0.0204	29
			1500	60	13,170	192	11,501	30.3457	472	0.0005	1.2347	0.0206	30
			1600	60	13,230	192	11,501	30.3457	465	0.0005	1.2163	0.0203	29
			1700	60	13,290	192	11,501	30.3457	461	0.0005	1.2059	0.0201	29
		10/25/2013	800	900	14,190	189	169,659	447.6491	435	0.0004	16.7855	0.0187	27
			900	60	14,250	189	11,311	29.8433	429	0.0004	1.1036	0.0184	26
			1000	60	14,310	189	11,311	29.8433	420	0.0004	1.0804	0.0180	26
			1100	60	14,370	189	11,311	29.8433	428	0.0004	1.1010	0.0184	26
			1200	60	14,430	190	11,406	30.0945	425	0.0004	1.1025	0.0184	26
			1300	60	14,490	192	11,501	30.3457	427	0.0004	1.1169	0.0186	27
			1400	60	14,550	192	11,501	30.3457	432	0.0004	1.1300	0.0188	27
			1500	60	14,610	193	11,596	30.5969	429	0.0004	1.1315	0.0189	27
			1600	60	14,670	193	11,596	30.5969	418	0.0004	1.1025	0.0184	26
			1700	60	14,730	193	11,596	30.5969	417	0.0004	1.0998	0.0183	26
		10/26/2013	800	900	15,630	193	173,943	458.9535	407	0.0004	16.1016	0.0179	26
			900	60	15,690	193	11,596	30.5969	414	0.0004	1.0919	0.0182	26
			1000	60	15,750	193	11,596	30.5969	406	0.0004	1.0708	0.0178	26
			1100	60	15,810	192	11,501	30.3457	401	0.0004	1.0489	0.0175	25
			1200	60	15,870	192	11,501	30.3457	395	0.0004	1.0332	0.0172	25

Table 6

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MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1300	60	15,930	192	11,501	30.3457	403	0.0004	1.0542	0.0176	25
			1400	60	15,990	192	11,501	30.3457	401	0.0004	1.0489	0.0175	25
			1500	60	16,050	193	11,596	30.5969	402	0.0004	1.0603	0.0177	25
			1600	60	16,110	193	11,596	30.5969	399	0.0004	1.0523	0.0175	25
			1700	60	16,170	193	11,596	30.5969	395	0.0004	1.0418	0.0174	25
		10/27/2013	800	900	17,070	192	172,515	455.1853	374	0.0004	14.6746	0.0163	23
			900	60	17,130	192	11,501	30.3457	367	0.0004	0.9600	0.0160	23
			1000	60	17,190	192	11,501	30.3457	364	0.0004	0.9522	0.0159	23
			1100	60	17,250	192	11,501	30.3457	368	0.0004	0.9626	0.0160	23
			1200	60	17,310	192	11,501	30.3457	364	0.0004	0.9522	0.0159	23
			1300	60	17,370	192	11,501	30.3457	371	0.0004	0.9705	0.0162	23
			1400	60	17,430	192	11,501	30.3457	368	0.0004	0.9626	0.0160	23
			1500	60	17,490	192	11,501	30.3457	367	0.0004	0.9600	0.0160	23
			1600	60	17,550	192	11,501	30.3457	368	0.0004	0.9626	0.0160	23
			1700	60	17,610	192	11,501	30.3457	365	0.0004	0.9548	0.0159	23
		10/28/2013	800	900	18,510	192	172,515	455.1853	358	0.0004	14.0468	0.0156	22
			900	60	18,570	192	11,501	30.3457	355	0.0004	0.9286	0.0155	22
			1000	60	18,630	192	11,501	30.3457	351	0.0004	0.9181	0.0153	22
			1100	60	18,690	192	11,501	30.3457	347	0.0003	0.9077	0.0151	22
			1200	60	18,750	192	11,501	30.3457	342	0.0003	0.8946	0.0149	21
			1300	60	18,810	192	11,501	30.3457	350	0.0004	0.9155	0.0153	22
			1400	60	18,870	192	11,501	30.3457	347	0.0003	0.9077	0.0151	22
			1500	60	18,930	193	11,596	30.5969	354	0.0004	0.9337	0.0156	22
			1600	60	18,990	193	11,596	30.5969	346	0.0003	0.9126	0.0152	22
			1700	60	19,050	193	11,596	30.5969	343	0.0003	0.9046	0.0151	22
		10/29/2013	800	900	19,950	189	169,659	447.6491	334	0.0003	12.8882	0.0143	21
			900	60	20,010	189	11,311	29.8433	330	0.0003	0.8489	0.0141	20
			1000	60	20,070	189	11,311	29.8433	328	0.0003	0.8438	0.0141	20
			1100	60	20,130	189	11,311	29.8433	326	0.0003	0.8386	0.0140	20
			1200	60	20,190	190	11,406	30.0945	325	0.0003	0.8431	0.0141	20
			1300	60	20,250	190	11,406	30.0945	331	0.0003	0.8587	0.0143	21
			1400	60	20,310	190	11,406	30.0945	327	0.0003	0.8483	0.0141	20
	PAUSE		1500	60	20,370	192	11,501	30.3457	337	0.0003	0.8815	0.0147	21
MPE-1, MPE-2, MW-6	**START**	**10/30/2013**	1200	30	20,400	192	5,751	15.1728	371	0.0004	0.4852	0.0162	23
			1300	60	20,460	192	11,501	30.3457	360	0.0004	0.9417	0.0157	23
			1400	60	20,520	192	11,501	30.3457	356	0.0004	0.9312	0.0155	22

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MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1500	60	20,580	192	11,501	30.3457	355	0.0004	0.9286	0.0155	22
			1600	60	20,640	192	11,501	30.3457	347	0.0003	0.9077	0.0151	22
			1700	60	20,700	192	11,501	30.3457	341	0.0003	0.8920	0.0149	21
		10/31/2013	800	900	21,600	192	172,515	455.1853	319	0.0003	12.5166	0.0139	20
			900	60	21,660	192	11,501	30.3457	311	0.0003	0.8135	0.0136	20
			1000	60	21,720	192	11,501	30.3457	306	0.0003	0.8004	0.0133	19
			1100	60	21,780	192	11,501	30.3457	314	0.0003	0.8214	0.0137	20
			1200	60	21,840	192	11,501	30.3457	317	0.0003	0.8292	0.0138	20
			1300	60	21,900	192	11,501	30.3457	312	0.0003	0.8161	0.0136	20
			1400	60	21,960	192	11,501	30.3457	314	0.0003	0.8214	0.0137	20
			1500	60	22,020	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1600	60	22,080	192	11,501	30.3457	307	0.0003	0.8031	0.0134	19
			1700	60	22,140	192	11,501	30.3457	303	0.0003	0.7926	0.0132	19
		11/1/2013	800	900	23,040	190	171,087	451.4172	331	0.0003	12.8799	0.0143	21
			900	60	23,100	190	11,406	30.0945	317	0.0003	0.8223	0.0137	20
			1000	60	23,160	192	11,501	30.3457	327	0.0003	0.8554	0.0143	21
			1100	60	23,220	192	11,501	30.3457	322	0.0003	0.8423	0.0140	20
			1200	60	23,280	192	11,501	30.3457	316	0.0003	0.8266	0.0138	20
			1300	60	23,340	192	11,501	30.3457	330	0.0003	0.8632	0.0144	21
			1400	60	23,400	192	11,501	30.3457	319	0.0003	0.8344	0.0139	20
			1500	60	23,460	192	11,501	30.3457	317	0.0003	0.8292	0.0138	20
			1600	60	23,520	192	11,501	30.3457	341	0.0003	0.8920	0.0149	21
			1700	60	23,580	192	11,501	30.3457	346	0.0003	0.9051	0.0151	22
		11/2/2013	800	900	24,480	192	172,515	455.1853	334	0.0003	13.1051	0.0146	21
			900	60	24,540	192	11,501	30.3457	332	0.0003	0.8684	0.0145	21
			1000	60	24,600	192	11,501	30.3457	336	0.0003	0.8789	0.0146	21
			1100	60	24,660	192	11,501	30.3457	339	0.0003	0.8868	0.0148	21
			1200	60	24,720	192	11,501	30.3457	342	0.0003	0.8946	0.0149	21
			1300	60	24,780	192	11,501	30.3457	346	0.0003	0.9051	0.0151	22
			1400	60	24,840	192	11,501	30.3457	345	0.0003	0.9025	0.0150	22
			1500	60	24,900	192	11,501	30.3457	342	0.0003	0.8946	0.0149	21
			1600	60	24,960	192	11,501	30.3457	334	0.0003	0.8737	0.0146	21
			1700	60	25,020	192	11,501	30.3457	343	0.0003	0.8972	0.0150	22
		11/3/2013	800	900	25,920	192	172,515	455.1853	330	0.0003	12.9482	0.0144	21
			900	60	25,980	192	11,501	30.3457	323	0.0003	0.8449	0.0141	20
			1000	60	26,040	192	11,501	30.3457	326	0.0003	0.8528	0.0142	20

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MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1100	60	26,100	192	11,501	30.3457	334	0.0003	0.8737	0.0146	21
			1200	60	26,160	192	11,501	30.3457	336	0.0003	0.8789	0.0146	21
			1300	60	26,220	192	11,501	30.3457	335	0.0003	0.8763	0.0146	21
			1400	60	26,280	192	11,501	30.3457	334	0.0003	0.8737	0.0146	21
			1500	60	26,340	192	11,501	30.3457	330	0.0003	0.8632	0.0144	21
			1600	60	26,400	192	11,501	30.3457	332	0.0003	0.8684	0.0145	21
			1700	60	26,460	192	11,501	30.3457	330	0.0003	0.8632	0.0144	21
		11/4/2013	800	900	27,360	192	172,515	455.1853	302	0.0003	11.8496	0.0132	19
			900	60	27,420	192	11,501	30.3457	311	0.0003	0.8135	0.0136	20
			1000	60	27,480	192	11,501	30.3457	319	0.0003	0.8344	0.0139	20
			1100	60	27,540	192	11,501	30.3457	328	0.0003	0.8580	0.0143	21
			1200	60	27,600	192	11,501	30.3457	334	0.0003	0.8737	0.0146	21
			1300	60	27,660	192	11,501	30.3457	329	0.0003	0.8606	0.0143	21
			1400	60	27,720	192	11,501	30.3457	356	0.0004	0.9312	0.0155	22
			1500	60	27,780	192	11,501	30.3457	324	0.0003	0.8475	0.0141	20
			1600	60	27,840	192	11,501	30.3457	321	0.0003	0.8397	0.0140	20
			1700	60	27,900	192	11,501	30.3457	320	0.0003	0.8371	0.0140	20
		11/5/2013	800	900	28,800	192	172,515	455.1853	316	0.0003	12.3989	0.0138	20
			900	60	28,860	192	11,501	30.3457	321	0.0003	0.8397	0.0140	20
			1000	60	28,920	192	11,501	30.3457	317	0.0003	0.8292	0.0138	20
			1100	60	28,980	192	11,501	30.3457	331	0.0003	0.8658	0.0144	21
			1200	60	29,040	192	11,501	30.3457	332	0.0003	0.8684	0.0145	21
			1300	60	29,100	192	11,501	30.3457	335	0.0003	0.8763	0.0146	21
			1400	60	29,160	192	11,501	30.3457	324	0.0003	0.8475	0.0141	20
			1500	60	29,220	192	11,501	30.3457	318	0.0003	0.8318	0.0139	20
			1600	60	29,280	192	11,501	30.3457	315	0.0003	0.8240	0.0137	20
			1700	60	29,340	192	11,501	30.3457	317	0.0003	0.8292	0.0138	20
		11/6/2013	800	900	30,240	192	172,515	455.1853	311	0.0003	12.2027	0.0136	20
			900	60	30,300	192	11,501	30.3457	306	0.0003	0.8004	0.0133	19
			1000	60	30,360	192	11,501	30.3457	303	0.0003	0.7926	0.0132	19
			1100	60	30,420	192	11,501	30.3457	312	0.0003	0.8161	0.0136	20
			1200	60	30,480	192	11,501	30.3457	321	0.0003	0.8397	0.0140	20
			1300	60	30,540	192	11,501	30.3457	319	0.0003	0.8344	0.0139	20
			1400	60	30,600	192	11,501	30.3457	315	0.0003	0.8240	0.0137	20
			1500	60	30,660	192	11,501	30.3457	296	0.0003	0.7743	0.0129	19
			1600	60	30,720	192	11,501	30.3457	289	0.0003	0.7560	0.0126	18
			1700	60	30,780	192	11,501	30.3457	304	0.0003	0.7952	0.0133	19

Table 6

MPE Event
Extraction Data and VOC Mass Removal Rate
October-November 2013

15101 Freedom Avenue
San Leandro, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
		11/7/2013	800	900	31,680	189	169,659	447.6491	297	0.0003	11.4604	0.0127	18
			900	60	31,740	189	11,311	29.8433	305	0.0003	0.7846	0.0131	19
			1000	60	31,800	189	11,311	29.8433	308	0.0003	0.7923	0.0132	19
			1100	60	31,860	189	11,311	29.8433	311	0.0003	0.8000	0.0133	19
			1200	60	31,920	189	11,311	29.8433	314	0.0003	0.8078	0.0135	19
			1300	60	31,980	189	11,311	29.8433	316	0.0003	0.8129	0.0135	20
			1400	60	32,040	189	11,311	29.8433	328	0.0003	0.8438	0.0141	20
			1500	60	32,100	190	11,406	30.0945	319	0.0003	0.8275	0.0138	20
			1600	60	32,160	190	11,406	30.0945	315	0.0003	0.8172	0.0136	20
			1700	60	32,220	190	11,406	30.0945	311	0.0003	0.8068	0.0134	19
		11/8/2013	800	900	33,120	190	171,087	451.4172	301	0.0003	11.7126	0.0130	19
			900	60	33,180	190	11,406	30.0945	292	0.0003	0.7575	0.0126	18
			1000	60	33,240	190	11,406	30.0945	303	0.0003	0.7860	0.0131	19
			1100	60	33,300	190	11,406	30.0945	311	0.0003	0.8068	0.0134	19
			1200	60	33,360	190	11,406	30.0945	313	0.0003	0.8120	0.0135	19
			1300	60	33,420	190	11,406	30.0945	312	0.0003	0.8094	0.0135	19
			1400	60	33,480	192	11,501	30.3457	317	0.0003	0.8292	0.0138	20
			1500	60	33,540	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1600	60	33,600	192	11,501	30.3457	309	0.0003	0.8083	0.0135	19
			1700	60	33,660	192	11,501	30.3457	321	0.0003	0.8397	0.0140	20
		11/9/2013	800	900	34,560	192	172,515	455.1853	302	0.0003	11.8496	0.0132	19
			900	60	34,620	192	11,501	30.3457	308	0.0003	0.8057	0.0134	19
			1000	60	34,680	192	11,501	30.3457	300	0.0003	0.7847	0.0131	19
			1100	60	34,740	192	11,501	30.3457	305	0.0003	0.7978	0.0133	19
			1200	60	34,800	192	11,501	30.3457	311	0.0003	0.8135	0.0136	20
			1300	60	34,860	192	11,501	30.3457	309	0.0003	0.8083	0.0135	19
			1400	60	34,920	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1500	60	34,980	192	11,501	30.3457	306	0.0003	0.8004	0.0133	19
			1600	60	35,040	192	11,501	30.3457	304	0.0003	0.7952	0.0133	19
			1700	60	35,100	192	11,501	30.3457	305	0.0003	0.7978	0.0133	19
		11/10/2013	800	900	36,000	192	172,515	455.1853	288	0.0003	11.3002	0.0126	18
			900	60	36,060	192	11,501	30.3457	285	0.0003	0.7455	0.0124	18
			1000	60	36,120	192	11,501	30.3457	286	0.0003	0.7481	0.0125	18
			1100	60	36,180	192	11,501	30.3457	294	0.0003	0.7690	0.0128	18
			1200	60	36,240	192	11,501	30.3457	301	0.0003	0.7874	0.0131	19
			1300	60	36,300	192	11,501	30.3457	300	0.0003	0.7847	0.0131	19
			1400	60	36,360	192	11,501	30.3457	299	0.0003	0.7821	0.0130	19

Table 6

MPE Event
Extraction Data and VOC Mass Removal Rate
October-November 2013

15101 Freedom Avenue
San Leandro, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
			1500	60	36,420	192	11,501	30.3457	297	0.0003	0.7769	0.0129	19
			1600	60	36,480	192	11,501	30.3457	295	0.0003	0.7717	0.0129	19
			1700	60	36,540	192	11,501	30.3457	298	0.0003	0.7795	0.0130	19
		11/11/2013	800	900	37,440	192	172,515	455.1853	307	0.0003	12.0458	0.0134	19
			1700	540	37,980	192	103,509	273.1112	301	0.0003	7.0862	0.0131	19
		11/12/2013	800	900	38,880	192	172,515	455.1853	308	0.0003	12.0850	0.0134	19
			900	60	38,940	192	11,501	30.3457	304	0.0003	0.7952	0.0133	19
			1000	60	39,000	192	11,501	30.3457	307	0.0003	0.8031	0.0134	19
			1100	60	39,060	192	11,501	30.3457	308	0.0003	0.8057	0.0134	19
			1200	60	39,120	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1300	60	39,180	192	11,501	30.3457	309	0.0003	0.8083	0.0135	19
			1400	60	39,240	192	11,501	30.3457	311	0.0003	0.8135	0.0136	20
			1500	60	39,300	192	11,501	30.3457	316	0.0003	0.8266	0.0138	20
			1600	60	39,360	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1700	60	39,420	192	11,501	30.3457	308	0.0003	0.8057	0.0134	19
		11/13/2013	800	900	40,320	192	172,515	455.1853	302	0.0003	11.8496	0.0132	19
			900	60	40,380	192	11,501	30.3457	298	0.0003	0.7795	0.0130	19
			1000	60	40,440	192	11,501	30.3457	293	0.0003	0.7664	0.0128	18
			1100	60	40,500	192	11,501	30.3457	305	0.0003	0.7978	0.0133	19
			1200	60	40,560	192	11,501	30.3457	314	0.0003	0.8214	0.0137	20
			1300	60	40,620	192	11,501	30.3457	310	0.0003	0.8109	0.0135	19
			1400	60	40,680	192	11,501	30.3457	306	0.0003	0.8004	0.0133	19
			1500	60	40,740	192	11,501	30.3457	298	0.0003	0.7795	0.0130	19
			1600	60	40,800	192	11,501	30.3457	305	0.0003	0.7978	0.0133	19
			1700	60	40,860	192	11,501	30.3457	315	0.0003	0.8240	0.0137	20
		11/14/2013	800	900	41,760	190	171,087	451.4172	312	0.0003	12.1406	0.0135	19
			900	60	41,820	190	11,406	30.0945	323	0.0003	0.8379	0.0140	20
			1000	60	41,880	190	11,406	30.0945	309	0.0003	0.8016	0.0134	19
			1100	60	41,940	190	11,406	30.0945	302	0.0003	0.7834	0.0131	19
			1200	60	42,000	190	11,406	30.0945	314	0.0003	0.8146	0.0136	20
			1300	60	42,060	190	11,406	30.0945	309	0.0003	0.8016	0.0134	19
			1400	60	42,120	192	11,501	30.3457	307	0.0003	0.8031	0.0134	19
			1500	60	42,180	192	11,501	30.3457	302	0.0003	0.7900	0.0132	19
			1600	60	42,240	192	11,501	30.3457	308	0.0003	0.8057	0.0134	19
			1700	60	42,300	192	11,501	30.3457	305	0.0003	0.7978	0.0133	19

Table 6

MPE Event
Extraction Data and VOC Mass Removal Rate
October-November 2013

15101 Freedom Avenue
San Leandro, California

MPE WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
				minutes	minutes	SCFM	ft^3 of extracted air	Moles of extracted air	ppmv as hexane	VOC mole %	lb VOC mass removal as hexane	lbs/min	lbs/day
		11/15/2013	800	900	43,200	192	172,515	455.1853	284	0.0003	11.1433	0.0124	18
			900	60	43,260	192	11,501	30.3457	287	0.0003	0.7507	0.0125	18
			1000	60	43,320	192	11,501	30.3457	281	0.0003	0.7350	0.0123	18
			1100	60	43,380	192	11,501	30.3457	290	0.0003	0.7586	0.0126	18
			1200	60	43,440	192	11,501	30.3457	287	0.0003	0.7507	0.0125	18
			1300	60	43,500	192	11,501	30.3457	294	0.0003	0.7690	0.0128	18
	STOP		1400	60	43,560	192	11,501	30.3457	296	0.0003	0.7743	0.0129	19
	TOTAL				**43,560**		**8,220,874**	**21,691**			**790**	**0.0181**	**26**
	MEDIAN					**192**			**340**	**0.0003**			

Notes

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

DERIVATION OF MASS REMOVAL RATE

ppmv as hexane/1,000,000 = VOC mole %
ft3 of extracted air/(379 ft3 air/lb-mole air) = moles of extracted air
(moles of extracted air)(VOC mole %)(86.2 lb/lb-mole hexane) = lbs of VOC removed as hexane
(lbs of VOC mass removed as hexane)(elapsed time) = lbs/min of VOC removed as hexane
(lbs/min of VOC removed as hexane)(60 min/1 hour)(24 hours/1 day) = lbs/day of VOC removed as hexane

Table 7
SVE Abatement System Emissions
15101 Freedom Avenue, San Leandro, CA

Operation Start Date/Time	Onboard Analyzer Sample Date/Time	Onboard Analyzer		Lab Sample Date/Time	USEPA TO-3 MODIFIED		USEPA TO-15 MODIFIED		Q (SCFM)	Abatement Efficiency	Emissions Rate Benzene (lbs/day)
		Hydrocarbons (TPH-g + BTEX) (ppmv as hexane)			TPH-g (ppmv)		Benzene (ppmv)				
		Inlet	Outlet		Inlet	Outlet	Inlet	Outlet			
10/15/13 @ 11:30	10/16/13 @ 11:00	671	0	10/16/13 @ 11:00	270	0.14	0.92	<0.0005	149	100.0%	NA

SCFM standard cubic feet per minute

lbs/day pounds per day

Appendix A

Standard Operating Procedures for
Conducting Groundwater Monitoring Activities

Standard Operating Procedures for Conducting Groundwater Monitoring Activities

Water Level and Free-Product 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.

For free-product (FP) measurement, an oil-water interface probe is used. When the probe is lowered into the FP, the oil/water light and beeper are continuously on at which point a reading for depth to FP is noted. The probe is lowered further into the well until the water signal is given (light flashes and beeps intermittently). Then the probe is carefully raised until the FP signal is given and the reading is noted. This gives the depth to interface of product and water.

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.

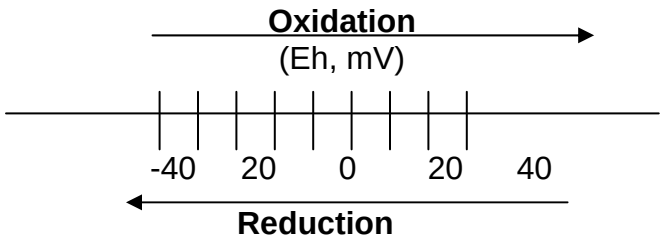
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

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_2 in water is low (9 mg/L at 25 ^{o}C and 11 mg/L at 5 ^{o}C), and

because the rate of O_2 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_2 in the groundwater is consumed; however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO^-_3, MnO_2, Fe $(OH)_3$, SO_4^{2-} 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 (Fe^{+2}), nitrate (NO_3^-), and sulfate (SO_4^{-2}) concentrations.

Fe^{+2}, NO_3^-, and 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, non-preserved 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, Field Measurements of Physical, Chemical, and Natural Attenuation Parameters of Groundwater Samples, and Groundwater Gradient Calculations

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
	37º 42' 29.1" N	122º 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
	37º 42' 28.5" N	122º 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
	37º 42' 27.7" N	122º 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 37º43'11.04190" LONG W 122º07'09.20691", 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 37º43'02.71762" LONG W 122º07'00.46339", ELEVATION 442.77 NAVD 88.

AMMENDED REPORT
15101 FREEDOM AVE
SAN LEANDRO, CA.

