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Fourth Quarter 2002
Groundwater Monitoring Report
Former Glovatorium Facility

3815 Broadway
Oakland, California

December 3, 2002

Project 01-2511

Prepared for
Smiland and Khachigian
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Prepared by
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December 4, 2002

Alameda County
DEC 09 2002
Environmental Health

Project: 01-2510

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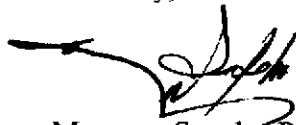
Subject: Site Located at 3815 Broadway, Oakland, California
Former Glovatorium Facility

Dear Mr. Seery:

Enclosed for your review is a copy of SOMA's "Fourth Quarter 2002 Groundwater Monitoring Report" for the subject property.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 244-6600, if you have any questions or comments.

Sincerely,



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



Enclosure

cc: Mr. Stuart Depper, Clean Tech Machinery w/enclosure
Mr. Albert M. Cohen, Smiland & Khachigian w/enclosure
Ms. Betty Graham, Regional Water Quality Control Board w/enclosure
Dr. Bruce Page, Bruce W. Page Consulting w/enclosure

Alameda County

DEC 09 2002

Certification

Environmental Health

This report has been prepared by SOMA Environmental Engineering, Inc. for Smiland & Khachigian, to comply with the Alameda County Department of Environmental Health's requirements for the Fourth Quarter 2002 groundwater monitoring event and to provide information necessary to defend claims brought against the owners by Earl Thompson and Grace Johnson.



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



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1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) for the Law Offices of Smiland and Khachigian on behalf of their client, the owners of the former Glovatorium. The property, the former Glovatorium, is located at 3815 Broadway Avenue, Oakland, California (the "Site"), as illustrated in Figure 1. The Site is located in an area consisting primarily of commercial and residential uses.

This report summarizes the results of the Fourth Quarter 2002 groundwater monitoring event conducted at the Site on October 22 and 23, 2002 by SOMA, including the results of the laboratory analyses of the groundwater samples, which were analyzed for:

- Total petroleum hydrocarbons as gasoline (TPH-g), and as Stoddard solvents (TPH-ss) using EPA Method 8015;
- Volatile organic compounds (VOCs) using EPA Method 8260B;
- Benzene, toluene, ethylbenzene, total xylenes (collectively referred to as BTEX), and Methyl tertiary Butyl Ether (MtBE) using EPA Method 8021B.

In addition to the above laboratory analyses, the natural attenuation study which was initiated by Levine-Fricke Recon (LFR) in the Third Quarter of 2000 continued during this monitoring event. The objective of the natural attenuation study was to evaluate whether or not tetrachloroethene (PCE) and other VOCs found in the groundwater were biodegrading. Therefore, the groundwater samples collected during this monitoring event were analyzed for common electron acceptors and other geochemical indicators, and the results are described in this report.

These activities were performed in accordance with the general guidelines of the

Regional Water Quality Control Board (RWQCB) and the Alameda County Environmental Health Services (ACEHS).

This work is needed to determine the nature and extent of the environmental contamination, and thus whether contamination is affecting the neighboring Thompson property. This information is needed to defend against the claim Mr. Thompson brought against Glovatorium and the Deppers. This work may also provide data that could help determine when releases occurred, which is also significant in defending against the claims brought by a former owner of the property, Ms. Johnson.

1.1 Site Description

The Site is located between Manila Avenue and Broadway, near the intersection of 38th Street in Oakland, California. The ground surface at the Site is covered with concrete and asphalt and slopes gently southwest, with surface elevations ranging from approximately 78 to 84 feet above mean sea level (msl).

A 54-inch inside-diameter storm drain culvert passes under the property, from Manila Avenue on the west to 38th Street on the south (see 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 GW-4.

In addition to a storm drain system, a 10-inch diameter cast iron sanitary sewer conduit runs in a westerly direction from the on-site building and discharges into the sanitary sewer line, which runs north to south along Manila Avenue. The floor drain inside the building is less than 2 feet bgs. However, the depth of the sanitary sewer line inside the building gradually increases and then slopes more steeply downward near the western wall of the building, where it plunges

underneath the 54-inch storm drain (LFR, January 2001). Figure 2 shows the location of the storm drain and sanitary sewer system.

Reportedly, there were six underground storage tanks (USTs) at the Site. Two USTs were located under the sidewalk on 38th Street and four USTs were located inside the building. The volumes of the USTs have been variously reported as ranging from 800 gallons to 5,000 gallons. They reportedly contained Stoddard solvent, fuel oil and possibly waste oil. In August 1997, the six USTs were abandoned in-place by backfilling with either cement-sand slurry or pea gravel. In addition, there are four USTs owned by Earl Thompson, Sr., under the sidewalk on 38th Street, see Figure 2.

The surrounding properties are primarily commercial, businesses and residential housing. TOSCO Marketing Company (TOSCO) is located north and upgradient of the Site, at 40th Street and Broadway and contains a number of groundwater monitoring wells. Figure 2 shows the location of the main building, fuel tank areas, and the on-site and off-site groundwater monitoring wells. The groundwater monitoring wells are currently monitored on a quarterly basis. Past groundwater monitoring events have indicated the presence of VOCs and petroleum hydrocarbons in the groundwater beneath the Site. The source of the VOCs and Stoddard solvent is believed to be the former USTs, which were used to store Stoddard solvent and VOCs at the Site. There also has been testimony in the on-going litigation concerning the Site that there were releases from the piping on the washer system and from washing the floors with Stoddard solvent. This report includes both the results of the historical groundwater monitoring events and the results of the Fourth Quarter 2002 groundwater monitoring event.

1.2 Background

The following is a brief description of previous Site investigations conducted by

other environmental firms.

In August 1997, Geosolv, LLC (Geosolv) initiated the first soil and groundwater investigation at the Site. Geosolv drilled fourteen soil borings to the approximate depths of 10 to 24 feet bgs using the direct push method. Seven of the soil borings (B-2, B-3, B-7 through B-10 and B-13; see Figure 2) were converted into temporary groundwater monitoring wells where grab groundwater samples were collected. In September 1998, Geosolv conducted further soil and groundwater investigations by drilling twelve additional soil borings to the approximate depths of 19 to 25 feet bgs. All of the twelve soil borings were converted into temporary groundwater sampling points, and are labeled E-15 through E-26. After collecting grab groundwater samples from the temporary "E" sampling points, they were abandoned and grouted.

