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October 28, 2011

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

Subject: **Fuel Leak Case#RO0458**  
Site Located at 3820 Manila Avenue, Oakland, California  
Former Glovatorium Facility

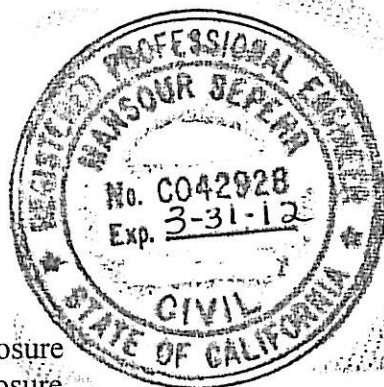
Dear Mr. Wickham:

SOMA's "Second Semi-Annual 2011 Groundwater Monitoring and Interim Remedial Action 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 any questions or comments.

Sincerely,

Mansour Sepel, Ph.D., PE  
Principal Hydrogeologist



cc: Mr. Albert M. Cohen, LOEB&LOEB LLP w/enclosure  
Mr. Peter W. McGaw, ARCHER NORRIS w/enclosure  
Mr. John Kortum, ARCHER NORRIS w/enclosure  
Mr. Stuart Depper w/enclosure  
Ms. Betty Graham, Regional Water Quality Control Board w/o enclosure

**Second Semi-Annual 2011  
Groundwater Monitoring and  
Interim Remedial Action Report**

**Former Glovatorium Facility  
3820 Manila Avenue  
Oakland, California**

**October 28, 2011**

**Project 2511**

**Prepared for:**

**Loeb & Loeb LLP  
10100 Santa Monica Boulevard, Suite 2200  
Los Angeles, California 90067-4164**



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## Perjury Statement

Stuart Depper  
Name

Responsible Party  
Title

3820 Manila Avenue                      Oakland                      94609  
Street Address                                      City                                      Zip

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

  
Signature

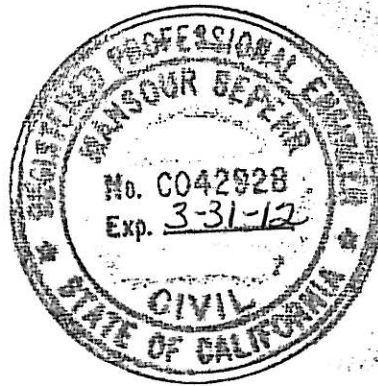
10-28-11  
Date

## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report for the law offices of Loeb & Loeb LLP, to comply with Alameda County Department of Environmental Health requirements for the groundwater monitoring event described herein and provide information necessary to defend claims brought against the property owners by Earl Thompson and Grace Johnson.



Mansour Sefehri, PhD, PE  
Principal Hydrogeologist



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# 1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report for the law offices of Loeb & Loeb LLP on behalf of their client, owners of the former Glovatorium located at 3820 Manila Avenue (formerly known as 3815 Broadway), Oakland, California (Figure 1). The site is located in an area of primarily commercial and residential development.

This report summarizes results of the groundwater monitoring event conducted at the site from August 29 to 31, 2011 and includes laboratory results for groundwater samples. It also includes a summary of the continued multi-phase extraction (MPE) ongoing at the site.

All activities were performed in accordance with general guidelines of the California Regional Water Quality Control Board (CRWQCB) and the Alameda County Environmental Health Services (ACEHS). Appendix A details procedures followed by SOMA during this monitoring event.

This work is intended to determine the nature and extent of environmental contamination and whether contamination is affecting the neighboring Thompson property. This information is pertinent to Mr. Thompson's claim against the Deppers, owners of the Glovatorium. Data gathered by this work may also help determine when releases occurred, significant information that is pertinent to the defense against claims brought by Ms. Johnson, a former owner of the property.

## 1.1 Site Description

The site is located between Manila Avenue and Broadway, near the intersection with 38th Street in Oakland, California. Surface elevation ranges from approximately 78 to 84 feet above mean sea level.

A 54-inch inside-diameter storm drain culvert passes under the property, from Manila Avenue on the west to 38th Street on the south (Figure 2). The depth of the storm drain invert is approximately 8.5 feet under the sidewalk on the eastern side of Manila Avenue and approximately 13.2 feet below ground surface (bgs) at the far end, approximately 60 feet south of well GW-4.

A 10-inch-diameter cast iron sanitary sewer conduit runs westerly from the on-site building and discharges into the sanitary sewer line, which runs north to south along Manila Avenue. Figure 2 shows locations of the storm drain and sanitary sewer system.

Six underground storage tanks (USTs) were formerly on the site. Two were located under the sidewalk on 38th Street and four inside the building. UST capacities have been variously reported as ranging from 800 to 5,000 gallons.



They reportedly contained Stoddard solvent (TPH-ss), fuel oil and possibly waste oil. In 1997, the six USTs were abandoned in place by backfilling with either cement-sand slurry or pea gravel. In addition, three USTs which were located under the sidewalk on 38th Street, adjacent to property owned by Earl Thompson, Sr., were decommissioned in November 2008.

Surrounding properties are primarily commercial and residential. TOSCO Marketing Company is located north and upgradient of the site, at 40<sup>th</sup> Street and Broadway, and contains a number of groundwater monitoring wells. Figure 2 shows locations of the subject site's main building, UST areas, and on- and off-site groundwater monitoring wells.

## 1.2 Background

In June 1997, the six USTs were abandoned in place by backfilling with either a cement-sand slurry or pea gravel. HK2, Inc. of San Mateo, California conducted the tank closure and reporting. The report indicates the presence of holes in UST-2 and UST-3, which contained TPH-ss, and also indicates that on June 11, 1997, HK2 pumped out groundwater that had recharged into UST-1 through UST-4. This indirectly indicates the presence of holes in UST-1 and UST-4 also. Eighty-one drums containing diesel fuel, TPH-ss, oil, and various wastes were removed from the site and properly disposed of.

Geosolv, LLC (Geosolv) initiated the first soil and groundwater investigation in August 1997. Using the direct push method, Geosolv drilled 14 soil borings to approximate depths of 10 to 24 feet bgs. Seven borings (B-2, B-3, B-7 through B-10 and B-13 [Figure 2]) were converted to temporary groundwater monitoring wells, where grab groundwater samples were collected. In September 1998, Geosolv conducted further soil and groundwater investigations by drilling 12 additional soil borings to approximate depths of 19 to 25 feet bgs. All 12 borings were converted to temporary groundwater sampling points, labeled E-15 through E-26. After collection of grab groundwater samples from temporary "E" sampling points, these borings were abandoned and grouted.

In July 1999, an investigation of potential groundwater preferential flow paths was initiated by LFR. LFR drilled 10 soil borings (GW-1 through GW-8, GW-5A, and GW-6A [Figure 2]) primarily along the 54-inch-diameter storm drain and sanitary sewer systems, to depths ranging from 8 to 20 feet bgs. During drilling, soil samples were collected from various depth intervals. In August 1999, LFR collected grab groundwater samples from seven of the nine "GW" wells. GW-1 to GW-6A are shown in Figure 2. GW-6, GW-7, and GW-8 were decommissioned between July 1999 and July 2000.

LFR conducted groundwater monitoring events in January, April, October, and November 2000, and installed four groundwater monitoring wells, LFR-1 through LFR-4, in July and August 2000 (Figure 2).

In January 2001, LFR conducted a groundwater monitoring event that suggested strong anaerobic conditions and dechlorination of PCE beneath the site. On April 26 to 27, 2001, SOMA began its initial groundwater monitoring events. Results of the Second Quarter 2001 monitoring event indicated strong dechlorination of PCE occurring in the subsurface.

SOMA's June 2001 workplan contained a recommendation to replace the existing small-diameter monitoring wells, B-7 and B-10, with larger-diameter wells, to better evaluate bioattenuation parameters. On October 4, 11, and 12, 2001, SOMA installed monitoring wells SOMA-1 through SOMA-5 (Figure 2). During installation, boreholes were continuously logged and soil samples collected at 5-foot depth intervals to delineate vertical extent of soil and groundwater contamination.

Phase I of SOMA's workplan included installing additional groundwater monitoring wells, soil and groundwater sampling, hydraulic testing, and a sensitive receptor survey. Phase II of the workplan included defining site regulatory status by conducting groundwater flow, chemical fate and transport modeling, and a risk-based corrective action (RBCA). SOMA's "Report on Conducting Additional Field Investigation to Evaluate the Site's Conceptual Model," dated January 3, 2002, describes results of investigations conducted in Phase I.

The modeling aspect of Phase II used results collected in Phase I and analytical data from quarterly monitoring events. The main objective of groundwater flow and chemical transport modeling was to predict groundwater chemical concentrations downgradient of the site, beneath the nearest residential neighboring property, in order to assess site regulatory status and restore groundwater quality conditions to acceptable levels specified by the RBCA.

Groundwater flow, chemical transport, and bioattenuation modeling for the site was conducted by SOMA in First Quarter 2003. Modeling results confirmed occurrence of biodegradation beneath the site and indicated that bioattenuation processes could remove PCE in the groundwater in approximately 7 to 10 years, trichloroethylene (TCE) in approximately 3 to 9 years, and cis-1,2-dichloroethene (cis-1,2-DCE) in approximately 4 to 13 years. SOMA's March 7, 2003 report entitled "Groundwater Flow, Chemical Transport and Bioattenuation Modeling" describes the study in detail.

Based on ACEHS approval, groundwater monitoring events have been conducted semi-annually since First Quarter 2003.

### **1.3 Site Geology and Hydrogeology**

The site is located on the alluvial plain between the San Francisco Bay shoreline and the Oakland hills. Surface sediments in the site vicinity consist of Holocene alluvial deposits representative of an alluvial fan depositional environment. These deposits consist of brown, medium-dense sand that fines upward to sandy or silty clay. The pattern of stream channel deposition results in a three-dimensional network of coarse-grained sediments interspersed with finer-grained silts and clays. The individual units tend to be discontinuous lenses aligned parallel to the axis of the former stream flow direction.

Sediments encountered in soil borings are predominantly fine grained, consisting of clay, silty clay, sandy clay, gravelly clay and clayey silt. Discontinuous layers of coarse-grained sediments (clayey sand, silty sand, and clayey gravel) generally also contain relatively high percentages of silt and clay, which tend to reduce their permeability. Based on previous investigations conducted by Geosolv and LFR, a relatively coarse-grained layer of silty sand, clayey sand, and clayey gravel was encountered in soil borings E-23, E-25, E-26, GW-2, GW-3, GW-7, and GW-8 at depths of approximately 4.5 to 14 feet bgs. A discontinuous layer of silty to clayey sand was encountered in borings B-11, E-23, E-25, GW-7 and GW-8 at depths of 17 to 21 feet bgs.

Based on SOMA's October 2001 field investigation, no deeper major water-bearing zone was encountered. However, as lithologic logs of the newly installed groundwater monitoring wells indicate, the water-bearing zone is composed of fine-grained, clayey silt sediments separated by very low-permeability intervening clay layers, which are unsaturated in some locations. For instance, SOMA-5, which has been screened within a significantly thick clay layer beneath the first water-bearing zone, from 21 to 26 feet bgs using the dual tubing method, was a dry well until the First Quarter 2002 sampling event. Due to the presence of unsaturated and low-permeability intervening clay layers between the shallow and deep layers, there is a significant vertical downward gradient between the shallow and deep wells.

Based on quarterly monitoring activities, depths of groundwater have ranged from 4 to 14 feet bgs at gradients ranging from 0.019 ft/ft to 0.035 ft/ft. Groundwater flow has been predominantly northeast to southwest across the site. Slug test results indicate that hydraulic conductivity of the saturated sediments ranges between  $1.2 \times 10^{-4}$  and  $6.9 \times 10^{-4}$  cm/sec. Using the average groundwater flow gradient of 0.027 and aquifer porosity of 0.32, the groundwater flow velocity ranges between 10.5 and 60.1 ft/year.

### **1.4 Previous Activities**

In order to demonstrate the fate and transport of PCE and other VOCs, SOMA conducted groundwater flow and chemical transport modeling and compared

results with those of routine groundwater monitoring data. Results of groundwater fate and transport modeling were used to conduct a human health risk assessment in order to evaluate site cleanup levels. Analyses showed that conditions are conducive to biodegradation and that, in fact, biodegradation is occurring. In general, PCE trends appeared generally consistent with SOMA's model, indicating that passive remediation has been effective. However, one obstacle to closing the site was the presence of free product (FP). Alameda County environmental regulatory guidelines do not permit closure as long as FP is present. As a result, over the past several years SOMA has been removing FP from the site. As of March 2008, approximately 1,895 gallons had been removed. Levels of FP in the wells were dropping fairly consistently over the past several years and, as noted above, PCE trends were decreasing consistent with SOMA's model.

FP or sheen has been reported sporadically in monitoring wells at the site since 1997. Past attempts to delineate the extent and sources of FP have been problematic due to variability and complexity of the subsurface soil and water table characteristics, access limited by buildings, and presence of potential preferential pathways for contaminant migration related to underground storm drain and sanitary sewer lines.

FP was located primarily in the vicinity of SOMA-4 and B-8 (Figure 2). As a result, SOMA instituted an FP removal program for those wells in 2002. As of March 2008, 1,895 gallons of FP and contaminated groundwater had been removed from SOMA-4 and B-8. By summer 2007, FP levels had been reduced significantly and SOMA was optimistic that it would be in a position to request closure. However, during First Semi-Annual 2008 groundwater monitoring, FP was unexpectedly observed for the first time in SOMA-2 and B-10, which are located approximately 40 feet east-southeast and northeast of SOMA-4 and B-8. Approximately 0.71 feet of FP was detected in SOMA-2 and 2.76 feet in B-10. During Second Semi-Annual 2008 groundwater monitoring, FP was observed in B-10 at 0.17 feet and in SOMA-2 and SOMA-4 at 0.60 feet each.

Results from the First Semi-Annual 2008 sampling event showed significant increases in PCE levels in wells with newly discovered FP (B-10 and SOMA-2). SOMA believes that the presence of elevated levels of FP in these wells for the first time contributed to the presence of elevated levels of dissolved solvents at this location. The FP consisted primarily of TPH-ss, which has the potential to dissolve PCE and TCE. Thus, it is suspected that FP in the area of SOMA-2 and B-10 caused dissolution and mobilization of PCE in the subsurface.

Beginning September 2, 2008, SOMA conducted a 45-day multi-phase extraction (MPE) pilot test at the site. Test results indicated that MPE technology is highly effective in removing FP, chemically impacted groundwater and soil vapor from the subsurface. Pilot tests were conducted using SOMA-4, SOMA-2, B-8 and B-10. Significantly, the pilot test showed that MPE can effectively remove

contamination from the smear zone, thereby removing the remaining FP from the subsurface.

From May 4 through May 22, 2009, SOMA advanced 16 soil and groundwater borings at the site to delineate the groundwater plume and smear zone. Based on results of soil and groundwater analysis, five new MPE wells (MPE-1 through MPE-5) were installed and SOMA-4, B-8, and B-10 were reconstructed as 2-inch wells (SOMA-4R, B-8R, and B-10R) with a screening interval from 5 to 20 feet bgs.

Continued MPE pilot testing was conducted from December 17, 2008 to December 14, 2009 and from August 16, 2010 to April 26, 2011 and was resumed on June 28, 2011.

## **2. RESULTS**

This section describes results of the current groundwater monitoring event, including groundwater flow conditions, status of groundwater contamination, and occurrence of bioattenuation in the subsurface.

### **2.1 Groundwater Flow Conditions**

Table 2 presents groundwater elevations in each well, calculated using depths to water and top of the well casing elevations. Elevations ranged from 64.18 feet in B-9 to 78.10 feet in SOMA-5. Refer to Table 2 for detailed groundwater elevation trends.

In evaluating groundwater flow direction and gradient, water level data from all "B" wells (except B-3, B-8R, and B-10R) and from GW-4, SOMA-1, SOMA-3, and SOMA-5 were not utilized for the following reasons:

1. No accurate information about construction details of the "B" wells installed by Geosolv is available, and water-level data from these wells are questionable. B-3, B-8R, and B-10R were reconstructed by SOMA into 2-inch wells.
2. GW-4 was installed adjacent to the storm drain system in order to evaluate whether the system is leaking. This well was installed in the shallow formation and may partially penetrate into the underlying water-bearing zone. Therefore, the water level elevation recorded inside GW-4 may not be representative of the underlying water-bearing zone.
3. SOMA-1, SOMA-3 and SOMA-5 have been completed in the deeper layer of the water-bearing zone, and due to the strong vertical gradient, the water level elevation in this layer is significantly lower than the shallow layer.

Figure 3 displays a contour map of groundwater elevations. In general, groundwater flows from northeast to southwest at an average gradient of 0.023 ft/ft. Groundwater flow direction has remained consistent and the gradient has slightly decreased since the previous monitoring event.

Groundwater elevation in B-9 was corrected for presence of FP. That correction is detailed below. Depth to groundwater and corresponding groundwater elevations are shown in Table 2.

- **Corrected Depth to Groundwater:** During monitoring, 0.18 feet of FP was observed in B-9. Depth to groundwater and corresponding groundwater elevation were corrected for product thickness. The correction factor was calculated by multiplying the specific gravity of gasoline (0.68) by the FP thickness. This resulted in correction factor of 0.1224-foot for B-9 from the actual measured groundwater column at each well. The correction factor was subtracted from the actual measured depth to water. The resulting corrected groundwater elevation was slightly higher than the field measured value. Values reflecting the correction for the FP thickness are shown in Table 2.

Field measurements of some physical and chemical parameters of the groundwater samples are presented in detail in Appendix B field notes, and summarized in Table 3 along with their historical values. Water temperatures ranged from 16.98°C in MPE-1 to 21.34°C in GW-3. The temperature variation may reflect changes in air temperature during sampling. Measurements of pH ranged from 5.55 in LFR-3 to 6.73 in SOMA-5. Electrical conductivity (EC) ranged from 426 µS/cm in GW-3 to 1,261 µS/cm in B-8R.

## 2.2 Groundwater Quality

Table 4 presents laboratory analysis results for the following: TPH-ss and TPH as gasoline (TPH-g); methyl tertiary-butyl ether (MtBE); and benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX).

TPH-ss was below the laboratory-reporting limit in GW-2, GW-3, MW-11, LFR-1, LFR-3, and SOMA-5. Detectable TPH-ss levels ranged from 100 µg/L in SOMA-1 to 540,000 µg/L in MPE-3. Figure 4 shows the contour map of TPH-ss concentrations in groundwater. Since the previous monitoring event (February 2011), TPH-ss decreased in B-10R, SOMA-2, SOMA-3, SOMA-4R, SOMA-5, MPE-1 and increased in B-8R, LFR-2, SOMA-1, MPE-2, MPE-3, MPE-4, and MPE-5 and remained constant in LFR-4. TPH-ss increased significantly in MPE-2 through MPE-3 and decreased significantly in B-10R, SOMA-2 and SOMA-4R. TPH-ss has also increased significantly in LFR-2 since August 2009.

TPH-g was below the laboratory-reporting limit in GW-2, MW-11, LFR-1, and LFR-3. Detectable TPH-g concentrations ranged from 68 µg/L in GW-3 to 760,000 µg/L in MPE-3. All groundwater samples for gasoline with detectable concentrations exhibited a chromatographic pattern that did not resemble the standard pattern. Figure 5 shows the contour map of TPH-g concentrations in groundwater. Since the previous monitoring event (February 2011), TPH-g decreased in B-10R, GW-3, LFR-1, SOMA-2, SOMA-3, SOMA-4R, SOMA-5, MPE-1, and increased in B-8R, LFR-2, LFR-4, SOMA-1, MPE-2, MPE-3, MPE-4, and MPE-5. TPH-g increased significantly in MPE-2 through MPE-3 and decreased significantly in B-10R, SOMA-2 and SOMA-4R. TPH-g has also increased significantly in LFR-2 since August 2009.

MtBE was below the laboratory-reporting limit in B-8R, B-10R, GW-2, GW-3, MW-11, LFR-1, LFR-2, LFR-3, SOMA-5, MPE-1 and MPE-3 and was detected in concentrations ranging from 0.7 µg/L in LFR-4 to 220 µg/L in SOMA-1. However, there is no known on-site source of MtBE. Figure 6 shows the contour map of MtBE concentrations in groundwater.

In general, BTEX constituents were below laboratory-reporting limits throughout the site, except for LFR-2, SOMA-4R, and MPE-3.

- In LFR-2, ethylbenzene and total xylenes were below laboratory-reporting limits; benzene and toluene were at low levels.
- In SOMA-4R, all BTEX analytes except total xylenes were below laboratory-reporting limits; total xylenes were detected at 1.7 µg/L.
- In MPE-3, toluene and ethylbenzene were below laboratory-reporting limits and benzene and total xylenes were detected at low levels.

Due to generally low or non-detectable levels throughout the site, no iso-concentration figures were drawn for BTEX constituents.

Table 5 shows historical concentrations of VOCs in the groundwater, discussed below.

PCE was below the laboratory-reporting limit in groundwater samples from B-8R, MW-11, LFR-2, LFR-3, LFR-4, SOMA-3, SOMA-4R, SOMA-5, MPE-2, MPE-3, MPE-4, and MPE-5. Detectable PCE concentrations ranged from 2.9 µg/L in MPE-1 to 190 µg/L in GW-3. Figure 7 shows the contour map of PCE concentrations in groundwater. Since the previous monitoring event (February 2011), PCE has decreased in B-10R, GW-2, LFR-3, SOMA-1, SOMA-2, MPE-1, and MPE-3; increased in GW-3 and remained constant in LFR-1. PCE decreased in SOMA-2 significantly.

TCE was below the laboratory-reporting limit in groundwater samples from B-8R, MW-11, LFR-2, LFR-3, LFR-4, SOMA-3, SOMA-4R, SOMA-5, MPE-2, MPE-3, MPE-4, and MPE-5. Detectable TCE concentrations ranged from 1.7 µg/L in

SOMA-1 to 160 µg/L in B-10R. Figure 8 shows the contour map of TCE concentrations in groundwater. Since the previous monitoring event (February 2011), TCE has decreased in GW-2, SOMA-1, and SOMA-2, and increased in B-10R, GW-3, LFR-1, and MPE-1. None of the increase or decrease was significant.

Cis-1,2-DCE was below the laboratory-reporting limit in groundwater samples from GW-2, MW-11, LFR-3, LFR-4, and SOMA-5. Detectable cis-1,2-DCE concentrations ranged from 8.9 µg/L in B-8R to 3,000 µg/L in SOMA-2. Figure 9 shows the contour map of cis-1,2-DCE concentrations in groundwater. Since the previous monitoring event (February 2011), cis-1,2-DCE concentrations have decreased in B-8R, SOMA-1, SOMA-3, SOMA-4R, MPE-1, MPE-2, MPE-3, MPE-4, and MPE-5 and increased in B-10R, GW-3, LFR-1, LFR-2, SOMA-2. None of the increase or decrease was significant.

Trans-1,2-dichloroethene (trans-1,2-DCE) was below the laboratory-reporting limit in all groundwater samples except at LFR-1, SOMA-2, MPE-1, MPE-4, and MPE-5. Detectable trans-1,2-DCE concentrations ranged from 0.9 µg/L in MPE-4 to 10 µg/L in SOMA-2. Figure 10 shows the contour map of trans-1,2-DCE concentrations in groundwater.

Vinyl chloride (VC) was reported in LFR-2, SOMA-2, and MPE-4 at 9.6 µg/L, 6.0 µg/L, and 0.6 µg/L, respectively. 1,2-dichloropropane (1,2-DCP) was reported in SOMA-4R at 0.8 µg/L and was below the laboratory-reporting limit in all other wells. Due to generally low or non-detectable levels of these constituents throughout the site, no iso-concentration figures were drawn for VC and 1,2-DCP.

Appendix C includes chain of custody forms and laboratory analytical reports for this groundwater monitoring event.

### **2.3 Bioattenuation Parameter Analysis Results**

Naturally occurring biological processes can enhance the removal rate of contaminants in the subsurface. During the degradation process, indigenous bacteria in the subsurface utilize energy released from the transfer of electrons to drive redox reactions that remove organic mass from contaminated groundwater. The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor. Based on thermodynamic considerations, the most energetically preferred electron acceptor for redox reactions is dissolved oxygen (DO), followed by nitrate, manganese, ferric iron, sulfate, and carbon dioxide, in descending order of preference. Evaluating distribution of these electron acceptors can provide evidence of where, and to what extent, chlorinated and aliphatic hydrocarbon



biodegradation is occurring. Byproducts of biodegradation processes are nitrite, ferrous iron, alkalinity, sulfide, methane, and carbon dioxide.

Field or laboratory measurement of bioattenuation parameters was terminated because enough data has been generated that indicates occurrence of intrinsic bioremediation processes beneath the subsurface.

Table 6 summarizes historical trends in following bioattenuation parameters.

**Dissolved Oxygen:** DO is the most favored electron acceptor used by microbes for biodegrading organic compounds. A DO concentration lower than 0.5 mg/L indicates anaerobic conditions.

**Nitrate:** After DO has been depleted, nitrate may be used as an electron acceptor for anaerobic biodegradation. Nitrate concentrations lower than 1.0 mg/L may indicate that reductive dechlorination is occurring.

**Manganese:** After DO and nitrate have been depleted, manganese may be used as an electron acceptor for anaerobic biodegradation. Therefore, increased dissolved manganese concentrations in groundwater indicate reductive dechlorination.

**Sulfate:** After DO, nitrate, and manganese have been depleted, sulfate may be used as an electron acceptor for anaerobic biodegradation. This process is termed sulfate reduction, and results in production of sulfide. Sulfate concentrations lower than 20 mg/L indicate reductive dechlorination (EPA 1998).

**Ferrous Iron:** Increased ferrous iron concentrations often accompany anaerobic degradation. Ferric iron can be used as an electron acceptor during anaerobic biodegradation. During this process, ferric iron is reduced to ferrous iron, which may be soluble in water. Ferrous iron concentrations can thus be used as an indicator of anaerobic biodegradation.

**Methane:** The presence of methane in groundwater indicates strongly reduced conditions and suggests reductive dechlorination by the process of methanogenesis. Methane was below the laboratory-reporting limit in GW-2, MW-11, LFR-1, and LFR-3. Detectable methane concentrations ranged from 0.034 mg/L in MPE-1 to 9.4 mg/L in LFR-2. Higher concentrations of methane indicate conditions conducive to anaerobic biodegradation. The contour map of methane concentrations in groundwater is illustrated in Figure 11.

**Oxygen Reduction Potential (ORP):** The ORP of groundwater is a measure of electron activity and an indicator of the relative tendency of a solution to accept or transfer electrons. Lower ORP values are expected in areas where anaerobic processes are occurring. Negative ORP values indicate that conditions in and

near the apparent source area are conducive to anaerobic biodegradation. Positive redox potentials are more energetically favorable in utilizing electron acceptors during chemical reactions. This promotes removal of organic mass from the contaminated groundwater by indigenous bacteria in the subsurface.

As mentioned above, since enough data has been generated that indicates occurrence of intrinsic bioremediation processes beneath the subsurface. Therefore, measurement of bioattenuation parameters in the field or laboratory is no longer required.

## 2.4 Other Parameters

Table 3 summarizes pH, temperature, conductivity and other parameters discussed below.

**Alkalinity:** Alkalinity is a general water quality parameter. High alkalinity levels are a result of interaction between carbon dioxide (a product of several biodegradation processes) and aquifer minerals. Due to the inconclusive data collected during previous groundwater monitoring events in connection with the bioattenuation process, no alkalinity data was collected during the current groundwater monitoring event.

**Chloride:** Chloride is the final product of the reduction of chlorinated solvents, and also a general water quality parameter. Due to the inconclusive data collected during previous groundwater monitoring events in connection with the bioattenuation process, no chloride data was collected during this or previous groundwater monitoring events.

**Carbon Dioxide:** Carbon dioxide is a product of several biodegradation processes. Due to the inconclusive data collected during previous groundwater monitoring events in connection with the bioattenuation process, no carbon dioxide data was collected during recent groundwater monitoring events.

**Iron:** Ferric iron may be used as an electron acceptor during anaerobic biodegradation. During this process, ferric iron is reduced to ferrous iron that may be soluble in water. Ferric iron concentrations may be obtained by subtracting ferrous iron concentrations from total iron concentrations.

**Nitrite:** Nitrate may reduce to nitrite during the process of anaerobic biodegradation.

**Sulfide:** When sulfate is used as an electron acceptor for anaerobic biodegradation it is reduced to sulfide. Due to the inconclusive data collected during previous groundwater monitoring events in connection with the

bioattenuation process, sulfide data was not collected during the current groundwater monitoring event.

**pH, Temperature, and Conductivity:** The pH of groundwater affects activity of microbial populations in the groundwater, with optimal pH values ranging from 6 to 8 standard units for microbes capable of degrading PCE and other chlorinated aliphatic hydrocarbons. Groundwater temperature affects metabolic activity of bacteria, and groundwater conductivity is directly related to the concentration of ions in solution. The pH, temperature, and conductivity values are included in Table 3.

### **3. FREE PRODUCT REMOVAL ACTIVITIES**

Prior to installation of a skimmer pump in SOMA-4 on January 28, 2004, over 9 feet of FP was on the surface of groundwater in this well. On February 6, 2004, SOMA installed a flexible axial peristaltic pump (FAP system) in SOMA-4 to remove FP.

Borings B-3 and B-8 were converted into wells in August 2004 and the FAP system was installed in B-8. The FAP was operational till March 2008 and removed approximately 1,895 gallons of FP and contaminated groundwater from SOMA-4 and B-8.

During the First Semi-Annual 2008 monitoring event, FP was unexpectedly observed in B-10 and SOMA-2 at 2.76 feet and 0.71 feet, respectively.

During MPE pilot testing (September-October 2008), an additional 60 gallons of FP was removed from the extraction wells. During 2010 groundwater monitoring events FP was observed in MPE-2 and MPE-3.

During the current monitoring event, FP was observed in B-9 at 0.18 feet; it was last observed in this well in January 2000. FP was not observed in other wells.

Table 7 shows FP observations for SOMA-4, B-8, B-10, SOMA-2, B-9, and MPE wells. Figure 12 illustrates historical FP thickness measured in extraction wells.

### **4. CONTINUED MULTI PHASE EXTRACTION PILOT TESTING**

During MPE pilot testing, soil vapor and groundwater are extracted from the subsurface. Both extracted soil vapor and groundwater are treated on-site with granular activated carbon (GAC). Two vessels capable of holding 1,000 pounds of GAC are used to process the vapor and liquid stream separately. Two

55-gallon drums, holding 200 pounds of GAC each, are used as polishing vessels prior to discharge. Treatment and discharge of the vapor stream to the atmosphere operates under valid BAAQMD discharge permitting for plant number 19199. Treatment and discharge of extracted groundwater to the local sanitary sewer (manhole location shown in Figure 2) operates under valid EBMUD discharge permit 50638151. The effluent being discharged to the sewer is periodically sampled to ensure compliance with the discharge permit.

Following evaluation of the initial 45-day testing between September 2, 2008 and October 24, 2008, based on the Alameda County directive dated December 5, 2008 SOMA resumed MPE pilot testing between December 17, 2008 and December 14, 2009. MPE pilot testing continued between August 16, 2010 to April 26, 2011 and resumed on June 28, 2011. Existing monitoring wells and borings SOMA-2, B-8R, B-10R, MPE-1, MPE-2, and MPE-3 (Figure 2) were historically used as extraction and observation wells. Induced vacuum and groundwater levels were monitored, measured and recorded from existing wells used as observation wells.

With most chlorinated compounds removed and treated using GAC treatment through 2010, an engineering evaluation was performed to determine whether a modification to the existing MPE system would increase treatment capacity. Based on that evaluation, on January 18, 2011, an electric catalytic oxidizer was delivered to the site and installed the following days. The electric catalytic oxidizer heats process vapors inside a chamber containing heating elements coated with a catalyst to combust soil vapors before discharge to the atmosphere. Vapors are heated to a minimum temperature of 600 degrees Fahrenheit to fully combust contaminated soil vapors. The existing air permit was modified to allow discharge of treated vapors.

MPE operational data is presented in Table 8, and extraction data and mass removal rate in Table 9.

#### **4.1 MPE Pilot Testing Duration**

This report presents MPE pilot test data from Friday, March 31, 2011 (last reporting day) through Monday, October 10, 2011. In this period, the MPE system was offline from April 26, 2011 through June 28, 2011. Total MPE time during this phase was 2,296 hours (95.67 days). MPE pilot testing is ongoing at the site.

#### **4.2 MPE Pilot Test Results April 2011 to Present**

VOC concentrations in the extracted soil vapor stream ranged from 65 to 349 parts per million vapor (ppmv) as TPH-ss or between 400 and 2,145 ppmv as

hexane (Tables 8 and 9). A total of 70,940 gallons of groundwater was extracted (Table 8) at a rate of 0.51 gallons per minute.

The estimated mass of VOCs removed from extracted soil vapor since March 31, 2011 until October 10, 2011 was 629.58 lbs. The estimated VOC mass removal rate was 6.58 lbs/day.

### **4.3 MPE Conclusions**

As of October 10, 2011, the total mass of VOCs (as TPH-ss) extracted by MPE from extraction wells is 5174.06 lbs (Table 9).

## **5. FINDINGS REGARDING CURRENT ENVIRONMENTAL CONDITIONS, AND RECOMMENDATIONS**

### **5.1 Current Environmental Conditions**

Based on data obtained during the Second Semi-Annual 2011 groundwater monitoring event, current environmental conditions at the site are as follows:

1. All analyzed constituents in the farthest downgradient well, LFR-3, were either at low levels or below laboratory-reporting limits. Results are consistent with modeling performed by SOMA which predicted that PCE would barely reach LFR-3. Furthermore, all analyzed constituents in the farthest upgradient well, MW-11, were below laboratory-reporting limits.
2. Data collected to date regarding distribution of PCE and other VOCs in groundwater demonstrate that PCE has degraded into some of its breakdown products in certain groundwater monitoring wells.
3. During the current event, 0.18 feet of FP was observed in B-9, which had not shown any FP since January 2000. No FP was observed in MPE-2, MPE-3 or other extraction wells.
4. The highest TPH-ss and TPH-g concentrations were detected in MPE-3 at 540,000 µg/L and 760,000 µg/L, respectively. Since the previous monitoring event (First Semi-Annual 2011), TPH-ss and TPH-g significantly increased in MPE-2 through MPE-5 and significantly decreased in B-10R, SOMA-2, and SOMA-4R. MPE-2 and MPE-3 have shown presence of FP sporadically in the past and now after removing FP by MPE operation it is expected to exhibit elevated levels of dissolved phase hydrocarbons. The lower concentrations of chemicals in B-10R, SOMA-2 and SOMA-4R can be attributed to ongoing MPE operation on these wells.

5. PCE and TCE levels in B-10R have decreased significantly since the sampling event of February and March 2008 when FP was discovered for the first time in B-10 and SOMA-2. However, since the previous monitoring event (First Semi-Annual 2011), TCE has increased in B-10R, GW-3, LFR-1, and MPE-1 slightly and decreased in GW-2, SOMA-1, and SOMA-2, while PCE has increased in GW-3 and decreased in B-10R, GW-2, LFR-3, SOMA-1, SOMA-2, MPE-1, and MPE-3. The increase in GW-3 is not significant because PCE concentrations in this well have shown similar fluctuations in the past. In general, PCE concentrations across the site show a decreasing trend.
6. PCE typically degrades into TCE, then cis-1,2-DCE and then trans-1,2-DCE (at much lower concentrations than cis-1,2-DCE), then to VC, ethane and ethene and, finally, to carbon dioxide, water, and chloride. This sequence of degradation would be anticipated where biological reductive dehalogenation of PCE is occurring. The presence of TCE in B-10R, GW-2, GW-3, LFR-1, SOMA-1, SOMA-2, and MPE-1 demonstrates that PCE degradation is occurring. The presence of cis-1,2-DCE in B-8R, B-10R, GW-3, LFR-1, LFR-2, SOMA-1, SOMA-2, SOMA-3, SOMA-4R, MPE-1, MPE-2, MPE-3, MPE-4, and MPE-5 indicates the occurrence of dechlorination of PCE in the subsurface. In addition, VC was detected in LFR-2, SOMA-2, and MPE-4 which indicates final stages of biodegradation activities in subsurface.
7. Bioattenuation parameters were not measured in field or laboratory because enough data has been generated to indicate occurrence of intrinsic bioremediation processes beneath the subsurface.
8. In general, the region near B-9, B-10R, SOMA-2, SOMA-4R, GW-3, LFR-1, LFR-2, and MPE-3 appears to be more impacted by chemicals of potential concern.
9. Since March 31, 2011 until October 10, 2011 a total of 630 pounds of petroleum hydrocarbons has been removed from the subsurface. This brings up the total extracted contaminant mass (as TPH-ss) since the MPE pilot test start up to 5,174.06 lbs.

## 5.2 Recommendations

Results of the current groundwater monitoring event show that elevated concentrations of TPH-ss and TPH-g remain in the subsurface. In addition, 0.18 feet of FP was reported at B-9. Although reported chlorinated solvent concentrations have approached risk-based closure levels, presence of FP and elevated groundwater concentrations of TPH-ss and TPH-g remain a concern. SOMA recommends:

1. Continued operation of MPE pilot test at the site.

2. Due to the wide spread contaminant mass in subsurface, the existing MPE unit is not capable to extract the contaminant mass from every MPE well; to expedite the cleanup process an additional unit is highly recommended.
3. Continued groundwater monitoring events on a semi-annual basis.

# TABLES



**Table 1**  
**Construction Data for Temporary Sampling Points and Monitoring Wells**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Location	Date Installed	Ground Surface Elevation (feet)	Top of Casing Elevation (feet)	Total Depth (feet)	Screen Interval Depth (feet)	Screen Interval Elevation (feet)
<b>Temporary Sampling Points Installed by Geosolv, LLC</b>						
B-2	19-Aug-97	82.20	82.09	21	5 to 21	77.2 to 61.2
B-3 <sup>1</sup>	19-Aug-97	82.60	82.57	18	5 to 18	77.6 to 64.6
B-7	20-Aug-97	77.33	76.96	17.5	5 to 17.5	72.3 to 59.8
B-8	20-Aug-97	82.06	81.82	24	9 to 24	73.1 to 58.1
B-9	21-Aug-97	77.57	77.37	19.5	4.5 to 19.5	73.1 to 58.1
B-10	21-Aug-97	81.65	81.50	19	4 to 9	77.7 to 62.7
B-13	22-Aug-97	85.12	84.58	20	5 to 20	80.1 to 65.1
<b>Temporary Sampling Points Installed by LFR</b>						
GW-1	16-Jul-99	80.24	79.94	8	3 to 8	77.2 to 72.2
GW-2	16-Jul-99	79.44	79.14	20	10 to 20	69.4 to 59.4
GW-3	15-Jul-99	78.48	77.92	20	10 to 20	68.5 to 58.5
GW-4	16-Jul-99	82.55	82.37	12	7 to 12	75.6 to 70.6
GW-5	15-Jul-99	81.31	81.01	13	8 to 13	73.3 to 68.3
GW-6 <sup>2</sup>	15-Jul-99	81.91	81.65	13.5	7.5 to 13.5	74.4 to 68.4
GW-6A <sup>2</sup>	16-Jul-99	81.93	81.61	15	5 to 15	76.9 to 66.9
GW-7 <sup>2</sup>	15-Jul-99	81.30	NS	20	10 to 20	71.3 to 61.3
GW-8 <sup>2</sup>	16-Jul-99	80.28	80.10	20	10 to 20	70.3 to 60.3
<b>Temporary Sampling Points Installed by TOSCO</b>						
MW-8	unknown	NS	87.44	unknown	unknown	unknown
MW-9	unknown	NS	86.56	unknown	unknown	unknown
MW-11	unknown	NS	84.13	unknown	unknown	unknown
<b>Groundwater Monitoring Wells Installed by LFR</b>						
LFR-1	28-Jul-00	NS	79.97	19	9 to 19	unknown
LFR-2	27-Jul-00	NS	81.89	19	9 to 19	unknown
LFR-3	27-Jul-00	NS	77.96	22	12 to 22	unknown
LFR-4	28-Jul-00	NS	81.65	19	9 to 19	unknown
<b>Groundwater Monitoring Wells Installed by SOMA</b>						
SOMA-1	4-Oct-01	82.31	81.64	40	25 to 40	42.31 to 57.71
SOMA-2 *	11-Oct-01	84.61	84.38	20	10 to 20	61.62 to 71.62
SOMA-3	11-Oct-01	81.65	81.42	30	21 to 26	60.65 to 71.51
SOMA-4	12-Oct-01	81.51	81.09	20	10 to 20	61.51 to 71.51
SOMA-5	12-Oct-01	61.68	81.50	26	21 to 26	55.68 to 60.68
B-8R	19-May-09	85.07	84.66	20	5 to 20	79.66 to 64.66
B-10R	18-May-09	84.60	83.98	20	5 to 20	78.98 to 63.98
SOMA-4R	18-May-09	84.49	83.95	20	5 to 20	78.95 to 63.95
MPE-1	21-May-09	84.65	84.41	20	2.5 to 20	81.91 to 64.41
MPE-2	21-May-09	85.09	84.66	20	2.5 to 20	82.16 to 64.66
MPE-3	22-May-09	85.14	84.87	20	2.5 to 20	82.37 to 64.87
MPE-4	21-May-09	84.80	84.45	20	2.5 to 20	81.95 to 64.45
MPE-5	19-May-09	85.23	84.64	20	2.5 to 20	82.14 to 64.64

Notes:

- <sup>1</sup> Top of casing surveyed on south side on January 21, 2000, because the casing was broken.
- <sup>2</sup> GW-7 was abandoned on July 15, 1999, in accordance with LFR's workplan dated May 6, 1999. GW-6 and GW-8 were abandoned on July 26, 2000, in accordance with LFR's workplan dated June 14, 2000.

NS = Not surveyed.

\* SOMA-2 was resurveyed along with the new MPE wells in July 2009

**Table 2**  
**Historical Groundwater Elevation Data (feet)**  
Former Glovatorium Site  
3820 Manila Avenue, Oakland, California

Date	B-2	B-3	B-7	B-8	B-8R	B-9	FP (feet)	B-9 orr. FP	B-10	B-10R	B-13
29-Aug-11	71.58	71.78	DRY		72.25	64.06	0.18	64.18		72.04	DRY
10-Feb-11	71.58	71.75	DRY		71.86	64.94				71.57	DRY
4-Aug-10	71.50	71.62	DRY		71.23	65.83				72.21	DRY
1-Feb-10	73.71	73.72	DRY		74.14	67.39				73.55	DRY
11-Aug-09	72.11	72.03	DRY		73.01	64.79				71.79	DRY
9-Feb-09	73.46	73.72	DRY	70.52		66.72			70.63		DRY
21-Aug-08	71.98	72.65	DRY	68.80		66.64			70.47		DRY
19-Feb-08	78.05	74.51	DRY	68.27		68.33			69.75		64.58
23-Aug-07	70.45	71.54	DRY	64.66		63.89			67.76		75.59
28-Feb-07	78.13	76.18	Dry	70.80		70.14			74.18		75.77
05-Jul-06	74.24	74.86	68.78	62.47		68.81			72.70		75.66
05-Jan-06	79.72	77.85	71.76	74.02		71.28			74.91		NM
05-Jul-05	74.49	75.23	69.05	NM		69.05			72.91		DRY
1-Feb-05	75.67	76.19	72.85	NM		69.76			73.54		75.90
03-Aug-04	73.52	73.46	68.03	73.90		68.22			72.13		75.57
29-Jan-04	74.99	75.31	70.01	NM		69.24			73.07		75.66
29-Jul-03	73.99	73.83	68.53	72.39		68.67			72.58		75.80
18-Feb-03	75.83	75.55	69.94	73.01		70.00			73.87		75.77
22-Oct-02	73.29	73.06	67.98	71.43		68.10			72.09		NM
17-Jul-02	74.02	73.82	NM	72.37		68.59			72.51		NM
16-Apr-02	75.16	75.34	69.41	73.54		69.38			73.21		NM
31-Jan-02	77.35 <sup>(FP)</sup>	77.16 <sup>(FP 0.5)</sup>	70.79	75.03 <sup>(FP 0.5)</sup>		70.43			74.14		77.53 <sup>(FP 0.7)</sup>
18-Oct-01	73.26 <sup>(0.25' FP)</sup>	73.24 <sup>(1' FP)</sup>	67.89	69.51 <sup>(2.1' FP)</sup>		67.98			71.96		DRY
26-Jul-01	73.86	73.17	68.69	70.41		68.73			72.61		DRY
26-Apr-01	75.26	74.00	69.60	73.19		69.80			73.61		
29-Jan-01	74.63	75.06	69.11	74.23		69.33			73.20		
2-Nov-00											
31-Oct-00											
30-Oct-00	74.34	74.84 <sup>(FP)</sup>	69.01	73.32		69.42			73.35		DRY
10-Aug-00											
9-Aug-00	73.9 <sup>(FP)</sup>	74.55 <sup>(FP)</sup>	68.61	72.8 <sup>(FP)</sup>		68.82			72.65		75.23
27-Apr-00	75.41 <sup>(FP)</sup>	75.86 <sup>(FP)</sup>	69.85 <sup>(FP)</sup>	74.14 <sup>(FP)</sup>		69.96			73.70		75.87
25-Jan-00											
24-Jan-00	75.93 <sup>(FP)</sup>	75.83	69.66 <sup>(FP)</sup>	72.84		70.25 <sup>(FP)</sup>			74.15 <sup>(FP)</sup>		
21-Jan-00											76.32
20-Jan-00											
19-Jan-00	73.97 <sup>(FP)</sup>	73.22 <sup>(2)</sup>	68.6 <sup>(FP)</sup>	71.81 <sup>(FP)</sup>		68.91 <sup>(FP)</sup>			73.02 <sup>(FP)</sup>		74.18
27-Aug-99											
18-Feb-98	78.16 <sup>(1)</sup>	78.04 <sup>(1)</sup>	71.57 <sup>(1)</sup>	76.64 <sup>(1)</sup>		71.44 <sup>(1)</sup>			75.13 <sup>(1)</sup>		78.51 <sup>(1)</sup>
26-Oct-97	72.66 <sup>(1)</sup>	73.64 <sup>(1)</sup>	68.09 <sup>(1)</sup>	71.11 <sup>(1)</sup>		68.39 <sup>(1)</sup>			72.26 <sup>(1)</sup>		73.02 <sup>(1)</sup>

**Table 2**  
**Historical Groundwater Elevation Data (feet)**  
Former Glovatorium Site  
3820 Manila Avenue, Oakland, California

Date	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6A	GW-8	MW-8	MW-9	MW-11
29-Aug-11	DRY	66.07	67.31	DRY	69.38	67.52	NM	77.82	77.17	68.12
10-Feb-11	DRY	65.90	67.49	DRY	70.72	DRY	NM	77.68	76.98	68.72
4-Aug-10	DRY	65.46	67.15	DRY	68.68	DRY	NM	76.22	75.60	68.49
1-Feb-10	72.11	66.66	68.04	74.53	71.08	68.03	NM	78.49	77.71	71.53
11-Aug-09	DRY	67.60	67.45	DRY	68.65	67.67	NM	76.54	75.99	72.43
9-Feb-09	DRY	67.28	68.01	74.87	68.59	67.76	NM	77.23	76.83	71.64
21-Aug-08	DRY	66.59	67.88	DRY	68.88	67.70	NM	76.38	75.94	68.43
19-Feb-08	DRY	60.89	67.15	74.81	69.10	67.94	NM	76.70	76.00	69.82
22-Aug-07	DRY	DRY	66.71	DRY	68.54	67.89	NM	75.98	75.15	70.70
28-Feb-07	72.31	69.95	68.39	74.90	69.73	68.13	NM	79.05	78.64	71.30
05-Jul-06	71.94	69.74	66.49	70.37	68.96	68.01	NM	77.74	77.72	72.47
05-Jan-06	72.13	70.29	68.06	75.08	70.59	69.01	NM	80.66	79.96	71.51
5-Jul-05	DRY	69.38	67.03	73.57	69.53	68.03	NM	77.81	77.73	70.21
1-Feb-05	72.13	68.72	67.91	74.40	69.89	68.04	NM	78.46	78.42	71.68
3-Aug-04	72.13	68.19	67.54	72.54	69.46	67.93	NM	NM	NM	73.22
29-Jan-04	NM	68.37	68.05	74.69	68.71	68.00	NM	77.82	78.76	74.08
29-Jul-03	NM*	68.69	67.67	72.61	68.82	67.97	NM	77.44	77.11	73.78
18-Feb-03	NM*	69.02	68.26	74.75	70.35	67.97	NM	78.82	78.59	74.68
22-Oct-02	NM*	67.92	67.78	71.70	68.67	67.85	NM	76.89	76.51	73.12
17-Jul-02	NM*	68.61	67.78	72.65	68.76	67.95	NM	77.27	77.12	73.90
16-Apr-02	NM	69.76	68.14	74.11	68.68	68.07	NM	77.97	NM	74.98
31-Jan-02	-	69.77	68.28	74.83	68.78	68.06		78.86	79.41	75.48
18-Oct-01	NM	67.91	67.67	74.22	68.41	67.81		76.81	76.46	72.97
26-Jul-01	NM	68.55	67.84	73.85	68.77	68.00		77.40	77.03	73.73
26-Apr-01	NM	69.41	67.93	74.59	68.43	68.43				74.81
29-Jan-01	71.99	68.62	67.89	74.92	68.61	67.90		78.14	77.95	73.79
2-Nov-00								78.38	78.31	
31-Oct-00										
30-Oct-00		68.45	67.95	74.55	68.64	68.16				73.62
10-Aug-00								77.26	77.14	
9-Aug-00	DRY	69.11	66.54	DRY	68.71	67.88				74.12
27-Apr-00	DRY	70.59	68.16	73.97	68.70	68.00	71.34	79.15	77.25	75.35
25-Jan-00										73.48
24-Jan-00										
21-Jan-00		68.32		74.33						
20-Jan-00			67.93		68.61		70.42			
19-Jan-00	DRY	68.24	67.86	74.71	68.61	67.63	70.44			
27-Aug-99	DRY	68.46	67.66	NM	68.71	67.71	70.60			
18-Feb-98										
26-Oct-97										

**Table 2**  
**Historical Groundwater Elevation Data (feet)**  
Former Glovatorium Site  
3820 Manila Avenue, Oakland, California

Date	LFR-1	LFR-2	LFR-3	LFR-4	SOMA-1	SOMA-2	SOMA-3	SOMA-4	SOMA-4R	SOMA-5
29-Aug-11	69.84	69.33	64.55	65.26	65.01	70.47	66.96		70.16	78.10
10-Feb-11	69.90	69.92	64.51	65.15	64.67	71.57	66.77		70.21	77.18
4-Aug-10	69.73	69.42	64.01	64.76	64.17	70.81	66.74		69.89	57.02
1-Feb-10	70.38	72.31	65.57	NM	65.60	72.47	67.61		71.66	56.98
11-Aug-09	69.95	69.44	66.17	67.09	66.79	71.69	68.59		71.80	56.92
9-Feb-09	70.42	70.74	66.37	67.51	66.86	70.69	67.97	69.00		59.28
21-Aug-08	69.81	69.57	65.20	66.02	65.63	70.63	67.24	67.27		56.49
19-Feb-08	69.94	70.90	61.64	62.35	61.04	71.39	64.87	64.51		56.51
23-Aug-07	69.64	69.18	60.03	62.52	59.51	69.72	63.23	63.05		DRY
28-Feb-07	70.98	73.41	67.90	69.99	69.10	73.73	70.96	71.63		61.57
05-Jul-06	70.36	71.29	67.60	69.33	68.99	72.59	71.02	71.11		78.70
05-Jan-06	70.97	74.56	69.04	NM	70.11	77.59	71.99	FP		76.78
5-Jul-05	70.26	71.52	67.45	69.31	68.55	75.77	70.65	FP		78.66
1-Feb-05	70.61	72.64	68.09	NM	69.08	73.20	71.05	NM		78.92
3-Aug-04	70.13	70.70	66.42	NM	67.24	69.34	72.03	NM		62.18
28-Jan-04	70.41	NM	67.44	69.13	68.33	73.34	73.00	FP		58.50
29-Jul-03	70.18	70.96	66.71	68.37	67.84	69.84	72.48	FP		57.18
18-Feb-03	70.63	73.08	67.61	69.44	68.77	70.74	73.77	NM		56.59
22-Oct-02	70.00	70.48	66.13	67.85	66.92	69.00	72.01	NM		59.43
17-Jul-02	70.18	70.98	67.67	68.33	67.62	72.40	69.64	NM		59.53
16-Apr-02	70.36	71.71	67.60	69.27	68.85	73.06	70.90	68.56		59.48
31-Jan-02	70.56	71.92	67.72	NM	69.36	73.98	71.46	69.79 <sup>(FP 2.5)</sup>		57.38
18-Oct-01	70.04	70.53	66.09	67.74	67.89	71.86	68.32	69.77		NM
26-Jul-01	70.16	70.92	66.56	68.33						
26-Apr-01	70.23	71.90	67.62	68.87						
29-Jan-01	70.44	72.04	66.96	67.92						
2-Nov-00										
31-Oct-00				68.14						
30-Oct-00	70.22	71.62	66.99							
10-Aug-00										
9-Aug-00	70.16	69.99	66.76	68.39						
27-Apr-00										
25-Jan-00										
24-Jan-00										
21-Jan-00										
20-Jan-00										
19-Jan-00										
27-Aug-99										
18-Feb-98										
26-Oct-97										

**Table 2**  
**Historical Groundwater Elevation Data (feet)**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Date	MPE-1	MPE-2	FP (feet)	MPE-2 corr. FP	MPE-3	FP (feet)	MPE-3 corr. FP	MPE-4	MPE-5
29-Aug-11	71.32	70.18	0.00	NA	73.63	0.00	NA	73.49	74.26
10-Feb-11	71.78	70.80	0.00	NA	73.87	0.00	NA	74.06	74.24
4-Aug-10	71.79	70.09	2.44	71.75	72.36	0.84	72.93	72.91	74.05
1-Feb-10	74.75	73.77	0.24	73.93	75.56	0.34	75.79	75.33	76.15
11-Aug-09	72.31	72.22	-	-	73.54	-	-	72.71	74.45

**Notes:**

1= Survey elevation and water-level measurement taken at concrete surface. Elevations and water levels without a "1" in Notes Column were measured from top of casing.

2= Top of the casing was re-surveyed because it was broken.

"-" Not applicable or Not available

\* Monitoring well GW-1 was dry

Monitoring wells MW-8, MW-9, and LFR-4 were inaccessible in Third Quarter 2004

MPE-1 through MPE-5 were installed May 2009

FP= Floating product or sheen was observed.

\* Depth to groundwater corrected for product thickness:

Therefore, corrected depth to groundwater is equal to (measured depth to water)- 0.68x(free product thickness)

Therefore, corrected groundwater elevation is shown using both (measured and corrected) groundwater elevations

The correction factor is derived by the following: specific gravity of gas at 20 °C is 0.68, then specific gravity is multiplied by the thickness of free product

The specific gravity is defined as the ratio of water density to determined substance density. Water density is equal to one

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
<b>Temporary Sampling Points Installed by Geosolv, LLC</b>												
B-7 B-7 field	11-Aug-00	760	39	202				<0.0005	<0.0005	6.86	17.55	1279
	11-Aug-00											
	31-Oct-00	760	42	200	14.00	-1.00	0.05					
	31-Oct-00				17.22	<0.1	<2.0			6.16	16.05	1454
	31-Jan-00	720	43	170	12.00	-1.00	-1.00					
B-7 field	31-Jan-00					<0.1	<2.0			6.79	13.90	1424
	26-Apr-01				>3.3	0.24				6.59	16.30	1340
	26-Jul-01				15.30	0.02				6.39	15.97	1400
B-8R	12-Aug-09	NM	NM	NM	1.00	0.043	NM	NM	NM	6.48	18.17	1222
	2-Feb-10	NM	NM	NM	3.30	0.015	NM	NM	NM	6.00	16.85	1307
	6-Aug-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.34	17.54	1411
	11-Feb-11	NM	NM	NM	NM	NM	NM	NM	NM	6.35	16.63	1307
	31-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.38	17.38	1261
B-10 field B-10	10-Aug-00					0.02	0.06					
	31-Oct-00	500	76	120	6.60	<0.1	<2.0					
	31-Oct-00				8.35	0.00	0.00			6.21	16.62	1051
	31-Jan-01	480	81	72	6.10	<0.1	<2.0					
	31-Jan-01				1.44	0.07				6.81	14.66	1117
	11-Jun-01				1.31					6.65	16.70	1090
	26-Jul-01				6.50	0.00				6.38	16.09	1160
	10-Aug-01	520	74	145	6.00	<0.05	<0.04	<0.0005	0.00	6.86	16.80	1130
	6-Jul-05	NM	NM	NM	3.30	0.348	NM	<0.005	<0.005	6.70	16.55	1420
	9-Jan-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.68	16.48	1410
	6-Jul-06	NM	NM	NM	3.30	0.122	NM	<0.005	<0.005	7.19	15.80	1170
	1-Mar-07	NM	NM	NM	3.20	0.000	NM	<0.005	<0.005	7.12	10.79	776
	23-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	20-Feb-08	NM	NM	NM	3.30	0.244	NM	NM	NM	NM	NM	NM
21-Aug-08	NM	NM	NM	3.30	0.196	NM	NM	NM	NM	6.83	20.43	380
10-Feb-09	NM	NM	NM	3.30	0.012	NM	NM	NM	NM	6.89	14.33	7
B-10R	12-Aug-09	NM	NM	NM	3.30	0.070	NM	NM	NM	6.21	18.89	1083
	2-Feb-10	NM	NM	NM	3.30	0.001	NM	NM	NM	5.93	18.50	1173
	6-Aug-10	NM	NM	NM	3.30	0.017	NM	NM	NM	6.52	17.00	1163
	11-Feb-11	NM	NM	NM	0.00	0.054	NM	NM	NM	6.02	17.00	1021
	30-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.04	17.67	1017
<b>Temporary Sampling Points Installed by LFR</b>												
GW-2	01-Nov-00									6.31	18.97	1218
GW-2 field	30-Jan-01			63								
	31-Jan-01									6.82	13.75	846
	26-Apr-01				0.02					6.80	19.50	874
	26-Jul-01				0.03	0.02				6.74	20.30	803
	19-Oct-01	NM	NM	NM	NM	NM	NM	NM	NM	6.84	21.30	786

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
GW-2 cont.	31-Jan-02	NM	NM	NM	1.05	0.01	NM	NM	NM	6.70	17.70	797
	16,17-Apr-02	NM	NM	NM	0.65	0.02	NM	NM	NM	6.38	17.00	707
	17,18-Jul-02	NM	NM	NM	1.39	0.00	NM	NM	NM	6.35	17.75	798
	23-Oct-02	NM	NM	NM	0.12	0.04	NM	NM	NM	6.73	19.78	670
	19-Feb-03	NM	NM	NM	0.10	0.02	NM	NM	NM	6.86	18.10	607
	29-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	7.26	20.10	651
	29-Jan-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.72	18.00	542
	4-Aug-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.85	19.92	561
	2-Feb-05	NM	NM	NM	0.00	0.00	NM	NM	NM	6.82	18.34	503
	6-Jul-05	NM	NM	NM	0.00	0.00	NM	<0.005	<0.005	6.78	19.07	529
	6-Jan-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.88	17.89	510
	6-Jul-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.99	17.80	657
	28-Feb-07	NM	NM	NM	0.37	0.024	NM	<0.005	<0.005	6.27	16.70	544
	22-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	20-Feb-08	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	22-Aug-08	NM	NM	NM	0.30	0.032	NM	NM	NM	6.55	22.66	422
	9-Feb-09	NM	NM	NM	0.22	0.004	NM	NM	NM	6.59	17.40	614
	11-Aug-09	NM	NM	NM	0.07	0.000	NM	NM	NM	6.46	20.21	585
	1-Feb-10	NM	NM	NM	0.06	0.005	NM	NM	NM	6.13	17.75	473
5-Aug-10	NM	NM	NM	0.00	0.007	NM	NM	NM	6.71	20.74	661	
10-Feb-11	NM	NM	NM	0.88	0.000	NM	NM	NM	6.16	18.43	648	
29-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>6.33</b>	<b>20.48</b>	<b>437</b>	
GW-3	11-Aug-00	340	25	54		0.05	-1.00	<0.0005	<0.0005	7.05	21.43	860
GW-3 field	11-Aug-00											
GW-3 field	1-Nov-00									6.52	18.83	967
GW-3 field	1-Feb-01			54						6.89	17.29	602
	29-Jan-01				0.00	0.70				5.68	16.20	673
	11-Jun-01				0.14	0.00				6.53	22.25	547
	26-Jul-01									6.84	22.56	590
	19-Oct-01	NM	NM	NM	0.00	NM	NM	NM	NM	6.84	22.56	590
	31-Jan-02	NM	NM	NM	0.14	0.01	NM	NM	NM	6.70	18.40	593
	16,17-Apr-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.64	16.61	526
	17,18-Jul-02	NM	NM	NM	1.08	0.01	NM	NM	NM	6.32	17.10	545
	23-Oct-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.36	19.80	425
	19-Feb-03	NM	NM	NM	0.08	0.01	NM	NM	NM	6.77	17.80	412
	29-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	7.07	19.40	490
	29-Jan-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.65	18.20	450
	3-Aug-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.74	20.20	436
	2-Feb-05	NM	NM	NM	0.00	0.00	NM	NM	NM	6.28	19.39	445
	6-Jul-05	NM	NM	NM	0.00	0.00	NM	<0.005	<0.005	6.90	18.99	415
	6-Jan-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.89	18.75	471
	6-Jul-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.90	17.30	560
	1-Mar-07	NM	NM	NM	0.14	0.010	NM	<0.005	<0.005	6.59	16.15	518
	23-Aug-07	NM	NM	NM	0.07	0.210	NM	<0.005	<0.005	6.58	19.71	412
	20-Feb-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.62	18.66	275
22-Aug-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.10	21.52	463	
9-Feb-09	NM	NM	NM	0.10	0.009	NM	NM	NM	6.38	17.90	440	
11-Aug-09	NM	NM	NM	0.13	0.014	NM	NM	NM	6.30	20.47	505	
1-Feb-10	NM	NM	NM	1.37	0.012	NM	NM	NM	6.08	17.73	469	
5-Aug-10	NM	NM	NM	0.05	0.015	NM	NM	NM	6.46	19.03	525	
10-Feb-11	NM	NM	NM	0.19	0.000	NM	NM	NM	6.15	15.48	406	
29-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>6.22</b>	<b>21.34</b>	<b>426</b>	



**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
<b>GW-4</b>	30-Jan-01				2.00	0.04				6.60	13.48	479
	26-Jul-01				11.00	NM				6.45	19.44	827
	19-Oct-01	NM	NM	NM			NM	NM	NM	6.79	18.36	732
	31-Jan-02	NM	NM	NM	12.70	0.01	NM	NM	NM	6.50	12.00	414
	16,17-Apr-02	NM	NM	NM	6.40	0.03	NM	NM	NM	6.34	13.98	467
	17,18-Jul-02	NM	NM	NM	>3.3	0.03	NM	NM	NM	6.49	21.93	572
	23-Oct-02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.67	13.60	466
	30-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.30	18.70	430
	29-Jan-04	NM	NM	NM	3.30	0.00	NM	NM	NM	6.85	13.00	534
	3-Aug-04	NM	NM	NM	3.30	0.00	NM	NM	NM	6.96	22.62	509
	1-Feb-05	NM	NM	NM	3.30	0.00	NM	NM	NM	6.80	13.25	382
	6-Jul-05	NM	NM	NM	3.30	0.028	NM	<0.005	<0.005	6.98	18.71	403
	5-Jan-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.72	17.98	610
	28-Feb-07	NM	NM	NM	3.30	0.000	NM	<0.01	<0.01	6.70	12.63	369
	22-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	20-Feb-08	NM	NM	NM	1.18	0.000	NM	NM	NM	6.54	13.42	248
	21-Aug-08	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10-Feb-09	NM	NM	NM	3.30	0.000	NM	NM	NM	6.45	17.67	487
	11-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1-Feb-10	NM	NM	NM	3.30	0.019	NM	NM	NM	6.02	13.59	398	
4-Aug-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
10-Feb-11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
29-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
<b>Monitoring Wells Owned by TOSCO</b>												
<b>MW-11</b>	10-Aug-00	360	110	216	0.13	<0.05	<0.04	<0.0005	<0.0005	6.47	21.00	1
	10-Aug-00					0.04	0.00					
MW-11 field	1-Nov-00	300	120	190	<0.05	<0.1	<2.0			5.83	20.13	1
	1-Nov-00				0.01	0.00	-1.00					
MW-11 field	31-Jan-01	330	130	150	<0.05	<0.1	<2.0					
	31-Jan-01									6.35	13.67	1
	26-Apr-01				0.01					5.67	18.00	1210
	26-Jul-01				0.00	0.02				6.02	19.85	1120
	19-Oct-01	NM	NM	NM	0.00	NM	NM	NM	NM	6.41	21.25	130
	31-Jan-02	NM	NM	NM	0.05	0.04	NM	NM	NM	6.60	18.50	1090
	16,17-Apr-02	NM	NM	NM	0.00	0.00	NM	NM	NM	5.87	18.70	1150
	17,18-Jul-02	NM	NM	NM	0.00	0.02	NM	NM	NM	6.27	18.37	1180
	23-Oct-02	NM	NM	NM	0.00	0.04	NM	NM	NM	6.62	20.81	1220
	18-Feb-03	NM	NM	NM	0.00	0.04	NM	NM	NM	6.49	19.50	1170
	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.92	19.70	941
	29-Jan-04	NM	NM	NM	0.00	1.80	NM	NM	NM	6.61	19.00	1000
	3-Aug-04	NM	NM	NM	0.00	0.00	NM	NM	NM	8.86	21.70	825
	1-Feb-05	NM	NM	NM	0.00	0.00	NM	NM	NM	6.43	20.55	856
	5-Jul-05	NM	NM	NM	0.13	0.00	NM	<0.005	<0.005	6.16	20.25	1130
	5-Jan-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.39	20.61	817
	5-Jul-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.61	19.10	1120
	28-Feb-07	NM	NM	NM	0.74	0.000	NM	<0.005	<0.005	6.71	16.34	1100
22-Aug-07	NM	NM	NM	0.01	0.000	NM	<0.005	<0.005	5.46	19.97	865	
19-Feb-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.51	19.36	1081	
22-Aug-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.61	22.07	676	
10-Feb-09	NM	NM	NM	0.23	0.007	NM	NM	NM	6.39	21.73	1130	
12-Aug-09	NM	NM	NM	0.16	0.003	NM	NM	NM	6.00	19.91	1008	

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Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
MW-11 cont.	1-Feb-10	NM	NM	NM	0.15	0.005	NM	NM	NM	6.16	18.93	1001
	5-Aug-10	NM	NM	NM	0.45	0.005	NM	NM	NM	6.29	19.21	1007
	10-Feb-11	NM	NM	NM	1.30	0.015	NM	NM	NM	5.72	18.98	1075
	29-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.04	20.87	953
<b>Monitoring Wells Installed by LFR</b>												
LFR-1	11-Aug-00	250	110					<0.0005	<0.0005	6.97	19.73	936
LFR-1 field	09-Aug-00			51		0.02	-1.00					
	30-Oct-00	240	100	25	<0.05	<0.1	<2			6.38	17.94	697
LFR-1 field/sp	30-Oct-00				0.01/0.01	0.031/0.036	0.001/0.001					
LFR-1-spl	30-Oct-00	220	100	40	<0.05	<0.1	<2					
LFR-1 field	29-Jan-01	150	76	28	<0.05	<0.1	<2			6.82	15.00	870
	29-Jan-01				0.00	0.04						
LFR-1 Dup	29-Jan-01	150	75	26	<0.05	<0.1	<2					
	26-Apr-01				0.00					5.76	16.80	980
	26-Jul-01				0.05	0.01				6.48	19.38	772
	26-Jul-01	NM	NM	NM	0.42	NM	NM	NM	NM	6.73	20.83	661
	31-Jan-02	NM	NM	NM	0.03	0.01	NM	NM	NM	6.50	16.50	879
	16,17-Apr-02	NM	NM	NM	0.75	0.02	NM	NM	NM	5.88	16.37	1120
	17,18-Jul-02	NM	NM	NM	0.22	0.01	NM	NM	NM	6.40	17.02	832
	23-Oct-02	NM	NM	NM	0.30	0.00	NM	NM	NM	6.54	20.09	803
	18-Feb-03	NM	NM	NM	0.40	0.00	NM	NM	NM	6.47	16.90	607
	30-Jul-03	NM	NM	NM	0.02	0.00	NM	NM	NM	6.92	19.20	1330
	29-Jan-04	NM	NM	NM	0.00	5.10	NM	NM	NM	6.62	18.00	830
	4-Aug-04	NM	NM	NM	0.47	0.00	NM	NM	NM	6.39	19.01	1260
	2-Jan-05	NM	NM	NM	0.00	0.00	NM	NM	NM	6.73	17.80	744
	6-Jul-05	NM	NM	NM	0.09	0.002	NM	<0.005	<0.005	6.69	18.26	1360
	6-Jan-06	NM	NM	NM	0.03	0.000	NM	<0.005	<0.005	6.31	19.06	1260
	6-Jul-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.59	17.10	1270
	1-Mar-07	NM	NM	NM	0.45	0.000	NM	<0.005	<0.005	6.15	14.51	787
	23-Aug-07	NM	NM	NM	0.22	0.011	NM	<0.005	<0.005	5.45	19.42	642
	19-Feb-08	NM	NM	NM	0.08	0.000	NM	NM	NM	6.50	17.29	690
	22-Aug-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.50	21.13	432
	9-Feb-09	NM	NM	NM	0.00	0.000	NM	NM	NM	6.32	16.20	482
	11-Aug-09	NM	NM	NM	0.41	0.009	NM	NM	NM	6.18	18.72	652
	1-Feb-10	NM	NM	NM	0.89	0.000	NM	NM	NM	5.95	17.43	510
	5-Aug-10	NM	NM	NM	0.63	0.000	NM	NM	NM	6.66	19.14	547
	10-Feb-11	NM	NM	NM	0.00	0.000	NM	NM	NM	6.25	16.84	671
	29-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.20	20.13	638
LFR-2	11-Aug-00	590	33	174				<0.0005	0.00	7.15	19.87	1088
LFR-2 field	11-Aug-00				2.95	-1.00	0.01					
	02-Nov-00	550	40	180	6.20	<0.1	<2					
LFR-2 field	02-Nov-00				7.45	0.01	0.00			6.19	19.67	1306
LFR-2 field	30-Jan-01	480	21	130	4.60	<0.1	<2					
	30-Jan-01				1.04	0.01				6.60	12.73	945
	27-Apr-01				2.97					5.64	16.40	921
	26-Jul-01				4.60	0.01				6.31	18.66	970
	18-Oct-01	NM	NM	NM	8.20	NM	NM	NM	NM	6.78	19.56	109

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
LFR-2 cont.	31-Jan-02	NM	NM	NM	1.97	0.05	NM	NM	NM	6.50	16.60	644
	16,17-Apr-02	NM	NM	NM	7.60	0.06	NM	NM	NM	6.19	16.43	845
	17,18-Jul-02	NM	NM	NM	8.80	0.00	NM	NM	NM	6.52	16.24	986
	23-Oct-02	NM	NM	NM	3.30	0.06	NM	NM	NM	6.84	18.09	812
	18-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.50	16.90	617
	30-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.15	17.30	861
	29-Jan-04	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	4-Aug-04	NM	NM	NM	3.30	0.00	NM	NM	NM	6.76	17.39	795
	1-Feb-05	NM	NM	NM	2.25	0.00	NM	NM	NM	6.46	17.68	559
	5-Jul-05	NM	NM	NM	3.30	0.00	NM	<0.005	<0.005	6.56	18.18	712
	5-Jan-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.58	18.23	721
	6-Jul-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.91	17.90	679
	28-Feb-07	NM	NM	NM	3.30	0.000	NM	<0.025	<0.025	6.41	16.54	782
	22-Aug-07	NM	NM	NM	3.30	0.000	NM	<0.025	<0.025	6.05	17.60	814
	20-Feb-08	NM	NM	NM	1.77	0.000	NM	NM	NM	6.58	17.52	616
	21-Aug-08	NM	NM	NM	3.30	0.092	NM	NM	NM	6.68	23.60	610
	10-Feb-09	NM	NM	NM	3.30	0.009	NM	NM	NM	6.53	17.41	980
	11-Aug-09	NM	NM	NM	3.30	0.057	NM	NM	NM	6.45	18.56	943
	1-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.12	17.76	836
	5-Aug-10	NM	NM	NM	NM	NM	NM	NM	NM	6.60	17.03	928
10-Feb-11	NM	NM	NM	NM	NM	NM	NM	NM	6.09	17.94	833	
29-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>6.34</b>	<b>17.97</b>	<b>868</b>
LFR-3	10-Aug-00	310	85	162	<0.1	0.15	0.04	<0.0005	<0.0005	6.57	19.92	951
LFR-3 split	10-Aug-00	300	85	152				<0.0005	<0.0005			
LFR-3 field	10-Aug-00					0.06	-1.00					
LFR-3 field	01-Nov-00	350	66	160	<0.05	<0.1	<2			6.16	17.71	1164
LFR-3 field	01-Nov-00				0.01	0.01	0.00					
LFR-3 field	30-Jan-01	250	31	71	<0.05	<0.1	<2					
LFR-3 field	30-Jan-01				0.03					6.64	17.29	541
LFR-3 field	11-Jun-01				0.01					5.43	18.00	613
LFR-3 field	26-Jul-01				0.70	0.03				6.25	20.50	602
LFR-3 field	18-Oct-01	NM	NM	NM	0.12	NM	NM	NM	NM	6.50	21.39	645
LFR-3 field	31-Jan-02	NM	NM	NM	0.06	0.02	NM	NM	NM	6.30	19.10	566
LFR-3 field	16,17-Apr-02	NM	NM	NM	1.20	0.04	NM	NM	NM	5.78	18.68	566
LFR-3 field	17,18-Jul-02	NM	NM	NM	0.08	0.01	NM	NM	NM	6.17	18.42	585
LFR-3 field	23-Oct-02	NM	NM	NM	1.35	0.00	NM	NM	NM	6.32	20.65	457
LFR-3 field	19-Feb-03	NM	NM	NM	0.74	0.00	NM	NM	NM	6.34	19.30	497
LFR-3 field	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.87	19.80	457
LFR-3 field	29-Jan-04	NM	NM	NM	1.70	0.00	NM	NM	NM	6.60	20.00	393
LFR-3 field	3-Aug-04	NM	NM	NM	0.34	0.00	NM	NM	NM	6.24	19.96	415
LFR-3 field	2-Feb-05	NM	NM	NM	0.12	0.00	NM	NM	NM	6.17	20.06	381
LFR-3 field	5-Jul-05	NM	NM	NM	3.30	0.205	NM	<0.005	<0.005	6.39	20.01	463
LFR-3 field	9-Dec-05	NM	NM	NM	NM	NM	NM	<0.005	<0.005	NM	NM	NM
LFR-3 field	6-Jan-06	NM	NM	NM	2.16	0.001	NM	<0.005	<0.005	6.27	20.42	461
LFR-3 field	5-Jul-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.56	20.10	640
LFR-3 field	1-Mar-07	NM	NM	NM	1.03	0.005	NM	<0.005	<0.005	6.17	17.44	514
LFR-3 field	22-Aug-07	NM	NM	NM	0.84	0.000	NM	<0.005	<0.005	5.45	20.36	547
LFR-3 field	20-Feb-08	NM	NM	NM	0.20	0.000	NM	NM	NM	6.38	19.55	607
LFR-3 field	22-Aug-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.63	21.09	406
LFR-3 field	9-Feb-09	NM	NM	NM	0.00	0.002	NM	NM	NM	6.21	17.30	453
LFR-3 field	11-Aug-09	NM	NM	NM	0.12	0.007	NM	NM	NM	6.11	19.66	482
LFR-3 field	1-Feb-10	NM	NM	NM	2.13	0.009	NM	NM	NM	5.84	19.57	554
LFR-3 field	5-Aug-10	NM	NM	NM	0.10	0.003	NM	NM	NM	6.32	19.41	479
LFR-3 field	10-Feb-11	NM	NM	NM	0.49	0.000	NM	NM	NM	6.19	18.82	492
LFR-3 field	30-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>5.55</b>	<b>19.14</b>	<b>466</b>