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

JOB NO. 2445
DATE: FEB. 21,2008

	NAD 83	NAD 83	NAVD 88		NORTH	WEST
PT	NORTH (sft)	EAST(sft)	ELEV.	DESCRIPTION	LATITUDE (DMS)	LONGITUDE (DMS)
1	2087731.02	6094039.23	442.77	FD CHABOT B	37°43'02.71762"	122°07'00.46339"
2	2088584.99	6093351.39	492.08	FD CHABOT A	37°43'11.04190"	122°07'09.20691"
51	2084348.54	6092159.32	55.44	FD. X-8		
52	2084073.17	6092141.24	46.15	MW-6 PAV		
53	2084072.72	6092140.95	46.15	MW-6 PUNCH		
54	2084072.47	6092140.95	45.82	MW-6 NOTCH	37°42'26.22635"	122°07'23.29643
55	2083909.71	6091947.10	40.61	MW-9 PAV		
56	2083909.10	6091946.97	40.61	MW-9 PUNCH		
57	2083908.71	6091947.00	40.26	MW-9 NOTCH	37°42'24.57425"	122°07'25.67431"
58	2083861.20	6092118.11	41.38	MW-8 PAV		
59	2083860.43	6092118.36	41.44	MW-8 PUNCH		
60	2083860.03	6092118.52	41.14	MW-8 NOTCH	37°42'24.12245"	122°07'23.52966"
61	2084008.21	6092290.11	44.94	MW-7 PAV		
62	2084007.88	6092290.27	44.95	MW-7 PVNCH		
63	2084007.68	6092290.40	44.74	MW-7 NOTCH	37°42'25.61150"	122°07'21.42290"
64	2084206.49	6092175.95	51.03	MW-5 PAV		
65	2084206.17	6092176.55	50.96	MW-5 PUNCH		
66	2084206.01	6092176.79	50.53	MW-5 NOTCH	37°42'27.55260	122°07'22.87930
67	2084670.41	6092307.68	69.79	FD BM FAIR580		
68	2084251.32	6092125.25	53.70	MW-4 PAV	Ammended 2\21\08	From here down
69	2084250.55	6092124.46	53.74	MW-4 PUNCH		
70	2084250.36	6092124.67	53.31	MW-4 NOTCH	37°42'27.98205"	122°07'23.53734"
71	2084298.86	6092176.07	54.37	MW-3 PAV		
72	2084298.19	6092176.26	54.33	MW-3 PUNCH		
73	2084297.82	6092176.29	53.91	MW-3 NOTCH	37°42'28.46009"	122°07'22.90536"
74	2084365.28	6092117.89	54.82	MW-1 PAV		
75	2084364.32	6092118.22	54.79	MW-1 PUNCH		
76	2084364.03	6092118.49	54.46	MW-1 NOTCH	37°42'29.10470"	122°07'23.63882"
77	2084323.98	6092063.51	52.88	MW-2 PAV		
78	2084323.44	6092063.77	52.92	MW-2 PUNCH		
79	2084323.06	6092063.88	52.41	MW-2 NOTCH	37°42'28.69039"	122°07'24.30947"
80	2084930.49	6091759.33	58.50	FD BM K1256	37°42'34.64279"	122°07'28.23011"

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

PROFESSIONAL LAND SURVEYOR
EDUARDO A. ESPINOZA
EXP. 9/30/10
No. L 6772
STATE OF CALIFORNIA

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-1	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	30.50 feet		San Leandro, CA
Top of Casing Elevation:	54.46 feet	**Date:**	December 6, 2013
Depth to Groundwater:	24.16 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	30.30 feet		
Water Column Height:	6.34 feet		
Purged Volume:	12 gallons		

Purging Method:	**Bailer**	☐		**Pump**	☑
Sampling Method:	**Bailer**	☑		**Pump**	☐
Color:	**Yes**	☐	**No** ☑	**Describe:**	
Sheen:	**Yes**	☐	**No** ☑	**Describe:**	
Odor:	**Yes**	☑	**No** ☐	**Describe:**	Petro Odor

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
10:51	Started purging well						
10:52	2	1.99	6.55	19.35	1031	15.3	-31.0
10:54	6	1.13	6.53	19.49	1041	19.1	-36.6
10:56	10	0.77	6.56	19.42	1149	17.5	-42.1
10:57	12	0.71	6.56	19.38	1153	15.6	-45.2
11:02	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-2	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	30.15 feet		San Leandro, CA
Top of Casing Elevation:	52.41 feet	**Date:**	December 6 2013
Depth to Groundwater:	22.52 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	30.16 feet		
Water Column Height:	7.63 feet		
Purged Volume:	12 gallons		

Purging Method: Bailer ☐ Pump ☑

Sampling Method: Bailer ☑ Pump ☐

Color: Yes ☐ No ☑ Describe: _____

Sheen: Yes ☐ No ☑ Describe: _____

Odor: Yes ☑ No ☐ Describe: Slight Petro

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
10:24	Started purging well						
10:25	2	1.41	6.71	19.29	1264	20.5	-43.2
10:27	6	1.01	6.62	19.63	1052	19.5	-69.7
10:29	10	0.87	6.61	19.61	1032	22.7	-77.6
10:30	12	0.74	6.64	19.63	1025	18.0	-77.5
10:35	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-3	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	29.90 feet		San Leandro, CA
Top of Casing Elevation:	53.91 feet	**Date:**	December 6, 2013
Depth to Groundwater:	23.76 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	30.15 feet		
Water Column Height:	6.14 feet		
Purged Volume:	12 gallons		

Purging Method: Bailer ☐ Pump ☑

Sampling Method: Bailer ☑ Pump ☐

Color: Yes ☑ No ☐ **Describe:** Cloudy

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
11:14	Started purging well						
11:15	2	1.71	6.69	20.14	1122	58.8	-37.7
11:17	6	0.99	6.68	20.27	1118	51.6	-50.6
11:19	10	0.67	6.67	20.21	1128	67.4	-56.3
11:20	12	0.61	6.68	20.20	1131	62.6	-58.7
11:25	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-4	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	30.20 feet		San Leandro, CA
Top of Casing Elevation:	53.31 feet	**Date:**	December 6, 2013
Depth to Groundwater:	23.60 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	29.71 feet		
Water Column Height:	6.60 feet		
Purged Volume:	12 gallons		

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
09:57	Started purging well						
09:58	2	2.53	6.61	18.97	1271	38.1	-10.3
10:00	6	1.56	6.51	19.04	1286	31.5	-11.7
10:02	10	1.15	6.56	19.02	1325	33.0	-12.0
10:03	12	1.09	6.57	19.01	1335	42.4	-11.8
10:08	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:**	December 6, 2013
Depth to Groundwater:	20.86 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	29.67 feet		
Water Column Height:	8.94 feet		
Purged Volume:	12 gallons		

Purging Method: Bailer ☐ Pump ☑

Sampling Method: Bailer ☑ Pump ☐

Color: Yes ☑ No ☐ **Describe:** Slightly Cloudy

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
11:38	Started purging well						
11:39	2	1.30	7.04	20.49	730	23.2	-100.0
11:41	6	0.81	7.04	20.81	733	19.7	-104.9
11:43	10	0.68	7.03	20.83	739	24.2	-108.2
11:44	12	0.60	7.01	20.82	747	16.7	-110.6
11:49	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-6	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	27.30 feet		San Leandro, CA
Top of Casing Elevation:	45.82 feet	**Date:**	December 5, 2013
Depth to Groundwater:	18.75 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	27.07 feet		
Water Column Height:	8.55 feet		
Purged Volume:	14 gallons		

Purging Method: Bailer ☐ Pump ☑

Sampling Method: Bailer ☑ Pump ☐

Color: Yes ☑ No ☐ **Describe:** Slightly Cloudy

Sheen: Yes ☑ No ☑ **Describe:** Rainbow Sheen

Odor: Yes ☑ No ☐ **Describe:** ~~Slight~~ Petro Odor

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
13:53	Started purging well						
13:54	2	2.43	6.58	20.02	1336	28.1	-68.3
13:55	4	1.85	6.64	20.24	1327	23.4	-74.4
13:57	8	1.14	6.66	20.35	1333	24.6	-75.5
13:59	12	0.92	6.67	20.30	1337	23.0	-74.4
14:00	14	0.90	6.66	20.26	1342	21.4	-73.5
14:05	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-7	**Project No.:**	2551
Casing Diameter:	2 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	21.00 feet		San Leandro, CA
Top of Casing Elevation:	44.74 feet	**Date:**	December 5, 2013
Depth to Groundwater:	16.21 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	28.53 feet		
Water Column Height:	4.79 feet		
Purged Volume:	2.5 gallons		

Purging Method: **Bailer** ☑ **Pump** ☐

Sampling Method: **Bailer** ☑ **Pump** ☐

Color: **Yes** ☑ **No** ☐ **Describe:** 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
13:20	Started purging well						
13:23	1	9.24	6.55	17.22	1208	999	+96.8
13:28	2	3.48	6.59	17.55	1207	999	+12.6
13:31	2.5	2.76	6.63	17.96	1212	999	+6.5
13:36	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	EX-1	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	— feet		San Leandro, CA
Top of Casing Elevation:	47.36 feet	**Date:**	December 5, 2013
Depth to Groundwater:	22.53 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	24.83 feet		
Water Column Height:	NC feet		
Purged Volume:	— gallons		
	Not purged		

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
14:25	Grab	sample					

ENVIRONMENTAL ENGINEERING, INC

Well No.:	EX-2	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	— feet		San Leandro, CA
Top of Casing Elevation:	45.96 feet	**Date:**	December 5, 2013
Depth to Groundwater:	23.28 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	22.68 feet		
Water Column Height:	NC feet		
Purged Volume:	— gallons		
	Not purged		

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
14:35	Grab sample						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MPE-1	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	30.00 feet		San Leandro, CA
Top of Casing Elevation:	51.96 feet	**Date:**	December 6, 2013
Depth to Groundwater:	22.41 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	29.55 feet		
Water Column Height:	7.59 feet		
Purged Volume:	14 gallons		

Purging Method:	**Bailer**	☐	**Pump**	☑	
Sampling Method:	**Bailer**	☑	**Pump**	☐	
Color:	**Yes**	☑	**No**	☐	**Describe:** Cloudy
Sheen:	**Yes**	☑	**No**	☐	**Describe:** 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
12:05	Started purging well						
12:06	2	1.18	6.61	19.21	1397	37.8	-51.9
12:08	6	0.95	6.63	19.34	1393	29.5	-62.0
12:10	10	0.85	6.63	19.41	1386	34.5	-75.1
12:12	14	0.78	6.63	19.41	1390	32.0	-77.5
12:17	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MPE-2	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	30.00 feet		San Leandro, CA
Top of Casing Elevation:	53.72 feet	**Date:**	December 5, 2013
Depth to Groundwater:	23.73 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	29.99 feet *30.07 feet		
Water Column Height:	6.27 feet		
Purged Volume:	— gallons		
	Not purged		

Purging Method: **Bailer** ☐ **Pump** ☐

Sampling Method: **Bailer** ☐ **Pump** ☐ Not sampled

Color:	**Yes** ☐	**No** ☐	**Describe:**	Unknown	
Sheen:	**Yes** ☐	**No** ☐	**Describe:**	Free Product	
Odor:	**Yes** ☐	**No** ☐	**Describe:**	Strong Petro	

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP

Depth to Free Product: 23.61 ft.

0.12 feet of FP.

* Elevation adjusted for FP

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-1D	**Project No.:**	2551
Casing Diameter:	2 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	59.81 feet		San Leandro, CA
Top of Casing Elevation:	54.42 feet	**Date:**	December 5, 2013
Depth to Groundwater:	24.31 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	30.11 feet		
Water Column Height:	35.50 feet		
Purged Volume:	14 gallons		

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
15:02	Started purging well						
15:03	2	2.56	7.32	18.36	1182	15.0	+3.3
15:05	6	1.48	7.30	18.43	1183	24.5	+1.5
15:07	10	1.04	7.30	18.45	1184	25.6	+3.6
15:09	14	0.87	7.29	18.47	1184	232	+5.2
15:14	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-3D	**Project No.:**	2551
Casing Diameter:	2 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	59.81 feet		San Leandro, CA
Top of Casing Elevation:	54.10 feet	**Date:**	December 5, 2013
Depth to Groundwater:	23.97 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	30.13 feet		
Water Column Height:	35.84 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
15:33 (MW-3D)	Started purging well						
15:34	2	1.81	7.42	18.52	1063	16.9	+21.5
15:36	6	1.01	7.23	18.60	1163	10.8	+22.3
15:38	10	0.88	7.19	18.63	1182	15.5	+25.0
15:40	14	0.74	7.16	18.64	1193	11.9	+28.3
15:45	Sampled						

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-4D	**Project No.:**	2551
Casing Diameter:	2 inches	**Address:**	15101 Freedom Avenue
Depth of Well:	58.79 feet		San Leandro, CA
Top of Casing Elevation:	53.12 feet	**Date:**	December 6, 2013
Depth to Groundwater:	23.43 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	29.69 feet		
Water Column Height:	35.36 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
09:30	Started purging well						
09:31	2	3.73	7.08	17.95	1167	16.1	+65.1
09:33	6	2.33	7.14	18.00	1173	15.0	+69.2
09:35	10	1.52	7.14	18.03	1175	43.0	+72.0
09:37	14	1.34	7.17	18.05	1175	20.0	+75.0
09:42	Sampled						

Table A
Historical Field Parameters
15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Dissolved Oxygen (mg/L)	pH	Temperature °C	Electrical Conductivity µS/cm	Turbidity NTU	ORP
1st WBZ							
MW-1	8/27/2009	0.38	6.32	20.8	1357	4.69	-95.7
	12/2/2009	0.15	6.4	20.82	1261	6.19	-136.4
	3/17/2010	0.58	5.68	20.97	1186	7.00	-155.9
	6/3/2010	0.91	6.11	20.81	1285	2.49	-131.6
	9/2/2010	0.92	6.04	20.66	1361	2.46	-86.4
	12/2/2010	0.97	5.96	20.74	1309	4.32	-119.7
	3/4/2011	1.4	6.69	20.96	1169	1.98	-101.2
	5/20/2011	1.51	6.22	20.68	1305	1.85	-164.5
	9/9/2011	1.73	6.02	20.53	1320	4.63	-179.2
	3/2/2012	1.39	6.53	20.84	1309	12.00	-204.4
	6/7/2012	0.89	6.51	20.00	1234	3.92	-20.0
	9/21/2012	0.55	6.12	19.96	1313	5.98	-31.4
	12/14/2012	0.63	6.6	19.71	1314	6.56	-99.2
	3/28/2013	1.07	6.4	20.67	1307	5.93	-70.5
	6/11/2013	0.71	6.52	20.43	1284	11.10	-49.4
	9/17/2013	1.56	6.44	20.47	1225	16.90	2.5
	12/6/2013	**0.71**	**6.56**	**19.38**	**1153**	**15.60**	**-45.2**
MW-2	8/27/2009	0.43	6.57	20.72	1530	2.59	-168.1
	12/1/2009	0.48	6.75	21.12	1297	5.01	-191.3
	3/17/2010	0.51	5.78	21.08	1025	5.65	-108
	6/3/2010	0.62	6.28	20.84	930	2.66	-150.2
	9/2/2010	0.66	6.29	20.73	1269	2.67	-174.2
	12/2/2010	0.63	6.06	20.94	1439	2062	-162.4
	3/4/2011	1.55	6.84	20.91	815	3.34	-87.8
	5/20/2011	1.22	6.39	20.59	981	2.58	-185.9
	9/9/2011	1.67	5.89	20.48	1303	6.19	-157.7
	3/2/2012	1.98	6.37	20.83	1014	11.8	-204.5
	6/7/2012	0.93	6.53	19.87	877	4.64	-22.9
	9/21/2012	0.63	5.97	20.01	1359	7.56	-55.0
	12/14/2012	1.06	6.67	19.91	1067	7.75	-82.3
	3/28/2013	1.35	6.46	20.59	1107	5.98	-88.0
	6/11/2013	0.5	6.61	20.44	1118	20.9	-42.7
	9/16/2013	1.04	6.68	20.82	1276	17.1	-51.3
	12/6/2013	**0.74**	**6.64**	**19.63**	**1025**	**18**	**-77.5**
MW-3	8/27/2009	1.90	6.36	20.82	1318	5.57	-119.3
	12/2/2009	1.80	6.52	20.94	1239	5.88	-206.6
	3/17/2010	1.60	5.78	21.28	1080	5.37	-166.4
	6/3/2010	1.05	6.24	21.16	1130	2.03	-134.8
	9/2/2010	1.17	6.18	21.04	1256	2.86	-131.2
	12/2/2010	1.27	6.06	21.03	1152	1.83	-171.9
	3/4/2011	1.26	6.77	21.18	1074	3.57	-109.8
	5/20/2011	1.04	6.4	20.9	1180	2.72	-220.1
	9/9/2011	1.05	6.13	20.74	1272	3.23	-179.4
	3/2/2012	1.72	6.58	20.87	1120	12.00	-162.7
	6/7/2012	0.54	6.66	20.13	1057	3.11	-20.9
	9/21/2012	0.60	6.08	20.04	1229	8.61	-74.9
	12/14/2012	0.53	6.66	19.81	1017	7.42	-59.3
	3/28/2013	0.90	6.49	20.71	1188	7.83	-56.8
	6/11/2013	0.38	6.64	20.67	1280	96.3	-39.6
	9/17/2013	0.94	6.64	20.93	1203	108	-44.7
	12/6/2013	**0.61**	**6.68**	**20.2**	**1131**	**62.6**	**-58.7**
MW-4	8/27/2009	2.90	6.26	20.11	1649	2.78	-115.5
	12/2/2009	0.87	6.4	20.12	1578	5.06	-173.2

Table A
Historical Field Parameters
15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Dissolved Oxygen (mg/L)	pH	Temperature °C	Electrical Conductivity µS/cm	Turbidity NTU	ORP
MW-4 cont.	3/17/2010	2.30	5.63	20.39	1506	4.01	-119.4
	6/3/2010	1.90	6.14	20.45	1418	1.56	-131.8
	9/2/2010	1.80	6.06	20.21	1305	1.45	-101.5
	12/2/2010	1.63	5.89	20.28	1465	102	-180
	3/3/2011	1.89	6.66	20.47	1278	0.97	-90.5
	5/19/2011	1.78	6.42	20.51	1251	1.5	-168.3
	9/8/2011	1.77	6.27	20.32	1430	3.82	-157.4
	3/2/2012	1.55	6.39	20.21	1486	8.00	-165.9
	6/7/2012	0.58	6.58	19.53	1315	2.62	-0.3
	9/21/2012	0.48	6.08	19.49	1425	5.12	-82.6
	12/14/2012	0.62	6.58	19.12	1216	5.42	-46
	3/28/2013	0.94	6.54	19.99	1350	5.03	-35.1
	6/11/2013	0.81	6.47	20.06	1372	16.20	-3
	9/17/2013	1.18	6.5	20.01	1353	11.70	3.8
	12/6/2013	**1.09**	**6.57**	**19.01**	**1335**	**42.40**	**-11.8**
MW-5	8/27/2009	1.00	6.38	20.8	1321	6.63	-91.9
	12/2/2009	1.50	6.47	21.03	1227	5.66	-109.1
	3/17/2010	1.10	5.82	21.28	1150	75.3	-60.7
	6/4/2010	1.10	5.99	20.87	1128	3.84	-33.8
	9/2/2010	1.03	6.16	21.22	1178	13.0	-168.4
	12/2/2010	1.05	6.02	21.46	1112	12.3	-167.7
	3/4/2011	1.11	6.89	21.46	1078	4.59	-106.9
	5/20/2011	1.18	6.47	21.02	1106	26.5	-222.5
	9/9/2011	1.14	6.2	21.07	1194	5.83	-215.4
	3/2/2012	1.70	6.72	21.34	1187	11.7	-228.6
	6/7/2012	0.40	6.68	20.29	1200	5.35	-50.7
	9/21/2012	0.44	6.24	20.73	1164	9.74	33.0
	12/14/2012	0.52	6.76	20.7	1173	17	-126.5
	3/28/2013	1.01	6.59	21.24	1068	6.39	-141.5
	6/11/2013	0.50	6.69	20.94	1016	17	-44.8
	9/17/2013	0.65	6.85	21.44	1165	20.9	-64.7
	12/6/2013	**0.60**	**7.01**	**20.82**	**747**	**16.7**	**-110.6**
MW-6	8/26/2009	0.42	6.47	20.93	1201	6.53	-172.3
	12/1/2009	0.26	6.89	21.64	1171	6.83	-207.9
	3/16/2010	0.63	5.91	21.26	1544	6.72	-168.2
	6/3/2010	0.58	6.38	20.74	1346	2.61	-116.4
	9/1/2010	0.41	6.44	20.86	1419	2.77	-120.3
	12/2/2010	0.37	6.24	21.17	1362	4.5	-148
	3/3/2011	1.54	6.81	21	1262	1.87	-98.3
	5/20/2011	1.23	6.62	20.51	1312	2.53	-221.1
	9/8/2011	1.07	6.2	20.84	1292	5.17	-167.9
	3/2/2012	1.10	6.55	21.03	1197	13.2	-166.4
	6/6/2012	1.18	6.78	19.82	1091	3.46	-32.8
	9/20/2012	FP	FP	FP	FP	FP	FP
	12/13/2012	1.47	6.72	21.05	1231	9.99	-46.2
	3/27/2013	1.53	6.58	20.81	1179	6.82	-54.9
	6/10/2013	0.70	6.64	20.55	1209	13	-13.9
	9/16/2013	FP	FP	FP	FP	FP	FP
	12/5/2013	**0.90**	**6.66**	**20.26**	**1342**	**21.4**	**-73.5**
MW-7	8/26/2009	0.98	6.36	19.24	1375	145	-128.3
	12/1/2009	1.05	6.83	19.51	1340	997	-4.3

Table A
Historical Field Parameters
15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Dissolved Oxygen (mg/L)	pH	Temperature °C	Electrical Conductivity µS/cm	Turbidity NTU	ORP
MW-7 cont.	3/16/2010	0.83	5.88	18.37	1266	382	-37.9
	6/3/2010	0.77	6.46	18.67	1199	873	-30.4
	9/1/2010	0.98	6.4	19.83	1271	999	-60
	12/2/2010	1.01	6.23	19.17	1253	999	-85.6
	3/4/2011	3.66	6.68	18.33	1098	609	-49.5
	5/19/2011	1.35	6.42	17.71	1192	879	-53.7
	9/8/2011	2.01	6.07	18.91	1198	748	-17.8
	3/2/2012	1.82	6.39	18.12	1308	363	-69.3
	6/6/2012	2.78	6.57	17.41	1106	362	1.3
	9/20/2012	1.61	6.11	18.8	1303	1000	95.9
	12/13/2012	2.93	6.67	18.42	1274	524	-22
	3/27/2013	3.01	6.51	17.1	1256	335	2.1
	6/10/2013	2.55	6.22	17.81	1232	672	8
	9/16/2013	3.59	6.21	19.19	1264	999	45.9
	12/5/2013	**2.76**	**6.63**	**17.96**	**1212**	**999**	**6.5**
MPE-1	6/6/2012	1.73	6.83	19.34	1269	16.8	-41.9
	9/20/2012	0.62	5.87	19.36	1389	16.2	20.2
	12/14/2012	0.7	6.76	19.14	1473	16.4	-63.5
	3/27/2013	2.01	6.64	19.96	1499	7.03	-214.9
	6/10/2013	0.59	6.62	20.05	1497	20	-59.7
	9/17/2013	0.65	6.59	19.97	1467	16.2	-66.7
	12/6/2013	**0.78**	**6.63**	**19.41**	**1390**	**32**	**-77.5**
MPE-2	3/2/2012	1.30	6.40	21.18	1303	8.70	-164.9
	6/7/2012	0.48	6.62	20.32	1309	3.63	-20.4
	9/21/2012	0.46	6.29	20.27	1284	7.05	72.4
	12/14/2012	0.47	6.68	20.14	1223	7.29	-60.5
	3/28/2013	0.84	6.51	20.93	1327	8.35	-64.3
	6/11/2013	0.52	6.63	20.34	1192	29.70	-56.8
	9/17/2013	0.61	6.69	21.15	1201	26.50	-80.7
	12/5/2013	**FP**	**FP**	**FP**	**FP**	**FP**	**FP**
			2nd WBZ				
MW-1D	8/26/2009	0.45	7.04	19.93	1388	7.75	-11
	12/1/2009	0.51	7.4	19.79	1342	19.1	-21.7
	3/16/2010	0.57	6.45	19.99	1353	98.9	-28.2
	6/4/2010	0.58	6.66	19.98	1336	3.85	97.7
	9/1/2010	0.52	6.94	20.12	1404	4.41	-6.6
	12/3/2010	0.49	6.64	19.73	1328	7.12	-75.3
	3/3/2011	2.77	7.35	19.79	1294	9.97	18.8
	5/19/2011	2.81	7.07	19.95	1330	5.26	6.6
	9/8/2011	3.21	6.66	20.03	1309	9.98	-35.5
	3/2/2012	2.04	6.75	19.76	1306	22.0	-71.3
	6/6/2012	1.1	7.29	19.54	1228	10.8	58.7
	9/20/2012	0.42	6.85	19.57	1256	18.6	93.7
	12/13/2012	1.03	7.29	18.82	1234	11.4	93.7
	3/27/2013	1.45	7.08	19.7	1253	5.8	-1
	6/10/2013	0.52	7.27	19.8	1238	16	111.5
	9/16/2013	0.78	7.09	19.88	1225	19	80.1
	12/5/2013	**0.87**	**7.29**	**18.47**	**1184**	**23.2**	**5.2**
MW-3D	8/26/2009	0.73	6.93	20.17	1276	1.73	-18.8
	12/1/2009	0.98	7.3	20.04	1236	2.48	-23.5
	3/16/2010	0.69	6.38	20.29	1272	8.05	-27.8
	6/4/2010	0.77	6.54	20.2	1254	0.42	78.1
	9/1/2010	0.79	6.85	20.33	1304	0.25	-29.4
	12/3/2010	0.81	6.49	20.04	1252	1.49	-79.2