In July 1999, based on the request of the ACEHS, an investigation of potential groundwater preferential flow paths was initiated by LFR. LFR drilled ten soil borings (GW-1 through GW-8, GW-5A, and GW-6A) primarily along the 54-inch diameter storm drain and sanitary sewer systems to depths ranging from 8 to 20 feet bgs using a direct push drilling method. During drilling operations, soil samples were collected from various depth intervals. In August 1999, LFR collected grab groundwater samples from seven of the nine "GW" wells.

In January and April 2000, LFR conducted quarterly groundwater monitoring events at the Site. During the groundwater monitoring events, groundwater elevations were measured in the temporary sampling points installed by LFR and Geosolv, and in off-site wells MW-8, MW-9 and MW-11 owned by TOSCO. Groundwater samples were collected from the temporary sampling points installed by LFR and from off-site well MW-11.

In July and August 2000, LFR installed four groundwater monitoring wells,

namely LFR-1 through LFR-4, and conducted the Third Quarter 2000 groundwater monitoring event. This was the first sampling event in which bioattenuation parameters were collected. The measured bioattenuation parameters included: dissolved oxygen (DO), nitrate (NO_3^-), sulfate (SO_4^{-2}), ferrous iron (Fe^{+2}), total iron, methane, oxidation-reduction potential (ORP), alkalinity, chloride, carbon dioxide, nitrite, sulfide, ethene, and ethane. The bioattenuation parameters provided a baseline for these parameters and a means to compare their concentrations at locations within the apparent source area against surrounding up-gradient, down-gradient, and cross-gradient locations. During this monitoring event, groundwater elevations were measured and groundwater samples were collected from the newly installed groundwater monitoring wells (LFR-1 through LFR-4), from temporary sampling points installed by LFR and Geosolv, and from off-site monitoring wells MW-8, MW-9, and MW-11 owned by TOSCO. However, no groundwater samples were collected from MW-8 or MW-9.

In late October and early November 2000, LFR conducted the Fourth Quarter 2000 groundwater monitoring event, including another bioattenuation study. During the fourth quarter monitoring event, LFR sampled nine groundwater monitoring wells and temporary groundwater sampling points and measured groundwater elevations in nineteen groundwater monitoring wells and temporary sampling points (LFR, January 2001).

Well completion details for the LFR wells and the Geosolv sampling points are presented in Table 1.

In late January, LFR conducted the First Quarter 2001 groundwater monitoring event. However, SOMA prepared the First Quarter 2001 monitoring report (SOMA, May 2001). The results of the First Quarter 2001 groundwater monitoring event suggested the occurrence of strong anaerobic biodegradation

activities and dechlorination of PCE beneath the Site.

The Second Quarter 2001 groundwater monitoring event was conducted by SOMA on April 26 and 27, 2001 and reported on July 5, 2001. During this period certain bioattenuation data, which proved to be less useful, were not collected. The results of the Second Quarter 2001 monitoring event indicated a strong occurrence of the dechlorination process of PCE in the subsurface.

The Third Quarter 2001 groundwater monitoring event was conducted by SOMA on July 26 and 27, 2001. During this monitoring event ten groundwater monitoring wells were sampled and depths to groundwater were measured in 20 groundwater monitoring wells and temporary sampling points. To better evaluate the bioattenuation parameters including DO, SOMA recommended replacing the existing small diameter monitoring wells B-7 and B-10 with larger diameter wells as proposed in the SOMA's June 15, 2001 Workplan.

After receiving approval of the workplan on August 27, 2001, SOMA installed five groundwater monitoring wells, SOMA-1 through SOMA-5, at the Site on October 4, 11 and 12, 2001. During the installation of the groundwater monitoring wells, boreholes were continuously logged and soil samples were collected at 5-foot depth intervals. The objective of this investigation was to delineate the vertical extent of soil and groundwater contamination and install larger diameter monitoring wells at the suspected chemical source areas in order to collect more reliable bioattenuation parameters (i. e., DO) in the groundwater.

The Third Quarter 2001 groundwater monitoring event was conducted by SOMA on October 18 and 19, 2001. During this monitoring event eleven groundwater monitoring wells were sampled and depths to groundwater were measured in 20 groundwater monitoring wells and temporary sampling points.

The First Quarter 2002 groundwater monitoring event was conducted by SOMA on January 30 and 31, 2002. During this monitoring event eleven groundwater monitoring wells were sampled, depths to groundwater and free product were measured in 23 groundwater monitoring wells and temporary sampling points.

The Second Quarter 2002 groundwater monitoring event was conducted by SOMA on April 16 and 17, 2002. During this monitoring event 11 groundwater monitoring wells were sampled, depths to groundwater and free product were measured in 22 groundwater monitoring wells and temporary sampling points.

The Third Quarter 2002 groundwater monitoring event was conducted by SOMA on July 17 and 18, 2002. During this monitoring event, 11 groundwater monitoring wells were sampled, depths to groundwater and free product were measured in 23 wells and temporary sampling points.

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's vicinity consist of Holocene alluvial deposits that are 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 (LFR, 2001).

According to LFR, sediments encountered in soil borings at the Site are typical of those encountered in an alluvial fan depositional environment. The sediments 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 at depths of 17 to 21 bgs in borings B-11, E-23, E-25, GW-7 and GW-8.

Based on the October 2001 results of the field investigation conducted by SOMA, no major water-bearing zone at a deeper depth was encountered. However, as the lithological 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 in some locations are unsaturated. 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.

According to the results of historical groundwater monitoring activities, groundwater occurs at 4 to 14 feet bgs. Based on the current and previous groundwater monitoring reports, groundwater flows from the northeast to the southwest with an approximate groundwater flow gradient of 0.019 ft/ft to 0.035 ft/ft. The results of the slug tests indicated that the hydraulic conductivity of the saturated sediments ranges between 1.2×10^{-4} and 6.9×10^{-4} cm/sec, which is equivalent to 0.34 ft/day to 1.95 ft/day. 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.