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
LFR-4	11-Aug-00	630	71	161				<0.0005	<0.0005	6.90	20.11	1240
	10-Aug-00							<0.0005	<0.0005			
LFR-4 FB	11-Aug-00				0.22	0.02	0.00					
LFR-4 field	31-Oct-00	490	28	130	1.00	<0.1	<2			6.21	18.11	830
LFR-4 field	01-Feb-01				0.67	0.02	0.00					
LFR-4 field	01-Feb-01	460	25	120	1.30	<0.1	<2			6.55	15.28	916
	27-Apr-01				1.43	0.02				5.79	18.30	1060
	26-Jul-01				0.95	0.00				6.26	19.23	866
	16,17-Apr-02	NM	NM	NM	5.10	0.03	NM	NM	NM	6.19	18.04	925
	17,18-Jul-02	NM	NM	NM	>3.3	0.01	NM	NM	NM	5.92	17.28	878
	23-Oct-02	NM	NM	NM	3.30	0.00	NM	NM	NM	6.69	19.90	602
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.38	19.10	994
	29-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.94	19.00	994
	29-Jan-04	NM	NM	NM	0.71	0.00	NM	NM	NM	6.53	19.50	689
	5-Jul-05	NM	NM	NM	3.30	0.00	NM	<0.005	<0.005	6.49	19.20	772
	5-Jan-06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	5-Jul-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.75	18.90	912
	1-Mar-07	NM	NM	NM	3.30	0.000	NM	<0.01	<0.01	6.46	15.75	972
	22-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	19-Feb-08	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	21-Aug-08	NM	NM	NM	3.30	0.00	NM	NM	NM	6.13	21.38	353
	10-Feb-09	NM	NM	NM	3.30	0.00	NM	NM	NM	6.38	20.16	591
	11-Aug-09	NM	NM	NM	3.30	0.07	NM	NM	NM	6.22	17.62	536
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	5-Aug-10	NM	NM	NM	3.30	0.00	NM	NM	NM	6.36	17.99	511
	10-Feb-11	NM	NM	NM	3.30	0.00	NM	NM	NM	5.97	18.28	544
	31-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	5.90	18.39	471
<b>Monitoring Wells Installed by SOMA</b>												
SOMA-1	19-Oct-01	NM	NM	NM	0.75	NM	NM	NM	NM	6.77	18.15	146
	31-Jan-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.70	17.50	1160
	16,17-Apr-02	NM	NM	NM	0.17	0.03	NM	NM	NM	6.01	17.98	1280
	17,18-Jul-02	NM	NM	NM	0.11	0.01	NM	NM	NM	6.52	16.21	1270
	23-Oct-02	NM	NM	NM	0.24	0.01	NM	NM	NM	6.60	17.77	1270
	19-Feb-03	NM	NM	NM	0.00	0.01	NM	NM	NM	6.33	17.40	1350
	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.90	17.80	1300
	29-Jan-04	NM	NM	NM	2.10	0.00	NM	NM	NM	6.51	17.60	959
	3-Aug-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.42	17.89	956
	1-Feb-05	NM	NM	NM	0.00	0.00	NM	NM	NM	6.26	17.70	985
	5-Jul-05	NM	NM	NM	0.19	0.00	NM	<0.005	<0.005	6.36	19.36	1220
	5-Jan-06	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.54	18.02	926
	5-Jul-06	NM	NM	NM	0.30	0.011	NM	<0.005	<0.005	6.68	18.40	1150
	28-Feb-07	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	6.10	17.17	1140
	22-Aug-07	NM	NM	NM	0.00	0.000	NM	<0.005	<0.005	5.73	17.75	939
	20-Feb-08	NM	NM	NM	0.00	0.006	NM	NM	NM	6.53	17.93	791
	21-Aug-08	NM	NM	NM	0.00	0.000	NM	NM	NM	6.21	19.33	834
	10-Feb-09	NM	NM	NM	0.28	0.011	NM	NM	NM	6.42	19.31	779
	11-Aug-09	NM	NM	NM	0.10	0.009	NM	NM	NM	6.20	17.91	1102
	2-Feb-10	NM	NM	NM	0.03	0.003	NM	NM	NM	5.80	17.64	1088
5-Aug-10	NM	NM	NM	0.17	0.006	NM	NM	NM	6.21	17.60	1093	
10-Feb-11	NM	NM	NM	0.00	0.027	NM	NM	NM	5.92	18.25	1082	
	29-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.20	17.63	681

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Giovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
<b>SOMA-2</b>	19-Oct-01	NM	NM	NM	44.00	NM	NM	NM	NM	6.87	16.93	122
	31-Jan-02	NM	NM	NM	10.50	0.34	NM	NM	NM	6.90	15.20	1140
	16,17-Apr-02	NM	NM	NM	8.70	0.01	NM	NM	NM	6.30	15.25	1170
	17,18-Jul-02	NM	NM	NM	>3.3	0.00	NM	NM	NM	6.86	14.19	1170
	23-Oct-02	NM	NM	NM	3.30	0.00	NM	NM	NM	6.97	16.47	1380
	19-Feb-03	NM	NM	NM	2.93	0.01	NM	NM	NM	6.86	15.70	1420
	29-Jul-03	NM	NM	NM	1.37	0.00	NM	NM	NM	7.91	16.80	1290
	28-Jan-04	NM	NM	NM	0.00	0.00	NM	NM	NM	6.65	16.60	835
	4-Aug-04	NM	NM	NM	0.34	0.00	NM	NM	NM	6.78	16.76	1180
	2-Feb-05	NM	NM	NM	3.30	0.00	NM	NM	NM	6.52	15.96	1310
	6-Jul-05	NM	NM	NM	3.30	0.00	NM	<0.005	<0.005	6.64	16.12	1290
	9-Jan-06	NM	NM	NM	3.30	0.001	NM	<0.005	<0.005	6.92	16.30	982
	6-Jul-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	7.08	16.00	1170
	1-Mar-07	NM	NM	NM	3.30	0.000	NM	<0.025	<0.025	7.24	10.16	1288
	23-Aug-07	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.20	15.98	764
	20-Feb-08	NM	NM	NM	3.30	0.000	NM	NM	NM	6.85	13.37	1434
	21-Aug-08	NM	NM	NM	3.30	0.000	NM	NM	NM	7.19	17.59	834
	10-Feb-09	NM	NM	NM	3.30	0.000	NM	NM	NM	6.86	19.33	912
	11-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	2-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.13	18.01	1150
6-Aug-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.41	17.37	1041	
11-Feb-11	NM	NM	NM	3.30	0.000	NM	NM	NM	6.63	16.92	1062	
<b>30-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>6.45</b>	<b>17.05</b>	<b>1172</b>
<b>SOMA-3</b>	19-Oct-01	NM	NM	NM	0.40	NM	NM	NM	NM	6.91	17.09	158
	31-Jan-02	NM	NM	NM	0.78	0.38	NM	NM	NM	6.50	14.90	1320
	16,17-Apr-02	NM	NM	NM	1.03	0.00	NM	NM	NM	6.23	15.83	1260
	17,18-Jul-02	NM	NM	NM	>3.3	0.00	NM	NM	NM	6.77	15.03	1290
	23-Oct-02	NM	NM	NM	3.30	0.03	NM	NM	NM	7.02	16.44	970
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.87	15.80	1350
	29-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.27	16.20	1200
	29-Jan-04	NM	NM	NM	3.30	0.00	NM	NM	NM	6.75	16.20	925
	4-Aug-04	NM	NM	NM	3.30	0.00	NM	NM	NM	6.79	16.43	956
	2-Feb-05	NM	NM	NM	0.15	0.00	NM	NM	NM	6.62	16.64	968
	6-Jul-05	NM	NM	NM	1.12	0.00	NM	<0.005	<0.005	6.56	16.79	935
	6-Jan-06	NM	NM	NM	0.49	0.000	NM	<0.005	<0.005	6.38	16.84	1120
	6-Jul-06	NM	NM	NM	0.53	0.000	NM	<0.005	<0.005	7.11	16.00	1020
	1-Mar-07	NM	NM	NM	0.69	0.000	NM	<0.005	<0.005	6.78	14.34	528
	23-Aug-07	NM	NM	NM	1.20	0.000	NM	<0.005	<0.005	6.45	17.13	495
	20-Feb-08	NM	NM	NM	3.21	0.158	NM	NM	NM	6.98	14.19	31
	21-Aug-08	NM	NM	NM	0.27	0.000	NM	NM	NM	6.62	19.87	341
	10-Feb-09	NM	NM	NM	0.90	0.008	NM	NM	NM	6.75	16.30	1149
	12-Aug-09	NM	NM	NM	0.75	0.028	NM	NM	NM	6.48	19.26	682
	2-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.01	17.32	1185
6-Aug-10	NM	NM	NM	1.40	0.013	NM	NM	NM	6.69	17.42	1118	
11-Feb-11	NM	NM	NM	1.64	0.000	NM	NM	NM	6.09	16.22	1055	
<b>30-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>6.09</b>	<b>17.98</b>	<b>1033</b>
<b>SOMA-4</b>	Oct-19-01	NM	NM	NM	0.26	NM	NM	NM	NM	6.53	16.88	145
	23-Oct-02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

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Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)	
SOMA-4 cont.	19-Feb-03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	29-Jul-03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	5-Jul-05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	5-Jan-06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	10-Feb-09	NM	NM	NM	3.10	0.003	NM	NM	NM	6.61	19.42	1071	
SOMA-4R	12-Aug-09	NM	NM	NM	2.93	0.008	NM	NM	NM	6.25	17.86	1023	
	2-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.04	18.61	1573	
	6-Aug-10	NM	NM	NM	3.30	0.040	NM	NM	NM	6.42	17.17	1403	
	11-Feb-11	NM	NM	NM	NM	NM	NM	NM	NM	6.11	17.28	1425	
	30-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.16	17.82	1125	
SOMA-5	4-Aug-04	NM	NM	NM	3.30	0.00	NM	NM	NM	7.14	16.98	773	
	2-Feb-05	NM	NM	NM	3.30	0.00	NM	NM	NM	7.20	15.99	549	
	6-Jul-05	NM	NM	NM	3.30	0.00	NM	<0.005	<0.005	6.75	16.99	1150	
	9-Jan-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	6.78	16.72	1200	
	6-Jul-06	NM	NM	NM	3.30	0.000	NM	<0.005	<0.005	7.81	16.30	454	
	1-Mar-07	NM	NM	NM	NM	NM	NM	<0.025	<0.025	NM	NM	NM	
	23-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	20-Feb-08	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	21-Aug-08	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	10-Feb-09	NM	NM	NM	3.30	0.000	NM	NM	NM	NM	7.07	15.80	538
	12-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	6-Aug-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
11-Feb-11	NM	NM	NM	1.03	0.035	NM	NM	NM	NM	6.17	16.82	987	
	30-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.73	17.84	1071	
MPE-1	12-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	6.60	16.89	557	
	2-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	5.94	16.73	672	
	6-Aug-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.33	16.73	545	
	11-Feb-11	NM	NM	NM	NM	NM	NM	NM	NM	6.29	16.60	479	
	30-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	5.96	16.98	478	
MPE-2	12-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	6.46	18.23	1043	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	5-Aug-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	11-Feb-11	NM	NM	NM	3.30	0.000	NM	NM	NM	6.35	16.82	1122	
	31-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.43	17.19	1108	
MPE-3	12-Aug-09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	5-Aug-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	11-Feb-11	NM	NM	NM	3.30	0.000	NM	NM	NM	6.35	16.64	1077	
	31-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.26	17.29	1017	
MPE-4	12-Aug-09	NM	NM	NM	1.87	0.004	NM	NM	NM	6.39	19.06	839	
	2-Feb-10	NM	NM	NM	3.30	0.000	NM	NM	NM	6.33	16.74	1279	
	6-Aug-10	NM	NM	NM	NM	0.188	NM	NM	NM	6.60	16.51	639	
	11-Feb-11	NM	NM	NM	3.30	0.000	NM	NM	NM	6.29	16.84	1047	
	30-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.25	17.50	944	
MPE-5	12-Aug-09	NM	NM	NM	2.85	0.00	NM	NM	NM	6.41	17.11	1077	
	2-Feb-10	NM	NM	NM	3.30	0.00	NM	NM	NM	6.16	16.46	1078	
	6-Aug-10	NM	NM	NM	3.30	0.00	NM	NM	NM	6.32	16.39	988	
	11-Feb-11	NM	NM	NM	3.30	0.00	NM	NM	NM	6.17	16.75	1026	
	31-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM	6.23	17.29	1091	

**Table 3**  
**Historical Analytical Results and Field Measurements for**  
**Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
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Notes

Samples with "field" in the well ID indicate that the results are from field measurements obtained using a Hach spectrometer or a Hydrolab Quanta flow-through instrument.

since April 2001, field measurements have been performed using a Hach Calorimeter

NM= not measured

MPE-1 through MPE-5 were installed May 2009

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
<b>Temporary Sampling Points Installed by Geosolv, LLC</b>								
B-2	24-Jan-00	20 <sup>J</sup>	31 <sup>YJ</sup>	<0.05	<0.013	<0.013	0.11 <sup>C</sup>	0.22 <sup>C</sup>
B-3	24-Jan-00	4.9 <sup>J</sup>	8.8 <sup>YJ</sup>	<0.01	0.0048	<0.0025	<0.0025	0.0714
B-7	24-Jan-00	19	30 <sup>J</sup>	<0.05	<0.013	0.062	<0.013	0.207
	11-Aug-00	3.7 <sup>J</sup>	6.8 <sup>YHJ</sup>	0.02	0.0077 <sup>J</sup>	0.047 <sup>J</sup>	0.007 <sup>J</sup>	0.065 <sup>CJ</sup>
	31-Oct-00	62 <sup>J</sup>	98 <sup>YHJ</sup>	0.01 <sup>J</sup>	0.0091 <sup>J</sup>	0.061 <sup>J</sup>	<0.0005	0.237 <sup>J</sup>
	27-Jul-01	2.5	5.2 <sup>HY</sup>	0.0057	0.0070	0.051	0.0082	0.0740
	31-Jan-01	5.3	7.9	0.0100	0.0089	0.059	0.0097	0.0870
	26-Apr-01	4.5	8.9 <sup>H</sup>	0.0069	0.0110	0.071	0.077 <sup>C</sup>	0.2080
B-8	24-Jan-00	11 <sup>J</sup>	19 <sup>YJ</sup>	<0.01	<0.0025	<0.0025	<0.0025	0.17 <sup>C</sup>
B-8R	12-Aug-09	22	39 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	2-Feb-10	8.2	13 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Aug-10	1.3	2 <sup>Y</sup>	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007
	11-Feb-11	1.0	1.6 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
31-Aug-11	3.6	5.1 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
B-9	24-Jan-00	1 <sup>YJ</sup>	1.8 <sup>YHJ</sup>	<0.002	<0.0005	<0.0005	0.01 <sup>C</sup>	0.0089 <sup>C</sup>
B-10	24-Jan-00	2.4 <sup>Y</sup>	4.2	0.0140 <sup>C</sup>	0.0072	0.027	0.025 <sup>C</sup>	0.032
	10-Aug-00	2.8 <sup>Y</sup>	6.1 <sup>Y</sup>	0.1600	0.0073	0.012	<0.005	0.0241
	31-Oct-00	2.2 <sup>YZ</sup>	3.5 <sup>Z</sup>	<0.002	0.0038	0.011	<0.0005	0.0182
	27-Jul-01	1.7	3.6 <sup>H</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	31-Jan-01	2.4 <sup>Z</sup>	3.6 <sup>HYZ</sup>	<0.002	0.0031	0.010	0.00076 <sup>C</sup>	0.0197
	26-Apr-01	2.4 <sup>Z</sup>	4.7 <sup>Z</sup>	0.0025	0.0041	0.013	ND	0.0290
	6-Jul-05	3.4 <sup>H</sup>	4.5 <sup>HY</sup>	<0.1	<0.1	<0.1	<0.1	<0.1
	9-Jan-06	11 <sup>Y</sup>	15	<0.1	<0.1	<0.1	<0.1	<0.1
	6-Jul-06	1.3	2.2 <sup>HY</sup>	<0.1	<0.1	<0.1	<0.1	<0.1
	1-Mar-07	0.5 <sup>L</sup>	0.810 <sup>HY</sup>	<0.1	<0.1	<0.1	<0.1	<0.1
	23-Aug-07	NA	NA	NA	NA	NA	NA	NA
	20-Feb-08	860	1,100 <sup>Y</sup>	<0.25	<0.25	<0.25	<0.25	<0.25
25-Mar-08	2,000	43 <sup>Yb</sup>	<0.36	<0.36	0.75	0.42	2.12	
21-Aug-08	760	1,200 <sup>Y</sup>	<0.083	<0.083	<0.083	<0.083	<0.083	
10-Feb-09	1.5	2.3 <sup>Y</sup>	<0.02	<0.02	<0.02	<0.02	<0.02	
B-10R	12-Aug-09	50	88 <sup>Y</sup>	0.067	<0.013	<0.013	<0.013	<0.013
	2-Feb-10	9.3	15 <sup>Y</sup>	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063
	6-Aug-10	37	58 <sup>Y</sup>	<0.001	0.0012	0.0013	<0.001	<0.001
	11-Feb-11	37	57 <sup>Y</sup>	<0.013	<0.013	<0.013	<0.013	<0.013
	30-Aug-11	1.8	2.6 <sup>Y</sup>	<0.013	<0.013	<0.013	<0.013	<0.013
B-13	24-Jan-00	1.7 <sup>J</sup>	3 <sup>YJ</sup>	<0.01	<0.0025	<0.0025	<0.0025	0.0200
<b>Temporary Sampling Points Installed by LFR</b>								
GW-2	19-Jul-99	<0.05	<0.05	0.0025	<0.0005	0.00071	<0.0005	0.00074
	20-Jan-00	0.15	0.25 <sup>Y</sup>	0.0044	<0.0005	<0.0005	0.00097 <sup>C</sup>	0.0013
	28-Apr-00	<0.05	0.095 <sup>YZ</sup>	<0.0021	<0.0005	<0.0005	<0.0005	<0.0005
	2-Nov-00	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-01	<0.05	ND	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-01	<0.05	0.086 <sup>YZ</sup>	0.0022	<0.0005	0.0240	<0.0005	<0.0005
	27-Jul-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	<0.05	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050



**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
GW-2 cont.	31-Jan-02	<0.05	<0.05	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22-Oct-02	<0.05	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	19-Feb-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jul-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	4-Aug-04	0.054 <sup>YZ</sup>	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jan-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jul-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	NA	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA	NA
	22-Aug-08	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	9-Feb-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11-Aug-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	<0.05	<0.05	<0.0005	0.0046	<0.0005	<0.0005	<0.0005	
5-Aug-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
29-Aug-11	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
GW-3	19-Jul-99	0.070 <sup>Z</sup>	0.100 <sup>Z</sup>	<0.0020	<0.0005	<0.0005	<0.0005	0.00064
	20-Jan-00	0.15	0.260 <sup>Y</sup>	<0.0020	<0.0005	<0.0005	<0.0005	0.00130 <sup>C</sup>
	27-Apr-00	0.20 <sup>YZ</sup>	0.380 <sup>YZ</sup>	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
	27-Apr-00	0.30 <sup>Z</sup>	0.570 <sup>YZ</sup>	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
	11-Aug-00	<0.05	0.077 <sup>YZ</sup>	<0.0020	<0.0005	<0.0005	<0.0005	0.00051
	2-Nov-00	<0.05	0.050 <sup>YZ</sup>	0.0026	<0.0005	<0.0005	<0.0005	<0.00050
	1-Feb-01	<0.05	<0.05	<.0020	<.0005	<0.0005	<0.0005	<0.00050
	27-Apr-01	<0.05	0.062 <sup>YZ</sup>	0.0056	<0.0005	<0.0005	<0.0005	<0.00050
	27-Jul-01	<0.05	<0.05	0.0008	<0.0005	<0.0005	<0.0005	<0.00050
	19-Oct-01	0.054	0.11	<0.0100	<0.0100	<0.0100	<0.0100	<0.02000
	31-Jan-02	<0.05	0.070 <sup>YZ</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.00500 <sup>b</sup>
	16,17-Apr-02	<0.05	0.055 <sup>YZ</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	0.11 <sup>YZ</sup>	0.140 <sup>YZ</sup>	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
	19-Feb-03	0.068 <sup>YZ</sup>	0.100 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jul-03	0.120 <sup>YZ</sup>	0.180 <sup>YZ</sup>	<0.010	<0.010	<0.010	<0.010	<0.010
	28-Jan-04	0.051 <sup>YZ</sup>	0.086 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	3-Aug-04	0.170 <sup>YZ</sup>	0.150 <sup>YZ</sup>	<0.017	<0.017	<0.017	<0.017	<0.017
	2-Feb-05	0.190 <sup>Z</sup>	0.250 <sup>HYZ</sup>	<0.031	<0.031	<0.031	<0.031	<0.031
	6-Jul-05	0.084 <sup>YZ</sup>	0.11 <sup>YZ</sup>	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	6-Jan-06	0.063 <sup>YZ</sup>	0.088 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jul-06	0.091 <sup>YZ</sup>	.140 <sup>YZ</sup>	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	1-Mar-07	0.088 <sup>YZ</sup>	0.140 <sup>YZ</sup>	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017
23-Aug-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
20-Feb-08	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
22-Aug-08	0.079 <sup>Y</sup>	0.120 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
9-Feb-09	0.070 <sup>Y</sup>	0.084 <sup>YZ</sup>	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
11-Aug-09	0.075 <sup>Y</sup>	0.085 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
5-Aug-10	0.066 <sup>YZ</sup>	0.10 <sup>YZ</sup>	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
GW-3 cont.	10-Feb-11	<0.05	0.072 <sup>YZ</sup>	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	29-Aug-11	<0.05	0.068 <sup>YZ</sup>	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
GW-4 Split	21-Jul-99	6.80 <sup>J</sup>	10 <sup>YHJ</sup>	0.0022	<0.0005	<0.0005	<0.0005	0.0029 <sup>J</sup>
	20-Jan-00	0.97 <sup>J</sup>	1.60 <sup>YJ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	20-Jan-00	0.85 <sup>J</sup>	1.50 <sup>YJ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-00	0.31	0.60 <sup>Y</sup>	<0.0020	<0.0005	<0.0005	<0.0005	0.0027
	30-Jan-01	0.39	0.58 <sup>HY</sup>	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.42	0.86 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	0.83	1.60	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100
	31-Jan-02	0.92	1.70 <sup>HY</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	0.40	0.67 <sup>HY</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.97	1.7 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	0.55	0.700 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	0.58	0.880 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	0.39	0.580 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	0.31	0.520 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	3-Aug-04	0.71	0.640 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	0.28	0.370 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	0.12	0.16 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jan-06	0.54	0.75 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	0.56	0.90 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	NA	NA	NA	NA	NA	NA	NA
20-Feb-08	0.50	0.63 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
21-Aug-08	NA	NA	NA	NA	NA	NA	NA	
10-Feb-09	0.49	0.58 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
11-Aug-09	NA	NA	NA	NA	NA	NA	NA	
1-Feb-10	0.25	0.42 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
4-Aug-10	NA	NA	NA	NA	NA	NA	NA	
10-Feb-11	NA	NA	NA	NA	NA	NA	NA	
29-Aug-11	NA	NA	NA	NA	NA	NA	NA	
GW-5	27-Aug-99	<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
	20-Jan-00	<0.05	0.057 <sup>Y</sup>	0.0007	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-00	0.05 <sup>Y</sup>	0.096 <sup>Y</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	5-Aug-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
GW-6A Split	27-Aug-99	<0.05	0.054 <sup>Y</sup>	0.0089	<0.0005	<0.0005	<0.0005	<0.0005
	27-Aug-99	<0.05	0.057 <sup>Y</sup>	0.0087	<0.0005	<0.0005	<0.0005	<0.0005
	25-Jan-00	<0.05	<0.05	0.0022	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-00	<0.05	0.087 <sup>Y</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
GW-7 Split	15-Jul-99	NA	NA	<0.0025	0.05 <sup>J</sup>	<0.0005	0.000727	0.00313 <sup>J</sup>
	15-Jul-99	NA	NA	NA	NA	NA	NA	NA
	15-Jul-99	NA	NA	NA	0.0567 <sup>J</sup>	<0.002	<0.002	<0.002
	15-Jul-99	NA	NA	NA	0.0755 <sup>J</sup>	<0.002	<0.002	<0.002
GW-8 Split	19-Jul-99	<0.05	<0.05	0.0078	<0.0005	0.00064	<0.0005	0.00151
	20-Jan-00	0.19	0.33 <sup>Y</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	20-Jan-00	0.20	0.37 <sup>Y</sup>	<0.002	0.00058	<0.0005	<0.0005	<0.0005
	28-Apr-00	0.064 <sup>YZ</sup>	0.12 <sup>YZ</sup>	0.013	<0.0005	<0.0005	<0.0005	<0.0005

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
<b>Monitoring Wells Owned by TOSCO</b>								
<b>MW-11</b>	25-Jan-00	< 0.05	<0.05	0.0090	<0.0005	<0.0005	<0.0005	<0.0005
	28-Apr-00	<0.05	<0.05	<0.0087	<0.0005	<0.0005	<0.0005	<0.0005
	10-Aug-00	<0.05	<0.05	0.0110	<0.0005	<0.0005	<0.0005	<0.0005
	1-Nov-00	<0.05	<0.05	0.0068	<0.0005	<0.0005	<0.0005	<0.0005
	31-Jan-01	< 0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Jul-01	<0.05	0.10 <sup>HY</sup>	0.0010	<0.0005	<0.0005	<0.0005	0.0007
	19-Oct-01	<0.05	<0.05	<0.0050	<0.0050	<0.005	<0.005	<0.010
	31-Jan-02	<0.05	0.071 <sup>Y</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>
	16,17-Apr-02	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	3-Aug-04	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	5-Jul-05	<0.05	<0.05	0.0008	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jan-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.05	<0.05	0.001	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
22-Aug-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
19-Feb-08	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
22-Aug-08	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
12-Aug-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
5-Aug-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
29-Aug-11	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
<b>Monitoring Wells Installed by LFR</b>								
<b>LFR-1</b>	9-Aug-00	0.53	1.2	0.0095	<0.0005	<0.0005	<0.0005	<0.0005
	30-Oct-00	0.24 <sup>YZ</sup>	0.37 <sup>YZ</sup>	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	Split	0.24 <sup>YZ</sup>	0.37 <sup>YZ</sup>	0.0043	<0.0005	<0.0005	<0.0005	<0.0005
	29-Jan-01	0.21 <sup>YZ</sup>	0.31 <sup>YZ</sup>	0.0033	<0.0005	<0.0005	<0.0005	<0.0005
	26-Apr-01	0.092	0.18 <sup>YZ</sup>	0.0044	<0.0005	0.002	<0.0005	<0.0005
	27-Jul-01	0.086	0.18 <sup>YZ</sup>	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	18-Oct-01	0.19	0.38	<0.031	<0.031	<0.031	<0.031	<0.062
	31-Jan-02	0.15 <sup>YZ</sup>	0.27 <sup>YZ</sup>	<0.013 <sup>b</sup>	<0.013 <sup>b</sup>	<0.013 <sup>b</sup>	<0.013 <sup>b</sup>	<0.013 <sup>b</sup>
	16,17-Apr-02	0.10 <sup>YZ</sup>	0.17 <sup>YZ</sup>	< 0.013	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.084 <sup>YZ</sup>	0.14 <sup>YZ</sup>	<0.013	<0.013	<0.013	<0.013	<0.013
	22,23-Oct-02	<0.05	0.078 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	0.076 <sup>YZ</sup>	0.110 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.05	0.068 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	0.060 <sup>YZ</sup>	0.100 <sup>YZ</sup>	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063
	4-Aug-04	<0.05	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.05	0.056 <sup>YZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jan-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jul-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Mar-07	<0.05	0.053 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
23-Aug-07	0.070 <sup>YZ</sup>	0.120 <sup>YZ</sup>	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	
19-Feb-08	0.062 <sup>Y</sup>	0.077 <sup>Y</sup>	<0.001	<0.001	<0.001	<0.001	0.0033	
22-Aug-08	<0.05	0.059 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

**Table 4**  
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**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
LFR-1 cont.	9-Feb-09	0.057 <sup>Y</sup>	0.067 <sup>YZ</sup>	<0.001	<0.001	<0.001	<0.001	<0.001
	11-Aug-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-10	<0.05	0.051 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Aug-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	10-Feb-11	<0.05	0.058 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	<b>29-Aug-11</b>	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
LFR-2	11-Aug-00	0.59	1.10 <sup>YH</sup>	0.0022	0.0018	<0.0005	<0.0005	0.0013 <sup>C</sup>
	2-Nov-00	0.38	0.70 <sup>YH</sup>	0.003	0.0035	0.0011	0.0042	0.01184 <sup>C</sup>
	30-Jan-01	0.36	0.54 <sup>HY</sup>	0.0034	0.00057	<0.0005	<0.0005	<0.0005
	27-Apr-01	0.33	0.66 <sup>HY</sup>	<0.002	<0.0005	0.0013	<0.0005	<0.0005
	27-Apr-01	0.36	0.72 <sup>HY</sup>	<0.002	0.00059	0.0019	<0.0005	0.013
	27-Jul-01	0.33	0.76 <sup>HY</sup>	<0.0005	0.0013	<0.0005	<0.0005	0.0006
	18-Oct-01	0.73	1.50	<0.0071	<0.0071	<0.0071	<0.0071	<0.0142
	31-Jan-02	0.76	1.40 <sup>HY</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>
	16,17-Apr-02	1.10	1.90 <sup>HY</sup>	<0.002	<0.0005	<0.0005	<0.0005	0.019 <sup>C</sup>
	17,18-Jul-02	0.97	1.7 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	3.10	5.000 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	1.50	2.300 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	4.10	6.000 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	NA	NA	NA	NA	NA	NA	NA
	4-Aug-04	2.50	2.2 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	1.10	1.5 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	5-Jul-05	0.95	1.3 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jan-06	4.00	5.6 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jul-06	0.49	0.770 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	1.20	1.9 <sup>HY</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	3.70	6.4 <sup>HY</sup>	<0.0005	0.0022	<0.0005	<0.0005	<0.0005
	20-Feb-08	73	92 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	21-Aug-08	15	23 <sup>Y</sup>	<0.0083	0.0059	0.0017	<0.0005	<0.0005
10-Feb-09	3.4	4.0 <sup>Y</sup>	<0.0017	0.0027	<0.0017	<0.0017	<0.0017	
11-Aug-09	38	68 <sup>Y</sup>	<0.0008	0.0010	<0.0008	<0.0008	<0.0008	
1-Feb-10	100	160 <sup>Y</sup>	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	
5-Aug-10	60	93 <sup>Y</sup>	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	
10-Feb-11	380	600 <sup>Y</sup>	<0.001	0.0011	<0.001	<0.001	<0.001	
	<b>29-Aug-11</b>	<b>470</b>	<b>670<sup>Y</sup></b>	<b>&lt;0.0005</b>	<b>0.0009</b>	<b>0.0007</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
LFR-3 Split	10-Aug-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	10-Aug-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	1-Nov-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	30-Jan-01	<0.05	<0.05	0.0036	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-01	<0.05	<0.05	0.0024	<0.0005	0.0054	<0.0005	<0.0005
	27-Jul-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.01
	31-Jan-02	<0.05	0.067 <sup>Y</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>	<0.005 <sup>b</sup>
	16,17-Apr-02	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	3-Aug-04	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
5-Jul-05	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
9-Dec-05	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

**Table 4**  
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**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
LFR-3 cont.	6-Jan-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Mar-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	20-Feb-08	<0.05	0.053 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-08	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	9-Feb-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	11-Aug-09	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Aug-10	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10-Feb-11	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
30-Aug-11	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
LFR-4	11-Aug-00	0.22 <sup>Y</sup>	0.41 <sup>Y</sup>	0.0051	0.01100	<0.0005	<0.0005	0.00162 <sup>C</sup>
	31-Oct-00	0.17 <sup>Y</sup>	0.27	0.0065	0.00084	<0.0005	<0.0005	<0.0005
	1-Feb-01	0.16 <sup>Y</sup>	0.22	0.0097	0.00330	<0.0005	<0.0005	<0.0005
	27-Apr-01	0.22 <sup>Y</sup>	0.44	0.0058	0.02700	0.0036	<0.0005	<0.0005
	27-Jul-01	0.091 <sup>Y</sup>	0.19	0.011	0.00090	<0.0005	<0.0005	<0.0005
	31-Jan-02	NA	NA	NA	NA	NA	NA	NA
	16,17-Apr-02	0.40 <sup>Y</sup>	0.67	< 0.005	0.05300	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.21 <sup>Y</sup>	0.36 <sup>Y</sup>	0.0075	0.007	<0.005	<0.005	<0.005
	22,23-Oct-02	0.110 <sup>Y</sup>	0.17	0.0080	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	0.490 <sup>Y</sup>	0.740	<0.005	0.055	<0.005	<0.005	<0.005
	30-Jul-03	0.400 <sup>Y</sup>	0.59	<0.005	0.010	<0.005	<0.005	<0.005
	29-Jan-04	0.42 <sup>Y</sup>	0.700 <sup>Y</sup>	<0.005	0.011	<0.005	<0.005	<0.005
	4-Aug-04	NA	NA	NA	NA	NA	NA	NA
	5-Jul-05	0.510 <sup>Y</sup>	0.68	0.0049	0.024	<0.0005	<0.0005	<0.0005
	5-Jul-06	0.650 <sup>Y</sup>	1.10	0.0081	0.059	<0.0005	0.0081	0.006
	1-Mar-07	0.370 <sup>Y</sup>	0.590 <sup>H</sup>	0.006	0.0063	<0.0005	<0.0005	<0.0005
	22-Aug-07	NA	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA	NA
21-Aug-08	0.990 <sup>Y</sup>	1.50 <sup>Y</sup>	0.0029	0.0009	<0.0005	<0.0005	<0.0005	
10-Feb-09	1.20 <sup>Y</sup>	1.40 <sup>Y</sup>	0.0025	0.0021	<0.0005	<0.0005	<0.0005	
11-Aug-09	0.27 <sup>Y</sup>	0.48 <sup>Y</sup>	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	NA	NA	NA	NA	NA	NA	NA	
5-Aug-10	0.27 <sup>Y</sup>	0.42 <sup>Y</sup>	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	0.29 <sup>Y</sup>	0.45 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
31-Aug-11	0.290	0.49 <sup>Y</sup>	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	
<b>Monitoring Wells Installed by SOMA</b>								
SOMA-1	19-Oct-01	0.22	0.44	0.034	<0.0050	<0.0050	<0.0050	<0.0100
	31-Jan-02	0.058	0.100 <sup>HY</sup>	0.110 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.05	0.052 <sup>Y</sup>	0.120	0.0008	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	0.120	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.05	0.053	0.140	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	<0.05	<0.05	0.150	<0.0071	<0.0071	<0.0071	<0.0071
	30-Jul-03	<0.05	<0.05	0.190	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	<0.05	<0.05	0.190	<0.005	<0.005	<0.005	<0.005
	3-Aug-04	<0.05	<0.05	0.170	<0.013	<0.013	<0.013	<0.013
	1-Feb-05	<0.05	<0.05	0.200	<0.017	<0.017	<0.017	<0.017
	5-Jul-05	<0.05	<0.05	0.210	<0.0017	<0.0017	<0.0017	<0.0017
	5-Jan-06	<0.05	<0.05	0.270	0.0006	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.05	<0.05	0.310	<0.002	<0.002	<0.002	<0.002
28-Feb-07	0.050 <sup>YZ</sup>	0.081 <sup>YZ</sup>	0.330	0.0025	<0.002	<0.002	<0.002	
22-Aug-07	<0.05	0.066 <sup>YZ</sup>	0.450	<0.002	<0.002	<0.002	<0.002	

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
SOMA-1 cont.	20-Feb-08	<0.05	0.076 <sup>Y</sup>	0.340	<0.002	<0.002	<0.002	0.0084
	21-Aug-08	0.055 <sup>Y</sup>	0.084 <sup>YZ</sup>	0.390	<0.0025	<0.0025	<0.0025	<0.0025
	10-Feb-09	0.057 <sup>Y</sup>	0.086 <sup>YZ</sup>	0.370	<0.0025	<0.0025	<0.0025	<0.0025
	11-Aug-09	<0.05	0.053 <sup>Y</sup>	0.430	<0.0025	<0.0025	<0.0025	<0.0025
	2-Feb-10	<0.05	0.051 <sup>Y</sup>	0.360	<0.0025	<0.0025	<0.0025	<0.0025
	5-Aug-10	<0.05	0.054 <sup>YZ</sup>	0.400	<0.0036	<0.0036	<0.0036	<0.0036
	10-Feb-11	<0.05	0.059 <sup>YZ</sup>	0.400	<0.0025	<0.0025	<0.0025	<0.0025
	<b>29-Aug-11</b>	<b>0.100</b>	<b>0.170<sup>Y</sup></b>	<b>0.220</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
SOMA-2	19-Oct-01	1.4	2.8	<0.250	<0.2500	<0.250	<0.250	<0.500
	31-Jan-02	1.3	2.4 <sup>HY</sup>	<0.071 <sup>b</sup>	<0.0710 <sup>b</sup>	<0.071 <sup>b</sup>	<0.071 <sup>b</sup>	<0.071 <sup>b</sup>
	16,17-Apr-02	1.3 <sup>L</sup>	2.2 <sup>H</sup>	<0.130	0.0067	0.046	0.012	0.044
	17,18-Jul-02	2.6	4.4 <sup>HY</sup>	<0.063	<0.063	<0.063	<0.063	<0.063
	22,23-Oct-02	0.37	0.600 <sup>HY</sup>	0.300	<0.0071	<0.0071	<0.0071	<0.0071
	19-Feb-03	0.30	0.460 <sup>HY</sup>	0.210	<0.017	<0.017	<0.017	<0.017
	29-Jul-03	0.27	0.400 <sup>HY</sup>	0.300	<0.020	<0.020	<0.020	<0.020
	28-Jan-04	0.23	0.38 <sup>HY</sup>	0.270	<0.017	<0.017	<0.017	<0.017
	4-Aug-04	0.31	0.28 <sup>HY</sup>	0.280	<0.031	<0.031	<0.031	<0.031
	2-Feb-05	39	53 <sup>HY</sup>	<0.31	<0.31	<0.31	<0.31	<0.31
	6-Jul-05	5.10	6.8 <sup>HY</sup>	<0.025	<0.025	0.053	<0.025	0.031
	9-Jan-06	67	93 <sup>HY</sup>	<0.042	<0.042	0.054	<0.042	<0.042
	6-Jul-06	25	40 <sup>HY</sup>	<0.042	<0.042	0.061	<0.042	<0.042
	1-Mar-07	18	29 <sup>HY</sup>	<0.042	<0.042	0.055	<0.042	<0.042
	23-Aug-07	75	130 <sup>HY</sup>	<0.042	<0.042	0.081	<0.042	<0.042
	20-Feb-08	3.2	4.0 <sup>Y</sup>	<0.1	<0.1	<0.1	<0.1	<0.1
	25-Mar-08	360.0	270 <sup>Yb</sup>	<0.13	<0.13	0.180	<0.13	0.170
	21-Aug-08	3.8	5.7 <sup>Y</sup>	<0.0063	0.016	0.120	0.014	0.094
	10-Feb-09	860.0	1,300 <sup>Y</sup>	<0.05	<0.05	<0.05	<0.05	<0.05
	11-Aug-09	FP	FP	FP	FP	FP	FP	FP
2-Feb-10	430	700 <sup>Y</sup>	<0.013	<0.013	<0.013	<0.013	<0.013	
6-Aug-10	52	80 <sup>Y</sup>	<0.02	<0.02	<0.02	<0.02	<0.02	
11-Feb-11	110	180 <sup>Y</sup>	<0.01	<0.01	<0.01	<0.01	<0.01	
	<b>30-Aug-11</b>	<b>2</b>	<b>3.50<sup>Y</sup></b>	<b>0.026</b>	<b>&lt;0.0025</b>	<b>&lt;0.0025</b>	<b>&lt;0.0025</b>	<b>&lt;0.0025</b>
SOMA-3	19-Oct-01	0.42	0.83	0.65	<0.02500	<0.02500	<0.0250	<0.0500
	31-Jan-02	0.23	0.41 <sup>HY</sup>	0.31 <sup>b</sup>	<0.01300 <sup>b</sup>	<0.01300 <sup>b</sup>	<0.0130 <sup>b</sup>	<0.0130 <sup>b</sup>
	16,17-Apr-02	0.61	1.00 <sup>HY</sup>	0.42	0.00078	0.00068	<0.0005	<0.0005
	17,18-Jul-02	0.41	0.69 <sup>HY</sup>	0.38	<0.017	<0.017	<0.017	<0.017
	22,23-Oct-02	3.00	4.700 <sup>HY</sup>	<0.17	<0.170	<0.170	<0.170	<0.170
	19-Feb-03	2.50	3.800 <sup>HY</sup>	<0.13	<0.130	<0.130	<0.130	<0.130
	29-Jul-03	2.10	3.100 <sup>HY</sup>	<0.13	<0.130	<0.130	<0.130	<0.130
	29-Jan-04	4.10	6.8 <sup>HY</sup>	<0.31	<0.310	<0.310	<0.310	<0.310
	4-Aug-04	4.00	3.6 <sup>HY</sup>	<0.50	<0.500	<0.500	<0.500	<0.500
	2-Feb-05	0.27	0.36 <sup>HY</sup>	0.25	<0.063	<0.063	<0.063	<0.063
	6-Jul-05	0.32	0.43 <sup>HY</sup>	0.32	0.0017	<0.0005	<0.0005	0.0016
	6-Jan-06	0.22	0.30 <sup>HY</sup>	0.39	0.0014	<0.0005	<0.0005	0.0012
	6-Jul-06	0.14	0.27 <sup>HY</sup>	0.500	<0.005	<0.005	<0.005	<0.005
	1-Mar-07	0.19	0.31 <sup>HY</sup>	0.490	<0.005	<0.005	<0.005	<0.005
	23-Aug-07	0.97	1.700 <sup>HY</sup>	0.320	<0.005	<0.005	<0.005	<0.005
	20-Feb-08	0.38	0.48 <sup>Y</sup>	<0.031	<0.031	<0.031	<0.031	<0.031
	21-Aug-08	0.40	0.60 <sup>Y</sup>	0.220	<0.013	<0.013	<0.013	<0.013
	10-Feb-09	0.10	0.15 <sup>Y</sup>	0.280	<0.013	<0.013	<0.013	<0.013
	12-Aug-09	0.076 <sup>Y</sup>	0.13 <sup>Y</sup>	0.430	<0.0036	<0.0036	<0.0036	<0.0036
	2-Feb-10	0.27	0.44 <sup>Y</sup>	0.110	<0.0083	<0.0083	<0.0083	<0.0083
6-Aug-10	0.24	0.37 <sup>Y</sup>	0.020	<0.013	<0.013	<0.013	<0.013	

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
SOMA-3 cont.	11-Feb-11	0.28	0.44 <sup>Y</sup>	0.018	<0.01	<0.01	<0.01	<0.01
	<b>30-Aug-11</b>	<b>0.18</b>	<b>0.30<sup>Y</sup></b>	<b>0.110</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>
SOMA-4	19-Oct-01	2.5	5	0.63	<0.13	<0.13	<0.13	<0.26
	31-Jan-02	FP	FP	FP	FP	FP	FP	FP
	16,17-Apr-02	FP	FP	FP	FP	FP	FP	FP
	17,18-Jul-02	FP	FP	FP	FP	FP	FP	FP
	22,23-Oct-02	FP	FP	FP	FP	FP	FP	FP
	18-Feb-03	FP	FP	FP	FP	FP	FP	FP
	29-Jul-03	FP	FP	FP	FP	FP	FP	FP
	10-Feb-09	44	65 <sup>Y</sup>	0.018	<0.005	0.016	<0.005	0.029
SOMA-4R	12-Aug-09	37	65 <sup>Y</sup>	0.08	<0.001	<0.001	<0.001	0.0019
	2-Feb-10	21	34 <sup>Y</sup>	0.008	<0.002	0.0031	<0.002	0.0065
	6-Aug-10	20	32 <sup>Y</sup>	0.015	<0.0031	0.0035	<0.0031	0.0043
	11-Feb-11	290	450 <sup>Y</sup>	0.023	<0.002	<0.002	<0.002	0.0073
	<b>0</b> <b>30-Aug-11</b>	<b>1.1</b>	<b>1.90<sup>Y</sup></b>	<b>0.043</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.0017</b>
SOMA-5	4-Aug-04	4.1	3.7 <sup>HY</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	0.11 <sup>Z</sup>	0.15 <sup>HYZ</sup>	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	2.3 <sup>H</sup>	3.1 <sup>HY</sup>	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	9-Jan-06	0.89	1.2 <sup>HY</sup>	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	6-Jul-06	0.45 <sup>YZ</sup>	0.720 <sup>YZ</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Mar-07	NA	3.9 <sup>YZ</sup>	0.0052	<0.0005	<0.0005	<0.0005	<0.0005
	23-Aug-07	NA	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA	NA
	21-Aug-08	NA	NA	NA	NA	NA	NA	NA
	10-Feb-09	NA	NA	NA	NA	NA	NA	NA
	11-Aug-09	NA	NA	NA	NA	NA	NA	NA
	1-Feb-10	NA	NA	NA	NA	NA	NA	NA
	6-Aug-10	0.78	1.2 <sup>Y</sup>	0.0078	<0.0005	<0.0005	<0.0005	<0.0005
11-Feb-11	0.065 <sup>Y</sup>	0.1 <sup>YZ</sup>	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	
<b>30-Aug-11</b>	<b>&lt;0.05</b>	<b>0.08<sup>YZ</sup></b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
MPE-1	12-Aug-09	28	49 <sup>Y</sup>	0.26	<0.0005	0.0011	<0.0005	0.0029
	2-Feb-10	<5	<5	<0.002	<0.002	<0.002	<0.002	<0.002
	6-Aug-10	1.1	1.8 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	11-Feb-11	3.3	5.2 <sup>Y</sup>	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	<b>30-Aug-11</b>	<b>2.5</b>	<b>3.6<sup>Y</sup></b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
MPE-2	12-Aug-09	380	200 <sup>Y</sup>	0.015	0.0016	0.0053	0.0013	0.0204
	1-Feb-10	FP	FP	FP	FP	FP	FP	FP
	5-Aug-10	FP	FP	FP	FP	FP	FP	FP
	11-Feb-11	1.9	3.0 <sup>Y</sup>	0.0053	<0.001	0.0014	<0.001	0.0093
	<b>31-Aug-11</b>	<b>21</b>	<b>30<sup>Y</sup></b>	<b>0.0026</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
MPE-3	11-Aug-09	FP	FP	FP	FP	FP	FP	FP
	1-Feb-10	FP	FP	FP	FP	FP	FP	FP
	5-Aug-10	FP	FP	FP	FP	FP	FP	FP
	11-Feb-11	390	620 <sup>Y</sup>	<0.0005	0.0007	<0.0005	<0.0005	0.0076
	<b>31-Aug-11</b>	<b>540</b>	<b>760<sup>Y</sup></b>	<b>&lt;0.0005</b>	<b>0.0006</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.0028</b>
MPE-4	12-Aug-09	71	130 <sup>Y</sup>	0.0043	0.0006	<0.0005	<0.0005	0.0036
	2-Feb-10	1.3	2.2 <sup>Y</sup>	0.0021	0.0009	<0.0005	0.0006	0.0026
	6-Aug-10	0.99	1.5 <sup>Y</sup>	0.0028	0.0009	<0.0005	<0.0005	0.0009
	11-Feb-11	0.48	0.75 <sup>Y</sup>	0.0013	<0.0005	<0.0005	<0.0005	0.0005
	<b>30-Aug-11</b>	<b>3.20</b>	<b>4.50<sup>Y</sup></b>	<b>0.0014</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
MPE-5	12-Aug-09	1.1 <sup>Y</sup>	1.9 <sup>Y</sup>	0.0032	<0.001	<0.001	<0.001	<0.001
	2-Feb-10	29	47 <sup>Y</sup>	0.0021	0.001	<0.001	<0.001	<0.001
	6-Aug-10	18	27 <sup>Y</sup>	0.0022	0.0005	<0.0005	<0.0005	<0.0005
	11-Feb-11	18	28 <sup>Y</sup>	0.0015	<0.001	<0.001	<0.001	<0.001
	<b>31-Aug-11</b>	<b>99</b>	<b>140<sup>Y</sup></b>	<b>0.0018</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>

**Table 4**  
**Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE**  
**in Groundwater Samples**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)
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Notes:

- <sup>b</sup> Analysis was carried out past the hold date, no analytical problems were encountered. See narrative for Q1 2008
- <sup>c</sup> Presence of this compound confirmed by second column, however, the confirmation concentration different from reported results by more than a factor of two.
- <sup>H</sup> Heavier hydrocarbons than the standard are present in the sample.
- <sup>J</sup> Result is estimated.
- <sup>L</sup> Lighter hydrocarbons contributed to the quantitation
- <sup>NA</sup> Not analyzed.
- During First and Second Semi-annual 2009 events SOMA-5 had insufficient groundwater for sampling
- During Second Semi-annual 2009 event GW-4 had insufficient groundwater for sampling
- <sup>Y</sup> Sample exhibits fuel pattern which does not resemble standard.
- <sup>Z</sup> Sample exhibits unknown single peak or peaks.

FP: Not Analyzed due to Free Product

TPH, purge = Total petroleum hydrocarbons (purgeable)

Groundwater samples collected from the temporary sampling points are considered grab samples, therefore, the results should be considered estimates of groundwater quality.

MPE-1 through MPE-5 were installed May 2009



**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
<b>Temporary Sampling Points Installed by Geosolv, LLC</b>							
B-2	24-Jan-00	<0.0013	<0.0013	0.27	0.001	< 0.0013	< 0.0013
B-3	24-Jan-00	< 0.0020	< 0.002	0.61	< 0.002	< 0.002	< 0.002
B-7	24-Jan-00	< 0.0036	< 0.0036	0.92	0.004	< 0.0036	< 0.0036
	11-Aug-00	< 0.0031	< 0.0031	0.86	0.005	< 0.0031	< 0.0031
	31-Oct-00	< 0.0042	< 0.0042	0.91	0.004	< 0.0042	< 0.0042
	27-Jul-01	0.01	0.017	0.86	0.005	<0.0031	<0.0031
	27-Apr-01	<0.0031	<0.0031	1.10	0.007	<0.0031	<0.0031
31-Jan-01	< 0.0042	< 0.0042	0.92	0.005	< 0.0042	< 0.0042	
B-8	24-Jan-00	< 0.0005	< 0.0005	0.035	< 0.0005	< 0.0005	< 0.0005
B-8R	12-Aug-09	<0.0005	<0.0005	0.027	<0.0005	<0.0005	<0.0005
	2-Feb-10	0.0012	<0.0005	0.016	<0.0005	<0.0005	<0.0005
	6-Aug-10	<0.0007	<0.0007	0.018	<0.0007	<0.0007	<0.0007
	11-Feb-11	<0.0005	<0.0005	0.014	<0.0005	<0.0005	<0.0005
31-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.0089</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
B-9	24-Jan-00	< 0.0005	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
B-10	24-Jan-00	1.20	2.40	14.00	0.090	< 0.063	< 0.063
	10-Aug-00	2.90	1.60	6.50	0.050	< 0.025	< 0.025
	31-Oct-00	2.40	1.90	7.10	0.061	< 0.025	< 0.025
	27-Jul-01	1.70	1.40	7.30	0.043	<0.025	<0.025
	27-Jul-01	0.87	0.81	6.60	0.041	<0.025	<0.025
	31-Jan-01	2.10	1.60	6.60	0.044	< 0.025	< 0.025
	6-Jul-05	0.59	0.34	12.00	<0.1	<0.1	<0.1
	9-Jan-06	0.14	0.29	13.00	<0.1	<0.1	<0.1
	6-Jul-06	0.37	0.38	14.00	<0.1	<0.1	<0.1
	1-Mar-07	<0.1	<0.1	14.00	0.110	<0.1	<0.1
	23-Aug-07	NA	NA	NA	NA	NA	NA
	20-Feb-08	20.0	9.1	16.0	<0.25	<0.25	<0.25
	25-Mar-08	520.0	70.0	28.0	<0.36	<0.36	<0.36
	21-Aug-08	1.1	0.97	17.0	0.096	<0.083	<0.083
	10-Feb-09	1.2	1.2	2.9	<0.02	<0.02	<0.02
B-10R	12-Aug-09	0.260	0.120	1.8	<0.013	<0.013	<0.013
	2-Feb-10	0.130	0.100	2.0	0.0077	<0.0063	<0.0063
	6-Aug-10	0.025	0.055	3.9	0.048	0.012	<0.001
	11-Feb-11	0.070	0.150	1.6	<0.013	<0.013	<0.013
	30-Aug-11	<b>0.067</b>	<b>0.160</b>	<b>2.0</b>	<b>&lt;0.013</b>	<b>&lt;0.013</b>	<b>&lt;0.013</b>
B-13	24-Jan-00	0.020	0.029	0.13	0.005	< 0.0005	< 0.0005
<b>Temporary Sampling Points Installed by LFR</b>							
GW-2	19-Jul-99	0.014	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	20-Jan-00	0.130	0.019	0.006	< 0.0005	< 0.0005	< 0.0005
	28-Apr-00	0.120	0.016	0.003	< 0.0005	< 0.0005	< 0.0005
	2-Nov-00	0.008	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
	1-Feb-01	0.008	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	0.010	0.002	0.002	< 0.0005	< 0.0005	< 0.0005
	27-Jul-01	0.033	0.004	0.002	< 0.0005	< 0.0005	< 0.0005
	19-Oct-01	0.019	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	0.0092 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	0.014	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17-18-Jul-02	0.014	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	0.027	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	0.057	0.007	<0.005	<0.005	<0.010	<0.005
	29-Jul-03	0.043	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	0.057	0.0069	<0.005	<0.005	<0.010	<0.005
	4-Aug-04	0.075	0.0100	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	0.049	0.0066	0.016	<0.005	<0.010	<0.005
	6-Jul-05	0.082	0.0110	0.0009	<0.0005	<0.0005	<0.0005
	6-Jan-06	0.061	0.0079	0.0008	<0.0005	<0.0005	<0.0005
	6-Jul-06	0.0750	0.0095	0.0007	<0.0005	<0.0005	<0.0005
	28-Feb-07	0.082	0.0096	0.0006	<0.0005	<0.0005	<0.0005
	22-Aug-07	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA
	22-Aug-08	0.015	0.003	<0.0005	<0.0005	<0.0005	<0.0005
	9-Feb-09	0.059	0.0062	<0.0005	<0.0005	<0.0005	<0.0005
	11-Aug-09	0.030	0.0031	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-10	0.042	0.0046	<0.0005	<0.0005	<0.0005	<0.0005
5-Aug-10	0.033	0.0035	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	0.035	0.0037	<0.0005	<0.0005	<0.0005	<0.0005	
29-Aug-11	<b>0.029</b>	<b>0.0032</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
GW-3  Split	19-Jul-99	0.220	<0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	20-Jan-00	0.055	0.001	0.020	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	0.350	0.002	0.006	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	0.270	0.002	0.002	< 0.0013	< 0.0013	< 0.0013
	11-Aug-00	0.068	0.003	0.012	< 0.0005	< 0.0005	< 0.0005
	2-Nov-00	0.059	0.001	0.002	< 0.0005	< 0.0005	< 0.0005
	1-Feb-01	0.046	0.001	0.001	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	0.079	0.001	0.002	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.090	0.001	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	0.180	<0.0100	<0.0100	<0.0100	<0.0200	<0.0100
	31-Jan-02	0.0960 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	0.160	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	0.086	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	0.200	<0.0071	<0.0071	<0.0071	<0.014	<0.0071
	19-Feb-03	0.240	<0.005	0.006	<0.005	<0.010	<0.005
	29-Jul-03	0.430	<0.010	<0.010	<0.010	<0.010	<0.010
	28-Jan-04	0.170	<0.005	<0.005	<0.005	<0.010	<0.005
	3-Aug-04	0.440	<0.017	<0.017	<0.017	<0.033	<0.017
	2-Feb-05	0.360	<0.031	<0.031	<0.031	<0.063	<0.031
	6-Jul-05	0.320	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	6-Jan-06	0.200	0.0008	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jul-06	0.400	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	1-Mar-07	0.400	0.002	<0.0017	<0.0017	<0.0017	<0.0017
	23-Aug-07	0.150	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	20-Feb-08	0.082	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-08	0.240	0.0013	<0.0005	<0.0005	<0.0005	<0.0005
	9-Feb-09	0.330	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	11-Aug-09	0.230	0.0058	0.0013	<0.0005	<0.0005	<0.0005
	1-Feb-10	0.100	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
5-Aug-10	0.180	0.0084	0.0063	<0.0017	<0.0017	<0.0017	
10-Feb-11	0.140	<0.0013	0.0014	<0.0013	<0.0013	<0.0013	
<b>29-Aug-11</b>	<b>0.190</b>	<b>0.0033</b>	<b>0.0140</b>	<b>&lt;0.0013</b>	<b>&lt;0.0013</b>	<b>&lt;0.0013</b>	
GW-4  Split	19-Jul-99	< 0.0005	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
	20-Jan-00	0.001	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
	20-Jan-00	0.001	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
	27-Apr-00	0.002	< 0.0005	0.001	< 0.0005	< 0.0005	0.001
	30-Jan-01	< 0.0005	< 0.0005	0.002	< 0.0005	< 0.0005	0.001
	27-Jul-01	< 0.0005	< 0.0005	0.003	< 0.0005	0.001	0.002
	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	0.0081	<0.005	0.010	<0.005	<0.010	<0.005
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	6-Jul-05	0.0006	<0.0005	0.0013	<0.0005	<0.0005	0.0011
	5-Jan-06	<0.0005	<0.0005	0.0018	<0.0005	<0.0005	0.0015
	28-Feb-07	0.0006	<0.0005	0.0016	<0.0005	<0.0005	0.0014
	22-Aug-07	NA	NA	NA	NA	NA	NA
	20-Feb-08	<0.0005	<0.0005	0.0010	<0.0005	<0.0005	0.0011
	21-Aug-08	NA	NA	NA	NA	NA	NA
	10-Feb-09	<0.0005	<0.0005	0.0013	<0.0005	<0.0005	0.0017
11-Aug-09	NA	NA	NA	NA	NA	NA	
1-Feb-10	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	
4-Aug-10	NA	NA	NA	NA	NA	NA	
10-Feb-11	NA	NA	NA	NA	NA	NA	
<b>29-Aug-11</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	
GW-5	27-Aug-99	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	20-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	5-Aug-10	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-6A Split	27-Aug-99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Aug-99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
GW-7	15-Jul-99	< 0.0005	< 0.0005	0.004	< 0.0005	< 0.0005	0.001
	15-Jul-99	< 0.0020	< 0.0020	0.004	< 0.0020	< 0.0020	< 0.0020
	Split 15-Jul-99	< 0.0020	< 0.0020	0.004	< 0.0020	< 0.0020	< 0.0020
GW-8	19-Jul-99	0.024	0.015	0.004	0.002	0.001	< 0.0005
	20-Jan-00	0.150	0.190	0.053	0.012	0.005	< 0.0007
	20-Jan-00	0.150	0.180	0.052	0.011	0.005	< 0.0005
	Split 28-Apr-00	0.120	0.110	0.029	0.005	0.002	< 0.0005
<b>Monitoring wells owned by TOSCO</b>							
MW-11	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	28-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	31-Jan-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Jul-01	0.002	0.001	0.006	< 0.0005	< 0.0005	< 0.0005
	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	18-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jan-06	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	19-Feb-08	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-08	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10-Feb-09	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
12-Aug-09	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
5-Aug-10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
29-Aug-11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
<b>Monitoring wells installed by LFR</b>							
LFR-1	9-Aug-00	2.80	0.064	0.041	< 0.0083	< 0.0083	< 0.0083
	30-Oct-00	0.82	0.034	0.010	< 0.0031	< 0.0031	< 0.0031
	Split 30-Oct-00	0.87	0.035	0.014	< 0.0031	< 0.0031	< 0.0031
	29-Jan-01	0.77	0.026	0.007	<0.0025	<0.0025	<0.0025
	26-Apr-01	0.44	0.013	0.005	<0.0013	<0.0013	<0.0013
	27-Jul-01	0.38	0.031	0.010	<0.0013	<0.0013	<0.0013
	18-Oct-01	0.78	0.093	<0.0310	<0.0310	<0.0630	<0.0310
	31-Jan-02	0.37 <sup>b</sup>	0.035 <sup>b</sup>	<0.0130 <sup>b</sup>	<0.0130 <sup>b</sup>	<0.0250 <sup>b</sup>	<0.0130 <sup>b</sup>
	16,17-Apr-02	0.38	0.040	<0.0130	<0.0130	<0.0250	<0.0130
	17,18-Jul-02	0.36	0.041	<0.013	<0.013	<0.025	<0.013
	22,23-Oct-02	0.18	0.024	0.007	<0.005	<0.010	<0.005
	18-Feb-03	0.28	0.032	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	0.15	0.027	0.007	<0.005	<0.010	<0.005
	29-Jan-04	0.15	0.023	0.0077	<0.0063	<0.013	<0.0063
	4-Aug-04	0.058	0.016	0.0052	<0.005	<0.010	<0.005
	2-Feb-05	0.089	0.0079	0.0072	<0.005	<0.010	<0.005
	6-Jul-05	0.096	0.0260	0.0049	<0.0005	<0.0005	<0.0005
	6-Jan-06	0.062	0.0076	0.0010	<0.0005	<0.0005	<0.0005
	6-Jul-06	0.0078	0.0410	0.001	<0.0005	<0.0005	<0.0005
	1-Mar-07	0.098	0.0099	0.0017	<0.0005	<0.0005	<0.0005
	23-Aug-07	0.170	0.073	0.036	0.0066	0.0005	<0.0005
	19-Feb-08	0.130	0.051	0.021	0.0048	<0.001	<0.001
	22-Aug-08	0.084	0.047	0.014	0.0039	<0.0005	<0.0005
	9-Feb-09	0.100	0.020	0.0031	<0.001	<0.001	<0.001
11-Aug-09	0.082	0.039	0.011	0.0028	<0.0005	<0.0005	
1-Feb-10	0.110	0.032	0.0048	0.0011	<0.0005	<0.0005	
5-Aug-10	0.074	0.036	0.011	0.0035	<0.0005	<0.0005	
10-Feb-11	0.076	0.032	0.0073	0.0026	<0.0005	<0.0005	
29-Aug-11	0.076	0.034	0.0095	0.0033	<0.0005	<0.0005	

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
LFR-2  split	11-Aug-00	< 0.0005	< 0.0005	0.035	< 0.0005	0.005	< 0.0005
	2-Nov-00	< 0.0005	< 0.0005	0.130	0.001	0.015	0.001
	29-Jan-01	<0.0005	<0.0005	0.006	<0.0005	0.002	<0.0005
	27-Apr-01	0.001	<0.0005	0.006	<0.0005	0.001	<0.0005
	27-Jul-01	0.001	0.001	0.019	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.0071	<0.0071	0.160	<0.0071	<0.0140	<0.0071
	27-Apr-01	0.001	<0.0005	0.007	<0.0005	0.002	<0.0005
	31-Jan-02	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	0.0069 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	0.012	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	0.066	<0.005	<0.010	<0.005
	18-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	0.011	<0.005	<0.010	<0.005
	4-Aug-04	<0.005	<0.005	0.012	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005
	5-Jan-06	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28-Feb-07	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Aug-07	<0.0005	<0.0005	0.078	<0.0005	0.0098	<0.0005
20-Feb-08	<0.0005	<0.0005	0.014	<0.0005	0.004	<0.0005	
21-Aug-08	<0.0083	<0.0005	1.40	0.0083	0.089	0.0009	
10-Feb-09	<0.0017	<0.0017	0.33	0.0023	0.032	<0.0017	
11-Aug-09	<0.0008	<0.0008	0.12	<0.0008	0.013	<0.0008	
1-Feb-10	<0.0005	<0.0005	0.027	<0.0005	0.0057	<0.0005	
5-Aug-10	<0.0017	<0.0017	0.067	<0.0017	0.0085	<0.0017	
10-Feb-11	<0.001	<0.001	0.025	<0.001	0.0047	<0.001	
29-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.028</b>	<b>&lt;0.0005</b>	<b>0.0096</b>	<b>&lt;0.0005</b>	
LFR-3  Split	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	30-Jan-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-01	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	<0.0050 <sup>b</sup>
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	29-Jan-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	0.011	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	9-Dec-05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	6-Jan-06	0.0031	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	5-Jul-06	0.023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1-Mar-07	0.020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
22-Aug-07	0.0039	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
20-Feb-08	0.0020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
22-Aug-08	0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
9-Feb-09	0.0015	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
11-Aug-09	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1-Feb-10	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
5-Aug-10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10-Feb-11	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
30-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
LFR-4	11-Aug-00	< 0.0005	< 0.0005	0.001	< 0.0005	< 0.0005	< 0.0005
	31-Oct-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	30-Jan-01	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005
	27-Apr-01	<0.0005	<0.0005	0.002	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.001	<0.0005	0.002	<0.0005	<0.0005	<0.0005
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
LFR-4 cont.	29-Jan-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	4-Aug-04	NA	NA	NA	NA	NA	NA
	5-Jul-05	0.0011	<0.0005	0.0026	<0.0005	<0.0005	<0.0005
	5-Jul-06	<0.0005	<0.0005	0.0022	<0.0005	0.0007	<0.0005
	1-Mar-07	<0.0005	<0.0005	0.0033	<0.0005	0.0006	<0.0005
	22-Aug-07	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA
	21-Aug-08	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	10-Feb-09	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005
	11-Aug-09	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-10	NA	NA	NA	NA	NA	NA
	5-Aug-10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	10-Feb-11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
31-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
<b>Monitoring wells installed by SOMA</b>							
SOMA-1	19-Oct-01	<0.0050	<0.0050	0.014	<0.0050	<0.0100	<0.0050
	31-Jan-02	0.0056 <sup>b</sup>	<0.0050 <sup>b</sup>	0.0070 <sup>b</sup>	<0.0050 <sup>b</sup>	<0.0100 <sup>b</sup>	0.0057 <sup>b</sup>
	16,17-Apr-02	0.006	<0.0050	0.007	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	0.016	<0.005	<0.01	<0.005
	22,23-Oct-02	0.008	<0.005	0.041	<0.005	<0.010	0.007
	19-Feb-03	0.009	<0.0071	0.016	<0.0071	<0.014	<0.0071
	30-Jul-03	0.016	<0.005	0.042	<0.005	<0.010	0.006
	29-Jan-04	0.019	<0.005	0.044	<0.005	<0.010	0.0059
	3-Aug-04	0.019	<0.013	0.038	<0.013	<0.025	<0.013
	1-Feb-05	0.022	<0.017	0.028	<0.017	<0.033	<0.017
	5-Jul-05	0.041	0.0026	0.051	<0.0017	<0.0017	0.0046
	5-Jan-06	0.019	0.0013	0.028	<0.0005	<0.0005	0.0026
	5-Jul-06	0.037	0.0028	0.057	<0.002	<0.002	0.0037
	28-Feb-07	0.079	0.0062	0.170	<0.002	<0.002	0.0067
	22-Aug-07	0.062	0.0060	0.170	0.0022	<0.002	0.0035
	20-Feb-08	0.075	0.0058	0.180	0.0022	<0.002	0.0025
	21-Aug-08	0.110	0.0085	0.250	<0.0025	<0.0025	0.0031
	10-Feb-09	0.085	0.0067	0.290	0.0028	<0.0025	0.0035
	12-Aug-09	0.059	0.0063	0.220	<0.0025	<0.0025	<0.0025
	2-Feb-10	0.046	0.0052	0.180	<0.0025	<0.0025	<0.0025
5-Aug-10	0.050	0.0047	0.170	<0.0036	<0.0036	<0.0036	
10-Feb-11	0.046	0.0045	0.180	<0.0025	<0.0025	<0.0025	
29-Aug-11	<b>0.012</b>	<b>0.0017</b>	<b>0.062</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
SOMA-2	19-Oct-01	1.400	0.350	5.000	<0.250	<0.500	<0.250
	31-Jan-02	<0.071 <sup>b</sup>	<0.071 <sup>b</sup>	1.8 <sup>b</sup>	<0.071 <sup>b</sup>	<0.140 <sup>b</sup>	<0.071 <sup>b</sup>
	16,17-Apr-02	<0.130	<0.130	2.900	<0.130	<0.250	<0.130
	17,18-Jul-02	<0.063	<0.063	1.600	<0.063	<0.13	<0.063
	22,23-Oct-02	0.017	0.008	0.350	<0.0071	<0.014	<0.0071
	19-Feb-03	<0.017	<0.017	0.790	<0.017	<0.033	<0.017
	29-Jul-03	0.032	<0.020	0.580	<0.040	<0.040	<0.020
	28-Jan-04	0.036	<0.017	0.430	<0.017	<0.033	<0.017
	4-Aug-04	<0.031	<0.031	0.430	<0.031	<0.063	<0.031
	2-Feb-05	<0.310	<0.310	6.100	<0.310	<0.630	<0.310
	6-Jul-05	0.078	0.047	5.200	0.044	<0.025	<0.025
	9-Jan-06	<0.042	<0.042	7.30	0.049	<0.042	<0.042
	6-Jul-06	<0.042	<0.042	5.400	0.046	<0.042	<0.042
	1-Mar-07	<0.042	<0.042	5.100	<0.042	<0.042	<0.042
	23-Aug-07	<0.042	0.110	5.400	0.042	<0.042	<0.042
	20-Feb-08	0.200	0.360	16.00	0.100	<0.100	<0.100
	25-Mar-08	6.400	2.500	20.00	0.130	<0.130	<0.130
	21-Aug-08	0.620	0.870	15.00	0.160	<0.0063	<0.0063
	10-Feb-09	0.170	0.390	5.90	<0.05	<0.05	<0.05
	11-Aug-09	FP	FP	FP	FP	FP	FP
2-Feb-10	<0.013	<0.013	1.90	0.018	<0.013	<0.013	
6-Aug-10	<0.02	<0.02	2.40	0.023	<0.02	<0.02	
11-Feb-11	0.130	0.086	1.40	<0.01	<0.01	<0.01	
30-Aug-11	<b>0.018</b>	<b>0.063</b>	<b>3.00</b>	<b>0.010</b>	<b>0.006</b>	<b>&lt;0.0025</b>	

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
SOMA-3	19-Oct-01	0.042	0.057	0.440	<0.025	<0.050	<0.025
	31-Jan-02	0.018 <sup>b</sup>	0.023 <sup>b</sup>	0.38 <sup>b</sup>	<0.013 <sup>b</sup>	<0.025 <sup>b</sup>	<0.013 <sup>b</sup>
	16,17-Apr-02	0.025	0.018	0.36	<0.017	<0.033	<0.017
	17,18-Jul-02	0.027	<0.017	0.44	<0.017	<0.033	<0.017
	22,23-Oct-02	<0.170	<0.170	5.90	<0.170	<0.330	<0.170
	19-Feb-03	<0.130	<0.130	4.10	<0.130	<0.250	<0.130
	29-Jul-03	0.150	0.220	4.70	<0.130	<0.250	<0.130
	29-Jan-04	<0.310	<0.310	7.70	<0.310	<0.630	<0.310
	4-Aug-04	<0.500	<0.500	6.90	<0.500	<1.0	<0.500
	2-Feb-05	<0.063	<0.063	1.10	<0.063	<0.130	<0.063
	6-Jul-05	0.031	0.014	0.89	0.0067	0.0011	0.0032
	6-Jan-06	0.025	0.0094	0.77	0.005	0.001	0.0026
	6-Jul-06	0.015	0.0064	0.370	<0.005	<0.005	<0.005
	1-Mar-07	0.015	<0.005	0.270	<0.005	<0.005	<0.005
	23-Aug-07	0.280	0.060	2.900	0.010	<0.005	<0.005
	20-Feb-08	0.041	0.062	5.300	0.068	<0.031	<0.031
21-Aug-08	0.160	0.030	2.100	0.019	<0.013	<0.013	
10-Feb-09	0.024	0.014	1.800	0.013	<0.013	<0.013	
12-Aug-09	0.0078	0.0036	0.170	<0.0036	<0.0036	<0.0036	
2-Feb-10	<0.0083	<0.0083	1.50	<0.0083	<0.0083	<0.0083	
6-Aug-10	<0.013	<0.013	1.60	<0.013	<0.013	<0.013	
11-Feb-11	<0.01	<0.01	1.00	<0.01	<0.01	<0.01	
30-Aug-11	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>0.67</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	<b>&lt;0.005</b>	
SOMA-4	19-Oct-01	<0.13	<0.13	2.600	<0.13	<0.25	<0.13
	31-Jan-02	FP	FP	FP	FP	FP	FP
	16,17-Apr-02	FP	FP	FP	FP	FP	FP
	17,18-Jul-02	FP	FP	FP	FP	FP	FP
	22,23-Oct-02	FP	FP	FP	FP	FP	FP
	18-Feb-03	FP	FP	FP	FP	FP	FP
	29-Jul-03	FP	FP	FP	FP	FP	FP
	10-Feb-09	<0.005	<0.005	0.830	0.0051	<0.005	<0.005
	12-Aug-09	0.0015	<0.001	0.099	<0.001	<0.001	0.0015
	2-Feb-10	<0.002	<0.002	0.360	0.00350	<0.002	<0.002
6-Aug-10	<0.0031	<0.0031	0.310	<0.0031	<0.0031	<0.0031	
11-Feb-11	<0.002	<0.002	0.079	<0.002	<0.002	<0.002	
30-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.066</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.0008</b>	
SOMA-5	4-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	6-Jul-05	<0.0025	<0.0025	0.0057	<0.0025	<0.0025	<0.0025
	9-Jan-06	<0.0025	0.0067	0.430	0.027	<0.0025	<0.0025
	6-Jul-06	<0.0005	<0.0005	0.0035	<0.0005	<0.0005	<0.0005
	1-Mar-07	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	23-Aug-07	NA	NA	NA	NA	NA	NA
	20-Feb-08	NA	NA	NA	NA	NA	NA
	21-Aug-08	NA	NA	NA	NA	NA	NA
	10-Feb-09	NA	NA	NA	NA	NA	NA
	11-Aug-09	NA	NA	NA	NA	NA	NA
	1-Feb-10	NA	NA	NA	NA	NA	NA
6-Aug-10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
11-Feb-11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
30-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
MPE-1	12-Aug-09	0.0039	0.012	0.880	0.0053	<0.0005	<0.0005
	2-Feb-10	0.0240	0.052	0.330	0.0062	<0.0002	<0.0002
	6-Aug-10	0.0170	0.021	0.077	0.0057	<0.0005	<0.0005
	11-Feb-11	0.0079	0.0051	0.054	0.0025	<0.0005	<0.0005
	30-Aug-11	<b>0.0029</b>	<b>0.0089</b>	<b>0.027</b>	<b>0.0012</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
MPE-2	12-Aug-09	<0.0013	<0.0013	0.150	0.0013	<0.0013	0.0016
	1-Feb-10	FP	FP	FP	FP	FP	FP
	5-Aug-10	FP	FP	FP	FP	FP	FP
	11-Feb-11	<0.001	<0.001	0.057	<0.001	<0.001	<0.001
31-Aug-11	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>0.020</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	
MPE-3	11-Aug-09	FP	FP	FP	FP	FP	FP
	1-Feb-10	FP	FP	FP	FP	FP	FP
	5-Aug-10	FP	FP	FP	FP	FP	FP
	11-Feb-11	0.0006	<0.0005	0.029	<0.0005	<0.0005	<0.0005
	31-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.021</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>

**Table 5**  
**Historical Analytical Results For Volatile Organic Compound Analyses in**  
**Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
MPE-4	12-Aug-09	<0.0005	<0.0005	0.083	0.0021	<0.0005	<0.0005
	2-Feb-10	0.0006	0.0016	0.092	0.0032	<0.0005	<0.0005
	6-Aug-10	<0.0005	0.0007	0.075	0.0017	<0.0005	<0.0005
	11-Feb-11	<0.0005	<0.0005	0.038	0.0014	<0.0005	<0.0005
	30-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.020</b>	<b>0.0009</b>	<b>0.0006</b>	<b>&lt;0.0005</b>
MPE-5	12-Aug-09	<0.001	<0.001	0.14	0.0045	<0.001	<0.001
	2-Feb-10	<0.001	0.0021	0.16	0.0062	<0.001	<0.001
	6-Aug-10	<0.0005	<0.0005	0.10	0.0038	<0.0005	<0.0005
	11-Feb-11	<0.001	<0.001	0.078	0.0028	<0.001	<0.001
	31-Aug-11	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>0.048</b>	<b>0.0030</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>

Notes:

<: Not detected above the laboratory reporting limits.