Table A
Historical Field Parameters
15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Dissolved Oxygen (mg/L)	pH	Temperature °C	Electrical Conductivity µS/cm	Turbidity NTU	ORP
MW-3D cont.	3/3/2011	2	7.24	20.02	1254	0.85	54
	5/19/2011	1.99	6.91	20.21	1260	2.03	-14.8
	9/8/2011	1.73	6.52	20.19	1247	3.53	-32.6
	3/2/2012	2.17	6.99	20.02	1269	9.02	-84.2
	6/6/2012	0.33	7.16	19.76	1225	4.78	67.5
	9/20/2012	0.54	6.77	19.71	1233	4.70	88.0
	12/13/2012	0.85	7.14	19.02	1229	5.27	104.1
	3/27/2013	2.11	7.01	19.94	1241	5.31	66.3
	6/10/2013	0.73	7.19	20.32	1238	12.6	100.2
	9/16/2013	0.84	7.03	20	1236	16	72.9
	12/5/2013	**0.74**	**7.16**	**18.64**	**1193**	**11.9**	**28.3**
MW-4D	8/27/2009	0.98	6.93	19.46	1280	4.31	-26.4
	12/1/2009	1.9	7.36	19.42	1249	4.66	-24.2
	3/16/2010	1.4	6.36	19.58	1283	24.8	-16.7
	6/4/2010	1.3	6.53	19.49	1259	5.1	115.8
	9/1/2010	1.44	6.92	19.67	1333	2.2	-26.9
	12/3/2010	1.3	6.5	19.4	1266	1.57	-116.6
	3/3/2011	2.11	7.36	19.42	1219	1.8	-96.4
	5/19/2011	2.12	6.95	19.56	1262	2.09	-15.5
	9/8/2011	2.03	6.57	19.62	1261	3.13	-54
	3/2/2012	2.15	6.92	19.39	1272	13.1	-86.5
	6/6/2012	0.32	7.27	19.25	1189	6.32	22.9
	9/20/2012	0.39	6.76	19.21	1232	6.12	91.1
	12/13/2012	0.89	7.2	18.46	1210	7.34	-15.7
	3/27/2013	2.01	7.02	19.39	1236	5.31	47.4
	6/10/2013	0.75	7.14	19.54	1223	24.7	43.7
	9/16/2013	0.77	7.13	19.44	1220	24.2	42.8
	12/6/2013	**1.34**	**7.17**	**18.05**	**1175**	**20**	**75**

EPA On-line Tools for Site Assessment Calculation

Hydraulic Gradient -- Magnitude and Direction

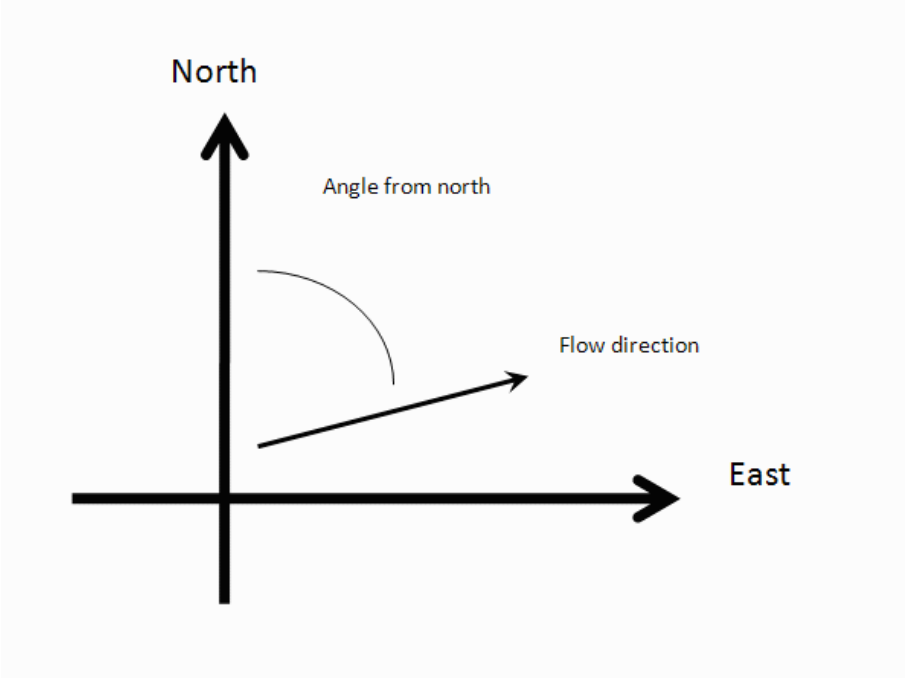
Gradient Calculation from fitting a plane to as many as thirty points

$a x_1 + b y_1 + c = h_1$
$a x_2 + b y_2 + c = h_2$
$a x_3 + b y_3 + c = h_3$
. . .
$a x_{30} + b y_{30} + c = h_{30}$

where (x_i,y_i) are the coordinates of the well and
h_i is the head

i = 1,2,3, ... , 30
The coefficients a, b, and c are calculated by a least-squares fitting of the the data to a plane

The gradient is calculated from the square root of $(a^2 + b^2)$ and the angle from the arctangent of a/b or b/a depending on the quadrant



Inputs

Example Data Set 1 | Example Data Set 2 | Calculate | Clear
Save Data | Recall Data | Go Back

Site Name: 15101 Freedom Ave, Sa
Date: 12/5/2013 Current Date
Calculation basis: Head
Coordinates: ft

I.D.	x-coordinate	y-coordinate	head (ft)
1) MW-1	6092119.016	2084364.691	30.30
2) MW-2	6092063.978	2084323.224	30.16
3) MW-3	6092176.317	2084298.343	30.15
4) MW-4	6092124.294	2084251.598	29.71
5) MW-5	6092177.071	2084206.361	29.67
6) MW-6	6092140.881	2084072.911	27.07
7) MW-7	6092290.918	2084008.071	28.53
8) EX-1	6092163.5	2084133.982	24.83
9) EX-2	6092131.08	2084082.713	22.68
10) MPE-1	6092125.048	2084212.393	29.55
11) MPE-2	6092171.793	2084292.312	30.07
12)			
13)			
14)			

15)				
16)				
17)				
18)				
19)				
20)				
21)				
22)				
23)				
24)				
25)				
26)				
27)				
28)				
29)				
30)				

Results

Number of Points Used in Calculation	11
Max. Difference Between Head Values	2.323
Gradient Magnitude (i)	0.03094
Flow direction as degrees from North (positive y axis)	226.9
Coefficient of Determination (R^2)	0.631

WCMS

Last updated on 1/10/2013

EPA On-line Tools for Site Assessment Calculation

Module Home Objectives Table of Contents Previous < Next >

Hydraulic Gradient

Gradient Calculation from fitting a plane to three points

$$a x_1 + b y_1 + c = h_1$$
$$a x_2 + b y_2 + c = h_2$$
$$a x_3 + b y_3 + c = h_3$$

where (x_i,y_i) are the coordinates of the well and
h_i is the head

$i = 1,2,3$

The gradient is calculated from the square root of $(a^2 + b^2)$ and the angle from the arctangent of a/b or b/a depending on the quadrant

Example Data Set 1 | Calculate | Clear
Save Data | Recall Data | Go Back

Site Name: 15101 Freedom Ave, Sa
Date: 12/5/2013 Current Date
Calculation basis: Head
Coordinates: ft

x-coordinate	y-coordinate	head (ft)
6092128.064	2084372.231	30.11
6092183.856	2084303.621	30.13
6092116.755	2084222.948	29.69

Gradient Magnitude (i): 0.004324
Degrees from North (+ y axis): 233.9

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WCMS
Last updated on 1/10/2013

Appendix C

Laboratory Reports and Chain of Custody Forms
for the Fourth Quarter 2013 Monitoring Event

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 251404
ANALYTICAL REPORT

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

Project : 2551
Location : 15101 Freedom Avenue San Leandro
Level : II

Sample ID	Lab ID
MW-1	251404-001
MW-2	251404-002
MW-3	251404-003
MW-4	251404-004
MW-5	251404-005
MW-6	251404-006
MW-7	251404-007
MW-1D	251404-008
MW-3D	251404-009
MW-4D	251404-010
EX-1	251404-011
EX-2	251404-012
MPE-1	251404-013

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: _____ Date: 12/17/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**251404**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2551**
Location:	**15101 Freedom Avenue San Leandro**
Request Date:	**12/06/13**
Samples Received:	**12/06/13**

This data package contains sample and QC results for thirteen water samples, requested for the above referenced project on 12/06/13. The samples were received cold and intact.

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

Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 12/13/13 15:07; this analyte met minimum response criteria, and affected data was qualified with "b". Low recoveries were observed for ethylbenzene in the MS/MSD of MW-3 (lab # 251404-003); the LCS was within limits, and the associated RPD was within limits. No other 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

C&T LOGIN # 251404

Sampler: Lizzie Hightower/~~Raisa Metavalli~~

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: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	Analyses: TPHg, BTEX, MtBE 8260B	Gasoline Oxygenates & Lead Scavengers
1	MW-1	12/6/13 11:02		*		3-VOAs	*			*	*	*
2	MW-2	12/6/13 10:35		*		3-VOAs	*			*	*	*
3	MW-3	12/6/13 11:25		*		3-VOAs	*			*	*	*
4	MW-4	12/6/13 10:08		*		3-VOAs	*			*	*	*
5	MW-5	12/6/13 11:49		*		3-VOAs	*			*	*	*
6	MW-6	12/5/13 14:05		*		3-VOAs	*			*	*	*
7	MW-7	12/5/13 13:36		*		3-VOAs	*			*	*	*
8	MW-1D	12/5/13 15:14		*		3-VOAs	*			*	*	*
9	MW-3D	12/5/13 15:45		*		3-VOAs	*			*	*	*
10	MW-4D	12/6/13 09:42		*		3-VOAs	*			*	*	*
11	EX-1	12/5/13 14:25		*		3-VOAs	*			*	*	*
12	EX-2	12/5/13 14:35		*		3-VOAs	*			*	*	*
13	MPE-1	12/6/13 12:17		*		3-VOAs	*			*	*	*
	~~MPE-2~~			*		~~3-VOAs~~	*			*	*	*

Notes: **EDF OUTPUT REQUIRED**
Ethanol

RELINQUISHED BY:	RECEIVED BY:
12/6/13 13:25 DATE/TIME	12/6/13 13:25 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

CHAIN OF CUSTODY

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

LOGIN # 251404

Sampler: Lizzie Hightower

Project No: 2553

Report To: Joyce Bobek

Project Name: 15101 Freedom Ave, San Leandr

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	Analyses: TPH-g 8015	BTEX 8020	TPH-d, TPH-mo 8015
14	Effluent	12/6/13 12:40		*		6 VOAs	*			*	*	*	
		↓ ↓		*		2-500 mL Ambers				*			*

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY:	RECEIVED BY:
E. Hightower 12/6/13 13:25 DATE/TIME	Pat Stanley 12/6/13 13:25 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 251404 Date Received 12/6/13 Number of coolers 1
Client SOMA Project 1501 FREEDOM AVE., SAN LEANDRO (2551)

Date Opened 12/6/13 By (print) IR (sign) Tung Rankan
Date Logged in 1 By (print) 1 (sign) 1

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: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☒ Samples Received on ice & cold without a temperature blank; ~~temp. taken with IR gun~~

☒ 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 there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	206139
Lab ID:	251404-001	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/15/13
Diln Fac:	3.333		

Analyte	Result	RL
Gasoline C7-C12	5,300	170
tert-Butyl Alcohol (TBA)	ND	33
Isopropyl Ether (DIPE)	ND	1.7
Ethyl tert-Butyl Ether (ETBE)	ND	1.7
Methyl tert-Amyl Ether (TAME)	ND	1.7
Ethanol	ND	3,300
MTBE	ND	1.7
1,2-Dichloroethane	ND	1.7
Benzene	71	1.7
Toluene	ND	1.7
1,2-Dibromoethane	ND	1.7
Ethylbenzene	240	1.7
m,p-Xylenes	84	1.7
o-Xylene	ND	1.7

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	206172
Lab ID:	251404-002	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	290	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	1.4	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	1.1	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-136
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	206172
Lab ID:	251404-003	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	20.00		

Analyte	Result	RL
Gasoline C7-C12	23,000	1,000
tert-Butyl Alcohol (TBA)	ND	200
Isopropyl Ether (DIPE)	ND	10
Ethyl tert-Butyl Ether (ETBE)	ND	10
Methyl tert-Amyl Ether (TAME)	ND	10
Ethanol	ND	20,000
MTBE	ND	10
1,2-Dichloroethane	ND	10
Benzene	360	10
Toluene	26	10
1,2-Dibromoethane	ND	10
Ethylbenzene	1,700	10
m,p-Xylenes	3,200	10
o-Xylene	130	10

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4	Units:	ug/L
Lab ID:	251404-004	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	2,300	1,000	20.00	206119	12/13/13
tert-Butyl Alcohol (TBA)	1,500	400	40.00	206139	12/15/13
Isopropyl Ether (DIPE)	ND	10	20.00	206119	12/13/13
Ethyl tert-Butyl Ether (ETBE)	ND	10	20.00	206119	12/13/13
Methyl tert-Amyl Ether (TAME)	ND	10	20.00	206119	12/13/13
Ethanol	ND	20,000	20.00	206119	12/13/13
MTBE	42	10	20.00	206119	12/13/13
1,2-Dichloroethane	ND	10	20.00	206119	12/13/13
Benzene	3,300	20	40.00	206139	12/15/13
Toluene	ND	10	20.00	206119	12/13/13
1,2-Dibromoethane	ND	10	20.00	206119	12/13/13
Ethylbenzene	78	10	20.00	206119	12/13/13
m,p-Xylenes	150	10	20.00	206119	12/13/13
o-Xylene	49	10	20.00	206119	12/13/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	85	77-136	20.00	206119	12/13/13
1,2-Dichloroethane-d4	76	75-139	20.00	206119	12/13/13
Toluene-d8	93	80-120	20.00	206119	12/13/13
Bromofluorobenzene	80	80-120	20.00	206119	12/13/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-5	Diln Fac:	2.000
Lab ID:	251404-005	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	3,600	100	206172	12/16/13
tert-Butyl Alcohol (TBA)	ND	20	206172	12/16/13
Isopropyl Ether (DIPE)	ND	1.0	206172	12/16/13
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	206172	12/16/13
Methyl tert-Amyl Ether (TAME)	3.9	1.0	206172	12/16/13
Ethanol	ND	2,000	206172	12/16/13
MTBE	2.5	1.0	206172	12/16/13
1,2-Dichloroethane	ND	1.0	206172	12/16/13
Benzene	35	1.0	206172	12/16/13
Toluene	2.1	1.0	206172	12/16/13
1,2-Dibromoethane	ND	1.0	206172	12/16/13
Ethylbenzene	160	1.0	206119	12/13/13
m,p-Xylenes	200	1.0	206172	12/16/13
o-Xylene	41	1.0	206172	12/16/13

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	104	77-136	206172	12/16/13
1,2-Dichloroethane-d4	104	75-139	206172	12/16/13
Toluene-d8	99	80-120	206172	12/16/13
Bromofluorobenzene	99	80-120	206172	12/16/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-6	Units:	ug/L
Lab ID:	251404-006	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	18,000	500	10.00	206172	12/16/13
tert-Butyl Alcohol (TBA)	270	50	5.000	206139	12/15/13
Isopropyl Ether (DIPE)	ND	2.5	5.000	206139	12/15/13
Ethyl tert-Butyl Ether (ETBE)	ND	2.5	5.000	206139	12/15/13
Methyl tert-Amyl Ether (TAME)	ND	2.5	5.000	206139	12/15/13
Ethanol	ND	5,000	5.000	206139	12/15/13
MTBE	6.1	2.5	5.000	206139	12/15/13
1,2-Dichloroethane	ND	2.5	5.000	206139	12/15/13
Benzene	220	2.5	5.000	206139	12/15/13
Toluene	330	2.5	5.000	206139	12/15/13
1,2-Dibromoethane	ND	2.5	5.000	206139	12/15/13
Ethylbenzene	460	5.0	10.00	206172	12/16/13
m,p-Xylenes	1,500	5.0	10.00	206172	12/16/13
o-Xylene	530	5.0	10.00	206172	12/16/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	101	77-136	5.000	206139	12/15/13
1,2-Dichloroethane-d4	106	75-139	5.000	206139	12/15/13
Toluene-d8	100	80-120	5.000	206139	12/15/13
Bromofluorobenzene	92	80-120	5.000	206139	12/15/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	206172
Lab ID:	251404-007	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,800	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)	0.73	0.50
Ethanol	ND	1,000
MTBE	5.7	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	8.0	0.50
m,p-Xylenes	3.1	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-136
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1D	Batch#:	206172
Lab ID:	251404-008	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/16/13
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	1.3	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3D	Batch#:	206172
Lab ID:	251404-009	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	1.6	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	0.53	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4D	Batch#:	206139
Lab ID:	251404-010	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/14/13
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	3.4	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	104	77-136
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-1	Batch#:	206101
Lab ID:	251404-011	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	390	50
tert-Butyl Alcohol (TBA)	230	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	1.7	0.50
Methyl tert-Amyl Ether (TAME)	5.5	0.50
Ethanol	ND	1,000
MTBE	76	0.50
1,2-Dichloroethane	ND	0.50
Benzene	42	0.50
Toluene	2.5	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	9.8	0.50
m,p-Xylenes	28	0.50
o-Xylene	4.6	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-136
1,2-Dichloroethane-d4	111	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-2	Units:	ug/L
Lab ID:	251404-012	Sampled:	12/05/13
Matrix:	Water	Received:	12/06/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	3,700	100	2.000	206139	12/14/13
tert-Butyl Alcohol (TBA)	30	20	2.000	206139	12/14/13
Isopropyl Ether (DIPE)	ND	1.0	2.000	206139	12/14/13
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	2.000	206139	12/14/13
Methyl tert-Amyl Ether (TAME)	ND	1.0	2.000	206139	12/14/13
Ethanol	ND	2,000	2.000	206139	12/14/13
MTBE	7.2	1.0	2.000	206139	12/14/13
1,2-Dichloroethane	1.2	1.0	2.000	206139	12/14/13
Benzene	160	1.0	2.000	206139	12/14/13
Toluene	46	1.0	2.000	206139	12/14/13
1,2-Dibromoethane	ND	1.0	2.000	206139	12/14/13
Ethylbenzene	110	2.0	4.000	206172	12/16/13
m,p-Xylenes	320	2.0	4.000	206172	12/16/13
o-Xylene	74	1.0	2.000	206139	12/14/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	101	77-136	2.000	206139	12/14/13
1,2-Dichloroethane-d4	106	75-139	2.000	206139	12/14/13
Toluene-d8	103	80-120	2.000	206139	12/14/13
Bromofluorobenzene	94	80-120	2.000	206139	12/14/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MPE-1	Batch#:	206101
Lab ID:	251404-013	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	40.00		

Analyte	Result	RL
Gasoline C7-C12	27,000	2,000
tert-Butyl Alcohol (TBA)	1,500	400
Isopropyl Ether (DIPE)	ND	20
Ethyl tert-Butyl Ether (ETBE)	ND	20
Methyl tert-Amyl Ether (TAME)	30	20
Ethanol	ND	40,000
MTBE	110	20
1,2-Dichloroethane	ND	20
Benzene	1,600	20
Toluene	220	20
1,2-Dibromoethane	ND	20
Ethylbenzene	990	20
m,p-Xylenes	3,700	20
o-Xylene	1,300	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-136
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206101
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720275

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	130.0	104	37-151
Isopropyl Ether (DIPE)	25.00	27.32	109	56-124
Ethyl tert-Butyl Ether (ETBE)	25.00	26.48	106	61-122
Methyl tert-Amyl Ether (TAME)	25.00	25.53	102	65-120
MTBE	25.00	25.80	103	64-121
1,2-Dichloroethane	25.00	26.76	107	77-137
Benzene	25.00	26.48	106	80-124
Toluene	25.00	25.14	101	80-122
1,2-Dibromoethane	25.00	25.08	100	80-120
Ethylbenzene	25.00	26.23	105	80-124
m,p-Xylenes	50.00	56.25	113	80-122
o-Xylene	25.00	27.56	110	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	77-136
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC720276

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	110.0	88	37-151	17	30
Isopropyl Ether (DIPE)	25.00	24.32	97	56-124	12	20
Ethyl tert-Butyl Ether (ETBE)	25.00	23.94	96	61-122	10	22
Methyl tert-Amyl Ether (TAME)	25.00	23.91	96	65-120	7	22
MTBE	25.00	23.34	93	64-121	10	20
1,2-Dichloroethane	25.00	25.20	101	77-137	6	20
Benzene	25.00	25.28	101	80-124	5	20
Toluene	25.00	24.32	97	80-122	3	20
1,2-Dibromoethane	25.00	24.74	99	80-120	1	20
Ethylbenzene	25.00	26.11	104	80-124	0	20
m,p-Xylenes	50.00	53.94	108	80-122	4	20
o-Xylene	25.00	26.25	105	77-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206101
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720277

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,073	107	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC720278

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,023	102	80-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720279	Batch#:	206101
Matrix:	Water	Analyzed:	12/13/13
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC720357	Batch#:	206119
Matrix:	Water	Analyzed:	12/13/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	93.75	54.78 b	58	37-151
Isopropyl Ether (DIPE)	18.75	13.41	72	56-124
Ethyl tert-Butyl Ether (ETBE)	18.75	13.98	75	61-122
Methyl tert-Amyl Ether (TAME)	18.75	15.43	82	65-120
MTBE	18.75	14.58	78	64-121
1,2-Dichloroethane	18.75	15.31	82	77-137
Benzene	18.75	18.07	96	80-124
Toluene	18.75	18.95	101	80-122
1,2-Dibromoethane	18.75	18.49	99	80-120
Ethylbenzene	18.75	20.03	107	80-124
m,p-Xylenes	37.50	42.68	114	80-122
o-Xylene	18.75	20.72	110	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	82	80-120

b= See narrative

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720358	Batch#:	206119
Matrix:	Water	Analyzed:	12/13/13
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-136
1,2-Dichloroethane-d4	81	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206119
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720359

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,015	101	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	80	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	83	80-120

Type: BSD Lab ID: QC720360

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,024	102	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	80	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	83	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	206119
MSS Lab ID:	251404-003	Sampled:	12/06/13
Matrix:	Water	Received:	12/06/13
Units:	ug/L	Analyzed:	12/14/13
Diln Fac:	20.00		

Type: MS Lab ID: QC720361

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<44.77	2,500	2,083 b	83	38-150
Isopropyl Ether (DIPE)	<2.000	500.0	335.2	67	62-120
Ethyl tert-Butyl Ether (ETBE)	<2.000	500.0	371.3	74	64-120
Methyl tert-Amyl Ether (TAME)	<2.004	500.0	446.0	88	67-120
MTBE	3.216	500.0	420.5	83	66-120
1,2-Dichloroethane	<2.141	500.0	409.5	82	80-136
Benzene	303.5	500.0	745.1	88	80-127
Toluene	24.83	500.0	484.4	92	80-123
1,2-Dibromoethane	<2.683	500.0	513.2	103	80-120
Ethylbenzene	1,247	500.0	1,633	77 *	80-126
m,p-Xylenes	2,313	1,000	3,135	82	80-123
o-Xylene	136.3	500.0	653.9	104	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-136
1,2-Dichloroethane-d4	81	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	81	80-120

Type: MSD Lab ID: QC720362

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	2,500	2,003 b	80	38-150	4	38
Isopropyl Ether (DIPE)	500.0	332.7	67	62-120	1	25
Ethyl tert-Butyl Ether (ETBE)	500.0	376.6	75	64-120	1	27
Methyl tert-Amyl Ether (TAME)	500.0	442.6	87	67-120	1	28
MTBE	500.0	416.4	83	66-120	1	27
1,2-Dichloroethane	500.0	420.2	84	80-136	3	23
Benzene	500.0	747.0	89	80-127	0	23
Toluene	500.0	501.9	95	80-123	4	22
1,2-Dibromoethane	500.0	495.4	99	80-120	4	23
Ethylbenzene	500.0	1,640	79 *	80-126	0	22
m,p-Xylenes	1,000	3,157	84	80-123	1	22
o-Xylene	500.0	656.9	104	76-120	0	23

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-136
1,2-Dichloroethane-d4	80	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	82	80-120

*= Value outside of QC limits; see narrative
b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720454	Batch#:	206139
Matrix:	Water	Analyzed:	12/14/13
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	106	77-136
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206139
Units:	ug/L	Analyzed:	12/14/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720455

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	96.67	97	37-151
Isopropyl Ether (DIPE)	20.00	19.00	95	56-124
Ethyl tert-Butyl Ether (ETBE)	20.00	18.82	94	61-122
Methyl tert-Amyl Ether (TAME)	20.00	18.52	93	65-120
MTBE	20.00	17.89	89	64-121
1,2-Dichloroethane	20.00	20.07	100	77-137
Benzene	20.00	19.86	99	80-124
Toluene	20.00	19.81	99	80-122
1,2-Dibromoethane	20.00	19.56	98	80-120
Ethylbenzene	20.00	20.12	101	80-124
m,p-Xylenes	40.00	42.02	105	80-122
o-Xylene	20.00	20.55	103	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC720456

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	96.43	96	37-151	0	30
Isopropyl Ether (DIPE)	20.00	18.46	92	56-124	3	20
Ethyl tert-Butyl Ether (ETBE)	20.00	17.96	90	61-122	5	22
Methyl tert-Amyl Ether (TAME)	20.00	18.61	93	65-120	0	22
MTBE	20.00	18.41	92	64-121	3	20
1,2-Dichloroethane	20.00	19.72	99	77-137	2	20
Benzene	20.00	18.90	94	80-124	5	20
Toluene	20.00	18.71	94	80-122	6	20
1,2-Dibromoethane	20.00	19.79	99	80-120	1	20
Ethylbenzene	20.00	19.47	97	80-124	3	20
m,p-Xylenes	40.00	40.92	102	80-122	3	20
o-Xylene	20.00	19.74	99	77-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206139
Units:	ug/L	Analyzed:	12/14/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720457