2.0 FIELD ACTIVITIES

Field activities were conducted on October 22 and 23, 2002, during which 11 groundwater monitoring wells were sampled. Depth to water levels and product thickness were measured in 24 groundwater monitoring wells and temporary sampling points. Due to the presence of floating product in SOMA-4, this well was not sampled. Figure 2 shows the location of the groundwater monitoring wells and temporary sampling points. Appendix A includes SOMA's site-specific field activities for this groundwater monitoring event.

On October 22, 2002, SOMA's field crew measured the 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 data at each groundwater monitoring well were used to calculate the groundwater elevation.

Prior to collecting samples, each well was purged using a battery operated 2-inch diameter pump (Model ES-60 DC). Groundwater parameters such as pH, temperature, electric conductivity (EC), DO, turbidity and ORP were measured in-situ using a Horiba, Model U-22 multi-parameter meter during the purging of the wells. 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, EC, DO, turbidity, and ORP stabilized, or three casing volumes were purged. The groundwater samples were also tested on-site for nitrate, sulfate, total iron, ferrous iron and dissolved manganese concentrations once stabilization occurred.

Nitrate, sulfate, total iron, ferrous iron and dissolved manganese were measured colorimetrically using the Hach Colorimeter Model 890. The Hach Model 890 Colorimeter is a microprocessor-controlled photometer suitable for colorimetric testing in the laboratory or the field. The required reagents for each specific test were provided in AccuVac ampuls.

Nitrate was measured colorimetrically using Method 8039, the Cadmium Reduction Method. Cadmium metal in the Nitra Ver 5 Nitrate Reagent reduces nitrates present in the sample to nitrite; the nitrite ion reacts in an acidic medium with sulfanilic acid to form an intermediate diazonium salt, which couples with getistic acid to form an amber-colored product. The intensity of the color is proportional to the nitrate concentration in the sample.

Sulfate was measured colorimetrically using Method 8051 of Sulfa Ver 4 Method. Sulfate ions in the sample react with barium in the Sulfa Ver 4 Sulfate Reagent to form insoluble barium sulfate. The amount of turbidity formed is proportional to the sulfate concentration. The Sulfa Ver 4 also contains a stabilizing agent to hold the barium sulfate in suspension.

Ferrous iron was measured colorimetrically using Method 8146 (1,10-phenanthroline Method). The 1,10-phenanthroline indicator in the ferrous iron reagent reacts with Fe^{+2} in the sample to form an orange color. The intensity of the orange color is proportional to the iron concentration.

Total iron was measured colorimetrically using Method 8008. The FerroVer Iron Reagent reacts with all soluble and most insoluble forms of iron in the sample to produce soluble ferrous iron. This reacts with the 1,10-phenanthroline indicator in the reagent to form an orange color in proportion to the iron concentration.

Dissolved manganese was measured colorimetrically using Method 8034, the

Periodate Oxidation Method. Manganese in the sample is oxidized to the purple permanganate state by sodium periodate, after buffering the sample with citrate. The purple color that develops as a result of this reaction is directly proportional to the manganese concentration.

For sampling purposes, after purging, a disposable polyethylene bailer was used to collect sufficient samples from each monitoring well for laboratory analyses. The groundwater sample was transferred to four 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 (COC) form was written and placed with the samples in the cooler. SOMA's field crew delivered the samples to Curtis & Tompkins, Ltd. Laboratory in Berkeley, California on October 23, 2002. Samples for methane analysis were placed in a cooler and maintained at 9°C. These samples were sent to Microseeps Laboratory on October 23, 2002.

2.1 Laboratory Analysis

Curtis & Tompkins, Ltd., a state certified laboratory, analyzed the groundwater samples for TPH-g, TPH-ss, BTEX, MtBE, and VOCs. TPH-g and TPH-ss were prepared using EPA Method 5030B and measured using EPA Method 8015B(M). BTEX, MtBE, and VOCs were prepared using EPA Method 5030B and analyzed using EPA Method 8260B. Methane analysis of the groundwater samples were conducted by Microseeps Laboratory.

3.0 Results

This section describes the results of the Fourth Quarter 2002 groundwater monitoring event. It includes groundwater flow conditions, the status of

groundwater contamination, and the occurrence of bioattenuation in the subsurface.

3.1 Groundwater Flow Condition

Table 2 presents the calculated groundwater elevations at each well. Depths to water and the elevation at the top of the well casings were used to calculate groundwater elevations. As shown in Table 2, depths to groundwater ranged from 8.80 feet in B-2 to 22.07 feet in monitoring well SOMA-5. The corresponding groundwater elevations ranged from 59.43 feet in monitoring well SOMA-5 to 76.89 feet in MW-8. Table 3 shows the historical water level elevations at different groundwater monitoring wells. The groundwater elevations differs only slightly from measurements recorded during the Third Quarter 2002 monitoring event.

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

1. No accurate information about the construction details of the "B" wells installed by Geosolv is available, therefore water level data from these wells are questionable.
2. GW-4 was installed adjacent to the storm drain system in order to evaluate whether or not the storm drain 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 zone

and due to the strong vertical gradient, the water level elevation in the deeper zone is significantly lower than the shallow water-bearing zone.

4. Due to the presence of free product in SOMA-4 (6.98 feet on October 14, 2002), the recorded water level elevation in this well is not representative of the shallow water-bearing zone.

The water level elevation in SOMA-2 closely matches the water level elevation of the other groundwater monitoring well within the source area, therefore, it was used in drawing the water level elevation contour map.

As in the three previous monitoring events, groundwater was encountered in SOMA-5. However, the well could not be sampled due to insufficient groundwater volume. SOMA-5 has been completed within the intervening clay layers below the first water-bearing zone.

Figure 3 displays a contour map of groundwater elevations. As Figure 3 shows, during the recent monitoring event, the groundwater was found to flow from the northeast to southwest at an average gradient of 0.036 ft/ft. This is consistent with the findings of previous monitoring events. It should be noted that our knowledge of the groundwater flow direction does not extend beyond LFR-3, the most downgradient groundwater monitoring well.