<sup>b</sup> analysis was carried out past hold date, no analytical problems were encountered

FP: Not Analyzed due to Free Product

NA: Not Analyzed.

During First and Second Semi-annual 2009 events SOMA-5 had insufficient groundwater for sampling

During Second Semi-annual 2009 event GW-4 had insufficient groundwater for sampling

MPE-1 through MPE-5 were installed May 2009

**Table 6**  
**Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters**  
**in Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
<b>B-7</b>	11-Aug-00						11.0	193	
B-7-field	11-Aug-00	0.63		-1.0	3.0				
	31-Oct-00	0.62	2.6	< 0.10	< 1.0	11.00	2.4		-3
B-7-field	31-Oct-00	0.25		0.4	-1.0	15.85		-63	
	1-Feb-01	0.78	2.2	0.8	<1.0	15.00	13.0		
B-7-field	31-Jan-01	0.48						28	
B-7 Field	26-Apr-01	0.60	1.7	2.5	5.0	>3.3	7.6	-28	
B-7 Field	26-Jul-01	1.98	7.3	0.0	8.0	11.60	7.0	-40	
<b>B-8 field</b>	31-Jan-01	0.45						58	
<b>B-8R</b>	12-Aug-09	0.17	15.3	0.0	0.0	0.00	5.4	-41.4	
	2-Feb-10	0.37	10.2	6.5	12.0	3.30	4.6	-21.2	
	6-Aug-10	0.43	14.4	0.0	0.0	1.50	6.2	-72.3	
	11-Feb-11	0.45	NM	NM	NM	NM	3.4	-85.6	
	31-Aug-11	NM	NM	NM	NM	NM	4.3	NM	
<b>B-10</b>	10-Aug-00			< 0.05	< 0.05	5.70	10.0	213	
B-10-field	10-Aug-00	0.44		-1.0	-2.0				
	31-Oct-00	2.40	1.4	< 0.10	< 1.0	5.90	6.7		0.81
<b>B-10-field</b>	31-Oct-00	0.44		0.0	0.0	7.60		-22	
	31-Jan-01	6.40	1.3	< 0.10	<2.0	7.70	24.0		1.3
B-10-field	31-Jan-01	0.46						64	
B-10 Field	11-Jun-01	0.90	0.0	0	0	1.25	3.9	-8	NM
B-10 Field	26-Jun-01	1.87	1.3	0	3	6.20	5.6	-22	
	6-Jul-05	9.53	41.1	35	80	3.30	2.2	12	
	9-Jan-06	3.39	13.6	0	0	3.30	10.0	10	
	6-Jul-06	10.62	0.0	0	0	3.30	11	-104	
	1-Mar-07	10.53	1.8	0	0	3.30	0.25	-76.3	
	23-Aug-07	NM	NM	NM	NM	NM	NM	NM	
	20-Feb-08	NM	0.70	7.20	11.00	3.30	6.30	NM	
	25-Mar-08	NM	NM	NM	NM	NM	7.40	NM	
	21-Aug-08	0.25	12.40	12.10	16.00	3.30	2.90	-60.20	
	10-Feb-09	0.18	10.50	5.70	80.00	2.68	2.00	-65.70	
<b>B-10R</b>	12-Aug-09	0.19	47.00	12.30	80.00	3.12	1.00	-102.80	
	2-Feb-10	0.29	3.40	0.00	80.00	3.30	2.10	-49.60	
	6-Aug-10	0.39	13.80	2.40	7.00	2.49	2.60	-88.10	
	11-Feb-11	0.35	15.20	0.00	0.00	0.00	1.10	-43.10	
	30-Aug-11	NM	NM	NM	NM	NM	1.60	NM	
<b>GW-2-field</b>	1-Nov-00	2.32						77	
<b>GW-2</b>	1-Feb-01	3.80					0.0410		
GW-2-field	1-Feb-01	0.58						159	
	26-Apr-01	4.00	1.0	7.1	36	0.02	0.0002	152	NM
	26-Jul-01	1.93	0.0	3.9	60	0.00	0.0160	233	
GW-2 field	Not En. Sample						0.0009		
	31-Jan-02	2.80	0.0	0.8	45	0.36	0.0069	179	NM
	16,17-Apr-02	1.76	0.0	4.7	70	0.09	0.0003	198	
	17,18-Jul-02	1.39	0.6	0.0	69	0.00	0.0021	161	
	22,23-Oct-02	3.86	0.6	11.5	40	0.07	0.0007	166	



**Table 6**  
**Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters**  
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**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)	
<b>GW-2</b>	19-Feb-03	7.24	0.1	10.3	49	0.03	0.0012	169		
	29-Jul-03	4.21	0.2	0.0	44	0.00	0.0007	47		
	28-Jan-04	6.02	0.0	3.3	56	0.00	0.00046	143		
	4-Aug-04	8.27	0.0	0.0	27	0.00	0.00035	115		
	2-Feb-05	8.41	0.0	0.0	40	0.00	<0.0050	76		
	6-Jul-05	10.90	0.0	5.3	51	0.00	<0.005	90		
	6-Jan-06	8.11	2.4	0.0	44	0.00	<0.005	86		
	6-Jul-06	9.71	0.3	0.0	53	0.00	<0.005	86		
	28-Feb-07	6.51	1.5	14.4	48	0.12	<0.005	33.5		
	22-Aug-07	NM	NM	NM	NM	NM	NM	NM	NM	
	20-Feb-08	NM	NM	NM	NM	NM	NM	NM	NM	
	22-Aug-08	0.12	0.00	0.00	29.00	0.00	<0.005	114.80		
	9-Feb-09	0.14	1.30	3.40	66.00	0.11	<0.005	10.40		
	11-Aug-09	1.03	1.10	6.80	69.00	0.00	<0.005	30.20		
1-Feb-10	1.08	0.80	0.40	41.00	0.00	<0.005	122.40			
5-Aug-10	1.15	1.70	2.90	52.00	0.00	<0.005	39.70			
10-Feb-11	1.29	0.20	2.40	43.00	0.06	<0.005	15.10			
	<b>29-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>&lt;0.005</b>	<b>NM</b>		
<b>GW-3</b>	11-Aug-00						< 0.0005	395		
	GW-3-field	11-Aug-00	0.72		1.0	46				
	GW-3-field	1-Nov-00	7.76					81		
	GW-3-field	29-Jan-01	8.80					0.0120		
		1-Feb-01	8.99						235	
	GW-3 field	27-Apr-01	2.90	0.0	0.7	30	0.00	0.0150	212	NM
		26-Jul-01	2.48	0.0	2.4	52	0.12	0.0083	214	
	GW-3 field	18-Oct-01	3.76	0.0	5.2	4.9	0.00	0.0041	131	NM
		31-Jan-02	3.70	0.2	1.3	52	0.00	0.0081	163	
		16,17-Apr-02	7.55	0.0	4.2	59	0.00	0.0006	133	
		17,18-Jul-02	3.50	0.0	0.0	47	0.22	0.0100	155	
		22,23-Oct-02	2.19	0.0	1.6	33	0.00	0.0007	178	
		19-Feb-03	5.28	0.4	4.0	43	0.02	0.0007	123	
		29-Jul-03	6.12	0.0	0.0	31	0.00	0.0005	96	
		28-Jan-04	4.21	0.0	0.8	61	0.00	0.00042	141	
		3-Aug-04	10.20	0.0	0.0	41	0.00	0.00028	84	
		2-Feb-05	3.97	0.5	0.0	12	0.00	<0.0050	84	
		6-Jul-05	7.96	2.9	0.5	52	0.00	<0.005	67	
		6-Jan-06	5.22	0.0	0.0	4	0.00	<0.005	61	
		6-Jul-06	5.69	3.1	0.0	31	0.00	<0.005	63	
		1-Mar-07	7.27	0.6	4.3	15	0.00	<0.005	50.4	
		23-Aug-07	4.79	1.9	7.8	33	0.17	<0.005	178.3	
		20-Feb-08	0.22	0.0	35.0	0	0.00	<0.0065	71.1	
22-Aug-08		0.12	0.3	0.0	4	0.00	<0.005	135.5		
	9-Feb-09	0.13	1.4	2.8	36	0.02	<0.005	-6.1		
	11-Aug-09	0.50	0.0	1.3	34	0.02	<0.005	17.5		
	1-Feb-10	0.99	1.3	0.3	26	0.24	<0.005	126.5		
	5-Aug-10	1.31	3.5	1.1	43	0.00	<0.005	49.1		
	10-Feb-11	1.12	0.5	0.0	41	0.00	0.011	3.9		
	<b>29-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>0.350</b>	<b>NM</b>		
<b>GW-4-field</b>	30-Jan-01	0.83						67		
	GW-4-field	26-Jul-01	2.59	0.2	10.5	25	1.29	0.0028	-3	
	GW-4-field	18-Oct-01	1.00	0.1	0.0	0	4.80	4.80	-84	NM
	<b>GW-4</b>	31-Jan-02	0.90	0.8	0.0	0	8.00	3.50	-91	
		16,17-Apr-02	0.41	0.1	5.2	0	5.70	4.70	-2	
		17,18-Jul-02	2.38	3.0	0.0	0	>3.3	4.60	-68	
		22,23-Oct-02	NM	NM	NM	NM	NM	0.30	NM	
	GW-4-field	19-Feb-03	7.76	0.4	5.4	0	3.30	2.30	-57	
	GW-4-field	30-Jul-03	5.38	6.1	0.0	0	3.30	1.30	-141	

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Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)	
GW-4	28-Jan-04	2.17	5.9	0.0	0	3.30	0.22	-73		
	3-Aug-04	10.35	0.9	0.0	0	3.30	3.20	-113		
	1-Feb-05	2.97	0.8	0.0	0	1.53	1.20	93		
	6-Jul-05	9.17	1.9	9.8	20	1.07	0.84	128		
	5-Jan-06	7.62	3.4	0.0	0	3.30	3.40	110		
	28-Feb-07	5.26	1.1	0.0	0	3.30	3.90	-119.5		
	22-Aug-07	NM	NM	NM	NM	NM	NM	NM		
	20-Feb-08	0.23	0.60	0.00	0.00	3.30	2.50	-108.70		
	21-Aug-08	NM	NM	NM	NM	NM	NM	NM		
	10-Feb-09	0.13	8.00	2.30	8.00	3.30	2.40	-19.40		
	11-Aug-09	NM	NM	NM	NM	NM	NM	NM		
	1-Feb-10	0.97	5.80	1.80	24.00	3.30	1.40	-21.00		
	4-Aug-10	NM	NM	NM	NM	NM	NM	NM		
	10-Feb-11	NM	NM	NM	NM	NM	NM	NM		
29-Aug-11	NM	NM	NM	NM	NM	NM	NM	NM		
MW-11	10-Aug-00			2.8	63	< 0.1	< 0.0005	476		
	MW-11-field	10-Aug-00		4.1	67					
		1-Nov-00	4.10	< 0.010	15.0	90	< 0.1	0.0000		130
	MW-11-field	1-Nov-00	4.01		3.3	73	0.00		87	
	MW-11-field	1-Nov-00	3.97		27.3	74	0.00		319	
		31-Jan-01	6.30	< 0.010	15.0	94	< 1.0	0.0001		1.1
	MW-11 Field	26-Apr-01	7.40	0.0	6.8	52	0.00	0.0014	229	NM
	MW-11 Field	26-Jul-01	1.85	0.0	5.2	77	0.00	0.0049	233	
	MW-11 Field	18-Oct-01	5.58	0.0	10.1	NM	0.00	0.0066	155	NM
		31-Jan-02	4.90	0.0	2.8	79	0.00	0.0077	218	
		16,17-Apr-02	3.18	0.0	2.8	88	0.00	0.0092	242	
		17,18-Jul-02	2.82	0.0	4.1	79	0.00	0.0088	357	
		22,23-Oct-02	4.47	0.0	3.7	69	0.00	0.0025	118	
		18-Feb-03	5.65	0.6	2.3	73	0.00	0.0022	304	
		30-Jul-03	3.80	0.1	0.0	54	0.00	0.0010	224	
		28-Jan-04	7.32	0.0	0.0	80	0.00	0.0200	130	
		3-Aug-04	10.40	0.0	0.0	77	0.00	0.0028	185	
		1-Feb-05	6.99	1.7	0.0	52	0.00	<0.0050	91	
		5-Jul-05	10.38	1.2	0.0	80	0.00	<0.005	125	
		5-Jan-06	6.21	0.0	0.0	65	0.00	<0.005	166	
		5-Jul-06	8.35	5.9	0.0	80	0.00	<0.005	35	
		28-Feb-07	6.68	0.4	0.0	41	0.63	<0.005	12.9	
		22-Aug-07	3.07	3.5	0.0	54	0.00	<0.005	237	
		19-Feb-08	0.23	0.8	0.0	27	0.00	<0.0065	48	
		22-Aug-08	0.10	1.9	0.0	35	0.00	<0.005	67.60	
		10-Feb-09	0.25	0.6	0.0	50	0.02	<0.005	34.40	
		12-Aug-09	1.39	0.6	1.6	52	0.06	<0.005	2.30	
	1-Feb-10	1.29	0.0	0.2	80	0.03	<0.005	104.80		
	5-Aug-10	1.10	0.0	0.0	80	0.07	<0.005	67.10		
	10-Feb-11	1.22	0.0	0.0	57	0.32	<0.005	33.80		
	29-Aug-11	NM	NM	NM	NM	NM	<0.005	NM		
LFR-1	9-Aug-00							462		
	LFR-1-field	11-Aug-00					0.0096			
		9-Aug-00	3.63		5.5	30				1.5
	LFR-1-field/split	30-Oct-00	2.70	0.0	39.0	42	< 1.0	0.0004		
	LFR-1 split	30-Oct-00	2.95		10.3/10.0	29/29	0.01/0.01		77	1
		30-Oct-00	3.40	0.0	40.0	43.0	< 1.0	0.0007		
		29-Jan-01	5.10	<0.01	<0.10	51	<1.0	0.0001		0.43
	LFR-1-field	29-Jan-01	3.78	0.0		36	0.00		383	
	LFR-1 Dup	29-Jan-01	4.60	<0.01	<0.10	50	<1.0	0.0000		0.32
		26-Apr-01	3.20	0.0	12.9	16	0.00	0.0003	224	NM
	26-Jul-01	1.07	0.0	8.0	25	0.01	0.0084	238		

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LFR-1 field <b>LFR-1</b>	18-Oct-01	1.03	0.0	6.9	24	0.18	0.0054	119	NM
	31-Jan-02	1.80	0.3	5.5	31	0.00	0.0062	163	
	16,17-Apr-02	1.68	0.3	1.5	38	0.39	0.0030	240	
	17,18-Jul-02	0.00	0.0	6.1	3	0.07	0.0047	209	
	22,23-Oct-02	0.00	0.4	0.0	23	0.15	0.0008	265	
	18-Feb-03	7.76	0.0	4.3	30	0.00	0.0008	260	
	30-Jul-03	0.58	0.3	0.0	10	0.00	0.0004	190	
	29-Jan-04	3.12	0.5	0.0	57	0.00	0.0011	19	
	4-Aug-04	6.26	5.8	0.0	17	0.00	0.0010	62	
	2-Feb-05	5.24	0.0	0.0	1	0.00	0.0120	93	
	6-Jul-05	8.53	0.2	2.5	40	0.00	<0.005	110	
	6-Jan-06	5.43	3.9	0.0	5	0.00	0.025	161	
	6-Jul-06	9.93	0.4	0.0	6	0.00	<0.005	99	
	1-Mar-07	5.00	5.2	4.5	42	0.04	<0.005	62.9	
	23-Aug-07	0.88	2.7	4.7	23	0.15	<0.005	215	
	19-Feb-08	0.20	0.0	0.0	11	0.00	<0.0065	43.9	
	22-Aug-08	0.14	6.7	0.0	0	0.00	0.0059	119.2	
	9-Feb-09	0.14	4.9	0.0	23	0.00	<0.005	12.2	
	11-Aug-09	0.14	5.6	2.4	23	0.00	<0.005	15.3	
1-Feb-10	0.48	0.8	0.6	31	0.41	<0.005	124.5		
5-Aug-10	0.47	1.8	5.8	36	0.36	<0.005	37.4		
10-Feb-11	0.43	0.6	3.3	34	0.00	<0.005	8.1		
<b>29-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>&lt;0.005</b>	<b>NM</b>		
<b>LFR-2</b>	11-Aug-00						6.60	270	
LFR-2-field	11-Aug-00	0.48		1.5	-1.0	2.70			1200
	2-Nov-00	2.20	8.8	0.3	5.4	5.30	8.50		
LFR-2-field	2-Nov-00	0.47		0.5	-1.0	6.05		-24	
	30-Jan-01	4.40	8.9	1.0	8.3	4.60	4.60		1.1
LFR-2-field	30-Jan-01	0.61	10.7	2.9		1.02		210	
	27-Apr-01	1.40	0.4	1.6	1.0	2.66	14.00	9	NM
	26-Jul-01	0.55	0.2	0.0	0.0	4.50	10.00	-20	
LFR-2 field	18-Oct-01	0.43	0.0	0.0	0.0	6.50	11.00	-75	NM
	31-Jan-02	1.00	0.0	2.6	19.0	1.81	11.00	-14	
	16,17-Apr-02	0.00	0.0	1.7	0.0	7.20	16.00	-6	
	17,18-Jul-02	0.00	13.9	0.0	0.0	7.20	9.60	-64	
	22,23-Oct-02	0.00	10.7	0.5	0.0	3.30	4.70	-82	
	18-Feb-03	0.42	9.0	0.0	0.0	3.30	9.60	-53	
	30-Jul-03	0.00	3.0	0.0	0.0	3.30	8.70	-85	
	4-Aug-04	4.78	1.6	0.0	0.0	3.30	6.20	-93	
	1-Feb-05	1.77	12.1	0.0	0.0	1.79	11.00	69	
	5-Jul-05	4.21	18.2	0.0	0.0	3.30	11.00	-60	
	5-Jan-06	3.53	3.8	0.0	3.0	3.30	14.00	-29	
	5-Jul-06	7.70	4.3	0.0	0.0	3.30	10.00	-136	
	28-Feb-07	3.03	4.2	0.0	0.0	3.30	11.00	-89.9	
	22-Aug-07	0.11	22.7	0.0	0.0	3.30	6.60	-24.0	
	20-Feb-08	0.20	0.0	0.0	0.0	0.76	4.70	-69.5	
	21-Aug-08	0.13	21.4	0.0	0.0	3.30	5.80	-66.1	
	10-Feb-09	0.16	24.0	0.2	0.0	3.30	3.70	-62.2	
	11-Aug-09	0.16	35.5	3.6	7.0	2.88	3.10	-138.1	
	1-Feb-10	0.37	21.4	0.0	0.0	3.30	7.70	-18.9	
	5-Aug-10	0.29	NM	NM	NM	NM	4.90	-83.7	
	10-Feb-11	0.30	NM	NM	NM	NM	8.90	-65.5	
	<b>29-Aug-11</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>9.40</b>	<b>NM</b>	

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LFR-3 LFR-3 split LFR-3-field LFR-3-field LFR-3-field LFR-3 Field LFR-3 Field LFR-3 Field	10-Aug-00			2.4	64	< 0.1	0.0005	464		
	10-Aug-00							< 0.0005		
	LFR-3-field	10-Aug-00	1.30		2.4	64			850	
		1-Nov-00	4.70	0.0	8.8	74	< 1.0	0.0003		
	LFR-3-field	1-Nov-00	0.58		1.8	57	0.00		75	
		31-Jan-01	4.10	<0.01	1.2	58	< 1.0	0.0004		
	LFR-3-field	30-Jan-01	1.75		0.0	44	0.00		195	
	LFR-3 Field	11-Jun-01	1.00	0.0	0.8	28	0.00	0.0086	201	NM
	LFR-3 Field	26-Jul-01	1.29	0.4	0.0	51	0.60	0.0035	228	
	LFR-3 Field	18-Oct-01	0.54	0.0	0.8	30	0.11	0.0093	139	NM
		31-Jan-02	0.80	0.4	2.6	32	0.00	0.0072	212	
		16,17-Apr-02	0.19	0.4	0.0	55	0.79	0.0096	228	
		17,18-Jul-02	0.00	0.2	1.7	42	0.00	0.0068	166	
		22,23-Oct-02	0.11	0.5	0.0	36	0.00	0.0035	186	
		19-Feb-03	1.10	0.5	0.0	19	0.54	0.0069	217	
		30-Jul-03	0.17	0.1	0.0	21	0.00	0.0069	167	
		29-Jan-04	1.39	0.0	0.0	0	3.30	0.0011	64	
		3-Aug-04	5.14	3.9	0.0	8	0.00	0.0054	175	
		2-Feb-05	2.74	0.0	0.0	0	0.00	<0.005	94	
		5-Jul-05	7.59	0.5	35.0	80	3.29	<0.005	85	
		6-Jan-06	3.52	1.8	0.0	23	0.67	<0.005	151	
		5-Jul-06	5.47	1.1	0.0	40	0.00	<0.005	56	
		1-Mar-07	3.78	1.6	5.3	12	0.72	<0.005	42.7	
		22-Aug-07	1.70	4.0	0.0	9	0.44	<0.005	192	
		20-Feb-08	0.22	6.2	0.0	0	0.00	<0.0065	58.9	
		22-Aug-08	0.14	1.5	0.0	0	0.00	<0.005	140.4	
	9-Feb-09	0.13	0.0	2.3	44	0.00	<0.005	-41.0		
	11-Aug-09	0.12	4.6	0.0	32	0.00	<0.005	-27.6		
	1-Feb-10	0.32	1.3	1.3	44	0.37	<0.005	101.8		
	5-Aug-10	0.63	0.6	0.0	45	0.00	<0.005	53.7		
	10-Feb-11	0.76	0.0	0.0	29	0.03	<0.005	10.9		
	30-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>&lt;0.005</b>	<b>NM</b>		
LFR-4 LFR-4-field LFR-4-field LFR-4-field LFR-4 Field LFR-4 Field	11-Aug-00			0.7	1	0.14	0.06	402	1.1	
	LFR-4-field	11-Aug-00	1.13		0.7	1	0.14			
		31-Oct-00	1.90	2.2	< 0.10	2.9	1.10	3.20		
	LFR-4-field	31-Oct-00	0.64		1.0		0.61		-80	
		1-Feb-01	3.20	2.8	1.5	2.8	1.80	2.20		1.5
	LFR-4-field	1-Feb-01	0.55	4.5	8.0	0.0	1.50		59	
	LFR-4 Field	27-Apr-01	5.60	0.0	1.7	0.0	1.37	7.00	14	NM
	LFR-4 Field	26-Jul-01	1.65	0.0	0.0	0.0	0.84	1.20	18	
		16,17-Apr-02	0.00	1.0	2.6	6.0	4.80	12.00	-4	
		17,18-Jul-02	0.79	6.8	0.0	0.0	>3.3	2.80	3	
		22,23-Oct-02	0.00	4.0	0.0	0.0	2.55	1.30	-63	
		19-Feb-03	0.50	6.8	0.0	18	3.30	4.40	-41	
		30-Jul-03	0.28	5.1	0.0	0.0	3.30	3.90	-49	
		29-Jan-04	1.64	5.0	0.0	0.0	0.52	4.00	1	
		4-Aug-04	NM	NM	NM	NM	NM	NM	NM	
		5-Jul-05	5.22	2.8	0.0	0.0	3.30	5.40	61	
		5-Jul-06	9.70	5.9	0.0	0.0	3.30	9.20	-98	
		1-Mar-07	3.97	1.7	0.0	0.0	3.30	3.00	-50	
		22-Aug-07	NM	NM	NM	NM	NM	NM	NM	
		19-Feb-08	NM	NM	NM	NM	NM	NM	NM	
		21-Aug-08	0.14	4.40	0.00	0.00	3.20	6.20	-0.70	
		10-Feb-09	0.18	28.10	0.00	0.00	2.18	4.40	-30.60	
		11-Aug-09	0.44	10.10	0.00	0.00	2.65	1.80	-29.70	
		1-Feb-10	NM	NM	NM	NM	NM	NM	NM	
		5-Aug-10	0.38	5.30	0.00	0.00	3.17	NM	-15.90	
		10-Feb-11	0.44	6.20	0.00	0.00	2.51	4.10	-36.20	
	31-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>2.80</b>	<b>NM</b>		

**Table 6**  
**Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters**  
**in Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
<b>SOMA-1</b>	18-Oct-01	4.19	0.3	0.2	33	0.52	0.12	151	NM
	31-Jan-02	0.40	0.0	0.0	18	0.00	0.58	141	NM
	16,17-Apr-02	0.00	0.0	0.6	31	0.10	0.82	213	
	17,18-Jul-02	0.00	0.0	1.8	28	0.05	0.44	149	
	22,23-Oct-02	0.00	0.7	0.0	4	0.00	0.68	131	
	18-Feb-03	5.12	0.4	0.0	1	0.00	0.41	258	
	30-Jul-03	0.00	0.4	0.0	1	0.00	0.99	74	
	29-Jan-04	0.29	0.5	0.0	13	0.47	0.85	133	
	3-Aug-04	4.44	0.0	0.0	25	0.00	0.50	152	
	1-Feb-05	1.57	0.1	0.0	0.0	0.00	0.83	137	
	5-Jul-05	7.58	0.5	0.0	16	0.21	1.50	72	
	5-Jan-06	5.82	0.0	0.0	6	0.00	0.60	156	
	5-Jul-06	6.79	1.8	0.0	13	0.00	1.10	66	
	28-Feb-07	2.13	10.1	0.0	12	0.00	2.50	37.3	
	22-Aug-07	0.14	3.3	0.0	9	0.39	0.79	177.0	
	20-Feb-08	0.22	0.2	0.0	0	0.00	0.65	57.1	
	21-Aug-08	0.12	0.1	0.0	0	0.00	0.67	202.7	
	10-Feb-09	0.15	8.0	0.6	22	0.20	1.20	22.7	
11-Aug-09	0.20	23.0	0.0	10	0.06	0.86	-20.8		
2-Feb-10	0.63	3.0	0.6	20	0.00	0.79	78.9		
5-Aug-10	0.77	7.6	0.0	18	0.00	0.83	28.1		
10-Feb-11	0.91	13.0	0.0	19	0.00	0.34	23.4		
29-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>0.37</b>	<b>NM</b>	
<b>SOMA-2</b>	18-Oct-01	0.57	0.0	0.4	0.0	40.00	6.60	-89	NM
	31-Jan-02	0.70	3.8	0.8	0.0	9.00	13.00	103	NM
	16,17-Apr-02	0.00	0.5	0.1	0.0	7.40	14.00	-69	
	17,18-Jul-02	0.00	5.7	0.0	0.0	>3.3	9.40	-87	
	22,23-Oct-02	0.35	1.7	2.8	15	3.30	2.20	-98	
	19-Feb-03	3.17	1.9	1.7	0.0	2.89	2.40	-72	
	30-Jul-03	2.71	1.0	0.0	0.0	0.83	1.00	-53	
	28-Jan-04	4.52	0.2	0.0	0.0	1.46	1.70	-8	
	4-Aug-04	7.06	0.4	0.0	0.0	0.31	1.40	-33	
	2-Feb-05	1.17	8.4	0.0	0.0	3.30	13.00	-95	
	6-Jul-05	5.67	1.1	0.0	0.0	3.30	11.00	-66	
	9-Jan-06	3.01	15.7	5.6	0.0	3.30	15.00	-60	
	6-Jul-06	8.92	7.4	0.0	0.0	3.30	14.00	-85	
	1-Mar-07	6.42	8.7	0.0	0.0	3.30	12.00	-137	
	23-Aug-07	0.43	0.0	0.0	0.0	2.87	8.60	-31.6	
	20-Feb-08	0.25	2.9	0.0	0.0	3.30	11.00	-79.6	
	25-Mar-08	NM	NM	NM	NM	NM	9.10	NM	
	21-Aug-08	0.26	3.10	0.00	0.00	3.30	7.50	-65.40	
10-Feb-09	0.18	30.30	0.00	80.00	3.30	2.50	-100.60		
11-Aug-09	NM	NM	NM	NM	NM	NM	NM		
2-Feb-10	0.63	9.60	6.00	0.00	3.30	1.40	-45.40		
6-Aug-10	0.73	13.80	1.50	0.00	3.30	2.60	-90.40		
11-Feb-11	0.71	10.50	14.80	3.00	1.56	0.62	-73.90		
30-Aug-11	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>1.00</b>	<b>NM</b>	<b>NM</b>	
<b>SOMA-3</b>	18-Oct-01	1.32	0.0	0.0	33	0.22	1.00	2	NM
	31-Jan-02	1.00	22.0	2.0	54	0.62	0.46	-71	NM
	16,17-Apr-02	2.60	0.0	0.6	42	0.77	0.41	29	
	17,18-Jul-02	0.97	10.9	0.0	23	>3.3	0.94	-51	
	22,23-Oct-02	0.30	2.7	0.1	7	3.26	4.20	-98	
	19-Feb-03	0.18	0.0	0.0	0.0	3.30	9.00	-88	
	30-Jul-03	0.00	2.0	0.0	0.0	3.30	8.70	-106	
	29-Jan-04	2.30	3.5	0.0	0.0	3.30	8.40	-85	
	4-Aug-04	5.35	0.0	0.0	0.0	3.30	6.50	-105	
	2-Feb-05	3.66	0.3	0.0	0.0	0.00	2.70	-73	
	6-Jul-05	9.65	0.7	0.0	0.0	0.77	2.50	84	
	6-Jan-06	2.20	2.9	0.0	0.0	0.40	3.10	86	
	6-Jul-06	10.52	0.5	0.0	0.0	0.37	1.40	-58	
	1-Mar-07	5.03	0.5	0.0	0.0	0.80	1.40	-51.9	
23-Aug-07	9.68	0.0	0.0	35.0	0.28	2.70	11.8		
20-Feb-08	0.25	34.2	12.1	49.0	3.30	6.50	59.3		
21-Aug-08	0.30	0.0	0.0	0.0	0.00	1.60	27.3		

**Table 6**  
**Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters**  
**in Groundwater Samples**  
**at the Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
SOMA-3 cont.	10-Feb-09	0.20	0.8	0.0	25.0	0.80	0.83	34.2	
	12-Aug-09	2.28	2.6	0.9	19.0	0.71	0.20	4.3	
	2-Feb-10	1.22	6.4	0.0	22.0	1.61	1.20	9.5	
	6-Aug-10	1.23	0.5	0.0	48.0	0.46	1.50	-8.7	
	11-Feb-11	1.27	0.4	0.0	55.0	0.84	0.74	-26.1	
	30-Aug-11	NM	NM	NM	NM	NM	0.51	NM	
SOMA-4	18-Oct-01	0.83	4.0	22.0	17	0.22	1.20	88	NM
	10-Feb-09	0.17	7.1	0.4	80.0	2.83	2.20	-104.9	
SOMA-4R	12-Aug-09	0.23	7.4	2.1	2.0	2.47	1.00	-138.1	
	2-Feb-10	0.39	12.4	0.0	35.0	3.30	2.00	-134.7	
	6-Aug-10	0.57	27.6	4.1	3.0	3.30	4.10	-114.6	
	11-Feb-11	0.47	NM	NM	NM	NM	1.80	-73.1	
	30-Aug-11	NM	NM	NM	NM	NM	0.68	NM	
SOMA-5	4-Aug-04	5.65	0.0	0.0	0.0	0.23	1.70	-143	
	2-Feb-05	2.40	1.5	0.0	0.0	3.30	3.00	-81	
	6-Jul-05	8.91	20.9	0.0	0.0	3.30	20.00	-113	
	9-Jan-06	3.24	15.2	0.0	0.0	3.30	10.00	-141	
	6-Jul-06	10.54	0.0	0.0	0.0	0.82	6.90	-129	
	1-Mar-07	NM	NM	NM	NM	NM	NM	NM	
	23-Aug-07	NM	NM	NM	NM	NM	NM	NM	
	20-Feb-08	NM	NM	NM	NM	NM	NM	NM	
	21-Aug-08	NM	NM	NM	NM	NM	NM	NM	
	10-Feb-09	0.18	63.4	0.0	0.0	1.64	NM	-119.4	
	12-Aug-09	NM	NM	NM	NM	NM	NM	NM	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	
	6-Aug-10	NM	NM	NM	NM	NM	NM	NM	
	11-Feb-11	NM	1.60	0.00	31.00	0.00	0.046	-65.20	
	30-Aug-11	NM	NM	NM	NM	NM	0.420	NM	
MPE-1	12-Aug-09	0.64	NM	NM	NM	NM	0.09	0.2	
	2-Feb-10	0.57	19.7	0.0	80.0	0.52	0.035	7.7	
	6-Aug-10	0.68	8.5	0.0	37.0	1.48	0.020	-69.2	
	11-Feb-11	0.63	NM	NM	NM	NM	0.0094	22.0	
	30-Aug-11	NM	NM	NM	NM	NM	0.0340	NM	
MPE-2	12-Aug-09	0.11	NM	NM	NM	NM	1.70	-41.5	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	
	5-Aug-10	NM	NM	NM	NM	NM	NM	NM	
	11-Feb-11	0.43	12.20	1.30	8.00	3.30	0.99	-80.20	
	31-Aug-11	NM	NM	NM	NM	NM	2.30	NM	
MPE-3	11-Aug-09	NM	NM	NM	NM	NM	NM	NM	
	1-Feb-10	NM	NM	NM	NM	NM	NM	NM	
	5-Aug-10	NM	NM	NM	NM	NM	NM	NM	
	11-Feb-11	0.48	15.20	0.00	25.00	2.36	4.50	-73.20	
	31-Aug-11	NM	NM	NM	NM	NM	6.90	NM	
MPE-4	12-Aug-09	0.19	9.1	0.0	20.0	1.21	1.70	-66.9	
	2-Feb-10	0.42	8.7	0.0	5.0	2.74	3.20	-81.4	
	6-Aug-10	0.50	NM	NM	NM	NM	3.80	-66.2	
	11-Feb-11	0.60	0.4	0.0	0.0	1.91	2.00	-71.7	
	30-Aug-11	NM	NM	NM	NM	NM	2.50	NM	
MPE-5	12-Aug-09	0.19	26.7	0.0	0.0	0.00	2.80	-117.0	
	2-Feb-10	0.48	46.7	0.0	18.0	3.30	4.40	-80.7	
	6-Aug-10	0.69	14.4	0.0	0.0	1.60	4.40	-78.2	
	11-Feb-11	0.71	11.5	0.0	0.0	3.30	3.70	-75.5	
	31-Aug-11	NM	NM	NM	NM	NM	6.60	NM	

Notes:

Samples with "field" in the well number indicate that the results are from field measurements obtained using a Hach spectrophotometer or a Hydrolab Quanta flow-through instrument.

since April 2001, field measurements have been obtained by a Hach Calorimeter

\* Methane was measured by Laboratory.

Since the First Quarter 2005, Curtis & Tompkins has analyzed for methane.

NM: Not Measured.

During First and Second Semi-annual 2009 events SOMA-5 had insufficient groundwater for sampling

During Second Semi-annual 2009 event GW-4 had insufficient groundwater for sampling

MPE-1 through MPE-5 were installed May 2009

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>SOMA-4</b>			
<b>2002</b>			
31-Jan-2002	11.30	8.80	2.50
10-Apr-2002	12.45	9.58	2.87
29-Apr-2002	13.00	9.80	3.20
10-Sep-2002	16.75	10.26	6.49
19-Sep-2002	16.32	10.64	5.68
27-Sep-2002	16.59	10.65	5.94
3-Oct-2002	16.95	11.65	5.30
7-Oct-2002	17.40	11.01	6.39
8-Oct-2002	17.11	10.75	6.36
14-Oct-2002	17.51	10.53	6.98
25-Oct-2002	16.90	10.96	5.94
1-Nov-2002	15.59	11.70	3.89
14-Nov-2002	16.24	11.20	5.04
20-Nov-2002	13.44	11.90	1.54
15-Dec-2002	12.73	12.10	0.63
<b>2003</b>			
18-Jul-2003	17.70	7.20	10.50
<b>2004</b>			
28-Jan-2004	12.00	2.90	9.10
<b>2005</b>			
29-Jun-2005	10.40	10.10	0.30
18-Jul-2005	10.35	9.90	0.45
25-Jul-2005	10.75	10.00	0.75
1-Aug-2005	10.87	9.25	1.62
24-Aug-2005	13.47	9.95	3.52
31-Aug-2005	11.15	10.01	1.14
6-Sep-2005	12.98	10.78	2.20
12-Sep-2005	11.15	9.10	2.05
19-Sep-2005	12.90	10.80	2.10
5-Oct-2005	12.80	10.85	1.95
<b>2006</b>			
4-Jan-2006	12.50	8.60	3.90
12-Jan-2006	13.10	10.30	2.80
18-Jan-2006	13.64	10.50	3.14
24-Jan-2006	9.20	9.19	0.01
24-Jan-2006	began extracting free product using GeoTech pump		
26-Jan-2006	9.67	9.66	0.01
13-Feb-2006	10.24	10.23	0.01
27-Feb-2006	9.72	9.70	0.02
10-Mar-2006	8.90	8.70	0.20
20-Mar-2006	7.80	7.70	0.10
30-Mar-2006	8.30	8.20	0.10

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>SOMA-4</b>			
<b>2006</b>			
6-Apr-2006	7.01	6.65	0.36
18-Apr-2006	moved GeoTech pump from SOMA-4 to B-8		
1-May-2006	7.60	7.56	0.04
10-May-2006	8.64	8.63	0.01
22-May-2006	8.53	8.40	0.13
1-Jun-2006	8.64	8.61	0.03
7-Jun-2006	8.86	8.82	0.04
19-Jun-2006	9.39	9.38	0.01
27-Jun-2006	10.54	10.46	0.08
<b>2006</b>			
13-Jul-2006	10.75	10.15	0.60
24-Jul-2006	11.05	10.16	0.89
3-Aug-2006	12.02	10.32	1.70
14-Aug-2006	13.08	9.88	3.20
14-Aug-2006	began extracting free product using GeoTech pump		
25-Aug-2006	13.95	10.70	3.25
28-Aug-2006	11.50	10.73	0.77
9-Sep-2006	14.23	10.75	3.48
13-Sep-2006	12.95	10.70	2.25
27-Sep-2006	15.78	11.00	4.78
<b>2006</b>			
4-Oct-2006	14.61	11.26	3.35
11-Oct-2006	14.25	10.75	3.50
1-Nov-2006	17.23	10.92	6.31
22-Nov-2006	14.98	10.53	4.45
30-Nov-2006	15.16	10.29	4.87
8-Dec-2006	13.54	11.30	2.24
11-Dec-2006	12.24	10.66	1.58
<b>2007</b>			
8-Jan-2007	11.15	10.78	0.37
12-Jan-2007	10.79	10.38	0.41
16-Jan-2007	11.00	11.00	0.00
24-Jan-2007	11.10	10.83	0.27
31-Jan-2007	11.02	10.44	0.58
8-Feb-2007	11.50	10.64	0.86
14-Feb-2007	9.60	9.25	0.35
22-Feb-2007	9.94	9.81	0.13
9-Mar-2007	9.73	9.53	0.20
16-Mar-2007	10.02	10.01	0.01
22-Mar-2007	9.93	9.91	0.02
26-Mar-2007	10.67	10.67	0.00
26-Mar-2007	Stopped extracting free product from well SOMA-4.		



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**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>SOMA-4</b>			
<b>2007</b>			
4-Apr-2007	10.56	10.39	0.17
9-Apr-2007	10.71	10.60	0.11
17-May-2007	16.05	15.32	0.73
21-May-2007	16.06	15.30	0.76
31-May-2007	16.31	15.31	1.00
8-Jun-2007	16.73	16.09	0.64
11-Jun-2007	16.85	16.02	0.83
20-Jun-2007	16.44	15.62	0.82
29-Jun-2007	16.63	15.90	0.73
2-Jul-2007	16.73	16.15	0.58
12-Jul-2007	17.30	16.64	0.66
12-Jul-2007	Installed new GeoTech pump system in SOMA-4 and began extraction of free product from both wells.		
20-Jul-2007	16.94	-	0.00
25-Jul-2007	16.61	16.58	0.03
7-Aug-2007	18.52	18.49	0.03
7-Aug-2007	FP recovery pump in SOMA-4 well not operating due to unknown internal fault; removed and returned to supplier for repair.		
16-Aug-2007	17.65	-	0.00
22-Aug-2007	18.04	-	0.00
30-Aug-2007	18.21	-	0.00
7-Sep-2007	17.96	-	0.00
14-Sep-2007	18.05	-	0.00
21-Sep-2007	17.90	-	-
29-Nov-2007	17.54	-	-
21-Dec-2007	17.04	-	-
<b>2008</b>			
4-Jan-2008	15.94	15.84	0.10
11-Jan-2008	15.23	14.72	0.51
14-Jan-2008	15.48	15.00	0.48
22-Jan-2008	15.79	15.35	0.44
23-Jan-2008	Geopump serviced by EI		
29-Jan-2008	15.66	15.54	0.12
4-Feb-2008	14.75	14.80	0.05
7-Feb-2008	14.95	14.92	0.03
12-Feb-2008	15.75	15.72	0.03
26-Feb-2008	16.19	16.02	0.17

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>SOMA-4</b>			
<b>2008</b>			
4-Mar-2008	16.27	16.13	0.14
17-Mar-2008	16.65	16.56	0.09
25-Mar-2008	16.97	16.88	0.09
5-Aug-2008	13.95	13.55	0.40
21-Aug-2008	13.82	13.22	0.60
2-Sep-2008		Begin MPE Pilot Test	
11-Sep-2008	14.00	13.60	0.40
19-Sep-2008	14.25	13.40	0.85
26-Sep-2008	14.01	13.10	0.91
2-Oct-2008	14.00	13.00	1.00
9-Oct-2008	14.00	12.95	1.05
24-Oct-2008	13.20	13.09	0.11
No FP observed since then			
<b>B-8</b>			
<b>2001</b>			
18-Oct-2001	12.31	10.21	2.10
<b>2002</b>			
31-Jan-2002	6.79	6.29	0.50
10-Apr-2002	8.22	8.08	0.14
29-Apr-2002	8.55	8.45	0.10
3-Oct-2002	10.40	9.64	0.76
7-Oct-2002	10.37	8.79	1.58
8-Oct-2002	10.28	9.68	0.60
14-Oct-2002	10.30	9.69	0.61
22-Oct-2002	10.39	9.70	0.69
<b>2003</b>			
18-Jul-2003	9.40	9.17	0.23
<b>2005</b>			
29-Jun-2005	11.50	11.25	0.25
18-Jul-2005	10.90	10.10	0.80
25-Jul-2005	10.92	10.20	0.72
1-Aug-2005	10.85	9.85	1.00
24-Aug-2005	10.35	10.10	0.25
31-Aug-2005	10.48	10.10	0.38
6-Sep-2005	10.86	10.59	0.27
12-Sep-2005	10.59	10.00	0.59
19-Sep-2005	11.20	10.60	0.60
5-Oct-2005	11.30	10.50	0.80
<b>2006</b>			
4-Jan-2006	9.50	8.00	1.50
12-Jan-2006	11.40	10.20	1.20
18-Jan-2006	11.93	11.00	0.93
24-Jan-2006	8.65	8.65	0.00
26-Jan-2006	8.72	8.70	0.02
13-Feb-2006	8.82	8.59	0.23
27-Feb-2006	8.81	8.61	0.20
10-Mar-2006	7.45	6.85	0.60
20-Mar-2006	7.90	7.20	0.70
30-Mar-2006	7.88	7.00	0.88

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>B-8</b>			
<b>2006</b>			
6-Apr-2006	7.91	7.90	0.01
18-Apr-2006	began extracting free product using GeoTech pump		
1-May-2006	8.34	8.31	0.03
22-May-2006	9.51	8.92	0.59
1-Jun-2006	9.81	9.30	0.51
7-Jun-2006	10.24	9.51	0.73
14-Jun-2006	10.58	9.73	0.85
27-Jun-2006	9.04	8.92	0.12
27-Jun-2006	removed GeoTech pump from well		
13-Jul-2006	9.61	9.30	0.31
24-Jul-2006	9.70	9.26	0.44
3-Aug-2006	10.01	9.05	0.96
14-Aug-2006	10.41	9.69	0.72
25-Aug-2006	10.60	9.64	0.96
28-Aug-2006	10.62	9.80	0.82
7-Sep-2006	10.68	9.73	0.95
13-Sep-2006	10.65	9.78	0.87
27-Sep-2006	11.03	10.23	0.80
4-Oct-2006	11.00	10.20	0.80
11-Oct-2006	10.68	9.73	0.95
1-Nov-2006	11.39	10.24	1.15
22-Nov-2006	11.53	9.78	1.75
30-Nov-2006	11.64	9.25	2.39
8-Dec-2006	11.53	9.76	1.77
11-Dec-2006	11.44	9.68	1.76
<b>2007</b>			
8-Jan-2007	11.56	9.33	2.23
12-Jan-2007	11.58	9.33	2.25
16-Jan-2007	11.59	9.49	2.10
24-Jan-2007	11.77	9.70	2.07
31-Jan-2007	11.76	9.62	2.14
8-Feb-2007	11.92	9.71	2.21
14-Feb-2007	10.91	7.61	3.30
22-Feb-2007	11.46	8.54	2.92
9-Mar-2007	11.34	8.20	3.14
16-Mar-2007	11.53	8.60	2.93
22-Mar-2007	11.72	8.71	3.01
26-Mar-2007	11.71	8.81	2.90
26-Mar-2007	Started extracting free product from well B-8. Moved GeoTech pump from SOMA-4 to B-8		

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>B-8</b>			
<b>2007</b>			
4-Apr-2007	10.71	9.67	1.04
9-Apr-2007	10.83	9.91	0.92
17-May-2007	13.98	13.22	0.76
21-May-2007	13.98	13.20	0.78
31-May-2007	14.78	13.90	0.88
8-Jun-2007	15.44	14.72	0.72
11-Jun-2007	15.50	14.80	0.70
20-Jun-2007	15.43	14.80	0.63
29-Jun-2007	15.20	15.15	0.05
2-Jul-2007	15.32	15.29	0.03
12-Jul-2007	16.03	15.92	0.11
20-Jul-2007	15.95	15.85	0.10
25-Jul-2007	15.90	15.82	0.08
7-Aug-2007	17.18	17.12	0.06
16-Aug-2007	16.87	-	0.00
22-Aug-2007	17.16	-	0.00
30-Aug-2007	17.68	-	0.00
7-Sep-2007	17.10	-	0.00
14-Sep-2007	17.09	-	0.00
21-Sep-2007	17.00	-	-
29-Nov-2007	16.47	-	-
21-Dec-2007	14.18	-	-
<b>2008</b>			
4-Jan-2008	13.69	-	-
11-Jan-2008	10.69	10.68	0.01
14-Jan-2008	11.25	11.23	0.02
22-Jan-2008	13.18	-	0.00
23-Jan-2008		Geopump serviced by EI	
29-Jan-2008	10.68	-	0.00
4-Feb-2008	10.09	-	0.00
7-Feb-2008	10.26	10.24	0.02
12-Feb-2008	11.24	11.21	0.03
26-Feb-2008	10.85	NA	0.00
4-Mar-2008	12.97	NA	0.00
17-Mar-2008	14.92	NA	0.00
25-Mar-2008	15.41	NA	NA
5-Aug-2008	13.19	NA	NA
21-Aug-2008	13.02	NA	NA
No FP observed since then			
<b>B-9</b>			
<b>2011</b>			
29-Aug-2011	13.31	13.13	0.18

**Table 7**  
**Free Product Log**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, CA**

Date	Depth to Water (feet)	Depth to Free Product (feet)	Thickness of Free Product (feet)
<b>B-10</b>			
<b>2008</b>			
20-Feb-2008	11.75	8.99	2.76
26-Feb-2008	9.94	8.37	1.57
4-Mar-2008	9.23	9.21	0.02
17-Mar-2008	9.9	9.87	0.03
25-Mar-2008	10.15	10.12	0.03
5-Aug-2008	11.03	10.96	0.07
21-Aug-2008	11.03	10.86	0.17
2-Sep-2008		Begin MPE Pilot Test	
3-Sep-2008	11.51	11.33	0.18
11-Sep-2008	13.93	12.55	1.38
19-Sep-2008	12.87	12.10	0.77
24-Oct-2008	11.33	NA	NA
No FP observed since then			
<b>SOMA-2</b>			
<b>2008</b>			
20-Feb-2008	10	9.29	0.71
25-Mar-2008	10.67	10.02	0.65
5-Aug-2008	11.38	10.84	0.46
21-Aug-2008	11.36	10.76	0.6
2-Sep-2008		Begin MPE Pilot Test	
3-Sep-2008	11.62	11.3	0.32
5-Sep-2008	11.77	11.42	0.35
24-Sep-2008	12.87	12.25	0.62
30-Sep-2008	12.6	11.9	0.7
6-Oct-2008	12.32	11.66	0.66
16-Oct-2008	12.6	11.85	0.75
24-Oct-2008	11.42	NA	NA
<b>2009</b>			
11-Aug-2009	12.69	12.51	0.18
No FP observed since then			
<b>MPE-2</b>			
<b>2009</b>			
2-Jun-2009	12.72	11.85	0.87
3-Jun-2009	11.9	11.70	0.2
<b>2010</b>			
1-Feb-2010	10.89	10.65	0.24
4-Aug-2010	14.57	12.13	2.44
<b>2011</b>			
1-Feb-2011	13.65	13.35	0.3
10-Feb-2011	No FP observed during First Semi-annual 2011 groundwater monitoring event		
<b>MPE-3</b>			
<b>2009</b>			
2-Jun-2009	11.55	11.50	0.05
3-Jun-2009	11.39	11.31	0.08
11-Aug-2009	11.33	11.19	0.14
<b>2010</b>			
1-Feb-2010	9.31	8.97	0.34
4-Aug-2010	12.51	11.67	0.84

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
12/17/2008	700	carbon change out, prep. system and extraction wells to continue pilot test																	
	1300	begin extraction from SOMA-2, SOMA-4, B-8, and B-10																	
	1330	166	56	23	-	25.75	0.17	1.7	23	0	6	54	5,769	939	4.1	3.5	3,904		
	1430	166	58	23	-	25.75	0.17	1.7	23	0	6	62	6,000	977	4.0	2.4	3,967		
12/18/2008	1000	system down upon arrival, main timer = 1253.1, approximate shut down at 0800,																	
		inspection revealed - magnetic contactor connected to xfer pump short circuited, temporary alternate route created until repair/replacement of contactor																	
	1330	restart system																	
	1400	168	62	23		25.75	0.17	1.7	23	0	6	60	10,300	1,677	3.0	0.0	4,502		
	1430	168	64	23		25.75	0.19	1.7	24	0	6	64	9,600	1,563	3.6	2.0	4,502		
	1530	168	60	23.5		26	0.15	1.4	21	0	5	66	5,375	875	3.0	1.0	4,522		
		shutdown system to replace magnetic contactor, system remaining off overnight to allow groundwater to recharge, insufficient water being extracted to allow xfer pump to run																	
12/19/2008	900	restart system after inspection of treatment system																	
	1000	168	59	24		26.25	0.135	1.6	20	0	5	60	6,300	1,026	3.4	1.6	4,620		
	1100	168	59	24		26.25	0.135	1.6	20	0	5	64	4,214	686	2.8	1.9	4,620		
	1200	168	57	24		26.25	0.135	1.6	20	0	5	66	3,475	566	2.9	1.7	4,620		
	1300	166	57	24.5		26.5	0.12	1.4	19	0	5	66	3,000	488	2.5	1.0	4,620		
	1430	166	59	24		26.5	0.13	1.6	20	0	5	70	3,035	494	0.7	1.1	4,620		
	1500	166	59	23		26.5	0.12	1.5	19	0	5	70	2,730	444	2	3	4,620		
12/22/2008	900	166	51	24		26	0.15	1.6	21	0	5	62	1,575	256	0.0	0.0	4,620		
	1100	166	58	22		25	0.28	2	29	0	7	64	1,898	309	0.0	0.0	4,620		
	1230	166	59	22		25	0.3	2.2	30	0	8	64	2,490	405	0.0	0.0	4,620		
	1330	166	62	22		25	0.3	2.2	30	0	8	66	2,095	341	0.0	0	4,620		
	1400	166	60	22		25	0.3	2.2	30	0	8	66	1,941	316	0.0	0	4,620		
12/23/2008	930	166	57	22		25	0.3	2.2	30	0	8	64	1,714	279	0.0	0	4,620	227	
	1030	166	57	22		25	0.3	2.2	30	0	8	62	2,560	417	0.0	0.0	4,620		
	1130	166	59	22		25	0.3	2.2	30	0	8	64	1,666	271	0.0	0	4,620		
	1330	166	59	22		25	0.3	2.2	30	0	8	66	1,805	294	0.0	0.0	4,620		
12/24/2008	1000	166	59	22		25	0.3	2.2	30	0	8	66	1,844	300	0.0	0.0	4,620		
	1200	166	59	22		25	0.3	2.2	30	0	8	68	1,680	273	0.0	0.0	4,620		
		shutdown system due to rain and expected rain over weekend																	

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H <sub>2</sub> O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC	
12/29/2008	1000	restarted system after initial inspection of system and wells																	232	
	1100	168	61	22		25	0.3	2.2	30	0	8	58	1,820	296	0.0	0.0	4,640			
	1300	168	63	22		25	0.3	2.2	30	0	8	66	1,653	269	0.0	0.0	4,958			
	1400	168	63	22		25	0.32	2.2	31	0	8	70	1,507	245	0.0	0.0	4,958			
12/30/2008	930	168	56	22		25	0.32	2.2	31	0	8	68	1,775	289	0.0	0.0	5,414			
	1030	168	61	22		25	0.32	2.2	31	0	8	68	1,815	295	0.0	0.0	5,414			
	1130	168	61	22		25	0.32	2.2	31	0	8	70	1,623	264	0.0	0.0	5,414			
	1230	168	61	22		25	0.32	2.2	31	0	8	70	1,596	260	0.0	0.0	5,414			
	1330	168	61	22		25	0.32	2.2	31	0	8	70	1,470	239	0.0	0.0	5,414			
12/31/2008	1000	168	53	22		25	0.32	2.2	31	0	8	62	1,645	268	1.0	0.0	5,577			
	1200	168	58	22		25	0.32	2.2	31	0	8	64	1,835	299	0.0	0.0	5,577			
	1400	168	60	22		25	0.32	2.2	31	0	8	68	1,644	268	0.0	0.0	5,632			
	1500	shut down system for holiday and long weekend																		
1/5/2009	800	restart system, extraction from only B-10																		
	830	168	56	21.75		24.5	0.38	2.3	35	0	9	50	2,400	390	0.0	0.0	5,632			
	900	168	56	21.25		24.25	0.34	2.5	33	0	8	54	2,395	174	1.0	1.0	5,632			
	1100	168	56	21		24	0.46	2.5	38	0	9	60	1,070	174	0.0	0.0	5,632			
		extraction from B-10 and SOMA-2 began and continued overnight																		
1/6/2009	1000	168	58	21		24.25	0.48	2.6	38	0	10	66	6,250	1,017	5.0	3.0	5,632			
	1200	168	58	21		24.25	0.48	2.6	38	0	10	66	5,290	861	1.0	0.0	5,632			
		extraction from B-10, SOMA-2, and SOMA-4 began and continued overnight																		
	1400	168	64	20		24	0.5	2.6	39	0	10	68	7,345	1,196	0.0	0.0	6,374			
1/7/2009	700	168	59	20		24	0.6	2.8	43	0	11	66	7,215	1,175	30.0	1.0	6,988			
	730	shut down system for carbon change out of 1000 lb vessel on vapor side																		
	930	restart system with extraction from B-10 only																	252	
	1030	168	58	23.5		25.5	0.3	2.2	30	0	8	60	7,520	1,224	2.0	8.0	6,988			
	1130	168	56	23.5		25.5	0.3	2	30	0	8	60	5,675	924	3.0	3.0	7,045			
		extraction from B-10, B-8, SOMA-4, and SOMA-2																		
	1230	168	63	21		24.5	0.4	2.3	35	0	9	62	7,360	1,198	1.0	2.0	7,096			
	1430	168	63	20.5		24.5	0.48	2.4	38	0	10	66	8,225	1,339	1.0	1.0	7,157			

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
1/8/2009	1000	168	62	20.5		24	0.52	2.5	40	0	10	70	9,725	1,583	0.0	0.0	7,988		
	1200	168	61	21		25	0.42	2.3	36	0	9	70	7,180	1,169	0.0	0.0	8,034		
	1400	168	61	21.5		24.5	0.44	2.3	36	0	9	70	6,885	1,121	0.0	0.0	8,034		
		extraction from B-8, SOMA-4, SOMA-2																	
	1500	168	58	24		26	0.18	1.4	23	0	6	70	5,040	820	0.0	0.0	8,034		
1/9/2009	1200	168	60	24		26.25	0.19	1.4	24	0	6	66	7,500	1,221	83.0	0.0	8,260		
	1400	168	63	24		26.25	0.19	2.2	24	0	6	70	5,370	874	100.0	0.0	8,260		
	1500	168	63	22		25	0.4	2.4	35	0	9	70	4,250	692	142.0	0.0	8,299		
1/12/2009	1030	168	69	22		25	0.4	2.4	34	0	9	78	8,690	1,415	400.0	20.0	9,025		
		pause operation to change out 55 gallon polishing vapor drum																	
	1300	restart operation w/ only extraction from B-10																	
	1400	168	74	22		25	0.36	2.3	33	0	8	80	1,580	257	100.0	2.0	9,029		
	1500	168	74	22		25	0.36	2.3	33	0	8	82	1,300	212	101.0	0.0	9,029		
1/13/2009	1030	168	72	22		25	0.36	2.3	33	0	8	82	2,250	366	310.0	40.0	9,029		
		pause operation to change out 55 gallon polishing vapor drum																	
	1130	restart operation w/ only extraction from B-10																	
	1230	168	74	23		25.75	0.28	1.8	29	0	7	84	600	98	44	0	9,029		
	1400	168	75	24		26	0.22	1.7	25	0	6	84	601	98	56	0	9,029		
1/14/2009	930	system down upon arrival; main timer = 1644.9; approximate shut down at 0930; pressure, temp., or power issues, will observe closely																	
	1030	system remains shut down overnight to allow system to reset/cool down																	
1/15/2009	730	change out of 1000 lb vessel for vapor and removal of 2 55 gal vapor drums and drop off of 2 new 55 gal vapor drums																	
	1030	restart system with extraction from B-10, B-8, SOMA-2, SOMA-4																	
	1100	168	69	23		25.5	0.28	2	29	0	7	64	3,471	565	0	0	9,029		
	1130	168	73	23		25.5	0.28	2	29	0	7	68	2,267	369	0	0	9,029		
	1230	168	74	23		25.5	0.3	2	30	0	7	74	2,002	326	0	0	9,029		
1/16/2009	1030	168	66	23		25.5	0.3	2	30	0	7	74	2,911	474	0	0	9,195		
	1100	system shut down due to pressure, temp., or power issue - under observation																	
	1230	restart system with extraction from B-10, B-8, SOMA-2, SOMA-4																	
	1330	168	75	25		27	0.14	2	20	0	5	76	4,550	741	0	0	9,242		

Table 8: MPE Pilot Test Operational data



SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC		
1/19/2009	1000	system down upon arrival; main timer = 1687.2; approximate shut down at 0500 on 1/17/9; pressure, temp., or power issue under observation												741							
	1030	restart system with extraction from SOMA-4, B-8																			
	1200	168	71	23.5		26	0.18	1.6	23	0	6	68	9,211	1,499	0	0	9,514				
	1300	168	73	23.5		26	0.2	1.6	25	0	6	70	10,000	1,628	1	0	9,570				
1/20/2009	930	system shut down upon arrival; main timer = 1700; approximate shut down at 2300 1/19/9																			
	1000	restart system with extraction from SOMA-4, B-10																			
	1100	168	67	23		26	0.2	1.6	25	0	6	68	7,830	1,275	0	0	10,019				
	1200	168	71	23		26	0.2	1.6	25	0	6	72	6,946	1,131	1	0	10,075				
	1330	168	73	24		27	0.1	1.3	17	0	4	74	7,400	1,205	0	0	10,075				
1/21/2009	930	system shut down upon arrival; main timer = 1710; approximate shut down at 2000 1/20/9																			
	1100	inspection revealed: pressure sensor damage - internal part, diaphragm torn; pressure sensor repaired and system restarted																			
	1300	168	64	22		25	0.36	2	33	0	8	72	4,934	803	0	0	10,299				
1/22/2009	1000	168	59	22		25	0.36	2.2	33	0	8	72	3,775	615	4	0	10,299				
	1100	166	59	22		25	0.36	2.2	33	0	8	72	3,290	536	11	0	10,299				
	1200	168	61	22		25	0.4	2.2	35	0	9	72	2,082	339	16	0	10,299				
1/23/2009	1100	166	62	22		25	0.4	2.2	35	0	9	74	808	132	45	0	10,299				
	1200	166	63	21.5		24.25	0.5	2.5	39	0	10	74	810	132	46	0	10,299				
1/26/2009	1000	166	55	21.5		24.25	0.5	2.3	39	0	10	64	568	92	45	0	10,299				
		extraction from B-10, B-8, SOMA-2, and SOMA-4 began																			
	1130	166	61	20		24	0.48	2.4	38	0	10	66	8,360	1,361	67	0	10,731				
	1230	166	63	20.25		24.25	0.48	2.4	38	0	10	68	9,064	1,476	92	2	10,805				
1/27/2009	1000	system down upon arrival; main timer = 1843.4 H @ - 2300																			
	1030	xfer pum shorted causing wires to burn; repaired and rewired xfer pump; restarted system																			
	1130	166	64	20.25		24.25	0.48	2.4	38	0	10	62	13,000	2,116	787	0	11,532				
		shutdown system because xfer pump short circuit and overheat causing xfer pump failure; rerouted effluent piping to GAC																			
	1200	restart system																			
	1300	168	66	20.5		24.5	0.5	2.4	39	0	10	64	11,800	1,921	1,555	1	11,565				
		added 2nd 55 gal carbon drum because exceeding air permit discharge conditions																			
	1400	168	65	20.5		24.5	0.5	2.4	39	0	10	64	9,500	1,547	0	0	11,624				

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
1/28/2009	1000	168	65	20.5		24.5	0.52	2.6	40	0	10	68	8,669	1,411	0	0	12,517		
	1100	168	65	20		24	0.52	2.6	40	0	10	70	7,980	1,299	0	0	12,595		
1/29/2009	730	168	64	20		24	0.6	2.8	42	0	11	72	13,444	2,189	80	0	13,373		
		carbon change out of 1000 lb vapor vessel																	
	930	restart system																	
	1030	168	68	20.5		24.5	0.5	2.4	39	0	10	62	13,600	2,214	2	0	13,430		
1/30/2009	930	168	65	20.5		24.5	0.48	2.6	38	0	10	64	15,000	2,442	0	0	14,313		
		extraction from SOMA-2 only																	
	1030	168	61	25		27	0.1	0.4	17	0	4	66	8,565	1,394	3	0	14,342		
2/2/2009	1230	168	67	24.5		27	0.1	1.2	17	0	4	70	15,000	2,442	0	0	14,992		
		extraction from SOMA-2, SOMA-4, and B-8																	
	1330	168	74	20.5		24.5	0.5	2.4	39	0	10	70	15,000	2,442	0	0	15,021		
	1400	168	72	20		24	0.5	2.6	39	0	10	72	15,000	2,442	0	0	15,050		
2/3/2009	1500	168	76	20.5		24	0.5	2.6	38	0	10	80	15,000	2,442	120	30	15,962		
		extraction from B-10 only																	
	1600	168	71	22		24.5	0.5	2.4	38	0	10	80	3,918	638	0	0	15,962		
2/4/2009	1300	168	65	22		24.5	0.44	2.4	36	0	9	72	775	126	0	0	15,989		
	1400	168	65	22		24.5	0.44	2.4	36	0	9	72	653	106	0	0	15,989		
	1500	168	67	22		24.5	0.44	2.4	36	0	9	72	627	102	0	0	15,989		
2/5/2009	1330	168	65	22		24.5	0.44	2.4	36	0	9	70	795	129	0	0	15,989		
	1430	168	65	22		24.5	0.44	2.4	36	0	9	70	672	109	0	0	15,989		
2/6/2009	730	168	61	22		24.5	0.44	2.4	36	0	9	68	1,100	179	20	0	15,989		
		carbon change out of 1000 lb vapor vessel																	
	930	restart system																	
	1000	168	61	21		24	0.4	2.4	35	0	9	58	785	128	0	0	15,989		
	1030	168	63	21		24	0.42	2.4	36	0	9	62	617	100	0	0	15,989		
2/9/2009	1100	168	55	21.5		24	0.42	2.4	36	0	9	62	572	93	0	0	15,989		
		shut down system for ground water monitoring																	
																		397	

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
2/11/2009	930	restart system with SOMA-2, SOMA-4, B-8, and B-10																	
	1000	system shut down, transfer pump failed																	
	1130	restart system with extraction from B-10 only, reroute piping to allow discharge of water																	
	1230	168	63	21.5		24	0.44	2.4	37	0	9	50	2,000	326	0	0	15,989		
2/12/2009	930	168	55	21.5		24.5	0.44	2.4	37	0	9	60	429	70	0	0	15,989		
		closed B-10; extraction from SOMA-2, SOMA-4, and B-8																	
	1030	168	60	22		26	0.22	1.8	26	0	6	62	4,500	733	0	0	16,213		
2/13/2009	900	168	60	21		24	0.32	2.2	31	0	8	60	7,840	1,276	0	0	16,213		
		extraction from B-8 only																	
	1100	168	58	22		24	0.4	2.4	35	0	9	60	4,100	667	0	0	16,213		
2/16/2009	1130	168	60	22		24	0.4	2.4	35	0	9	60	500	81	2	0	16,213		
		shut down system to install new motor for transfer pump																	
	1230	restart system; extraction from B-8 only																	
	1330	168	62	22		24	0.4	2.4	35	0	9	60	1,500	244	0	0	16,213		
2/17/2009	1000	168	58	22		24	0.4	2.4	35	0	9	60	322	52	0	0	16,213		
	1100	168	57	22		24	0.4	2.4	35	0	9	60	255	42	0	0	16,213		
2/18/2009	1000	168	59	22.5		24.5	0.42	2.4	36	0	9	64	240	39	14	7	16,213		
		extraction from SOMA-2 only																	
	1200	168	64	23		25	0.32	2.2	31	0	8	64	1,235	201	10	0	16,213		
2/19/2009	1000	168	59	24		26	0.34	2.2	32	0	8	66	775	126	4	0	18,332		
		extraction from SOMA-2, SOMA-4, B-10, and B-8																	
	1100	168	65	22.5		25.5	0.26	2	28	0	7	66	1,750	285	7	0	18,358		
	1200	168	65	22.5		25.5	0.26	2	28	0	7	66	2,082	339	10	0	18,417		
2/20/2009	1000	168	64	22.5		25.5	0.28	2	29	0	7	66	2,684	437	40	0	19,272		
	1100	168	65	22.5		25.5	0.26	2	28	0	7	70	3,520	573	99	10	19,320		
		change out of 55 gal vapor drum for polishing																	
	1200	168	67	22.5		25.5	0.2	2	25	0	6	65	2,330	379	33	0	19,346		
2/23/2009	1000	168	68	22.5		25.5	0.2	2	25	0	6	70	3,780		101	8	19,346		