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	800.0	810.4	101	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC720458

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	800.0	775.4	97	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720586	Batch#:	206172
Matrix:	Water	Analyzed:	12/16/13
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206172
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720587

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	105.1	105	37-151
Isopropyl Ether (DIPE)	20.00	20.93	105	56-124
Ethyl tert-Butyl Ether (ETBE)	20.00	20.17	101	61-122
Methyl tert-Amyl Ether (TAME)	20.00	20.16	101	65-120
MTBE	20.00	20.47	102	64-121
1,2-Dichloroethane	20.00	20.79	104	77-137
Benzene	20.00	20.96	105	80-124
Toluene	20.00	20.78	104	80-122
1,2-Dibromoethane	20.00	20.97	105	80-120
Ethylbenzene	20.00	21.81	109	80-124
m,p-Xylenes	40.00	45.30	113	80-122
o-Xylene	20.00	21.74	109	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC720588

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	105.2	105	37-151	0	30
Isopropyl Ether (DIPE)	20.00	19.93	100	56-124	5	20
Ethyl tert-Butyl Ether (ETBE)	20.00	19.90	100	61-122	1	22
Methyl tert-Amyl Ether (TAME)	20.00	19.76	99	65-120	2	22
MTBE	20.00	19.92	100	64-121	3	20
1,2-Dichloroethane	20.00	20.37	102	77-137	2	20
Benzene	20.00	19.80	99	80-124	6	20
Toluene	20.00	19.71	99	80-122	5	20
1,2-Dibromoethane	20.00	20.67	103	80-120	1	20
Ethylbenzene	20.00	20.42	102	80-124	7	20
m,p-Xylenes	40.00	43.16	108	80-122	5	20
o-Xylene	20.00	20.99	105	77-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	251404	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206172
Units:	ug/L	Analyzed:	12/16/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720589

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	900.0	908.3	101	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-136
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC720590

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	900.0	866.9	96	80-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	77-136
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

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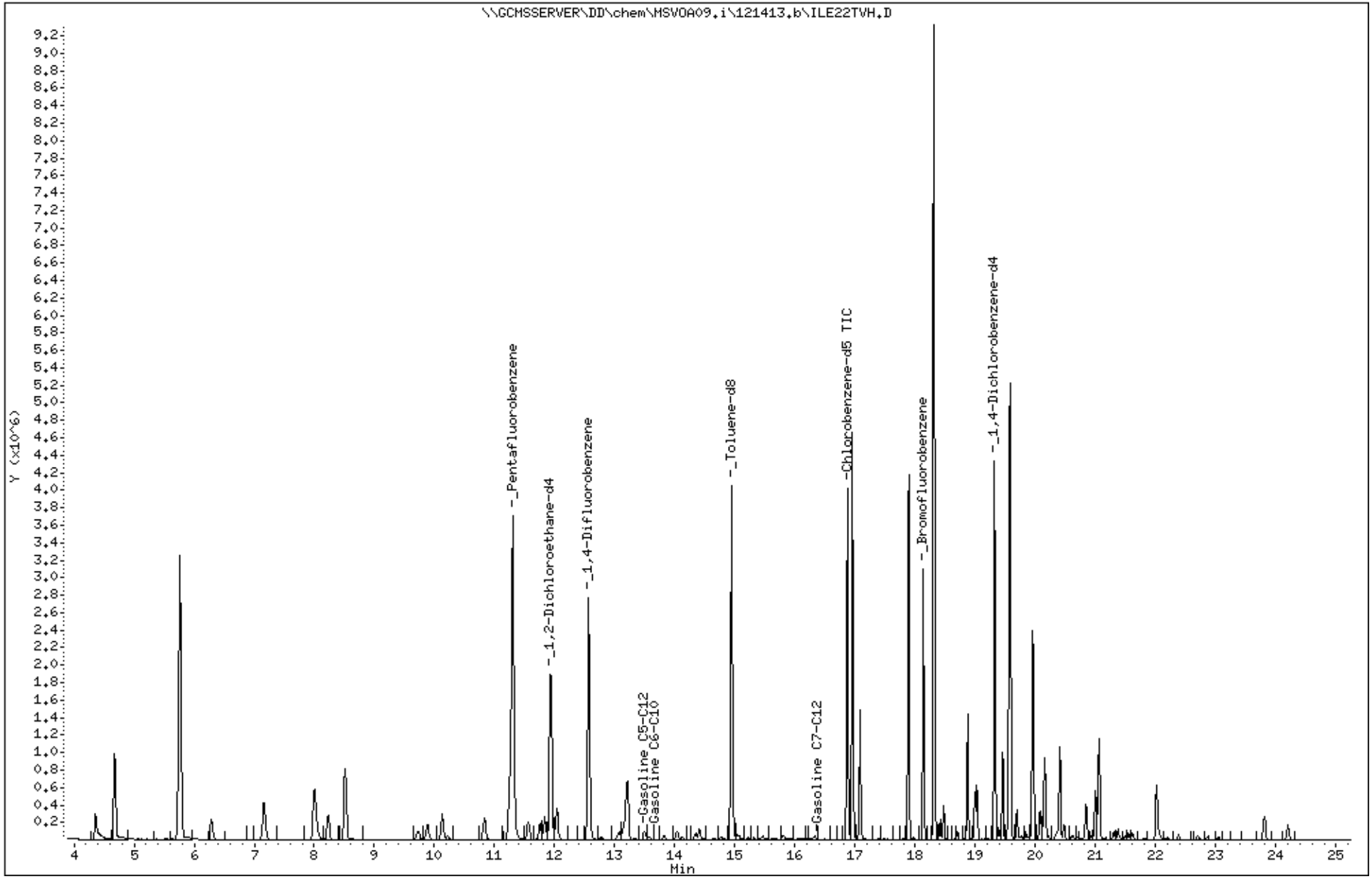

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Sample Info: S,251404-002

Operator: VOC

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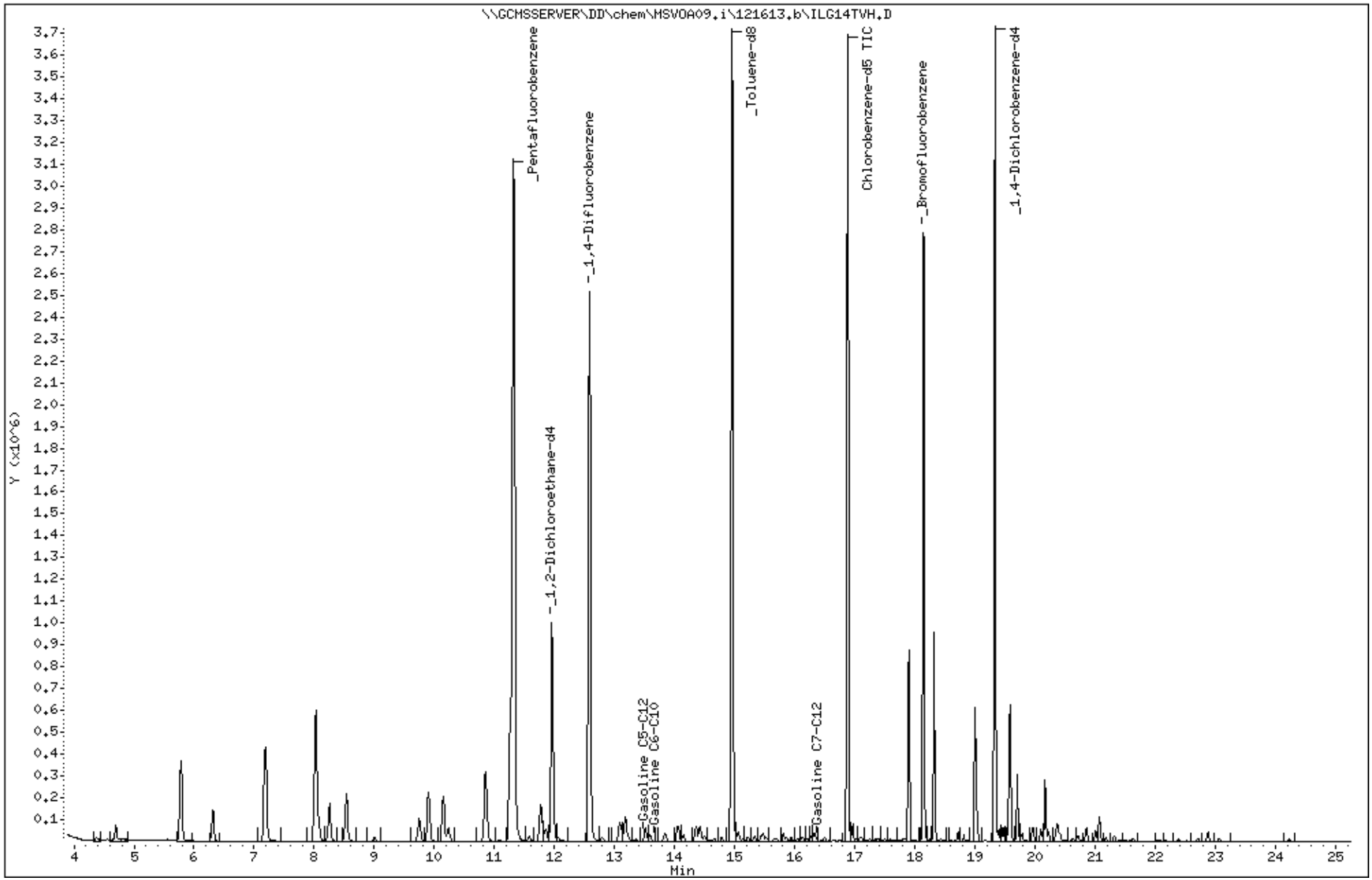

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Date : 16-DEC-2013 23:02

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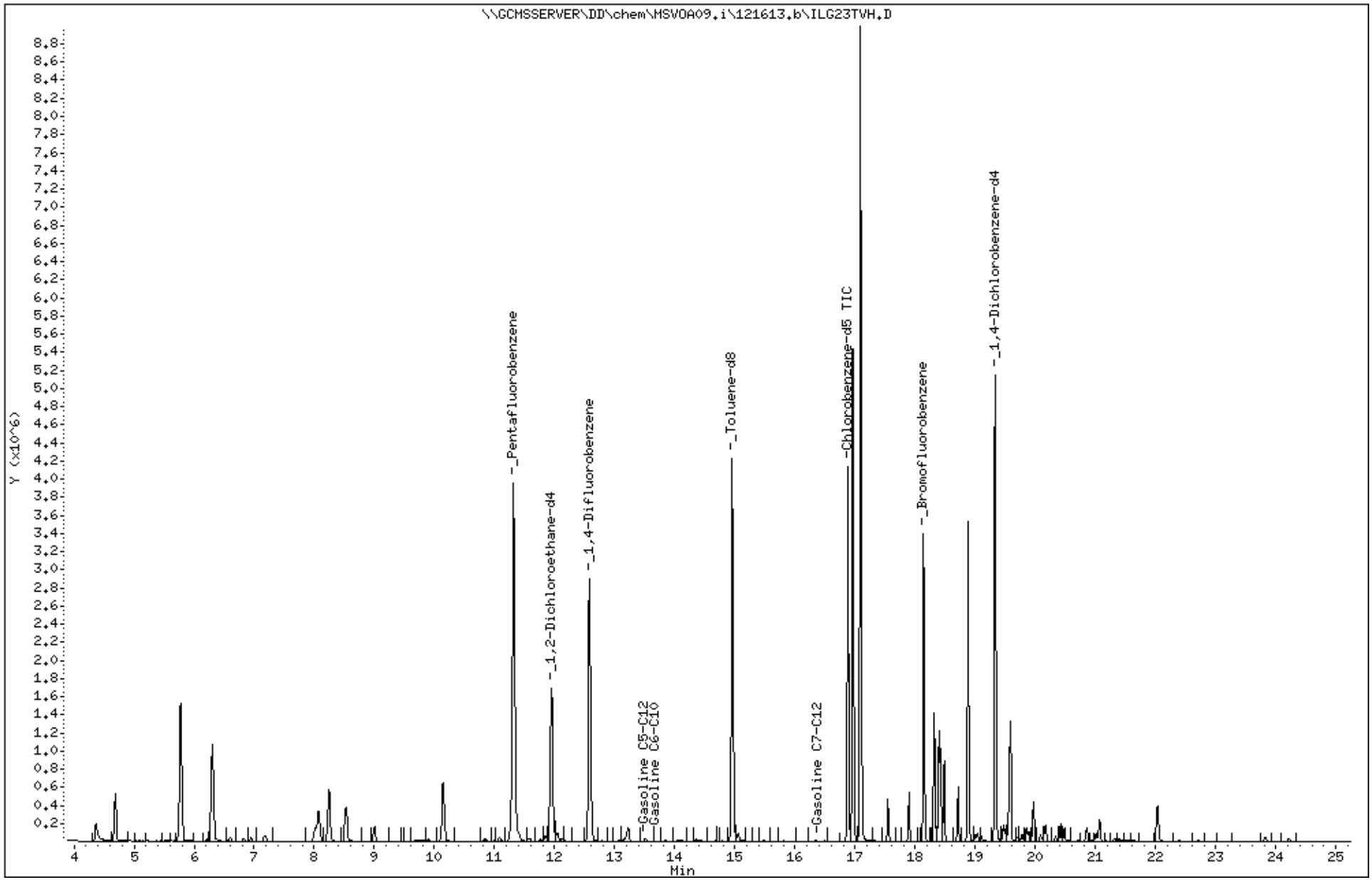
Instrument: MSVOA09.i