The field measurements of some physical and chemical parameters of the groundwater samples are presented in detail in the field notes in Appendix A, and are summarized in Table 4, along with their historical values. Water temperatures ranged from 16.44°C in SOMA-3 to 20.81°C in MW-11. The variation in temperature may reflect the changes in air temperature during sampling. The temperature measurements allowed the field crew to make corrections to the pH, EC, and DO measurements. Measurements of pH ranged from 6.32 in LRF-3 to

7.02 in SOMA-3. The EC measurements ranged from 425 $\mu\text{S}/\text{cm}$ in GW-3 to 1380 $\mu\text{S}/\text{cm}$ in SOMA-2.

3.2 Groundwater Quality

Table 5 displays the results of the laboratory analyses for TPH-ss, TPH-g, MtBE and BTEX. As shown in Table 5, TPH-ss was detected underneath the Site in GW-3, GW-4, LFR-2, LFR-4, SOMA-2 and SOMA-3. Detectable TPH-ss levels ranged from 110 $\mu\text{g}/\text{L}$ in GW-3 and LFR-4 to 3,100 $\mu\text{g}/\text{L}$ in LFR-2. A contour map of TPH-ss concentrations in groundwater is shown in Figure 4. TPH-g was detected in eight of the eleven wells sampled. TPH-g levels in GW-2, MW-11 and LFR-3 were below the laboratory reporting limits. Detectable TPH-g concentrations ranged from 53 $\mu\text{g}/\text{L}$ in SOMA-3 to 5,000 $\mu\text{g}/\text{L}$ in LFR-2. LFR-2 was found to have both the highest TPH-g and TPH-ss concentrations. A contour map of TPH-g concentrations in groundwater is shown in Figure 5.

During this groundwater monitoring event, MtBE was detected in LFR-4, SOMA-1 and SOMA-2 at 8.0 $\mu\text{g}/\text{L}$, 140 $\mu\text{g}/\text{L}$ and 300 $\mu\text{g}/\text{L}$, respectively. MtBE concentrations in the other eight wells sampled were below the laboratory reporting limit. Figure 6 shows a contour map of MtBE concentrations below the Site.

In all the wells that were sampled, BTEX were not detected above the laboratory reporting limits. A contour map of benzene is not presented due to the non-detectable results underneath the Site.

Table 6 shows the historical analytical results for total petroleum hydrocarbons, MtBE and BTEX. Since the Third Quarter 2002 monitoring event, the following trends were observed: BTEX concentrations have remained non-detectable in all the wells, with the exception of benzene in LFR-4. The benzene concentration in LFR-4 has slightly decreased since the previous quarter. TPH-ss and TPH-g

concentrations have remained non-detectable in GW-2, MW-11, and LFR-3. TPH-ss and TPH-g concentrations have increased in GW-3, LFR-2 and SOMA-3, but the concentrations decreased in GW-4, LFR-1, LFR-4 and SOMA-2. MtBE concentrations have increased in LFR-4, SOMA-1 and SOMA-2 but remained non-detectable in all the other wells.

Floating product was reported in SOMA-4 during this monitoring event. Based on the results of a recent floating product investigation conducted by SOMA, the extent of free product is limited around SOMA-4 and B-8. On June 11, 2002, SOMA installed a passive skimmer inside SOMA-4 as an interim measure for removing free product from the groundwater. Since then SOMA has monitored the product thickness inside the surrounding monitoring wells B-2, B-3, B-8 and B-9. Table 7 shows the thickness of free product in SOMA-4 and it's surrounding monitoring wells. Based on the results of our observations, the thickness of the free product in SOMA-4 increased from 5.30 feet on October 13, 2002 to 6.98 feet on October 14, 2002. However, the same trend was not observed for the surrounding wells. Free product was not detected in B-2 and B-9. In B-3 and B-8, free product thickness decreased on October 8, 2002 but slightly increased the following week on October 14, 2002. This could be attributed to the groundwater elevations fluctuations and lack of rainfall events during the recent months. Based on a July 12 workplan, on October 1, 2002, SOMA drilled six hydropunches to delineate the extent of floating product around SOMA-4. SOMA's report dated November 19, 2002 presents the results of the latest free product investigation at the Site.

Table 8 shows the concentrations of VOCs in the groundwater during this monitoring event. PCE was detected in five of the eleven wells sampled. The detectable concentrations of PCE ranged from 8.4 µg/L in monitoring well SOMA-1 to 200 µg/L in GW-3. A contour map of PCE concentrations in the groundwater is shown in Figure 7. Trichloroethene (TCE) was detected in only two of the

eleven wells sampled. TCE levels were found to be 8.2 µg/L in SOMA-2 and 24 µg/L in LFR-1. A contour map of TCE is not presented due to insufficient contouring points. Cis-1,2-dichloroethene (cis-1,2-DCE) was detected in LFR-1, LFR-2, SOMA-1, SOMA-2 and SOMA-3 at concentrations of 6.7 µg/L, 66 µg/L, 41 µg/L, 350 µg/L and 5,900 µg/L, respectively. Figure 8 shows a contour maps of cis-1,2-DCE in groundwater. 1,2-Dichloropropane was only detected in monitoring well SOMA-1 at a concentration of 7.0 µg/L. Trans-1,2-Dichloroethene (trans-1,2-DCE), vinyl chloride and 1,1-dichloroethene were below the laboratory detection limits for all wells sampled.

Table 9 shows the historical concentration of VOCs in the groundwater. The following trends in VOC concentrations were observed since the Third Quarter 2002 monitoring event: VOCs remained below the detection limits in GW-4, MW-11, LFR-3 and LFR-4. PCE concentrations increased in GW-2, GW-3, SOMA-1 and SOMA-2, but decreased in LFR-1. TCE decreased in LFR-1 and SOMA-1, but remained non-detectable in all the other wells. Cis-1,2-DCE increased in LFR-2, SOMA-1 and SOMA-3, but decreased in SOMA-2.

3.3 Bioattenuation Parameter Analysis Results

This is the tenth quarterly groundwater monitoring event in which the natural attenuation parameters of groundwater were studied. The objective of the bioattenuation study is to evaluate whether intrinsic bioremediation processes are active at the Site. The results of this study indicated that PCE and other dissolved organic compounds are biodegrading beneath the Site.