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SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
		change out of 55 gal vapor drum for polishing; extraction from B-10 only																	
	1200	168	64	24		26	0.14	2	21	0	5	64	1,385		101	0	19,346		
2/24/2009	1000	168	60	25		27	0.14	2	21	0	5	70	242	225	94	0	21,299		
	1100	168	62	25		27	0.12	1.6	19	0	5	70	154	39	88	0	21,302		
	1200	168	63	25		27	0.12	1.6	19	0	5	70	152	25	94	0	21,302		
2/25/2009	1000	168	61	25		27	0.1	1.6	17	0	4	64	251	25	83	0	21,302		
	1100	168	64	25		27	0.1	1.6	17	0	4	64	767	41	143	0	21,302		
	1200	168	66	25		27	0.1	1.6	17	0	4	66	580	128	150	0	21,302		
2/26/2009	730	168	59	25		27	0.12	1.6	19	0	5	70	270	94	245	0	21,302		
		carbon change out of 1000 lb vapor vessel																	
	930	restart system																	
	1030	168	62	24.5		26.5	0.12	1.4	19	0	5	64	835		0	0	21,302		
	1130	168	67	22		25	0.34	2.4	32	0	8	64	1,200	136	0	0	21,302		
		extraction from SOMA-2, SOMA-4, B-10, and B-8																	
2/27/2009	1230	168	62	22		25	0.34	2.4	32	0	8	64	222	36	0	0	21,387		
	1330	168	63	24.5		27	0.1	1.4	17	0	4	66	760	124	0	0	21,505		
	1430	168	64	24.5		27	0.1	1.4	17	0	4	68	982	160	0	0	21,595		
3/2/2009	1030	168	65	23		26	0.14	1.4	21	0	5	68	2,721	443	32	0	21,595		
	1130	168	62	24		27	0.1	1	17	0	4	68	4,091	666	100	21	21,595		
	1230	168	61	25		27	0.1	1	18	0	4	60	2,185	356	180	0	21,595		
3/3/2009	1100	168	60	25		27	0.1	1	17	0	4	62	1,611	262	6	1	21,595		
	1200	168	60	25		27	0.1	1	17	0	4	62	1,020	166	2	0	21,595		
3/4/2009	1000	168	61	25		27	0.1	1	18	0	4	60	1,715	279	1	0	21,595		
	1100	168	62	25		27	0.1	1	18	0	4	60	2,023	329	1	0	21,595		
	1200	168	62	25		27	0.1	1	18	0	4	60	1,750	285	40	0	21,595		
3/5/2009	1000	168	60	25		27	0.08	1.4	16	0	4	68	1,120	182	0	0	21,595		
	1100	168	61	25		27	0.08	1.4	16	0	4	68	790	129	0	0	21,595		
	1200	168	61	25		27	0.08	1.4	16	0	4	68	784	128	0	0	21,595		
3/6/2009	1030	168	58	25		27	0.08	1.4	16	0	4	68	1,130	184	0	0	21,595		
	1130	168	62	25		27	0.08	1.4	16	0	4	66	828	135	0	0	21,595		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC	
3/9/2009	1100	168	52	25		27	0.08	1.2	16	0	4	66	841	137	0	0	27,066			
		extraction from SOMA-2 and B-10																		
	1200	168	59	24		26.8	0.1	1.8	17	0	4	64	3,754	611	0	0	27,107			
3/10/2009	1430	168	62	24.5		26.5	0.1	1.6	17	0	4	68	3,595	585	0	0	27,863			
	1530	168	67	23		26	0.14	1.6	21	0	5	68	5,233	852	0	0	27,913			
		extraction from SOMA-2, SOMA-4, and B-10																		
3/11/2009	1530	168	68	23		26	0.18	1.8	23	0	6	70	5,054	823	0	0	29,562			
	1630	168	68	23		26	0.2	1.8	25	0	6	70	5,041	821	0	0	29,602			
3/12/2009	1000	system ok																31,885		
3/13/2009	1100	170	66	23		26	0.2	1.8	25	0	6	68	7,362	1,198	0	0	31,885			
		extraction from SOMA-4 only																		
	1200	170	66	25		27	0.1	1.2	17	0	4	68	5,644	919	0	0	31,944			
	1300	168	63	25.5		27.5	0.08	1.2	16	0	4	68	5,260	856	0	0	31,944			
3/16/2009	1000	168	63	26		27.5	0.04	1.6	11	0	3	62	7,345	1,196	0	0	33,184			
		extraction from SOMA-2, SOMA-4, and B-8																		
	1100	168	65	25		27	0.08	1.8	16	0	4	62	3,510	571	0	0	33,184			
	1200	168	66	25		27	0.08	1.4	16	0	4	62	2,970	483	0	0	33,184			
3/17/2009	1000	168	65	25		27	0.08	1.4	16	0	4	68	395	64	0	0	33,298			
		extraction from SOMA-2, SOMA-4, and B-8																		
	1100	168	68	24.5		27	0.1	1.6	17	0	4	70	1,586	258	0	0	33,383			
	1200	168	70	24.5		26.5	0.14	1.6	21	0	5	70	3,216	524	0	0	33,471			
3/18/2009	1000	system ok																33,471		
3/19/2009	1000	168	69	23		26	0.24	2	27	0	7	76	7,100	1,156	30	15	35,947			
		extraction from SOMA-4 only																		
	1100	168	69	25		27	0.1	1.2	17	0	4	76	5,070	825	0	0	35,975			
	1200	168	69	25		27	0.1	1.2	17	0	4	76	5,465	890	0	0	36,003			
3/20/2009	700	168	62	25		27	0.1	1.2	17	0	4	64	5,344	870	0	0	36,472			
		carbon change out of 1000 lb vapor vessel																		
	930	restart system																36,472		
	1030	168	65	25		27	0.1	1.4	17	0	4	66	15,000	2,442	0	0	36,545			

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H <sub>2</sub> O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
	1130	168	68	25		27	0.1	1.4	17	0	4	66	9,000	1,465	0	0	36,577		
		extraction from SOMA-2, SOMA-4, and B-8																	
3/23/2009	1000	168	55	25		27	0.1	1.4	17	0	4	64	5,025	818	2	0	38,962		
	1100	168	61	23		26	0.2	1.8	25	0	6	64	5,783	941	3	1	39,057		
	1200	168	63	23		26	0.2	1.8	25	0	6	64	5,354	872	0	0	39,137		
3/24/2009	1000	168	63	23		26	0.24	2	27	0	7	64	8,451	1,376	4	5	40,307		
	1100	168	63	23		26	0.24	2	27	0	7	68	7,875	1,282	6	8	40,338		
	1200	170	69	23		26	0.24	2.4	27	0	7	68	6,759	1,100	8	8	40,396		
3/25/2009		system ok																	
3/26/2009	1130	168	69	23		26	0.24	2.4	27	0	7	72	6,500	1,058	0	0	42,445		
	1230	168	71	23		26	0.24	2.4	27	0	7	72	5,979	973	10	0	42,477		
3/27/2009	1100	168	72	23		26	0.28	2.4	29	0	7	76	8,460	1,377	6	7	43,427		
		extraction from SOMA-4 only																	
	1200	168	71	25		27	0.1	1.4	17	0	4	74	5,825	948	0	0	43,457		
3/30/2009		system ok																	
3/31/2009	1130	170	61	25		27	0.1	1.4	17	0	4	70	6,554	1,067	100	25	45,845		
	1230	170	61	25		27	0.1	1.4	17	0	4	70	6,414	1,044	100	25	45,877		
	1330	170	71	25		27	0.1	1.4	17	0	4	70	5,655	921	0	0	45,908		
4/1/2009	1100	170	70	25		27	0.1	1.4	17	0	4	80	6,220	1,013	0	0	46,532		
	1200	170	70	25		27	0.1	1.4	17	0	4	80	6,180	1,006	0	0	46,563		
	1300	170	74	25		27	0.1	1.4	17	0	4	80	5,137	836	0	0	46,589		
4/2/2009		system ok																	
4/3/2009	730	168	58	25		27	0.08	1.4	16	0	4	68	4,500		0	0	47,758		
		carbon change out of 1000 lb vapor vessel																	
	930	restart system																	
	1030	168	64	25		27	0.08	1.4	16	0	4	66	8,478	1,380	0	0	47,758		
		extraction from SOMA-2, SOMA-4, and B-8																	
	1130	168	67	24		26	0.18	1.8	23	0	6	70	7,455	1,214	0	0	47,803		
	1230	168	69	24		26	0.18	1.8	23	0	6	70	7,291	1,187	0	0	47,928		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
4/6/2009	1300	170	76	23.5		25.5	0.26	2	28	0	7	80	6,985	1,137	0	0	50,877		
	1400	170	80	23.5		25.5	0.3	2.2	30	0	7	82	6,227	1,014	0	0	50,915		
4/7/2009	1300	170	80	23.5		25.5	0.28	2.2	29	0	7	82	6,454	1,051	0	0	52,058		
	1400	171	80	23.5		25.5	0.28	2.2	29	0	7	82	6,333	1,031	0	0	52,090		
4/8/2009	1030	172	67	22.5		25.5	0.28	2.2	29	0	7	68	6,605	1,075	0	0	52,507		
		extraction from SOMA-2 only																	
	1130	172	64	25		27	0.08	1.2	16	0	4	66	7,700	1,253	0	0	52,507		
4/9/2009	1230	170	66	25		27	0.08	1.2	16	0	4	64	8,500	1,384	0	0	52,507		
	1330	170	66	25		27	0.08	1.2	16	0	4	65	8,399	1,367	0	0	52,507		
4/10/2009	1030	170	64	25		27	0.08	1.2	16	0	4	68	8,674	1,412	0	0	52,507		
	1130	170	64	25		27	0.08	1.2	16	0	4	67	8,356	1,360	0	0	52,507		
4/13/2009	1000	170	67	25		27	0.08	1.2	16	0	4	66	8,125	1,323	100	25	53,805		
	1100	172	69	25		27	0.08	1.2	16	0	4	68	8,835	1,438	0	0	53,809		
	1200	172	69	25		27	0.08	1.2	16	0	4	68	9,100	1,481	10	0	53,809		
4/14/2009	1030	172	62	25		27	0.1	1.6	17	0	4	70	8,100	1,319	0	0	54,061		
	1130	172	62	25		27	0.1	1.6	17	0	4	70	10,000	1,628	0	0	54,075		
4/15/2009	1000	170	60	25		27	0.1	1.6	17	0	4	68	9,700	1,579	0		54,271		
	1100	170	65	25		27	0.1	1.6	17	0	4	68	10,000	1,628	0		54,282		
4/16/2009	700	170	63	25		27	0.1	1.6	17	0	4	64	10,000	1,628	0		54,457		
																	54,457		
	900																54,457		
	1000	170	64	25		27	0.1	1.6	17	0	4	65	12,111	1,972	0	0	54,457		
4/17/2009	1300	170	64	25		27	0.1	1.6	17	0	4	65	11,124	1,811	0	0	54,665		
4/20/2009	1700	180	84	25		27	0.1	1.6	17	0	4	85	10,000	1,628	0	0	55,381		
4/21/2009	1330	186	86	25		27	0.1	1.6	17	0	4	86	14,000	2,279	10	0	55,603		
	1430	186	86	25		27	0.1	1.6	17	0	4	86	14,000	2,279	10	0	55,603		
4/22/2009	1300	180	76	25		27	0.1	1.6	17	0	4	80	7,200	1,172	0	0	55,803		
	1400	180	76	25		27	0.1	1.6	17	0	4	80	7,281	1,185	0	0	55,803		
4/23/2009	1300	176	69	25		27	0.1	1.6	17	0	4	66	9,220	1,501	0	0	55,997		
	1400	176	69	25		27	0.1	1.6	17	0	4	65	9,111	1,483	0	0	55,997		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
4/24/2009	1300	176	67	25		27	0.1	1.6	18	0	4	58	15,000	2,442	0	0	56,224		
	1400	176	68	25		27	0.1	1.6	18	0	4	58	15,000	2,442	0	0	56,224		
4/27/2009	1230	174	66	24.5		26.5	0.1	1.8	17	0	4	64	8,935	1,455	0	0	56,839		
	1330	174	68	24.5		26.5	0.1	1.8	17	0	4	64	8,670	1,411	0	0	56,839		
4/28/2009	1400	174	68	24.5		26.5	0.1	1.8	17	0	4	64	8,770	1,428	0	0	57,046		
4/29/2009	1230	174	68	25		27	0.1	1.8	17	0	4	68	7,650	1,245	0	0	57,258		
4/30/2009	1330	174	69	24.75		27	0.1	2	17	0	4	70	8,000	1,302	0	0	57,454		
	1430	174	72	24.75		27	0.1	2	17	0	4	70	10,000	1,628	0	0	57,454		
5/1/2009	730	174	63	24.75		27	0.1	2	17	0	4	64	8,500	1,384	75	0	57,623		
		carbon change out of 1000 lb vapor vessel															57,623		
	1000	restart															57,623		
	1300	174	68	25		27	0.1	1.6	17	0	4	68	7,500	1,221	0	0	57,623		
5/4/2009	1000	174	68	25		27	0.1	1.6	17	0	4	70	8,975	1,461	0	0	57,623		
		shut down system for drilling; additional site investigation															57,623		
5/6/2009	1300	restart with SOMA-2, SOMA-4, and B-8															57,623		
	1400	176	76	22.5		25.5	0.28	2.2	29	0	7	73	6,434	1,047	0	0	57,623		
5/7/2009	1200	176	77	22.5		25.5	0.28	2.2	29	0	7	74	6,125	997	0	0	59,779		
	1300	176	76	22.5		25.5	0.28	2.2	29	0	7	74	6,380	1,039	0	0	59,779		
		shut down system to allow 1000 lb liquid vessel to drain for change out															59,779		
5/8/2009	700	change out of 1000 lb liquid vessel															59,779		
	1000	restart															59,779		
	1100	172	75	23		26	0.2	1.8	25	0	6	70	8,300	1,351	0	0	59,896		
5/11/2009	1700	182	79	23		26	0.2	2.6	25	0	6	70	8,450	1,376	0	0	63,401		
	1800	182	77	23		26	0.2	2.6	25	0	6	71	9,675	1,575	0	0	63,401		
5/12/2009	1430	182	79	22		25	0.16	2.5	22	0	5	74	8,653	1,409	0	0	64,127		
	1530	182	79	22		25	0.16	2.5	22	0	5	74	8,930	1,454	0	0	64,127		
5/13/2009	1430	182	79	22		25	0.16	2.5	22	0	5	74	9,664	1,573	0	8	64,858		
5/14/2009	1230	180	78	22		25	0.22	2.2	26	0	6	72	8,800	1,433	100	15	65,801		
	1330	180	79	22		25	0.18	2.2	23	0	6	72	7,011	1,141	0	0	65,830		
5/15/2009	1300	180	79	22		25	0.18	2.2	23	0	6	72	7,000	1,140	0	0	66,591		

Table 8: MPE Pilot Test Operational data



SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
5/18/2009	830	180	64	22		25	0.18	2.2	23	0	6	64	7,100	1,156	0	0	68,046		
		shut down system to reconstruct wells SOMA-4, B-8, & B-10 and construct new wells MPE-1,2,3,4,5																	
5/21/2009	1500	carbon change out of 1000 lb vapor vessel; restart with SOMA-4																	
	1600	180	71	25		27	0.1	1.4	17	0	4	70	7,000	1,140	0	0	68,084		
5/22/2009	1500	176	71	24		26	0.16	1.8	22	0	5	78	5,347	870	0	0	69,117		
5/26/2009	1200	176	71	24		26	0.16	1.8	22	0	5	78	5,500	895	0	0	70,161		
5/27/2009	1200	176	71	24		26	0.16	1.8	22	0	5	78	5,500	895	0	0	71,792		
5/28/2009	1200	176	71	24		26	0.16	1.8	22	0	5	78	5,500	895	0	0	73,061		
5/29/2009	1200	182	72	23.5		26	0.18	1.8	23	0	6	76	6,300	1,026	0	0	74,601		
6/1/2009	1430	182	71	23.5		26	0.18	1.8	23	0	6	70	4,590	747	0	0	76,684		
		extraction from MPE-4 only																	
	1530	174	72	26		28	0.04	1	11	0	3	70	825	134	0	0	76,718		
6/2/2009	1130	178	68	24.5		26.75	0.12	1.6	19	0	5	68	4,720	768	0	0	77,310		
	1230	180	73	24.5		26.75	0.12	1.6	19	0	5	70	5,200	847	0	0	77,339		
6/3/2009	1130	182	73	24		26	0.2	1.8	25	0	6	70	3,066	499	0	0	77,793		
	1230	184	75	24		26	0.18	1.8	23	0	6	76	2,670	435	0	0	77,847		
6/4/2009	730	180	64	24		26	0.18	1.8	23	0	6	64	2,500	407	0	0	78,087		
		carbon change out of 1000 lb vapor vessel																	
	1100	restart extraction with MPE-3 & 5																	
	1300	182	75	22.5		25	0.3	2.2	30	0	8	62	15,000	2,442	0	0	78,227		
6/5/2009	1200	184	73	22		25	0.34	2.4	32	0	8	70	2,620	427	0	0	78,477		
		extraction from MPE-2 only																	
	1400	184	74	24		26	0.14	1.6	21	0	5	70	3,660	596	0	0	78,578		
		extraction from MPE-2 & 3																	
	1500	186	75	22.5		25.5	0.3	2.2	30	0	8	70	3,990	650	0	0	78,608		
6/8/2009	1400	190	70	21.5		24.5	0.4	2.6	35	0	9	70	3,450	562	0	0	79,507		
6/9/2009	1400	184	70	21.5		24.5	0.4	2.6	35	0	9	70	3,065	499	0	0	79,652		
		extraction from MPE-2 only																	
6/10/2009	1500	181	72	23.5		26	0.2	2	25	0	6	70	3,620	589	0	0	79,822		

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SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
6/11/2009	1200	184	74	23.5		26	0.22	2	26	0	6	70	3,550	578	0	0	79,822		
		extraction from SOMA-2 only for sampling																	
	1300	182	75	25		27.5	0.04	1	11	0	3	70	3,820	622	0	0	79,822		
		extraction from B-10 only for sampling																	
	1400	182	78	25		27	0.08	1.2	16	0	4	70	6,717	1,093	0	0	79,822		
		extraction from MPE-1 only for sampling																	
	1500	182	78	25		27	0.1	1.2	17	0	4	70	8,000	1,302	0	0	79,822		
		extraction from MPE-2 only																	
6/12/2009	1000	180	64	25		27	0.1	1.2	17	0	4	70	7,500	1,221	0	0	79,822		
	1200	carbon change out of 1000 lb vapor vessel; restart with MPE-2 & 5																	
6/15/2009	700	180	64	22.5		25	0.3	2.4	30	0	8	70	3,000	488	0	0	80,298		
6/16/2009	700	180	64	22.5		25	0.3	2.4	30	0	8	70	2,511	409	0	0	80,431		
6/17/2009	1100	186	74	22.5		25	0.3	2.4	30	0	8	70	2,330	379	0	0	80,526		
6/18/2009	1200	186	74	22.5		25	0.3	2.4	30	0	8	70	3,451	562	0	0	80,622		
6/19/2009	900	190	76	22.5		25	0.36	2.4	33	0	8	70	4,300	700	0	0	80,622		
	1030	190	76	22.5		25	0.36	2.4	33	0	8	70	4,297	700	0	0	80,622		
		extraction from LFR-2 only																	
	1130	190	82	25		27	0.1	1.6	17	0	4	74	3,110	506	0	0	80,642		
	1230	190	83	25		27	0.1	1.6	17	0	4	74	3,710	604	0	0	80,642		
	1330	190	86	25		27	0.1	1.6	17	0	4	76	3,733	608	0	0	80,668		
6/22/2009	1100	190	76	23		25.5	0.28	2.2	29	0	7	70	2,175	354	0	0	80,869		
		end extraction from LFR-2; begin extraction from MPE-5																	
6/23/2009	1030	186	76	24.5		26.5	0.14	1.6	21	0	5	70	2,608	425	100	0	81,095		
		carbon change out of 1000 lb vapor vessel																	
	1300	restart with MPE-2																	
	1400	190	79	23		25	0.26	2	28	0	7	72	3,200	521	0	0	81,095		
6/24/2009	1230	188	72	23		25	0.3	2.2	30	0	7	74	2,880	469	0	0	81,095		
		extraction from B-10R only																	
	1330	182	73	25		27	0.1	1.2	17	0	4	74	5,420	882	0	0	81,095		
	1430	187	72	25		27	0.1	1.2	17	0	4	74	5,544	903	0	0	81,095		

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SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
6/25/2009	930	180	69	24		26.5	0.16	1.6	22	0	6	66	7,400	1,205	0	0	82,095		
		extraction from B-10R & MPE-1																	
	1030	190	77	22.5		25	0.3	2.6	30	0	8	70	15,000	2,442	0	0	82,145		
	1130	190	73	22.5		25	0.3	2.6	30	0	8	70	4,790	780	0	0	82,175		
		extraction from B-10 only																	
	1300	190	75	24.5		26.5	0.2	1.6	24	0	6	74	4,400	716	0	0	82,205		
		extraction from B-10R & MPE-1																	
	1430	190	78	23		26	0.26	2	28	0	7	78	5,555	904	0	0	82,235		
6/26/2009	1330	190	77	23		25	0.3	2	30	0	7	79	10,200	1,660	0	0	82,845		
	1430	190	77	23		25	0.3	2	30	0	7	74	9,820	1,599	0	0	82,855		
6/29/2009	1430	200	79	22		25	0.34	2	32	0	8	80	3,500	570	0	0	84,495		
6/30/2009	1430	200	79	22		25	0.36	2	33	0	8	80	5,500	895	0	0	84,995		
7/1/2009	1500	200	75	22		25	0.4	2.6	34	0	9	80	6,419	1,045	0	0	85,475		
7/2/2009	930	192	70	22		25	0.38	2.4	34	0	8	72	6,000	977	0	0	85,808		
		carbon change out of 1000 lb vapor vessel																	
		surveying of newly installed wells and newly rebuilt wells																	
	1500	restart with MPE-1																	
7/3/2009	1200	190	74	23		25	0.3	2.2	30	0	8	72	6,500	1,058	0	0	85,968		
	1300	190	72	24		26	0.2	2	25	0	6	72	5,520	899	0	0	85,968		
7/6/2009	1030	182	70	23		26	0.2	2	25	0	6	68	4,990	812	0	0	86,225		
	1130	186	75	24		26	0.2	2	25	0	6	68	5,804	945	0	0	86,285		
7/7/2009	1400	190	77	23.5		26	0.22	2	26	0	6	70	4,282	697	20	0	86,365		
7/8/2009	1030	190	74	24.5		26	0.22	2	26	0	6	69	3,960	645	84	0	86,425		
	1130	190	77	23.5		26	0.22	2	26	0	6	72	4,002	651	79	0	86,425		
7/9/2009	1700	192	80	23.5		26	0.14	2	21	0	5	72	3,584	583	94	3	86,525		
7/10/2009	1530	192	79	23.5		26	0.2	2	25	0	6	72	3,563	580	96	4	86,615		
7/13/2009	1030	190	76	23.5		26	0.22	2	26	0	6	70	3,992	650	0	0	86,853		
		extraction from B-10R & MPE-1																	
	1130	194	80	22		25	0.34	2.4	32	0	8	74	6,342	1,032	0	0	86,881		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
7/14/2009	1530	194	80	22		25	0.34	2.6	32	0	8	80	6,122	997	50	5	87,485		
	1630	196	80	22		25	0.34	2.6	32	0	8	80	5,990	975	44	3	87,485		
7/15/2009	1330	198	77	21		24.5	0.36	2.8	33	0	8	80	5,300	863	100	7	88,161		
7/16/2009	930	190	71	20		24	0.46	2.8	37	0	9	74	5,250	855	150	10	88,624		
		carbon change out of 1000 lb vapor vessel																	
	1200	restart with MPE-1, B-10R, & SOMA-2																	
	1300	190	75	22		25	0.34	2.6	32	0	8	64	5,815	947	0	0	88,655		
7/17/2009	1330	194	81	21.1		24.75	0.4	2.8	35	0	9	76	5,640	918	0	0	89,040		
		extraction from SOMA-2 & MPE-1																	
7/20/2009	1530	195	83	22		25	0.38	2.4	34	0	8	79	6,830	1,112	0	0	89,295		
7/21/2009	930	186	69	22		25	0.38	2.4	34	0	8	68	6,720	1,094	0	0	89,741		
		extraction from SOMA-2 only for sampling																	
	1000	184	68	24		26	0.18	1.6	23	0	6	70	9,500	1,547	0	0	89,741		
		extraction from MPE-1 only for sampling																	
	1030	186	71	22.5		25	0.32	2.2	31	0	8	68	9,900	1,612	0	0	89,770		
		extraction from B-10R only for sampling																	
	1130	184	72	23.5		26	0.2	1.8	25	0	6	68	12,450	2,027	0	0	89,793		
		extraction from B-10R & MPE-2																	
7/22/2009	930	188	72	21.5		24.5	0.38	2.6	34	0	8	68	6,300	1,026	0	0	90,452		
	1030	190	73	21.5		24.5	0.44	2.8	36	0	9	68	6,944	1,130	0	0	90,452		
	1100	190	73	21.5		24.5	0.44	2.8	36	0	9	68	6,756	1,100	0	0			
		extraction from SOMA-4 & MPE-1																	
	1200	190	75	22		25	0.32	2.4	31	0	8	70	8,521	1,387	0	0	90,471		
7/23/2009	1130	190	74	22		25	0.34	2.4	32	0	8	68	7,504	1,222	0	0	91,032		
7/24/2009	1530	193	79	22		25	0.34	2.4	32	0	8	71	6,333	1,031	0	0	91,565		
7/27/2009	1230	190	74	22		25	0.36	2.4	33	0	8	70	5,178	843	0	0	92,965		
7/28/2009	1330	194	80	22		25	0.4	2.6	35	0	9	72	11,338	1,846	300	50	93,441		
		extraction from MPE-1																	
	1430	190	77	25		27	0.1	2.4	17	0	4	72	4,650	757	97	10	93,445		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
7/29/2009	1400	186	74	25		27	0.1	2.6	17	0	4	70	2,840	462	144	10	93,523		
	1500	186	74	25		27	0.1	2.6	17	0	4	70	2,951	480	101	7	93,523		
7/30/2009	1000	180	65	25		27	0.1	2.6	17	0	4	65	3,351	546	54	4	93,571		
	1030	carbon change out of 1000 lb vapor vessel																	
	1130	restart with B-10R & MPE-2																	
	1230	200	75	22.5		25.5	0.3	2.2	30	0	8	72	8,000	1,302	0	0	93,600		976
7/31/2009	1300	200	76	22		25	0.36	2.6	33	0	8	80	15,000	2,442	183	25	94,397		
		extraction from B-10R																	
	1330	196	75	25		26.5	0.16	2.4	22	0	5	80	5,300	863	20	2	94,425		
8/3/2009	1400	194	76	24		26.5	0.12	2.4	19	0	5	76	7,500	1,221	0	0	95,522		
		extraction from B-10R & MPE-2																	
	1500	194	78	23		26	0.24	2.4	27	0	7	76	4,607	750	0	0	95,551		
8/4/2009	1000	194	75	23		26	0.22	2.6	26	0	6	72	7,932	1,291	22	2	96,027		
	1100	194	73	23		26	0.25	2.6	27	0	7	74	8,606	1,401	36	14	96,027		
8/5/2009	1030	194	73	23		26	0.2	2.6	25	0	6	70	6,688	1,089	24	15	96,587		
	1130	196	79	23		26	0.24	2.4	27	0	7	70	5,081	827	2	2	96,615		
8/6/2009	1300	196	76	23		26	0.22	2.6	26	0	6	72	7,250	1,180	100	9	97,203		
		extraction from B-10R																	
	1400	196	78	24.5		26.5	0.14	2.6	21	0	5	72	4,900	798	54	9	97,231		
8/7/2009	1400	196	78	24.5		26.5	0.14	2.6	21	0	5	72	4,766	776	44	8	97,639		
8/10/2009	1400	198	81	24		26.5	0.14	2.6	20	0	5	80	7,011	1,141	154	10	98,549		
	1500	198	81	24		26.5	0.14	2.6	20	0	5	80	5,627	916	311	11	98,575		
		shut down system for scheduled groundwater monitoring on 8/11																	
8/14/2009	1530	carbon change out of 1000 lb vapor vessel, restart system with MPE-3																	
	1630	184	82	23.5		26	0.2	2	25	0	6	70	7,475	1,217	0	0	98,620		
8/17/2009	1300	182	75	22.5		25	0.3	2.2	30	0	8	70	4,140	674	17	7	99,026		
8/18/2009	1300	182	75	22.5		25	0.3	2.2	30	0	7	76	3,437	560	25	10	99,122		
		extraction from SOMA-2																	
	1400	180	75	25		27	0.1	2	17	0	4	80	6,490	1,057	0	0	99,149		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
8/19/2009	1300	180	74	24		26.5	0.14	2.6	20	0	5	78	8,000	1,302	0	0	99,335		
		extraction from B-10R																	
	1400	180	75	23.5		26	0.2	1.8	24	0	6	80	10,000	1,628	0	0	99,362		
		extraction from MPE-1																	
	1500	180	73	23		25.5	0.26	2.2	28	0	7	82	6,364	1,036	0	0	99,380		
	1600	180	73	24.5		26.5	0.14	2	20	0	5	82	5,250	855	0	0	99,380		
8/20/2009	1230	176	74	26		27	0.08	2	15	0	4	76	3,131	510	0	0	99,425		
8/21/2009	1230	176	74	26		27	0.08	2	15	0	4	76	3,289	535	0	0	99,478		
	1330	176	77	26		27	0.08	2	15	0	4	82	3,070	500	0	0	99,478		
8/24/2009	1700	180	76	26		27	0.08	2	15	0	4	80	3,341	544	0	0	99,607		
8/25/2009	1400	180	73	26		27	0.08	2	15	0	4	78	3,539	576	15	0	99,677		
	1500	180	73	26		27	0.08	2	15	0	4	78	3,414	556	20	0	99,677		
8/26/2009	1400	180	76	26		27	0.1	2	17	0	4	76	2,613	425	0	0	99,726		
8/27/2009	1000	176	71	24		25	0.3	2.4	30	0	7	76	2,500	407	50	9	99,827		
	1100	carbon change out of 1000 lb vapor vessel, restart system with SOMA-2																	
	1200	180	76	25		27	0.14	1.4	20			76	7,787	1,268	0	0	99,854		
	1300	180	76	25		27	0.14	1.4	20			76	7,614	1,239	0	0	99,854		
8/28/2009	1200	184	83	26		27	0.16	1.4	22			84	10,803	1,759	37	0	100,067		
8/31/2009	1700	187	86	24		26	0.2	1.8	24			90	8,944	1,456	0	0	100,465		
9/1/2009	1700	188	84	24		26	0.2	1.8	24			90	9,150	1,490	0	0	100,600		
9/2/2009	1530	190	87	24		26	0.2	2	24			90	8,460	1,377	100	0	100,737		
9/3/2009	1700	190	87	24		26	0.2	2.2	24			90	8,111	1,320	200	9	100,778		
9/4/2009	930	184	70	24		26	0.24	2.4	27			72	9,027	1,470	3,412	0	100,943		
	1100	restart SOMA-2 after 55-gallon drum changeout																	
	1200	188	76	23		26	0.2	2.1	25			68	15,000	2,442	5,764	0	100,943		
9/8/2009	1100	188	76	23		26	0.24	2.2	27			80	6,627	1,079	5,381	0	101,425		
	1200	188	75	23		26	0.22	2.2	25			82	8,154	1,327	5,904	0	101,425		
	1300	190	76	23		26	0.24	2.2	27			84	5,868	955	4,823	0	101,425		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
9/10/2009	1000	186	73	23		26	0.24	2.2	27			78	4,590	747	3,297	26	101,629		
		restart SOMA-2 after 1000-lb & 55 gal drum changeout																	
	1330	186	82	23		26	0.24	2.4	27			78	7,083	1,153	180	9	101,629		
9/16/2009		System was shut down from 9/16 to 9/21 per EBMUD permit																	
9/21/2009	1030	restart SOMA-2 after effluent piping reassembly but Heat Exchanger failed to start, shut down																	
	1330	restart SOMA-2 after circuit breaker reset																	
	1430	178	78	25		27	0.1	1.8	17			72	2,736	445	5	0	102,087		
9/23/2009	1000	178	71	24		27	0.18	2.4	23			80	9,000	1,465	99.4	0	102,465		
9/25/2009	1000	176	70	24		26	0.16	2.6	22			80	10,000	1,628	100	17	102,737		
	1100	180	75	24		26	0.16	2.6	22			80	7,985	1,300	101	8	102,737		
	1200	180	75	24		26	0.16	2.6	22			80	8,451	1,376	96	7	102,737		
9/28/2009	1400	182	77	24		26	0.18	2.6	23			76	15,000	2,442	100	0	103,124		
	1500	184	75	24		26	0.18	2.6	23			76	7,574	1,233	100	0	103,149		
10/1/2009	1000	180	70	24		26	0.18	2.8	23			78	7,761	1,263	100	0	103,452		
		carbon change out of 1000 lb vapor vessel, restart system with SOMA-2																	
	1330	MPE-3 FP = 11.3 - 11.4'; restart with MPE-3																	
	1430	180	77	24		26	0.2	2.6	25			68	6,621	1,078	0	0	103,452		
10/5/2009	1630	188	74	24		26	0.26	2.4	28			75	2,700	440	0	0	103,775		
	1730	188	74	24		26	0.26	2.4	28			75	2,514	409	0	0	103,775		
10/6/2009	1200	188	72	24		26	0.26	2.4	28			74	2,310	376	0	0	103,846		
10/7/2009	1200	188	74	24		26	0.24	2.4	27			74	2,150	350	0	0	103,918		
10/8/2009	1300	188	70	24		26	0.24	2.4	27			70	2,470	402	0	0	103,982		
10/9/2009	1330	188	70	23		26	0.24	2.4	27			78	1,960	319	0	0	104,035		
10/12/2009	800	182	64	23		25	0.24	2.4	27			72	2,450	399	0	0	104,264		
10/13/2009	1400	186	71	23		25	0.2	2.4	25			66	2,715	442	0	0	104,264		
		extraction from SOMA-2 and MPE-1																	
	1500	186	78	21.5		24.5	0.3	2.4	30			66	6,430	1,047	0	0	104,264		
	1600	186	77	21.5		24.5	0.3	2.4	30			66	10,777	1,754	0	0	104,264		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
10/14/2009	1330	200	83	22		25	0.38	2.6	34			76	11,000	1,791	150	10	104,264		
		extraction from MPE-1															104,264		
	1400	200	81	23		25.5	0.24	2	27			76	6,050	985	101	10	104,264		
		vapor sample from MPE-1; extraction from SOMA-2															104,264		
	1430	194	82	24		26.5	0.14	1.6	20			76	5,600	912	25	5	104,264		
		extraction from B-10															104,264		
10/15/2009	1330	190	79	23.5		26	0.2	1.8	24			78	6,411	1,044	210	15	105,205		
		55-gallon polishing drum changeout for vapor															105,205		
	1430	extraction from MPE-3															105,205		
	1500	190	80	24		26.5	0.16	2.4	22			80	3,962	645	0	0	105,236		
10/19/2009	1230	190	74	24		26	0.19	2.8	24			74	1,355	221	126.2	0	105,635		
	1330	190	75	24		26	0.19	2.8	24			74	2,779	452	242.8	0	105,635		
	1430	192	76	24.5		26	0.2	2.8	24			74	2,990	487	502.7	3.2	105,635		
10/20/2009	1030	184	68	24		26	0.19	2.6	24			78	1,352	220	156.1	5.6	105,735		
	1130	184	68	24		26	0.2	2.6	24			78	1,349	220	167.2	4.8	105,735		
	1230	188	70	24		26.5	0.19	2.6	24			78	1,605	261	219.7	5	105,735		
10/21/2009	830	188	70	26		26	0.18	2.8	23			72	11,300	1,840	500	15	105,812		
		carbon change out of 1000 lb vapor vessel															105,812		
	1100	restart with extraction from MPE-3															105,812		
	1130	187	73	23		25.5	0.24	2.4	27			62	12,000	1,953	0	0	105,812		
10/22/2009	1130	189	71	23		26	0.2	2.4	24			80	2,161	352	0	0	29,979		
	1230	191	74	23.5		26	0.2	2.4	24			80	2,220	361	0	0	29,979		
	1330	191	73	24		26.5	0.2	2.4	24			82	1,522	248	32	0	29,994		
10/27/2009	1100	188	67	24		26	0.2	2.6	24			78	1,330	217	0	0	30,441		
		extraction from SOMA-2																	
	1200	184	68	25		27.5	0.08	1.2	15			78	2,160	352	0	0	30,468		
	1300	184	70	25		27	0.1	2.4	17			78	3,081	502	0	0	30,525		
10/28/2009	1430	190	69	24		26	0.16	3.4	22			78	4,151	676	0	0	30,940		
		extraction from SOMA-2, MPE-1 and B-10R																	
	1530	190	72	22		25	0.32	2.4	31			78	3,750	610	0	0	30,965		

Table 8: MPE Pilot Test Operational data



SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC	
10/29/2009	1100	192	69	22		25	0.4	2.8	34			78	4,299	700	0	0	31,502			
	1300	194	73	22		25	0.34	2.5	32			78	3,763	613	0	0	31,529			
10/30/2009	1430	198	76	22		25	0.34	2.6	32			82	2,922	476	0	0	32,007			
	1530	198	78	22		25	0.34	2.4	32			82	3,053	497	0	0	32,007			
11/2/2009	1130	198	75	22		25	0.3	2.6	30			80	3,525	574	0	0	33,115			
		extraction from SOMA-2 and MPE-1																		
	1500	198	81	21		24.5	0.4	2.8	34			88	3,411	555	0	0	33,143			
		extraction from B-10R and SOMA-4																		
	1600	200	81	21		25	0.4	2.8	34			90	3,965	645	0	0	33,220			
11/3/2009	1030	200	77	20		24	0.54	3.2	40			80	8,211	1,337	110	8	34,183			
	1130	200	79	20		24	0.54	3.2	40			82	6,212	1,011	53	10	34,240			
		extraction SOMA-4																		
	1300	200	80	24		26	0.2	1.8	24			84	5,610	913	25	4	34,298			
		extraction from MPE-4 and MPE-5																		
11/4/2009	800	196	66	20		23.5	0.68	3.6	45			78	1,413	230	0	0	34,719			
		extraction from MPE-4																		
	900	194	66	21		24	0.52	3	39			78	1,648	268	0	0	34,746			
		extraction from MPE-5																		
	1000	190	67	23.5		26	0.2	1.8	24			78	2,767	450	0	0	34,746			
		extraction from MPE-3																		
	1500	200	72	22.5		25	0.3	2.4	30			80	1,550	252	0	0	34,774			
		extraction from B-8R and MPE-2																		
11/5/2009	830	200	75	21		24	0.5	3	39			78	15,000	2,442	50	8	35,310			
		extraction from MPE-2																		
	900	200	76	22.5		25	0.32	2.4	31			78	6,500	1,058	40	7	35,310			
		extraction from B-8R																		
	1000	198	76	24		26.5	0.12	1.6	19			78	15,000	2,442	76	9	35,338			
		extraction from SOMA-2																		
	1500	200	76	24.5		26	0.14	1.6	20			80	6,232	1,015	99	9	35,395			
		extraction from B-10R and MPE-1																		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
11/6/2009	730	200	75	22		25	0.3	2.4	30			76	12,524	2,039	200	10	35,727		
		extraction from MPE-1																	
	800	200	73	23		25	0.28	2.2	29			76	5,911	962	200	10	35,727		
		extraction from B-10R																	
	900	196	73	24		26	0.18	1.8	23			76	5,888	959	175	9	35,727		
		carbon change out of 1000 lb vapor vessel																	
	1130	restart with extraction from SOMA-2 and MPE-1																	
	1300	194	74	22		25	0.3	2.6	30			74	5,911	962	0	0	35,754		
11/9/2009	1300	196	69	22		25	0.36	2.6	33			76	3,911	637	0	0	36,388		
	1500	196	70	21.5		25	0.36	2.8	33			76	3,791	617	0	0	36,416		
		extraction from SOMA-2, B-10R and MPE-1																	
11/10/2009	1100	198	72	21		24.5	0.46	3	37			78	4,850	790	185	5	36,804		
	1300	198	72	21		24.5	0.44	3	36			78	4,811	783	8	3	36,804		
11/11/2009	1030	198	69	21		24	0.44	3	36			78	5,460	889	25	2	37,135		
	1130	198	72	21		24	0.44	3	36			78	4,139	674	0	0	37,135	1,261	
11/12/2009	1100	198	68	21		24	0.42	3	35			76	4,100	667	80	9	37,498	1,264	
	1200	196	67	23		25.5	0.22	2.6	26			76	3,659	596	4	2	37,498		
11/13/2009	1300	196	70	22.5		25.5	0.22	2.6	26			72	7,111	1,158	125	9	37,800	1,267	
		extraction from B-10R																	
	1400	196	70	24		26.4	0.12	2.8	19			67	3,796	611	74	5	37,800		
11/16/2009	1400	192	68	24		26.4	0.11	2.8	18			70	3,812	621	60	15	38,150		
	1500	190	68	25		26.4	0.12	2.8	19			70	3,639	592	1,394	29	38,150		
	1600	190	68	26.4		27	0.1	2.8	17			70	3,036	494	60	17	38,150		
11/17/2009	1200	190	67	25		27	0.1	2.6	17			68	3,925	639	10	2	38,250		
	1300	196	70	23		26	0.2	3	25			70	4,211	686	8	3	114,195		
	1400	196	70	23		26	0.2	3	25			70	4,150	676	10	3	114,195		
11/18/2009	1030	192	66	23		26	0.24	3.2	27			68	4,386	714	1,936	30	114,443		
	1130	194	67	23		26	0.24	3.2	27			68	4,389	714	2,122	28	114,443		
	1230	194	67	23		26	0.24	3.2	27			70	3,955	644	2,101	28	114,443		

Table 8: MPE Pilot Test Operational data

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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC							
11/19/2009	900	190	65	23		26	0.24	3.2	27			64	2,758	449	28	20	114,635									
		carbon change out of 1000 lb vapor vessel																								
	1100	restart with extraction from SOMA-2 and MPE-1																								
	1200	192	66	22.5		25.5	0.28	2.2	29			64	3,325	541	0	0	114,635									
11/20/2009	1130	198	66	23		25	0.3	2.8	30			68	3,683	600	6	0	114,798									
	1230	198	66	23		25	0.3	2.8	30			68	4,320	703	6	0	114,798									
	1330	198	66	23		25	0.3	2.8	30			68	5,554	904	6	0	114,798									
11/23/2009	1215	196	66	23		25.5	0.32	2.8	31			68	3,565	580	8	3	115,120									
	1315	196	66	23		25.5	0.34	2.8	32			70	3,195	520	11	3	115,120									
	1415	196	66	22.5		25.5	0.32	2.8	31			70	3,314	539	11	3	115,120									
11/24/2009	1115	200	72	22.5		25	0.34	2.8	32			70	2,953	481	31	4	115,218									
	1215	200	69	22.5		25	0.34	2.8	32			72	2,711	441	21	4	115,239									
	1315	200	70	22.5		25	0.32	2.8	31			72	2,634	429	24	4	115,239									
11/25/2009	1100	200	68	21.4		25	0.33	2.7	32			70	4,200	684	30	4	115,335									
	1200	196	68	21.7		25	0.34	2.7	32			60	3,660	596	180	3	115,335									
	1300	199	67	22		25	0.33	2.7	32			60	3,700	602	160	8	115,335									
11/30/2009	730	190	60	22.5		25	0.32	2.6	31			60	3,411	555	101	6	115,774									
	830	192	60	22.5		25	0.32	2.7	31			60	3,210	523	141	7	115,774									
12/1/2009	730	190	61	22.5		25	0.33	2.8	32			62	3,157	514	51	5	115,897									
	830	190	60	22.5		25	0.32	2.8	31			62	3,009	490	44	8	115,897									
12/2/2009	1100	198	64	22.5		25	0.3	2.8	30			66	3,367	548	55	9	116,019									
	1200	196	63	22.5		26	0.18	2.6	23			66	2,911	474	53	9	116,019									
12/3/2009	1030	192	61	22.5		26	0.16	2.8	22			66	3,060	498	101	10	116,041									
	1200	194	63	22.5		26	0.16	2.8	22			60	2,811	458	3	1	116,059									
12/4/2009	730	190	60	22.5		26	0.16	2.8	22			60	2,710	441	0	0	116,084									
	830	188	60	22.5		26	0.16	2.8	22			61	2,950	480	0	0	116,084									
12/7/2009	730	188	60	22.5		26	0.16	2.8	22			60	2,101	342	20	4	116,146									
	830	188	61	22.5		26	0.16	2.8	22			60	1,953	318	15	8	116,146									
12/8/2009	730	182	52	22.5		26.5	0.14	2.4	21			60	1,877	306	0	0	116,175									
	830	180	52	22.5		26.5	0.14	2.4	21			52	1,855	302	0	0	116,175									

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
12/9/2009	1030	180	56	22.5		26.5	0.14	2.4	21			50	1,674	273	0	0	116,198		
	1130	180	56	22.5		26.5	0.14	2.4	21			50	1,701	277	0	0	116,198		
12/10/2009	730	180	55	22.5		26	0.18	2.6	24			56	1,666	271	25	0	116,255		
	830	179	54	22.5		26	0.18	2.6	24			56	1,713	279	33	2	116,255		
12/11/2009	1100	188	58	22.5		25.5	0.2	2.6	25			60	1,503	245	1,171	4	116,328		
	1200	188	59	22.5		25.5	0.2	2.6	25			60	1,434	233	1,012	6	116,339		
	1300	188	58	22.5		25.5	0.2	2.6	25			60	1,304	212	852	5	116,339		
12/14/2009	900	192	67	22.5		26	0.2	2.8	25			64	1,361	222	1,020	2	116,589		
	1000	192	65	22.5		26	0.2	2.8	25			64	1,902	310	1,462	5	116,589		
		shut down system												0			116,589		
		8/9 - 8/13 system maintenance - house keeping, electrical/mechanical tests												0			116,589		
8/13/2010		carbon change out of vapor side: 1000 lb vessel, 3 X 200 lb drums, and liquid side: 1000 lb vessel, 1 X 200 lb drum												0			116,647		
8/16/2010		prep system for restart - connect extraction wells, leak test, mechanical/electrical tests												0			116,647		
	1030	system restart with SOMA-2												0			116,647		
	1130	194	65	24		27	0.1	1.6	18			60	3,300	537	0	0	116,647	1,409	
8/17/2010	1000	194	70	24		26.5	0.14	2.6	21			72	3,932	640	0	0	116,841	1,415	
		added extraction from MPE-1 & B-10R with SOMA-2; MPE-1 = B-10R = SOMA-2 = 7" Hg vacuum												0			116,841		
	1100	194	70	23		25	0.4	2.6	35			74	4,150	676	10	5	116,841		
8/18/2010	1100	196	75	22.5		24.5	0.44	2.8	36			80	3,708	604	7	0	117,060	1,422	
	1200	194	75	22.5		24.5	0.44	2.8	36			82	3,611	588	10	5	117,062		
		extraction from B-10R only												0			117,062		
8/19/2010	1100	194	75	23		25	0.3	2.4	30			78	3,939	641	10	0	117,305	1,429	
	1200	194	75	23		25	0.3	2.4	30			80	3,124	509	8	3	117,315		
8/20/2010	1630	194	75	23		25	0.34	2.4	32			84	3,237	527	8	3	117,585		
		shut down system; heat exchanger leaking sealing fluid												0			117,585		
8/26/2010		installed repaired heat exchanger												0			117,587		
	1300	restarted with extraction from B-10R												0			117,587		
	1400	170	74	24		26	0.12	2.4	19			70	800	130	150	4	117,587		
8/27/2010	600	166	65	23		25	0.2	2.6	25			60	2,420	394	25	3	117,587		
		shut down system; heat exchanger leaking sealing fluid												0			117,587		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
9/2/2010		installed new heat exchanger; modified vapor abatement side pipeline, 4 x 200 lb vessels before 1000 lb vessel followed by 2 X 200 lb v												0			117,587		
	1100	restart with extraction from B-10R												0			117,587		
	1230	166	85			25	0.2	2.4	24			80	2,130	347	0	0	117,693		
9/3/2010	1430	166	77			25	0.3	2.6	30			80	2,881	469	0	0	117,949		
	1530	166	76			25	0.3	2.6	30			80	2,950	480	0	0	117,976		
9/7/2010	930	restart with extraction from B-10R, SOMA-2, MPE-1												0			117,976		
	1030	164	71			24.5	0.32	2.6	31			64	4,848	789	0	0	117,976		
	1200	166	73			24.75	0.32	2.6	31			70	5,262	857	0	0	118,009		
9/8/2010	900	EBMUD inspection and sampling															118,009		
	930	164	69			24.75	0.36	2.8	33			74	3,659	596	0	0	118,039		
	1030	164	69			24.75	0.36	2.8	33			74	4,530	737	0	0	118,087		
9/9/2010	1400	164	79			24.5	0.4	2.8	34			84	4,400	716	0	0	118,295		
9/10/2010	1530	164	79			24.5	0.4	2.8	34			84	4,000	651	0	0	118,470		
	1630	164	79			24.5	0.4	2.8	34			86	3,838	625	0	0	118,470		
9/13/2010	1300	restart with extraction from B-10R, SOMA-2, MPE-1												0			118,470		
	1330	164	68			24.75	0.34	2.6	32			62	4,100	667	0	0	118,485	1,472	
	1400	164	71			24.75	0.34	2.6	32			66	4,191	682	0	0	118,485		
9/14/2010	1230	164	70			24.75	0.38	2.8	34			76	4,573	744	0	0	118,685		
	1330	164	71			24.75	0.36	2.8	33			76	4,444	723	0	0	118,685		
9/15/2010	1100	164	69			24.75	0.38	2.8	34			74	3,540	576	0	0	118,827		
		closed SOMA-2 and B-10R; MPE at MPE-1												0			118,827		
9/16/2010	1230	164	75			25	0.32	2.4	31			80	1,435	234	0	0	118,914		
		closed MPE-1; MPE at SOMA-2 and B-10R															118,914		
	1330	164	78			25	0.34	2.6	32			82	3,636	592	0	0	118,943		
9/17/2010	1400	164	75			24	0.46	3.2	37			84	5,300	863	0	0	119,177		
		closed B-10R; opened SOMA-2															119,177		
	1500	164	75			26.5	0.16	1.6	22			84	7,877	1,282	0	0	119,177		
9/20/2010	1130	restart with SOMA-2 and B-10R															119,177		
	1230	164	76			25	0.3	2.4	30			70	8,299	1,351	0	0	119,209		

Table 8: MPE Pilot Test Operational data

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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
9/21/2010	1100	164	74			24.5	0.38	3	34			78	6,111	995	0	0	119,410		
	1200	164	74			24.5	0.38	3	34			78	5,250	855	0	0	119,410		
9/22/2010	1300	164	74			25	0.3	3	30			80	4,799	781	0	0	119,525		
	1400	164	75			26	0.22	2.4	26			80	7,681	1,250	0	0	119,553		
9/23/2010	1430	164	77			26	0.22	3	25			82	5,641	918	0	0	119,638		
		resolved restriction in vapor flow causing high effluent pressure																	
	1530	164	77			26	0.22	2.4	25			86	6,832	1,112	0	0	119,667		
9/24/2010	1430	164	80			26	0.22	3	25			84	7,600	1,237	0	0	119,752		
	1530	164	80			26	0.22	3	25			84	7,444	1,212	0	0	119,752		
9/27/2010	930	restart with SOMA-2, B-10R, and MPE-1																	
	1000	164	75			25	0.26	2.4	28			70	6,351	1,034	0	0	119,780		
	1030	164	76			25	0.28	2.4	29			74	7,853	1,278	0	0	119,780		
9/28/2010	1330	164	88			24.5	0.36	3	32			90	6,950	985	0	0	119,976		
		closed MPE-1; MPE at SOMA-2 and B-10R																	
9/29/2010	1200	164	80			25.5	0.22	2.2	25			86	6,000	977	0	0	120,087		
		opened MPE-1; MPE at SOMA-2, B-10R, and MPE-1																	
	1300	164	80			25	0.3	2.6	30			86	6,960	1,133	0	0	120,087		
9/30/2010	1000	168	73			24	0.3	2.6	30			80	6,211	1,011	0	0	120,225		
10/1/2010	1230	164	75			24.5	0.32	2.6	31			80	6,399	1,042	0	0	120,370		
	1330	164	75			24.5	0.32	2.6	31			80	6,122	997	0	0	120,370		
10/4/2010	1300	restart with SOMA-2, B-10R, and MPE-1																	
	1400	164	76			25	0.24	2.4	27			68	8,555	1,393	0	0	120,399		
10/5/2010	1300	164	74			24.5	0.3	2.8	30			80	5,250	855	0	0	120,570		
10/6/2010	1300	164	74			24.5	0.3	2.8	30			80	6,850	1,115	0	0	120,714		
		carbon change - removed 3 X 200 lbs vessels and installed 4 X 200 lb vessels																	
	1530	164	74			24.5	0.34	2.6	32			82	4,365	711	0	0	120,714		
10/7/2010	1200	164	71			24.5	0.34	2.6	32			76	5,540	902	0	0	120,854		
	1300	164	71			24.5	0.34	2.6	32			76	6,000	977	0	0	120,854		
10/8/2010	1300	164	76			24.5	0.34	2.8	32			78	4,878	794	0	0	120,995		
	1400	164	76			24.5	0.34	2.8	32			78	4,577	745	0	0	120,995		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
10/11/2010	930	164	99			25	0.24	2.6	27			66	4,318	703	0	0	120,995		
	1030	164	95			25	0.28	2.6	29			70	4,429	721	0	0	120,995		
	1130	164	98			25	0.3	2.6	30			70	4,510	734	0	0	121,025		
10/12/2010	930	164	101			24.5	0.34	2.8	32			80	4,802	782	0	0	121,165		
	1030	164	79			24.5	0.34	2.8	32			80	5,038	820	1	0	121,165		
	1130	164	80			25	0.34	2.8	32			80	4,912	800	0	0	121,165		
10/13/2010	1300	164	82			25	0.34	3	32			82	4,921	801	0	0	121,325		
	1400	164	84			25	0.34	3	31			88	4,216	686	5	6	121,325		
10/14/2010	1200	system shutdown overnight; restart																	
	1300	166	83			25	0.3	3	30			78	5,000	814	7	2	121,362		
	1400	166	85			25	0.3	3	30			86	5,000	814	3	2	121,379		
10/15/2010	system shutdown overnight, air leak, low oil																		
	1330	restart																	
	1400	164	76			24.5	0.26	2.8	28			70	5,900	895	0	0	121,432		
	1430	164	76			24.5	0.26	2.8	28			74	6,300	1,026	0	0	121,433		
																	121,433		
10/19/2010	1130	166	76			24.5	0.32	2.8	31			64	7,000	1,140	0	0	121,433		
	1230	166	71			24	0.36	2.8	33			70	6,791	1,106	0	0	121,440		
10/20/2010	1300	166	71			24	0.36	3	33			78	3,725	606	0	0	121,648		
		MPE at SOMA-2 & MPE-3 (valves 1/2 open)																	
	1400	166	74			24.5	0.28	2.6	29			80	8,000	1,302	0	0	121,648		
10/21/2010	1530	164	78			24.5	0.34	2.8	32			84	6,550	1,066	0	0	121,760		
10/22/2010	1500	164	73			24.5	0.32	3	31			80	15,000	2,442	4	7	121,863		
10/25/2010	1100	restart with SOMA-2 and MPE-1																	
	1200	164	73			25	0.26	2.6	28			64	7,100	1,156	10	3	121,870		
10/26/2010	1130	164	71			24	0.36	2.8	33			80	4,343	707	0	0	122,125		
10/27/2010	1100	164	71			25	0.28	2.8	29			80	4,195	683	0	0	122,320		
		MPE at SOMA-2																	
	1300	164	70			26	0.14	2	20			82	5,518	898	11	8	122,335		
		EBMUD inspection and sampling of effluent line																	
								0									122,335		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H <sub>2</sub> O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC	
10/28/2010	1200	170	70			26	0.17	3	23			68	6,671	1,086	3	8	122,447			
10/29/2010	1430	170	71			26	0.14	2.6	20			80	4,827	786	3	1	122,560			
	1530	170	71			26	0.14	2.6	20			80	4,811	783	4	1	122,560			
11/2/2010	1400	restart with SOMA-2								0								122,560		
	1500	164	76			26	0.1	2.8	17			70	4,407	717	1	4	122,588			
	1600	164	75			26	0.1	2.8	17			70	4,428	721	1	2	122,588			
11/3/2010	1500	164	77			26	0.14	2	21			70	3,340	544	0	2	122,756			
11/4/2010	1200	161	76			26	0.14	2	20			80	3,866	629	3	6	122,863			
	1300	164	79			26	0.15	2	21			82	3,265	532	3	6	122,869			
11/5/2010	1500	164	69			26	0.14	2	20			80	2,300	374	4	4	122,980			
11/8/2010	1100	restart with SOMA-2 and MPE-1																122,980	1,711	
	1200	164	69			25	0.3	2.6	30			64	2,929	477	4	3	123,006			
11/9/2010	1430	164	69			25	0.38	3	34			74	3,211	523	2	0	123,346			
	1530	164	70			25	0.38	3	34			74	3,340	544	1	0	123,346			
11/10/2010	1500	164	68			25	0.28	2.6	29			76	2,666	434	2	4	123,574			
	1600	164	68			25	0.28	2.6	29			76	2,680	436	1	2	123,574			
11/11/2010	1430	164	78			25	0.3	2.6	30			78	3,112	507	0	0	123,826			
	1530	164	78			25	0.3	2.6	30			78	3,364	548	0	0	123,826			
11/12/2010	1400	164	79			25	0.3	2.8	30			84	2,999	488	4	8	124,027			
	1500	164	75			25	0.3	2.8	30			82	3,002	489	2	1	124,055			
11/15/2010	1000	restart with SOMA-2 and MPE-1																124,055		
	1100	164	80			25.5	0.24	2	27			74	4,055	660	0	0	124,085			
	1200	164	81			25.5	0.26	2.4	28			76	3,945	642	0	0	124,085			
11/16/2010	1000	164	74			25	0.3	2.8	30			82	3,353	546	0	0	124,336			
		added MPE with B-10 with SOMA-2 and MPE-1 for vapor sampling																124,336		
	1200	164	78			24.5	0.38	3	33			84	3,314	539	3	1	124,365			
		closed B-10, SOMA-2 and MPE-1 remain																124,365		
11/17/2010	1400	system shutdown overnight; low vacuum pump oil level, restart																124,365		
	1500	164	74			24.5	0.28	2.8	29			74	4,475	728	0	0	124,530			
11/18/2010	1500	system shutdown overnight; low vacuum pump oil level																124,635		

Table 8: MPE Pilot Test Operational data



SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
11/22/2010	1000	restart with SOMA-2 and MPE-1																	
	1100	162	71			25	0.24	2.8	27			65	4,400	716	1	1	124,635		
11/23/2010	1500	161	72			25	0.24	2.8	27			65	4,300	700	1	2	125,145		
11/24/2010	1030	164	65			25	0.24	2.8	27			66	4,295	699	0	0	125,388		
11/29/2010	1000	restart with SOMA-2 and MPE-1																	
	1100	164	65			25.5	0.2	2.6	25			52	3,102	505	2	2	125,443		
	1200	164	68			25.5	0.2	2.8	25			54	2,841	462	2	1	125,443		
11/30/2010	1000	164	67			25.5	0.26	3.2	28			62	2,415	393	0	0	125,804		
		closed SOMA-2 and MPE-1, took DTW from indoor wells, change out removing 3 vapor drums and installing 2 new vapor drums																	
	1400	restart with MPE-3																	
	1430	164	70			26	0.2	2	25			62	6,000	977	7	5	125,804		
12/1/2010	1230	164	68			25.5	0.3	2.8	30			62	3,000	488	0	0	125,913		
	1300	164	69			25.5	0.3	2.8	30			62	2,912	474	2	1	125,913		
		closed MPE-3, opened MPE-2																	
	1400	164	65			25.5	0.18	2	23			62	7,911	1,288	9	6	125,913		
12/2/2010	1030	system shutdown overnight, unknown cause, restart with MPE-3																	
	1100	164	68			25.5	0.2	2.6	25			58	7,612	1,239	4	3	125,976		
	1200	164	70			25.5	0.2	2.6	25			60	>15000	>2442	6	7	125,981		
		1/2 inch FP layer in air water separator																	
		system shut down overnight, unknown cause																	
12/3/2010	1200	164	70			25.5	0.2	2.6	25			60	>15000	>2442	6	7	126,231		
12/6/2010	930	restart with MPE-2; MPE-3 DTW = 11.43, no FP																	
	1530	164	75			25.5	0.26	2.6	28			68	4,928	802	0	0	126,315		
12/7/2010	1130	164	70			25	0.28	2.8	29			68	7,630	1,242	2	1	126,535		
		MPE-3 DTW = 12.00', no FP																	
	1230	164	70			25.5	0.26	2.8	28			70	10,555	1,718	5	3	126,535		
	1330	164	70			25.5	0.28	2.8	29			70	8,362	1,361	10	7	126,785		
		water samples for EBMUD, shut down system due to rain per discharge permit, carbon change out 2 X 200 lbs drums out and 2 X 200 lbs drums in																	
12/13/2010	1000	restart with MPE-2; DTW MPE-3 = 10.4', MPE-2 = 13.10, no FP layer in wells																	
	1100	164	74			26	0.16	2	22			60	5,009	815	4	3	126,810	1,892	

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H <sub>2</sub> O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
	1200	164	71			26	0.18	2	23			62	5,549	903	2	1	126,840		
12/14/2010	1300	164	71			25	0.26	2.6	28			72	5,559	905	2	1	127,201		
		shut down system to prep for addition of electric oxidizer, cleared a pathway through building, removed/disconnected GAC vessels surrounding system																	
12/20/2010		issue with electric oxidizer delaying install and startup																	
12/21/2010		reinstalled/reconnected GAC vessels																	
	1130	restart with MPE-3																	
	1230	164	69			25.5	0.2	2.6	25			60	15,000	2,442	15	2	127,201		
12/22/2010	930	164	62			25	0.22	2.6	26			78	15,000	2,442	50	10	127,201		
		shut down system, GAC spent																	
		DTW: MPE-2 = 11.1', no FP; MPE-3 = 7.8', no FP																	
1/5/2011	1330	restart w/ SOMA-4																	
	1430	164	75			26.5	0.12	1.6	19			58	1,400	228	5	3	127,285		
		added MPE-3 w/ SOMA-4																	
	1530	164	75			25.5	0.24	2.4	27			58	800	130	4	3	127,353		
1/6/2011	1030	164	74			25	0.34	3	33			50	750	122	3	3	128,110		
		closed SOMA-4; added MPE-2 w/ MPE-3																	
	1200	164	74			25	0.3	2.6	31			52	688	112	3	2	128,110		
1/7/2011	1330	164	68			25	0.3	2.6	31			50	700	114	3	3	128,529		
	1500	164	69			25	0.3	2.6	31			50	699	114	3	2	128,556		
		extraction from MPE-3 only																	
1/10/2011	1430	164	69			25.5	0.2	2	25			50	500	81	1	0	128,556		
	1530	164	70			25.5	0.24	2.4	27			48	650	106	1	0	128,593		
1/11/2011	1330	164	70			24.5	0.3	2.8	31			52	1,125	183	1	0	128,749		
	1430	164	70			24.5	0.32	2.8	32			52	1,320	215	3	1	128,776		
1/12/2011	1430	164	74			24.5	0.3	2.8	30			60	1,500	244	1	0	128,916		
	1530	164	74			24.5	0.3	2.8	30			60	1,310	213	0	0	128,916		
1/13/2011	1300	system down upon arrival; restart w/ MPE-3																	
	1400	164	77			25	0.26	2.8	28			58	1,004	163	1	0	129,055	1,979	

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
1/14/2011	1000	system down upon arrival; (10450 H) electrical issue;																	
		system remains off in prep. for installation of new Ecat system																	
1/18/2011		Ecat system delivered; install and troubleshooting through 1/28/11																	
1/31/2011	1300	start Ecat system w/ extraction from MPE-3																	
	1400	168				25	0.01	1.4	38			664	520	85		5	129,141	1,990	
		shutdown system; fluid leaking from electrodes																	
2/1/2011	1100	DTW: MPE-2 = 13.35' - 13.65' has FP; MPE-3 = 11.7' no FP																	
	1300	168				25	0.01	1.4	37			730	650	106		9	129,141	1,991	
2/2/2011		repairing electrode box																	
2/3/2011	1100	restart Ecat with MPE-2 and MPE-3																	
	1300	168				23.5	0.01	1.4	37			713	660	107		9	129,155		
	1500	168				23.5	0.01	1.4	37			700	671	109		9	129,195		
2/4/2011	930	168				23.5	0.01	1.4	37			685	550	90		8	129,455		
	1030	168				23.5	0.01	1.4	37			684	566	92		9	129,545		
		added SOMA-2 and SOMA-4 with MPE-2 and MPE-3																	
	1430	168				21	0.03	2	64			690	500	81		20	129,645		
		shutdown system																	
2/7/2011	1000	restart with SOMA-2 and SOMA-4 with MPE-2 and MPE-3																	
	1100	168				21	0.03	2	65			685	2,000	326		10	129,725	2,000	
	1300	168				21	0.03	2	64			713	1,755	286		51	129,925		
2/8/2011	1100	168				20	0.04	2	73			721	2,731	445		80	131,012		
	1200	168				20	0.04	2	73			720	2,566	418		74	131,061		
2/9/2011	1100	168				19.5	0.045	2	78			727	1,700	277		45	131,963		
		2/10 - 2/11 groundwater monitoring; system down																	
2/15/2011	1330	restart																	
2/16/2011	1030	system shutdown																	
2/17/2011	1300	restart																	
	1400	168				21	0.03	2	64			720					134,262		
2/18/2011	200	system shutdown																	

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
2/22/2011	1300	restart															135,275		
	1400	168				22	0.03	1.6	64			700	2,000	326		9	135,275		
2/25/2011	1500	shut down															139,755		
																	139,755		
																	139,755		
3/1/2011	1200	restart										700					139,755		
3/2/2011	1200											700					140,645		
3/3/2011	1200											700					141,305		
3/4/2011	1200											700					142,025		
3/7/2011	1200											700					144,115		
																	144,115		
3/9/2011	1100	168				22	0.03	2	64			700	1,600	260		6	145,535		
	1300	168				22	0.03	2	64			700	1,600	260		8	145,765		
																	145,765		
3/11/2011	1200	168				20	0.04	2	74			700	3,250	529		10	148,035		
3/13/2011	2000	shut down										700	1,000	163			148,035		
3/14/2011	1330	restart															150,045		
3/15/2011	1200	168				20	0.04	2	74			700	1,000	163			151,676		
3/16/2011	1200	168				20	0.04	2	74			700	1,000	163			152,925		
3/17/2011	1300	168				20	0.04	2	74			700	1,000	163		9	154,100		
		shut down system; building sewers being cleaned by tenant															154,100		
3/23/2011	1100	restart										700					154,100		
3/24/2011	1100					20	0.04	2	74			700	1,100	179			154,100		
3/25/2011	1100					20	0.04	2	74			700	1,100	179			157,145		
3/28/2011		shut down at 2300															160,495		
3/29/2011	1100	restart										700	1,100	179			161,625		
	1800	shut down											1,100	179			161,625		
3/30/2011	1330	restart															161,625		
3/31/2011	1330	160				20	0.04	2	74			700	1,100	179			163,095		
4/1/2011	1330	160				20	0.04	2	74			700	1,100	179			163,725		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
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MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
4/4/2011	1330	160				20	0.04	2	74			700	1,100	179			166,295		
4/5/2011	1330	160				20	0.04	2	74			700	1,100	179			167,825		
4/6/2011	1400	160				20	0.04	2	74			700	1,100	179		7	169,125		
4/7/2011	1200	160				20	0.04	2	74			705	1,140	186			170,965		
4/11/2011	1200	160				20	0.04	2	75			687	1,142	186			174,285		
4/12/2011	1200	160				20	0.04	2	74			699	1,135	185			175,225		
4/15/2011	1200	160				20	0.04	2	73			735	1,164	189			178,235		
4/19/2011	1200	160				20	0.04	2	75			680	1,182	192			182,145		
4/20/2011	1200	160				20	0.04	2	73			741	1,179	192			183,145		
		shut down overnight; unknown cause															183,145		
4/21/2011	1200	164				20	0.04	2	73			740	1,173	191			183,245		
		shut down overnight; unknown cause															183,245		
4/22/2011	1200	164				20	0.04	2	74			700	1,194	194			183,295		
4/25/2011	1200	160				20	0.04	2	75			678	1,193	194			183,415		
		shut down overnight; unknown cause															183,415		
4/26/2011	1200	160				20	0.04	2	75			670	1,186	193			183,503		
		system remains off; issues with vac pump, mechanical bearing worn, vac pump oil to be replaced																	
6/28/2011	1300	restart system															183,635		
6/29/2011	1200	166				18	0.04	2	73			750	1,210	197		8	184,625		
6/30/2011	1200	166				18	0.04	2	73			745	1,206	196		9	185,585		
7/1/2011	1200	166				18	0.04	2	72			760	1,214	198		5	186,325		
		system off-restart																	
7/2/2011	1200	166				18	0.04	2	74			715	1,189	194		6	187,531		
		system off-restart																	
7/4/2011	1200	166				18	0.04	2	74			706	1,164	189		7	188,535		
7/5/2011	1200	166				18	0.04	2	75			688	1,152	188		7	189,375		
7/6/2011	1200	166				18	0.04	2	74			693	1,108	180		8	190,165		
7/8/2011	1200	168				18	0.04	2	74			710	1,100	179		8	190,845		
		System off over weekend (7-9 and 7-10)																	
7/11/2011	1100	restart system & collect sample															191,275		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
7/12/2011	1300	166				25	0.04	4	74			705	1,120	182		10	191,365		
	1400	168				20	0.04	4	73			723	1,115	182		12	192,295		
7/13/2011	1200	168		4		19	0.06	4	91			684	1,126	183		15	193,165		
7/14/2011	1500	168		4		19	0.05	4	81			741	1,050	171		14	193,885		
7/15/2011	1100	168		4		18	0.03	2	64			700	1,000	163		11	196,025		
7/18/2011	1100	168		4		18	0.06	2	89			750	510	83		17	196,775		
7/19/2011	1300	168		4		18	0.06	2	92	30	16	669	2,145	349		3	201,393		
		System down																	
7/26/2011	1130	Restart oxidizer																	
	1200	116	73	4		18	0.12	2.5	127	30	24	734	874	142		3	201,393		
7/27/2011	1300	168		4		18	0.1	2.5	116	30	21	730	900	147		6	201,845		
7/28/2011	1300	168		4		18	0.06	2.5	89	30	15	737	974	159		10	202,735		
7/29/2011	1200	168		4		18	0.05	2.5	83	30	13	700	994	162		15	203,365		
8/2/2011	1200	168		4		18	0.06	2.4	89	30	15	748	1,148	187		23	204,895		
8/3/2011	900	168		4		18	0.06	2.4	89	30	15	744	950	155		23	206,455		
8/8/2011	1100	168		4		17	0.05	2.3	82	30	13	734	900	147		22	209,515		
8/9/2011	1100	168		4		27	0.05	2.3	83	30	13	708	850	138		22	210,075		
8/10/2011	1100	168		4		18	0.06	2.2	92	30	15	678	842	137		23	210,665		
8/11/2011	1400	168		4		18	0.05	2.2	82	30	13	724	818	133		23	211,345		
8/12/2011	1500	168		4		18	0.05	2.1	81	30	13	740	796	130		23	212,065		
8/16/2011	1130	166		4		18	0.07	2	97	30	17	734	781	127		8	214,353		
8/17/2011		System down.																	
8/18/2011	1000	Refill oil																	
8/19/2011	920	Restart system-failed																	
8/22/2011	1430	Add oil, restart system																	
	1530	166		4		19	0.05	1.5	81	30	13	748	1,209	197		9	214,538		
8/24/2011	1400	PID doesn't work, sent to EI																	
8/26/2011	1200	Shut down for GWM																	
8/31/2011	1200	Restart																	
9/1/2011	1400	168		5		18	0.03	2	64	25	10	700	828	135		0	217,585		

Table 8: MPE Pilot Test Operational data

SITE ADDRESS: 3820 Manila Ave, Oakland, California  
 PROJECT #: 2515

MTS OPERATIONAL DATA

DATE	TIME	PUMP TEMPERATURE (F)	CONDENSER TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	CASING VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	PITOT TUBE Δ PRESSURE (IN-H2O)	PUMP OUTLET (Psi)	TOTAL FLOW RATE (SCFM)	DILUTION FLOW RATE (SCFM)	WELL FLOW RATE (SCFM)	EFFLUENT TEMPERATURE (F)	INFLUENT CONCENTRATION (PPMV as hexane)	INFLUENT CONCENTRATION (PPMV as TPH-ss)	MID EFFLUENT CONCENTRATION (PPMV)	END EFFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER	POWER USAGE (KWH)	GAC
9/6/2011	1330	166		5		18	0.07	2.5	98	25	18	704	903	147		0	220,565		
9/7/2011	1300	168		5		18	0.05	2	84	25	15	669	789	128		15	221,125		
9/8/2011	1200	168		5		18	0.05	2	81	25	14	741	822	134		29	221,685		
9/9/2011	1200	168		5		18	0.05	2.2	82	25	14	739	642	105		0	222,245		
9/12/2011	1100	168		5		18	0.04	2.2	75	25	13	670	815	133		5	223,915		
9/13/2011	1100	168		5		18	0.04	2.2	75	25	12	678	858	140		23	224,475		
9/14/2011	1200	168		5		18	0.05	2.1	81	25	14	742	822	134		2	225,035		
9/15/2011	1200	168		5		18	0.05	2	83	25	14	699	800	130		9	225,595		
9/19/2011	1000	168		5		19	0.05	2	83	25	14	700	804	131		14	225,745		
9/20/2011	1000	168		5		18	0.04	2	74	25	12	702	701	114		5	226,275		
9/21/2011	1100	168		5		18	0.05	2	82	25	14	739	471	77		3	226,855		
9/22/2011	1200	168		5		18	0.04	2	73	25	12	734	450	73		2	227,425		
9/23/2011	1500	168		5		18	0.05	2	83	25	14	700	454	74		2	227,945		
9/24/2011	System down																		
9/26/2011	Restart																		
9/27/2011	1100	168		5		18	0.05	2	82	25	14	721	770	125		2	228,515		
9/28/2011	1500	168		5		18	0.04	2	73	25	12	728	781	127		2	229,175		
9/29/2011	1200	168		5		18	0.05	2	82	25	14	739	790	129		2	229,695		
9/30/2011	1000	168		5		18	0.05	2	84	25	15	682	1,688	275		2	230,195		
10/1/2011	System shut down																		
10/3/2011	Restart																		
	1100	168		5		18	0.05	2.5	82	15	17	733	842	137		1	231,785		
10/4/2011	1200	168		6		18	0.05	2.3	83	15	17	690	798	130		0	232,345		
10/5/2011	1600	168		6		18	0.05	2.2	82	15	17	734	400	65		5	232,955		
10/6/2011	1100	168		6		18	0.05	2.3	82	15	17	727	420	68			233,415		
10/7/2011	1100	166		6		18	0.05	2.5	82	15	17	716	430	70			233,975		
	System shut down																		
10/10/2011	Restart																		
	1200	166		6		18	0.05	2.5	81	15	16	757	433	70		38	234,035		