Sample Info: S,251404-003

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 13-DEC-2013 23:41

Client ID: DYNA P&T

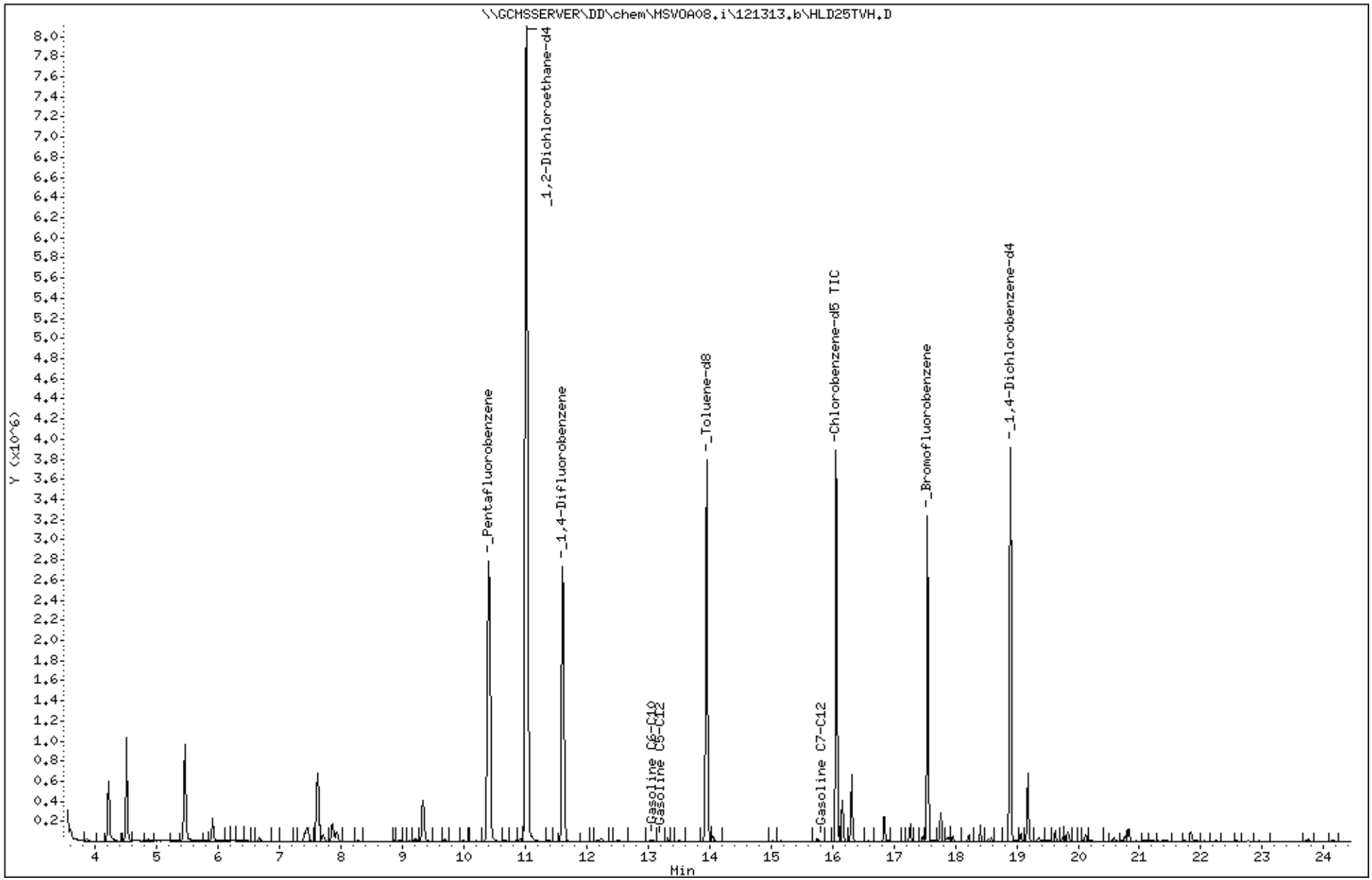
Instrument: MSVOA08.i

Sample Info: S,251404-004

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 16-DEC-2013 20:45

Client ID: DYNA P&T

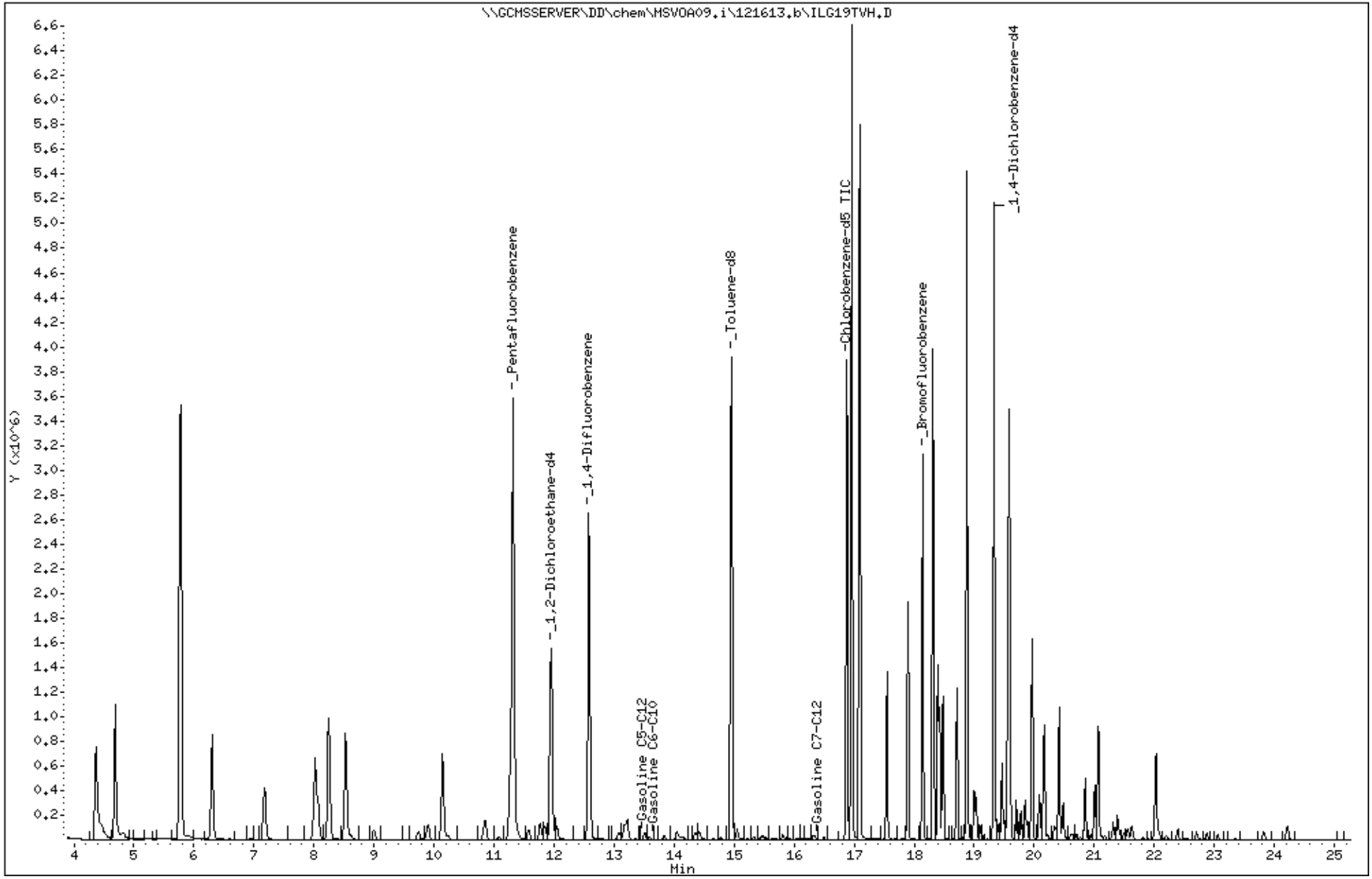
Instrument: MSVOA09.i

Sample Info: S,251404-005

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 16-DEC-2013 21:53

Client ID: DYNA P&T

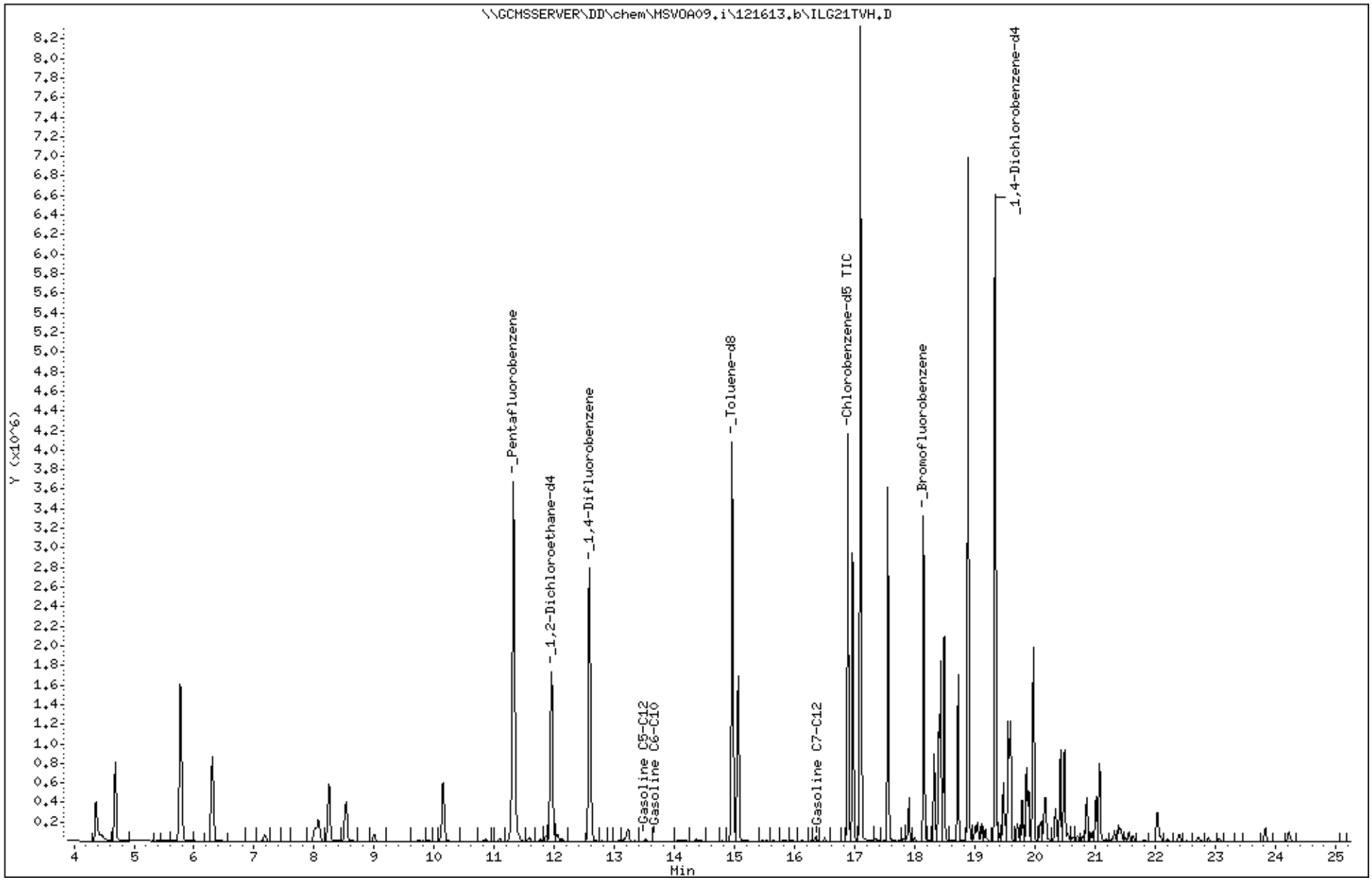
Instrument: MSVOA09.i

Sample Info: S,251404-006

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 16-DEC-2013 18:29

Client ID: DYNA P&T

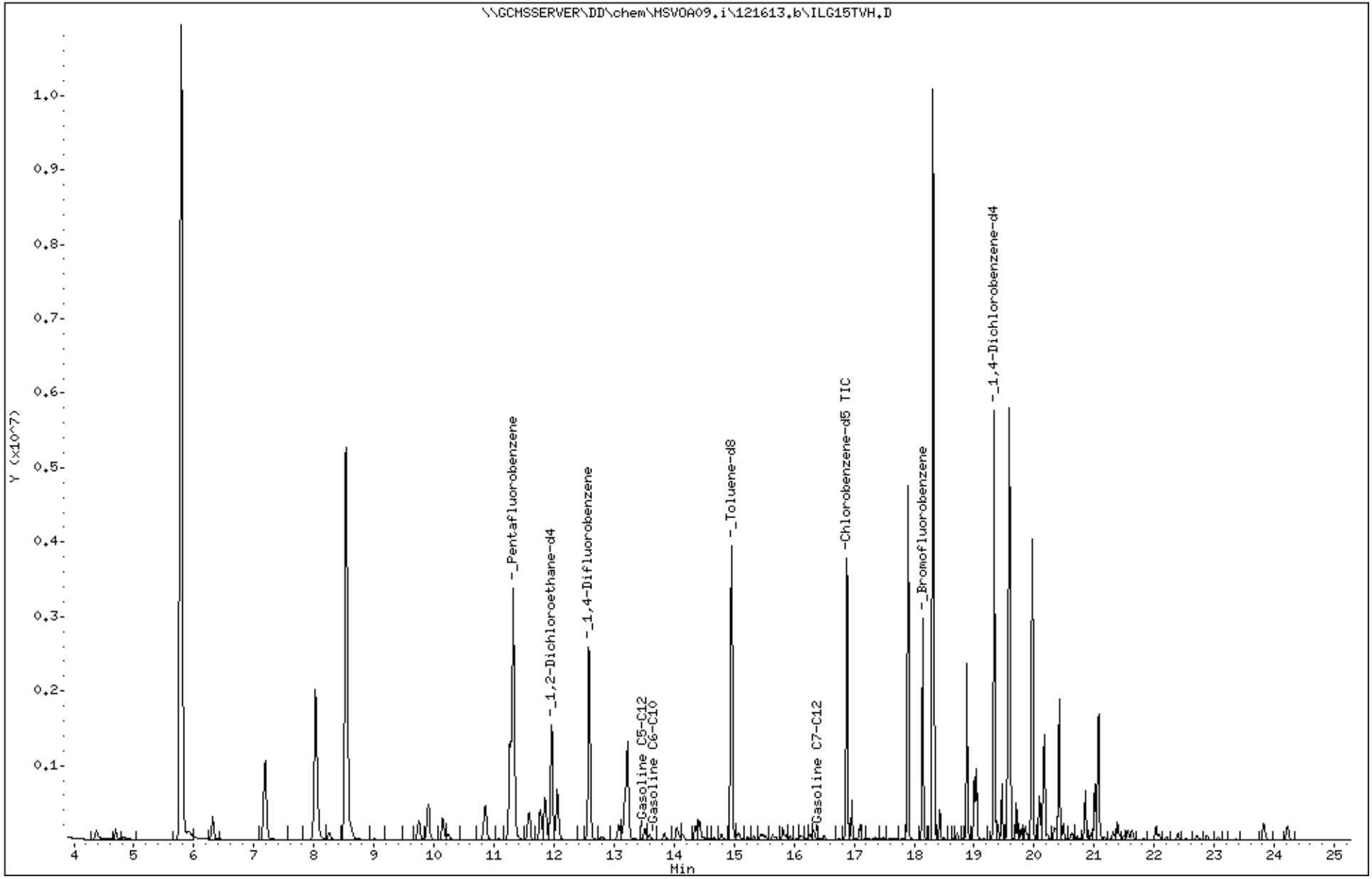
Instrument: MSVOA09.i

Sample Info: S,251404-007

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 13-DEC-2013 19:48

Client ID: DYNA P&T

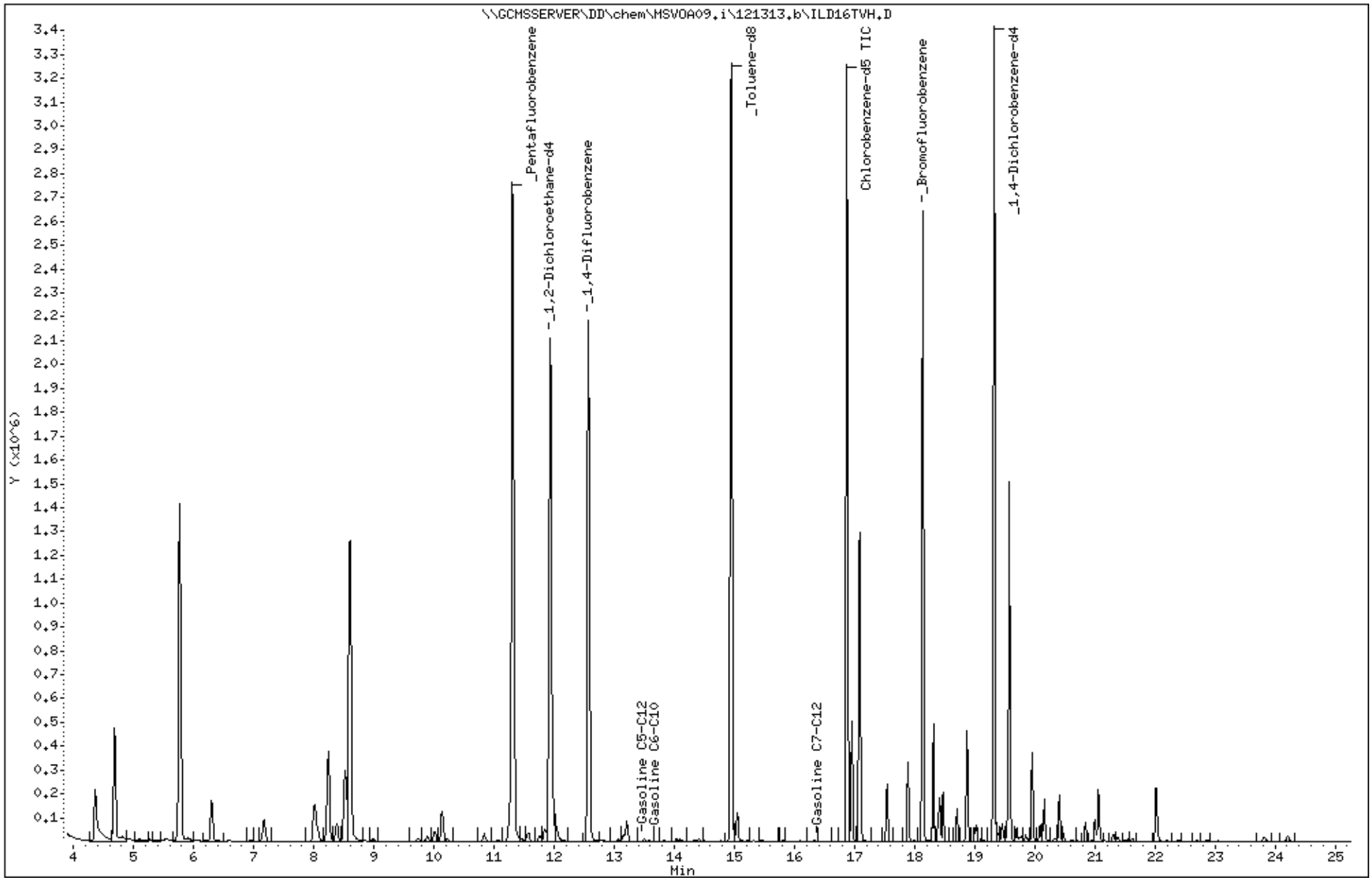
Instrument: MSVOA09.i

Sample Info: S,251404-011

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\GCMSSERVER\DD\chem\MSVOA09.i\121413.b\ILE21TVH.D

Date : 14-DEC-2013 23:35

Client ID: DYNA P&T

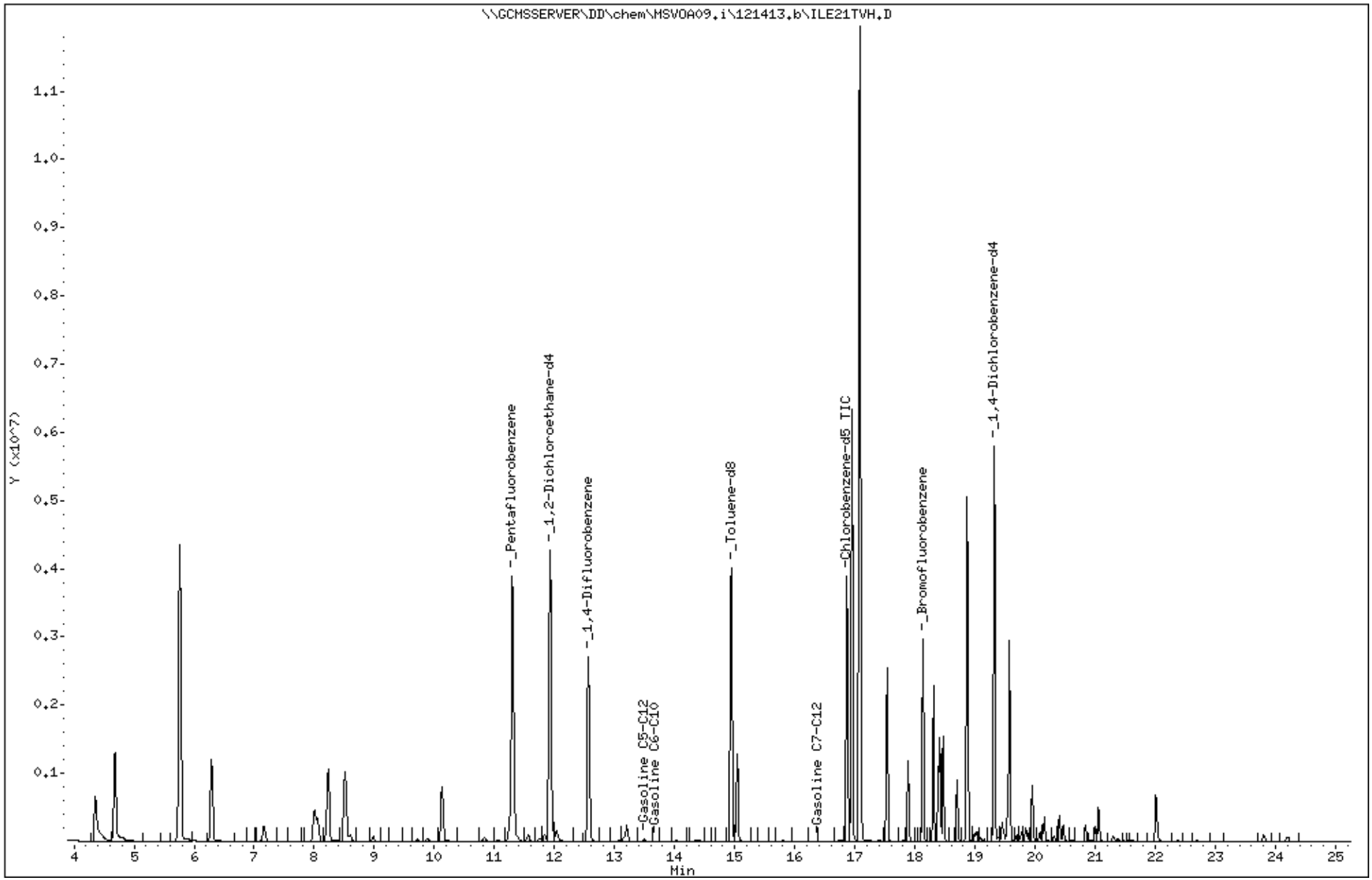
Instrument: MSVOA09.i

Sample Info: S,251404-012

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 13-DEC-2013 23:47

Client ID: DYNA P&T

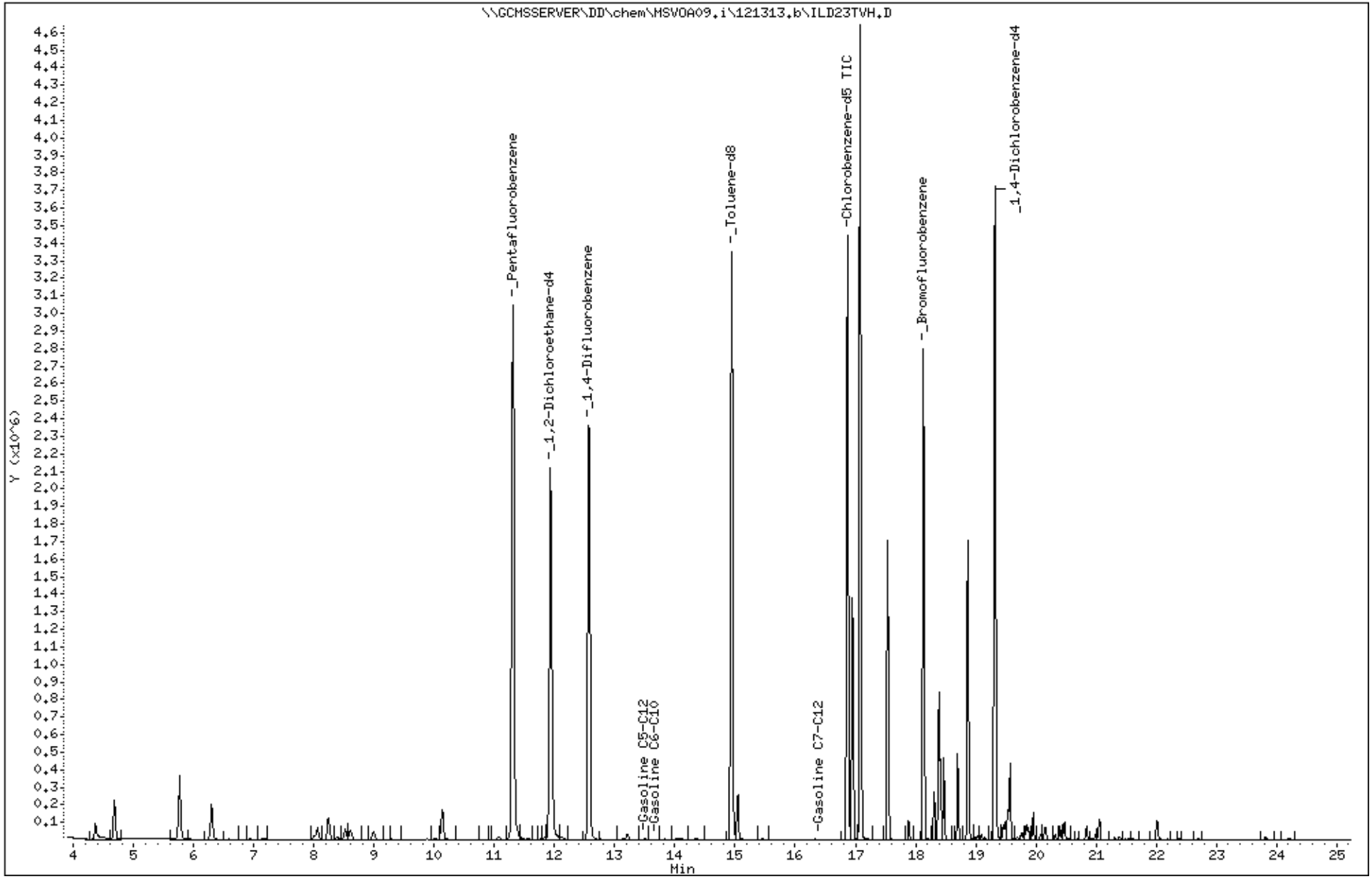
Instrument: MSVOA09.i

Sample Info: S,251404-013

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 13-DEC-2013 16:39

Client ID: DYNA P&T

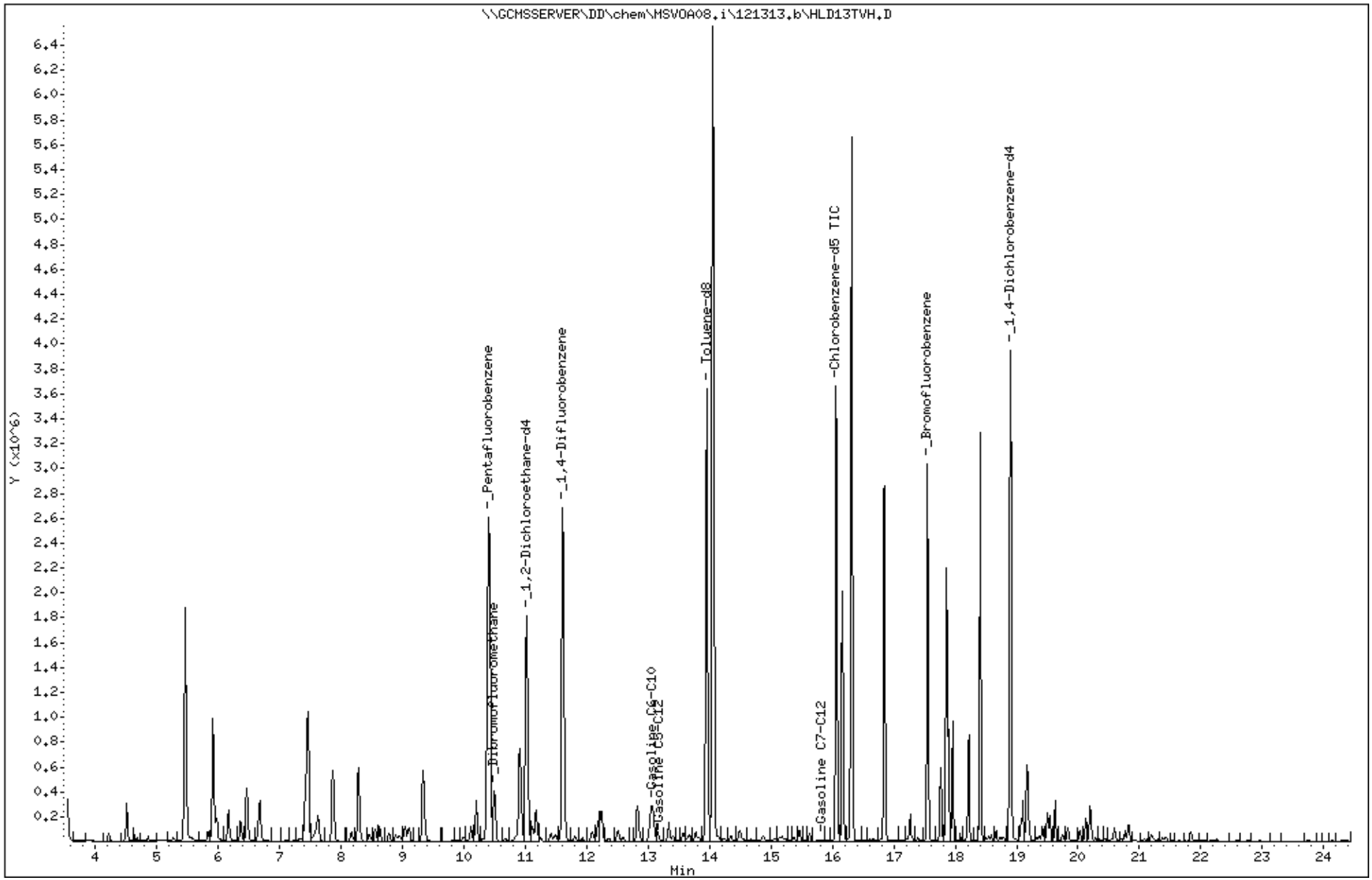
Instrument: MSVOA08.i

Sample Info: CCV/BS,QC720359,206119,S23229,.01/100

Operator: VOC

Column phase:

Column diameter: 2.00



Appendix D

Laboratory Reports and Chain of Custody Forms for the Treatment System

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250253
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 2553
6620 Owens Dr.	Location : 15101 Freedom Ave. San Leandro
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFFLUENT	250253-001
GAC-1	250253-002
INFLUENT	250253-003

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

Signature: _____ Date: 11/04/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250253**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2553**
Location:	**15101 Freedom Ave. San Leandro**
Request Date:	**10/28/13**
Samples Received:	**10/28/13**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 10/28/13. The samples were received cold and intact.

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

Low recoveries were observed for gasoline C7-C12 in the MS/MSD of INFLUENT (lab # 250253-003); the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

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

LOGIN # 25P253

Sampler: MAGOUD

Project No: 2553

Report To: Joyce Bobek

Project Name:15101 Freedom Ave, San Leandr

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: TPH-g 8015	Analyses: TPH-d, TPH-mo 8015	Analyses: BTEX 8020
1	EFFLUENT	10/28/13 — 10		*		6 VOAs	*			*	*		*
				*		2-500 ml Ambers				*		*	
2	GAC-1			*		6 VOAs	*			*	*		*
3	INFLUENT			*		6 VOAs	*			*	*		*

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:	RECEIVED BY:
10/28/13 - 12:35 DATE/TIME	Pat Lamb 10/28/13 12:40 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250253 Date Received 10/28/13 Number of coolers 1
Client SOMA Project 15101 FREEDOM AVE., SAN LEANDRO (2553)

Date Opened 10/28/13 By (print) IR (sign) Irma Rankin
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (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: * Notify PM if temperature exceeds 6°C

Type of ice used: ☐ Wet ☒ Blue/Gel ☐ None Temp(°C) _____

☒ Samples Received on ice & cold without a temperature blank; ~~temp. taken with IR gun~~

☒ 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 there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Matrix:	Water	Sampled:	10/28/13
Units:	ug/L	Received:	10/28/13

Field ID:	EFFLUENT	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	204510
Lab ID:	250253-001	Analyzed:	10/29/13

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	109	76-128	EPA 8015B
Bromofluorobenzene (PID)	134	70-136	EPA 8021B

Field ID:	GAC-1	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	204510
Lab ID:	250253-002	Analyzed:	10/29/13

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	110	76-128	EPA 8015B
Bromofluorobenzene (PID)	135	70-136	EPA 8021B

Field ID:	INFLUENT	Diln Fac:	12.50
Type:	SAMPLE	Batch#:	204591
Lab ID:	250253-003	Analyzed:	10/30/13

Analyte	Result	RL	Analysis
Gasoline C7-C12	4,900	630	EPA 8015B
Benzene	88	6.3	EPA 8021B
Toluene	49	6.3	EPA 8021B
Ethylbenzene	150	6.3	EPA 8021B
m,p-Xylenes	490	6.3	EPA 8021B
o-Xylene	93	6.3	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	96	76-128	EPA 8015B
Bromofluorobenzene (PID)	95	70-136	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Matrix:	Water	Sampled:	10/28/13
Units:	ug/L	Received:	10/28/13

Type:	BLANK	Batch#:	204510
Lab ID:	QC713835	Analyzed:	10/29/13
Diln Fac:	1.000		

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	95	76-128	EPA 8015B
Bromofluorobenzene (PID)	116	70-136	EPA 8021B

Type:	BLANK	Batch#:	204591
Lab ID:	QC714199	Analyzed:	10/30/13
Diln Fac:	1.000		

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	104	76-128	EPA 8015B
Bromofluorobenzene (PID)	100	70-136	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	204510
Units:	ug/L	Analyzed:	10/29/13
Diln Fac:	1.000		

Type: BS Lab ID: QC713832

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.198	92	80-120
Toluene	10.00	9.963	100	80-120
Ethylbenzene	10.00	9.914	99	80-120
m,p-Xylenes	10.00	9.506	95	80-120
o-Xylene	10.00	9.991	100	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	112	70-136

Type: BSD Lab ID: QC713833

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	9.385	94	80-120	2	20
Toluene	10.00	10.17	102	80-120	2	20
Ethylbenzene	10.00	9.819	98	80-120	1	20
m,p-Xylenes	10.00	10.47	105	80-120	10	20
o-Xylene	10.00	10.26	103	80-120	3	20

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	114	70-136

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	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:	QC713834	Batch#:	204510
Matrix:	Water	Analyzed:	10/29/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	944.2	94	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	76-128

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	INFLUENT	Batch#:	204510
MSS Lab ID:	250253-003	Sampled:	10/28/13
Matrix:	Water	Received:	10/28/13
Units:	ug/L	Analyzed:	10/29/13
Diln Fac:	1.000		

Type: MS Lab ID: QC713844

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	4,685	2,000	6,166	74 *	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	120	76-128

Type: MSD Lab ID: QC713845

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	6,132	72 *	76-120	1	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	121	76-128

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	204591
Units:	ug/L	Analyzed:	10/30/13
Diln Fac:	1.000		

Type: BS Lab ID: QC714196

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.177	92	80-120
Toluene	10.00	9.011	90	80-120
Ethylbenzene	10.00	9.837	98	80-120
m,p-Xylenes	10.00	9.461	95	80-120
o-Xylene	10.00	8.970	90	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	95	70-136

Type: BSD Lab ID: QC714197

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	9.140	91	80-120	0	20
Toluene	10.00	8.608	86	80-120	5	20
Ethylbenzene	10.00	9.327	93	80-120	5	20
m,p-Xylenes	10.00	9.456	95	80-120	0	20
o-Xylene	10.00	8.485	85	80-120	6	20