Like the previous monitoring event, most of the bioattenuation parameters were measured in the field. Only dissolved methane was measured in the laboratory. In addition, DO was measured in-situ by the field crew. Based on Borden (1998) and Sepehr (1999), the ex-situ measurement of natural gases such as DO may

introduce oxygen into the groundwater sample and result in certain errors. Therefore, DO was measured in the field inside the casing without collecting a groundwater sample.

During the degradation process, the indigenous bacteria that exist in the subsurface consume electron acceptors such as DO. After the DO is consumed, anaerobic microorganisms typically use alternative electron acceptors in the following order of preference: nitrate, ferric iron, oxyhydroxide, sulfate, and finally, carbon dioxide. Evaluating the distribution of these electron acceptors can provide evidence of where and to what extent chlorinated and aliphatic hydrocarbon biodegradation is occurring. The by-products of the biodegradation processes are nitrite, ferrous iron, alkalinity, sulfide, methane, and carbon dioxide. For evaluation of the bioattenuation processes, groundwater samples were collected during the current groundwater monitoring event and analyzed for selected electron acceptors and the by-products of biodegradation activities, as described below.

Dissolved Oxygen. DO is the most favored electron acceptor used by microbes for the biodegradation of organic compounds. A concentration of DO less than 0.5 mg/L indicates anaerobic conditions. In our experience in-situ measurements of DO yield more realistic results than ex-situ (laboratory) measurements. Significant differences in DO concentrations using in-situ and ex-situ measurements (conducted by Microseep) during the First Quarter 2001 can be attributed to cross contamination by atmospheric air during ex-situ measurement (R. Borden, 1998, M. Sepehr 1999). Therefore, during the recent monitoring events, the DO measurements were conducted in-situ by SOMA's field crew only. DO levels ranged from 0 mg/L to 4.47 mg/L in MW-11. Figure 9 presents the DO concentration contour map in the groundwater using in-situ measurements.

This is the fifth monitoring event in which the new wells (SOMA-1 through SOMA-3) were used for DO measurements. Due to the presence of floating product, no measurements were made at SOMA-4. It should be noted that due to the limitation of the drilling equipment, SOMA-3 still is a ¾ inch diameter well which was installed in the deeper zone within the suspected chemical source area inside the building. Although DO was measured in SOMA-3, the results may not be representative of the subsurface condition due to the small diameter of this well. As the results of field measurements indicate the measured DO in LFR-1, LFR-2, LFR-4, SOMA-1, and SOMA-2 were non-detectable, which seems to be representative of an anaerobic condition within the chemical source area. Table 10 presents the current and historical DO concentrations in the groundwater. Since the previous monitoring event, DO levels have increased in GW-2, MW-11, LFR-3 and SOMA-2; decreased in GW-3, LFR-4 and SOMA-3; and remained unchanged in LFR-1, LFR-2 and SOMA-1.

Nitrate. After DO has been depleted, nitrate may be used as an electron acceptor for anaerobic biodegradation. Nitrate concentrations less than 1.0 mg/L may indicate that reductive dechlorination is occurring. During this monitoring event nitrate was not detected in LFR-1, LFR-3, LFR-4 and SOMA-1. Detectable nitrate concentrations ranged from 0.1 mg/L to 11.5 mg/L in GW-2. Figure 10 shows the nitrate concentration contour map using the field data. Nitrate has increased in GW-2, GW-3, LFR-2, SOMA-2 and SOMA-3, but decreased in MW-11, LFR-1, LFR-3 and SOMA-1 since the Third Quarter 2002 monitoring event.

Manganese. After DO and nitrate have been depleted, manganese may be used as an electron acceptor for anaerobic biodegradation, and therefore, increased dissolved manganese concentrations are indicative of reductive dechlorination. Manganese was not detected in GW-3 and MW-11. Detectable concentrations ranged from 0.4 mg/L in LFR-1 to 10.7 mg/L in LFR-2. Manganese concentrations have increased in LFR-1, LFR-3 and SOMA-1, but decreased in

LFR-2, LFR-4, SOMA-2 and SOMA-3 since the previous monitoring event.

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 the production of sulfide. Sulfate concentrations less than 20 mg/L are indicative of reductive dechlorination (EPA 1998). Sulfate was not detected in, LFR-2, and LFR-4. Detectable sulfate levels ranged from 4 mg/L in SOMA-1 to 69 mg/L in MW-11. Figure 11 shows a contour map of sulfate concentrations in the groundwater using the field data. Sulfate concentrations have increased in LFR-1 and SOMA-2, remained unchanged in LFR-2 and LFR-4, and decreased in all the other wells since the Third Quarter 2002.

Ferrous Iron. Increased ferrous iron accompanies 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. The highest ferrous iron concentrations were found in LFR-2 and SOMA-2 at 3.3 mg/L in each well. Ferrous iron levels ranged from 0 mg/L to 3.3 mg/L. A contour map of ferrous iron concentrations is shown in Figure 12. Ferrous iron concentrations have increased in GW-2 and LFR-1, decreased in GW-3, LFR-2 and SOMA-1 since the previous monitoring event.

Methane. The presence of methane in groundwater is indicative of strongly reduced conditions, and suggests reductive dechlorination by the process of methanogenesis. Methane concentrations ranged from 0.00065 mg/L in GW-3 to 4.7 mg/L in LFR-2. The higher concentrations of methane at the source area, SOMA-2 (2.2 mg/L), SOMA-3 (4.2 mg/L) and LFR-2, indicate conditions that are conducive to anaerobic biodegradation. A contour map of methane concentrations in the groundwater is shown in Figure 13. Methane

concentrations have decreased in all wells, except for SOMA-3, since the previous monitoring event.

Oxygen Reduction Potential. The ORP of groundwater is a measure of electron activity, and is an indicator of the relative tendency of a solution to accept or transfer electrons. ORP may range from greater than 800 mV to less than -400 mV, with lower values expected in areas where anaerobic processes are occurring. ORP measurements obtained in this sampling event ranged from -98 mV in SOMA-2 and SOMA-3 to +265 mV in LFR-1. High values were also found in down-gradient locations at SOMA-1, GW-2, GW-3 and LFR-3. The low values were found in the apparent source area (SOMA-2 and SOMA-3), the cross-gradient well LFR-4 and the down-gradient well LFR-2. These results indicate that conditions in and near the apparent source area are conducive to anaerobic biodegradation.