Table 8: MPE Pilot Test Operational data

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
SOMA-4, 2 B-10, 8	START	12/17/2008	1300	0										
	STEADY-STATE		1330	30	30	23	690	1.8206	939	0.0009				
			1430	60	90	23	1,380	3.6412	977	0.0010	0.2462	0.0082	12	
	pause restart	12/18/2008	0830	1080	1,170	23	24,840	65.5409	977	0.0010	0.5121	0.0085	12	
					1,170									
			1330	0	1,170									
	pause restart	12/19/2008	1400	30	1,200	23	684	1.8059	1,677	0.0017	0.4360	0.0145	21	
			1430	30	1,230	24	722	1.9055	1,563	0.0016	0.4288	0.0143	21	
			1530	60	1,290	21	1,288	3.3992	875	0.0009	0.4283	0.0071	10	
	pause restart	12/19/2008			1,290									
			900	0	1,290									
			1000	60	1,350	20	1,222	3.2247	1,026	0.0010	0.4762	0.0079	11	
	12/22/2008	1100	60	1,410	20	1,217	3.2124	686	0.0007	0.3173	0.0053	8		
		1200	60	1,470	20	1,200	3.1662	566	0.0006	0.2579	0.0043	6		
		1300	60	1,530	19	1,140	3.0079	488	0.0005	0.2115	0.0035	5		
		1430	90	1,620	20	1,800	4.7493	494	0.0005	0.3379	0.0038	5		
		1500	30	1,650	19	570	1.5040	444	0.0004	0.0962	0.0032	5		
		900	3960	5,610	21	83,160	219.4195	256	0.0003	8.1012	0.0020	3		
		1100	120	5,730	29	3,480	9.1821	309	0.0003	0.4085	0.0034	5		
	12/23/2008	1230	90	5,820	30	2,700	7.1240	405	0.0004	0.4158	0.0046	7		
		1330	60	5,880	30	1,800	4.7493	341	0.0003	0.2332	0.0039	6		
		1400	60	5,940	30	1,800	4.7493	316	0.0003	0.2161	0.0036	5		
	12/23/2008	930	1170	7,110	30	35,100	92.6121	279	0.0003	3.7211	0.0032	5		
		1030	60	7,170	30	1,800	4.7493	417	0.0004	0.2850	0.0048	7		
		1130	60	7,230	30	1,800	4.7493	271	0.0003	0.1855	0.0031	4		
	12/24/2008	1330	120	7,350	30	3,600	9.4987	294	0.0003	0.4019	0.0033	5		
		1000	1230	8,580	30	37,135	97.9824	300	0.0003	4.2355	0.0034	5		
		1200	120	8,700	30	3,616	9.5411	273	0.0003	0.3758	0.0031	5		
	12/29/2008			8,700										
		1000	0	8,700										
		1100	60	8,760	30	1,825	4.8164	296	0.0003	0.2055	0.0034	5		
	12/30/2008	1300	120	8,880	30	3,623	9.5593	269	0.0003	0.3704	0.0031	4		
		1400	60	8,940	31	1,864	4.9177	245	0.0002	0.1737	0.0029	4		
930		1170	10,110	31	36,413	96.0769	289	0.0003	3.9977	0.0034	5			
1030		60	10,170	31	1,867	4.9270	295	0.0003	0.2096	0.0035	5			
1130		60	10,230	31	1,864	4.9177	264	0.0003	0.1871	0.0031	4			
1230		60	10,290	31	1,864	4.9177	260	0.0003	0.1840	0.0031	4			
1330		60	10,350	31	1,864	4.9177	239	0.0002	0.1695	0.0028	4			
12/31/2008	1000	750	11,100	31	23,476	61.9407	268	0.0003	2.3885	0.0032	5			
	1200	120	11,220	31	3,749	9.8916	299	0.0003	0.4255	0.0035	5			
	1400	120	11,340	31	3,735	9.8540	268	0.0003	0.3798	0.0032	5			
	1500	60	11,400	31	1,867	4.9270	268	0.0003	0.1899	0.0032	5			
			11,400											
	pause													



**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss
B-10	restart	1/5/2009	800	0	11,400									
			830	30	11,430	35	1,035	2.7315	390	0.0004	0.1534	0.0051	7	
			900	30	11,460	33	975	2.5737	174	0.0002	0.0646	0.0022	3	
B-10, SOMA-2			1100	120	11,580	38	4,512	11.9051	174	0.0002	0.2983	0.0025	4	
					11,580									
B-10, SOMA-2, 4		1/6/2009	1000	1380	12,960	38	52,701	139.0536	1,017	0.0010	20.3730	0.0148	21	
			1200	120	13,080	38	4,560	12.0317	861	0.0009	1.4920	0.0124	18	
					13,080							0.0000		
	c/o	1/7/2009	1400	120	13,200	39	4,680	12.3483	1,196	0.0012	2.1261	0.0177	26	
			700	1020	14,220	43	43,551	114.9101	1,175	0.0012	19.4351	0.0191	27	
			730	30	14,250	43	1,281	3.3797	1,175	0.0012	0.5718	0.0191	27	
B-10					14,250									
			930	0	14,250									
			1000	30	14,280	8	235	0.6206	1,224	0.0012	0.1094	0.0036	5	
B-10, 8, SOMA-2, 4			1030	30	14,310	30	911	2.4036	924	0.0009	0.3198	0.0107	15	
			1130	60	14,370	30	1,822	4.8071	0.0000	0.0000	0.0000	0		
			1230	60	14,430	35	2,100	5.5401	1,198	0.0012	0.9559	0.0159	23	
		1/8/2009	1430	120	14,550	38	4,583	12.0916	1,339	0.0013	2.3314	0.0194	28	
			1000	1110	15,660	40	43,954	115.9744	1,583	0.0016	26.4389	0.0238	34	
			1200	120	15,780	36	4,320	11.3984	1,169	0.0012	1.9185	0.0160	23	
B-8, SOMA-2, 4			1400	120	15,900	36	4,371	11.5331	1,121	0.0011	1.8614	0.0155	22	
					15,900									
			1500	60	15,960	23	1,398	3.6883	820	0.0008	0.4358	0.0073	10	
		1/9/2009	1200	1260	17,220	24	30,274	79.8785	1,221	0.0012	14.0438	0.0111	16	
			1400	120	17,340	24	2,880	7.5989	874	0.0009	0.9566	0.0080	11	
			1500	60	17,400	35	2,100	5.5409	692	0.0007	0.5520	0.0092	13	
B-10	pause restart	1/12/2009	1030	4050	21,450	34	139,607	368.3572	1,415	0.0014	75.0380	0.0185	27	
					21,450									
			1300		21,450									
		1/13/2009	1400	60	21,510	33	1,958	5.1675	257	0.0003	0.1914	0.0032	5	
			1500	60	21,570	33	1,955	5.1580	212	0.0002	0.1572	0.0026	4	
			1030	1170	22,740	33	38,120	100.5803	366	0.0004	5.3050	0.0045	7	
	pause restart				22,740									
			1130		22,740									
			1230	60	22,800	29	1,721	4.5405	98	0.0001	0.0639	0.0011	2	
	pause pause c/o	1/14/2009	1400	90	22,890	25	2,288	6.0371	98	0.0001	0.0851	0.0009	1	
			930	1170	24,060	25	29,745	78.4825	98	0.0001	1.1075	0.0009	1	
					24,060									
B-10, 8, SOMA-2, 4	restart	1/15/2009	730		24,060									
					24,060									
			1030		24,060									
			1100	30	24,090	29	877	2.3132	565	0.0006	0.1882	0.0063	9	
			1130	30	24,120	29	873	2.3044	369	0.0004	0.1225	0.0041	6	
			1230	60	24,180	30	1,798	4.7437	326	0.0003	0.2226	0.0037	5	
	pause restart	1/16/2009	1030	1320	25,500	30	39,553	104.3612	474	0.0005	7.1215	0.0054	8	
			1100	30	25,530									
			1230		25,530									
			1330	60	25,590	20	1,226	3.2345	741	0.0007	0.3450	0.0057	8	

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manilla Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %
SOMA-4, B-8,	pause	1/19/2009	1000	4110	29,700	20	83,973	221.5638	741	0.0007	23.6417	0.0058	8
	restart		1030		29,700								
			1200	90	29,790	23	2,101	5.5429	1,499	0.0015			
SOMA-4, 2	pause	1/20/2009	1300	60	29,850	25	1,473	3.8878	1,628	0.0016	0.9114	0.0152	22
	restart		930	600	30,450	25	14,735	38.8780	1,628	0.0016	9.1142	0.0152	22
			1000		30,450								
B-10, 8, SOMA-2, 4	pause	1/21/2009	1100	60	30,510	25	1,476	3.8952	1,275	0.0013	0.7150	0.0119	17
	restart		1200	60	30,570	25	1,471	3.8805	1,131	0.0011	0.6318	0.0105	15
			1330	90	30,660	17	1,557	4.1082	1,205	0.0012	0.7126	0.0079	11
B-10	pause	1/21/2009	930	450	31,110	17	7,650	20.1847	1,205	0.0012	3.5024	0.0078	11
	restart		1100		31,110								
			1300	120	31,230	33	3,960	10.4485	803	0.0008	1.2085	0.0101	15
B-10		1/22/2009	1000	1260	32,490	33	41,580	109.7098	615	0.0006	9.7085	0.0077	11
			1100	60	32,550	33	1,980	5.2243	536	0.0005	0.4029	0.0067	10
			1200	60	32,610	35	2,100	5.5409	339	0.0003	0.2704	0.0045	6
B-10, 8, SOMA-2, 4	pause	1/23/2009	1100	1380	33,990	35	47,748	125.9835	132	0.0001	2.3863	0.0017	2
	restart		1200	60	34,050	39	2,321	6.1241	132	0.0001	0.1163	0.0019	3
			1000	4200	38,250	39	164,015	432.7568	92	0.0001	5.7621	0.0014	2
B-10, 8, SOMA-2, 4	pause	1/27/2009			38,250								
	restart		1130	60	38,310	38	2,291	6.0458	1,361	0.0014	1.1848	0.0197	28
			1230	60	38,370	38	2,287	6.0343	1,476	0.0015	1.2822	0.0214	31
B-10	pause	1/27/2009	1000	630	39,000	38	23,940	63.1662	0	0.0000	0.0000	0.0000	0
	restart		1030		39,000								
	pause		1130	60	39,060	38	2,300	6.0689	2,116	0.0021	1.8495	0.0308	44
B-10	restart			39,060									
		1200		39,060									
		1300	60	39,120	39	2,343	6.1822	1,921	0.0019	1.7101	0.0285	41	
B-10		1/28/2009			39,120								
			1400	60	39,180	39	2,343	6.1822	1,547	0.0015	1.3768	0.0229	33
			1000	1200	40,380	40	48,000	126.6491	1,411	0.0014	25.7373	0.0214	31
B-10	pause c/o	1/29/2009	1100	60	40,440	40	2,400	6.3325	1,299	0.0013	1.1846	0.0197	28
	restart		730	1230	41,670	42	52,220	137.7844	2,189	0.0022	43.4231	0.0353	51
					41,670								
SOMA-2		1/30/2009	930		41,670								
			1030	60	41,730	39	2,348	6.1941	2,214	0.0022	1.9747	0.0329	47
			930	1380	43,110	38	52,802	139.3187	2,442	0.0024	48.9883	0.0355	51
B-8, SOMA-2, 4		2/2/2009			43,110								
			1030	60	43,170	17	1,046	2.7595	1,394	0.0014	0.5541	0.0092	13
			1230	4440	47,610	17	77,101	203.4325	2,442	0.0024	71.5325	0.0161	23
B-8, SOMA-2, 4		2/3/2009			47,610								
			1330	60	47,670	39	2,330	6.1471	2,442	0.0024	2.1615	0.0360	52
			1400	30	47,700	39	1,163	3.0678	2,442	0.0024	1.0787	0.0360	52
B-10		2/4/2009	1500	1500	49,200	39	58,500	154.3536	2,442	0.0024	54.2750	0.0362	52
					49,200								
			1600	60	49,260	38	2,280	6.0158	638	0.0006	0.5525	0.0092	13
B-10		2/4/2009	1300	1260	50,520	36	45,360	119.6834	126	0.0001	2.1743	0.0017	2
			1400	60	50,580	36	2,160	5.6992	106	0.0001	0.0872	0.0015	2
			1500	60	50,640	36	2,160	5.6992	102	0.0001	0.0838	0.0014	2

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**MPE Pilot Test**  
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 3820 Manila Ave  
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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
B-8, SOMA-2, 4		2/5/2009	1330	1350	51,990	36	48,600	128.2322	129	0.0001	2.3898	0.0018	3	
			1430	60	52,050	36	2,160	5.6992	109	0.0001	0.0898	0.0015	2	
	pause c/o restart	2/6/2009	730	1020	53,070	36	37,224	98.2166	179	0.0002	2.5326	0.0025	4	
			930		53,070									
				1000	30	53,100	35	1,054	2.7807	128	0.0001	0.0512	0.0017	2
				1030	30	53,130	36	1,076	2.8385	100	0.0001	0.0411	0.0014	2
		2/9/2009		1100	1410	54,540	36	50,562	133.4086	93	0.0001	1.7888	0.0013	2
						54,540								
		2/11/2009		930		54,540								
				1000	30	54,570	36	1,080	2.8496	93	0.0001	0.0382	0.0013	2
				1130		54,570						0.0000		
				1230	60	54,630	37	2,228	5.8785	326	0.0003	0.2756	0.0046	7
	2/12/2009		930	1260	55,890	37	46,335	122.2561	70	0.0001	1.2295	0.0010	1	
					55,890									
	2/13/2009		1030	60	55,950	26	1,557	4.1087	733	0.0007	0.4334	0.0072	10	
			900	1350	57,300	31	42,337	111.7075	1,276	0.0013	20.5301	0.0152	22	
B-8					57,300									
			1100	120	57,420	35	4,207	11.1016	667	0.0007	1.0670	0.0089	13	
	2/16/2009		1130	1410	58,830	35	49,438	130.4436	81	0.0001	1.5289	0.0011	2	
					58,830									
			1230		58,830									
			1330	60	58,890	35	2,104	5.5508	244	0.0002	0.1952	0.0033	5	
	2/17/2009		1000	1230	60,120	35	43,127	113.7912	52	0.0001	0.8589	0.0007	1	
			1100	60	60,180	35	2,104	5.5508	42	0.0000	0.0332	0.0006	1	
SOMA-2		2/18/2009	1000	1380	61,560	36	49,392	130.3207	39	0.0000	0.7332	0.0005	1	
					61,560									
			1200	120	61,680	31	3,749	9.8916	201	0.0002	0.2864	0.0024	3	
			1000	1320	63,000	32	42,426	111.9427	126	0.0001	2.0337	0.0015	2	
B-10, 8, SOMA-2, 4					63,000									
			1100	60	63,060	28	1,686	4.4496	285	0.0003	0.1825	0.0030	4	
			1200	60	63,120	28	1,686	4.4496	339	0.0003	0.2172	0.0036	5	
			1000	1320	64,440	29	38,501	101.5864	437	0.0004	6.3916	0.0048	7	
			1100	60	64,500	28	1,680	4.4328	573	0.0006	0.3658	0.0061	9	
					64,500									
			1200	60	64,560	25	1,480	3.9063	379	0.0004	0.2134	0.0036	5	
					64,560									
B-10		2/23/2009	1000	4200	68,760	25	105,000	277.0449	615	0.0006	24.5490	0.0058	8	
					68,760									
			1200	120	68,880	21	2,520	6.6491	225	0.0002	0.2159	0.0018	3	
			1000	1320	70,200	21	27,122	71.5608	39	0.0000	0.4060	0.0003	0	
	2/24/2009		1100	60	70,260	19	1,141	3.0115	25	0.0000	0.0109	0.0002	0	
			1200	60	70,320	19	1,141	3.0115	25	0.0000	0.0107	0.0002	0	
	2/25/2009		1000	1320	71,640	17	23,053	60.8252	41	0.0000	0.3579	0.0003	0	
			1100	60	71,700	17	1,048	2.7648	128	0.0001	0.0510	0.0009	1	
			1200	60	71,760	17	1,046	2.7595	94	0.0001	0.0375	0.0006	1	
			730	1170	72,930	19	22,256	58.7238	44	0.0000	0.3717	0.0003	0	

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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
B-10, 8, SOMA-2, 4	pause c/o restart	2/27/2009	930		72,930									
			1030	60	72,930	19	1,148	3.0287	136	0.0001	0.0593	0.0010	1	
			1130	60	73,050	32	1,932	5.0980	195	0.0002	0.1434	0.0024	3	
			1230	1500	74,550	32	48,304	127.4502	36	0.0000	0.6633	0.0004	1	
			1330	60	74,610	17	1,046	2.7595	124	0.0001	0.0492	0.0000	0	
			1430	60	74,670	17	1,044	2.7543	160	0.0002	0.0634	0.0011	2	
			1030	4080	78,750	21	83,989	221.6065	443	0.0004	14.1352	0.2356	339	
			1130	60	78,810	17	1,044	2.7543	666	0.0007	0.2641	0.0001	0	
			1230	60	78,870	18	1,052	2.7754	356	0.0004	0.1422	0.0024	3	
			1100	1350	80,220	17	22,950	60.5541	262	0.0003	2.2868	0.0381	55	
			1200	60	80,280	17	1,020	2.6913	166	0.0002	0.0644	0.0000	0	
			1000	1320	81,600	18	23,760	62.6913	279	0.0003	2.5204	0.0420	60	
			1100	60	81,660	18	1,080	2.8496	329	0.0003	0.1351	0.0001	0	
			1200	60	81,720	18	1,080	2.8496	285	0.0003	0.1169	0.0019	3	
			1000	1320	83,040	16	20,541	54.1972	182	0.0002	1.4229	0.0237	34	
			1100	60	83,100	16	934	2.4635	129	0.0001	0.0456	0.0000	0	
			1200	60	83,160	16	934	2.4635	128	0.0001	0.0453	0.0008	1	
			1030	1350	84,510	16	21,008	55.4290	184	0.0002	1.4683	0.0245	35	
1130	60	84,570	16	935	2.4682	135	0.0001	0.0479	0.0000	0				
1100	1410	85,980	16	21,983	58.0025	137	0.0001	1.1435	0.0191	27				
SOMA-2, B-10	3/10/2009	1200	60	86,040	17	1,048	2.7648	611	0.0006	0.2433	0.0041	6		
		1430	1590	87,630	17	27,663	72.9887	585	0.0006	6.1510	0.0039	6		
		1530	60	87,690	21	1,235	3.2589	852	0.0009	0.3998	0.0067	10		
B-10, SOMA-2, 4	3/11/2009	1530	1440	89,130	23	33,549	88.5189	823	0.0008	10.4873	0.0073	10		
		1630	60	89,190	25	1,473	3.8878	821	0.0008	0.4594	0.0077	11		
		1000	1050	90,240		0				0.0000	0.0000			
SOMA-4	3/13/2009	1100	1500	91,740	25	36,907	97.3788	1,198	0.0012	16.8055	0.0112	16		
		1200	60	91,740	17	1,044	2.7543	919	0.0009	0.3644	0.0061	9		
		1300	60	91,860	16	934	2.4635	856	0.0009	0.3038	0.0051	7		
B-8, SOMA-2, 4	3/16/2009	1000	4140	96,000	11	45,815	120.8844	1,196	0.0012	20.8139	0.0050	7		
		1100	60	96,000	16	939	2.4776	571	0.0006	0.2039	0.0034	5		
		1200	60	96,120	16	939	2.4776	483	0.0005	0.1725	0.0029	4		
B-8, SOMA-2, 4	3/17/2009	1000	1320	97,440	16	20,541	54.1972	64	0.0001	0.5018	0.0004	1		
		1100	60	97,440	17	1,042	2.7491	258	0.0003	0.1022	0.0017	2		
		1200	60	97,560	21	1,233	3.2528	524	0.0005	0.2452	0.0041	6		
SOMA-4	3/18/2009	1000	1320	98,880		0				0.0000	0.0000			
		1000	1440	100,320	27	38,521	101.6391	1,156	0.0012	16.9165	0.0117	17		
		1100	60	100,320	17	1,036	2.7337	825	0.0008	0.3249	0.0054	8		
SOMA-4	3/19/2009	1200	60	100,380	17	1,036	2.7337	890	0.0009	0.3502	0.0058	8		
		1200	60	100,440	17	1,036	2.7337	890	0.0009	0.3502	0.0058	8		

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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
SOMA-4	pause c/o restart	3/20/2009	700	1140	101,580	17	19,909	52.5309	870	0.0009	6.5807	0.0058	8	
			101,580											
				930		101,580								
				1030	60	101,640	17	1,046	2.7595	2,442	0.0024	0.9703	0.0162	23
				1130	60	101,700	17	1,046	2.7595	1,465	0.0015	0.5822	0.0097	14
			3/23/2009	1000	4230	105,930	17	73,874	194.9171	818	0.0008	22.9603	0.0054	8
				1100	60	105,990	25	1,482	3.9100	941	0.0009	0.5301	0.0088	13
				1200	60	106,050	25	1,482	3.9100	872	0.0009	0.4907	0.0082	12
			3/24/2009	1000	1320	107,370	27	35,640	94.0369	1,376	0.0014	18.6294	0.0141	20
				1100	60	107,430	27	1,620	4.2744	1,282	0.0013	0.7891	0.0132	19
			1200	60	107,490	27	1,620	4.2744	1,100	0.0011	0.6773	0.0113	16	
		3/25/2009		1440	108,930		0				0.0000	0.0000		
		3/26/2009	1130	1410	110,340	27	37,860	99.8951	1,058	0.0011	15.2212	0.0108	16	
			1230	60	110,400	27	1,611	4.2509	973	0.0010	0.5958	0.0099	14	
		3/27/2009	1100	1350	111,750	29	39,007	102.9214	1,377	0.0014	20.4112	0.0151	22	
			1200	60	111,810	17	1,038	2.7388	948	0.0009	0.3740	0.0062	9	
		3/30/2009			111,810									
		3/31/2009	1130	5730	117,540	17	97,410	257.0185	1,067	0.0011	39.4878	0.0069	10	
			1230	60	117,600	17	1,020	2.6913	1,044	0.0010	0.4047	0.0067	10	
			1330	60	117,660	17	1,020	2.6913	921	0.0009	0.3568	0.0059	9	
	4/1/2009	1100	1290	118,950	17	21,930	57.8628	1,013	0.0010	8.4369	0.0065	9		
		1200	60	119,010	17	1,020	2.6913	1,006	0.0010	0.3899	0.0065	9		
		1300	60	119,070	17	1,020	2.6913	836	0.0008	0.3241	0.0054	8		
	4/3/2009	730	2550	121,620	16	39,681	104.6992	733	0.0007	11.0446	0.0043	6		
B-8, SOMA-2, 4	pause c/o restart		930		121,620									
			1030	60	121,680	16	935	2.4682	1,380	0.0014	0.4905	0.0082	12	
			1130	60	121,740	23	1,398	3.6883	1,214	0.0012	0.6446	0.0107	15	
			1230	60	121,800	23	1,398	3.6883	1,187	0.0012	0.6304	0.0105	15	
			4/6/2009	1300	4290	126,090	28	119,004	313.9947	1,137	0.0011	51.4139	0.0120	17
				1400	60	126,150	30	1,785	4.7086	1,014	0.0010	0.6873	0.0115	16
			4/7/2009	1300	1380	127,530	29	39,653	104.6246	1,051	0.0011	15.8290	0.0115	17
				1400	60	127,590	29	1,724	4.5489	1,031	0.0010	0.6753	0.0113	16
			4/8/2009	1030	1230	128,820	29	35,808	94.4806	1,075	0.0011	14.6288	0.0119	17
				1130	60	128,880	16	935	2.4682	1,253	0.0013	0.4455	0.0074	11
SOMA-2		4/9/2009	1230	1380	130,260	16	21,556	56.8766	1,384	0.0014	11.3330	0.0082	12	
			1330	60	130,320	16	936	2.4705	1,367	0.0014	0.4864	0.0081	12	
		4/10/2009	1030	1260	131,580	16	19,607	51.7337	1,412	0.0014	10.5193	0.0083	12	
			1130	60	131,640	16	935	2.4658	1,360	0.0014	0.4830	0.0081	12	
		4/13/2009	1000	1350	132,990	16	21,047	55.5343	1,323	0.0013	10.5773	0.0078	11	
			1100	60	133,050	16	934	2.4635	1,438	0.0014	0.5102	0.0085	12	
			1200	60	133,110	16	934	2.4635	1,481	0.0015	0.5255	0.0088	13	
		4/14/2009	1030	1350	134,460	17	22,950	60.5541	1,319	0.0013	11.4980	0.0085	12	
			1130	60	134,520	17	1,042	2.7491	1,628	0.0016	0.6444	0.0107	15	
		4/15/2009	1000	1350	135,870	17	23,487	61.9715	1,579	0.0016	14.0915	0.0104	15	
		1100	60	135,930	17	1,044	2.7543	1,628	0.0016	0.6457	0.0108	15		
	4/16/2009	700	1200	137,130	17	20,957	55.2956	1,628	0.0016	12.9623	0.0108	16		

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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
B-8, SOMA-2, 4	pause c/o restart		900		137,130									
			1000	60	137,130	17	1,047	2.7621	1,972	0.0020	0.7842	0.0131	19	
		4/17/2009	1300	1620	138,810	17	28,265	74.5780	1,811	0.0018	19.4475	0.0120	17	
		4/20/2009	1700	4560	143,370	17	78,087	206.0354	1,628	0.0016	48.2985	0.0106	15	
		4/21/2009	1330	1230	144,600	17	21,044	55.5244	2,279	0.0023	18.2223	0.0148	21	
			1430	60	144,660	17	1,027	2.7085	2,279	0.0023	0.8889	0.0148	21	
		4/22/2009	1300	1350	146,010	17	23,225	61.2791	1,172	0.0012	10.3428	0.0077	11	
			1400	60	146,070	17	1,032	2.7235	1,185	0.0012	0.4648	0.0077	11	
		4/23/2009	1300	1380	147,450	17	24,055	63.4690	1,501	0.0015	13.7178	0.0099	14	
			1400	60	147,510	17	1,047	2.7621	1,483	0.0015	0.5899	0.0098	14	
		4/24/2009	1300	1380	148,890	18	24,240	63.9572	2,442	0.0024	22.4891	0.0163	23	
			1400	60	148,950	18	1,054	2.7807	2,442	0.0024	0.9778	0.0163	23	
		4/27/2009	1230	4230	153,180	17	73,874	194.9171	1,455	0.0015	40.8260	0.0097	14	
			1330	60	153,240	17	1,048	2.7648	1,411	0.0014	0.5619	0.0094	13	
		4/28/2009	1400	1410	154,650	17	24,625	64.9724	1,428	0.0014	13.3574	0.0095	14	
		4/29/2009	1230	1350	156,000	17	23,487	61.9715	1,245	0.0012	11.1134	0.0082	12	
		4/30/2009	1330	1500	157,500	17	26,048	68.7272	1,302	0.0013	12.8887	0.0086	12	
			1430	60	157,560	17	1,042	2.7491	1,628	0.0016	0.6444	0.0107	15	
		5/1/2009	730	1020	158,580	17	17,813	47.0013	1,384	0.0014	9.3653	0.0092	13	
					158,580									
		pause c/o restart		1000		158,580								
				1300	180	158,760	17	3,132	8.2629	1,221	0.0012	1.4527	0.0081	12
		5/4/2009	1000	4140	162,900	17	71,891	189.6871	1,461	0.0015	39.9084	0.0096	14	
					162,900									
		pause drilling restart	5/6/2009	1300		162,900								
				1400	60	162,960	29	1,739	4.5871	1,047	0.0010	0.6919	0.0115	17
		5/7/2009	1200	1320	164,280	29	38,212	100.8225	997	0.0010	14.4762	0.0110	16	
				1300	60	164,340	29	1,737	4.5828	1,039	0.0010	0.6854	0.0114	16
					164,340									
		pause restart	5/8/2009	700		164,340								
				1000		164,340								
				1100	60	164,400	25	1,473	3.8878	1,351	0.0014	0.7564	0.0126	18
		5/11/2009	1700	4680	169,080	25	114,931	303.2482	1,376	0.0014	60.0685	0.0128	18	
				1800	60	169,140	25	1,472	3.8841	1,575	0.0016	0.8809	0.0147	21
		5/12/2009	1430	1230	170,370	22	26,916	71.0182	1,409	0.0014	14.4055	0.0117	17	
				1530	60	170,430	22	1,313	3.4643	1,454	0.0015	0.7252	0.0121	17
		5/13/2009	1430	1380	171,810	22	30,198	79.6790	1,573	0.0016	18.0506	0.0131	19	
		5/14/2009	1230	1320	173,130	26	33,935	89.5375	1,433	0.0014	18.4705	0.0140	20	
				1330	60	173,190	23	1,395	3.6813	1,141	0.0011	0.6050	0.0101	15
		5/15/2009	1300	1410	174,600	23	32,788	86.5117	1,140	0.0011	14.1960	0.0101	14	
		5/18/2009	830	4050	178,650	23	94,894	250.3807	1,156	0.0012	41.6727	0.0103	15	
					178,650									
		pause restart c/o	5/21/2009	1500		178,650								
				1600	60	178,710	17	1,020	2.6913	1,140	0.0011	0.4416	0.0074	11
		5/22/2009	1500	1380	180,090	22	30,086	79.3822	870	0.0009	9.9501	0.0072	10	
		5/26/2009	1200	5580	185,670	22	121,652	320.9803	895	0.0009	41.3841	0.0074	11	
		5/27/2009	1200	1440	187,110	22	31,394	82.8336	895	0.0009	10.6798	0.0074	11	

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL				
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
MPE-4		5/28/2009	1200	1440	188,550	22	31,394	82.8336	895	0.0009	10.6798	0.0074	11		
		5/29/2009	1200	1440	189,990	23	33,360	88.0221	1,026	0.0010	12.9994	0.0090	13		
		6/1/2009	1430	4170	194,160	23	97,151	256.3360	747	0.0007	27.5813	0.0066	10		
						194,160									
					1530	60	194,220	11	659	1.7387	134	0.0001	0.0336	0.0006	1
		6/2/2009	1130	1200	195,420	19	22,870	60.3435	768	0.0008	6.6767	0.0056	8		
MPE-3,5	pause c/o restart		1230	60	195,480	19	1,141	3.0115	847	0.0008	0.3671	0.0061	9		
		6/3/2009	1130	1380	196,860	25	33,890	89.4193	499	0.0005	6.4268	0.0047	7		
			1430	60	196,920	23	1,390	3.6676	435	0.0004	0.2296	0.0038	6		
		6/4/2009	730	1140	198,060	23	26,711	70.4775	407	0.0004	4.1303	0.0036	5		
				198,060											
MPE-2			1100		198,060										
			1300	120	198,180	30	3,637	9.5958	2,442	0.0024	3.3742	0.0281	40		
MPE-2,3		6/5/2009	1200	1380	199,560	32	44,187	116.5885	427	0.0004	7.1606	0.0052	7		
					199,560										
			1400	120	199,680	21	2,466	6.5055	596	0.0006	0.5582	0.0047	7		
					199,680										
MPE-2			1500	60	199,740	30	1,805	4.7616	650	0.0006	0.4454	0.0074	11		
		6/8/2009	1400	4260	204,000	35	147,950	390.3705	562	0.0006	31.5710	0.0074	11		
		6/9/2009	1400	1440	205,440	35	50,011	131.9562	499	0.0005	9.4810	0.0066	9		
					205,440										
		6/10/2009	1500	1500	206,940	25	36,837	97.1949	589	0.0006	8.2479	0.0055	8		
SOMA-2		6/11/2009	1200	1260	208,200	26	32,453	85.6287	578	0.0006	7.1259	0.0057	8		
					208,200										
B-10			1300	60	208,260	11	659	1.7387	622	0.0006	0.1557	0.0026	4		
					208,260										
MPE-1			1400	60	208,320	16	932	2.4589	1,093	0.0011	0.3872	0.0065	9		
					208,320										
MPE-2			1500	60	208,380	17	1,042	2.7491	1,302	0.0013	0.5155	0.0086	12		
					208,380										
MPE-2,5		6/12/2009	1000	1140	209,520	17	19,796	52.2327	1,221	0.0012	9.1832	0.0081	12		
			1200		209,520										
		6/15/2009	700	4020	213,540	30	120,910	319.0245	488	0.0005	22.4356	0.0056	8		
		6/16/2009	700	1440	214,980	30	43,311	114.2774	409	0.0004	6.7267	0.0047	7		
		6/17/2009	1100	1200	216,180	30	36,093	95.2312	379	0.0004	5.2015	0.0043	6		
		6/18/2009	1200	1380	217,560	30	41,507	109.5159	562	0.0006	8.8596	0.0064	9		
		6/19/2009	900	1260	218,820	33	41,514	109.5366	700	0.0007	11.0413	0.0088	13		
			1030	90	218,910	33	2,965	7.8240	700	0.0007	0.7881	0.0088	13		
LFR-2					218,910										
			1130	60	218,970	17	1,038	2.7388	506	0.0005	0.1997	0.0033	5		
			1230	60	219,030	17	1,038	2.7388	604	0.0006	0.2382	0.0040	6		
			1330	60	219,090	17	1,036	2.7337	608	0.0006	0.2392	0.0040	6		
MPE-5		6/22/2009	1100	4170	223,260	29	121,169	319.7072	354	0.0004	16.3006	0.0039	6		
					223,260										
		6/23/2009	1030	1410	224,670	21	28,971	76.4400	425	0.0004	4.6733	0.0033	5		
					224,670										
MPE-2			1300		224,670										
	pause c/o restart		1400	60	224,730	28	1,677	4.4244	521	0.0005	0.3319	0.0055	8		

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
B-10R		6/24/2009	1230	60	224,790	30	1,798	4.7437	469	0.0005	0.3203	0.0053	8	
			1330	60	224,790									
			1430	60	224,850	17	1,038	2.7388	882	0.0009	0.3480	0.0058	8	
B-10R,MPE-1		6/25/2009	930	1140	224,910	17	1,038	2.7388	903	0.0009	0.3559	0.0059	9	
			1030	60	226,050	22	25,135	66.3204	1,205	0.0012	11.5046	0.0101	15	
			1130	60	226,050									
B-10R		6/26/2009	1030	60	226,110	30	1,805	4.7616	2,442	0.0024	1.6743	0.0279	40	
			1130	60	226,170	30	1,805	4.7616	780	0.0008	0.5347	0.0089	13	
			1300	90	226,170									
B-10R,MPE-1		6/26/2009	1300	90	226,260	24	2,202	5.8098	716	0.0007	0.5992	0.0067	10	
			1430	90	226,260									
			1430	1380	226,350	28	2,501	6.5995	904	0.0009	0.8594	0.0095	14	
MPE-1	pause c/o restart	6/29/2009	1330	1380	227,730	30	41,159	108.5977	1,660	0.0017	25.9665	0.0188	27	
			1430	60	227,790	30	1,798	4.7437	1,599	0.0016	1.0920	0.0182	26	
			1430	1440	229,230	32	45,679	120.5259	570	0.0006	9.8887	0.0069	10	
			1430	1440	230,670	33	47,004	124.0201	895	0.0009	15.9899	0.0111	16	
			1500	1470	232,140	34	50,578	133.4522	1,045	0.0010	20.0810	0.0137	20	
			930	1110	233,250	34	37,504	98.9542	977	0.0010	13.9180	0.0125	18	
			1500		233,250									
			1200	1260	233,250									
			1300	30	234,510	30	37,826	99.8046	1,058	0.0011	15.2074	0.0121	17	
			1030	4170	234,540	25	735	1.9402	899	0.0009	0.2511	0.0084	12	
			1130	60	238,770	25	102,600	270.7132	812	0.0008	31.6666	0.0076	11	
			1400	1710	238,770	25	1,476	3.8952	945	0.0009	0.5300	0.0088	13	
1030	1230	240,480	26	44,044	116.2103	697	0.0007	11.6650	0.0068	10				
1030	1230	241,710	26	31,711	83.6689	645	0.0006	7.7670	0.0063	9				
1130	60	241,770	26	1,542	4.0699	651	0.0007	0.3818	0.0064	9				
1700	1800	243,570	21	36,914	97.3993	583	0.0006	8.1831	0.0045	7				
1530	1350	244,920	25	33,091	87.3109	580	0.0006	7.2925	0.0054	8				
1030	4020	248,940	26	103,541	273.1963	650	0.0006	25.5657	0.0064	9				
B-10R,MPE-1		7/13/2009	1130	60	248,940									
			1530	1680	249,000	32	1,914	5.0500	1,032	0.0010	0.7508	0.0125	18	
			1630	60	250,680	32	53,293	140.6135	997	0.0010	20.1796	0.0120	17	
			1330	1260	250,740	32	1,903	5.0219	975	0.0010	0.7052	0.0118	17	
			1330	1260	252,000	33	41,128	108.5176	863	0.0009	13.4824	0.0107	15	
			930	1200	253,200	37	44,525	117.4802	855	0.0009	14.4583	0.0120	17	
B-10R,MPE-1,SOMA-2	pause c/o restart	7/14/2009	1200		253,200									
			1300	60	253,200	32	1,932	5.0980	947	0.0009	0.6949	0.0116	17	
			1330	1470	254,730	35	50,767	133.9492	918	0.0009	17.7097	0.0120	17	
SOMA-2,MPE-1		7/17/2009	1330	1470	254,730									
			1530	4200	254,730									
			1530	4200	258,930	34	140,981	371.9821	1,112	0.0011	59.5573	0.0142	20	
SOMA-2		7/20/2009	930	1080	260,010	34	36,628	96.6438	1,094	0.0011	15.2242	0.0141	20	
			1000	30	260,010									
			1000	30	260,040	23	699	1.8441	1,547	0.0015	0.4107	0.0137	20	



**Table 9**  
**MPE Pilot Test**  
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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
MPE-1					260,040									
B-10R			1030	30	260,070	31	934	2.4635	1,612	0.0016	0.5717	0.0191	27	
B-10R,MPE-2			1130	60	260,130	25	1,476	3.8952	2,027	0.0020	1.1368	0.0189	27	
		7/22/2009	930	1320	261,450	34	44,768	118.1202	1,026	0.0010	17.4444	0.0132	19	
			1030	60	261,510	36	2,190	5.7774	1,130	0.0011	0.9405	0.0157	23	
SOMA-4,MPE-1			1100	30	261,540	36	1,095	2.8887	1,100	0.0011	0.4575	0.0152	22	
					261,540									
		7/23/2009	1200	60	261,600	31	1,864	4.9177	1,387	0.0014	0.9823	0.0164	24	
			1130	1410	263,010	32	45,233	119.3485	1,222	0.0012	20.9943	0.0149	21	
		7/24/2009	1530	1680	264,690	32	53,742	141.8002	1,031	0.0010	21.0513	0.0125	18	
		7/27/2009	1230	4140	268,830	33	136,404	359.9059	843	0.0008	43.6861	0.0106	15	
		7/28/2009	1330	1500	270,330	35	52,500	138.5224	1,846	0.0018	36.8170	0.0245	35	
MPE-1					270,330									
		7/29/2009	1430	60	270,390	17	1,020	2.6913	757	0.0008	0.2934	0.0049	7	
			1400	1410	271,800	17	23,970	63.2454	462	0.0005	4.2106	0.0030	4	
			1500	60	271,860	17	1,020	2.6913	480	0.0005	0.1862	0.0031	4	
		7/30/2009	1000	1140	273,000	17	19,380	51.1346	546	0.0005	4.0168	0.0035	5	
B-10R,MPE-2	pause c/o		1030		273,000									
			1130		273,000									
	restart		1230	60	273,060	30	1,800	4.7493	1,302	0.0013	0.8907	0.0148	21	
		7/31/2009	1300	1470	274,530	33	48,510	127.9947	2,442	0.0024	45.0065	0.0306	44	
B-10R					274,530									
		8/3/2009	1330	30	274,560	22	660	1.7414	863	0.0009	0.2164	0.0072	10	
B-10R,MPE-2			1400	4350	278,910	19	82,650	218.0739	1,221	0.0012	38.3404	0.0088	13	
					278,910									
		8/4/2009	1500	60	278,970	27	1,620	4.2744	750	0.0007	0.4616	0.0077	11	
			1000	1140	280,110	26	29,640	78.2058	1,291	0.0013	14.5417	0.0128	18	
			1100	60	280,170	27	1,620	4.2744	1,401	0.0014	0.8623	0.0144	21	
		8/5/2009	1030	1410	281,580	25	35,250	93.0079	1,089	0.0011	14.5817	0.0103	15	
			1130	60	281,640	27	1,620	4.2744	827	0.0008	0.5091	0.0085	12	
		8/6/2009	1300	1530	283,170	26	39,780	104.9604	1,180	0.0012	17.8384	0.0117	17	
B-10R					283,170									
		8/7/2009	1400	60	283,230	21	1,260	3.3245	798	0.0008	0.3819	0.0064	9	
			1400	1440	284,670	21	29,531	77.9195	776	0.0008	8.7070	0.0060	9	
		8/10/2009	1400	4320	288,990	20	87,936	232.0204	1,141	0.0011	38.1219	0.0088	13	
			1500	60	289,050	20	1,221	3.2225	916	0.0009	0.4251	0.0071	10	
					289,050									
MPE-3	pause c/o	8/14/2009	1530		289,050									
	restart		1630	60	289,110	25	1,473	3.8878	1,217	0.0012	0.6813	0.0114	16	
		8/17/2009	1300	4110	293,220	30	123,617	326.1668	674	0.0007	31.6564	0.0077	11	
		8/18/2009	1300	1440	294,660	30	43,068	113.6360	560	0.0006	9.1636	0.0064	9	
SOMA-2					294,660									
			1400	60	294,720	17	1,032	2.7235	1,057	0.0011	0.4145	0.0069	10	

**Table 9**  
**MPE Pilot Test**  
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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %
B-10R		8/19/2009	1300	1380	296,100	20	28,143	74.2553	1,302	0.0013	13.9220	0.0101	15
			1400	60	296,100	24	1,460	3.8516	1,628	0.0016	0.9029	0.0150	22
MPE-1			1500	60	296,220	28	1,661	4.3834	1,036	0.0010	0.6539	0.0109	16
			1600	60	296,280	20	1,219	3.2166	855	0.0009	0.3960	0.0066	10
		8/20/2009	1230	1230	297,510	15	18,450	48.6807	510	0.0005	3.5751	0.0029	4
		8/21/2009	1230	1440	298,950	15	21,600	56.9921	535	0.0005	4.3907	0.0030	4
			1330	60	299,010	15	900	2.3747	500	0.0005	0.1709	0.0028	4
		8/24/2009	1700	4530	303,540	15	67,950	179.2876	544	0.0005	14.0417	0.0031	4
		8/25/2009	1400	1260	304,800	15	18,900	49.8681	576	0.0006	4.1371	0.0033	5
			1500	60	304,860	15	900	2.3747	556	0.0006	0.1900	0.0032	5
		8/26/2009	1400	1380	306,240	17	23,460	61.8997	425	0.0004	3.7916	0.0027	4
SOMA-2		8/27/2009	1000	1200	307,440	30	35,890	94.6967	407	0.0004	5.5497	0.0046	7
			1100		307,440								
	pause c/o		1200	60	307,500	20	1,226	3.2345	1,268	0.0013	0.5904	0.0098	14
	restart		1300	60	307,560	20	1,226	3.2345	1,239	0.0012	0.5773	0.0096	14
		8/28/2009	1200	1380	308,940	22	29,919	78.9432	1,759	0.0018	19.9918	0.0145	21
		8/31/2009	1700	4620	313,560	24	111,376	293.8671	1,456	0.0015	61.6133	0.0133	19
		9/1/2009	1700	1440	315,000	24	34,714	91.5949	1,490	0.0015	19.6465	0.0136	20
		9/2/2009	1530	1350	316,350	24	32,545	85.8702	1,377	0.0014	17.0296	0.0126	18
		9/3/2009	1700	1530	317,880	24	36,884	97.3196	1,320	0.0013	18.5041	0.0121	17
		9/4/2009	930	990	318,870	27	26,583	70.1391	1,470	0.0015	14.8421	0.0150	22
			1100		318,870								
	pause		1200	60	318,930	25	1,476	3.8952	2,442	0.0024	1.3696	0.0228	33
		9/8/2009	1100	5700	324,630	27	151,914	400.8288	1,079	0.0011	62.2684	0.0109	16
			1200	60	324,690	25	1,528	4.0322	1,327	0.0013	0.7707	0.0128	18
			1300	60	324,750	27	1,593	4.2037	955	0.0010	0.5782	0.0096	14
		9/10/2009	1000	2700	327,450	27	72,093	190.2188	747	0.0007	20.4672	0.0076	11
	pause c/o			1130		327,450							
	restart		1330	120	327,570	27	3,204	8.4542	1,153	0.0012	1.4037	0.0117	17
	pause		1030		327,570								
		9/21/2009	1330		327,570								
	restart			1430	8640	336,210	17	146,880	387.5462	445	0.0004	24.8560	0.0029
		9/23/2009	1000	2610	338,820	23	60,030	158.3905	1,465	0.0015	33.4167	0.0128	18
		9/25/2009	1000	2880	341,700	22	62,672	165.3602	1,628	0.0016	38.7635	0.0135	19
			1100	60	341,760	22	1,306	3.4450	1,300	0.0013	0.6448	0.0107	15
			1200	60	341,820	22	1,306	3.4450	1,376	0.0014	0.6825	0.0114	16
		9/28/2009	1400	4440	346,260	23	102,861	271.4014	2,442	0.0024	95.4323	0.0215	31
			1500	60	346,320	23	1,390	3.6676	1,233	0.0012	0.6512	0.0109	16
		10/1/2009	1000	4020	350,340	23	92,958	245.2711	1,263	0.0013	44.6227	0.0111	16
			1330		350,340								
	pause c/o		1430	60	350,400	25	1,476	3.8952	1,078	0.0011	0.6046	0.0101	15
	restart		1630	5880	356,280	28	163,871	432.3768	440	0.0004	27.3664	0.0047	7
		10/5/2009	1730	60	356,340	28	1,672	4.4120	409	0.0004	0.2600	0.0043	6
		10/6/2009	1200	1110	357,450	28	30,964	81.6985	376	0.0004	4.4240	0.0040	6
		10/7/2009	1200	1440	358,890	27	38,593	101.8293	350	0.0004	5.1322	0.0036	5

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL				
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min	lbs/day
SOMA-2	pause c/o restart	10/8/2009	1300	1500	360,390	27	40,353	106.4717	402	0.0004	6.1649	0.0041	6		
		10/9/2009	1330	1530	361,920	27	40,853	107.7907	319	0.0003	4.9526	0.0032	5		
		10/12/2009	800	1170	363,090	27	31,416	82.8917	399	0.0004	4.7607	0.0041	6		
		10/13/2009	1400	1080	364,170	25	26,623	70.2459	442	0.0004	4.4708	0.0041	6		
					1500	60	364,230	30	1,811	4.7796	1,047	0.0010	0.7204	0.0120	17
					1600	60	364,290	30	1,811	4.7796	1,754	0.0018	1.2075	0.0201	29
		10/14/2009	1330	1290	365,580	34	43,422	114.5709	1,791	0.0018	29.5433	0.0229	33		
					1400	30	365,610	27	803	2.1175	985	0.0010	0.3003	0.0100	14
					1430	30	365,640	20	613	1.6173	912	0.0009	0.2124	0.0071	10
		10/15/2009	1330	1380	367,020	24	33,120	87.3879	1,044	0.0010	13.1375	0.0095	14		
					1500	150	367,170	22	3,300	8.7071	645	0.0006	0.8087	0.0054	8
		10/19/2009	1230	1290	368,460	24	30,960	81.6887	221	0.0002	2.5947	0.0020	3		
					1330	60	368,520	24	1,440	3.7995	452	0.0005	0.2475	0.0041	6
					1430	60	368,580	24	1,440	3.7995	487	0.0005	0.2663	0.0044	6
		10/20/2009	1030	1200	369,780	24	28,800	75.9894	220	0.0002	2.4084	0.0020	3		
					1130	60	369,840	24	1,440	3.7995	220	0.0002	0.1202	0.0020	3
					1230	60	369,900	24	1,440	3.7995	261	0.0003	0.1430	0.0024	3
		10/21/2009	830	1200	371,100	23	27,600	72.8232	1,840	0.0018	19.2952	0.0161	23		
					1130	180	371,280	27	4,860	12.8232	1,953	0.0020	3.6063	0.0200	29
		10/22/2009	1130	1440	372,720	24	35,034	92.4391	352	0.0004	4.6856	0.0033	5		
					1230	60	372,780	24	1,460	3.8516	361	0.0004	0.2002	0.0033	5
					1330	60	372,840	24	1,457	3.8445	248	0.0002	0.1373	0.0023	3
		10/27/2009	1100	7050	379,890	24	171,841	453.4070	217	0.0002	14.1681	0.0020	3		
					1200	60	379,950	15	925	2.4405	352	0.0004	0.1237	0.0021	3
					1300	60	380,010	17	1,034	2.7286	502	0.0005	0.1972	0.0033	5
		10/28/2009	1430	1530	381,540	22	33,356	88.0107	676	0.0007	8.5673	0.0056	8		
			1530	60	381,600	31	1,850	4.8810	610	0.0006	0.4287	0.0071	10		
10/29/2009	1100	1170	382,770	34	40,331	106.4143	700	0.0007	10.7266	0.0092	13				
			1300	120	382,890	32	3,814	10.0625	613	0.0006	0.8882	0.0074	11		
10/30/2009	1430	90	382,980	32	2,850	7.5190	476	0.0005	0.5154	0.0057	8				
			1530	60	383,040	32	1,900	5.0126	497	0.0005	0.3587	0.0060	9		
11/2/2009	1130	4080	387,120	30	121,573	320.7740	574	0.0006	26.5139	0.0065	9				
			1500	210	387,120										
					387,330	34	7,173	18.9249	555	0.0006	1.5125	0.0072	10		
					387,330			0.0000							
			1600	60	387,390	34	2,046	5.3973	645	0.0006	0.5013	0.0084	12		
11/3/2009	1030	1050	388,440	40	41,976	110.7553	1,337	0.0013	21.3235	0.0203	29				
			1130	60	388,500	40	2,394	6.3172	1,011	0.0010	0.9197	0.0153	22		
					388,500										
SOMA-4			1300	90	388,590	24	2,182	5.7562	913	0.0009	0.7568	0.0084	12		
MPE-4,5					388,590										

**Table 9**  
**MPE Pilot Test**  
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Dec 2008-Oct 2011  
3820 Manila Ave  
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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %
MPE-4		11/4/2009	800	1140	389,730	45	51,237	135.1897	230	0.0002	4.4775	0.0039	6
			900	60	389,730								
MPE-5			900	60	389,790	39	2,358	6.2221	268	0.0003	0.2401	0.0040	6
			1000	60	389,790								
MPE-3			1000	60	389,850	24	1,462	3.8588	450	0.0005	0.2500	0.0042	6
			1500	300	389,850								
B-8R, MPE-2			1500	300	390,150	30	8,939	23.5863	252	0.0003	0.8559	0.0029	4
			11/5/2009	830	1050	390,150							
MPE-2			830	1050	391,200	39	40,467	106.7723	2,442	0.0024	37.5463	0.0358	51
			900	30	391,200								
B-8R			900	30	391,230	31	925	2.4405	1,058	0.0011	0.3718	0.0124	18
			1000	60	391,230								
SOMA-2			1000	60	391,290	19	1,133	2.9890	2,442	0.0024	1.0511	0.0175	25
			1500	300	391,290								
B-10R, MPE-1			1500	300	391,590	20	6,107	16.1125	1,015	0.0010	2.3550	0.0079	11
			11/6/2009	730	990	391,590							
MPE-1			730	990	392,580	30	29,609	78.1248	2,039	0.0020	22.9387	0.0232	33
			800	30	392,580								
B-10R			800	30	392,610	29	867	2.2871	962	0.0010	0.3168	0.0106	15
			900	60	392,610								
SOMA-2, MPE-1			900	60	392,670	23	1,390	3.6676	959	0.0010	0.5065	0.0084	12
			1130		392,670								
SOMA-2, MPE-1	pause c/o restart		1130	90	392,670	30	2,697	7.1155	962	0.0010	0.9857	0.0110	16
			1300	4320	392,760	33	141,536	373.4461	637	0.0006	34.2380	0.0079	11
SOMA-2, MPE-1			1300	120	397,080	33	3,932	10.3735	617	0.0006	0.9219	0.0077	11
			1500	0	397,200	33	3,932	10.3735	617	0.0006	0.9219	0.0077	11
B-10R			1500	0	397,200	33	3,932	10.3735	617	0.0006	0.9219	0.0077	11
			11/10/2009	1100	1200	397,200							
			1100	1200	398,400	37	44,359	117.0427	790	0.0008	13.3069	0.0111	16
			1300	120	398,520	36	4,338	11.4470	783	0.0008	1.2910	0.0108	15
			1030	1290	398,520	36	4,338	11.4470	783	0.0008	1.2910	0.0108	15
			11/11/2009	1030	1290	399,810	36	46,638	123.0553	889	0.0009	15.7502	0.0122
			1130	60	399,810	36	2,169	5.7235	674	0.0007	0.5553	0.0093	13
			11/12/2009	1100	1410	399,870	36	2,169	5.7235	674	0.0007	0.5553	0.0093
			1100	1410	401,280	35	49,897	131.6548	667	0.0007	12.6536	0.0090	13
			1200	60	401,340	26	1,537	4.0547	596	0.0006	0.3478	0.0058	8
B-10R			1200	60	401,340	26	1,537	4.0547	596	0.0006	0.3478	0.0058	8
			11/13/2009	1300	1500	402,840	26	38,562	101.7471	1,158	0.0012	16.9607	0.0113
			1300	1500	402,840	26	38,562	101.7471	1,158	0.0012	16.9607	0.0113	16
			1400	60	402,840	19	1,145	3.0200	611	0.0006	0.2659	0.0044	6
			1400	60	402,900	19	1,145	3.0200	611	0.0006	0.2659	0.0044	6
			11/16/2009	1400	4320	402,900	18	78,679	207.5953	621	0.0006	18.5508	0.0043
			1500	60	407,220	18	78,679	207.5953	621	0.0006	18.5508	0.0043	6
			1600	60	407,280	19	1,141	3.0115	592	0.0006	0.2569	0.0043	6
			1600	60	407,340	17	1,042	2.7491	494	0.0005	0.1957	0.0033	5
			11/17/2009	1200	1200	407,340	17	1,042	2.7491	494	0.0005	0.1957	0.0033
			1200	1200	408,540	17	20,878	55.0858	639	0.0006	5.0684	0.0042	6
			1300	60	408,600	25	1,473	3.8878	686	0.0007	0.3838	0.0064	9
			1300	60	408,600	25	1,473	3.8878	686	0.0007	0.3838	0.0064	9
			1400	60	408,660	25	1,473	3.8878	676	0.0007	0.3782	0.0063	9
			1400	60	408,660	25	1,473	3.8878	676	0.0007	0.3782	0.0063	9
			11/18/2009	1030	1230	409,890	27	33,152	87.4720	714	0.0007	8.9935	0.0073
			1130	60	409,890	27	33,152	87.4720	714	0.0007	8.9935	0.0073	11
			1230	60	409,950	27	1,617	4.2669	714	0.0007	0.4390	0.0073	11
			1230	60	410,010	27	1,614	4.2589	644	0.0006	0.3949	0.0066	9
			11/19/2009	900	1230	411,240	27	33,278	87.8052	449	0.0004	5.6768	0.0046
			900	1230	411,240	27	33,278	87.8052	449	0.0004	5.6768	0.0046	7
				0	411,240								

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**MPE Pilot Test**  
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Dec 2008-Oct 2011  
3820 Manila Ave  
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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss
SOMA-2, MPE-1	pause c/o restart	11/20/2009	1100	0	411,240		0	0.0000	0	0.0000	0.0000		
			1200	60	411,300	29	1,753	4.6264	541	0.0005	0.3606	0.0060	9
			1130	1410	412,710	30	42,489	112.1084	600	0.0006	9.6790	0.0069	10
			1230	60	412,770	30	1,808	4.7706	703	0.0007	0.4831	0.0081	12
			1330	60	412,830	30	1,808	4.7706	904	0.0009	0.6211	0.0104	15
			1215	4245	417,075	31	132,114	348.5869	580	0.0006	29.1315	0.0069	10
		11/23/2009	1315	60	417,135	32	1,921	5.0691	520	0.0005	0.3797	0.0063	9
			1415	60	417,195	31	1,864	4.9177	539	0.0005	0.3820	0.0064	9
			1115	1260	418,455	32	40,345	106.4504	481	0.0005	7.3689	0.0058	8
			1215	60	418,515	32	1,918	5.0595	441	0.0004	0.3215	0.0054	8
			1315	60	418,575	31	1,860	4.9085	429	0.0004	0.3031	0.0051	7
			1100	1305	419,880	32	41,167	108.6188	684	0.0007	10.6941	0.0082	12
		11/24/2009	1200	60	419,940	32	1,940	5.1176	596	0.0006	0.4391	0.0073	11
			1300	60	420,000	32	1,911	5.0418	602	0.0006	0.4373	0.0073	10
			1130	6870	426,870	31	215,449	568.4671	555	0.0006	45.4547	0.0066	10
			830	60	426,930	31	1,882	4.9648	523	0.0005	0.3736	0.0062	9
			730	1380	428,310	32	43,865	115.7380	514	0.0005	8.5653	0.0062	9
			830	60	428,370	31	1,878	4.9553	490	0.0005	0.3495	0.0058	8
		12/1/2009	1100	1590	429,960	30	48,004	126.6602	548	0.0005	9.9971	0.0063	9
			1200	60	430,020	23	1,403	3.7023	474	0.0005	0.2526	0.0042	6
			1230	1350	431,370	22	29,766	78.5373	498	0.0005	5.6336	0.0042	6
			1200	90	431,460	22	1,996	5.2659	458	0.0005	0.3470	0.0039	6
			730	1170	432,630	22	25,945	68.4573	441	0.0004	4.3489	0.0037	5
			830	60	432,690	22	1,329	3.5073	480	0.0005	0.2425	0.0040	6
12/7/2009	730	1380	434,070	22	30,602	80.7445	342	0.0003	3.9768	0.0029	4		
	830	60	434,130	22	1,331	3.5106	318	0.0003	0.1607	0.0027	4		
	730	1380	435,510	21	28,626	75.5295	306	0.0003	3.3233	0.0024	3		
	830	60	435,570	21	1,254	3.3094	302	0.0003	0.1439	0.0024	3		
	1030	1440	437,010	21	30,162	79.5823	273	0.0003	3.1229	0.0022	3		
	1130	60	437,070	21	1,257	3.3159	277	0.0003	0.1322	0.0022	3		
12/10/2009	730	1200	438,270	24	28,334	74.7598	271	0.0003	2.9197	0.0024	4		
	830	60	438,330	24	1,417	3.7380	279	0.0003	0.1501	0.0025	4		
	1100	1590	439,920	25	39,421	104.0125	245	0.0002	3.6647	0.0023	3		
	1200	60	439,980	25	1,488	3.9250	233	0.0002	0.1319	0.0022	3		
	1300	60	440,040	25	1,488	3.9250	212	0.0002	0.1200	0.0020	3		
	900	1200	441,240	25	29,638	78.1998	222	0.0002	2.4949	0.0021	3		
12/14/2009	1000	60	441,300	25	1,482	3.9100	310	0.0003	0.1743	0.0029	4		
	8/13/2010	0	441,300										
	8/16/2010	0	441,300										
	1030	0	441,300										
	1130	60	441,360	18	1,052	2.7754	537	0.0005	0.2147	0.0036	5		
	1000	1350	442,710	21	27,686	73.0495	640	0.0006	6.7332	0.0050	7		
SOMA-2	c/o	8/17/2010	1000	1350	442,710								
			1100	60	442,770	35	2,076	5.4775	676	0.0007	0.5329	0.0089	13
			1100	1440	444,210	36	51,964	137.1094	604	0.0006	11.9179	0.0083	12
			1200	60	444,270	36	2,161	5.7023	588	0.0006	0.4827	0.0080	12
SOMA-2,MPE-1, B-10R	restart	8/18/2010	1100	60	442,770								
			1100	1440	444,210	36	51,964	137.1094	604	0.0006	11.9179	0.0083	12

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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss
B-10R		8/19/2010	1100	0	444,270								
			1200	1380	445,650	30	41,197	108.6986	641	0.0006	10.0370	0.0073	10
		8/20/2010	1630	60	445,710	30	1,788	4.7173	509	0.0005	0.3455	0.0058	8
			1710	447,420	32	54,720	144.3799	527	0.0005	10.9557	0.0064	9	
		8/26/2010		0	447,420								
	pause		1300	0	447,420								
		8/27/2010	1400	60	447,480	19	1,141	3.0115	130	0.0001	0.0565	0.0009	1
	restart		600	960	448,440	25	23,801	62.8000	394	0.0004	3.5626	0.0037	5
		9/2/2010		0	448,440								
	pause		1100	0	448,440								
		9/3/2010	1230	90	448,530	24	2,190	5.7774	347	0.0003	0.2885	0.0032	5
	restart		1430	1560	450,090	30	46,484	122.6489	469	0.0005	8.2832	0.0053	8
		9/7/2010	1530	60	450,150	30	1,788	4.7173	480	0.0005	0.3262	0.0054	8
SOMA-2,MPE-1, B-10R	pause		930	0	450,150								
	restart	1030	60	450,210	31	1,874	4.9458	789	0.0008	0.5621	0.0094	13	
		9/8/2010	1200	90	450,300	31	2,796	7.3766	857	0.0009	0.9099	0.0101	15
			900	0	450,300								
		9/9/2010	930	1290	451,590	33	42,343	111.7238	596	0.0006	9.5830	0.0074	11
			1030	60	451,650	33	1,969	5.1965	737	0.0007	0.5518	0.0092	13
		9/10/2010	1400	1650	453,300	34	56,563	149.2416	716	0.0007	15.3934	0.0093	13
			1530	1530	454,830	34	52,449	138.3876	651	0.0007	12.9763	0.0085	12
		9/13/2010	1630	60	454,890	34	2,053	5.4170	625	0.0006	0.4874	0.0081	12
	pause		1300	0	454,890								
	restart	1330	30	454,920	32	968	2.5539	667	0.0007	0.2455	0.0082	12	
		9/14/2010	1400	30	454,950	32	964	2.5442	682	0.0007	0.2499	0.0083	12
			1230	1350	456,300	34	45,442	119.8998	744	0.0007	12.8532	0.0095	14
		9/15/2010	1330	60	456,360	33	1,966	5.1868	723	0.0007	0.5403	0.0090	13
			1100	1290	457,650	34	43,504	114.7853	576	0.0006	9.5254	0.0074	11
MPE-1		9/16/2010		0	457,650								
			1230	1530	459,180	31	47,430	125.1451	234	0.0002	4.2098	0.0028	4
B-10R, SOMA-2		9/17/2010		0	459,180								
			1330	60	459,240	32	1,920	5.0660	592	0.0006	0.4318	0.0072	10
SOMA-2		9/20/2010	1400	1470	460,710	37	54,039	142.5844	863	0.0009	17.7150	0.0121	17
				0	460,710								
B-10R, SOMA-2		9/20/2010	1500	60	460,770	22	1,301	3.4323	1,282	0.0013	0.6338	0.0106	15
	pause		1130	0	460,770								
	restart	1230	60	460,830	30	1,805	4.7616	1,351	0.0014	0.9263	0.0154	22	
		9/21/2010	1100	1350	462,180	34	45,900	121.1082	995	0.0010	17.3524	0.0129	19
			1200	60	462,240	34	2,040	5.3826	855	0.0009	0.6627	0.0110	16
		9/22/2010	1300	1500	463,740	30	45,000	118.7335	781	0.0008	13.3572	0.0089	13
			1400	60	463,800	26	1,560	4.1161	1,250	0.0013	0.7411	0.0124	18
SOMA-2		9/23/2010	1430	1470	465,270	25	36,750	96.9657	918	0.0009	12.8223	0.0087	13
				0	465,270								
		9/24/2010	1530	60	465,330	25	1,500	3.9578	1,112	0.0011	0.6339	0.0106	15
			1430	1380	466,710	25	35,084	92.5691	1,237	0.0012	16.4919	0.0120	17
		1530	60	466,770	25	1,525	4.0247	1,212	0.0012	0.7023	0.0117	17	

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WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss
SOMA-2,MPE-1, B-10R	pause restart	9/27/2010	930	0	466,770								
			1000	30	466,800	28	840	2.2164	1,034	0.0010	0.3300	0.0110	16
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		9/28/2010	1030	30	466,830	29	868	2.2914	1,278	0.0013	0.4218	0.0141	20
			1330	1620	468,450	32	52,396	138.2484	985	0.0010	19.6068	0.0121	17
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		9/29/2010	1200	1350	469,800	25	34,258	90.3908	977	0.0010	12.7136	0.0094	14
			1300	60	469,860	30	1,778	4.6913	1,133	0.0011	0.7654	0.0128	18
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		9/30/2010	1000	1260	471,120	30	37,545	99.0626	1,011	0.0010	14.4233	0.0114	16
			10/1/2010	1230	1590	472,710	31	48,932	129.1072	1,042	0.0010	19.3667	0.0122
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	pause restart	10/4/2010	1330	60	472,770	31	1,846	4.8720	997	0.0010	0.6992	0.0117	17
			1300	0	472,770								
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	pause restart	10/4/2010	1400	60	472,830	27	1,620	4.2744	1,393	0.0014	0.8574	0.0143	21
			10/5/2010	1300	1380	474,210	30	41,400	109.2348	855	0.0009	13.4490	0.0097
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	c/o	10/6/2010	1330	1470	475,680	30	44,100	116.3588	1,115	0.0011	18.6826	0.0127	18
			1530	120	475,800	32	3,840	10.1319	711	0.0007	1.0373	0.0086	12
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/7/2010	1200	1230	477,030	32	39,360	103.8522	902	0.0009	13.4892	0.0110	16
			1300	60	477,090	32	1,920	5.0660	977	0.0010	0.7127	0.0119	17
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/8/2010	1300	1440	478,530	32	46,080	121.5831	794	0.0008	13.9013	0.0097	14
			1400	60	478,590	32	1,920	5.0660	745	0.0007	0.5435	0.0091	13
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/11/2010	830	0	478,590								
			930	60	478,650	27	1,620	4.2750	703	0.0007	0.4328	0.0072	10
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/11/2010	1030	60	478,710	29	1,743	4.6001	721	0.0007	0.4776	0.0080	11
			1130	60	478,770	30	1,805	4.7616	734	0.0007	0.5034	0.0084	12
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/12/2010	930	1320	480,090	32	41,873	110.4821	782	0.0008	12.4367	0.0094	14
			1030	60	480,150	32	1,903	5.0219	820	0.0008	0.5931	0.0099	14
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	pause restart	10/13/2010	1130	60	480,210	32	1,903	5.0219	800	0.0008	0.5783	0.0096	14
			1300	1530	481,740	32	48,445	127.8223	801	0.0008	14.7452	0.0096	14
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	pause restart	10/14/2010	1400	60	481,800	31	1,889	4.9851	686	0.0007	0.4927	0.0082	12
			1200	180	481,980								
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/14/2010	1300	60	482,040	30	1,791	4.7260	814	0.0008	0.5540	0.0092	13
			1400	60	482,100	30	1,778	4.6913	814	0.0008	0.5499	0.0092	13
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R	pause restart	10/15/2010	1400	0	482,100								
			1330	180	482,280	30	5,400	14.2480	814	0.0008	1.6701	0.0093	13
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/19/2010	1400	30	482,310	28	840	2.2164	895	0.0009	0.2856	0.0095	14
			1430	30	482,340	28	840	2.2164	1,026	0.0010	0.3275	0.0109	16
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/19/2010	1030	0	482,340								
			1130	60	482,400	31	1,860	4.9077	1,140	0.0011	0.8056	0.0134	19
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/20/2010	1230	60	482,460	33	1,980	5.2243	1,106	0.0011	0.8320	0.0139	20
			1300	1470	483,930	33	48,072	126.8390	606	0.0006	11.0757	0.0075	11
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/20/2010	1400	60	483,930	29	1,727	4.5573	1,302	0.0013	0.8547	0.0142	21
			1530	1530	485,520	32	48,356	127.5871	1,066	0.0011	19.5903	0.0128	18
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/22/2010	1500	1410	486,930	31	43,392	114.4913	2,442	0.0024	40.2583	0.0286	41
			1100	0	486,930								
SOMA-2,MPE-1, SOMA-2,MPE-1, B-10R		10/25/2010	1200	60	486,990	28	1,690	4.4581	1,156	0.0012	0.7420	0.0124	18

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL				
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min	lbs/day
MPE-3		10/26/2010	1130	1410	488,400	33	46,024	121.4364	707	0.0007	12.3632	0.0088	13		
		10/27/2010	1100	1410	489,810	29	40,590	107.0968	683	0.0007	10.5318	0.0075	11		
				0	489,810										
				1300	120	489,930	20	2,438	6.4331	898	0.0009	0.8321	0.0069	10	
					0	489,930									
			10/28/2010	1200	1380	491,310	23	31,304	82.5965	1,086	0.0011	12.9165	0.0094	13	
			10/29/2010	1430	1590	492,900	20	32,365	85.3964	786	0.0008	9.6629	0.0061	9	
		pause		1530	60	492,960	20	1,221	3.2225	783	0.0008	0.3634	0.0061	9	
		restart		11/2/2010	1400	0	492,960	0							
				1500	60	493,020	17	1,042	2.7491	717	0.0007	0.2840	0.0047	7	
				1600	60	493,080	17	1,042	2.7491	721	0.0007	0.2854	0.0048	7	
			11/3/2010	1500	1380	494,460	21	28,354	74.8136	544	0.0005	5.8576	0.0042	6	
			11/4/2010	1200	1260	495,720	20	25,648	67.6726	629	0.0006	6.1329	0.0049	7	
				1300	60	495,780	21	1,262	3.3295	532	0.0005	0.2548	0.0042	6	
		pause		11/5/2010	1500	1560	497,340	20	31,755	83.7851	374	0.0004	4.5174	0.0029	4
		restart		11/8/2010	1100	0	497,340	0							
				1200	60	497,400	30	1,815	4.7887	477	0.0005	0.3288	0.0055	8	
			11/9/2010	1430	1590	498,990	34	53,621	141.4795	523	0.0005	10.6494	0.0067	10	
				1530	60	499,050	34	2,023	5.3388	544	0.0005	0.4180	0.0070	10	
			11/10/2010	1500	1410	500,460	29	40,741	107.4957	434	0.0004	6.7181	0.0048	7	
				1600	60	500,520	29	1,734	4.5743	436	0.0004	0.2874	0.0048	7	
			11/11/2010	1430	1350	501,870	30	40,301	106.3356	507	0.0005	7.7573	0.0057	8	
				1530	60	501,930	30	1,791	4.7260	548	0.0005	0.3727	0.0062	9	
			11/12/2010	1400	1350	503,280	30	40,078	105.7475	488	0.0005	7.4343	0.0055	8	
		pause		1500	60	503,340	30	1,785	4.7086	489	0.0005	0.3314	0.0055	8	
		restart		11/15/2010	1000	0	503,340	0							
				1100	60	503,400	27	1,608	4.2429	660	0.0007	0.4033	0.0067	10	
				1200	60	503,460	28	1,671	4.4079	642	0.0006	0.4076	0.0068	10	
			11/16/2010	1000	1320	504,780	30	39,260	103.5882	546	0.0005	8.1421	0.0062	9	
					0	504,780									
				1200	120	504,900	33	4,009	10.5791	539	0.0005	0.8219	0.0068	10	
					0	504,900									
			11/17/2010	1400	480	505,380	29	13,921	36.7316	698	0.0007	3.6896	0.0077	11	
			1500	60	505,440	29	1,740	4.5910	728	0.0007	0.4816	0.0080	12		
	pause		11/18/2010	1500	480	505,920	29	13,920	36.7282	728	0.0007	3.8503	0.0080	12	
	restart		11/22/2010	1000	0	505,920	0								
			1100	60	505,980	27	1,622	4.2791	716	0.0007	0.4414	0.0074	11		
		11/23/2010	1500	1680	507,660	27	45,410	119.8148	700	0.0007	12.0773	0.0072	10		
	pause		11/24/2010	1030	1170	508,830	27	31,595	83.3631	699	0.0007	8.3932	0.0072	10	
	restart		11/29/2010	1000	0	508,830	0								
			1100	60	508,890	25	1,499	3.9555	505	0.0005	0.2876	0.0048	7		
			1200	60	508,950	25	1,496	3.9478	462	0.0005	0.2629	0.0044	6		
		11/30/2010	1000	1320	510,270	28	37,243	98.2654	393	0.0004	5.5630	0.0042	6		
	pause			0	510,270										
	restart		1400	0	510,270										
			1430	30	510,300	25	742	1.9587	977	0.0010	0.2755	0.0092	13		
		12/1/2010	1230	1320	511,620	30	40,005	105.5540	488	0.0005	7.4231	0.0056	8		
			1300	30	511,650	30	909	2.3990	474	0.0005	0.1638	0.0055	8		