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	98	70-136

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	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:	QC714198	Batch#:	204591
Matrix:	Water	Analyzed:	10/30/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	959.9	96	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	76-128

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	204591
MSS Lab ID:	250344-005	Sampled:	10/20/13
Matrix:	Water	Received:	10/29/13
Units:	ug/L	Analyzed:	10/30/13
Diln Fac:	1.000		

Type: MS Lab ID: QC714200

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	20.14	2,000	1,906	94	76-120

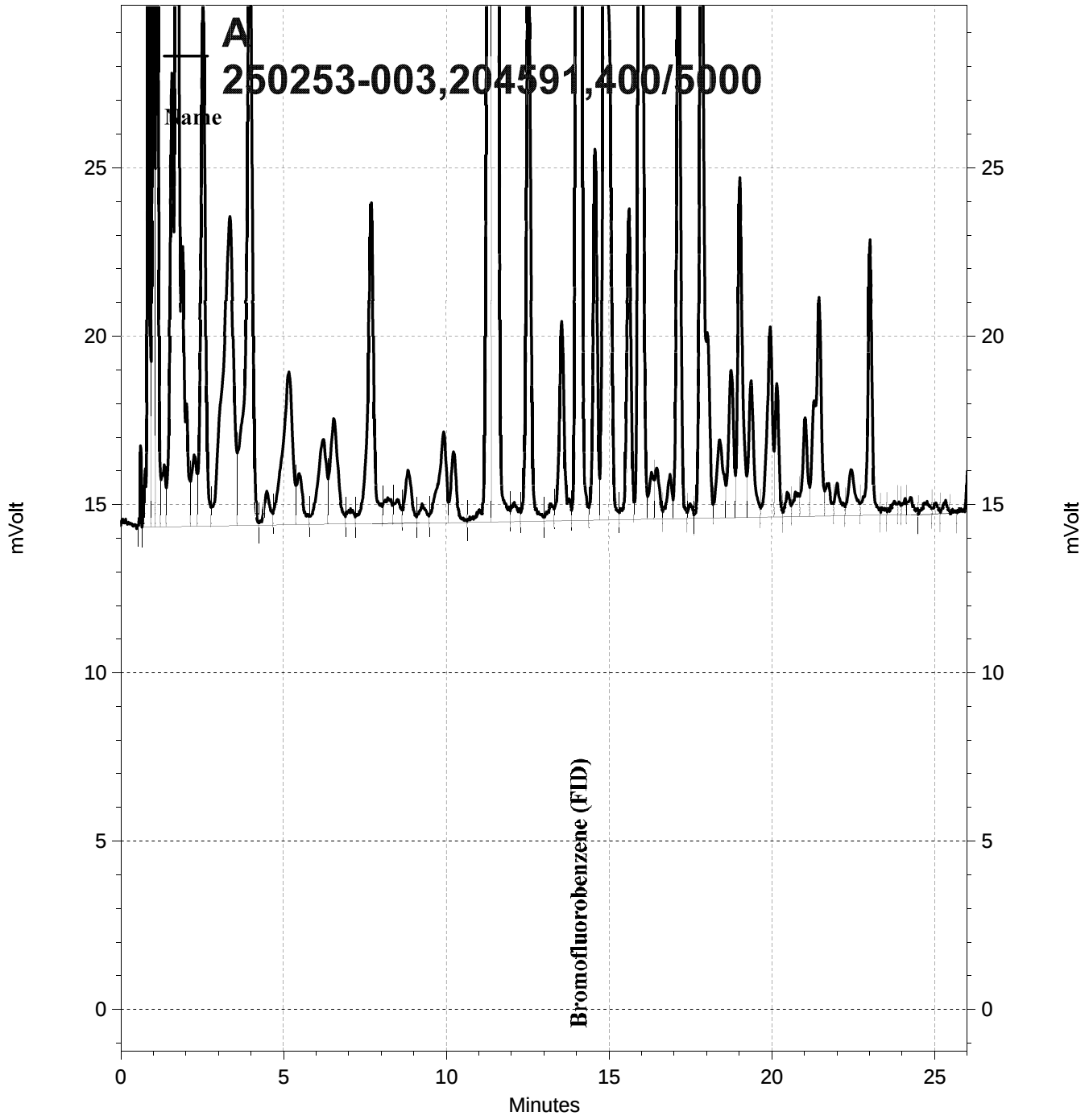
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	76-128

Type: MSD Lab ID: QC714201

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,919	95	76-120	1	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	76-128

RPD= Relative Percent Difference



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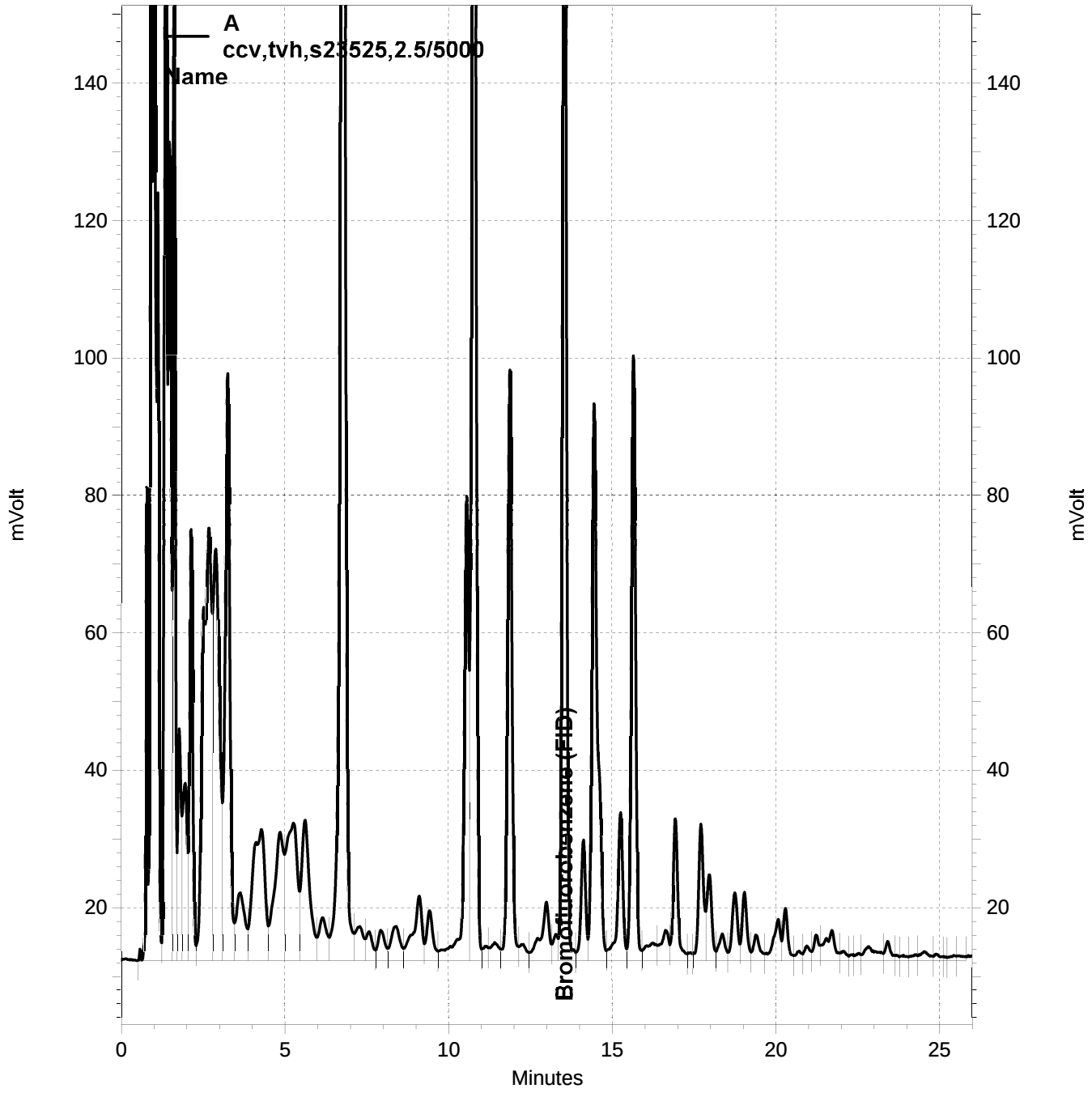
A
ccv,tvh,s23525,2.5/5000
Name
Bromofluorobenzene (FID)
mVolt
mVolt
Minutes
0
5
10
15
20
25
20
40
60
80
100
120
140
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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Sampled:	10/28/13
Matrix:	Water	Received:	10/28/13
Units:	ug/L	Prepared:	10/30/13
Diln Fac:	1.000	Analyzed:	11/01/13
Batch#:	204592		

Type: SAMPLE Lab ID: 250253-001

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

Surrogate	%REC	Limits
o-Terphenyl	94	62-133

Type: BLANK Lab ID: QC714202

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

Surrogate	%REC	Limits
o-Terphenyl	95	62-133

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	250253	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	204592
Units:	ug/L	Prepared:	10/30/13
Diln Fac:	1.000		

Type: BS
Lab ID: QC714203
Analyzed: 11/01/13
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,667	67	59-120

Surrogate	%REC	Limits
o-Terphenyl	93	62-133

Type: BSD
Lab ID: QC714204
Analyzed: 11/02/13
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,533	61	59-120	8	46

Surrogate	%REC	Limits
o-Terphenyl	87	62-133

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250800
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 2553
6620 Owens Dr.	Location : 15101 Freedom Ave. San Leandro
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFFLUENT	250800-001

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: Tracy Babjar Date: 11/21/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**250800**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2553**
Location:	**15101 Freedom Ave. San Leandro**
Request Date:	**11/14/13**
Samples Received:	**11/14/13**

This data package contains sample and QC results for one water sample, requested for the above referenced project on 11/14/13. 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.

CHAIN OF CUSTODY

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

LOGIN # 25080

Sampler: Davoud Bazrpash

Project No: 2553

Report To: Joyce Bobek

Project Name:15101 Freedom Ave, San Leandr

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: TPH-g 8015	Analyses: BTEX 8020	Analyses: TPH-d, TPH-mo 8015
1	Effluent	11/14/13-		*		6 VOAs	*			*	*	*	
				*		2-500 mL Ambers				*			*

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY:	RECEIVED BY:
11,14,13 10:59 DATE/TIME	11/14/13 10:59 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 250800 Date Received 11/14/13 Number of coolers 1
Client SOMA Project 1510 1 FREEDOM AVE, SAN LEANDRO (2553)

Date Opened 11/14/13 By (print) IR (sign) Tina Rayka
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO (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: * Notify PM if temperature exceeds 6°C

Type of ice used: ☐ Wet ☐ Blue/Gel ☒ None Temp(°C)

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ 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 there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO (N/A) M.G 11/14
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A
21. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250800	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Batch#:	205111
Matrix:	Water	Sampled:	11/14/13
Units:	ug/L	Received:	11/14/13
Diln Fac:	1.000	Analyzed:	11/15/13

Type: SAMPLE Lab ID: 250800-001

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	109	76-128	EPA 8015B
Bromofluorobenzene (PID)	118	70-136	EPA 8021B

Type: BLANK Lab ID: QC716352

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

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	104	76-128	EPA 8015B
Bromofluorobenzene (PID)	113	70-136	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250800	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	205111
Units:	ug/L	Analyzed:	11/15/13
Diln Fac:	1.000		

Type: BS Lab ID: QC716349

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	10.22	102	80-120
Toluene	10.00	10.12	101	80-120
Ethylbenzene	10.00	9.775	98	80-120
m,p-Xylenes	10.00	10.52	105	80-120
o-Xylene	10.00	10.31	103	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	114	70-136

Type: BSD Lab ID: QC716350

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	10.48	105	80-120	3	20
Toluene	10.00	10.47	105	80-120	3	20
Ethylbenzene	10.00	9.945	99	80-120	2	20
m,p-Xylenes	10.00	10.68	107	80-120	2	20
o-Xylene	10.00	10.35	103	80-120	0	20

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	113	70-136

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250800	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:	QC716351	Batch#:	205111
Matrix:	Water	Analyzed:	11/15/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,023	102	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	76-128

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	250800	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	205111
MSS Lab ID:	250800-001	Sampled:	11/14/13
Matrix:	Water	Received:	11/14/13
Units:	ug/L	Analyzed:	11/15/13
Diln Fac:	1.000		

Type: MS Lab ID: QC716353

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	25.35	2,000	2,048	101	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	76-128

Type: MSD Lab ID: QC716354

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,007	99	76-120	2	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	118	76-128

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	250800	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	205127
Matrix:	Water	Sampled:	11/14/13
Units:	ug/L	Received:	11/14/13
Diln Fac:	1.000	Prepared:	11/15/13

Type: SAMPLE Analyzed: 11/19/13
Lab ID: 250800-001

Analyte	Result	RL
Diesel C10-C24	ND	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	106	62-133

Type: BLANK Analyzed: 11/18/13
Lab ID: QC716407

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

Surrogate	%REC	Limits
o-Terphenyl	103	62-133

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	250800	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	205127
Units:	ug/L	Prepared:	11/15/13
Diln Fac:	1.000	Analyzed:	11/18/13

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC716408

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,986	79	59-120

Surrogate	%REC	Limits
o-Terphenyl	112	62-133

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC716409

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,055	82	59-120	3	46

Surrogate	%REC	Limits
o-Terphenyl	100	62-133

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 251453
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 2553
6620 Owens Dr.	Location : 15101 Freedom Ave. San Leandro
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFFLUENT	251453-001

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: Tracy Babjar Date: 12/16/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**251453**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2553**
Location:	**15101 Freedom Ave. San Leandro**
Request Date:	**12/09/13**
Samples Received:	**12/06/13**

This data package contains sample and QC results for one water sample, requested for the above referenced project on 12/09/13. 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.

CHAIN OF CUSTODY

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

LOGIN # 251453 ~~251404~~

Sampler: Lizzie Hightower

Project No: 2553

Report To: Joyce Bobek

Project Name: 15101 Freedom Ave, San Leandr

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE
14	Effluent	12/6/13 12:40		*		6 VOAs	*			*
				*		2-500 mL Ambers				*

Analyses

TPH-g 8015	BTEX 8020	TPH-d, TPH-mo 8015									
*	*										
		*									

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY:

E. Hightower 12/6/13 13:25 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

Pat Hamby 12/6/13 13:25 DATE/TIME

DATE/TIME

DATE/TIME

COOLER RECEIPT CHECKLIST

251453

Curtis & Tompkins, Ltd.

Login # ~~251404~~ Date Received 12/6/13 Number of coolers 1
Client COMA Project 1501 FREEDOM AVE., SAN LEANDRO (2551)

Date Opened 12/6/13 By (print) IR (sign) Jing Rarkar
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) ____ YES (NO)
   Shipping info ____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many ____ Name ____ Date ____
2B. Were custody seals intact upon arrival? ____ YES NO (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: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) ____

☒ Samples Received on ice & cold without a temperature blank; ~~temp taken with IR gun~~

☒ 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 there any missing / extra samples? ____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? ____ (YES) NO
12. Are sample labels present, in good condition and complete? ____ (YES) NO
13. Do the sample labels agree with custody papers? ____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? ____ (YES) NO
15. Are the samples appropriately preserved? ____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? ____ YES NO (N/A)
17. Did you document your preservative check? ____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? ____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? ____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? ____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? ____ YES (NO)
   If YES, Who was called? ____ By ____ Date: ____

COMMENTS

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	251453	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553		
Field ID:	EFFLUENT	Dil'n Fac:	1.000
Matrix:	Water	Sampled:	12/06/13
Units:	ug/L	Received:	12/06/13

Type: SAMPLE Lab ID: 251453-001

Analyte	Result	RL	Batch#	Analyzed	Analysis
Gasoline C7-C12	ND	50	205957	12/10/13	EPA 8015B
Benzene	ND	0.50	206023	12/11/13	EPA 8021B
Toluene	ND	0.50	206023	12/11/13	EPA 8021B
Ethylbenzene	ND	0.50	206023	12/11/13	EPA 8021B
m,p-Xylenes	ND	0.50	206023	12/11/13	EPA 8021B
o-Xylene	ND	0.50	206023	12/11/13	EPA 8021B

Surrogate	%REC	Limits	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	101	77-128	205957	12/10/13	EPA 8015B
Bromofluorobenzene (PID)	119	75-132	206023	12/11/13	EPA 8021B

Type: BLANK Batch#: 205957
Lab ID: QC719695 Analyzed: 12/10/13

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	98	77-128	EPA 8015B
Bromofluorobenzene (PID)	118	75-132	EPA 8021B

Type: BLANK Batch#: 206023
Lab ID: QC719967 Analyzed: 12/11/13

Analyte	Result	RL	Analysis
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	96	77-128	EPA 8015B
Bromofluorobenzene (PID)	117	75-132	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	251453	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:	QC719694	Batch#:	205957
Matrix:	Water	Analyzed:	12/10/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,064	106	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	77-128

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	251453	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	205957
MSS Lab ID:	251478-001	Sampled:	12/09/13
Matrix:	Water	Received:	12/09/13
Units:	ug/L	Analyzed:	12/10/13
Diln Fac:	1.000		

Type: MS Lab ID: QC719696

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	137.3	2,000	2,272	107	74-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	77-128

Type: MSD Lab ID: QC719697

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,173	102	74-120	4	27

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	77-128

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	251453	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2553	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	206023
Units:	ug/L	Analyzed:	12/11/13
Diln Fac:	1.000		

Type: BS Lab ID: QC719964

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	10.85	109	80-120
Toluene	10.00	9.574	96	80-120
Ethylbenzene	10.00	9.558	96	80-120
m,p-Xylenes	10.00	9.727	97	80-120
o-Xylene	10.00	9.973	100	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	115	75-132

Type: BSD Lab ID: QC719965

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	10.00	10.95	109	80-120	1	20
Toluene	10.00	9.900	99	80-120	3	20
Ethylbenzene	10.00	9.663	97	80-120	1	20
m,p-Xylenes	10.00	9.888	99	80-120	2	20
o-Xylene	10.00	9.978	100	80-120	0	20

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	116	75-132

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	251453	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Field ID:	EFFLUENT	Batch#:	205952
Matrix:	Water	Sampled:	12/06/13
Units:	ug/L	Received:	12/06/13
Diln Fac:	1.000	Prepared:	12/10/13

Type: SAMPLE Analyzed: 12/12/13
Lab ID: 251453-001

Analyte	Result	RL
Diesel C10-C24	ND	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	111	66-129

Type: BLANK Analyzed: 12/11/13
Lab ID: QC719671

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

Surrogate	%REC	Limits
o-Terphenyl	95	66-129

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	251453	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2553	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	205952
Units:	ug/L	Prepared:	12/10/13
Diln Fac:	1.000	Analyzed:	12/11/13

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC719672

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,131	85	61-120

Surrogate	%REC	Limits
o-Terphenyl	107	66-129

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC719673

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,284	91	61-120	7	45

Surrogate	%REC	Limits
o-Terphenyl	117	66-129

RPD= Relative Percent Difference

Appendix E

MPE Event Field Data Sheets

Golden Gate Remediation Technology

ADDRESS: 15101 Freedom Ave., San Leandro
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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
10/15/2013	1130	Extracting from MPE-1, MPE-2 and MW-6								
	1200	1498	175	13.7	20	149	0	149	1,030	0
	1230	1499	176	13.7	20	149	0	149	1,011	
	1300	1501	176	13.7	20	149	0	149	989	
	1330	1498	177	13.7	20	149	0	149	956	
	1400	1500	180	13.6	20	149	0	149	928	
	1430	1497	182	13.6	19.9	150	0	150	907	
	1500	1501	185	13.6	19.9	150	0	150	885	
	1600	1498	186	13.6	19.9	150	0	150	852	
	1700	1499	186	13.7	20	149	0	149	823	
	1800	1501	186	13.7	20	149	0	149	796	
10/16/2013	800	Extraction from MPE-1 and MW-6								
	830	1500	175	13.7	20	149	0	149	738	
	900	1498	176	13.6	20	149	0	149	706	
	1000	1501	176	13.7	20	149	0	149	697	
	1100	1499	175	13.7	20	149	0	149	inf=671; eff=0	
		Extraction from MPE-1, MPE-2, and MW-6								
	1200	1498	177	9.5	17.3	192	0	192	783	
	1300	1500	180	9.5	17.2	193	0	193	751	
	1400	1501	183	9.4	17.2	193	0	193	740	
	1500	1498	185	9.4	17.2	193	0	193	731	
	1600	1499	187	9.5	17.3	192	0	192	706	
	1700	1501	187	9.5	17.3	192	0	192	681	
10/17/2013	800	1499	173	9.8	17.3	192	0	192	547	
	900	1500	174	9.8	17.3	192	0	192	539	
	1000	1499	175	9.8	17.3	192	0	192	530	
	1100	1501	176	9.7	17.3	192	0	192	559	
	1200	1500	176	9.7	17.3	192	0	192	551	

P. O. Box 12072, Pleasanton, California 94588 (925) 847-0684

Golden Gate Remediation Technology

ADDRESS: 15101 Freedom Ave., San Leandro
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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1300	1499	178	9.7	17.3	192	0	192	558	
	1400	1501	183	9.7	17.3	192	0	192	554	
	1500	1499	186	9.7	17.3	192	0	192	549	
	1600	1501	187	9.7	17.3	192	0	192	545	
	1700	1500	185	9.7	17.3	192	0	192	544	
10/18/2013	800	1501	173	9.8	17.3	192	0	192	595	15,972
	900	1499	174	9.8	17.3	192	0	192	594	
	1000	1501	174	9.8	17.3	192	0	192	592	
	1100	1500	174	9.8	17.3	192	0	192	588	
	1200	1498	176	9.8	17.3	192	0	192	581	
	1300	1501	176	9.7	17.3	192	0	192	568	
	1400	1499	180	9.7	17.3	192	0	192	577	
	1500	1500	184	9.7	17.3	192	0	192	582	
	1600	1498	184	9.7	17.3	192	0	192	571	
	1700	1500	182	9.7	17.3	192	0	192	560	
10/19/2013	800	1500	173	10	19.4	158	0	158	542	28,239
	1000	1499	174	10	19	165	0	165	549	
	1130	1500	175	10	17	196	0	196	656	
	1400	1501	178	9.4	17.2	193	0	193	650	
	1600	1503	186	9.6	17.2	193	0	193	672	
10/20/2013	800	1498	172	9.6	17.3	192	0	192	609	33,593
	900	1500	172	9.6	17.3	192	0	192	621	
	1000	1499	173	10.1	17.5	189	0	189	647	
	1100	1500	173	10	17.5	189	0	189	653	
	1200	1498	175	10	17.5	189	0	189	659	
	1300	1501	174	10	17.5	189	0	189	655	
	1400	1500	177	9.9	17.4	190	0	190	688	

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ADDRESS: 15101 Freedom Ave., San Leandro
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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1500	1498	179	10	17.4	190	0	190	703	
	1600	1499	179	9.9	17.3	192	0	192	694	
	1700	1498	177	9.9	17.3	192	0	192	687	
10/21/2013	800	1499	173	10	17.3	192	0	192	650	39,158
	900	1500	174	10	17.3	192	0	192	655	
		Extraction from MPE-1 and MPE-2								
	1000	1498	174	10.2	19.5	157	0	157	489	
	1100	1501	174	10.2	19.5	157	0	157	483	
	1200	1499	174	10.2	19.5	157	0	157	478	
	1300	1501	175	10.2	19.5	157	0	157	497	
		Extraction from MPE-1, MPE-2, and MW-6								
	1400	1500	174	10	17.3	192	0	192	721	
	1500	1498	176	9.8	17.3	192	0	192	704	
	1600	1501	176	9.8	17.3	192	0	192	873	
	1700	1500	178	9.8	17.3	192	0	192	895	
10/22/2013	800	1502	174	10.4	17.9	182	0	182	1,091	46,005
	900	1500	174	10.4	17.9	182	0	182	1,069	
	1000	1502	174	10.3	17.8	184	0	184	1,007	
	1100	1502	174	9.9	17.8	184	0	184	935	
	1200	1500	174	9.9	17.8	184	0	184	901	
	1300	1498	174	9.8	17.2	193	0	193	845	
	1400	1502	174	9.8	17.2	193	0	193	826	
	1500	1499	176	9.8	17.3	192	0	192	798	
	1600	1501	174	9.7	17.2	193	0	193	753	
	1700	1500	174	9.7	17.2	193	0	193	724	
10/23/2013	800	1500	173	10.2	17.5	189	0	189	598	53,059
	900	1499	172	10.2	17.5	189	0	189	586	