3.4 Other Parameters

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 nature of data collected during the previous groundwater monitoring events in connection with the bioattenuation process, no alkalinity data was collected during the current and previous groundwater monitoring events.

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

Carbon Dioxide. Carbon dioxide is a product of several biodegradation processes. Due to the inconclusive nature of data collected during the previous groundwater monitoring events in connection with the bioattenuation process, no carbon dioxide data was collected during the 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. Total iron concentrations ranged from 0 mg/L in GW-3 and MW-11 to 3.3 mg/L in LFR-2, SOMA-2, SOMA-3 and LFR-4. Table 4 presents the results of the total iron analysis, and Table 10 presents the results of the ferrous iron analysis.

Nitrite. Nitrate may reduce to nitrite during the process of anaerobic biodegradation. Nitrite concentrations were non-detectable in GW-3, LFR-1, LFR-3, LFR-4 and SOMA-2. Detectable nitrite concentrations ranged from 0.009 mg/L in SOMA-1 to 0.057 mg/L in LFR-2.

Sulfide. When sulfate is used as an electron acceptor for anaerobic biodegradation, it is reduced to sulfide. Due to the inconclusive nature of data collected during the 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 has an effect on the 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. The groundwater temperature affects the 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 4.

Appendix B includes the COC forms and laboratory reports for this, the Fourth Quarter 2002, groundwater monitoring event.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following is a summary of the work performed on October 22 and 23, 2002 and the results of this work.

Groundwater samples and field measurements of physical and chemical parameters were collected from monitoring wells SOMA-1 through SOMA-3, LFR-1 through LFR-4, temporary sampling points GW-2, GW-3, GW-4, and from well MW-11. Measurements of pH, temperature, electric conductivity, turbidity, and bioattenuation parameters were collected in the field. The groundwater samples were analyzed for TPH-ss, TPH-g, MtBE, BTEX, and VOCs.

Groundwater elevations during this monitoring event were found to range from 59.43 feet to 76.89 feet. Groundwater flows from the northeast to southwest at an average gradient of 0.036 ft/ft. This is consistent with the findings of previous monitoring events.

TPH-ss was found in six of the eleven wells sampled. TPH-ss concentrations ranged from 110 µg/L to 3,100 µg/L. TPH-g was found in eight of the eleven wells. TPH-g concentrations were found to range from 53 µg/L to 5,000 µg/L. The maximum concentrations of TPH-ss and TPH-g were detected in LFR-2. MtBE was detected in only three wells. Detectable MtBE concentrations ranged from 8.0 µg/L to 300 µg/L. BTEX concentrations were not detected above the laboratory reporting limits for all wells.

Free product was detected in monitoring well SOMA-4 and in two of the surrounding wells. Based on the measurements taken in October 2002, free product thickness in SOMA-4 seems to be increasing since the previous monitoring event.

PCE was detected in five of the eleven wells and had a concentration range of 8.4 µg/L to 200 µg/L. The maximum level of PCE (200 µg/L) was found in GW-3. TCE was detected in only two wells. The maximum concentration of TCE was 24 µg/L in LFR-1. Cis-1,2-DCE was detected in five wells with a concentration range of 6.7 µg/L to 5,900 µg/L. Cis-1,2-DCE is one of the breakdown products of PCE, its presence in groundwater indicates that reductive dechlorination may be occurring underneath the Site. 1,2-Dichloropropane was only detected in monitoring well SOMA-1 at a concentration of 7.0 µg/L. Trans-1,2-DCE, vinyl chloride, and 1,1-dichloroethene were below the laboratory detection limits for all wells.

This is the tenth quarterly groundwater monitoring event in which bioattenuation parameters were analyzed. Groundwater samples were analyzed for DO, nitrate, manganese, sulfate, total iron, ferrous iron, methane and ORP. Certain parameters such as chloride, carbon dioxide, hydrogen, alkalinity, and sulfide were not measured due to their inconclusive role in the bioattenuation processes at this Site.

4.1 Conclusions

Based on the data obtained during the Fourth Quarter 2002 groundwater monitoring event, our conclusions are as follows:

The furthest down-gradient well, LFR-3 and the furthest up gradient well, MW-11,

contained no detectable concentrations of VOCs, TPH-g, TPH-ss, MtBE and BTEX.

The data collected to date regarding the distribution of PCE and other VOCs in the groundwater indicate that PCE has been degraded into some of its breakdown products. PCE typically degrades into TCE, then cis-1,2-DCE and trans-1,2-DCE (at much lower concentrations than cis-1,2-DCE), then to vinyl chloride, ethane and ethene and finally carbon dioxide, water, and chloride. This sequence of degradation would be anticipated where the biological reductive dehalogenation of PCE is occurring. Some of these breakdown products and relative concentrations are present at the Site. The presence of TCE in the apparent source area wells LFR-1 and SOMA-2 during the current sampling event indicates that PCE degradation is occurring. The presence of relatively high concentrations of cis-1,2-DCE in SOMA-2 and SOMA-3 and its presence in other wells such as LFR-1 and LFR-2 is also indicative of biodegradation.

The results of DO, nitrate, manganese, sulfate, ferrous iron, methane, and ORP measurements indicate that conditions in the apparent source area are conducive to the reductive dechlorination processes.

DO concentrations of approximately less than 1.0 mg/L in the groundwater are indicative of anaerobic biodegradation conditions. During this groundwater monitoring event, anaerobic conditions were detected in SOMA-1 through SOMA-3 and LFR-1 through LFR-4. In the past several monitoring events, results indicated that conditions in the apparent source area were conducive to the anaerobic biodegradation processes. It appears that in-situ DO measurements in the newly installed monitoring wells SOMA-2 and SOMA-3 within the chemical source are more representative of actual anaerobic conditions in this area. This improvement over previous monitoring events was due to the replacement of B-7 and B-10 with the newly installed monitoring wells SOMA-2, and SOMA-3.

Relatively low concentrations of nitrate (e.g. less than 1.0 mg/L) are anticipated in locations where the oxygen has been depleted, because nitrate ions can be an effective electron acceptor in anaerobic biodegradation processes. Low concentrations of nitrate occurring near the apparent source area in monitoring wells LFR-1 through LFR-4, SOMA-1 and SOMA-3, indicate conditions that are conducive to anaerobic biodegradation.