**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
 Dec 2008-Oct 2011  
 3820 Manila Ave  
 Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min
MPE-2		12/2/2010	1400	0	511,650									
			1030	60	511,710	23	1,409	3.7164	1,288	0.0013	0.6892	0.0115	17	
			1100	480	512,190	23	11,040	29.1293	1,288	0.0013	5.4020	0.0113	16	
			1200	30	512,220	25	745	1.9663	1,239	0.0012	0.3509	0.0117	17	
		restart		1200	60	512,280	25	1,488	3.9250	2,442	0.0024	1.3802	0.0230	33
						512,280								
						512,280								
		pause	12/3/2010	1200	1440	513,720	25	35,702	94.2000	2,442	0.0024	33.1253	0.0230	33
		restart	12/6/2010	930	0	513,720								
				1530	360	514,080	28	10,099	26.6469	802	0.0008	3.0783	0.0086	12
			12/7/2010	1130	1200	515,280	29	34,935	92.1762	1,242	0.0012	16.4868	0.0137	20
						515,280								
				1230	60	515,340	28	1,680	4.4328	1,718	0.0017	1.0968	0.0183	26
				1330	60	515,400	29	1,743	4.6001	1,361	0.0014	0.9017	0.0150	22
		pause				515,400								
		restart	12/13/2010	1000	0	515,400								
				1100	60	515,460	22	1,331	3.5106	815	0.0008	0.4122	0.0069	10
				1200	60	515,520	23	1,409	3.7164	903	0.0009	0.4834	0.0081	12
		12/14/2010	1300	1500	517,020	28	41,921	110.6108	905	0.0009	14.4141	0.0096	14	
	pause				517,020									
		12/20/2010		0	517,020									
MPE-3	restart	12/21/2010		0	517,020									
			1130	0	517,020									
			1230	60	517,080	25	1,488	3.9250	2,442	0.0024	1.3801	0.0230	33	
	pause	12/22/2010	930	540	517,620	26	14,040	37.0449	2,442	0.0024	13.0267	0.0241	35	
					517,620									
					517,620									
SOMA-4	restart	1/5/2011	1330	0	517,620									
			1430	60	517,680	19	1,154	3.0462	228	0.0002	0.1000	0.0017	2	
MPE-3,SOMA4					517,680									
			1530	60	517,740	27	1,633	4.3079	130	0.0001	0.0808	0.0013	2	
		1/6/2011	1030	1140	518,880	33	37,211	98.1826	122	0.0001	1.7262	0.0015	2	
MPE-2,3					518,880									
			1200	90	518,970	31	2,754	7.2668	112	0.0001	0.1172	0.0013	2	
			1330	1350	520,320	31	41,393	109.2156	114	0.0001	1.7922	0.0013	2	
MPE-3			1500	90	520,410	31	2,760	7.2810	114	0.0001	0.1193	0.0013	2	
					520,410									
		pause	1/10/2011	1430	60	520,470	25	1,502	3.9633	81	0.0001	0.0465	0.0008	1
		restart		1530	60	520,530	27	1,649	4.3501	106	0.0001	0.0663	0.0011	2
			1/11/2011	1330	1320	521,850	31	40,394	106.5798	183	0.0002	2.8107	0.0021	3
				1430	60	521,910	32	1,896	5.0034	215	0.0002	0.1548	0.0026	4
			1/12/2011	1430	1440	523,350	30	43,726	115.3710	244	0.0002	4.0568	0.0028	4
		pause		1530	60	523,410	30	1,822	4.8071	213	0.0002	0.1476	0.0025	4
	restart	1/13/2011	1300	720	524,130									
	pause		1400	60	524,190	28	1,699	4.4838	163	0.0002	0.1055	0.0018	3	

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
Dec 2008-Oct 2011  
3820 Manila Ave  
Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %
MPE-3	restart	1/14/2011	1000	720	524,910								
	pause			0	524,910								
	ecat system	1/18/2011		0	524,910								
	restart	1/31/2011	1300	0	524,910								
MPE-2,3	ecat system		1400	60	524,970	38	2,259	5.9602	85	0.0001	0.0727	0.0012	2
	pause			0	524,970								
	restart	2/1/2011	1100	0	524,970								
			1300	120	525,090	37	4,391	11.5852	106	0.0001	0.1765	0.0015	2
MPE-2,3	pause	2/2/2011		0	525,090								
	restart	2/3/2011	1100	0	525,090								
			1300	120	525,210	37	4,422	11.6689	107	0.0001	0.1805	0.0015	2
			1500	120	525,330	37	4,447	11.7341	109	0.0001	0.1846	0.0015	2
MPE-2,3, SOMA-2,4		2/4/2011	930	1110	526,440	37	41,405	109.2487	90	0.0001	1.4085	0.0013	2
			1030	60	526,500	37	2,239	5.9079	92	0.0001	0.0784	0.0013	2
				0	526,500								
			1430	240	526,740	64	15,472	40.8243	81	0.0001	0.4785	0.0020	3
MPE-2,3, SOMA-2,4	pause			0	526,740								
	restart	2/7/2011	1000	0	526,740								
			1100	60	526,800	65	3,877	10.2283	326	0.0003	0.4795	0.0080	12
			1300	120	526,920	64	7,660	20.2111	286	0.0003	0.8315	0.0069	10
MPE-2,3, SOMA-2,4		2/8/2011	1100	1320	528,240	73	96,965	255.8439	445	0.0004	16.3791	0.0124	18
			1200	60	528,300	73	4,409	11.6342	418	0.0004	0.6998	0.0117	17
		2/9/2011	1100	1380	529,680	78	107,250	282.9803	277	0.0003	11.2771	0.0082	12
	pause			0	529,680								
MPE-2,3, SOMA-2,4	restart	2/15/2011	1330	0	529,680								
	restart	2/16/2011	1030	1260	530,940	64	80,640	212.7704	277	0.0003	8.4870	0.0067	10
	restart	2/17/2011	1300	0	530,940								
			1400	60	531,000	64	3,819	10.0755	277	0.0003	0.4019	0.0067	10
MPE-2,3, SOMA-2,4	pause	2/18/2011	200	720	531,720								
	restart	2/22/2011	1300	0	531,720								
			1400	60	531,780	64	3,851	10.1620	326	0.0003	0.4764	0.0079	11
	pause	2/25/2011	1500	1500	533,280	64	96,000	253.2982	326	0.0003	11.8908	0.0079	11
MPE-2,3, SOMA-2,4				0	533,280								
	restart	3/1/2011	1200	0	533,280								
		3/2/2011	1200	1440	534,720	64	92,160	243.1662	260	0.0003	9.1041	0.0063	9
		3/3/2011	1200	1440	536,160	64	92,160	243.1662	260	0.0003	9.1041	0.0063	9
MPE-2,3, SOMA-2,4		3/4/2011	1200	1440	537,600	64	92,160	243.1662	260	0.0003	9.1041	0.0063	9
		3/7/2011	1200	1440	539,040	64	92,160	243.1662	260	0.0003	9.1041	0.0063	9
				0	539,040								
		3/9/2011	1100	2820	541,860	64	181,016	477.6138	260	0.0003	17.9139	0.0064	9
MPE-2,3, SOMA-2,4			1300	120	541,980	64	7,703	20.3240	260	0.0003	0.7623	0.0064	9
				0	541,980								
		3/11/2011	1200	2820	544,800	74	209,019	551.5010	529	0.0005	42.0167	0.0149	21
	pause	3/13/2011	2000	2640	547,440	74	195,360	515.4617	163	0.0002	12.0989	0.0046	7
MPE-2,3, SOMA-2,4	restart	3/14/2011	1330	0	547,440								
		3/15/2011	1200	1350	548,790	74	99,900	263.5884	163	0.0002	6.1869	0.0046	7
		3/16/2011	1200	1440	550,230	74	106,560	281.1609	163	0.0002	6.5994	0.0046	7

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
 Dec 2008-Oct 2011  
 3820 Manila Ave  
 Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL			
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss
MPE-2,3, SOMA-2,4	pause	3/17/2011	1300	1500	551,730	74	111,180	293.3516	163	0.0002	6.8767	0.0046	7	
				0	551,730									
	restart	3/23/2011	1100	0	551,730									
		3/24/2011	1100	1440	553,170	74	106,560	281.1609	179	0.0002	7.2472	0.0050	7	
		3/25/2011	1100	1440	554,610	74	106,560	281.1609	179	0.0002	7.2472	0.0050	7	
	pause	3/28/2011	2300	5040	559,650	74	372,960	984.0633	179	0.0002	25.3652	0.0050	7	
	restart	3/29/2011	1100	0	559,650									
	pause			1800	540	560,190	74	39,960	105.4354	179	0.0002	2.7177	0.0050	7
	restart	3/30/2011	1330	0	560,190									
		3/31/2011	1330	1440	561,630	74	106,560	281.1609	179	0.0002	7.2472	0.0050	7	
		4/1/2011	1330	1440	563,070	74	106,560	281.1609	179	0.0002	7.2472	0.0050	7	
		4/4/2011	1330	4320	567,390	74	319,680	843.4828	179	0.0002	21.7416	0.0050	7	
		4/5/2011	1330	1440	568,830	74	106,560	281.1609	179	0.0002	7.2472	0.0050	7	
		4/6/2011	1400	1470	570,300	74	108,957	287.4845	179	0.0002	7.4102	0.0050	7	
		4/7/2011	1200	1320	571,620	74	97,628	257.5948	186	0.0002	6.8839	0.0052	8	
		4/11/2011	1200	5760	577,380	75	429,345	1132.8357	186	0.0002	30.3267	0.0053	8	
		4/12/2011	1200	1440	578,820	74	106,779	281.7390	185	0.0002	7.4961	0.0052	7	
		4/15/2011	1200	4320	583,140	73	315,475	832.3883	189	0.0002	22.7128	0.0053	8	
		4/19/2011	1200	5760	588,900	75	430,661	1136.3084	192	0.0002	31.4852	0.0055	8	
		4/20/2011	1200	1440	590,340	73	104,895	276.7688	192	0.0002	7.6493	0.0053	8	
	4/21/2011	1200	180	590,520	73	13,140	34.6702	191	0.0002	0.9536	0.0053	8		
	4/22/2011	1200	180	590,700	74	13,320	35.1451	194	0.0002	0.9818	0.0055	8		
	4/25/2011	1200	4320	595,020	75	324,000	854.8813	194	0.0002	23.8820	0.0055	8		
MPE-2,3, SOMA-2,4		4/26/2011	1200	180	595,200	75	13,500	35.6201	193	0.0002	0.9900	0.0055	8	
	restart	6/28/2011	1300	0	595,200									
		6/29/2011	1200	1380	596,580	73	100,740	265.8047	197	0.0002	7.5395	0.0055	8	
		6/30/2011	1200	1440	598,020	73	105,120	277.3615	196	0.0002	7.8413	0.0054	8	
		7/1/2011	1200	2880	600,900	72	207,360	547.1240	198	0.0002	15.5703	0.0054	8	
		7/2/2011	1200	180	601,080	74	13,320	35.1451	194	0.0002	0.9818	0.0055	8	
		7/4/2011	1200	180	601,260	74	13,307	35.1115	189	0.0002	0.9581	0.0053	8	
		7/5/2011	1200	1440	602,700	75	107,289	283.0856	188	0.0002	7.6447	0.0053	8	
		7/6/2011	1200	1440	604,140	74	107,057	282.4711	180	0.0002	7.3368	0.0051	7	
		7/8/2011	1200	2880	607,020	74	212,552	560.8229	179	0.0002	14.4614	0.0050	7	
		7/11/2011	1100	0	607,020									
		7/12/2011	1300	1560	608,580	74	115,379	304.4302	182	0.0002	7.9928	0.0051	7	
			1400	60	608,640	73	4,404	11.6194	182	0.0002	0.3037	0.0051	7	
		7/13/2011	1200	1320	609,960	91	120,662	318.3704	183	0.0002	8.4036	0.0064	9	
		7/14/2011	1500	1620	611,580	81	131,936	348.1166	171	0.0002	8.5685	0.0053	8	
		7/15/2011	1100	1200	612,780	64	77,028	203.2399	163	0.0002	4.7643	0.0040	6	
		7/18/2011	1100	4320	617,100	89	383,974	1013.1246	83	0.0001	12.1123	0.0028	4	
		7/19/2011	1300	1560	618,660	92	143,545	378.7472	349	0.0003	19.0445	0.0122	18	
		7/26/2011	1130	0	618,660									
			1200	30	618,690	127	3,796	10.0163	142	0.0001	0.2053	0.0068	10	
	7/27/2011	1300	1500	620,190	116	173,561	457.9457	147	0.0001	9.6616	0.0064	9		
	7/28/2011	1300	1440	621,630	89	128,685	339.5371	159	0.0002	7.7540	0.0054	8		
	7/29/2011	1200	1380	623,010	83	114,359	301.7389	162	0.0002	7.0323	0.0051	7		
	8/2/2011	1200	5760	628,770	89	512,389	1351.9506	187	0.0002	36.3827	0.0063	9		

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
 Dec 2008-Oct 2011  
 3820 Manila Ave  
 Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						minutes	minutes	minutes	SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %
		8/3/2011	900	1260	630,030	89	112,271	296.2300	155	0.0002	6.5970	0.0052	8
		8/8/2011	1100	7320	637,350	82	597,901	1577.5753	147	0.0001	33.2832	0.0045	7
		8/9/2011	1100	1440	638,790	83	118,922	313.7778	138	0.0001	6.2522	0.0043	6
		8/10/2011	1100	1440	640,230	92	131,978	348.2276	137	0.0001	6.8733	0.0048	7
		8/11/2011	1400	1620	641,850	82	132,880	350.6068	133	0.0001	6.7230	0.0042	6
		8/12/2011	1500	1500	643,350	81	122,214	322.4644	130	0.0001	6.0365	0.0040	6
		8/16/2011	1130	5550	648,900	97	536,383	1415.2593	127	0.0001	25.8823	0.0047	7
	pause	8/17/2011	1200	0	648,900								
	restart	8/22/2011	1430	0	648,900								
			1530	60	648,960	81	4,860	12.8232	197	0.0002	0.3638	0.0061	9
		8/24/2011	1400	2790	651,750								
		8/26/2011	1400	2880	654,630								
		8/31/2011	1400	0	654,630								
		9/1/2011	1400	1440	656,070	64	92,160	243.1662	135	0.0001	4.7198	0.0033	5
		9/6/2011	1330	7170	663,240	98	702,660	1853.9842	147	0.0001	39.2538	0.0055	8
		9/7/2011	1300	1410	664,650	84	118,438	312.5024	128	0.0001	5.7799	0.0041	6
		9/8/2011	1200	1380	666,030	81	112,390	296.5437	134	0.0001	5.7142	0.0041	6
		9/9/2011	1200	1440	667,470	82	117,374	309.6949	105	0.0001	4.6986	0.0033	5
		9/12/2011	1100	4260	671,730	75	319,916	844.1051	133	0.0001	16.1287	0.0038	5
		9/13/2011	1100	1440	673,170	75	107,760	284.3266	140	0.0001	5.7194	0.0040	6
		9/14/2011	1200	1500	674,670	81	122,112	322.1960	134	0.0001	6.2085	0.0041	6
		9/15/2011	1200	1440	676,110	83	119,383	314.9938	130	0.0001	5.9072	0.0041	6
		9/19/2011	1000	5640	681,750	83	467,380	1233.1937	131	0.0001	23.2423	0.0041	6
		9/20/2011	1000	1440	683,190	74	106,641	281.3751	114	0.0001	4.6238	0.0032	5
		9/21/2011	1100	1500	684,690	82	122,265	322.5989	77	0.0001	3.5619	0.0024	3
		9/22/2011	1200	1500	686,190	73	109,586	289.1447	73	0.0001	3.0501	0.0020	3
		9/23/2011	1500	1620	687,810	83	134,248	354.2152	74	0.0001	3.7698	0.0023	3
	pause	9/24/2011		0	687,810								
	restart	9/26/2011	1100	0	687,810								
		9/27/2011	1100	1440	689,250	82	118,265	312.0461	125	0.0001	5.6325	0.0039	6
		9/28/2011	1500	1680	690,930	73	123,046	324.6588	127	0.0001	5.9439	0.0035	5
		9/29/2011	1200	1260	692,190	82	102,703	270.9830	129	0.0001	5.0184	0.0040	6
		9/30/2011	1000	1320	693,510	84	110,246	290.8855	275	0.0003	11.5103	0.0087	13
	pause	10/1/2011		0	693,510								
	restart	10/3/2011	1000	0	693,510								
			1100	60	693,570	82	4,903	12.9364	137	0.0001	0.2552	0.0043	6
		10/4/2011	1200	1500	695,070	83	124,843	329.3999	130	0.0001	6.1620	0.0041	6
		10/5/2011	1600	1680	696,750	82	137,223	362.0665	65	0.0001	3.3950	0.0020	3
		10/6/2011	1100	1140	697,890	82	93,390	246.4113	68	0.0001	2.4261	0.0021	3
		10/7/2011	1100	1440	699,330	82	118,517	312.7087	70	0.0001	3.1521	0.0022	3
	pause			0	699,330								
	restart	10/10/2011	1100	0	699,330								
			1200	60	699,390	81	4,854	12.8082	70	0.0001	0.1299	0.0022	3
	<b>TOTAL</b>				<b>699,390</b>								
	<b>MEDIAN</b>					<b>29</b>	<b>26,708,508</b>	<b>70471</b>	<b>638</b>	<b>0.0006</b>	<b>5174.06</b>	<b>0.0074</b>	<b>10.65</b>

**Table 9**  
**MPE Pilot Test**  
**Extraction Data and VOC Mass Removal Rate**  
 Dec 2008-Oct 2011  
 3820 Manila Ave  
 Oakland, California

WELL	COMMENT	DATE	CLOCK TIME	INCREMENTAL TIME	ELAPSED TIME	Q			PID		MASS REMOVAL		
						SCFM	ft <sup>3</sup> of extracted air	Moles of extracted air	ppmv as TPHss	mole %	lb VOC mass removal as TPHss	lbs/min	lbs/day
				minutes	minutes								

Notes

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

11656.5  
 485.6875 862.3431637

DERIVATION OF MASS REMOVAL RATE

ppmv as TPHss/1,000,000 = mole %  
 ft<sup>3</sup> of extracted air/(379 ft<sup>3</sup> air/lb-mole air) = moles of extracted air  
 (moles of extracted air)(mole %)(144 lb/lb-mole TPHss) = lbs of VOC removed as TPHss  
 (lbs of VOC mass removed as TPHss)(elapsed time) = lbs/min of VOC removed as TPHss  
 (lbs/min of VOC removed as TPHss)(60 min/1 hour)(24 hours/1 day) = lbs/day of VOC removed as TPHss

# FIGURES

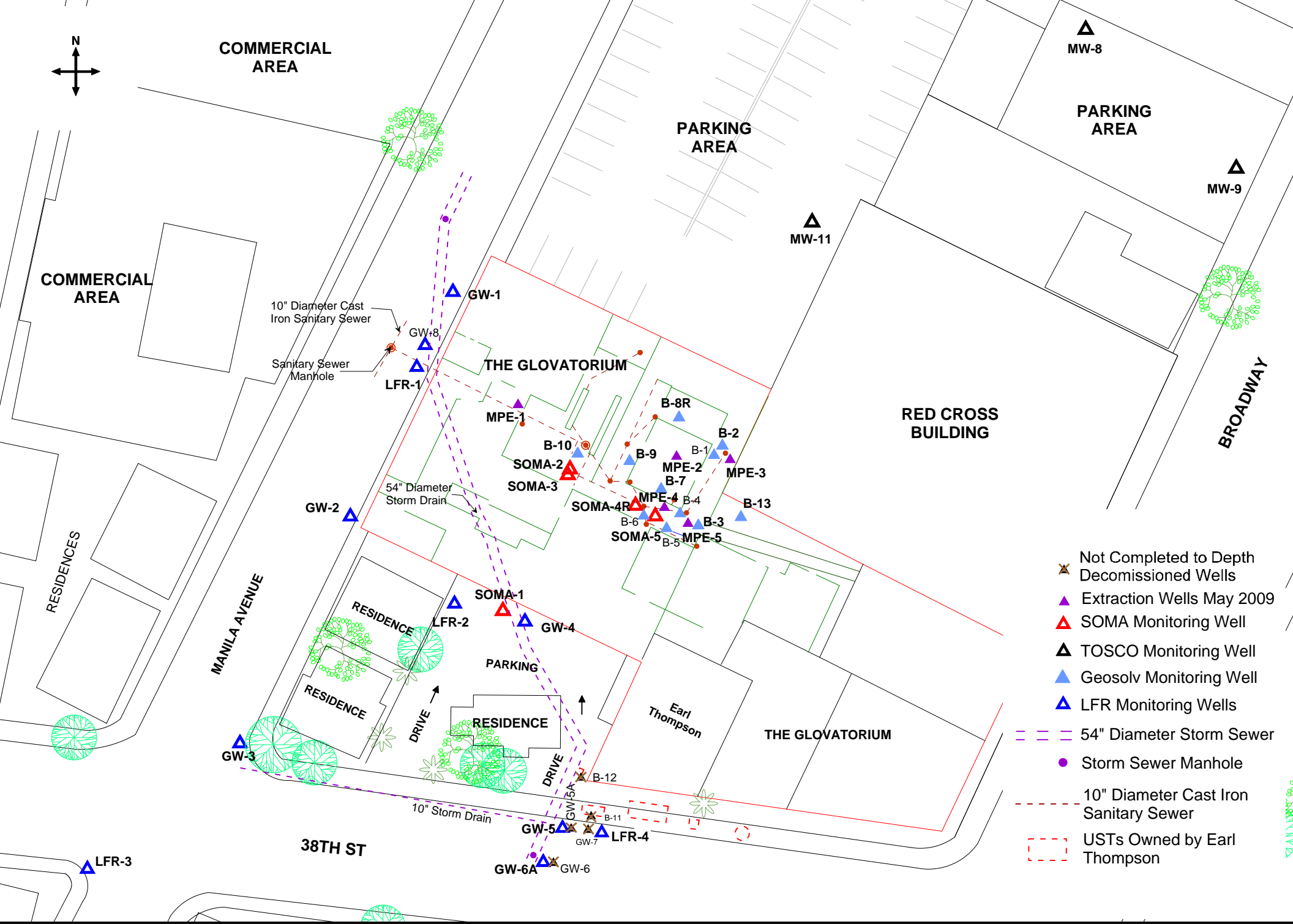


approximate scale in feet



Figure 1: Site vicinity map.





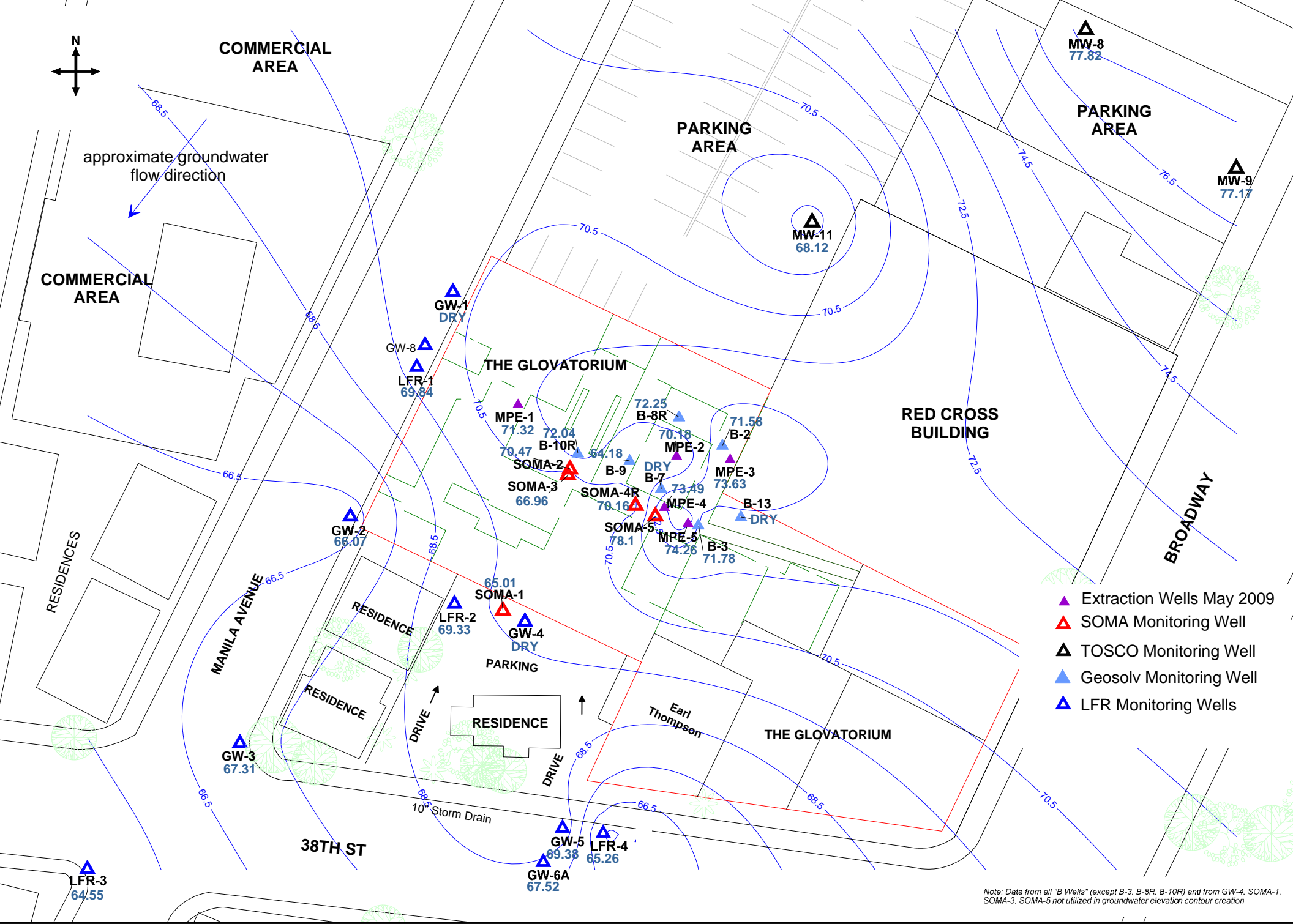
- Not Completed to Depth
- Decommissioned Wells
- Extraction Wells May 2009
- SOMA Monitoring Well
- TOSCO Monitoring Well
- Geosolv Monitoring Well
- LFR Monitoring Wells
- 54" Diameter Storm Sewer
- Storm Sewer Manhole
- 10" Diameter Cast Iron Sanitary Sewer
- USTs Owned by Earl Thompson

approximate scale in feet



Figure 2: Map showing the approximate locations of groundwater monitoring wells.





Note: Data from all "B Wells" (except B-3, B-8R, B-10R) and from GW-4, SOMA-1, SOMA-3, SOMA-5 not utilized in groundwater elevation contour creation

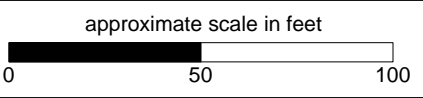


Figure 3: Groundwater elevation contour map in feet August 29, 2011



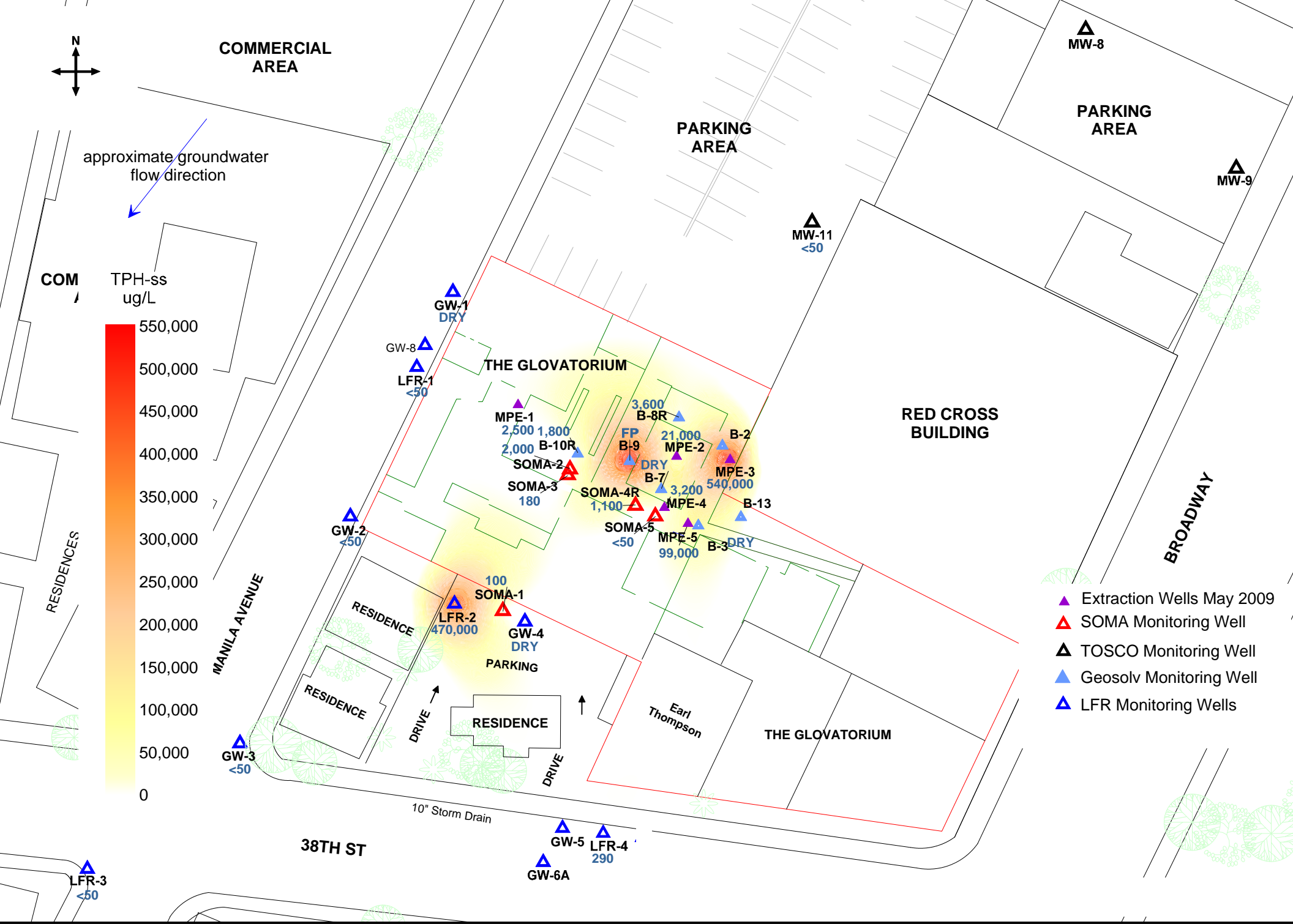


Figure 4: Contour map of TPH-ss concentrations in groundwater August 29 to 31, 2011

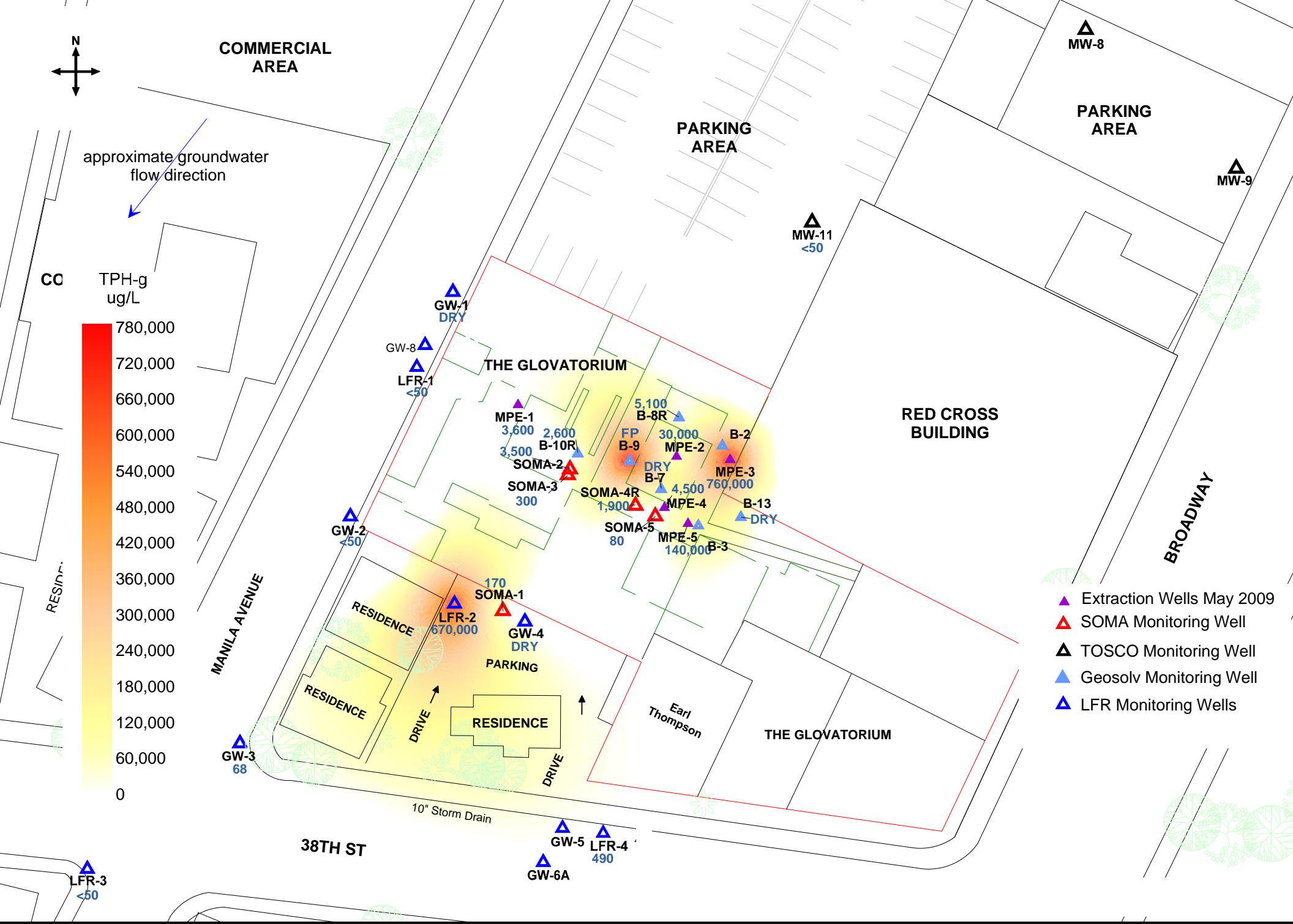


Figure 5: Contour map of TPH-g concentrations in groundwater August 29 to 31, 2011

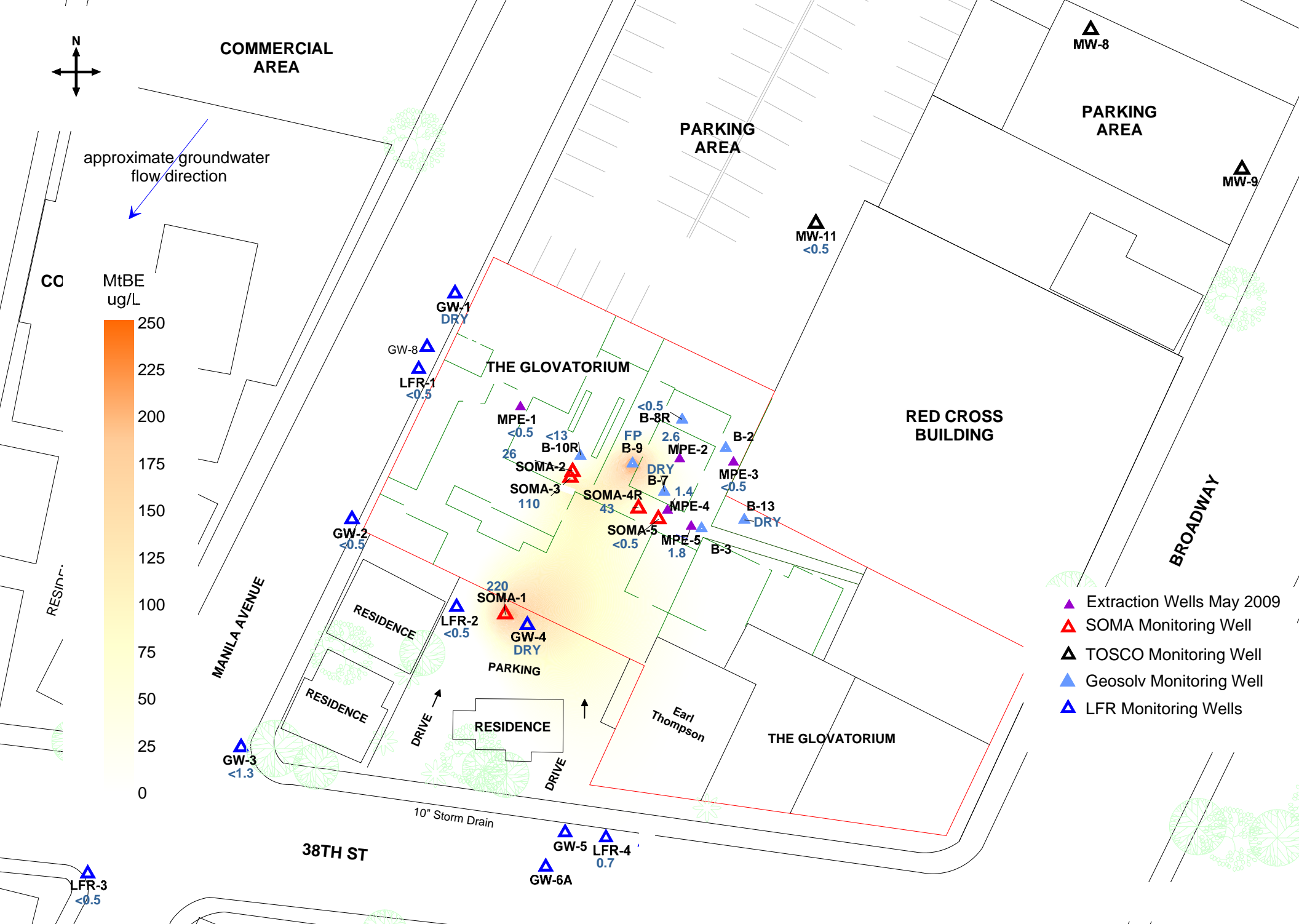


Figure 6: Contour map of MtBE concentrations in groundwater August 29 to 31, 2011

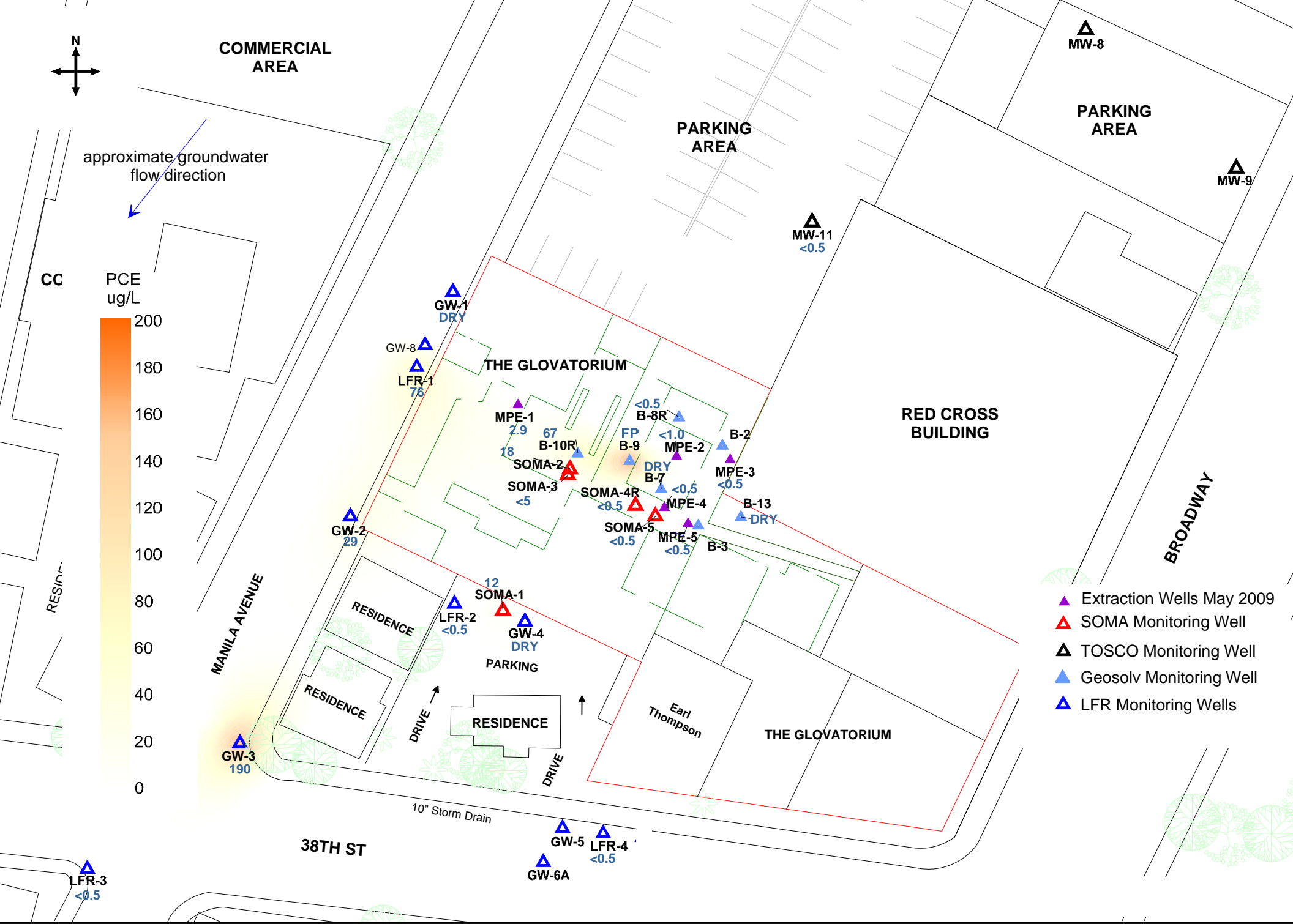
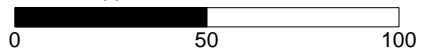


Figure 7: Contour map of PCE concentrations in groundwater August 29 to 31, 2011

approximate scale in feet



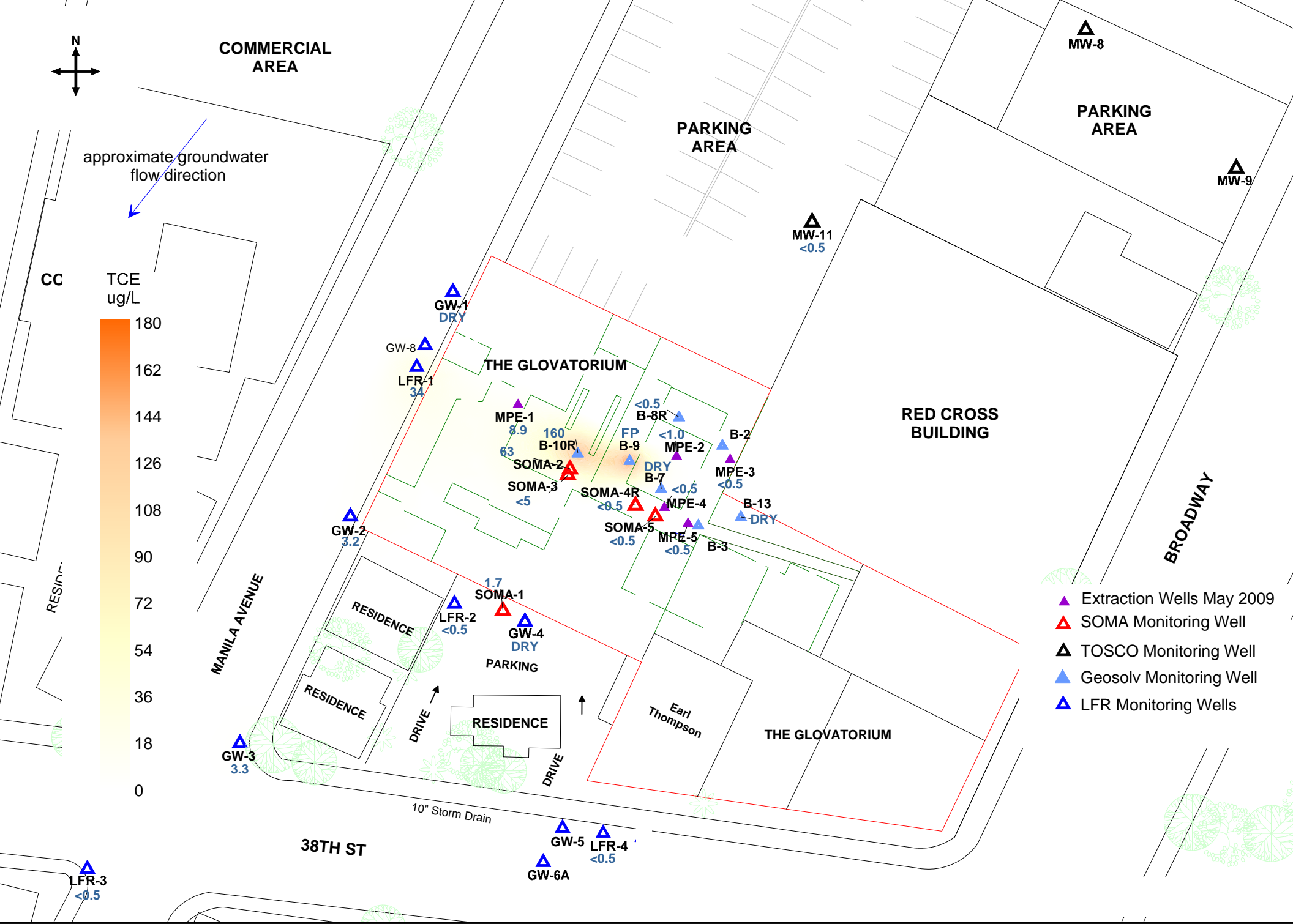
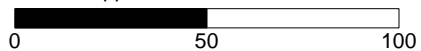


Figure 8: Contour map of TCE concentrations in groundwater August 29 to 31, 2011

approximate scale in feet



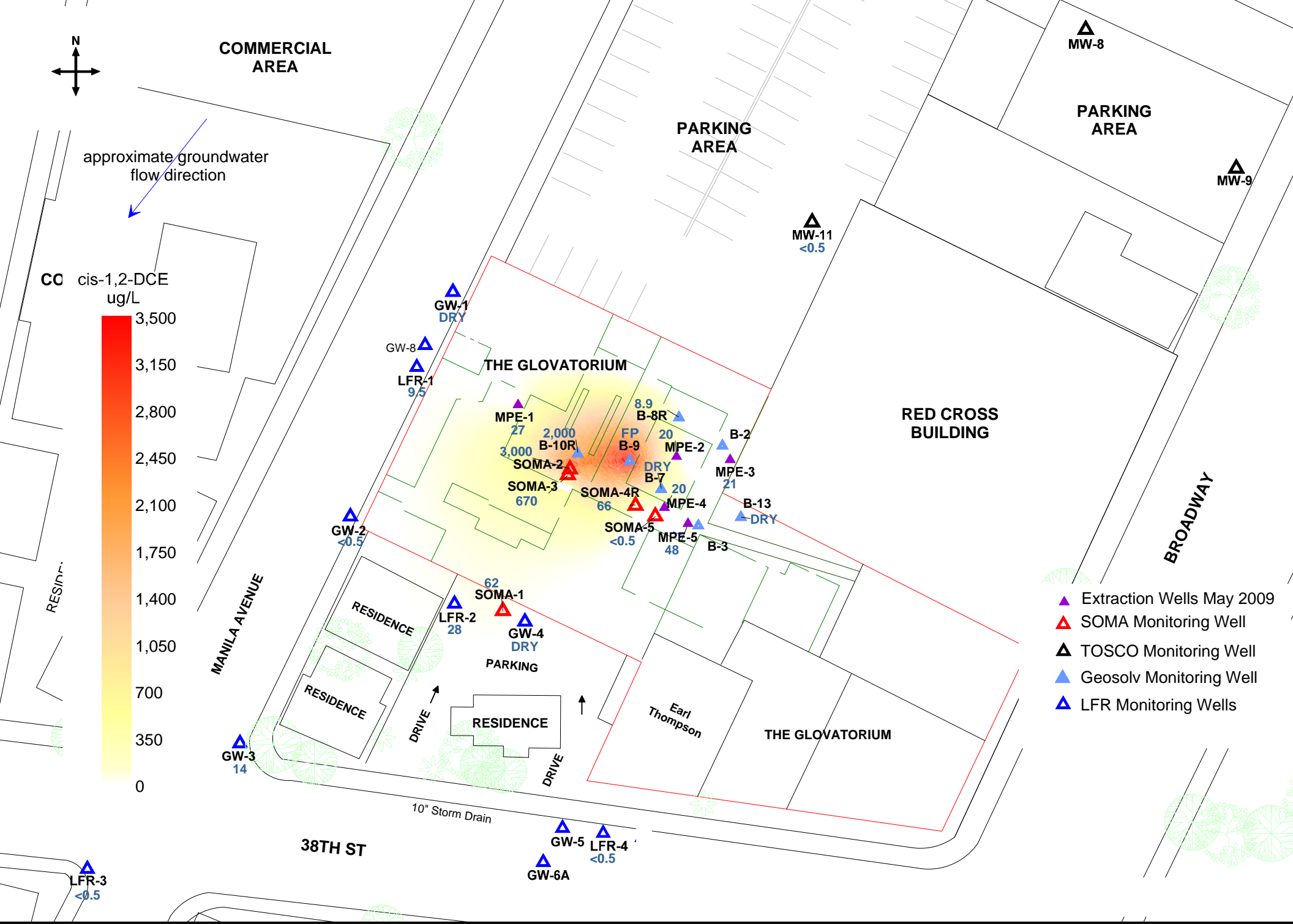
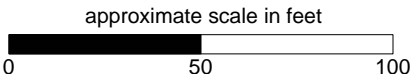


Figure 9: Contour map of cis-1,2-dichloroethene concentrations in groundwater August 29 to 31, 2011



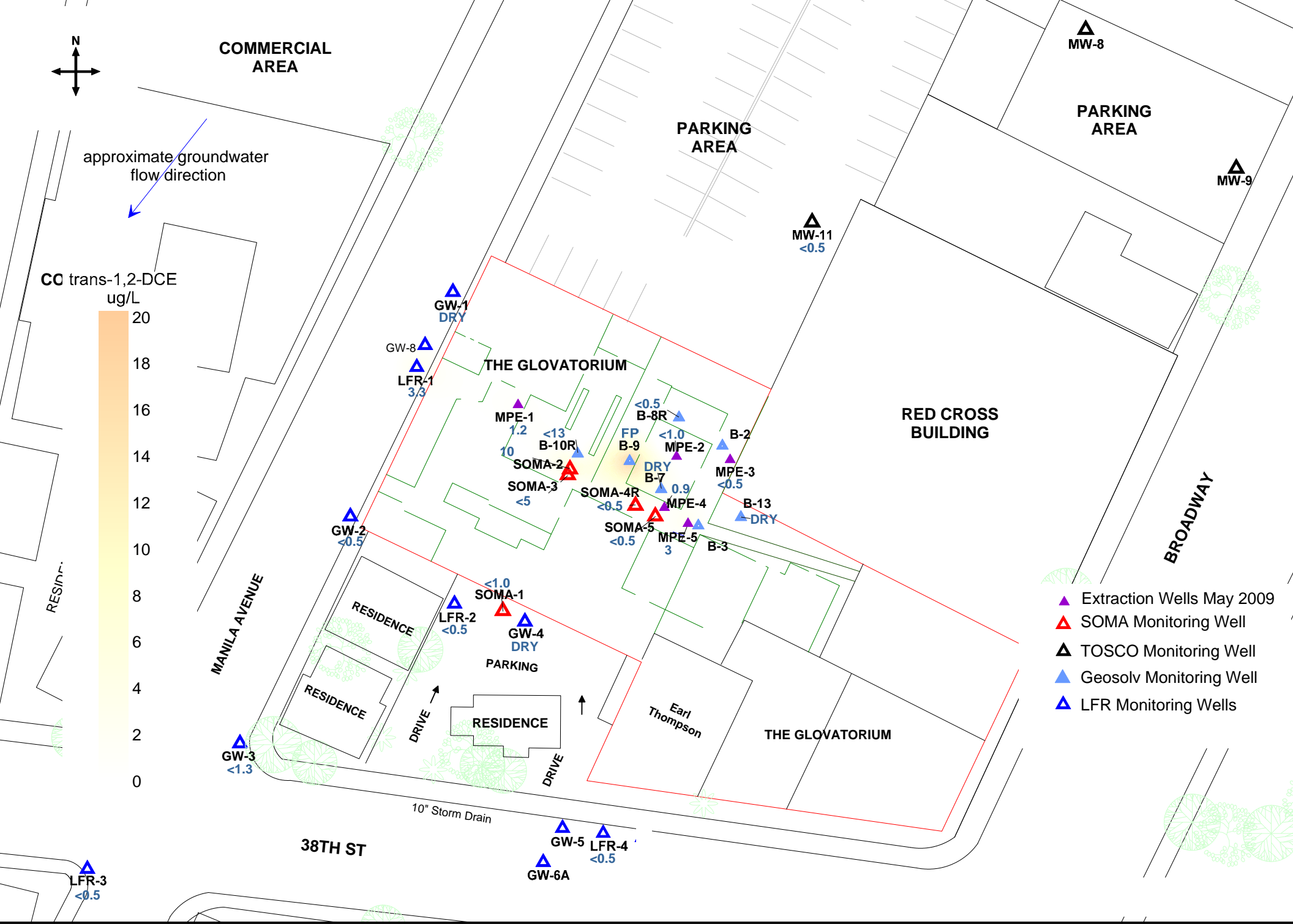
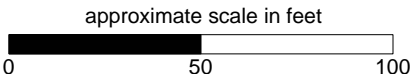


Figure 10: Contour map of trans-1,2-dichloroethene concentrations in groundwater August 29 to 31, 2011





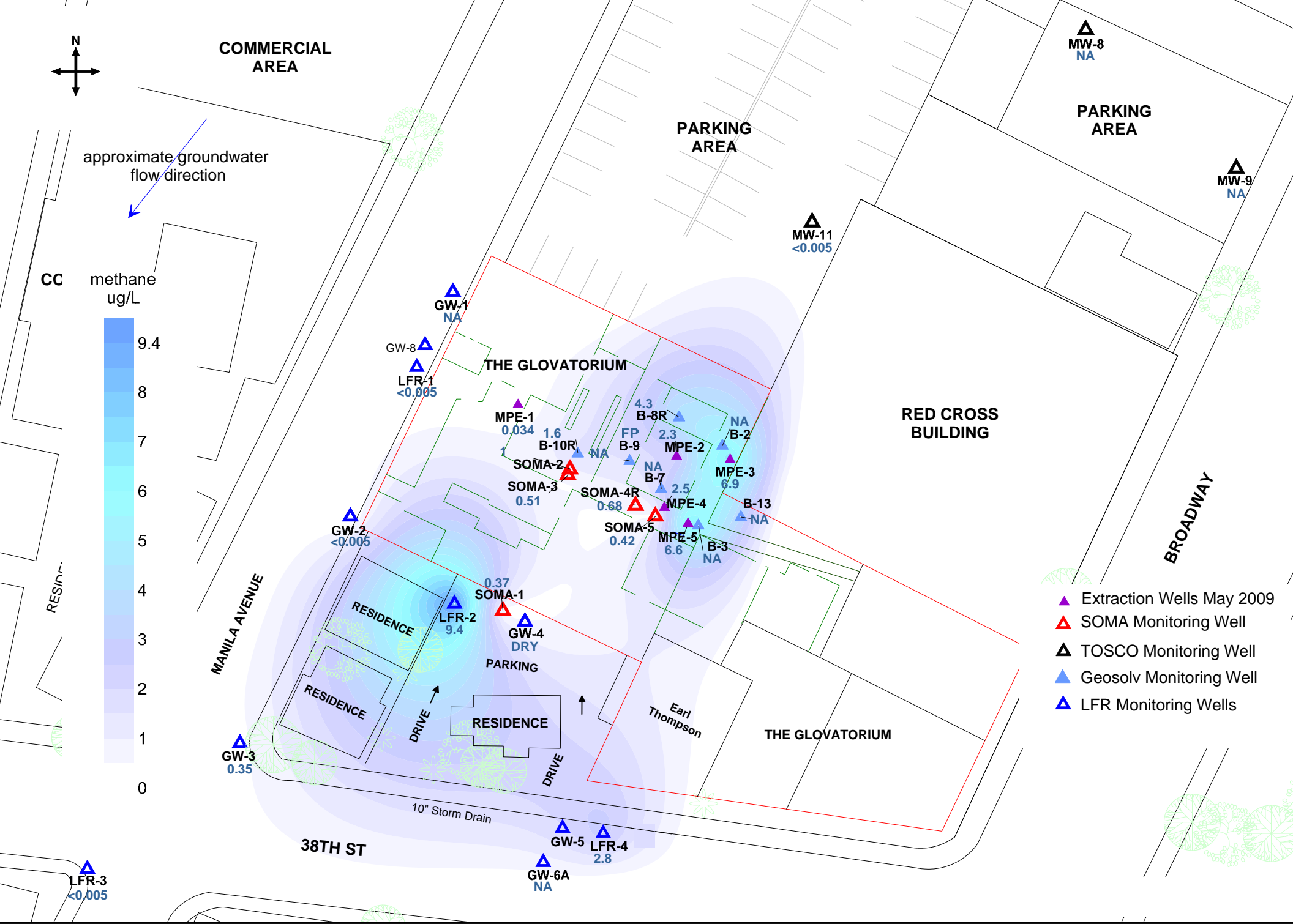
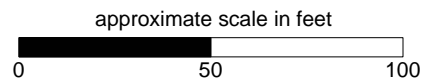
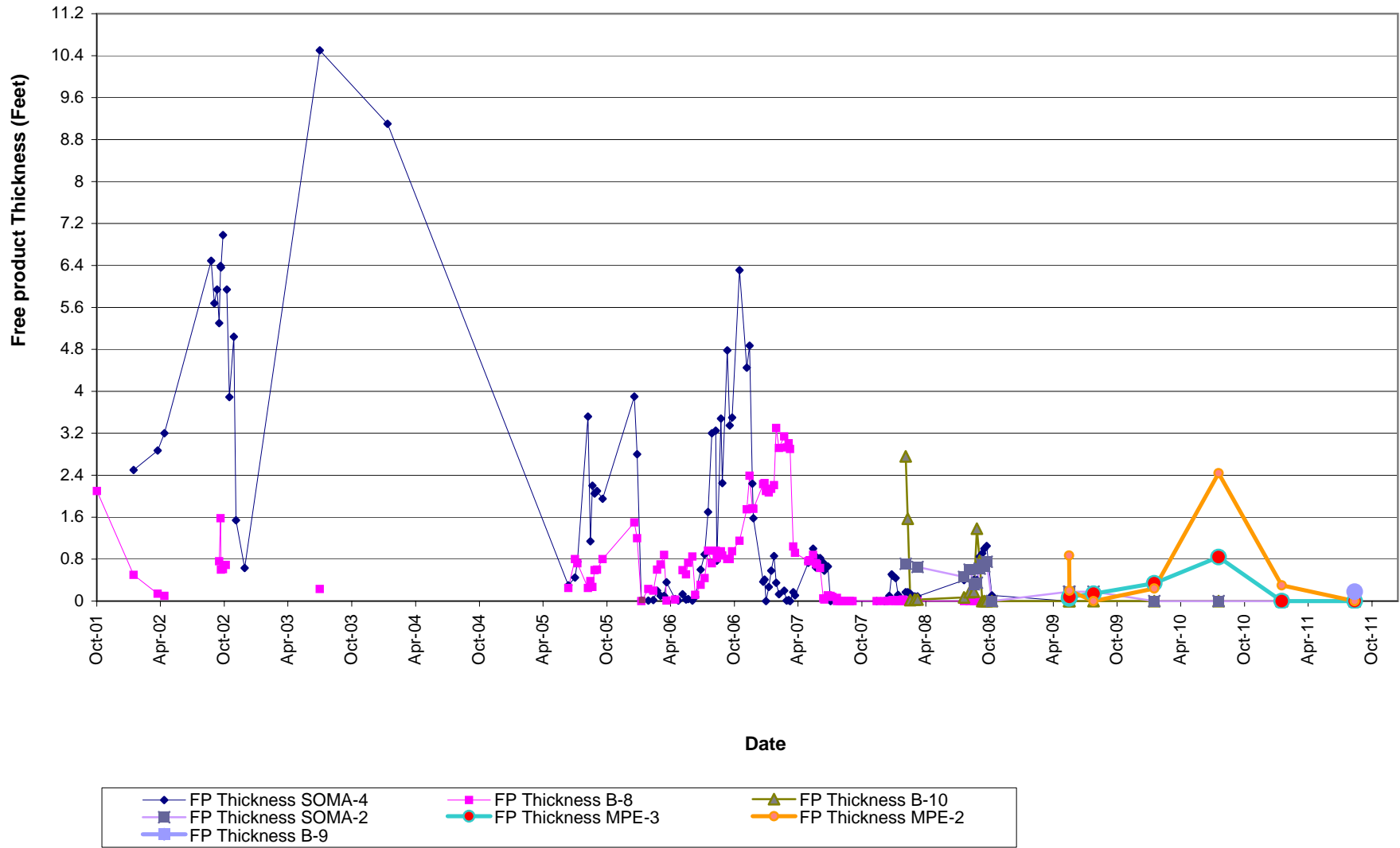


Figure 11: Contour map of methane concentrations in groundwater August 29 to 31, 2011



**Figure 12**  
**Free Product Thickness**  
**Former Glovatorium Site**  
**3820 Manila Avenue, Oakland, California**



# **APPENDIX A**

## **SOMA's Groundwater Monitoring Procedures**

## **Field Activities**

Field activities were conducted from August 29 to 31, 2011. During this event, 19 monitoring wells were sampled. Depths to groundwater were measured in 30 groundwater monitoring wells and temporary sampling points.

Figure 2 shows locations of groundwater monitoring wells and temporary sampling points.

On August 29, 2011, SOMA's field crew measured depths to groundwater in the monitoring wells and temporary groundwater sampling points from the top of the casings to the nearest 0.01 feet using an electrical sounder. The depth to groundwater and top of the casing elevation were used to calculate the Site's groundwater elevation at each sounding location.

Prior to sample collection, each well was purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC) or a GeoTech pump (for the smaller ¾-inch diameter temporary wells). During the purging activities, the groundwater was measured for parameters such as DO, pH, temperature, EC, and the ORP using a Hanna HI-9828 multi-parameter instrument. Turbidity was measured using a Hanna HI-98703 portable turbidimeter. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer.

The purging continued until the parameters for pH, temperature, and EC stabilized, or three casing volumes were purged.

After purging, a disposable polyethylene bailer was used to collect sufficient samples from each monitoring well for laboratory analyses. The groundwater samples from the smaller diameter ¾-inch temporary wells were collected using the GeoTech pump and a battery pack. A ¼-inch poly tube was placed in the temporary well, and groundwater was extracted through the tubing using the GeoTech pump.

The groundwater sample was transferred to nine 40-mL VOA vials and preserved with hydrochloric acid. The vials were then sealed to prevent the development of air bubbles within the headspace. The VOA vials containing the samples were immediately placed on ice and maintained at 4°C in a cooler. A chain of custody form was written and placed with the samples in the cooler. SOMA's field crew delivered the samples to Curtis & Tompkins Laboratories, in Berkeley, California, upon sampling completion.

## **Laboratory Analysis**

Curtis & Tompkins, Ltd., a state-certified laboratory, analyzed the groundwater samples for TPH-g, TPH-ss, purgeable organics, which included BTEX and MtBE constituents, and methane. TPH-g and TPH-ss were prepared using EPA Method 5030B and measured using EPA Method 8015B. Purgeable organics,

---

which included BTEX and MtBE, were prepared using EPA Method 5030B and analyzed using EPA Method 8260B. Methane was analyzed using RSK-175.

# **APPENDIX B**

Table of Elevations and Coordinates on Wells;  
Field Notes, Field Measured Physical  
and Chemical Parameter Values

**Virgil Chavez Land Surveying**

312 Georgia Street, Suite 225  
Vallejo, California 94590-5907  
(707) 553-2476 • Fax (707) 553-8698

November 6, 2001  
Project No. 1974-06

Mansour  
Soma Environmental Engineering, Inc.  
2680 Bishop Drive, Suite 203  
San Ramon, CA 94583

Subject: Monitoring Well Survey  
3815 Broadway  
Oakland, CA

Dear Mansour:

This is to confirm that we have proceeded at your request to survey the monitoring wells located at the above referenced location. The survey was performed on October 30, 2001. The benchmark for the survey was a USGS bronze disk located near the north end of the curb return at the Northwest corner of 38th Street and Broadway. The coordinates are for top of casing based on your coordinate system. Measurements taken at approximate north side of top of box and top of casing. Benchmark Elev. = 85.41 feet, (NGVD 29).

<u>Well No.</u>	<u>Rim Elevation</u>	<u>TOC Elevation</u>	<u>Northing</u>	<u>Easting</u>
SOMA - 1	82.31'	81.64'	270.13	326.38
SOMA - 2	81.62'	81.39'	270.39	392.29
SOMA - 3	81.65'	81.42'	270.60	394.89
SOMA - 4	81.51'	81.09'	237.74	392.79
SOMA - 5	81.68'	81.50'	227.76	392.24

Sincerely,



*Virgil D. Chavez*  
 \_\_\_\_\_  
 Virgil D. Chavez, PLS 6323

## Harrington Surveys

### Land Surveying & Mapping

2278 Larkey Lane, Walnut Creek, Ca. 94596 Phone (925)935-7228 Fax (925)935-5118  
Cel (925)788-7359 E-Mail (ben5132@pacbell.net)

Soma Environmental Engineering  
6620 Owens Dr  
Suite A  
Pleasanton Ca. 94588

July 02 2009

Attn: Erica Fisker  
Job # 2908

Ref: 3820 Manila Ave., Oakland Ca.

**HORIZONTAL CONTROL, NAD 88:**

Survey based on California Coordinate System, Zone 3, NAD 83.

B TIDAL PID AE5211 NORTH 2,121,308.82 EAST 6,032,659.16 LAT. N37°47'44.25088"  
W122°16'47.37830", NAVD 88, ELEV. 9.39.

PID HT0654, NORTH 2117,057.95 EAST 6,047,431.59, LAT. N37°43'11.04190"  
W122°07'09.20691", NAVD 88, ELEV. 13.65.

GPS: TRIMBLE 5800, LEICA TCA 1800, 1" HORZ. & VERT.

EPOCH DATE 2007.00

OBSERVATION: EPOCH=180.

FIELD SURVEY: 7-02-09.

Ben Harrington  
PLS 5132





3820 MANILA AVE.  
OAKLAND CA.

**HARRINGTON SURVEYS**  
**2278 LARKEY LANE**  
**WALNUT CREEK CA 94597**

**JOB # 2908**  
**DATE: 07/07/09**

PT#	NORTH	EAST	ELEV	DESC.	LATITUDE N.DMS	LONGTITUDE W.DMS	LAT.N. DEC. DEG.	LONG.W.DEC.DEG.
75	2128282.80	6053968.91	84.87	MPE-3 NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826788357°N	122.257938351°W
76	2128282.70	6053968.57	85.14	MPE-3 PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826788072°N	122.257939519°W
77	2128283.75	6053969.25	85.15	MPE-3 FF	37°49'36.27652"N	122°15'29.63631"W	37.826790983°N	122.257937246°W



JUL 16 2009 9:11AM Harrington Surveys Inc. 9259355118

3820 MANILA AVE.  
OAKLAND CA.

HARRINGTON SURVEYS  
2278 LARKEY LANE  
WALNUT CREEK CA 94597

JOB # 2908  
DATE: 07/07, 2009  
PAGE OF 2

PT#	NORTH	EAST	ELEV	DESC.	LATITUDE N.DMS	LONGTIDUDE W.DMS	LATTUDE DEC. DEG.	LONGTIDUDE W.DEC.DEG.
1	2128400.26	6053866.77	84.03	SET PK-TC-S	37°49'37.58019"N	122°15'29.87854"W	37.827105609°N	122.258299593°W
3	2128379.12	6053814.43	83.46	SET PK-TC-N	37°49'37.36145"N	122°15'30.52580"W	37.827044848°N	122.258479389°W
5	2128167.60	6053704.79	81.21	SET PK-TC-W	37°49'35.25021"N	122°15'31.84259"W	37.826458393°N	122.258845164°W
7	2128323.25	6053926.32	84.57	SET PK/S-TP	37°49'36.83002"N	122°15'29.11835"W	37.826897228°N	122.258088432°W
8	2128279.40	6053906.51	84.58	SET X-TP	37°49'36.39285"N	122°15'29.35491"W	37.826775791°N	122.258154113°W
9	2128267.32	6053922.80	84.59	SET X-TP	37°49'36.27652"N	122°15'29.14905"W	37.826743478°N	122.258096958°W
10	2128289.53	6053933.85	84.77	SET N/S-TP	37°49'36.27652"N	122°15'29.01656"W	37.826805020°N	122.258060156°W
11	2128307.69	6053943.14	84.90	SET X-TP	37°49'36.27652"N	122°15'28.90501"W	37.826855379°N	122.258029171°W
51	2128287.63	6053907.85	83.98	B-10R NOTCH	37°49'36.27652"N	122°15'29.34011"W	37.826798455°N	122.258150032°W
52	2128287.88	6053908.08	84.60	B-10R PUNCH	37°49'36.27652"N	122°15'29.33729"W	37.826799170°N	122.258149248°W
53	2128286.82	6053907.95	84.58	B-10R FF	37°49'36.27652"N	122°15'29.33866"W	37.826796242°N	122.258149628°W
54	2128279.68	6053904.41	84.38	SOMA-2 NOTCH	37°49'36.27652"N	122°15'29.38119"W	37.826776471°N	122.258161442°W
55	2128279.93	6053904.49	84.61	SOMA-2 PUNCH	37°49'36.27652"N	122°15'29.38022"W	37.826777138°N	122.258161172°W
56	2128278.63	6053904.50	84.59	SOMA-2 FF	37°49'36.27652"N	122°15'29.37976"W	37.826773586°N	122.258161045°W
57	2128309.67	6053884.35	84.41	MPE-1 NOTCH	37°49'36.27652"N	122°15'29.63818"W	37.826857770°N	122.258232829°W
58	2128309.44	6053884.49	84.65	MPE-1 PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826857149°N	122.258232309°W
59	2128308.72	6053884.79	84.65	MPE-1 FF	37°49'36.27652"N	122°15'29.63631"W	37.826855199°N	122.258231242°W
60	2128263.25	6053932.99	83.95	SOMA-4R NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826732814°N	122.258061416°W
61	2128263.39	6053932.72	84.49	SOMA-4R PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826733193°N	122.258062388°W
62	2128263.44	6053931.81	84.50	SOMA-4R FF	37°49'36.27652"N	122°15'29.63631"W	37.826733289°N	122.258065526°W
63	2128260.22	6053946.91	84.45	MPE-4 NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826725212°N	122.258013051°W
64	2128260.45	6053946.86	84.80	MPE-4 PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826725857°N	122.258013222°W
65	2128259.61	6053947.18	84.82	MPE-4 FF	37°49'36.27652"N	122°15'29.63631"W	37.826723563°N	122.258012083°W
66	2128258.29	6053957.28	84.64	MPE-5 NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826720467°N	122.257977014°W
67	2128258.06	6053957.18	85.23	MPE-5 PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826719808°N	122.257973751°W
68	2128258.09	6053958.22	85.26	MPE-5 FF	37°49'36.27652"N	122°15'29.63631"W	37.826718944°N	122.257973751°W
69	2128283.95	6053949.57	84.66	MPE-2 NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826790522°N	122.258005373°W
70	2128283.87	6053949.79	85.09	MPE-2 PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826790304°N	122.258004595°W
71	2128283.82	6053950.71	85.06	MPE-2 FF	37°49'36.27652"N	122°15'29.63631"W	37.826790210°N	122.258001410°W
72	2128302.87	6053952.63	84.66	B-8R NOTCH	37°49'36.27652"N	122°15'29.63631"W	37.826842611°N	122.257996005°W
73	2128302.78	6053952.89	85.07	B-8R PUNCH	37°49'36.27652"N	122°15'29.63631"W	37.826842379°N	122.257995115°W
74	2128302.48	6053953.60	85.05	B-8R FF	37°49'36.27652"N	122°15'29.63631"W	37.826841601°N	122.257992633°W

JUL 16 2009 9:11AM

Harrington Surveys Inc.