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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1000	1501	173	10.2	17.3	192	0	192	571	
	1100	1498	173	10.2	17.3	192	0	192	574	
	1200	1502	174	10.2	17.3	192	0	192	577	
	1300	1500	173	10	17.3	192	0	192	570	
	1400	1501	174	9.9	17.2	193	0	193	562	
	1500	1499	175	9.9	17.2	193	0	193	557	
	1600	1500	174	9.9	17.2	193	0	193	554	
	1700	1500	173	9.9	17.2	193	0	193	548	
10/24/2013	800	1501	172	9.8	17.3	192	0	192	494	59,974
	900	1499	172	9.8	17.3	192	0	192	489	
	1000	1498	173	9.8	17.3	192	0	192	485	
	1100	1501	172	9.8	17.3	192	0	192	472	
	1200	1502	173	9.8	17.3	192	0	192	474	
	1300	1498	174	9.8	17.3	192	0	192	470	
	1400	1500	174	9.8	17.3	192	0	192	467	
	1500	1499	174	9.8	17.3	192	0	192	472	
	1600	1500	172	9.8	17.3	192	0	192	465	
	1700	1502	173	9.8	17.3	192	0	192	461	
10/25/2013	800	1500	173	10	17.5	189	0	189	435	66,953
	900	1501	173	10	17.5	189	0	189	429	
	1000	1499	173	10	17.5	189	0	189	420	
	1100	1502	174	10	17.5	189	0	189	428	
	1200	1500	175	10	17.4	190	0	190	425	
	1300	1501	175	10	17.3	192	0	192	427	
	1400	1500	175	10	17.3	192	0	192	432	
	1500	1501	177	10	17.2	193	0	193	429	
	1600	1500	173	10	17.2	193	0	193	418	

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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1700	1501	174	10	17.2	193	0	193	417	
10/26/2013	800	1500	173	10	17.2	193	0	193	407	73,499
	900	1500	173	10	17.2	193	0	193	414	
	1000	1502	174	10	17.2	193	0	193	406	
	1100	1499	175	10	17.3	192	0	192	401	
	1200	1500	173	10	17.3	192	0	192	395	
	1300	1502	175	10	17.3	192	0	192	403	
	1400	1502	176	10	17.3	192	0	192	401	
	1500	1500	178	10	17.2	193	0	193	402	
	1600	1502	181	10	17.2	193	0	193	399	
	1700	1500	180	10	17.2	193	0	193	395	
10/27/2013	800	1501	172	10	17.3	192	0	192	374	80,628
	900	1499	172	10	17.3	192	0	192	367	
	1000	1500	172	10	17.3	192	0	192	364	
	1100	1498	173	10	17.3	192	0	192	368	
	1200	1499	173	10	17.3	192	0	192	364	
	1300	1499	174	10	17.3	192	0	192	371	
	1400	1501	173	10	17.3	192	0	192	368	
	1500	1502	173	10	17.3	192	0	192	367	
	1600	1500	173	10	17.3	192	0	192	368	
	1700	1501	172	10	17.3	192	0	192	365	
10/28/2013	800	1502	172	10	17.3	192	0	192	358	87,685
	900	1500	173	10	17.3	192	0	192	355	
	1000	1501	173	10	17.3	192	0	192	351	
	1100	1501	172	10	17.3	192	0	192	347	
	1200	1500	173	10	17.3	192	0	192	342	
	1300	1499	174	10	17.3	192	0	192	350	

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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1400	1499	172	10	17.3	192	0	192	347	
	1500	1501	173	9.9	17.2	193	0	193	354	
	1600	1498	172	9.9	17.2	193	0	193	346	
	1700	1499	172	9.9	17.2	193	0	193	343	
10/29/2013	800	1499	172	10	17.5	189	0	189	334	94,519
	900	1501	172	10	17.5	189	0	189	330	
	1000	1498	172	10	17.5	189	0	189	328	
	1100	1500	173	10	17.5	189	0	189	326	
	1200	1501	173	10	17.4	190	0	190	325	
	1300	1500	173	10	17.4	190	0	190	331	
	1400	1498	174	10	17.4	190	0	190	327	
	1500	1501	174	10	17.3	192	0	192	337	
		System shut down due to equipment issues								
10/30/2013	1130	Restart system								
	1200	1501	172	10	17.3	192	0	192	371	99,583
	1300	1499	173	9.9	17.3	192	0	192	360	
	1400	1502	173	9.9	17.3	192	0	192	356	
	1500	1500	173	9.9	17.3	192	0	192	355	
	1600	1500	174	9.8	17.3	192	0	192	347	
	1700	1501	174	9.8	17.3	192	0	192	341	
10/31/2013	800	1498	172	9.8	17.3	192	0	192	319	106,172
	900	1501	172	9.8	17.3	192	0	192	311	
	1000	1499	173	9.8	17.3	192	0	192	306	
	1100	1498	174	9.8	17.3	192	0	192	314	
	1200	1501	175	9.8	17.3	192	0	192	317	
	1300	1500	175	9.8	17.3	192	0	192	312	
	1400	1499	175	9.8	17.3	192	0	192	314	
	1500	1501	177	9.8	17.3	192	0	192	310	

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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1600	1499	177	9.8	17.3	192	0	192	307	
	1700	1500	175	9.8	17.3	192	0	192	303	
11/1/2013	800	1499	173	9.9	17.4	190	0	190	331	113,164
	900	1501	174	9.9	17.4	190	0	190	317	
	1000	1500	174	9.9	17.3	192	0	192	327	
	1100	1498	174	9.9	17.3	192	0	192	322	
	1200	1499	174	9.9	17.3	192	0	192	316	
	1300	1500	175	9.9	17.3	192	0	192	330	
	1400	1501	177	9.9	17.3	192	0	192	319	
	1500	1500	178	9.8	17.3	192	0	192	317	
	1600	1502	181	9.8	17.3	192	0	192	341	
	1700	1501	180	9.8	17.3	192	0	192	346	
11/2/2013	800	1500	173	9.9	17.3	192	0	192	334	119,674
	900	1501	172	9.9	17.3	192	0	192	332	
	1000	1500	174	9.9	17.3	192	0	192	336	
	1100	1501	174	9.9	17.3	192	0	192	339	
	1200	1499	174	9.9	17.3	192	0	192	342	
	1300	1501	175	9.9	17.3	192	0	192	346	
	1400	1502	175	9.8	17.3	192	0	192	345	
	1500	1501	174	9.8	17.3	192	0	192	342	
	1600	1499	173	9.8	17.3	192	0	192	334	
	1700	1498	175	9.8	17.3	192	0	192	343	
11/3/2013	800	1500	173	9.9	17.3	192	0	192	330	126,970
	900	1501	174	9.9	17.3	192	0	192	323	
	1000	1502	174	9.9	17.3	192	0	192	326	
	1100	1500	174	9.9	17.3	192	0	192	334	
	1200	1502	175	9.9	17.3	192	0	192	336	
	1300	1501	174	9.9	17.3	192	0	192	335	

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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)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER
	1400	1500	174	9.9	17.3	192	0	192	334	
	1500	1500	172	9.9	17.3	192	0	192	330	
	1600	1501	173	9.8	17.3	192	0	192	332	
	1700	1502	174	9.8	17.3	192	0	192	330	
11/4/2013	800	1499	173	9.9	17.3	192	0	192	302	134,153
	900	1500	173	9.9	17.3	192	0	192	311	
	1000	1502	173	9.9	17.3	192	0	192	319	
	1100	1501	175	9.9	17.3	192	0	192	328	
	1200	1500	175	9.9	17.3	192	0	192	334	
	1300	1490	176	9.9	17.3	192	0	192	329	
	1400	1501	175	9.9	17.3	192	0	192	356	
	1500	1502	174	9.9	17.3	192	0	192	324	
	1600	1500	173	9.9	17.3	192	0	192	321	
	1700	1501	174	9.9	17.3	192	0	192	320	
11/5/2013	800	1500	174	9.9	17.3	192	0	192	316	141,067
	900	1499	175	9.9	17.3	192	0	192	321	
	1000	1501	175	9.9	17.3	192	0	192	317	
	1100	1499	175	9.9	17.3	192	0	192	331	
	1200	1500	175	9.9	17.3	192	0	192	332	
	1300	1502	178	9.9	17.3	192	0	192	335	
	1400	1498	176	9.8	17.3	192	0	192	324	
	1500	1502	173	9.8	17.3	192	0	192	318	
	1600	1500	174	9.8	17.3	192	0	192	315	
	1700	1501	177	9.8	17.3	192	0	192	317	
11/6/2013	800	1500	173	9.9	17.3	192	0	192	311	147,951
	900	1499	173	9.9	17.3	192	0	192	306	
	1000	1501	174	9.9	17.3	192	0	192	303	
	1100	1498	175	9.9	17.3	192	0	192	312	
	1200	1500	175	9.9	17.3	192	0	192	321	

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	1300	1502	177	9.9	17.3	192	0	192	319	
	1400	1499	177	9.9	17.3	192	0	192	315	
	1500	1501	177	9.9	17.3	192	0	192	296	
	1600	1499	176	9.9	17.3	192	0	192	289	
	1700	1500	175	9.9	17.3	192	0	192	304	
11/7/2013	800	1499	173	10	17.5	189	0	189	297	154,804
	900	1501	173	10	17.5	189	0	189	305	
	1000	1498	174	10	17.5	189	0	189	308	
	1100	1499	174	10	17.5	189	0	189	311	
	1200	1501	175	10	17.5	189	0	189	314	
	1300	1500	176	10	17.5	189	0	189	316	
	1400	1499	179	10	17.5	189	0	189	328	
	1500	1500	179	10	17.4	190	0	190	319	
	1600	1499	176	10	17.4	190	0	190	315	
	1700	1500	175	10	17.4	190	0	190	311	
11/8/2013	800	1501	172	10	17.4	190	0	190	301	161,203
	900	1499	172	10	17.4	190	0	190	292	
	1000	1502	174	10	17.4	190	0	190	303	
	1100	1500	174	10	17.4	190	0	190	311	
	1200	1498	175	10	17.4	190	0	190	313	
	1300	1500	175	9.9	17.4	190	0	190	312	
	1400	1501	179	9.9	17.3	192	0	192	317	
	1500	1499	176	9.9	17.3	192	0	192	310	
	1600	1500	174	9.9	17.3	192	0	192	309	
	1700	1501	173	9.9	17.3	192	0	192	321	
11/9/2013	800	1500	175	9.9	17.3	192	0	192	302	168,020
	900	1500	173	9.9	17.3	192	0	192	308	
	1000	1500	174	9.9	17.3	192	0	192	300	
	1100	1499	175	9.9	17.3	192	0	192	305	

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	1200	1498	175	9.9	17.3	192	0	192	311	
	1300	1499	175	9.9	17.3	192	0	192	309	
	1400	1500	180	9.9	17.3	192	0	192	310	
	1500	1501	179	9.9	17.3	192	0	192	306	
	1600	1500	176	9.8	17.3	192	0	192	304	
	1700	1500	175	9.8	17.3	192	0	192	305	
11/10/2013	800	1498	173	9.9	17.3	192	0	192	288	174,710
	900	1500	174	9.9	17.3	192	0	192	285	
	1000	1501	174	9.9	17.3	192	0	192	286	
	1100	1500	174	9.9	17.3	192	0	192	294	
	1200	1499	175	9.9	17.3	192	0	192	301	
	1300	1499	174	9.9	17.3	192	0	192	300	
	1400	1500	175	9.9	17.3	192	0	192	299	
	1500	1499	174	9.9	17.3	192	0	192	297	
	1600	1498	172	9.9	17.3	192	0	192	295	
	1700	1500	173	9.9	17.3	192	0	192	298	
11/11/2013	800	1499	172	9.9	17.3	192	0	192	307	181,649
	1700	1501	174	9.9	17.3	192	0	192	301	
11/12/2013	800	1500	173	9.9	17.3	192	0	192	308	187,965
	900	1499	174	9.9	17.3	192	0	192	304	
	1000	1501	174	9.9	17.3	192	0	192	307	
	1100	1501	175	9.9	17.3	192	0	192	308	
	1200	1499	176	9.9	17.3	192	0	192	310	
	1300	1500	178	9.9	17.3	192	0	192	309	
	1400	1501	179	9.9	17.3	192	0	192	311	
	1500	1499	179	9.9	17.3	192	0	192	316	
	1600	1499	178	9.9	17.3	192	0	192	310	
	1700	1501	177	9.9	17.3	192	0	192	308	
11/13/2013	800	1500	173	9.9	17.3	192	0	192	302	194,520

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	900	1498	173	9.9	17.3	192	0	192	298	
	1000	1499	173	9.9	17.3	192	0	192	293	
	1100	1500	175	9.9	17.3	192	0	192	305	
	1200	1499	177	9.9	17.3	192	0	192	314	
	1300	1500	179	9.9	17.3	192	0	192	310	
	1400	1501	181	9.9	17.3	192	0	192	306	
	1500	1499	181	9.9	17.3	192	0	192	298	
	1600	1502	177	9.9	17.3	192	0	192	305	
	1700	1499	173	9.9	17.3	192	0	192	315	
11/14/2013	800	1502	174	10.1	17.4	190	0	190	312	201,163
	900	1500	173	10.1	17.4	190	0	190	323	
	1000	1501	173	10	17.4	190	0	190	309	
	1100	1498	173	10	17.4	190	0	190	302	
	1200	1500	174	10	17.4	190	0	190	314	
	1300	1499	174	10	17.4	190	0	190	309	
	1400	1501	174	10	17.3	192	0	192	307	
	1500	1502	172	10	17.3	192	0	192	302	
	1600	1499	172	10	17.3	192	0	192	308	
	1700	1500	172	10	17.3	192	0	192	305	
11/15/2013	800	1501	174	10	17.3	192	0	192	284	
	900	1499	172	10	17.3	192	0	192	287	
	1000	1498	174	10	17.3	192	0	192	281	
	1100	1500	174	10	17.3	192	0	192	290	
	1200	1501	174	10	17.3	192	0	192	287	
	1300	1499	174	10	17.3	192	0	192	294	
	1400	1501	175	10	17.3	192	0	192	296	207,635
		End of MPE Event								

P. O. Box 12072, Pleasanton, California 94588 (925) 847-0684

Appendix F

Laboratory Report and Chain of Custody
Form for the MPE Event

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 249943
ANALYTICAL REPORT

SOMA Environmental Engineering Inc.	Project : 2555
6620 Owens Dr.	Location : 15101 Freedom Ave. San Leandro
Pleasanton, CA 94588	Level : II

Sample ID	Lab ID
EFF MPE	249943-001
INF MPE	249943-002

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: Tracy Babjar Date: 10/23/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**249943**
Client:	**SOMA Environmental Engineering Inc.**
Project:	**2555**
Location:	**15101 Freedom Ave. San Leandro**
Request Date:	**10/16/13**
Samples Received:	**10/16/13**

This data package contains sample and QC results for two air samples, requested for the above referenced project on 10/16/13. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):
High RPD was observed for naphthalene in the BS/BSD for batch 204124; this analyte was not detected at or above the RL in the associated samples. No other analytical problems were encountered.

Volatile Organics in Air GC (EPA TO-3):
Gasoline range organics C6-C12 was detected between the MDL and the RL in the method blank for batch 204153; this analyte was detected in samples at a level at least 10 times that of the blank. No other 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

C&T LOGIN # 249943

Sampler: Masoud Sepehr

Project No: 2555

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: Soil	Water	Waste	Air	# of Containers	Preservative: HCL	H_2SO_4	HNO_3	ICE	NONE	Analyses: TO-15	TO-3 (Modified)
1	EFF MPE	10/16/13 11:00				*	Tedlar bag					*	*	*
2	INF MPE	10/16/13 11:00				*	Tedlar bag					*	*	*

Notes: **EDF OUTPUT REQUIRED**

RELINQUISHED BY:	RECEIVED BY:
10/16/13 14:32 DATE/TIME	1432 10/16 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 249943 Date Received 10/16/13 Number of coolers 1
Client SOMA Project 1501 FREEDOM AVE., SAN LEANDRO (2555)

Date Opened 10/16/13 By (print) JR (sign) Irma Raukar
Date Logged in ↓ By (print) ↓ (sign) ↓

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

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (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: * Notify PM if temperature exceeds 6°C

Type of ice used: ☐ Wet ☐ Blue/Gel ☒ None Temp(°C) _____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ 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 there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Field ID:	EFF MPE	Units (M):	ug/m3
Lab ID:	249943-001	Sampled:	10/16/13
Matrix:	Air	Received:	10/16/13
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	0.50	ND	2.5	1.000	204124	10/17/13
Freon 114	ND	0.50	ND	3.5	1.000	204124	10/17/13
Chloromethane	ND	0.50	ND	1.0	1.000	204124	10/17/13
Vinyl Chloride	ND	0.50	ND	1.3	1.000	204124	10/17/13
1,3-Butadiene	ND	0.50	ND	1.1	1.000	204124	10/17/13
Bromomethane	ND	0.50	ND	1.9	1.000	204124	10/17/13
Chloroethane	ND	0.50	ND	1.3	1.000	204124	10/17/13
Trichlorofluoromethane	ND	0.50	ND	2.8	1.000	204124	10/17/13
Acrolein	2.4	2.0	5.5	4.6	1.000	204124	10/17/13
1,1-Dichloroethene	ND	0.50	ND	2.0	1.000	204124	10/17/13
Freon 113	ND	0.50	ND	3.8	1.000	204124	10/17/13
Acetone	48	2.0	110	4.8	1.000	204124	10/17/13
Carbon Disulfide	ND	0.50	ND	1.6	1.000	204124	10/17/13
Methylene Chloride	ND	0.50	ND	1.7	1.000	204124	10/17/13
trans-1,2-Dichloroethene	ND	0.50	ND	2.0	1.000	204124	10/17/13
MTBE	ND	0.50	ND	1.8	1.000	204124	10/17/13
n-Hexane	ND	0.50	ND	1.8	1.000	204124	10/17/13
1,1-Dichloroethane	ND	0.50	ND	2.0	1.000	204124	10/17/13
Vinyl Acetate	ND	0.50	ND	1.8	1.000	204124	10/17/13
cis-1,2-Dichloroethene	ND	0.50	ND	2.0	1.000	204124	10/17/13
2-Butanone	26	0.50	76	1.5	1.000	204124	10/17/13
Ethyl Acetate	ND	0.50	ND	1.8	1.000	204124	10/17/13
Tetrahydrofuran	85	1.0	250	2.9	2.000	204171	10/18/13
Chloroform	ND	0.50	ND	2.4	1.000	204124	10/17/13
1,1,1-Trichloroethane	ND	0.50	ND	2.7	1.000	204124	10/17/13
Cyclohexane	ND	0.50	ND	1.7	1.000	204124	10/17/13
Carbon Tetrachloride	ND	0.50	ND	3.1	1.000	204124	10/17/13
Benzene	ND	0.50	ND	1.6	1.000	204124	10/17/13
1,2-Dichloroethane	ND	0.50	ND	2.0	1.000	204124	10/17/13
n-Heptane	ND	0.50	ND	2.0	1.000	204124	10/17/13
Trichloroethene	ND	0.50	ND	2.7	1.000	204124	10/17/13
1,2-Dichloropropane	ND	0.50	ND	2.3	1.000	204124	10/17/13
Bromodichloromethane	ND	0.50	ND	3.4	1.000	204124	10/17/13
cis-1,3-Dichloropropene	ND	0.50	ND	2.3	1.000	204124	10/17/13
4-Methyl-2-Pentanone	ND	0.50	ND	2.0	1.000	204124	10/17/13
Toluene	1.1	0.50	4.2	1.9	1.000	204124	10/17/13

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Field ID:	EFF MPE	Units (M):	ug/m3
Lab ID:	249943-001	Sampled:	10/16/13
Matrix:	Air	Received:	10/16/13
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
trans-1,3-Dichloropropene	ND	0.50	ND	2.3	1.000	204124	10/17/13
1,1,2-Trichloroethane	ND	0.50	ND	2.7	1.000	204124	10/17/13
Tetrachloroethene	2.8	0.50	19	3.4	1.000	204124	10/17/13
2-Hexanone	ND	0.50	ND	2.0	1.000	204124	10/17/13
Dibromochloromethane	ND	0.50	ND	4.3	1.000	204124	10/17/13
1,2-Dibromoethane	ND	0.50	ND	3.8	1.000	204124	10/17/13
Chlorobenzene	ND	0.50	ND	2.3	1.000	204124	10/17/13
Ethylbenzene	ND	0.50	ND	2.2	1.000	204124	10/17/13
m,p-Xylenes	1.2	0.50	5.4	2.2	1.000	204124	10/17/13
o-Xylene	0.52	0.50	2.2	2.2	1.000	204124	10/17/13
Styrene	ND	0.50	ND	2.1	1.000	204124	10/17/13
Bromoform	ND	0.50	ND	5.2	1.000	204124	10/17/13
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4	1.000	204124	10/17/13
4-Ethyltoluene	ND	0.50	ND	2.5	1.000	204124	10/17/13
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5	1.000	204124	10/17/13
1,2,4-Trimethylbenzene	1.5	0.50	7.5	2.5	1.000	204124	10/17/13
1,3-Dichlorobenzene	ND	0.50	ND	3.0	1.000	204124	10/17/13
1,4-Dichlorobenzene	ND	0.50	ND	3.0	1.000	204124	10/17/13
Benzyl chloride	ND	0.50	ND	2.6	1.000	204124	10/17/13
1,2-Dichlorobenzene	ND	0.50	ND	3.0	1.000	204124	10/17/13
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7	1.000	204124	10/17/13
Hexachlorobutadiene	ND	0.50	ND	5.3	1.000	204124	10/17/13
Naphthalene	ND	2.0	ND	10	1.000	204124	10/17/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Bromofluorobenzene	93	70-130	1.000	204124	10/17/13

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	200.0
Lab ID:	249943-002	Batch#:	204124
Matrix:	Air	Sampled:	10/16/13
Units (V):	ppbv	Received:	10/16/13
Units (M):	ug/m3	Analyzed:	10/17/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	100	ND	490
Freon 114	ND	100	ND	700
Chloromethane	ND	100	ND	210
Vinyl Chloride	ND	100	ND	260
1,3-Butadiene	ND	100	ND	220
Bromomethane	ND	100	ND	390
Chloroethane	ND	100	ND	260
Trichlorofluoromethane	ND	100	ND	560
Acrolein	ND	400	ND	920
1,1-Dichloroethene	ND	100	ND	400
Freon 113	ND	100	ND	770
Acetone	ND	400	ND	950
Carbon Disulfide	ND	100	ND	310
Methylene Chloride	ND	100	ND	350
trans-1,2-Dichloroethene	ND	100	ND	400
MTBE	ND	100	ND	360
n-Hexane	18,000	100	64,000	350
1,1-Dichloroethane	ND	100	ND	400
Vinyl Acetate	ND	100	ND	350
cis-1,2-Dichloroethene	ND	100	ND	400
2-Butanone	ND	100	ND	290
Ethyl Acetate	ND	100	ND	360
Tetrahydrofuran	230	100	680	290
Chloroform	ND	100	ND	490
1,1,1-Trichloroethane	ND	100	ND	550
Cyclohexane	9,300	100	32,000	340
Carbon Tetrachloride	ND	100	ND	630
Benzene	920	100	2,900	320
1,2-Dichloroethane	ND	100	ND	400
n-Heptane	9,200	100	38,000	410
Trichloroethene	ND	100	ND	540
1,2-Dichloropropane	ND	100	ND	460
Bromodichloromethane	ND	100	ND	670
cis-1,3-Dichloropropene	ND	100	ND	450
4-Methyl-2-Pentanone	ND	100	ND	410

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Field ID:	INF MPE	Diln Fac:	200.0
Lab ID:	249943-002	Batch#:	204124
Matrix:	Air	Sampled:	10/16/13
Units (V):	ppbv	Received:	10/16/13
Units (M):	ug/m3	Analyzed:	10/17/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	3,200	100	12,000	380
trans-1,3-Dichloropropene	ND	100	ND	450
1,1,2-Trichloroethane	ND	100	ND	550
Tetrachloroethene	ND	100	ND	680
2-Hexanone	ND	100	ND	410
Dibromochloromethane	ND	100	ND	850
1,2-Dibromoethane	ND	100	ND	770
Chlorobenzene	ND	100	ND	460
Ethylbenzene	1,300	100	5,700	430
m,p-Xylenes	8,500	100	37,000	430
o-Xylene	3,100	100	14,000	430
Styrene	ND	100	ND	430
Bromoform	ND	100	ND	1,000
1,1,2,2-Tetrachloroethane	ND	100	ND	690
4-Ethyltoluene	1,000	100	4,900	490
1,3,5-Trimethylbenzene	1,200	100	5,800	490
1,2,4-Trimethylbenzene	1,800	100	8,600	490
1,3-Dichlorobenzene	ND	100	ND	600
1,4-Dichlorobenzene	ND	100	ND	600
Benzyl chloride	ND	100	ND	520
1,2-Dichlorobenzene	ND	100	ND	600
1,2,4-Trichlorobenzene	ND	100	ND	740
Hexachlorobutadiene	ND	100	ND	1,100
Naphthalene	ND	400	ND	2,100

Surrogate	%REC	Limits
Bromofluorobenzene	114	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13
Diln Fac:	1.000		

Type: BS Lab ID: QC712237

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	16.67	18.48	111	70-130
Freon 114	16.67	18.78	113	70-130
Chloromethane	16.67	20.06	120	70-130
Vinyl Chloride	16.67	18.40	110	70-130
1,3-Butadiene	16.67	18.90	113	70-130
Bromomethane	16.67	19.63	118	70-130
Chloroethane	16.67	20.25	121	70-130
Trichlorofluoromethane	16.67	18.68	112	70-130
Acrolein	16.67	17.30	104	61-130
1,1-Dichloroethene	16.67	21.43	129	70-130
Freon 113	16.67	18.00	108	70-130
Acetone	16.67	17.06	102	70-130
Carbon Disulfide	16.67	18.04	108	70-130
Methylene Chloride	16.67	16.99	102	70-130
trans-1,2-Dichloroethene	16.67	19.00	114	70-130
MTBE	16.67	19.01	114	70-130
n-Hexane	16.67	17.96	108	70-130
1,1-Dichloroethane	16.67	19.25	116	70-130
Vinyl Acetate	16.67	20.22	121	70-130
cis-1,2-Dichloroethene	16.67	18.21	109	70-130
2-Butanone	16.67	18.63	112	70-130
Ethyl Acetate	16.67	18.32	110	70-130
Tetrahydrofuran	16.67	16.27	98	70-130
Chloroform	16.67	18.03	108	70-130
1,1,1-Trichloroethane	16.67	18.47	111	70-130
Cyclohexane	16.67	19.62	118	70-130
Carbon Tetrachloride	16.67	17.29	104	70-130
Benzene	16.67	18.63	112	70-130
1,2-Dichloroethane	16.67	19.36	116	70-130
n-Heptane	16.67	19.29	116	70-130
Trichloroethene	16.67	18.44	111	70-130
1,2-Dichloropropane	16.67	19.69	118	70-130
Bromodichloromethane	16.67	18.75	112	70-130