Relatively low concentrations of sulfate (e.g. less than 20 mg/L) are anticipated in locations where the oxygen has been depleted, because sulfate ion can be used as an effective electron acceptor in the anaerobic biodegradation processes. Lower sulfate concentrations in LFR-2, LFR-4, SOMA-1, SOMA-2 and SOMA-3 indicate conditions that are conducive to anaerobic biodegradation.

The reducing conditions conducive to the dehalogenation of VOCs can also reduce iron to the soluble ferrous state. Therefore, a relatively high concentration of ferrous iron is anticipated in locations where biodegradation occurs. Higher ferrous iron concentrations in the apparent source area LFR-2, SOMA-2, SOMA-3 and LFR-4, indicate conditions that are conducive to anaerobic biodegradation.

A relatively high concentration of methane is anticipated in locations where biodegradation occurs because methane is indicative of strongly reducing conditions and suggests reductive dechlorination by the process of methanogenesis. Methane concentrations ranged from 0.00065 mg/L in GW-3 to 4.7 mg/L in LFR-2, the apparent source area well, indicating conditions that are conducive to anaerobic biodegradation.

The ORP of groundwater is a measurement of electron activity and is an indicator of the relative tendency of a solution to accept or transfer electrons. ORP may range from greater than 800 millivolts (mV) to less than -400 mV, with negative values expected in areas where anaerobic processes are occurring.

The lowest value (-98 mV) was found in and near the apparent source area (SOMA-2). These results indicate that conditions in and near the apparent source area are conducive to anaerobic biodegradation.

4.2 Recommendations

SOMA has begun implementing Phase II of the approved Workplan (dated June 15, 2001). Currently, SOMA is conducting groundwater flow and chemical transport modeling to simulate the future extent of chlorinated solvents and other chemicals beneath the Site. In order to define the Site's regulatory status, SOMA will develop the Site's conceptual model before conducting human health risk assessment. The results of this evaluation will determine the Site's regulatory status in terms of "Low Risk" or "High Risk." Based upon the outcome of this study, the most appropriate corrective action can be proposed to the ACEHS. Meanwhile SOMA will do the following:

- Conduct groundwater monitoring events on a quarterly basis;
- Continue removal of free product from SOMA-4 until to the extent practicable.

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TABLES

Table 1
Construction Data for Temporary Sampling Points and Monitoring Wells
Former Glovatorium Site
3815 Broadway, 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)	Notes
Temporary Sampling Points Installed by Geosolv, LLC:							
B-2	19-Aug-97	82.2	82.09	21	5 to 21	77.2 to 61.2	1
B-3	19-Aug-97	82.6	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	81.5	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	
Temporary Sampling Points Installed by LFR:							
GW-1	16-Jul-99	80.24	79.94	8	3 to 8	77.2 to 72.2	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	15-Jul-99	81.91	81.65	13.5	7.5 to 13.5	74.4 to 68.4	
GW-6A	16-Jul-99	81.93	81.61	15	5 to 15	76.9 to 66.9	
GW-7	15-Jul-99	81.3	NS	20	10 to 20	71.3 to 61.3	
GW-8	16-Jul-99	80.28	80.1	20	10 to 20	70.3 to 60.3	
Temporary Sampling Points Installed by TOSCO:							
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	
Groundwater Monitoring Wells Installed by LFR:							
LFR-1	28-Jul-00	NS	79.97	19	9 to 19		
LFR-2	27-Jul-00	NS	81.89	19	9 to 19		
LFR-3	27-Jul-00	NS	77.96	22	12 to 22		
LFR-4	28-Jul-00		81.65	19	9 to 19		
Groundwater Monitoring Wells Installed by SOMA:							
SOMA-1	4-Oct-01	82.31	81.64	40	25 to 40	42.31 to 57.71	
SOMA-2	11-Oct-01	81.62	81.39	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	81.5	26	21 to 26	55.68 to 60.68	

Notes:

- (1) Top of casing surveyed on south side on January 21, 2000, because the casing was broken.
(2) 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.

Table 2
Groundwater Elevation Data, October 22, 2002
3815 Broadway, Oakland, California

Monitoring Well	Top of Casing Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Free Product (feet)
B-2	82.09	8.80	73.29	
B-3	82.57	9.51	73.06	0.69
B-7	76.96	8.98	67.98	0.05
B-8	81.82	10.39	71.43	0.69
B-9	77.37	9.27	68.10	
B-10	81.50	9.41	72.09	
B-13	84.58	dry	NC	
GW-1	79.94	dry	NC	
GW-2	79.14	11.22	67.92	
GW-3	77.92	10.14	67.78	
GW-4	82.37	10.67	71.70	
GW-5	81.01	12.34	68.67	
GW-6A	81.61	13.76	67.85	
MW-8	87.44	10.55	76.89	
MW-9	86.56	10.05	76.51	
MW-11	84.13	11.01	73.12	
LFR-1	79.97	9.97	70.00	
LFR-2	81.89	11.41	70.48	
LFR-3	77.96	11.83	66.13	
LFR-4	81.65	13.80	67.85	
SOMA-1	81.64	14.72	66.92	
SOMA-2	81.39	12.39	69.00	
SOMA-3	81.42	9.41	72.01	
SOMA-4	81.09	NM	NM	*
SOMA-5	81.50	22.07	59.43	

Notes:

dry: Monitoring wells GW-1 and B-13 were dry when measured during this monitoring event.

Trace amounts of free product were detected in temporary wells B-3, B-7 and B-8.

* SOMA-4 was not monitored due to the presence of free product.

NC: Not calculated. Groundwater elevation not calculated due to dryness of well.

NM: not measured during this monitoring event.