9259355118

P.3

**HARRINGTON SURVEYS**  
**2278 LARKEY LANE**  
**WALNUT CREEK, CA. 94597**

SOMA ENVIRONMENTAL ENGR.  
 6620 OWENS DR.  
 SUITE A  
 PLEASANTON, CA. 94588

**INVOICE # 2542**  
**DATE 07-15-09**

DATE	JOB #	CREW	DESCRIPTION	HRS	RATE	SUB TOT.	TOTAL
07/15/09	2908		3820 MANILA AVE. OAKLAND CA.				
			MONITORING WELLS				
			NAD 83 & NAVD 88				
			PREPARE REPORT				
			LUMP SUM FEE				\$1,450.00
			TOTAL DUE				\$1,450.00
			THANK YOU				
			<i>B. Harrington</i>				
			BEN HARRINGTON				

JUL 16 2009 9:11AM Harrington Surveys Inc. 9259355118 P.2



Well Name: B-2  
 Casing Diameter: 3/4 inch  
 Depth of Well: — feet  
 Top of Casing Elevation: 82.09 feet  
 Depth to Groundwater: 10.51 feet  
 Groundwater Elevation: 71.58 feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
not purged

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not sampled

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: B-3  
 Casing Diameter: 3/4 inch  
 Depth of Well: — feet  
 Top of Casing Elevation: 82.57 feet  
 Depth to Groundwater: 10.79 feet  
 Groundwater Elevation: 71.78 feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
Not purged

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
Erica Fisker

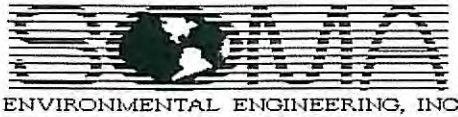
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not sampled

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: B-7

Casing Diameter: 3/4 inch

Depth of Well: - feet

Top of Casing Elevation: 76.96 feet

Depth to Groundwater: DRY feet

Groundwater Elevation: NC feet

Water Column Height: NC feet

Purged Volume: - gallons  
*Not purged*

Project #: 2511

Address: 3820 Manila Avenue  
Oakland, California

Date: August 29, 2011

Sampler: Lizzie Hightower  
*Erica Fisker*

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump  *Not sampled*

Color: No  Yes  Describe: Unknown

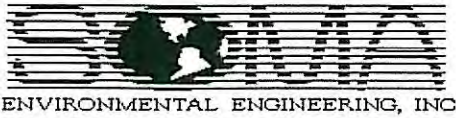
Sheen: No  Yes  Describe: Unknown

Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: B-8R  
 Casing Diameter: 2 inch  
 Depth of Well: 19.47 feet  
 Top of Casing Elevation: 84.66 feet  
 Depth to Groundwater: 12.41 feet  
 Groundwater Elevation: 72.25 feet  
 Water Column Height: 7.06 feet  
 Purged Volume: 3.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 31, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy / Gray  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Strong Petro odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
10:25	Started purging well			
10:28	1	6.51	17.29	1305
10:31	2	6.40	17.32	1289
10:32	3.5	6.38	17.38	1261
10:37	sampled			

Notes:



Well Name: B-9 Project #: 2511  
 Casing Diameter: 3/4 inch Address: 3820 Manila Avenue  
 Depth of Well: - feet Oakland, California  
 Top of Casing Elevation: 77.37 feet Date: August 29, 2011  
 Depth to Groundwater: 13.31 feet Sampler: Lizzie Hightower  
 Groundwater Elevation: 64.06 feet / 64.18 feet\* Erica Fisker  
 Water Column Height: NC feet  
 Purged Volume: - gallons  
Not purged

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not sampled

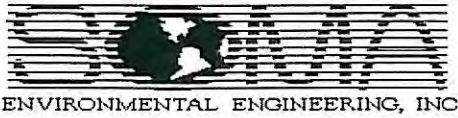
Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes: Depth to free product: 13.13 ft.  
 Total depth F.P.: 0.18 ft.  
 \* GWE (Corrected for F.P.): 64.18 ft





Well Name: B-10R  
 Casing Diameter: 2 inch  
 Depth of Well: 19.25 feet  
 Top of Casing Elevation: 83.98 feet  
 Depth to Groundwater: 11.94 feet  
 Groundwater Elevation: 72.04 feet  
 Water Column Height: 7.31 feet  
 Purged Volume: 3.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Gray  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Strong Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:58	Start & purging well			
12:01	1	6.10	18.04	962
12:04	2	6.06	17.91	978
12:08	3.5	6.04	17.67	1017
12:13	Sampled			

Notes:



Well Name: B-13  
 Casing Diameter: 3/4 inch  
 Depth of Well: — feet  
 Top of Casing Elevation: 84.58 feet  
 Depth to Groundwater: DRY feet  
 Groundwater Elevation: NC feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
*Not purged*

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

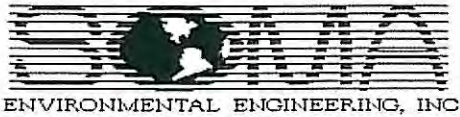
*Not sampled*

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: GW-1  
 Casing Diameter: 3/4 inch  
 Depth of Well: 7.85 feet  
 Top of Casing Elevation: 79.94 feet  
 Depth to Groundwater: DRY feet  
 Groundwater Elevation: NC feet  
 Water Column Height: NC feet  
 Purged Volume: - gallons  
Not purged

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
Erica Fister

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not sampled

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: GW-2  
 Casing Diameter: 3/4 inch  
 Depth of Well: 20.00 feet  
 Top of Casing Elevation: 79.14 feet  
 Depth to Groundwater: 13.07 feet  
 Groundwater Elevation: 66.07 feet  
 Water Column Height: 6.93 feet  
 Purged Volume: 0.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer   
 Sampling Method: Bailer

Pump  Geotech  
 Pump  Geotech

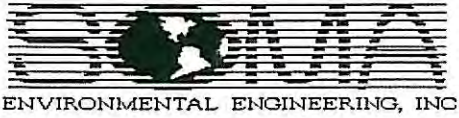
Color: No   
 Sheen: No   
 Odor: No

Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:00	Started purging well			
14:01	0.25	6.59	21.42	553
14:03	0.5	6.33	20.48	437
14:08	Sampled			

Notes:



Well Name: GW-3  
 Casing Diameter: 3/4 inch  
 Depth of Well: 20.00 feet  
 Top of Casing Elevation: 77.92 feet  
 Depth to Groundwater: 10.61 feet  
 Groundwater Elevation: 67.31 feet  
 Water Column Height: 9.39 feet  
 Purged Volume: 0.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
*Erica Fisher*

Purging Method: Bailer   
 Sampling Method: Bailer

Pump  *Geotek*  
 Pump  *Geotek*

Color: No   
 Sheen: No   
 Odor: No

Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:32	started purging well			
12:35	0.5	6.22	21.34	426
12:36	well dried			
12:37	sampled			

Notes:



Well Name: GW-4  
 Casing Diameter: 3/4 inch  
 Depth of Well: 12.00 feet  
 Top of Casing Elevation: 82.37 feet  
 Depth to Groundwater: DRY feet  
 Groundwater Elevation: NC feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
not purged

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
Erica Fisker

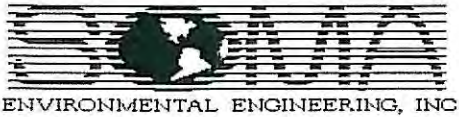
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not Sampled

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: GW-5  
 Casing Diameter: 3/4 inch  
 Depth of Well: 12.87 feet  
 Top of Casing Elevation: 81.01 feet  
 Depth to Groundwater: 11.63 feet  
 Groundwater Elevation: 69.38 feet  
 Water Column Height: 1.24 feet  
 Purged Volume: - gallons  
*Not purged*

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
*Erica Fiskel*

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

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: GW-6A  
 Casing Diameter: 3/4 inch  
 Depth of Well: — feet  
 Top of Casing Elevation: 81.61 feet  
 Depth to Groundwater: 14.09 feet  
 Groundwater Elevation: 67.52 feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
*not purged*

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
*Erica Fischer*

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  *not sampled*

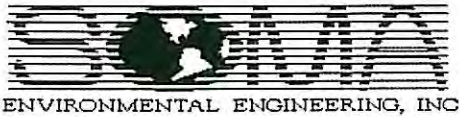
Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:





Well Name: MW-8  
 Casing Diameter: 2 inch  
 Depth of Well: - feet  
 Top of Casing Elevation: 87.44 feet  
 Depth to Groundwater: 9.62 feet  
 Groundwater Elevation: 77.82 feet  
 Water Column Height: NC feet  
 Purged Volume: - gallons  
not purged

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
Erica Fisker

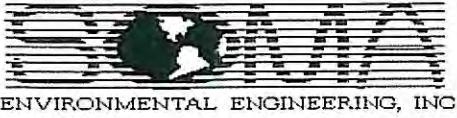
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump  Not sampled

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: MW-9  
 Casing Diameter: 2 inch  
 Depth of Well: — feet  
 Top of Casing Elevation: 86.56 feet  
 Depth to Groundwater: 9.39 feet  
 Groundwater Elevation: 77.17 feet  
 Water Column Height: NC feet  
 Purged Volume: — gallons  
*Not purged*

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
*Erica Fisker*

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

*Not sampled*

Color: No  Yes  Describe: Unknown  
 Sheen: No  Yes  Describe: Unknown  
 Odor: No  Yes  Describe: Unknown

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)

Notes:



Well Name: MW-11  
 Casing Diameter: 2 inch  
 Depth of Well: 19.00 feet  
 Top of Casing Elevation: 84.13 feet  
 Depth to Groundwater: 16.01 feet  
 Groundwater Elevation: 68.12 feet  
 Water Column Height: 2.99 feet  
 Purged Volume: 1.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 25, 2011  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:27	Started purging well			
13:29	0.5	6.20	20.32	977
13:31	1.0	6.06	20.68	954
13:33	1.5	6.04	20.87	953
13:38	Sampled			

Notes:



Well Name: LFR-1  
 Casing Diameter: 2 inch  
 Depth of Well: 19.00 feet  
 Top of Casing Elevation: 79.97 feet  
 Depth to Groundwater: 10.13 feet  
 Groundwater Elevation: 69.84 feet  
 Water Column Height: 8.87 feet  
 Purged Volume: 4 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
 Erica Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:32	Started purging well			
14:34	1	6.49	20.47	581
14:36	2	6.34	19.52	566
14:39	3	6.16	19.79	624
14:41	4	6.20	20.13	638
14:46	Sample			

Notes:



Well Name: LFR-2  
 Casing Diameter: 2 inch  
 Depth of Well: 19.00 feet  
 Top of Casing Elevation: 81.89 feet  
 Depth to Groundwater: 12.56 feet  
 Groundwater Elevation: 69.33 feet  
 Water Column Height: 6.44 feet  
 Purged Volume: 3.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
 Eric Fisker

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Gray/Cloudy  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Strong chemical odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:44	Started purging well			
11:46	1	6.45	18.43	836
11:49	2	6.36	18.83	809
11:52	3	6.31	18.10	859
11:53	3.5	6.34	17.97	868
11:57	Sampled			

Notes:



Well Name: LFR-3  
 Casing Diameter: 2 inch  
 Depth of Well: 22.00 feet  
 Top of Casing Elevation: 77.96 feet  
 Depth to Groundwater: 13.41 feet  
 Groundwater Elevation: 64.55 feet  
 Water Column Height: 8.59 feet  
 Purged Volume: 4 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
09:46	Started purging well			
09:49	1	5.76	19.35	438
09:57	2	5.56	19.14	476
10:00	3	5.58	18.89	473
10:03	4	5.55	19.14	466
10:08	Sampled			

Notes:



Well Name: LFR-4  
 Casing Diameter: 2 inch  
 Depth of Well: 19.30 feet  
 Top of Casing Elevation: 81.05 feet  
 Depth to Groundwater: 16.39 feet  
 Groundwater Elevation: 65.26 feet  
 Water Column Height: 2.91 feet  
 Purged Volume: 1.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 31, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:36	Started purging well			
12:38	0.50	5.80	18.79	466
12:40	1.00	5.85	18.53	476
12:42	1.50	5.90	18.39	471
12:47	Sampled			

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well Name: SOMA-1  
 Casing Diameter: 4 inch  
 Depth of Well: 40.00 feet  
 Top of Casing Elevation: 81.64 feet  
 Depth to Groundwater: 16.63 feet  
 Groundwater Elevation: 65.01 feet  
 Water Column Height: 23.37 feet  
 Purged Volume: 18 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 29, 2011  
 Sampler: Lizzie Hightower  
*Erica Fisher*

Purging Method: Bailer   
 Sampling Method: Bailer

Pump   
 Pump

Color: No   
 Sheen: No   
 Odor: No

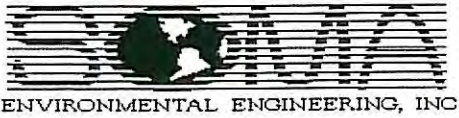
Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	Temp (°C)	pH	E.C. (µs/cm)
15:05	Started purging well			
15:06	2	17.72	6.55	1039
15:08	6	17.67	6.33	1040
15:10	10	17.66	6.26	1012
15:12	14	17.63	6.23	738
15:14	18	17.63	6.20	681
15:19	sampled			

Notes:





Well Name: SOMA-2  
 Casing Diameter: 2 inch  
 Depth of Well: 20.00 feet  
 Top of Casing Elevation: 84.38 feet  
 Depth to Groundwater: 13.91 feet  
 Groundwater Elevation: 70.47 feet  
 Water Column Height: 6.09 feet  
 Purged Volume: 3 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

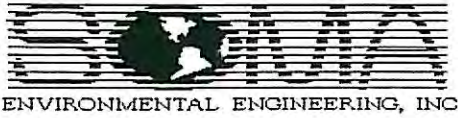
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Brown  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Strong Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:34	Started purging well			
12:37	1	6.55	17.18	1153
12:40	2	6.47	17.15	1163
12:43	3	6.45	17.05	1172
12:48	Sampled			

Notes:



Well Name: SOMA-3  
 Casing Diameter: 3/4 inch  
 Depth of Well: 30.00 feet  
 Top of Casing Elevation: 81.42 feet  
 Depth to Groundwater: 14.46 feet  
 Groundwater Elevation: 66.96 feet  
 Water Column Height: 15.54 feet  
 Purged Volume: 0.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer   
 Sampling Method: Bailer

Pump  Geotech  
 Pump  Geotech

Color: No   
 Sheen: No   
 Odor: No

Yes  Describe: Cloudy  
 Yes  Describe: \_\_\_\_\_  
 Yes  Describe: Slight Petro

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:38	Started purging well			
13:41	0.25	6.14	17.93	1068
13:43	0.50	6.09	17.98	1033
13:48	Sampled			

Notes:



Well Name: SOMA-4R  
 Casing Diameter: 2 inch  
 Depth of Well: 19.54 feet  
 Top of Casing Elevation: 83.95 feet  
 Depth to Groundwater: 13.79 feet  
 Groundwater Elevation: 70.16 feet  
 Water Column Height: 5.75 feet  
 Purged Volume: 2.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

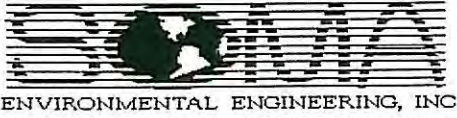
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy / Gray  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Petro odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:13	started purging well			
14:16	1	6.30	17.96	1173
14:20	2	6.28	17.44	1190
14:23	2.5	6.16	17.82	1125
14:28	sampled			

Notes:



Well Name: SOMA-5  
 Casing Diameter: 3/4 inch  
 Depth of Well: 25.60 feet  
 Top of Casing Elevation: 81.50 feet  
 Depth to Groundwater: 3.40 feet  
 Groundwater Elevation: 78.10 feet  
 Water Column Height: 22.20 feet  
 Purged Volume: 0.25 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer   
 Sampling Method: Bailer

Pump  Geotech  
 Pump  Geotech

Color: No   
 Sheen: No   
 Odor: No

Yes  Describe: \_\_\_\_\_  
 Yes  Describe: \_\_\_\_\_  
 Yes  Describe: Slight Petro

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:57	Started purging well			
15:01	0.25	6.73	17.84	1071
15:06	Sampled			

Notes:



Well Name: MPE-1  
 Casing Diameter: 2 inch  
 Depth of Well: 19.82 feet  
 Top of Casing Elevation: 84.41 feet  
 Depth to Groundwater: 13.09 feet  
 Groundwater Elevation: 71.32 feet  
 Water Column Height: 6.73 feet  
 Purged Volume: 3 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

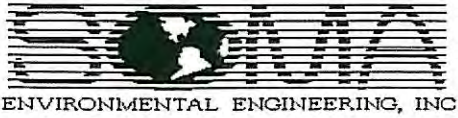
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Dark gray  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Petro Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:21	Started purging well			
11:24	1	6.20	17.13	456
11:28	2	5.94	16.99	462
11:33	3	5.96	16.98	478
11:38	Sampled			

Notes:



Well Name: MPE-2  
 Casing Diameter: 2 inch  
 Depth of Well: 19.00 feet  
 Top of Casing Elevation: 84.66 feet  
 Depth to Groundwater: 14.48 feet  
 Groundwater Elevation: 70.18 feet  
 Water Column Height: 4.52 feet  
 Purged Volume: 2.25 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 31, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Dark gray  
 Sheen: No  Yes  Describe: Sheen + product  
 Odor: No  Yes  Describe: Strong Petro Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
10:53	Started purging well			
10:55	0.75	6.39	17.23	1122
10:58	1.75	6.45	17.18	1113
11:00	2.25	6.43	17.19	1108
11:05	Sampled			

Notes:



Well Name: MPE-3  
 Casing Diameter: 2 inch  
 Depth of Well: 19.32 feet  
 Top of Casing Elevation: 84.87 feet  
 Depth to Groundwater: 11.24 feet  
 Groundwater Elevation: 73.63 feet  
 Water Column Height: 8.08 feet  
 Purged Volume: 4 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 31, 2011  
 Sampler: Lizzie Hightower

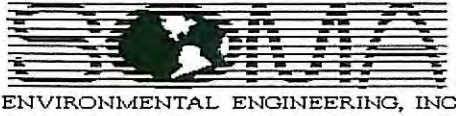
Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Grayish-brown  
 Sheen: No  Yes  Describe: Some free product  
 Odor: No  Yes  Describe: Strong odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
09:47	Started purging well			
09:51	1	6.42	17.45	1032
09:54	2	6.31	17.33	1021
09:57	3	6.27	17.30	1021
10:00	4	6.26	17.29	1017
10:05	Sampled			

Notes:



Well Name: MPE-4  
 Casing Diameter: 2 inch  
 Depth of Well: 18.54 feet  
 Top of Casing Elevation: 84.45 feet  
 Depth to Groundwater: 10.96 feet  
 Groundwater Elevation: 73.49 feet  
 Water Column Height: 7.58 feet  
 Purged Volume: 3.5 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 30, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Rusty Brown  
 Sheen: No  Yes  Describe: Rainbow Sheen  
 Odor: No  Yes  Describe: Petro Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
15:38	Started purging well			
15:41	1	6.33	17.59	920
15:44	2	6.29	17.51	931
15:47	3.5	6.25	17.50	944
15:52	Sampled			

Notes:





Well Name: MPE-5  
 Casing Diameter: 2 inch  
 Depth of Well: 19.53 feet  
 Top of Casing Elevation: 84.64 feet  
 Depth to Groundwater: 10.38 feet  
 Groundwater Elevation: 74.26 feet  
 Water Column Height: 9.15 feet  
 Purged Volume: 4 gallons

Project #: 2511  
 Address: 3820 Manila Avenue  
 Oakland, California  
 Date: August 31, 2011  
 Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Dark gray  
 Sheen: No  Yes  Describe: Free product globs  
 Odor: No  Yes  Describe: Strong Odor

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	E.C. (µs/cm)
09:20	Started purging well			
09:23	1	6.42	17.52	1075
09:26	2	6.30	17.31	1082
09:29	3	6.26	17.29	1085
09:33	4	6.23	17.29	1091
09:38	Sampled			

Notes:

# **APPENDIX C**

## Chain of Custody Forms and Laboratory Reports for Groundwater Monitoring Event



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

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

Laboratory Job Number 230771
ANALYTICAL REPORT

SOMA Environmental Engineering Inc. Project : 2511
6620 Owens Dr. Location : 3820 Manila Ave., Oakland CA
Pleasanton, CA 94588 Level : II

Table with 2 columns: Sample ID and Lab ID. Lists various sample identifiers like GW-2, MW-11, LFR-1, SOMA-1, B-8R, MPE-1, etc.

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: [Handwritten Signature]
Project Manager

Date: 09/13/2011

### CASE NARRATIVE

Laboratory number: 230771  
Client: SOMA Environmental Engineering Inc.  
Project: 2511  
Location: 3820 Manila Ave., Oakland CA  
Request Date: 09/01/11  
Samples Received: 09/01/11

This data package contains sample and QC results for nineteen water samples, requested for the above referenced project on 09/01/11. The samples were received cold and intact.

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

High surrogate recoveries were observed for bromofluorobenzene (FID) in many samples. No other analytical problems were encountered.

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

Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 09/07/11 11:40; this analyte met minimum response criteria, and affected data was qualified with "b". High surrogate recoveries were observed for bromofluorobenzene in MPE-2 (lab # 230771-016) and MPE-5 (lab # 230771-019). M,p-xylenes was detected above the RL in the method blank for batch 178841; this analyte was not detected in the sample at or above the RL. MPE-2 (lab # 230771-016) was diluted due to high hydrocarbons. No other analytical problems were encountered.

**Dissolved Gases by GC/FID (RSK-175):**

No analytical problems were encountered.

# CHAIN OF CUSTODY

## Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878  
 2232 Fifth Street  
 Berkeley, CA 94710  
 (510)486-0900 Phone  
 (510)486-0532 Fax

## Analyses

C&T LOGIN # 230771

Sampler: Lizzie Hightower/ Erica Fisker

Project No: 2511

Report To: Joyce Bobek

Project Name: 3820 Manila Ave., Oakland, CA

Company: SOMA Environmental

Turnaround Time: Standard

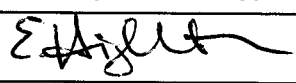
Telephone: 925-734-6400

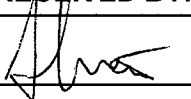
Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE	
1	GW-2	8/29/11 14:08	*			9-40ml VOAs	*			*	
2	GW-3	8/29/11 12:37	*			9-40ml VOAs	*			*	
	<del>GW-4</del>		*			<del>9-40ml VOAs</del>	*			*	
3	MW-11	8/29/11 13:52	*			9-40ml VOAs	*			*	
4	LFR-1	8/29/11 14:46	*			9-40ml VOAs	*			*	
5	LFR-2	8/29/11 11:57	*			9-40ml VOAs	*			*	
6	LFR-3	8/30/11 10:08	*			9-40ml VOAs	*			*	
7	LFR-4	8/30/11 12:47	*			9-40ml VOAs	*			*	
8	SOMA-1	8/29/11 15:19	*			9-40ml VOAs	*			*	
9	SOMA-2	8/30/11 12:48	*			9-40ml VOAs	*			*	
10	SOMA-3	8/30/11 13:48	*			9-40ml VOAs	*			*	
11	SOMA-4R	8/30/11 14:28	*			9-40ml VOAs	*			*	
12	SOMA-5	8/30/11 15:06	*			9-40ml VOAs	*			*	
13	B-8R	8/31/11 10:37	*			9-40ml VOAs	*			*	

TPHg (including Stoddard Solvent) 8015	8260 (Full List)	Methane																	
*	*	*																	
*	*	*																	
*	*	*																	
*	*	*																	
*	*	*																	
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*	*	*																	
*	*	*																	

Notes:  
 EDF Output required  
 8260B List to include gasoline oxygenates &  
 lead scavengers, BTEX, MtBE

RELINQUISHED BY:  
  
 9/1/11 13:44 DATE/TIME

RECEIVED BY:  
  
 9/1/11 1344 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

**Analyses**

C&T LOGIN # 230771  
Sampler: Lizzie Hightower/ Erica Fisker

Project No: 2511 Report To: Joyce Bobek  
Project Name: 3820 Manila Ave., Oakland, CA Company: SOMA Environmental  
Turnaround Time: Standard Telephone: 925-734-6400  
Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
14	B-10R	8/30/11 12:13	*			9-40ml VOAs	*			*
15	MPE-1	8/30/11 11:38	*			9-40ml VOAs	*			*
16	MPE-2	8/31/11 11:05	*			9-40ml VOAs	*			*
17	MPE-3	8/31/11 10:05	*			9-40ml VOAs	*			*
18	MPE-4	8/30/11 15:52	*			9-40ml VOAs	*			*
19	MPE-5	8/31/11 09:38	*			9-40ml VOAs	*			*

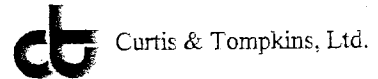
TPHg (including Stoddard Solvent) 8015												
8260 (Full List)												
Methane												

Notes:  
EDF Output required  
8260B List to include gasoline oxygenates &  
lead scavengers, BTEX, MtBE

RELINQUISHED BY:  
E. Hightower 9/1/11 13:44 DATE/TIME  
DATE/TIME  
DATE/TIME

RECEIVED BY:  
[Signature] 9/1/11 1344 DATE/TIME  
DATE/TIME  
DATE/TIME

COOLER RECEIPT CHECKLIST



Login # 230771 Date Received 9/1/11 Number of coolers 1  
 Client SOMA Project 2511

Date Opened 9/1/11 By (print) Isabelle (sign) [Signature]  
 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

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

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

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

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

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

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

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

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

15. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO N/A

16. Did you document your preservative check? \_\_\_\_\_ YES NO N/A

17. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO N/A

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

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

COMMENTS  
009 HEAVY SEDIMENTS  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Total Volatile Hydrocarbons**

Lab #: 230771	Location: 3820 Manila Ave., Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8015B
Matrix: Water	Received: 09/01/11
Units: ug/L	

Field ID: GW-2	Batch#: 178668
Type: SAMPLE	Sampled: 08/29/11
Lab ID: 230771-001	Analyzed: 09/06/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	78-123

Field ID: GW-3	Batch#: 178668
Type: SAMPLE	Sampled: 08/29/11
Lab ID: 230771-002	Analyzed: 09/06/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	68 Y Z	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	78-123

Field ID: MW-11	Batch#: 178668
Type: SAMPLE	Sampled: 08/29/11
Lab ID: 230771-003	Analyzed: 09/06/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	78-123

Field ID: LFR-1	Batch#: 178668
Type: SAMPLE	Sampled: 08/29/11
Lab ID: 230771-004	Analyzed: 09/06/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	78-123

\*= Value outside of QC limits; see narrative  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit



Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Received:	09/01/11
Units:	ug/L		

Field ID: LFR-2    Batch#: 178715  
 Type: SAMPLE    Sampled: 08/29/11  
 Lab ID: 230771-005                                      Analyzed: 09/07/11  
 Diln Fac: 250.0

Analyte	Result	RL
Gasoline C7-C12	670,000 Y	13,000
Stoddard Solvent C7-C12	470,000	13,000

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	150 *	78-123

Field ID: LFR-3    Batch#: 178715  
 Type: SAMPLE    Sampled: 08/30/11  
 Lab ID: 230771-006                                      Analyzed: 09/08/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	89	78-123

Field ID: LFR-4    Batch#: 178668  
 Type: SAMPLE    Sampled: 08/31/11  
 Lab ID: 230771-007                                      Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	490 Y	50
Stoddard Solvent C7-C12	290	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-123

Field ID: SOMA-1    Batch#: 178668  
 Type: SAMPLE    Sampled: 08/29/11  
 Lab ID: 230771-008                                      Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	170 Y	50
Stoddard Solvent C7-C12	100	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	78-123

\*= Value outside of QC limits; see narrative  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Received:	09/01/11
Units:	ug/L		

Field ID: SOMA-2                                      Batch#: 178668  
 Type: SAMPLE    Sampled: 08/30/11  
 Lab ID: 230771-009                                   Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	3,500 Y	50
Stoddard Solvent C7-C12	2,000	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	149 *	78-123

Field ID: SOMA-3                                      Batch#: 178668  
 Type: SAMPLE    Sampled: 08/30/11  
 Lab ID: 230771-010                                   Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	300 Y	50
Stoddard Solvent C7-C12	180	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	78-123

Field ID: SOMA-4R                                      Batch#: 178668  
 Type: SAMPLE    Sampled: 08/30/11  
 Lab ID: 230771-011                                   Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	1,900 Y	50
Stoddard Solvent C7-C12	1,100	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	126 *	78-123

Field ID: SOMA-5                                      Batch#: 178668  
 Type: SAMPLE    Sampled: 08/30/11  
 Lab ID: 230771-012                                   Analyzed: 09/07/11  
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	80 Y Z	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	78-123

\*= Value outside of QC limits; see narrative  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

### Total Volatile Hydrocarbons

Lab #: 230771	Location: 3820 Manila Ave., Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8015B
Matrix: Water	Received: 09/01/11
Units: ug/L	

Field ID: B-8R	Batch#: 178715
Type: SAMPLE	Sampled: 08/31/11
Lab ID: 230771-013	Analyzed: 09/07/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	5,100 Y	50
Stoddard Solvent C7-C12	3,600	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	192 *	78-123

Field ID: B-10R	Batch#: 178715
Type: SAMPLE	Sampled: 08/30/11
Lab ID: 230771-014	Analyzed: 09/07/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	2,600 Y	50
Stoddard Solvent C7-C12	1,800	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	140 *	78-123

Field ID: MPE-1	Batch#: 178715
Type: SAMPLE	Sampled: 08/30/11
Lab ID: 230771-015	Analyzed: 09/07/11
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	3,600 Y	50
Stoddard Solvent C7-C12	2,500	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	176 *	78-123

Field ID: MPE-2	Batch#: 178715
Type: SAMPLE	Sampled: 08/31/11
Lab ID: 230771-016	Analyzed: 09/08/11
Diln Fac: 200.0	

Analyte	Result	RL
Gasoline C7-C12	30,000 Y	10,000
Stoddard Solvent C7-C12	21,000	10,000

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	93	78-123

\*= Value outside of QC limits; see narrative  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

**Total Volatile Hydrocarbons**

Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Received:	09/01/11
Units:	ug/L		

Field ID:	MPE-3	Batch#:	178715
Type:	SAMPLE	Sampled:	08/31/11
Lab ID:	230771-017	Analyzed:	09/08/11
Diln Fac:	200.0		

Analyte	Result	RL
Gasoline C7-C12	760,000 Y	10,000
Stoddard Solvent C7-C12	540,000	10,000

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	155 *	78-123

Field ID:	MPE-4	Batch#:	178715
Type:	SAMPLE	Sampled:	08/30/11
Lab ID:	230771-018	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	4,500 Y	50
Stoddard Solvent C7-C12	3,200	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	183 *	78-123

Field ID:	MPE-5	Batch#:	178715
Type:	SAMPLE	Sampled:	08/31/11
Lab ID:	230771-019	Analyzed:	09/08/11
Diln Fac:	200.0		

Analyte	Result	RL
Gasoline C7-C12	140,000 Y	10,000
Stoddard Solvent C7-C12	99,000	10,000

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-123

Type:	BLANK	Batch#:	178668
Lab ID:	QC607791	Analyzed:	09/06/11
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	78-123

\*= Value outside of QC limits; see narrative  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 ND= Not Detected  
 RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Received:	09/01/11
Units:	ug/L		

Type:	BLANK	Batch#:	178715
Lab ID:	QC607994	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	91	78-123

\*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC607790	Batch#:	178668
Matrix:	Water	Analyzed:	09/06/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,016	102	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	78-123

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Field ID:	GW-2	Batch#:	178668
MSS Lab ID:	230771-001	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Type: MS Lab ID: QC607792

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	29.17	2,000	2,013	99	66-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	94	78-123

Type: MSD Lab ID: QC607793

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,020	100	66-120	0	25

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	78-123

RPD= Relative Percent Difference

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC607993	Batch#:	178715
Matrix:	Water	Analyzed:	09/07/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,006	101	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	92	78-123



Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	178715
MSS Lab ID:	230760-001	Sampled:	09/01/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Type: MS Lab ID: QC607995

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	92.05	2,000	1,945	93	66-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	93	78-123

Type: MSD Lab ID: QC607996

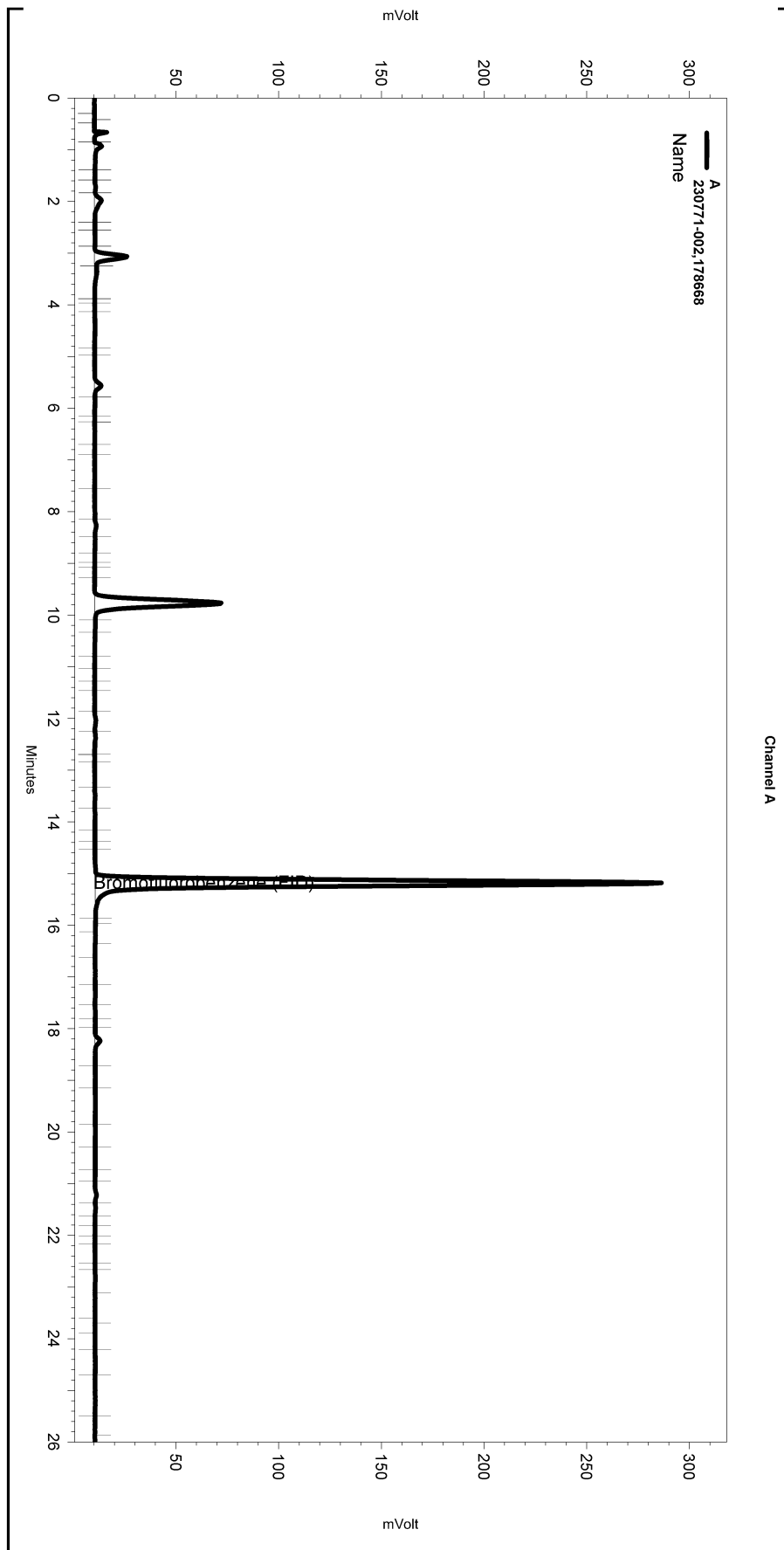
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,925	92	66-120	1	25

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	89	78-123

RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\249.seq  
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 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-012  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\TVHBTXE153.met

Software Version 3.1.7  
 Run Date: 9/6/2011 10:04:27 PM  
 Analysis Date: 9/7/2011 12:03:00 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Yes	Threshold	0	0	50

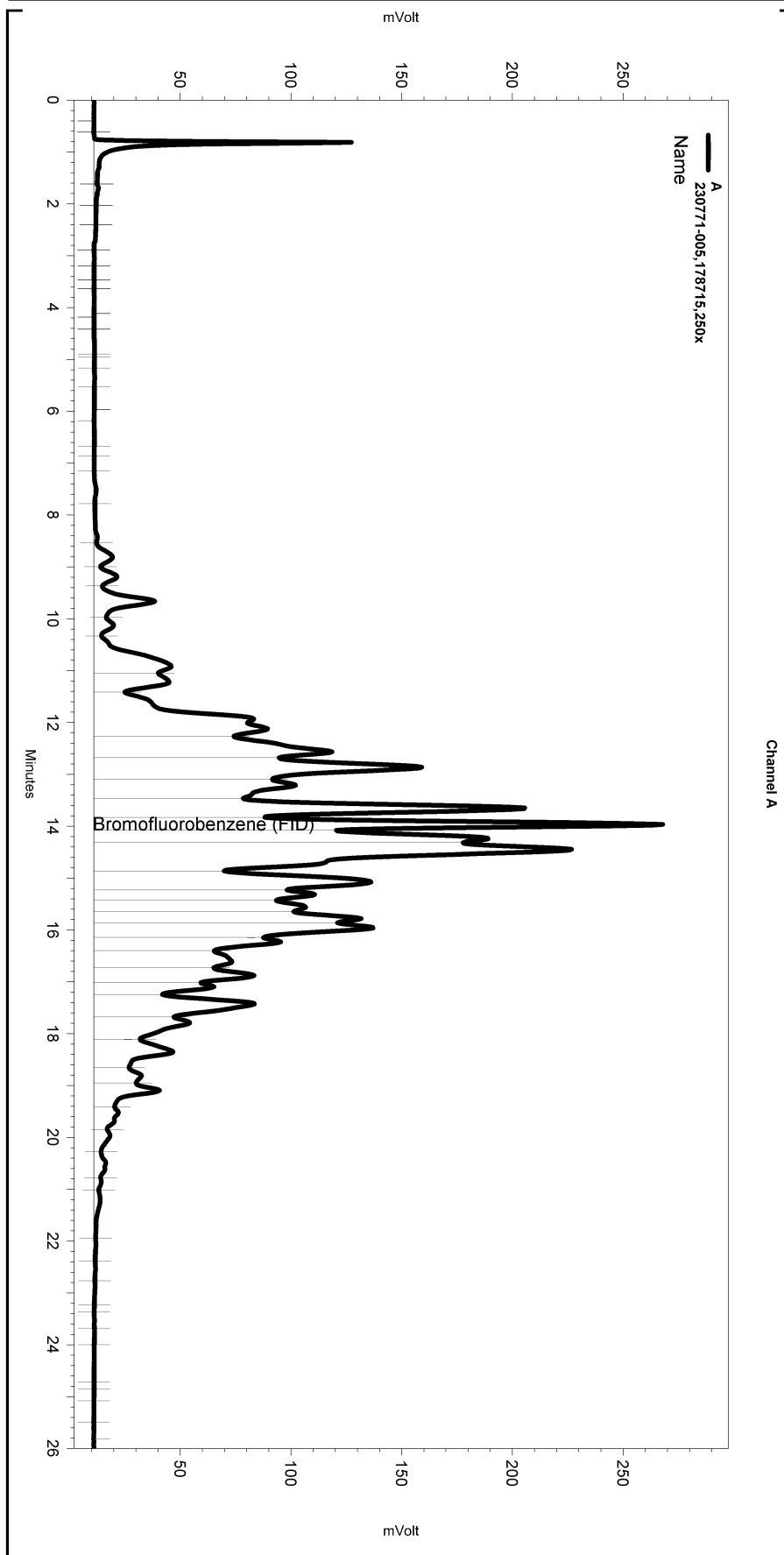
Manual Integration Fixes

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 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-008  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE241.MET

Software Version 3.1.7  
 Run Date: 9/7/2011 8:25:13 PM  
 Analysis Date: 9/8/2011 2:56:46 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: c1.0



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Integration Events

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

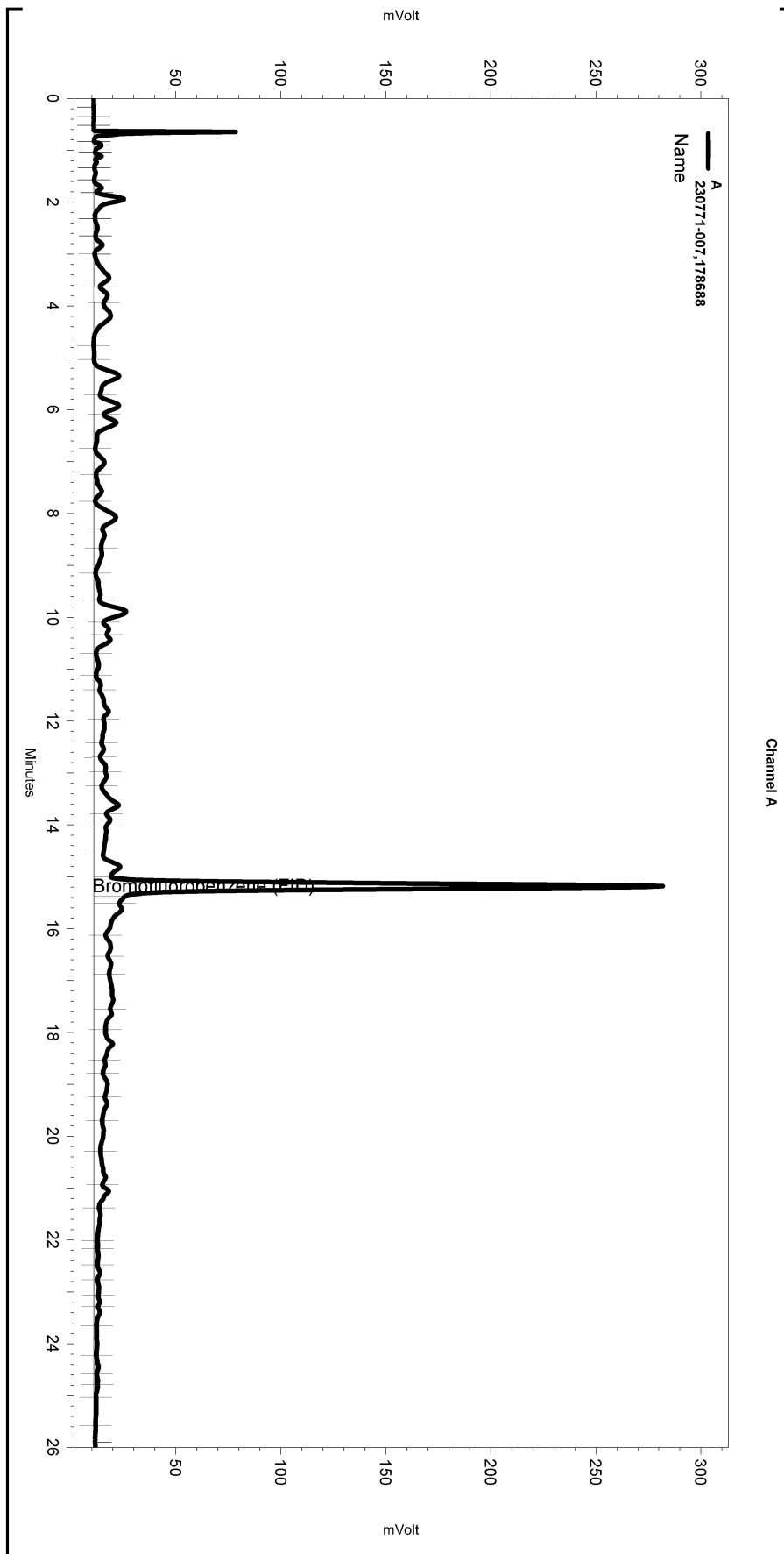
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-008

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Yes	Lowest Point Horizontal Baseli	0.179	25.821	0

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 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-017  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe153.met

Software Version 3.1.7  
 Run Date: 9/7/2011 1:15:11 AM  
 Analysis Date: 9/9/2011 9:20:29 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

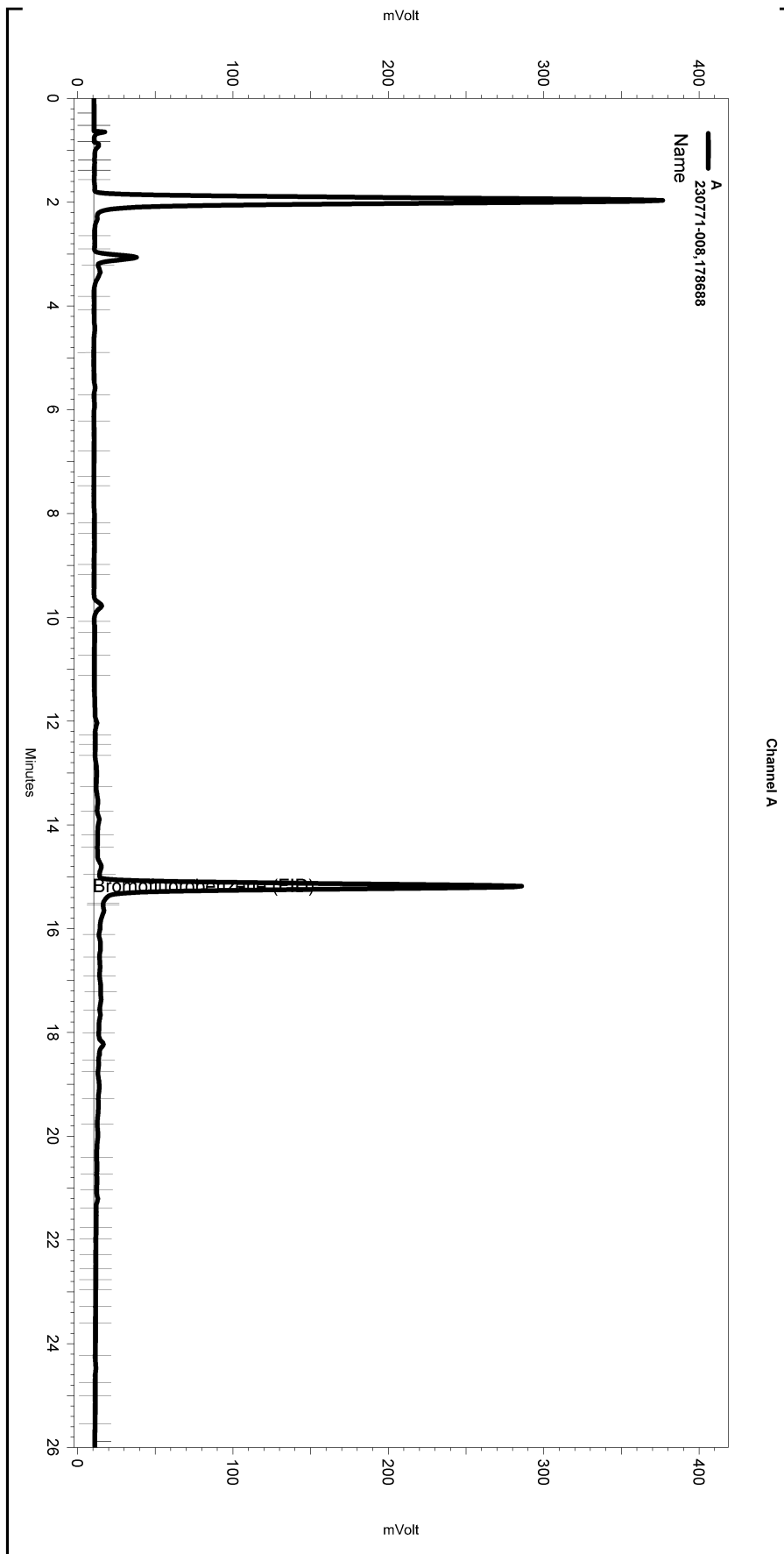
Manual Integration Fixes

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Yes	Lowest Point Horizontal Baseline	0	26.017	0
Yes	Split Peak	15.375	0	0

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 Sample Name: 230771-008,178688  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-018  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\lvhbtxe153.met

Software Version 3.1.7  
 Run Date: 9/7/2011 1:53:58 AM  
 Analysis Date: 9/9/2011 9:22:44 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

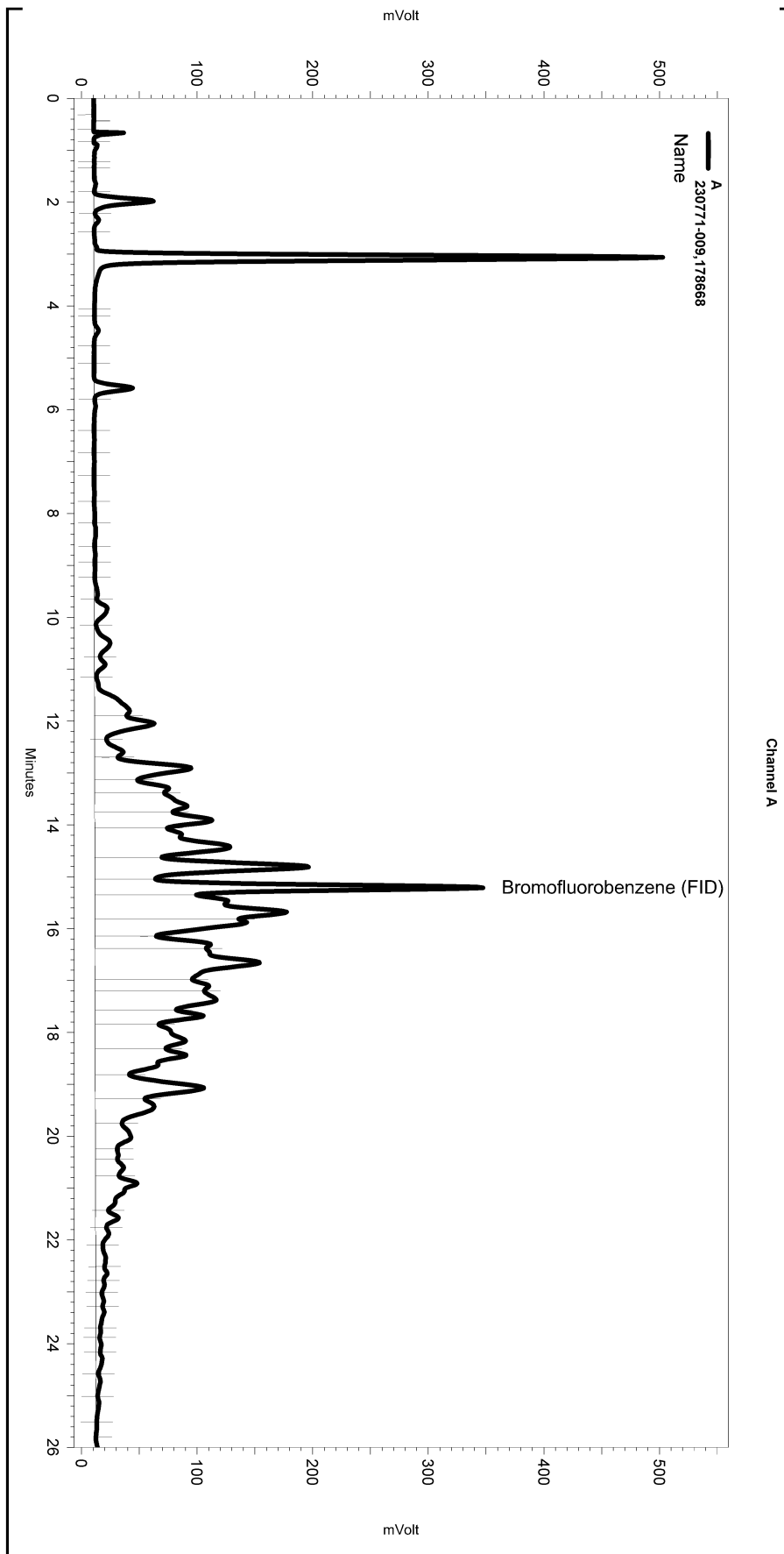
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-018

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseline	0	26.017	0
Yes	Split Peak	15.511	0	0

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 Sample Name: 230771-009,178668  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-019  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\TVHBTXE153.MET

Software Version 3.1.7  
 Run Date: 9/7/2011 2:32:11 AM  
 Analysis Date: 9/7/2011 10:41:17 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

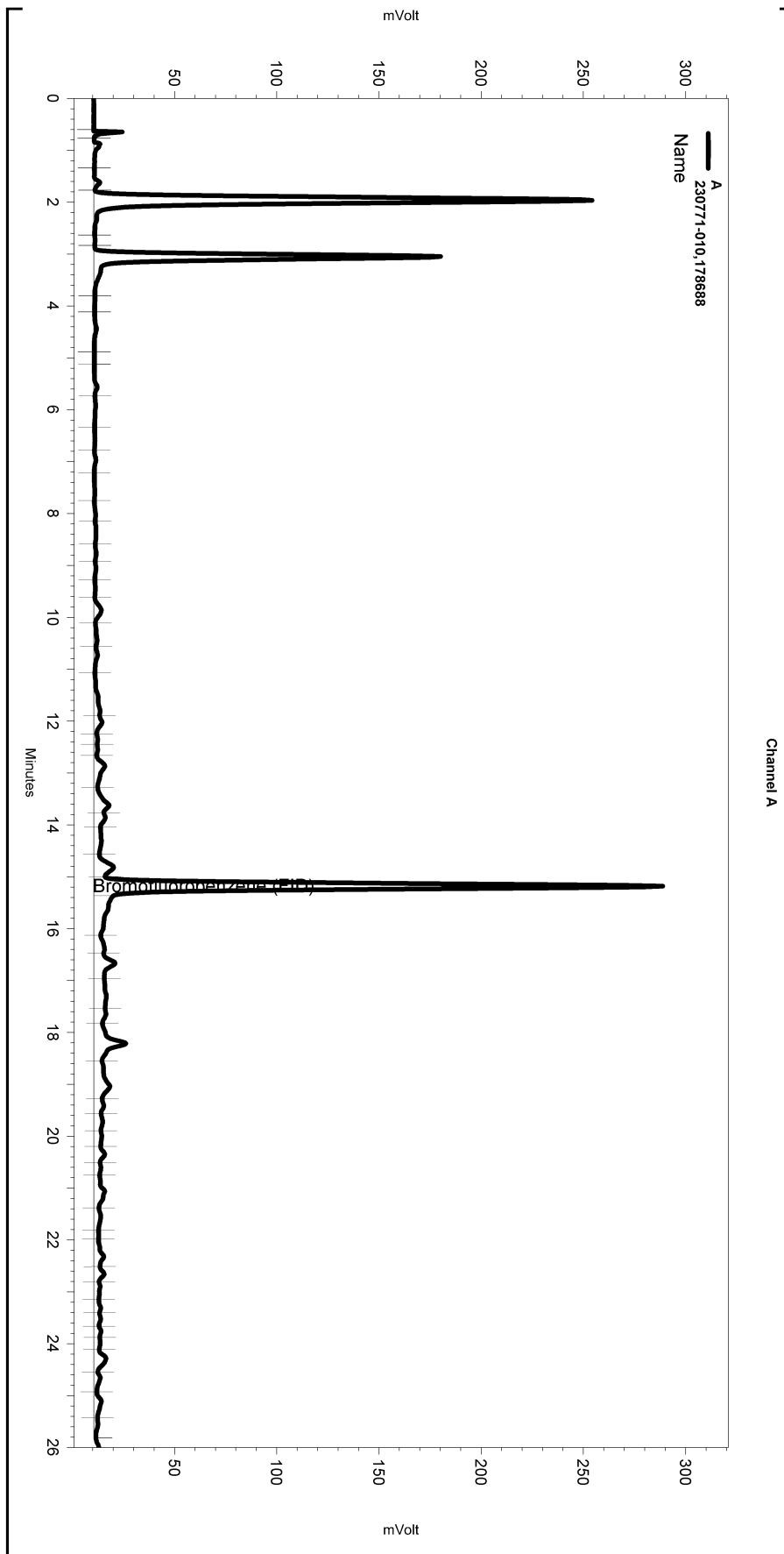
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-019

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\249.seq  
 Sample Name: 230771-010,178688  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-020  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\TVHBTXE153.met

Software Version 3.1.7  
 Run Date: 9/7/2011 3:10:25 AM  
 Analysis Date: 9/9/2011 9:26:56 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

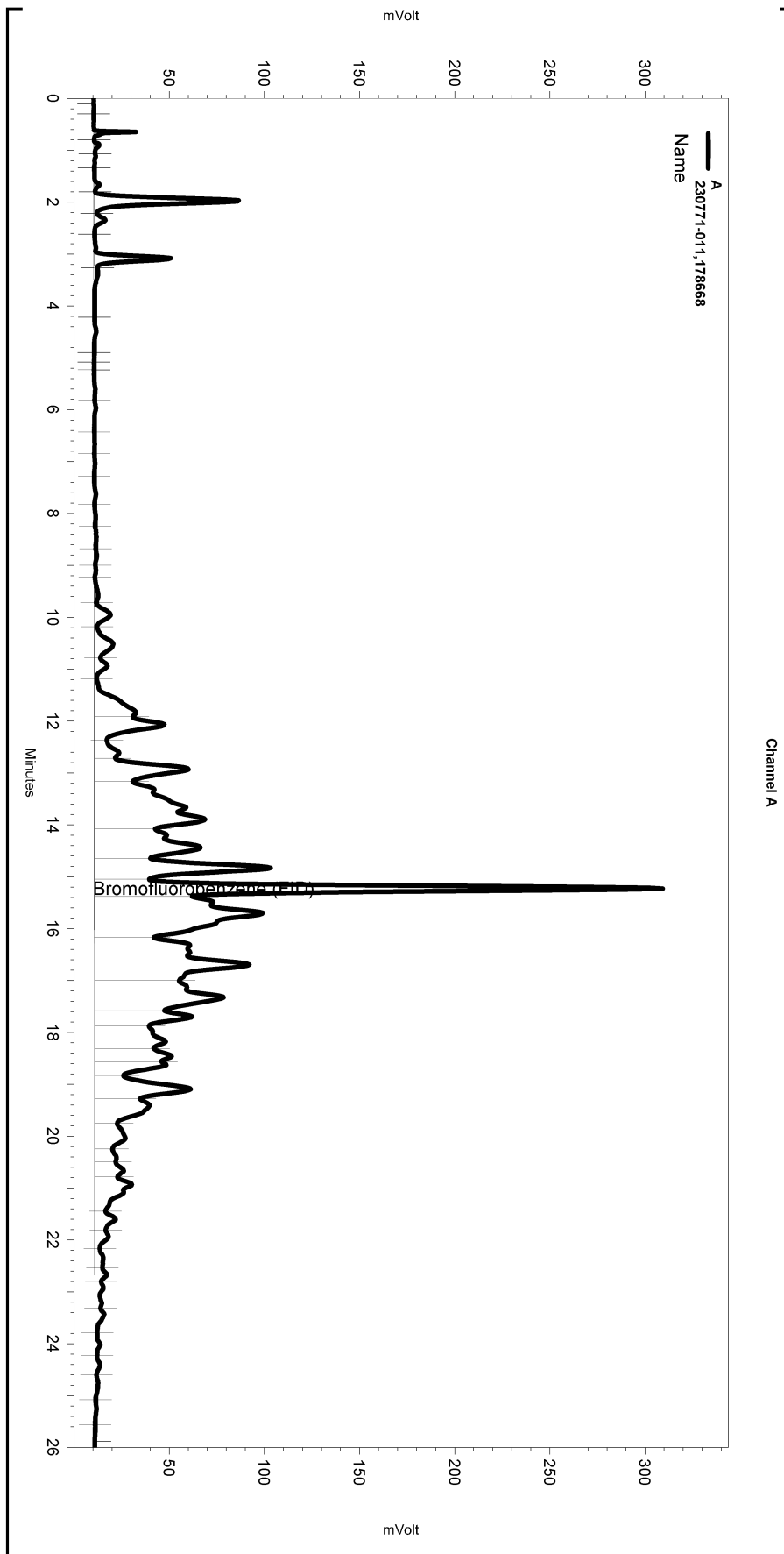
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-020

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Yes	Lowest Point Horizontal Baseline	0	26.017	0
Yes	Split Peak	15.368	0	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\249.seq  
 Sample Name: 230771-011,178668  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-030  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\TVHBTXE153.MET

Software Version 3.1.7  
 Run Date: 9/7/2011 9:35:06 AM  
 Analysis Date: 9/7/2011 10:42:17 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

Manual Integration Fixes

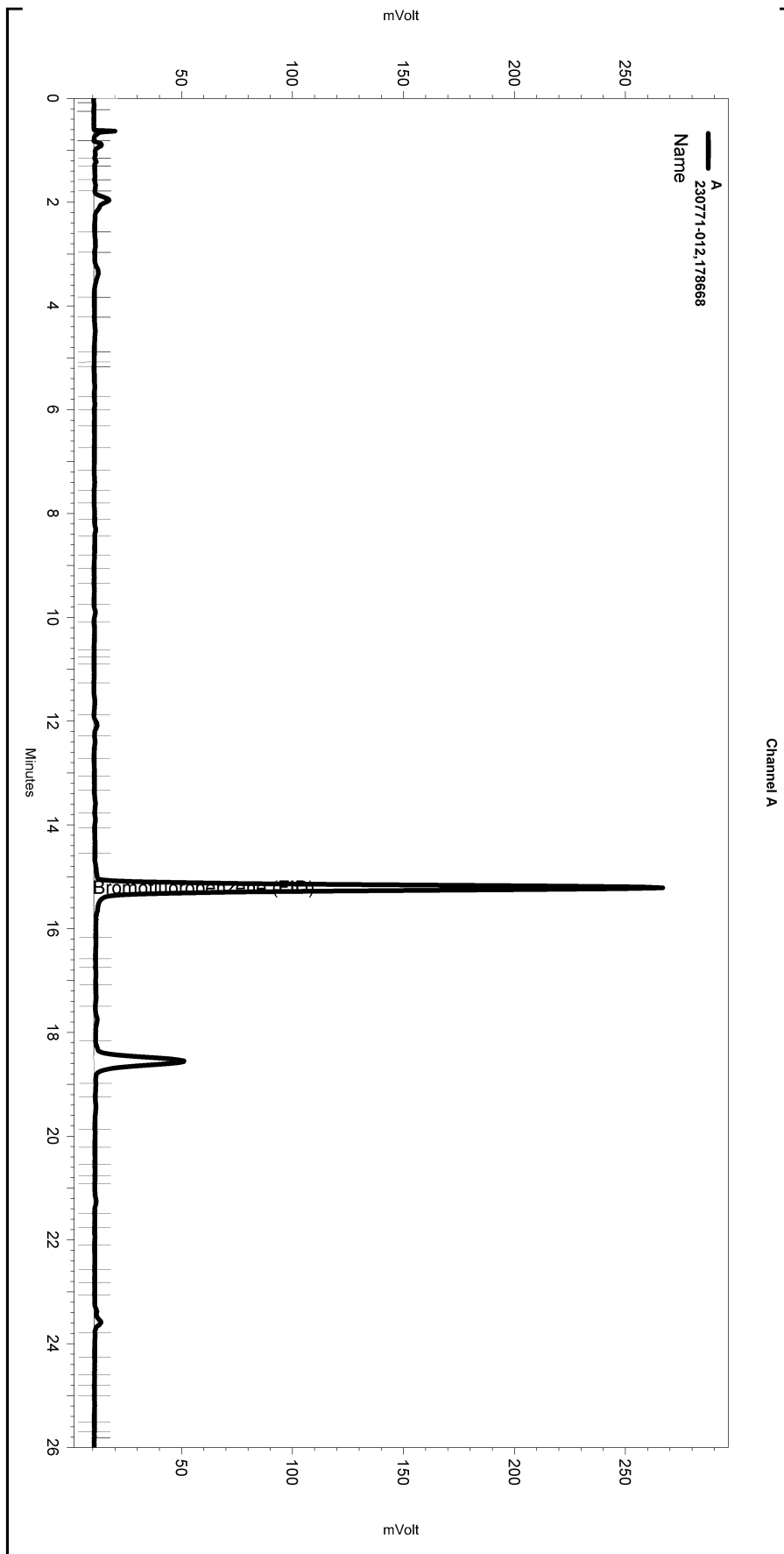
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Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-031  
 Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\TVHBTXE153.MET

Software Version 3.1.7  
 Run Date: 9/7/2011 10:13:35 AM  
 Analysis Date: 9/7/2011 11:35:29 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

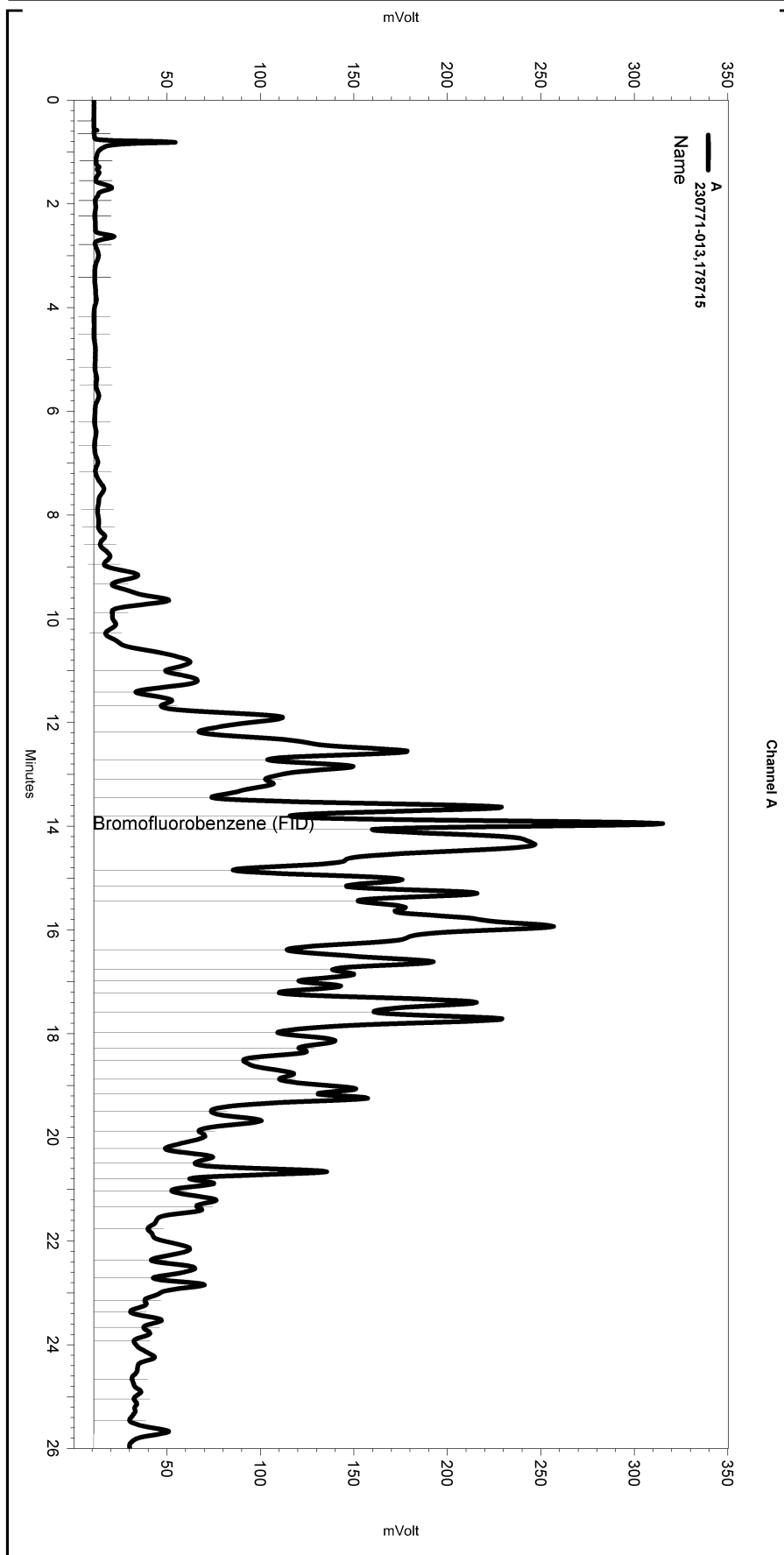
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-031

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-013,178715  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-010  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE241.MET

Software Version 3.1.7  
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 Analysis Date: 9/8/2011 10:40:32 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



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Integration Events

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

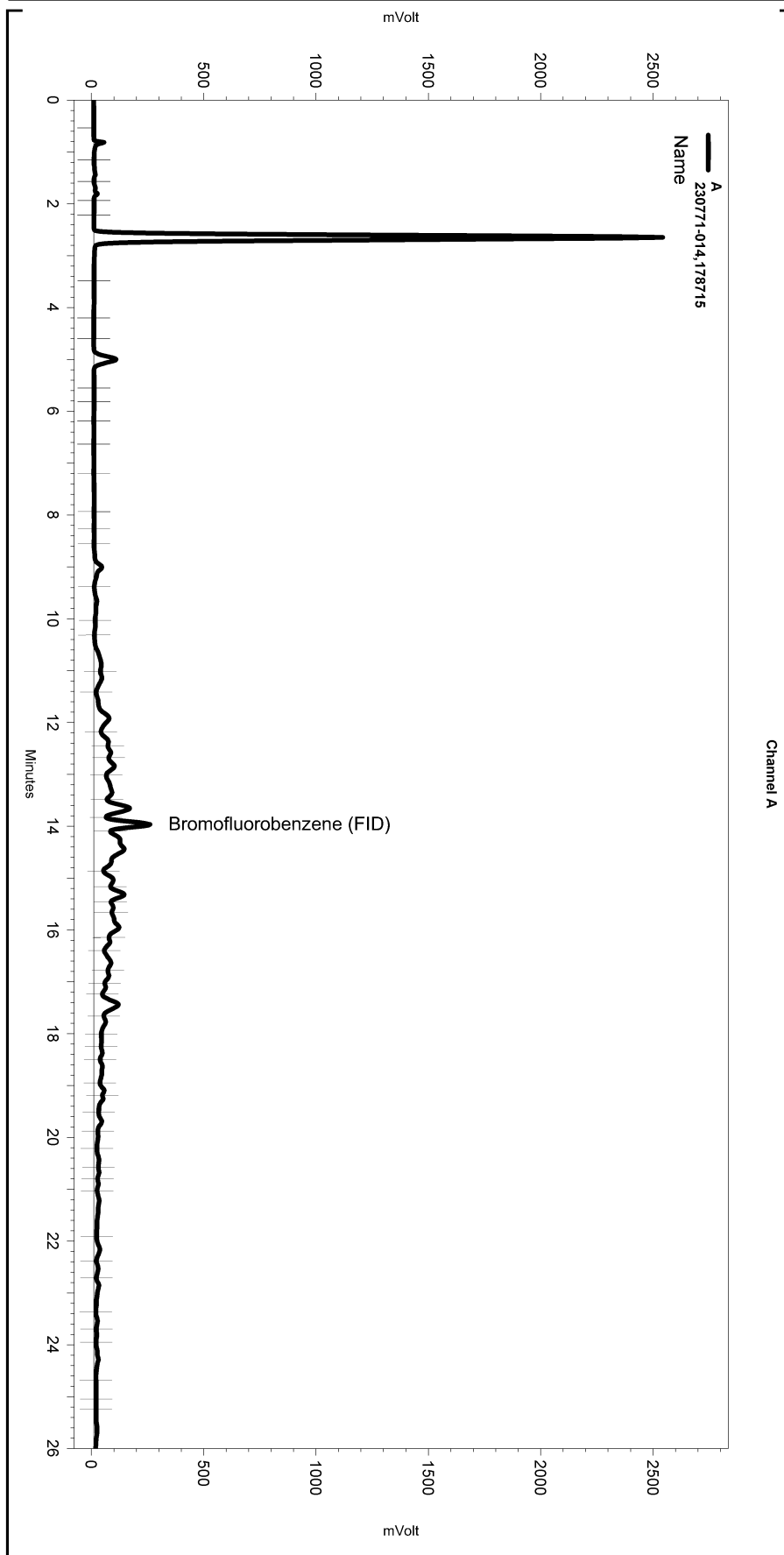
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-010

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0	26.017	0

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 Sample Name: 230771-014,178715  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-011  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE241.MET

Software Version 3.1.7  
 Run Date: 9/7/2011 10:18:09 PM  
 Analysis Date: 9/8/2011 3:01:42 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