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
cis-1,3-Dichloropropene	16.67	19.24	115	70-130
4-Methyl-2-Pentanone	16.67	18.72	112	70-130
Toluene	16.67	17.58	105	70-130
trans-1,3-Dichloropropene	16.67	19.14	115	70-130
1,1,2-Trichloroethane	16.67	18.08	108	70-130
Tetrachloroethene	16.67	17.69	106	70-130
2-Hexanone	16.67	18.58	111	70-130
Dibromochloromethane	16.67	18.08	108	70-130
1,2-Dibromoethane	16.67	18.30	110	70-130
Chlorobenzene	16.67	17.35	104	70-130
Ethylbenzene	16.67	16.45	99	70-130
m,p-Xylenes	33.33	32.86	99	70-130
o-Xylene	16.67	16.29	98	70-130
Styrene	16.67	19.41	116	70-130
Bromoform	16.67	18.57	111	70-130
1,1,2,2-Tetrachloroethane	16.67	16.54	99	70-130
4-Ethyltoluene	16.67	17.37	104	70-130
1,3,5-Trimethylbenzene	16.67	15.64	94	70-130
1,2,4-Trimethylbenzene	16.67	15.92	96	70-130
1,3-Dichlorobenzene	16.67	16.07	96	70-130
1,4-Dichlorobenzene	16.67	15.76	95	70-130
Benzyl chloride	16.67	16.94	102	70-130
1,2-Dichlorobenzene	16.67	15.49	93	70-130
1,2,4-Trichlorobenzene	16.67	12.42	75	70-130
Hexachlorobutadiene	16.67	12.65	76	70-130
Naphthalene	16.67	12.14	73	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	101	70-130

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC712238

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	16.67	17.79	107	70-130	4	20
Freon 114	16.67	18.14	109	70-130	3	20
Chloromethane	16.67	19.31	116	70-130	4	24
Vinyl Chloride	16.67	18.04	108	70-130	2	24
1,3-Butadiene	16.67	18.02	108	70-130	5	22
Bromomethane	16.67	19.28	116	70-130	2	20
Chloroethane	16.67	20.27	122	70-130	0	20
Trichlorofluoromethane	16.67	17.92	108	70-130	4	21
Acrolein	16.67	18.10	109	61-130	5	36
1,1-Dichloroethene	16.67	20.66	124	70-130	4	20
Freon 113	16.67	17.61	106	70-130	2	24
Acetone	16.67	17.02	102	70-130	0	21
Carbon Disulfide	16.67	17.73	106	70-130	2	21
Methylene Chloride	16.67	16.13	97	70-130	5	24
trans-1,2-Dichloroethene	16.67	18.47	111	70-130	3	20
MTBE	16.67	18.55	111	70-130	2	20
n-Hexane	16.67	17.79	107	70-130	1	20
1,1-Dichloroethane	16.67	19.07	114	70-130	1	20
Vinyl Acetate	16.67	19.87	119	70-130	2	21
cis-1,2-Dichloroethene	16.67	17.97	108	70-130	1	20
2-Butanone	16.67	18.22	109	70-130	2	20
Ethyl Acetate	16.67	17.58	105	70-130	4	22
Tetrahydrofuran	16.67	16.09	97	70-130	1	20
Chloroform	16.67	17.35	104	70-130	4	21
1,1,1-Trichloroethane	16.67	18.20	109	70-130	1	21
Cyclohexane	16.67	19.36	116	70-130	1	20
Carbon Tetrachloride	16.67	17.25	103	70-130	0	20
Benzene	16.67	18.49	111	70-130	1	20
1,2-Dichloroethane	16.67	19.51	117	70-130	1	20
n-Heptane	16.67	18.85	113	70-130	2	20
Trichloroethene	16.67	18.31	110	70-130	1	20
1,2-Dichloropropane	16.67	19.41	116	70-130	1	20
Bromodichloromethane	16.67	18.44	111	70-130	2	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
cis-1,3-Dichloropropene	16.67	19.33	116	70-130	0	20
4-Methyl-2-Pentanone	16.67	18.76	113	70-130	0	20
Toluene	16.67	17.28	104	70-130	2	23
trans-1,3-Dichloropropene	16.67	19.64	118	70-130	3	20
1,1,2-Trichloroethane	16.67	17.09	103	70-130	6	20
Tetrachloroethene	16.67	17.27	104	70-130	2	20
2-Hexanone	16.67	18.11	109	70-130	3	20
Dibromochloromethane	16.67	17.57	105	70-130	3	20
1,2-Dibromoethane	16.67	17.57	105	70-130	4	20
Chlorobenzene	16.67	16.68	100	70-130	4	21
Ethylbenzene	16.67	15.99	96	70-130	3	20
m,p-Xylenes	33.33	31.34	94	70-130	5	20
o-Xylene	16.67	16.04	96	70-130	2	20
Styrene	16.67	18.58	111	70-130	4	22
Bromoform	16.67	17.56	105	70-130	6	20
1,1,2,2-Tetrachloroethane	16.67	16.29	98	70-130	2	24
4-Ethyltoluene	16.67	16.28	98	70-130	6	22
1,3,5-Trimethylbenzene	16.67	15.37	92	70-130	2	22
1,2,4-Trimethylbenzene	16.67	15.48	93	70-130	3	23
1,3-Dichlorobenzene	16.67	15.54	93	70-130	3	21
1,4-Dichlorobenzene	16.67	15.20	91	70-130	4	22
Benzyl chloride	16.67	16.08	96	70-130	5	21
1,2-Dichlorobenzene	16.67	15.04	90	70-130	3	22
1,2,4-Trichlorobenzene	16.67	15.81	95	70-130	24	24
Hexachlorobutadiene	16.67	13.27	80	70-130	5	25
Naphthalene	16.67	16.12	97	67-130	28 *	24

Surrogate	%REC	Limits
Bromofluorobenzene	102	70-130

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC712239	Diln Fac:	1.000
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC712239	Diln Fac:	1.000
Matrix:	Air	Batch#:	204124
Units (V):	ppbv	Analyzed:	10/17/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	105	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13
Diln Fac:	1.000		

Type: BS Lab ID: QC712435

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	16.67	18.16	109	70-130
Freon 114	16.67	18.22	109	70-130
Chloromethane	16.67	19.91	119	70-130
Vinyl Chloride	16.67	18.23	109	70-130
1,3-Butadiene	16.67	18.61	112	70-130
Bromomethane	16.67	19.32	116	70-130
Chloroethane	16.67	20.49	123	70-130
Trichlorofluoromethane	16.67	18.11	109	70-130
Acrolein	16.67	18.69	112	61-130
1,1-Dichloroethene	16.67	20.95	126	70-130
Freon 113	16.67	17.94	108	70-130
Acetone	16.67	18.00	108	70-130
Carbon Disulfide	16.67	17.87	107	70-130
Methylene Chloride	16.67	16.75	101	70-130
trans-1,2-Dichloroethene	16.67	18.98	114	70-130
MTBE	16.67	18.72	112	70-130
n-Hexane	16.67	18.13	109	70-130
1,1-Dichloroethane	16.67	19.42	117	70-130
Vinyl Acetate	16.67	20.40	122	70-130
cis-1,2-Dichloroethene	16.67	18.26	110	70-130
2-Butanone	16.67	18.70	112	70-130
Ethyl Acetate	16.67	17.77	107	70-130
Tetrahydrofuran	16.67	15.88	95	70-130
Chloroform	16.67	17.79	107	70-130
1,1,1-Trichloroethane	16.67	18.52	111	70-130
Cyclohexane	16.67	19.45	117	70-130
Carbon Tetrachloride	16.67	17.42	105	70-130
Benzene	16.67	18.66	112	70-130
1,2-Dichloroethane	16.67	19.29	116	70-130
n-Heptane	16.67	19.00	114	70-130
Trichloroethene	16.67	18.19	109	70-130
1,2-Dichloropropane	16.67	19.30	116	70-130
Bromodichloromethane	16.67	18.41	110	70-130
cis-1,3-Dichloropropene	16.67	19.41	116	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	16.67	19.13	115	70-130
Toluene	16.67	16.75	101	70-130
trans-1,3-Dichloropropene	16.67	19.94	120	70-130
1,1,2-Trichloroethane	16.67	17.27	104	70-130
Tetrachloroethene	16.67	16.78	101	70-130
2-Hexanone	16.67	17.92	108	70-130
Dibromochloromethane	16.67	17.40	104	70-130
1,2-Dibromoethane	16.67	17.62	106	70-130
Chlorobenzene	16.67	16.36	98	70-130
Ethylbenzene	16.67	15.77	95	70-130
m,p-Xylenes	33.33	30.98	93	70-130
o-Xylene	16.67	16.15	97	70-130
Styrene	16.67	18.38	110	70-130
Bromoform	16.67	17.07	102	70-130
1,1,2,2-Tetrachloroethane	16.67	15.72	94	70-130
4-Ethyltoluene	16.67	16.44	99	70-130
1,3,5-Trimethylbenzene	16.67	15.28	92	70-130
1,2,4-Trimethylbenzene	16.67	15.18	91	70-130
1,3-Dichlorobenzene	16.67	15.36	92	70-130
1,4-Dichlorobenzene	16.67	14.82	89	70-130
Benzyl chloride	16.67	16.09	97	70-130
1,2-Dichlorobenzene	16.67	14.76	89	70-130
1,2,4-Trichlorobenzene	16.67	14.94	90	70-130
Hexachlorobutadiene	16.67	12.96	78	70-130
Naphthalene	16.67	15.16	91	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	106	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC712436

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	16.67	18.32	110	70-130	1	20
Freon 114	16.67	18.82	113	70-130	3	20
Chloromethane	16.67	19.72	118	70-130	1	24
Vinyl Chloride	16.67	18.32	110	70-130	0	24
1,3-Butadiene	16.67	19.00	114	70-130	2	22
Bromomethane	16.67	19.20	115	70-130	1	20
Chloroethane	16.67	19.86	119	70-130	3	20
Trichlorofluoromethane	16.67	18.58	111	70-130	3	21
Acrolein	16.67	17.47	105	61-130	7	36
1,1-Dichloroethene	16.67	21.02	126	70-130	0	20
Freon 113	16.67	17.75	106	70-130	1	24
Acetone	16.67	17.95	108	70-130	0	21
Carbon Disulfide	16.67	18.11	109	70-130	1	21
Methylene Chloride	16.67	16.75	100	70-130	0	24
trans-1,2-Dichloroethene	16.67	18.84	113	70-130	1	20
MTBE	16.67	18.39	110	70-130	2	20
n-Hexane	16.67	18.34	110	70-130	1	20
1,1-Dichloroethane	16.67	19.33	116	70-130	0	20
Vinyl Acetate	16.67	20.95	126	70-130	3	21
cis-1,2-Dichloroethene	16.67	18.53	111	70-130	1	20
2-Butanone	16.67	18.62	112	70-130	0	20
Ethyl Acetate	16.67	18.04	108	70-130	1	22
Tetrahydrofuran	16.67	16.06	96	70-130	1	20
Chloroform	16.67	17.71	106	70-130	0	21
1,1,1-Trichloroethane	16.67	18.05	108	70-130	3	21
Cyclohexane	16.67	19.84	119	70-130	2	20
Carbon Tetrachloride	16.67	17.10	103	70-130	2	20
Benzene	16.67	18.52	111	70-130	1	20
1,2-Dichloroethane	16.67	19.55	117	70-130	1	20
n-Heptane	16.67	18.81	113	70-130	1	20
Trichloroethene	16.67	18.59	112	70-130	2	20
1,2-Dichloropropane	16.67	19.57	117	70-130	1	20
Bromodichloromethane	16.67	18.86	113	70-130	2	20
cis-1,3-Dichloropropene	16.67	19.53	117	70-130	1	20

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	16.67	18.73	112	70-130	2	20
Toluene	16.67	16.72	100	70-130	0	23
trans-1,3-Dichloropropene	16.67	19.71	118	70-130	1	20
1,1,2-Trichloroethane	16.67	17.70	106	70-130	2	20
Tetrachloroethene	16.67	17.44	105	70-130	4	20
2-Hexanone	16.67	18.27	110	70-130	2	20
Dibromochloromethane	16.67	17.74	106	70-130	2	20
1,2-Dibromoethane	16.67	17.81	107	70-130	1	20
Chlorobenzene	16.67	16.78	101	70-130	2	21
Ethylbenzene	16.67	16.23	97	70-130	3	20
m,p-Xylenes	33.33	31.28	94	70-130	1	20
o-Xylene	16.67	15.98	96	70-130	1	20
Styrene	16.67	19.04	114	70-130	4	22
Bromoform	16.67	17.77	107	70-130	4	20
1,1,2,2-Tetrachloroethane	16.67	16.59	100	70-130	5	24
4-Ethyltoluene	16.67	16.17	97	70-130	2	22
1,3,5-Trimethylbenzene	16.67	15.27	92	70-130	0	22
1,2,4-Trimethylbenzene	16.67	15.77	95	70-130	4	23
1,3-Dichlorobenzene	16.67	15.49	93	70-130	1	21
1,4-Dichlorobenzene	16.67	15.55	93	70-130	5	22
Benzyl chloride	16.67	16.14	97	70-130	0	21
1,2-Dichlorobenzene	16.67	15.61	94	70-130	6	22
1,2,4-Trichlorobenzene	16.67	15.55	93	70-130	4	24
Hexachlorobutadiene	16.67	13.38	80	70-130	3	25
Naphthalene	16.67	15.63	94	67-130	3	24

Surrogate	%REC	Limits
Bromofluorobenzene	105	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC712437	Diln Fac:	1.000
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC712437	Diln Fac:	1.000
Matrix:	Air	Batch#:	204171
Units (V):	ppbv	Analyzed:	10/18/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	98	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	204153
Matrix:	Air	Sampled:	10/16/13
Units (V):	ppbv	Received:	10/16/13
Units (M):	ug/m3	Analyzed:	10/17/13

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac
EFF MPE	SAMPLE	249943-001	140	25	5.6	570	100	23	1.000
INF MPE	SAMPLE	249943-002	270,000	2,500	560	1,100,000	10,000	2,300	100.0
	BLANK	QC712353	9.5 J	25	5.6	39 J	100	23	1.000

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

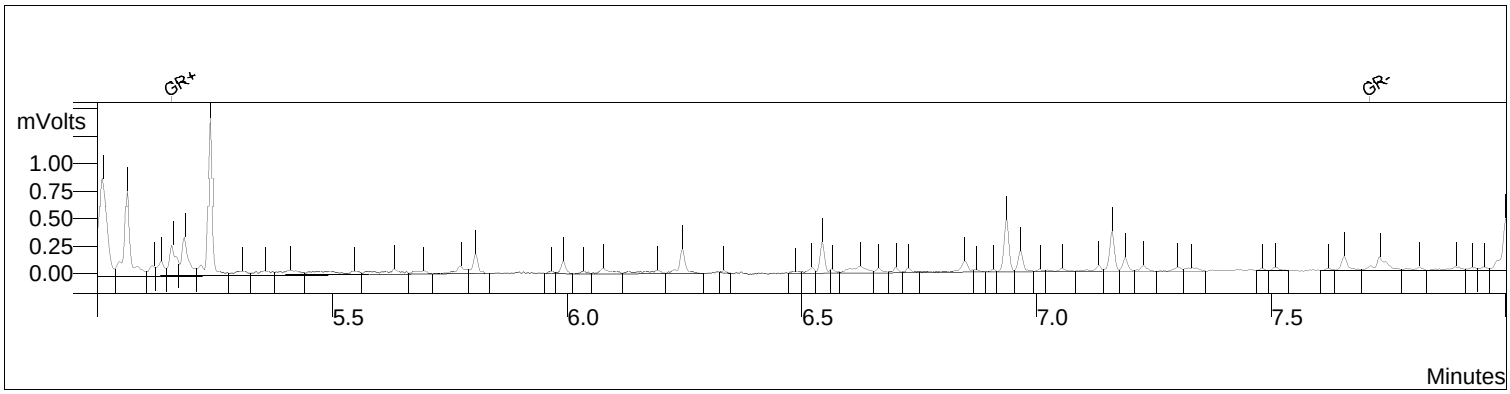
Lab #:	249943	Location:	15101 Freedom Ave. San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2555	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	204153
Units (V):	ppbv	Analyzed:	10/17/13

Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC712351	2,100	2,219	106	70-130		
BSD	QC712352	2,100	2,161	103	70-130	3	25

RPD= Relative Percent Difference
Result V= Result in volume units

GRO by TO-3

Sample ID:	249943-001,204153		
Data File:	c:\varianws\data\101713\290_004.run		
Sample List:	c:\varianws\101713.smp		
Method:	c:\varianws\to3_081811.mth		
Acquisition Date:	10/17/2013 14:19:59		
Calculation Date:	10/17/2013 14:32:01		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	1x		
Multiplier:	1.000	Divisor:	1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.432	GRO:6-12	5218	140.265
		Totals	**5218**	**140.265**

Integration Parameters

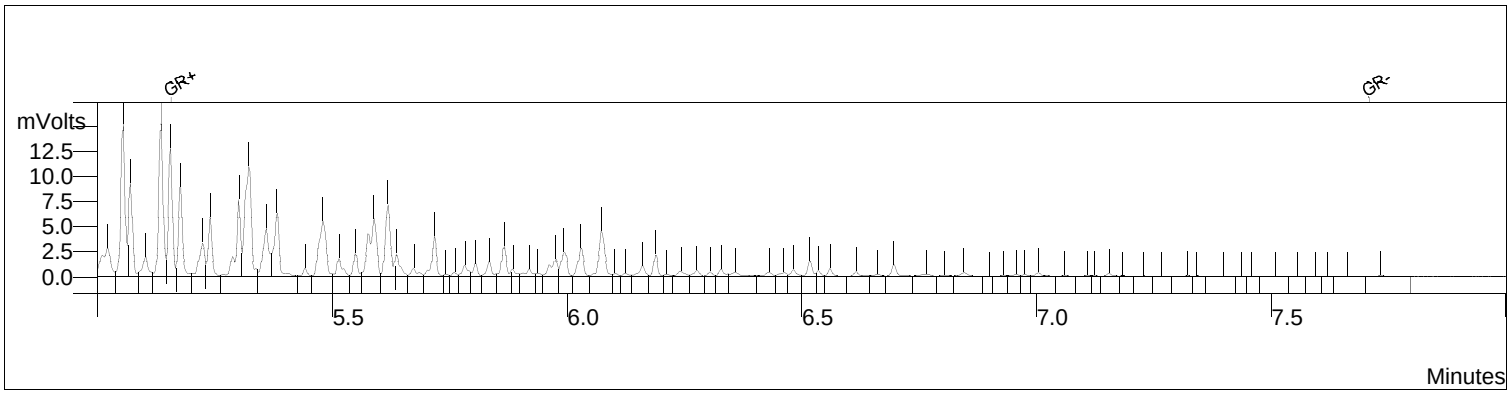
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	3

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.157	GR on
7.708	GR off

GRO by TO-3

Sample ID:	249943-002,204153		
Data File:	c:\varianws\data\101713\290_007.run		
Sample List:	c:\varianws\101713.smp		
Method:	c:\varianws\to3_081811.mth		
Acquisition Date:	10/17/2013 15:55:26		
Calculation Date:	10/17/2013 16:07:27		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	100x		
Multiplier:	1.000	Divisor:	1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.432	GRO:6-12	100984	2714.365
		Totals	**100984**	**2714.365**

Integration Parameters

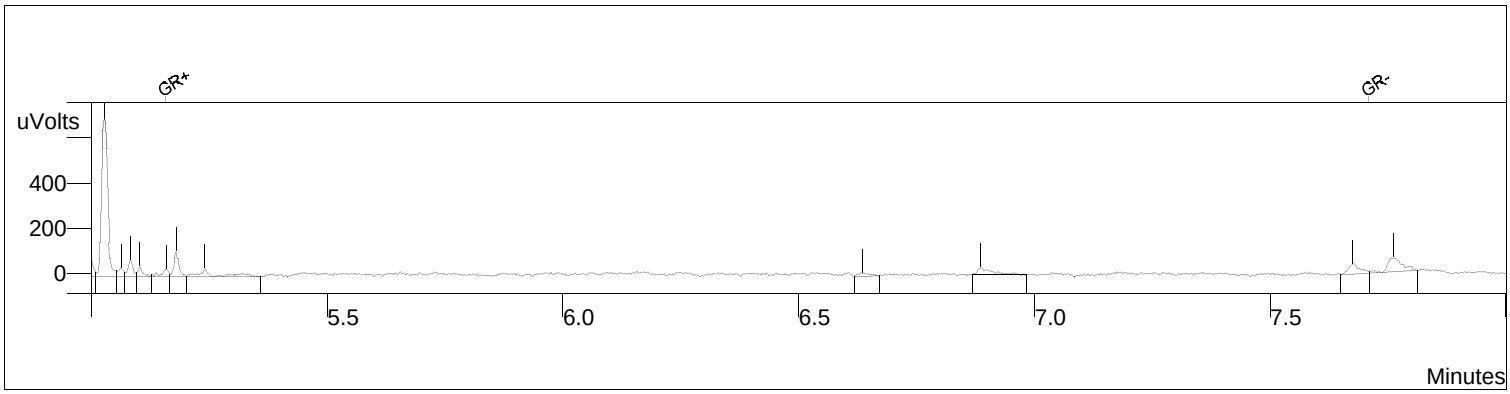
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	3

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.157	GR on
7.708	GR off
8.815	WI 8.0 sec
9.507	WI 4.0 sec

GRO by TO-3

Sample ID:	mb,qc712353,204153		
Data File:	c:\varianws\data\101713\290_003.run		
Sample List:	c:\varianws\101713.smp		
Method:	c:\varianws\to3_081811.mth		
Acquisition Date:	10/17/2013 14:04:21		
Calculation Date:	10/17/2013 14:16:23		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	1x		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.432	GRO:6-12	354	9.508
		Totals	**354**	**9.508**

Integration Parameters

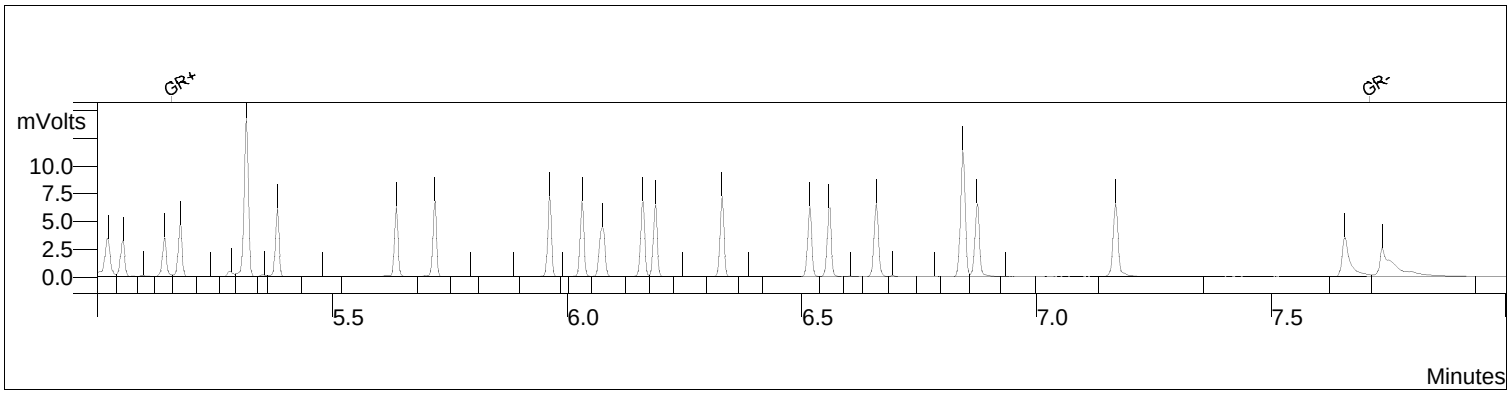
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	3

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.157	GR on
7.708	GR off

GRO by TO-3

Sample ID:	ccv/bs,qc712351		
Data File:	c:\varianws\data\101713\290_001.run		
Sample List:	c:\varianws\101713.smp		
Method:	c:\varianws\to3_081811.mth		
Acquisition Date:	10/17/2013 13:32:53		
Calculation Date:	10/17/2013 13:44:55		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	204153,s23398,1x		
Multiplier:	1.000	Divisor:	1.000



Channel: Front = FID RESULTS

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.432	GRO:6-12	82548	2218.810
		Totals	**82548**	**2218.810**

Integration Parameters

Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	3

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.157	GR on
7.708	GR off