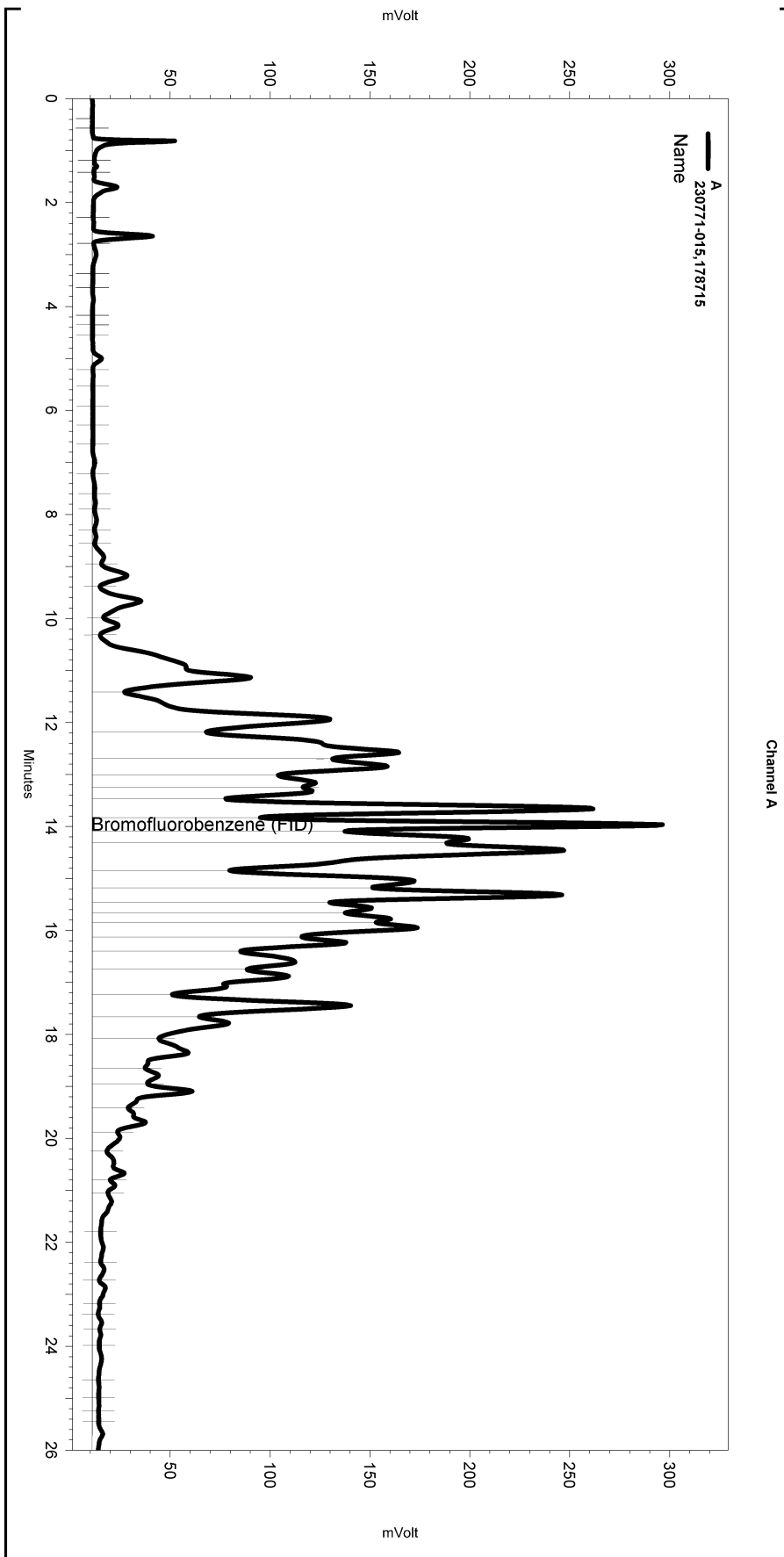
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-011

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.512	25.955	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-015,178715  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-012  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe241.met

Software Version 3.1.7  
 Run Date: 9/7/2011 10:55:48 PM  
 Analysis Date: 9/8/2011 3:02:41 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: b1.0



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 ---< General Method Parameters >-----  
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No items selected for this section

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 ---< A >-----  
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No items selected for this section

Integration Events

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

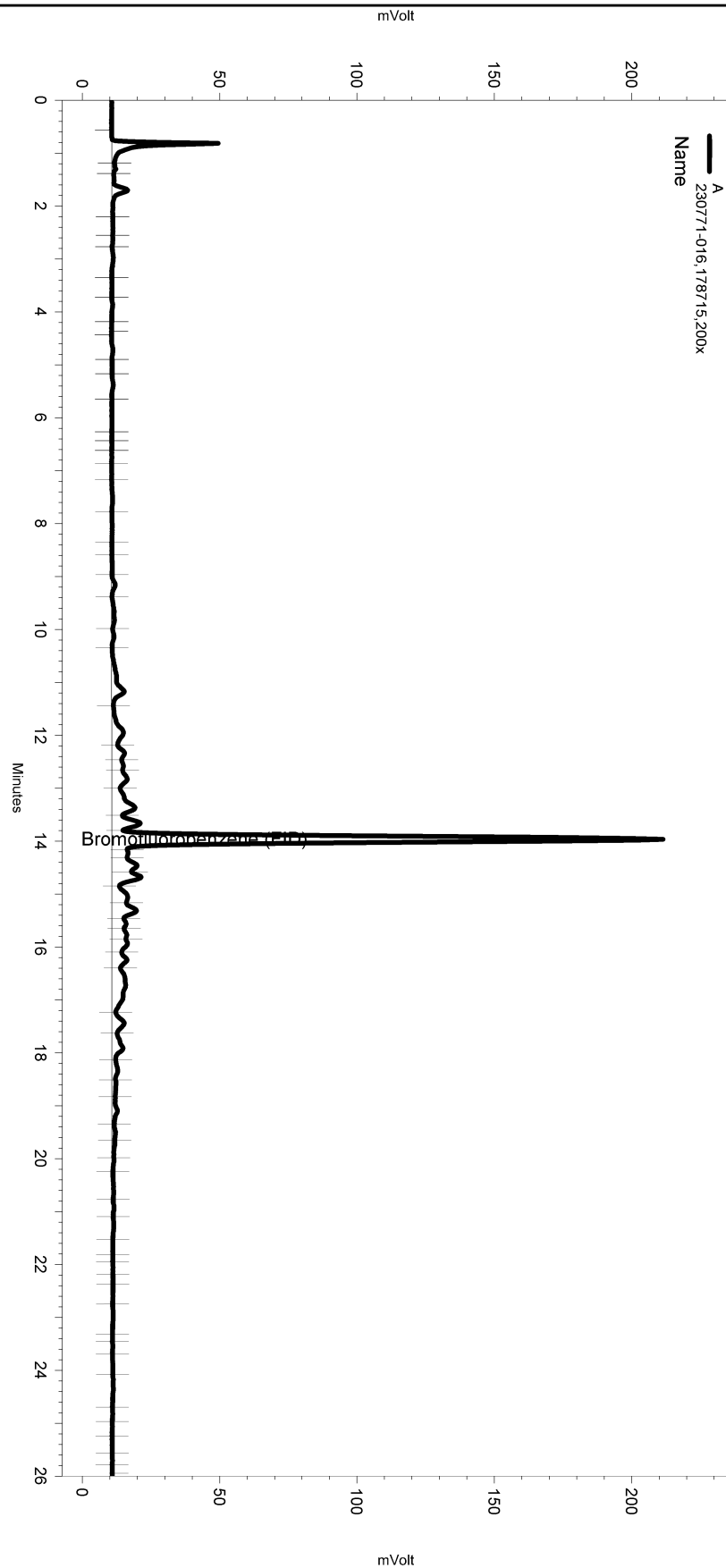
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-012

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.179	26.017	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-016,178715,200x  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-035  
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbx241.met

Software Version 3.1.7  
 Run Date: 9/8/2011 2:35:57 PM  
 Analysis Date: 9/8/2011 3:05:05 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

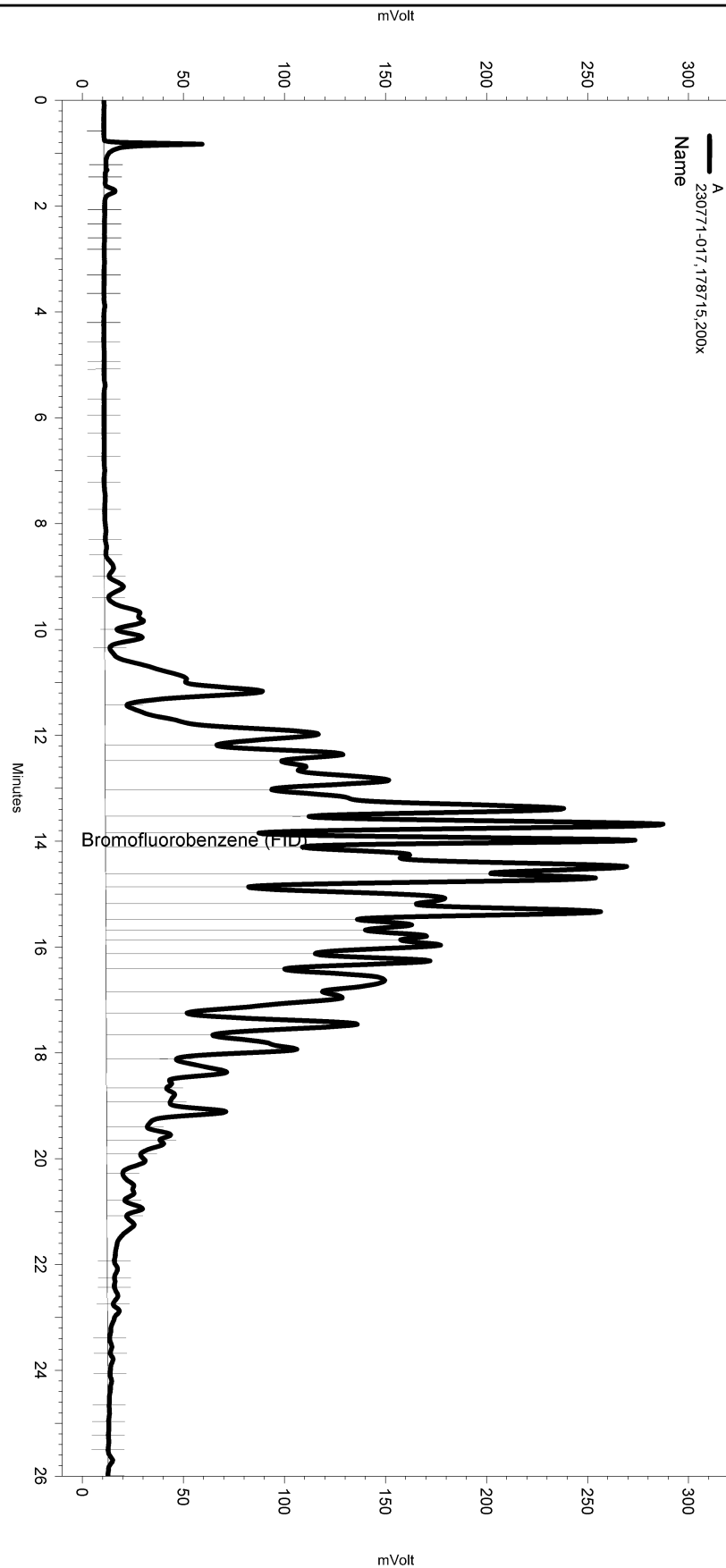
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\250-035\_C8F3.tmp

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

Channel A

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-017,178715,200x  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-036  
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbx241.met

Software Version 3.1.7  
 Run Date: 9/8/2011 3:13:27 PM  
 Analysis Date: 9/8/2011 3:42:35 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: b1.0



Channel A

---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

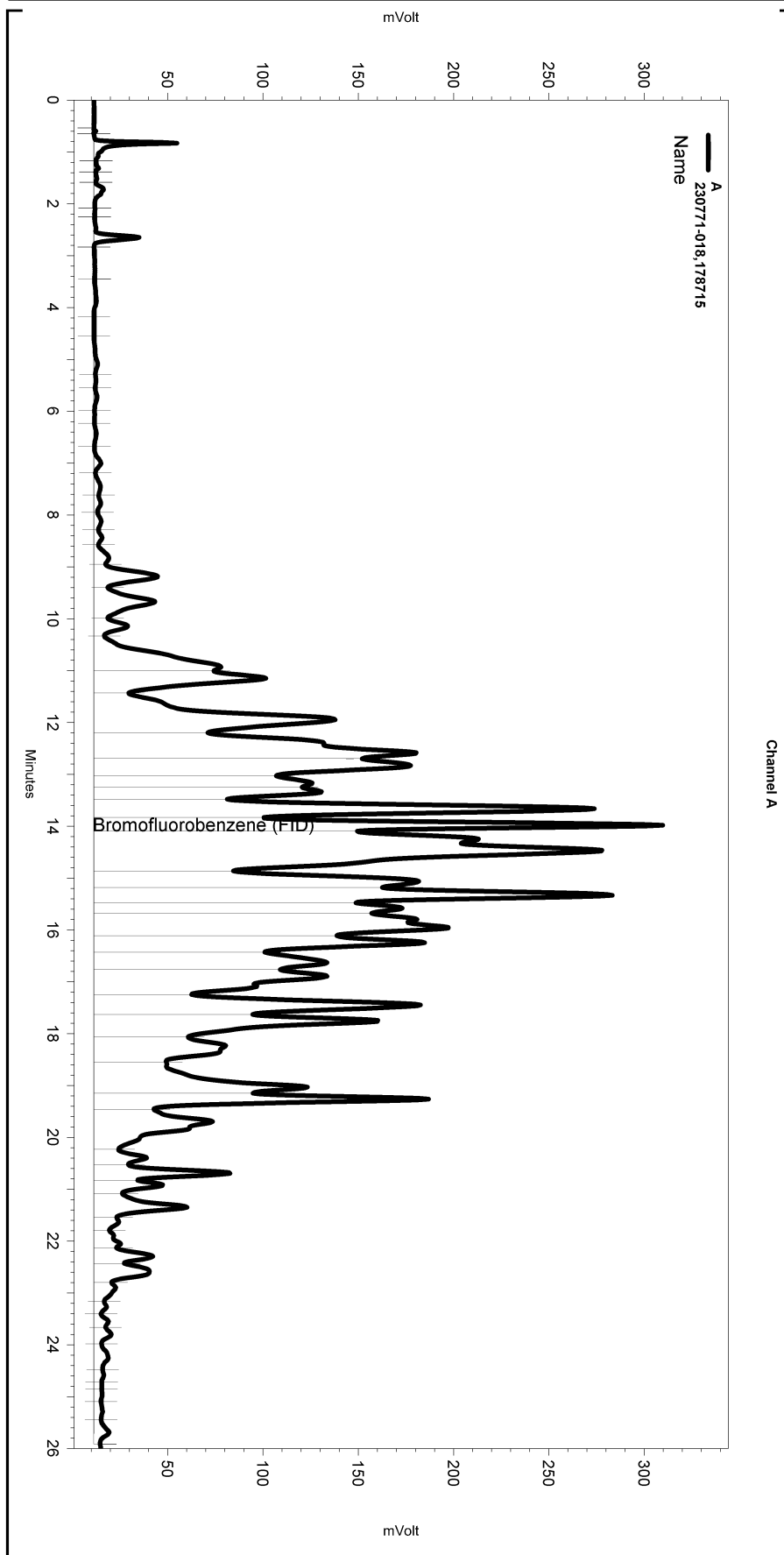
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\250-036\_C8F4.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-018,178715  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-015  
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE241.MET

Software Version 3.1.7  
 Run Date: 9/8/2011 12:48:37 AM  
 Analysis Date: 9/8/2011 10:48:55 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

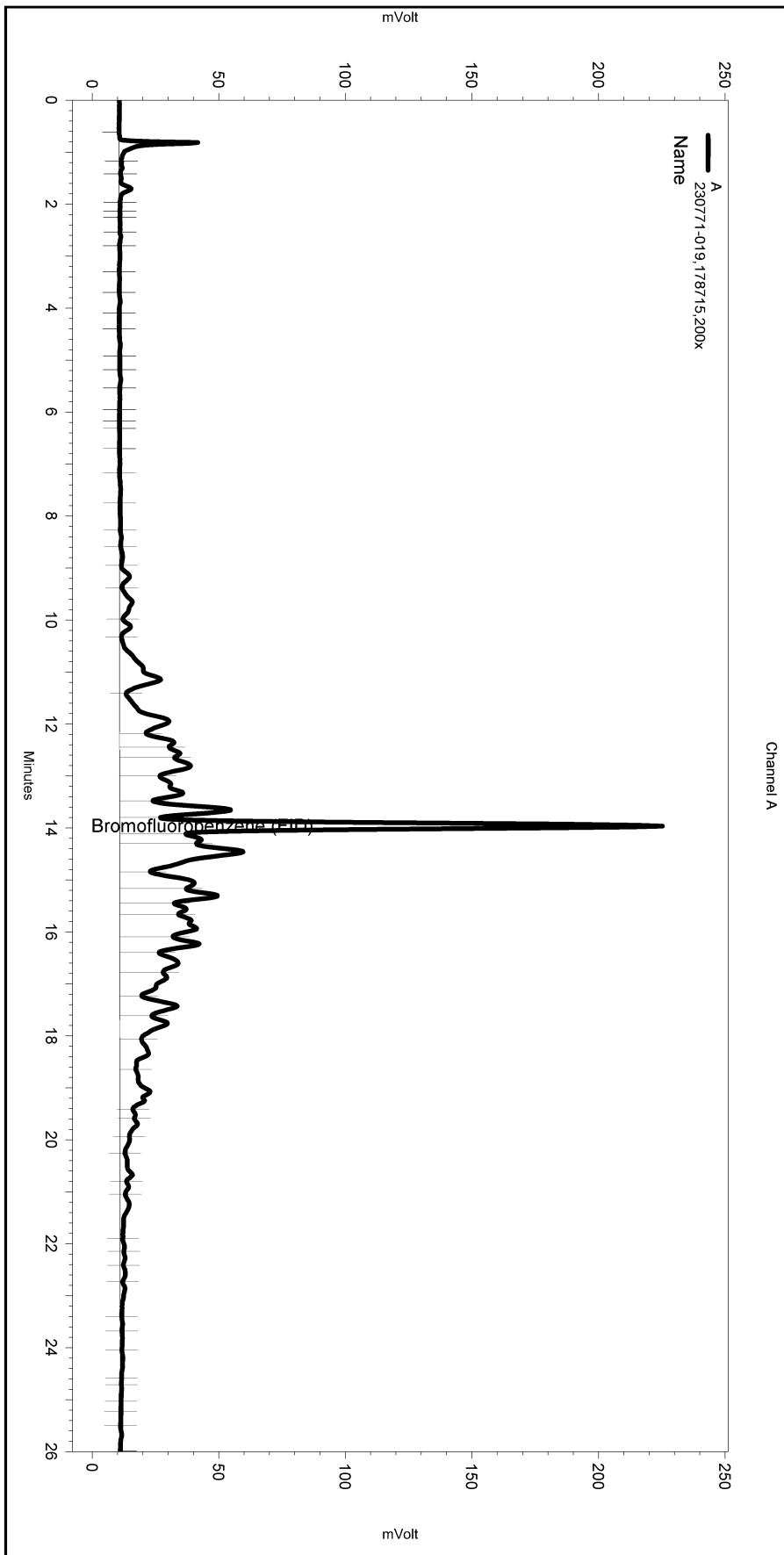
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-015

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseline	0	26.017	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\250.seq  
 Sample Name: 230771-019,178715,200x  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\250-037  
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbx241.met

Software Version 3.1.7  
 Run Date: 9/8/2011 3:51:03 PM  
 Analysis Date: 9/8/2011 4:20:11 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: d1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\250-037\_C8F5.tmp

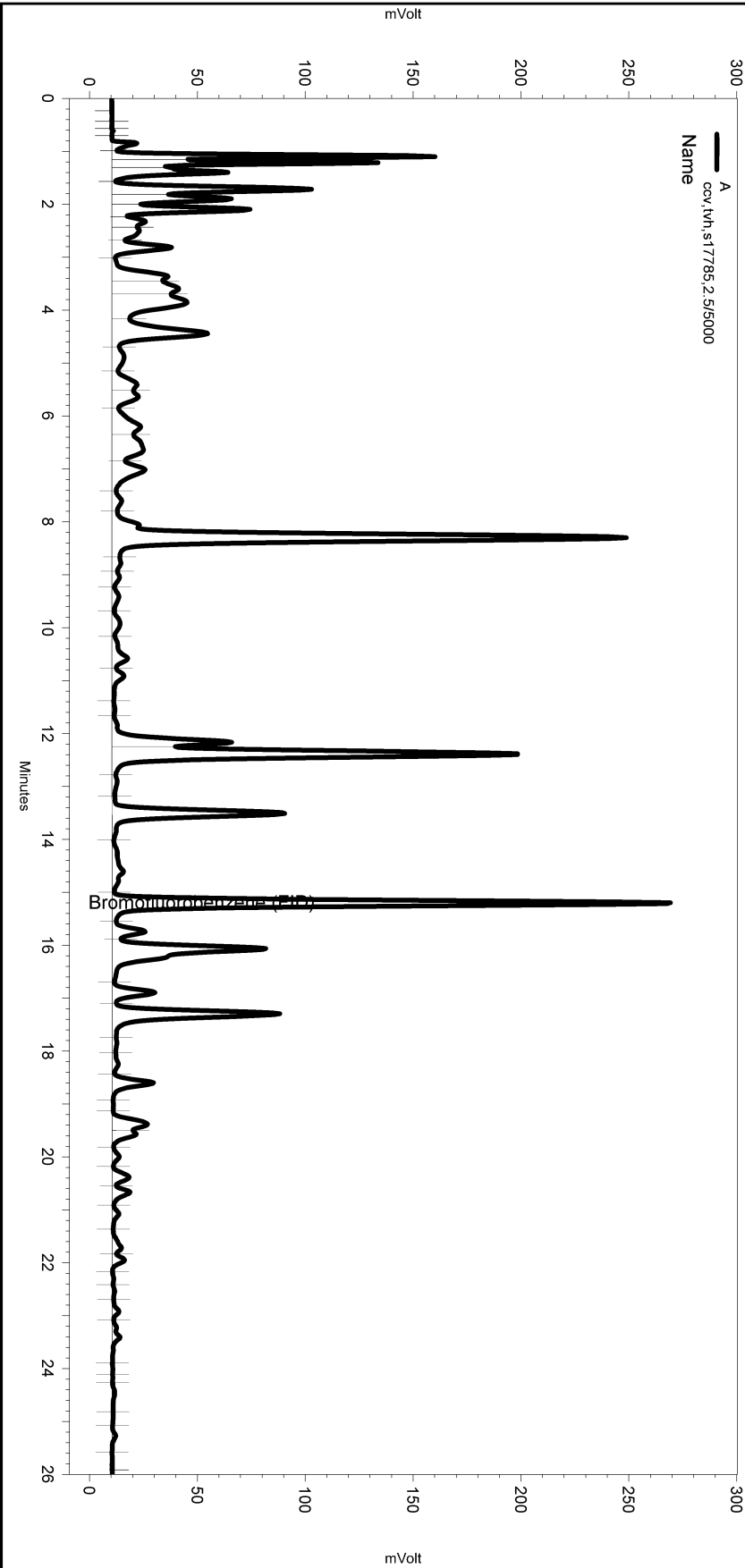
Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Channel A



Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\249.seq  
 Sample Name: ccv,tvh,s17785,2.5/5000  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-003  
 Instrument: GC07 Vial: N/A Operator: lims2k3\tvh3  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbx153.met

Software Version 3.1.7  
 Run Date: 9/6/2011 10:20:18 AM  
 Analysis Date: 9/6/2011 10:48:57 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: {Data Description}



Channel A

---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

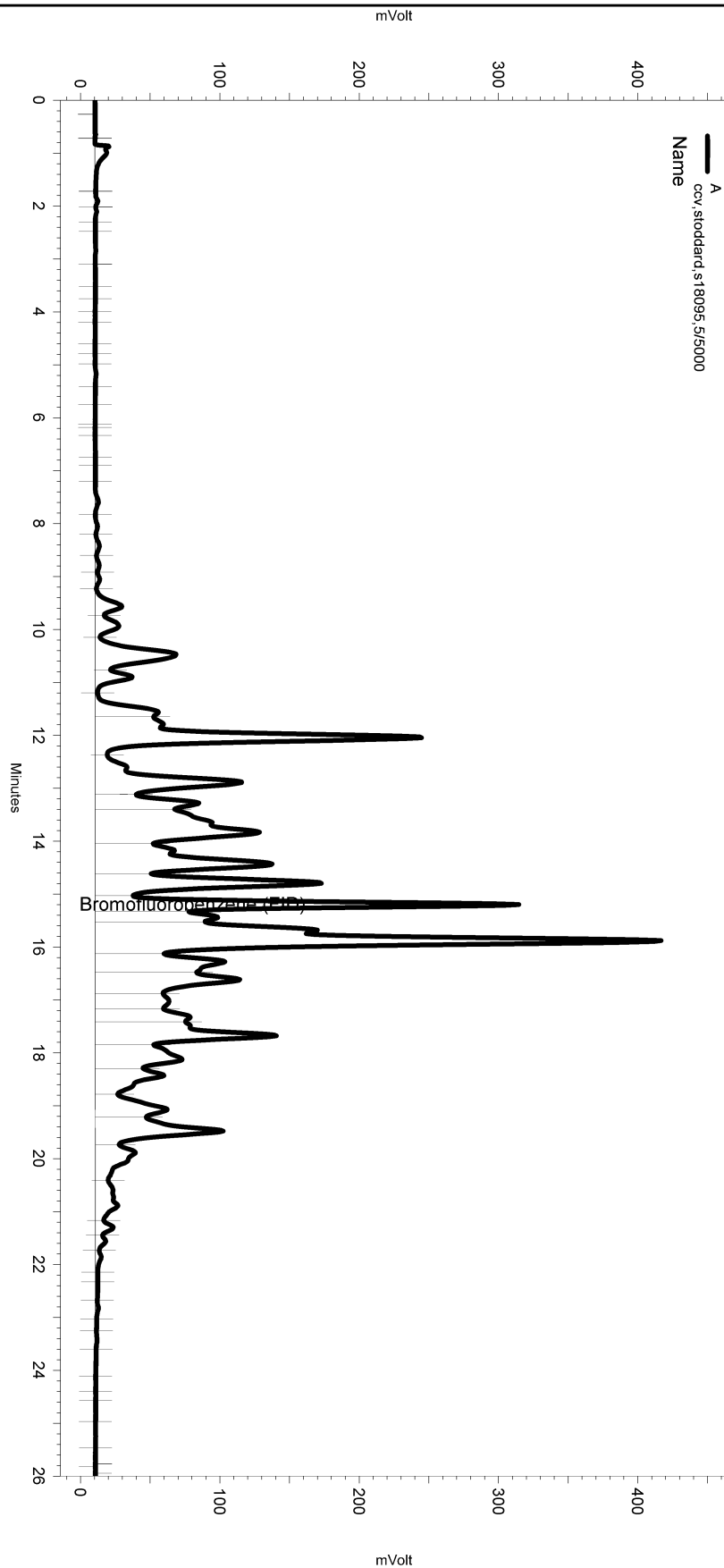
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10049\249-003\_57D1.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC07\Sequence\249.seq  
 Sample Name: ccv,stoddard,s18095,5/5000  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\249-007  
 Instrument: GC07 Vial: N/A Operator: lims2k3\tvh3  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbx153.met

Software Version 3.1.7  
 Run Date: 9/6/2011 6:52:52 PM  
 Analysis Date: 9/6/2011 7:21:35 PM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: {Data Description}



Channel A

---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10049\249-007\_57D5.tmp

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

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	178743
Lab ID:	230771-001	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	3.2	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	29	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	178743
Lab ID:	230771-001	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-127
1,2-Dichloroethane-d4	84	73-145
Toluene-d8	108	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Batch#:	178790
Lab ID:	230771-002	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	2.500		

Analyte	Result	RL
Freon 12	ND	2.5
tert-Butyl Alcohol (TBA)	ND	25
Chloromethane	ND	2.5
Isopropyl Ether (DIPE)	ND	1.3
Vinyl Chloride	ND	1.3
Bromomethane	ND	2.5
Ethyl tert-Butyl Ether (ETBE)	ND	1.3
Chloroethane	ND	2.5
Methyl tert-Amyl Ether (TAME)	ND	1.3
Trichlorofluoromethane	ND	2.5
Acetone	ND	25
Freon 113	ND	5.0
1,1-Dichloroethene	ND	1.3
Methylene Chloride	ND	25
Carbon Disulfide	ND	1.3
MTBE	ND	1.3
trans-1,2-Dichloroethene	ND	1.3
Vinyl Acetate	ND	25
1,1-Dichloroethane	ND	1.3
2-Butanone	ND	25
cis-1,2-Dichloroethene	14	1.3
2,2-Dichloropropane	ND	1.3
Chloroform	ND	1.3
Bromochloromethane	ND	1.3
1,1,1-Trichloroethane	ND	1.3
1,1-Dichloropropene	ND	1.3
Carbon Tetrachloride	ND	1.3
1,2-Dichloroethane	ND	1.3
Benzene	ND	1.3
Trichloroethene	3.3	1.3
1,2-Dichloropropane	ND	1.3
Bromodichloromethane	ND	1.3
Dibromomethane	ND	1.3
4-Methyl-2-Pentanone	ND	25
cis-1,3-Dichloropropene	ND	1.3
Toluene	ND	1.3
trans-1,3-Dichloropropene	ND	1.3
1,1,2-Trichloroethane	ND	1.3
2-Hexanone	ND	25
1,3-Dichloropropane	ND	1.3
Tetrachloroethene	190	1.3
Dibromochloromethane	ND	1.3
1,2-Dibromoethane	ND	1.3
Chlorobenzene	ND	1.3
1,1,1,2-Tetrachloroethane	ND	1.3
Ethylbenzene	ND	1.3
m,p-Xylenes	ND	1.3
o-Xylene	ND	1.3
Styrene	ND	1.3
Bromoform	ND	2.5
Isopropylbenzene	ND	1.3
1,1,2,2-Tetrachloroethane	ND	1.3
1,2,3-Trichloropropane	ND	1.3
Propylbenzene	ND	1.3

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Batch#:	178790
Lab ID:	230771-002	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	2.500		

Analyte	Result	RL
Bromobenzene	ND	1.3
1,3,5-Trimethylbenzene	ND	1.3
2-Chlorotoluene	ND	1.3
4-Chlorotoluene	ND	1.3
tert-Butylbenzene	ND	1.3
1,2,4-Trimethylbenzene	ND	1.3
sec-Butylbenzene	ND	1.3
para-Isopropyl Toluene	ND	1.3
1,3-Dichlorobenzene	ND	1.3
1,4-Dichlorobenzene	ND	1.3
n-Butylbenzene	ND	1.3
1,2-Dichlorobenzene	ND	1.3
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	1.3
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	1.3

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-127
1,2-Dichloroethane-d4	95	73-145
Toluene-d8	95	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	178664
Lab ID:	230771-003	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	178664
Lab ID:	230771-003	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-127
1,2-Dichloroethane-d4	90	73-145
Toluene-d8	114	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected  
 RL= Reporting Limit



Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	178664
Lab ID:	230771-004	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	3.3	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	9.5	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	0.6	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	2.0	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	34	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	76	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	178664
Lab ID:	230771-004	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-127
1,2-Dichloroethane-d4	92	73-145
Toluene-d8	111	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected  
 RL= Reporting Limit  
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Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-2	Batch#:	178790
Lab ID:	230771-005	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	9.6	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	28	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	0.9	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	0.7	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-2	Batch#:	178790
Lab ID:	230771-005	Sampled:	08/29/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	0.6	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	100	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	119	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-3	Batch#:	178708
Lab ID:	230771-006	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	0.5	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-3	Batch#:	178708
Lab ID:	230771-006	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	121	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-4	Batch#:	178708
Lab ID:	230771-007	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.7	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-4	Batch#:	178708
Lab ID:	230771-007	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-127
1,2-Dichloroethane-d4	123	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected  
 RL= Reporting Limit



Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-1	Sampled:	08/29/11
Lab ID:	230771-008	Received:	09/01/11
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

Analyte	Result	RL	Diln	Fac	Batch#
Freon 12	ND	2.0	2.000		178708
tert-Butyl Alcohol (TBA)	ND	20	2.000		178708
Chloromethane	ND	2.0	2.000		178708
Isopropyl Ether (DIPE)	ND	1.0	2.000		178708
Vinyl Chloride	ND	1.0	2.000		178708
Bromomethane	ND	2.0	2.000		178708
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	2.000		178708
Chloroethane	ND	2.0	2.000		178708
Methyl tert-Amyl Ether (TAME)	ND	1.0	2.000		178708
Trichlorofluoromethane	ND	2.0	2.000		178708
Acetone	ND	20	2.000		178708
Freon 113	ND	4.0	2.000		178708
1,1-Dichloroethene	ND	1.0	2.000		178708
Methylene Chloride	ND	20	2.000		178708
Carbon Disulfide	ND	1.0	2.000		178708
MTBE	220	2.0	4.000		178751
trans-1,2-Dichloroethene	ND	1.0	2.000		178708
Vinyl Acetate	ND	20	2.000		178708
1,1-Dichloroethane	ND	1.0	2.000		178708
2-Butanone	ND	20	2.000		178708
cis-1,2-Dichloroethene	62	1.0	2.000		178708
2,2-Dichloropropane	ND	1.0	2.000		178708
Chloroform	ND	1.0	2.000		178708
Bromochloromethane	ND	1.0	2.000		178708
1,1,1-Trichloroethane	ND	1.0	2.000		178708
1,1-Dichloropropene	ND	1.0	2.000		178708
Carbon Tetrachloride	ND	1.0	2.000		178708
1,2-Dichloroethane	ND	1.0	2.000		178708
Benzene	ND	1.0	2.000		178708
Trichloroethene	1.7	1.0	2.000		178708
1,2-Dichloropropane	ND	1.0	2.000		178708
Bromodichloromethane	ND	1.0	2.000		178708
Dibromomethane	ND	1.0	2.000		178708
4-Methyl-2-Pentanone	ND	20	2.000		178708
cis-1,3-Dichloropropene	ND	1.0	2.000		178708
Toluene	ND	1.0	2.000		178708
trans-1,3-Dichloropropene	ND	1.0	2.000		178708
1,1,2-Trichloroethane	ND	1.0	2.000		178708
2-Hexanone	ND	20	2.000		178708
1,3-Dichloropropane	ND	1.0	2.000		178708
Tetrachloroethene	12	1.0	2.000		178708
Dibromochloromethane	ND	1.0	2.000		178708
1,2-Dibromoethane	ND	1.0	2.000		178708
Chlorobenzene	ND	1.0	2.000		178708
1,1,1,2-Tetrachloroethane	ND	1.0	2.000		178708
Ethylbenzene	ND	1.0	2.000		178708
m,p-Xylenes	ND	1.0	2.000		178708
o-Xylene	ND	1.0	2.000		178708
Styrene	ND	1.0	2.000		178708
Bromoform	ND	2.0	2.000		178708
Isopropylbenzene	ND	1.0	2.000		178708
1,1,2,2-Tetrachloroethane	ND	1.0	2.000		178708
1,2,3-Trichloropropane	ND	1.0	2.000		178708
Propylbenzene	ND	1.0	2.000		178708
Bromobenzene	ND	1.0	2.000		178708

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-1	Sampled:	08/29/11
Lab ID:	230771-008	Received:	09/01/11
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#
1,3,5-Trimethylbenzene	ND	1.0	2.000	178708
2-Chlorotoluene	ND	1.0	2.000	178708
4-Chlorotoluene	ND	1.0	2.000	178708
tert-Butylbenzene	ND	1.0	2.000	178708
1,2,4-Trimethylbenzene	ND	1.0	2.000	178708
sec-Butylbenzene	ND	1.0	2.000	178708
para-Isopropyl Toluene	ND	1.0	2.000	178708
1,3-Dichlorobenzene	ND	1.0	2.000	178708
1,4-Dichlorobenzene	ND	1.0	2.000	178708
n-Butylbenzene	ND	1.0	2.000	178708
1,2-Dichlorobenzene	ND	1.0	2.000	178708
1,2-Dibromo-3-Chloropropane	ND	4.0	2.000	178708
1,2,4-Trichlorobenzene	ND	1.0	2.000	178708
Hexachlorobutadiene	ND	4.0	2.000	178708
Naphthalene	ND	4.0	2.000	178708
1,2,3-Trichlorobenzene	ND	1.0	2.000	178708

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	109	80-127	2.000	178708
1,2-Dichloroethane-d4	120	73-145	2.000	178708
Toluene-d8	100	80-120	2.000	178708
Bromofluorobenzene	105	80-120	2.000	178708

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-2	Sampled:	08/30/11
Lab ID:	230771-009	Received:	09/01/11
Matrix:	Water	Analyzed:	09/09/11
Units:	ug/L		

Analyte	Result	RL	Diln	Fac	Batch#
Freon 12	ND	5.0	5.000		178790
tert-Butyl Alcohol (TBA)	ND	50	5.000		178790
Chloromethane	ND	5.0	5.000		178790
Isopropyl Ether (DIPE)	ND	2.5	5.000		178790
Vinyl Chloride	6.0	2.5	5.000		178790
Bromomethane	ND	5.0	5.000		178790
Ethyl tert-Butyl Ether (ETBE)	ND	2.5	5.000		178790
Chloroethane	ND	5.0	5.000		178790
Methyl tert-Amyl Ether (TAME)	ND	2.5	5.000		178790
Trichlorofluoromethane	ND	5.0	5.000		178790
Acetone	ND	50	5.000		178790
Freon 113	ND	10	5.000		178790
1,1-Dichloroethene	ND	2.5	5.000		178790
Methylene Chloride	ND	50	5.000		178790
Carbon Disulfide	ND	2.5	5.000		178790
MTBE	26	2.5	5.000		178790
trans-1,2-Dichloroethene	10	2.5	5.000		178790
Vinyl Acetate	ND	50	5.000		178790
1,1-Dichloroethane	ND	2.5	5.000		178790
2-Butanone	ND	50	5.000		178790
cis-1,2-Dichloroethene	3,000	17	33.33		178751
2,2-Dichloropropane	ND	2.5	5.000		178790
Chloroform	ND	2.5	5.000		178790
Bromochloromethane	ND	2.5	5.000		178790
1,1,1-Trichloroethane	ND	2.5	5.000		178790
1,1-Dichloropropene	ND	2.5	5.000		178790
Carbon Tetrachloride	ND	2.5	5.000		178790
1,2-Dichloroethane	ND	2.5	5.000		178790
Benzene	ND	2.5	5.000		178790
Trichloroethene	63	2.5	5.000		178790
1,2-Dichloropropane	ND	2.5	5.000		178790
Bromodichloromethane	ND	2.5	5.000		178790
Dibromomethane	ND	2.5	5.000		178790
4-Methyl-2-Pentanone	ND	50	5.000		178790
cis-1,3-Dichloropropene	ND	2.5	5.000		178790
Toluene	ND	2.5	5.000		178790
trans-1,3-Dichloropropene	ND	2.5	5.000		178790
1,1,2-Trichloroethane	ND	2.5	5.000		178790
2-Hexanone	ND	50	5.000		178790
1,3-Dichloropropane	ND	2.5	5.000		178790
Tetrachloroethene	18	2.5	5.000		178790
Dibromochloromethane	ND	2.5	5.000		178790
1,2-Dibromoethane	ND	2.5	5.000		178790
Chlorobenzene	ND	2.5	5.000		178790
1,1,1,2-Tetrachloroethane	ND	2.5	5.000		178790
Ethylbenzene	ND	2.5	5.000		178790
m,p-Xylenes	ND	2.5	5.000		178790
o-Xylene	ND	2.5	5.000		178790
Styrene	ND	2.5	5.000		178790
Bromoform	ND	5.0	5.000		178790
Isopropylbenzene	ND	2.5	5.000		178790
1,1,2,2-Tetrachloroethane	ND	2.5	5.000		178790
1,2,3-Trichloropropane	ND	2.5	5.000		178790
Propylbenzene	ND	2.5	5.000		178790
Bromobenzene	ND	2.5	5.000		178790

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-2	Sampled:	08/30/11
Lab ID:	230771-009	Received:	09/01/11
Matrix:	Water	Analyzed:	09/09/11
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#
1,3,5-Trimethylbenzene	ND	2.5	5.000	178790
2-Chlorotoluene	ND	2.5	5.000	178790
4-Chlorotoluene	ND	2.5	5.000	178790
tert-Butylbenzene	ND	2.5	5.000	178790
1,2,4-Trimethylbenzene	ND	2.5	5.000	178790
sec-Butylbenzene	ND	2.5	5.000	178790
para-Isopropyl Toluene	ND	2.5	5.000	178790
1,3-Dichlorobenzene	ND	2.5	5.000	178790
1,4-Dichlorobenzene	ND	2.5	5.000	178790
n-Butylbenzene	ND	2.5	5.000	178790
1,2-Dichlorobenzene	ND	2.5	5.000	178790
1,2-Dibromo-3-Chloropropane	ND	10	5.000	178790
1,2,4-Trichlorobenzene	ND	2.5	5.000	178790
Hexachlorobutadiene	ND	10	5.000	178790
Naphthalene	ND	10	5.000	178790
1,2,3-Trichlorobenzene	ND	2.5	5.000	178790

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	100	80-127	5.000	178790
1,2-Dichloroethane-d4	98	73-145	5.000	178790
Toluene-d8	101	80-120	5.000	178790
Bromofluorobenzene	100	80-120	5.000	178790

ND= Not Detected  
 RL= Reporting Limit  
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Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Units:	ug/L
Lab ID:	230771-010	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	10	10.00	178739	09/08/11
tert-Butyl Alcohol (TBA)	ND	100	10.00	178739	09/08/11
Chloromethane	ND	10	10.00	178739	09/08/11
Isopropyl Ether (DIPE)	ND	5.0	10.00	178739	09/08/11
Vinyl Chloride	ND	5.0	10.00	178739	09/08/11
Bromomethane	ND	10	10.00	178739	09/08/11
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	10.00	178739	09/08/11
Chloroethane	ND	10	10.00	178739	09/08/11
Methyl tert-Amyl Ether (TAME)	ND	5.0	10.00	178739	09/08/11
Trichlorofluoromethane	ND	10	10.00	178739	09/08/11
Acetone	ND	100	10.00	178739	09/08/11
Freon 113	ND	20	10.00	178739	09/08/11
1,1-Dichloroethene	ND	5.0	10.00	178739	09/08/11
Methylene Chloride	ND	100	10.00	178739	09/08/11
Carbon Disulfide	ND	5.0	10.00	178739	09/08/11
MTBE	110	5.0	10.00	178739	09/08/11
trans-1,2-Dichloroethene	ND	5.0	10.00	178739	09/08/11
Vinyl Acetate	ND	100	10.00	178739	09/08/11
1,1-Dichloroethane	ND	5.0	10.00	178739	09/08/11
2-Butanone	ND	100	10.00	178739	09/08/11
cis-1,2-Dichloroethene	670	17	33.33	178790	09/09/11
2,2-Dichloropropane	ND	5.0	10.00	178739	09/08/11
Chloroform	ND	5.0	10.00	178739	09/08/11
Bromochloromethane	ND	5.0	10.00	178739	09/08/11
1,1,1-Trichloroethane	ND	5.0	10.00	178739	09/08/11
1,1-Dichloropropene	ND	5.0	10.00	178739	09/08/11
Carbon Tetrachloride	ND	5.0	10.00	178739	09/08/11
1,2-Dichloroethane	ND	5.0	10.00	178739	09/08/11
Benzene	ND	5.0	10.00	178739	09/08/11
Trichloroethene	ND	5.0	10.00	178739	09/08/11
1,2-Dichloropropane	ND	5.0	10.00	178739	09/08/11
Bromodichloromethane	ND	5.0	10.00	178739	09/08/11
Dibromomethane	ND	5.0	10.00	178739	09/08/11
4-Methyl-2-Pentanone	ND	100	10.00	178739	09/08/11
cis-1,3-Dichloropropene	ND	5.0	10.00	178739	09/08/11
Toluene	ND	5.0	10.00	178739	09/08/11
trans-1,3-Dichloropropene	ND	5.0	10.00	178739	09/08/11
1,1,2-Trichloroethane	ND	5.0	10.00	178739	09/08/11
2-Hexanone	ND	100	10.00	178739	09/08/11

ND= Not Detected

RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Units:	ug/L
Lab ID:	230771-010	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,3-Dichloropropane	ND	5.0	10.00	178739	09/08/11
Tetrachloroethene	ND	5.0	10.00	178739	09/08/11
Dibromochloromethane	ND	5.0	10.00	178739	09/08/11
1,2-Dibromoethane	ND	5.0	10.00	178739	09/08/11
Chlorobenzene	ND	5.0	10.00	178739	09/08/11
1,1,1,2-Tetrachloroethane	ND	5.0	10.00	178739	09/08/11
Ethylbenzene	ND	5.0	10.00	178739	09/08/11
m,p-Xylenes	ND	5.0	10.00	178739	09/08/11
o-Xylene	ND	5.0	10.00	178739	09/08/11
Styrene	ND	5.0	10.00	178739	09/08/11
Bromoform	ND	10	10.00	178739	09/08/11
Isopropylbenzene	ND	5.0	10.00	178739	09/08/11
1,1,2,2-Tetrachloroethane	ND	5.0	10.00	178739	09/08/11
1,2,3-Trichloropropane	ND	5.0	10.00	178739	09/08/11
Propylbenzene	ND	5.0	10.00	178739	09/08/11
Bromobenzene	ND	5.0	10.00	178739	09/08/11
1,3,5-Trimethylbenzene	ND	5.0	10.00	178739	09/08/11
2-Chlorotoluene	ND	5.0	10.00	178739	09/08/11
4-Chlorotoluene	ND	5.0	10.00	178739	09/08/11
tert-Butylbenzene	ND	5.0	10.00	178739	09/08/11
1,2,4-Trimethylbenzene	ND	5.0	10.00	178739	09/08/11
sec-Butylbenzene	ND	5.0	10.00	178739	09/08/11
para-Isopropyl Toluene	ND	5.0	10.00	178739	09/08/11
1,3-Dichlorobenzene	ND	5.0	10.00	178739	09/08/11
1,4-Dichlorobenzene	ND	5.0	10.00	178739	09/08/11
n-Butylbenzene	ND	5.0	10.00	178739	09/08/11
1,2-Dichlorobenzene	ND	5.0	10.00	178739	09/08/11
1,2-Dibromo-3-Chloropropane	ND	20	10.00	178739	09/08/11
1,2,4-Trichlorobenzene	ND	5.0	10.00	178739	09/08/11
Hexachlorobutadiene	ND	20	10.00	178739	09/08/11
Naphthalene	ND	20	10.00	178739	09/08/11
1,2,3-Trichlorobenzene	ND	5.0	10.00	178739	09/08/11

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	99	80-127	10.00	178739	09/08/11
1,2-Dichloroethane-d4	109	73-145	10.00	178739	09/08/11
Toluene-d8	98	80-120	10.00	178739	09/08/11
Bromofluorobenzene	102	80-120	10.00	178739	09/08/11

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-4R	Batch#:	178790
Lab ID:	230771-011	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	14	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	3.3	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	43	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	66	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	0.8	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.7	0.5
o-Xylene	1.0	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.8	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	1.7	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-4R	Batch#:	178790
Lab ID:	230771-011	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	2.2	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	12	0.5
sec-Butylbenzene	1.4	0.5
para-Isopropyl Toluene	1.0	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	1.2	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-127
1,2-Dichloroethane-d4	100	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected  
 RL= Reporting Limit



Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-5	Batch#:	178739
Lab ID:	230771-012	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	11	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-5	Batch#:	178739
Lab ID:	230771-012	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-127
1,2-Dichloroethane-d4	111	73-145
Toluene-d8	105	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected  
 RL= Reporting Limit  
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Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	B-8R	Batch#:	178739
Lab ID:	230771-013	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	16	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	8.9	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	B-8R	Batch#:	178739
Lab ID:	230771-013	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	1.1	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	0.5	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	106	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	B-10R	Units:	ug/L
Lab ID:	230771-014	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	25	25.00	178739	09/08/11
tert-Butyl Alcohol (TBA)	ND	250	25.00	178739	09/08/11
Chloromethane	ND	25	25.00	178739	09/08/11
Isopropyl Ether (DIPE)	ND	13	25.00	178739	09/08/11
Vinyl Chloride	ND	13	25.00	178739	09/08/11
Bromomethane	ND	25	25.00	178739	09/08/11
Ethyl tert-Butyl Ether (ETBE)	ND	13	25.00	178739	09/08/11
Chloroethane	ND	25	25.00	178739	09/08/11
Methyl tert-Amyl Ether (TAME)	ND	13	25.00	178739	09/08/11
Trichlorofluoromethane	ND	25	25.00	178739	09/08/11
Acetone	ND	250	25.00	178739	09/08/11
Freon 113	ND	50	25.00	178739	09/08/11
1,1-Dichloroethene	ND	13	25.00	178739	09/08/11
Methylene Chloride	ND	250	25.00	178739	09/08/11
Carbon Disulfide	ND	13	25.00	178739	09/08/11
MTBE	ND	13	25.00	178739	09/08/11
trans-1,2-Dichloroethene	ND	13	25.00	178739	09/08/11
Vinyl Acetate	ND	250	25.00	178739	09/08/11
1,1-Dichloroethane	ND	13	25.00	178739	09/08/11
2-Butanone	ND	250	25.00	178739	09/08/11
cis-1,2-Dichloroethene	2,000	50	100.0	178790	09/09/11
2,2-Dichloropropane	ND	13	25.00	178739	09/08/11
Chloroform	ND	13	25.00	178739	09/08/11
Bromochloromethane	ND	13	25.00	178739	09/08/11
1,1,1-Trichloroethane	ND	13	25.00	178739	09/08/11
1,1-Dichloropropene	ND	13	25.00	178739	09/08/11
Carbon Tetrachloride	ND	13	25.00	178739	09/08/11
1,2-Dichloroethane	ND	13	25.00	178739	09/08/11
Benzene	ND	13	25.00	178739	09/08/11
Trichloroethene	160	13	25.00	178739	09/08/11
1,2-Dichloropropane	ND	13	25.00	178739	09/08/11
Bromodichloromethane	ND	13	25.00	178739	09/08/11
Dibromomethane	ND	13	25.00	178739	09/08/11
4-Methyl-2-Pentanone	ND	250	25.00	178739	09/08/11
cis-1,3-Dichloropropene	ND	13	25.00	178739	09/08/11
Toluene	ND	13	25.00	178739	09/08/11
trans-1,3-Dichloropropene	ND	13	25.00	178739	09/08/11
1,1,2-Trichloroethane	ND	13	25.00	178739	09/08/11
2-Hexanone	ND	250	25.00	178739	09/08/11

ND= Not Detected

RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	B-10R	Units:	ug/L
Lab ID:	230771-014	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,3-Dichloropropane	ND	13	25.00	178739	09/08/11
Tetrachloroethene	67	13	25.00	178739	09/08/11
Dibromochloromethane	ND	13	25.00	178739	09/08/11
1,2-Dibromoethane	ND	13	25.00	178739	09/08/11
Chlorobenzene	ND	13	25.00	178739	09/08/11
1,1,1,2-Tetrachloroethane	ND	13	25.00	178739	09/08/11
Ethylbenzene	ND	13	25.00	178739	09/08/11
m,p-Xylenes	ND	13	25.00	178739	09/08/11
o-Xylene	ND	13	25.00	178739	09/08/11
Styrene	ND	13	25.00	178739	09/08/11
Bromoform	ND	25	25.00	178739	09/08/11
Isopropylbenzene	ND	13	25.00	178739	09/08/11
1,1,2,2-Tetrachloroethane	ND	13	25.00	178739	09/08/11
1,2,3-Trichloropropane	ND	13	25.00	178739	09/08/11
Propylbenzene	ND	13	25.00	178739	09/08/11
Bromobenzene	ND	13	25.00	178739	09/08/11
1,3,5-Trimethylbenzene	ND	13	25.00	178739	09/08/11
2-Chlorotoluene	ND	13	25.00	178739	09/08/11
4-Chlorotoluene	ND	13	25.00	178739	09/08/11
tert-Butylbenzene	ND	13	25.00	178739	09/08/11
1,2,4-Trimethylbenzene	ND	13	25.00	178739	09/08/11
sec-Butylbenzene	ND	13	25.00	178739	09/08/11
para-Isopropyl Toluene	ND	13	25.00	178739	09/08/11
1,3-Dichlorobenzene	ND	13	25.00	178739	09/08/11
1,4-Dichlorobenzene	ND	13	25.00	178739	09/08/11
n-Butylbenzene	ND	13	25.00	178739	09/08/11
1,2-Dichlorobenzene	ND	13	25.00	178739	09/08/11
1,2-Dibromo-3-Chloropropane	ND	50	25.00	178739	09/08/11
1,2,4-Trichlorobenzene	ND	13	25.00	178739	09/08/11
Hexachlorobutadiene	ND	50	25.00	178739	09/08/11
Naphthalene	ND	50	25.00	178739	09/08/11
1,2,3-Trichlorobenzene	ND	13	25.00	178739	09/08/11

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	99	80-127	25.00	178739	09/08/11
1,2-Dichloroethane-d4	107	73-145	25.00	178739	09/08/11
Toluene-d8	101	80-120	25.00	178739	09/08/11
Bromofluorobenzene	99	80-120	25.00	178739	09/08/11

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-1	Batch#:	178790
Lab ID:	230771-015	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	1.2	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	27	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	8.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	2.9	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-1	Batch#:	178790
Lab ID:	230771-015	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	101	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected  
 RL= Reporting Limit



Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-2	Batch#:	178790
Lab ID:	230771-016	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	2.000		

Analyte	Result	RL
Freon 12	ND	2.0
tert-Butyl Alcohol (TBA)	34	20
Chloromethane	ND	2.0
Isopropyl Ether (DIPE)	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	2.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Chloroethane	ND	2.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
Trichlorofluoromethane	ND	2.0
Acetone	ND	20
Freon 113	ND	4.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	1.0
MTBE	2.6	1.0
trans-1,2-Dichloroethene	ND	1.0
Vinyl Acetate	ND	20
1,1-Dichloroethane	ND	1.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	20	1.0
2,2-Dichloropropane	ND	1.0
Chloroform	ND	1.0
Bromochloromethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1-Dichloropropene	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Benzene	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
Dibromomethane	ND	1.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	1.0
Toluene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
2-Hexanone	ND	20
1,3-Dichloropropane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dibromoethane	ND	1.0
Chlorobenzene	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0
Ethylbenzene	ND	1.0
m,p-Xylenes	ND	1.0
o-Xylene	ND	1.0
Styrene	ND	1.0
Bromoform	ND	2.0
Isopropylbenzene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-2	Batch#:	178790
Lab ID:	230771-016	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	2.000		

Analyte	Result	RL
Propylbenzene	ND	1.0
Bromobenzene	ND	1.0
1,3,5-Trimethylbenzene	3.6	1.0
2-Chlorotoluene	ND	1.0
4-Chlorotoluene	ND	1.0
tert-Butylbenzene	ND	1.0
1,2,4-Trimethylbenzene	4.6	1.0
sec-Butylbenzene	1.7	1.0
para-Isopropyl Toluene	3.1	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
n-Butylbenzene	1.9	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	1.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-127
1,2-Dichloroethane-d4	92	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	122 *	80-120

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-3	Batch#:	178790
Lab ID:	230771-017	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	12	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	1.1	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	1.0	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	21	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	0.6	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.7	0.5
o-Xylene	2.1	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.6	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	1.0	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-3	Batch#:	178790
Lab ID:	230771-017	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	3.7	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	6.2	0.5
sec-Butylbenzene	1.4	0.5
para-Isopropyl Toluene	1.2	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	1.0	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-127
1,2-Dichloroethane-d4	107	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-4	Batch#:	178739
Lab ID:	230771-018	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	0.6	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	1.4	0.5
trans-1,2-Dichloroethene	0.9	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	20	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-4	Batch#:	178739
Lab ID:	230771-018	Sampled:	08/30/11
Matrix:	Water	Received:	09/01/11
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	1.2	0.5
1,2,4-Trimethylbenzene	0.7	0.5
sec-Butylbenzene	1.7	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-127
1,2-Dichloroethane-d4	107	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected  
 RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-5	Units:	ug/L
Lab ID:	230771-019	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	1.0	1.000	178739	09/08/11
tert-Butyl Alcohol (TBA)	ND	10	1.000	178739	09/08/11
Chloromethane	ND	1.0	1.000	178739	09/08/11
Isopropyl Ether (DIPE)	ND	0.5	1.000	178739	09/08/11
Vinyl Chloride	ND	0.5	1.000	178739	09/08/11
Bromomethane	ND	1.0	1.000	178739	09/08/11
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	1.000	178739	09/08/11
Chloroethane	ND	1.0	1.000	178739	09/08/11
Methyl tert-Amyl Ether (TAME)	ND	0.5	1.000	178739	09/08/11
Trichlorofluoromethane	ND	1.0	1.000	178739	09/08/11
Acetone	ND	10	1.000	178739	09/08/11
Freon 113	ND	2.0	1.000	178739	09/08/11
1,1-Dichloroethene	ND	0.5	1.000	178739	09/08/11
Methylene Chloride	ND	10	1.000	178739	09/08/11
Carbon Disulfide	ND	0.5	1.000	178739	09/08/11
MTBE	1.8	0.5	1.000	178739	09/08/11
trans-1,2-Dichloroethene	3.0	0.5	1.000	178739	09/08/11
Vinyl Acetate	ND	10	1.000	178739	09/08/11
1,1-Dichloroethane	ND	0.5	1.000	178739	09/08/11
2-Butanone	ND	10	1.000	178739	09/08/11
cis-1,2-Dichloroethene	48	2.5	5.000	178841	09/12/11
2,2-Dichloropropane	ND	0.5	1.000	178739	09/08/11
Chloroform	ND	0.5	1.000	178739	09/08/11
Bromochloromethane	ND	0.5	1.000	178739	09/08/11
1,1,1-Trichloroethane	ND	0.5	1.000	178739	09/08/11
1,1-Dichloropropene	ND	0.5	1.000	178739	09/08/11
Carbon Tetrachloride	ND	0.5	1.000	178739	09/08/11
1,2-Dichloroethane	ND	0.5	1.000	178739	09/08/11
Benzene	ND	0.5	1.000	178739	09/08/11
Trichloroethene	ND	0.5	1.000	178739	09/08/11
1,2-Dichloropropane	ND	0.5	1.000	178739	09/08/11
Bromodichloromethane	ND	0.5	1.000	178739	09/08/11
Dibromomethane	ND	0.5	1.000	178739	09/08/11
4-Methyl-2-Pentanone	ND	10	1.000	178739	09/08/11
cis-1,3-Dichloropropene	ND	0.5	1.000	178739	09/08/11
Toluene	ND	0.5	1.000	178739	09/08/11
trans-1,3-Dichloropropene	ND	0.5	1.000	178739	09/08/11
1,1,2-Trichloroethane	ND	0.5	1.000	178739	09/08/11
2-Hexanone	ND	10	1.000	178739	09/08/11
1,3-Dichloropropane	ND	0.5	1.000	178739	09/08/11
Tetrachloroethene	ND	0.5	1.000	178739	09/08/11
Dibromochloromethane	ND	0.5	1.000	178739	09/08/11
1,2-Dibromoethane	ND	0.5	1.000	178739	09/08/11
Chlorobenzene	ND	0.5	1.000	178739	09/08/11
1,1,1,2-Tetrachloroethane	ND	0.5	1.000	178739	09/08/11
Ethylbenzene	ND	0.5	1.000	178739	09/08/11
m,p-Xylenes	ND	0.5	1.000	178739	09/08/11
o-Xylene	ND	0.5	1.000	178739	09/08/11
Styrene	ND	0.5	1.000	178739	09/08/11
Bromoform	ND	1.0	1.000	178739	09/08/11
Isopropylbenzene	ND	0.5	1.000	178739	09/08/11
1,1,2,2-Tetrachloroethane	ND	0.5	1.000	178739	09/08/11
1,2,3-Trichloropropane	ND	0.5	1.000	178739	09/08/11
Propylbenzene	ND	0.5	1.000	178739	09/08/11
Bromobenzene	ND	0.5	1.000	178739	09/08/11

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MPE-5	Units:	ug/L
Lab ID:	230771-019	Sampled:	08/31/11
Matrix:	Water	Received:	09/01/11

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,3,5-Trimethylbenzene	0.7	0.5	1.000	178739	09/08/11
2-Chlorotoluene	ND	0.5	1.000	178739	09/08/11
4-Chlorotoluene	ND	0.5	1.000	178739	09/08/11
tert-Butylbenzene	2.7	0.5	1.000	178739	09/08/11
1,2,4-Trimethylbenzene	2.6	0.5	1.000	178739	09/08/11
sec-Butylbenzene	6.0	0.5	1.000	178739	09/08/11
para-Isopropyl Toluene	0.8	0.5	1.000	178739	09/08/11
1,3-Dichlorobenzene	ND	0.5	1.000	178739	09/08/11
1,4-Dichlorobenzene	ND	0.5	1.000	178739	09/08/11
n-Butylbenzene	ND	0.5	1.000	178739	09/08/11
1,2-Dichlorobenzene	ND	0.5	1.000	178739	09/08/11
1,2-Dibromo-3-Chloropropane	ND	2.0	1.000	178739	09/08/11
1,2,4-Trichlorobenzene	ND	0.5	1.000	178739	09/08/11
Hexachlorobutadiene	ND	2.0	1.000	178739	09/08/11
Naphthalene	ND	2.0	1.000	178739	09/08/11
1,2,3-Trichlorobenzene	ND	0.5	1.000	178739	09/08/11

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	103	80-127	1.000	178739	09/08/11
1,2-Dichloroethane-d4	108	73-145	1.000	178739	09/08/11
Toluene-d8	101	80-120	1.000	178739	09/08/11
Bromofluorobenzene	144 *	80-120	1.000	178739	09/08/11

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit



**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178664
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Type: BS Lab ID: QC607763

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	156.3	103.7 b	66	46-141
Isopropyl Ether (DIPE)	31.25	21.70	69	52-139
Ethyl tert-Butyl Ether (ETBE)	31.25	23.57	75	56-131
Methyl tert-Amyl Ether (TAME)	31.25	27.67	89	65-120
1,1-Dichloroethene	31.25	25.05	80	64-133
Benzene	31.25	32.62	104	80-122
Trichloroethene	31.25	28.95	93	78-120
Toluene	31.25	32.37	104	80-120
Chlorobenzene	31.25	31.93	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-127
1,2-Dichloroethane-d4	92	73-145
Toluene-d8	108	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC607764

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	156.3	107.2 b	69	46-141	3	31
Isopropyl Ether (DIPE)	31.25	21.62	69	52-139	0	20
Ethyl tert-Butyl Ether (ETBE)	31.25	23.99	77	56-131	2	20
Methyl tert-Amyl Ether (TAME)	31.25	27.97	89	65-120	1	20
1,1-Dichloroethene	31.25	28.79	92	64-133	14	20
Benzene	31.25	34.46	110	80-122	5	20
Trichloroethene	31.25	30.61	98	78-120	6	20
Toluene	31.25	35.47	114	80-120	9	20
Chlorobenzene	31.25	33.77	108	80-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	93	73-145
Toluene-d8	112	80-120
Bromofluorobenzene	100	80-120

b= See narrative  
 RPD= Relative Percent Difference  
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## Batch QC Report

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC607765	Batch#:	178664
Matrix:	Water	Analyzed:	09/07/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC607765	Batch#:	178664
Matrix:	Water	Analyzed:	09/07/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	103	80-127
1,2-Dichloroethane-d4	97	73-145
Toluene-d8	112	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178708
Units:	ug/L	Analyzed:	09/07/11
Diln Fac:	1.000		

Type: BS Lab ID: QC607963

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	142.4	114	46-141
Isopropyl Ether (DIPE)	25.00	27.01	108	52-139
Ethyl tert-Butyl Ether (ETBE)	25.00	28.57	114	56-131
Methyl tert-Amyl Ether (TAME)	25.00	25.42	102	65-120
1,1-Dichloroethene	25.00	26.13	105	64-133
Benzene	25.00	26.17	105	80-122
Trichloroethene	25.00	25.23	101	78-120
Toluene	25.00	24.50	98	80-120
Chlorobenzene	25.00	24.58	98	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-127
1,2-Dichloroethane-d4	114	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC607964

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	143.1	114	46-141	0	31
Isopropyl Ether (DIPE)	25.00	26.69	107	52-139	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	27.91	112	56-131	2	20
Methyl tert-Amyl Ether (TAME)	25.00	25.12	100	65-120	1	20
1,1-Dichloroethene	25.00	24.91	100	64-133	5	20
Benzene	25.00	24.68	99	80-122	6	20
Trichloroethene	25.00	24.43	98	78-120	3	20
Toluene	25.00	23.85	95	80-120	3	20
Chlorobenzene	25.00	23.73	95	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	113	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC607965	Batch#:	178708
Matrix:	Water	Analyzed:	09/07/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC607965	Batch#:	178708
Matrix:	Water	Analyzed:	09/07/11
Units:	ug/L		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	116	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178739
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608093

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	92.91	74	46-141
Isopropyl Ether (DIPE)	25.00	21.55	86	52-139
Ethyl tert-Butyl Ether (ETBE)	25.00	21.50	86	56-131
Methyl tert-Amyl Ether (TAME)	25.00	22.57	90	65-120
1,1-Dichloroethene	25.00	22.22	89	64-133
Benzene	25.00	24.71	99	80-122
Trichloroethene	25.00	22.37	89	78-120
Toluene	25.00	24.16	97	80-120
Chlorobenzene	25.00	24.30	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	104	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC608094

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	111.1	89	46-141	18	31
Isopropyl Ether (DIPE)	25.00	24.20	97	52-139	12	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.55	102	56-131	17	20
Methyl tert-Amyl Ether (TAME)	25.00	22.98	92	65-120	2	20
1,1-Dichloroethene	25.00	25.28	101	64-133	13	20
Benzene	25.00	25.40	102	80-122	3	20
Trichloroethene	25.00	23.16	93	78-120	3	20
Toluene	25.00	25.41	102	80-120	5	20
Chlorobenzene	25.00	24.51	98	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608095	Batch#:	178739
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit



## Batch QC Report

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608095	Batch#:	178739
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178743
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608106

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	156.3	110.4	71	46-141
Isopropyl Ether (DIPE)	31.25	21.92	70	52-139
Ethyl tert-Butyl Ether (ETBE)	31.25	24.32	78	56-131
Methyl tert-Amyl Ether (TAME)	31.25	28.65	92	65-120
1,1-Dichloroethene	31.25	27.70	89	64-133
Benzene	31.25	32.72	105	80-122
Trichloroethene	31.25	29.37	94	78-120
Toluene	31.25	32.34	103	80-120
Chlorobenzene	31.25	32.95	105	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	85	73-145
Toluene-d8	104	80-120
Bromofluorobenzene	93	80-120

Type: BSD Lab ID: QC608107

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	156.3	112.6	72	46-141	2	31
Isopropyl Ether (DIPE)	31.25	21.42	69	52-139	2	20
Ethyl tert-Butyl Ether (ETBE)	31.25	24.66	79	56-131	1	20
Methyl tert-Amyl Ether (TAME)	31.25	26.28	84	65-120	9	20
1,1-Dichloroethene	31.25	28.60	92	64-133	3	20
Benzene	31.25	30.35	97	80-122	8	20
Trichloroethene	31.25	28.30	91	78-120	4	20
Toluene	31.25	33.03	106	80-120	2	20
Chlorobenzene	31.25	32.57	104	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	77	73-145
Toluene-d8	109	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608108	Batch#:	178743
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608108	Batch#:	178743
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	83	73-145
Toluene-d8	111	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608116	Batch#:	178739
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608116	Batch#:	178739
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	104	80-127
1,2-Dichloroethane-d4	112	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608136	Batch#:	178751
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608136	Batch#:	178751
Matrix:	Water	Analyzed:	09/08/11
Units:	ug/L		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-127
1,2-Dichloroethane-d4	117	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected  
 RL= Reporting Limit



**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178751
Units:	ug/L	Analyzed:	09/08/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608137

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	109.6	110	46-141
Isopropyl Ether (DIPE)	20.00	21.06	105	52-139
Ethyl tert-Butyl Ether (ETBE)	20.00	22.38	112	56-131
Methyl tert-Amyl Ether (TAME)	20.00	19.56	98	65-120
1,1-Dichloroethene	20.00	21.29	106	64-133
Benzene	20.00	20.68	103	80-122
Trichloroethene	20.00	20.42	102	78-120
Toluene	20.00	19.47	97	80-120
Chlorobenzene	20.00	19.48	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	114	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC608138

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	105.3	105	46-141	4	31
Isopropyl Ether (DIPE)	20.00	21.08	105	52-139	0	20
Ethyl tert-Butyl Ether (ETBE)	20.00	23.91	120	56-131	7	20
Methyl tert-Amyl Ether (TAME)	20.00	19.38	97	65-120	1	20
1,1-Dichloroethene	20.00	20.30	101	64-133	5	20
Benzene	20.00	19.87	99	80-122	4	20
Trichloroethene	20.00	19.55	98	78-120	4	20
Toluene	20.00	19.33	97	80-120	1	20
Chlorobenzene	20.00	19.43	97	80-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	113	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178790
Units:	ug/L	Analyzed:	09/09/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608326

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	94.75	95	46-141
Isopropyl Ether (DIPE)	20.00	18.97	95	52-139
Ethyl tert-Butyl Ether (ETBE)	20.00	19.91	100	56-131
Methyl tert-Amyl Ether (TAME)	20.00	18.08	90	65-120
1,1-Dichloroethene	20.00	18.60	93	64-133
Benzene	20.00	18.91	95	80-122
Trichloroethene	20.00	19.21	96	78-120
Toluene	20.00	20.17	101	80-120
Chlorobenzene	20.00	19.76	99	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	97	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC608327

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	89.43	89	46-141	6	31
Isopropyl Ether (DIPE)	20.00	20.49	102	52-139	8	20
Ethyl tert-Butyl Ether (ETBE)	20.00	21.08	105	56-131	6	20
Methyl tert-Amyl Ether (TAME)	20.00	18.74	94	65-120	4	20
1,1-Dichloroethene	20.00	17.41	87	64-133	7	20
Benzene	20.00	19.25	96	80-122	2	20
Trichloroethene	20.00	18.37	92	78-120	4	20
Toluene	20.00	19.59	98	80-120	3	20
Chlorobenzene	20.00	19.08	95	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-127
1,2-Dichloroethane-d4	103	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

RPD= Relative Percent Difference

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608328	Batch#:	178790
Matrix:	Water	Analyzed:	09/09/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608328	Batch#:	178790
Matrix:	Water	Analyzed:	09/09/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	104	73-145
Toluene-d8	96	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178841
Units:	ug/L	Analyzed:	09/12/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608560

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	100.7	81	46-141
Isopropyl Ether (DIPE)	25.00	21.11	84	52-139
Ethyl tert-Butyl Ether (ETBE)	25.00	21.75	87	56-131
Methyl tert-Amyl Ether (TAME)	25.00	22.03	88	65-120
1,1-Dichloroethene	25.00	25.91	104	64-133
Benzene	25.00	25.64	103	80-122
Trichloroethene	25.00	24.27	97	78-120
Toluene	25.00	25.26	101	80-120
Chlorobenzene	25.00	25.09	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	97	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-120

Type: BSD Lab ID: QC608561

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	91.42	73	46-141	10	31
Isopropyl Ether (DIPE)	25.00	19.33	77	52-139	9	20
Ethyl tert-Butyl Ether (ETBE)	25.00	19.98	80	56-131	8	20
Methyl tert-Amyl Ether (TAME)	25.00	19.86	79	65-120	10	20
1,1-Dichloroethene	25.00	24.06	96	64-133	7	20
Benzene	25.00	23.30	93	80-122	10	20
Trichloroethene	25.00	22.54	90	78-120	7	20
Toluene	25.00	23.69	95	80-120	6	20
Chlorobenzene	25.00	24.00	96	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	94	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	93	80-120

RPD= Relative Percent Difference

## Batch QC Report

Volatile Organics			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608667	Batch#:	178841
Matrix:	Water	Analyzed:	09/12/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.6 b	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5

b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Volatile Organics</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608667	Batch#:	178841
Matrix:	Water	Analyzed:	09/12/11
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	94	80-127
1,2-Dichloroethane-d4	92	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-120

b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

<b>Dissolved Gases</b>			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2511	Analysis:	RSK-175
Analyte:	Methane	Diln Fac:	1.000
Matrix:	Water	Received:	09/01/11
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Batch#	Sampled	Analyzed
GW-2	SAMPLE	230771-001	ND	0.0050	178647	08/29/11	09/06/11
GW-3	SAMPLE	230771-002	0.35	0.0050	178647	08/29/11	09/06/11
MW-11	SAMPLE	230771-003	ND	0.0050	178647	08/29/11	09/06/11
LFR-1	SAMPLE	230771-004	ND	0.0050	178647	08/29/11	09/06/11
LFR-2	SAMPLE	230771-005	9.4	0.0050	178647	08/29/11	09/06/11
LFR-3	SAMPLE	230771-006	ND	0.0050	178647	08/30/11	09/06/11
LFR-4	SAMPLE	230771-007	2.8	0.0050	178647	08/31/11	09/06/11
SOMA-1	SAMPLE	230771-008	0.37	0.0050	178647	08/29/11	09/06/11
SOMA-2	SAMPLE	230771-009	1.0	0.0050	178647	08/30/11	09/06/11
SOMA-3	SAMPLE	230771-010	0.51	0.0050	178647	08/30/11	09/06/11
SOMA-4R	SAMPLE	230771-011	0.68	0.0050	178647	08/30/11	09/06/11
SOMA-5	SAMPLE	230771-012	0.42	0.0050	178647	08/30/11	09/06/11
B-8R	SAMPLE	230771-013	4.3	0.0050	178647	08/31/11	09/06/11
B-10R	SAMPLE	230771-014	1.6	0.0050	178647	08/30/11	09/06/11
MPE-1	SAMPLE	230771-015	0.034	0.0050	178647	08/30/11	09/06/11
MPE-2	SAMPLE	230771-016	2.3	0.0050	178647	08/31/11	09/06/11
MPE-3	SAMPLE	230771-017	6.9	0.0050	178700	08/31/11	09/07/11
MPE-4	SAMPLE	230771-018	2.5	0.0050	178700	08/30/11	09/07/11
MPE-5	SAMPLE	230771-019	6.6	0.0050	178700	08/31/11	09/07/11
	BLANK	QC607708	ND	0.0050	178647		09/06/11
	BLANK	QC607932	ND	0.0050	178700		09/07/11

ND= Not Detected  
 RL= Reporting Limit



## Batch QC Report

Dissolved Gases			
Lab #:	230771	Location:	3820 Manila Ave., Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2511	Analysis:	RSK-175
Analyte:	Methane	Units:	mg/L
Matrix:	Water	Diln Fac:	1.000

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim	Batch#	Analyzed
BS	QC607706	0.6544	0.6793	104	77-120			178647	09/06/11
BSD	QC607707	0.6544	0.6307	96	77-120	7	20	178647	09/06/11
BS	QC607930	0.6544	0.6243	95	77-120			178700	09/07/11
BSD	QC607931	0.6544	0.6519	100	77-120	4	20	178700	09/07/11

RPD= Relative Percent Difference