Table 3
Historical Groundwater Elevation Data
Former Glovatorium Site
3815 Broadway, Oakland, California

Date	B-2	B-3	B-7	B-8	B-9	B-10	B-13
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 (FP)	77.16 (FP 0.5')	70.79	75.03 (FP 0.5')	70.43	74.14	77.53 (FP 0.7')
18-Oct-01	73.26 (0.25' FP)	73.24 (1' FP)	67.89	69.51 (2.1' FP)	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	69.60	73.19	69.8	73.61	
29-Jan-01	74.63	75.06	69.11	74.23	69.33	73.2	
2-Nov-00							
31-Oct-00							
30-Oct-00	74.34	74.84 (FP)	69.01	73.32	69.42	73.35	DRY
10-Aug-00							
9-Aug-00	73.9 (FP)	74.55 (FP)	68.61	72.8 (FP)	68.82	72.65	75.23
27-Apr-00	75.41 (FP)	75.86 (FP)	69.85 (FP)	74.14 (FP)	69.96	73.7	75.87
25-Jan-00							
24-Jan-00	75.93 (FP)	75.83	69.66 (FP)	72.84	70.25 (FP)	74.15 (FP)	
21-Jan-00							76.32
20-Jan-00							
19-Jan-00	73.97 (FP)	73.22 (2)	68.6 (FP)	71.81 (FP)	68.91 (FP)	73.02 (FP)	74.18
27-Aug-99							
18-Feb-98	78.16 (1)	78.04 (1)	71.57 (1)	76.64 (1)	71.44 (1)	75.13 (1)	78.51 (1)
26-Oct-97	72.66 (1)	73.64 (1)	68.09 (1)	71.11 (1)	68.39 (1)	72.26 (1)	73.02 (1)

Table 3
Historical Groundwater Elevation Data
Former Glovatorium Site
3815 Broadway, Oakland, California

Date	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6A	GW-8	MW-8	MW-9	MW-11
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		77.4	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	67.9		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	68.7	68	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	70.6			
18-Feb-98										
26-Oct-97										

Table 3
Historical Groundwater Elevation Data
Former Glovatorium Site
3815 Broadway, Oakland, California

Date	LFR-1	LFR-2	LFR-3	LFR-4	SOMA-1	SOMA-2	SOMA-3	SOMA-4	SOMA-5
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 ^(FP 2.5)	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	71.9	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									

Notes:

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

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

NM: not measured

FP= Floating product or sheen was observed.

* Monitoring well GW-1 was dry

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/cm)
Temporary Sampling Points Installed by Geosolv, LLC												
B-7	11-Aug-00	760	39	202				<0.0005	<0.0005	6.86	17.55	1279
B-7 field	11-Aug-00					-1	0.049					
B-7	31-Oct-00	760	42	200	14.00	<0.1	<2.0					
B-7 field	31-Oct-00				17.22	-1	-1			6.16	16.05	1454
B-7	31-Jan-00	720	43	170	12.00	<0.1	<2.0					
B-7 field	31-Jan-00									6.79	13.90	1424
B-7	26-Apr-01				>3.3	0.243				6.59	16.30	1340
B-7	26-Jul-01				15.30	0.024				6.39	15.97	1400
B-10 field	10-Aug-00					0.023	0.060					
B-10	31-Oct-00	500	76	120	6.60	<0.1	<2.0					
B-10	31-Oct-00				8.35	0.001	0.004			6.21	16.62	1051
B-10	31-Jan-01	480	81	72	6.10	<0.1	<2.0					
B-10	31-Jan-01				1.44	0.073				6.81	14.66	1117
B-10	11-Jun-01				1.31					6.65	16.70	1090
B-10	26-Jul-01				6.50	0				6.38	16.09	1160
B-10	10-Aug-01	520	74	145	6.00	<0.05	<0.04	<0.0005	0.00057	6.86	16.80	1130

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/cm)
Temporary Sampling Points Installed by UFR												
GW-2	01-Nov-00									6.31	18.97	1218
GW-2	30-Jan-01			63								
GW-2 field	31-Jan-01									6.82	13.75	846
GW-2	26-Apr-01				0.02					6.80	19.50	874
GW-2	26-Jul-01				0.03	0.024				6.74	20.30	803
GW-2	19-Oct-01	NM	NM	NM	NM	NM	NM	NM	NM	6.84	21.30	786
GW-2	31-Jan-02	NM	NM	NM	1.05	0.013	NM	NM	NM	6.70	17.70	797
GW-2	16,17-Apr-02	NM	NM	NM	0.65	0.024	NM	NM	NM	6.38	17.00	707
GW-2	17,18-Jul-02	NM	NM	NM	1.39	0.000	NM	NM	NM	6.35	17.75	798
GW-2	23-Oct-02	NM	NM	NM	0.12	0.036	NM	NM	NM	6.73	19.78	670
GW-3	11-Aug-00	340	25	54.3				<0.0005	<0.0005	7.05	21.43	860
GW-3 field	11-Aug-00					0.046	-1					
GW-3 field	1-Nov-00									6.52	18.83	967
GW-3	1-Feb-01			54								
GW-3 field	29-Jan-01									6.89	17.29	602
GW-3	11-Jun-01				0	0.700				5.68	16.20	673
GW-3	26-Jul-01				0.14	0.004				6.53	22.25	547
GW-3	19-Oct-01	NM	NM	NM	0	NM	NM	NM	NM	6.84	22.56	590
GW-3	31-Jan-02	NM	NM	NM	0.14	0.014	NM	NM	NM	6.70	18.40	593
GW-3	16,17-Apr-02	NM	NM	NM	0.001	0	NM	NM	NM	6.64	16.61	526
GW-3	17,18-Jul-02	NM	NM	NM	1.08	0.008	NM	NM	NM	6.32	17.10	545
GW-3	23-Oct-02	NM	NM	NM	0.00	0	NM	NM	NM	6.36	19.80	425
GW-4	30-Jan-01									6.60	13.48	479
GW-4	26-Jul-01				2.00	0.035				6.45	19.44	827
GW-4	19-Oct-01	NM	NM	NM	11.00	NM	NM	NM	NM	6.79	18.36	732
GW-4	31-Jan-02	NM	NM	NM	12.70	0.010	NM	NM	NM	6.50	12.00	414
GW-4	16,17-Apr-02	NM	NM	NM	6.40	0.033	NM	NM	NM	6.34	13.98	467
GW-4	17,18-Jul-02	NM	NM	NM	>3.3	0.027	NM	NM	NM	6.49	21.93	572
GW-4	23-Oct-02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/cm)
Monitoring Wells Owned by TOSCO												
MW-11	10-Aug-00	360	110	216	0.13	<0.05	<0.04	<0.0005	<0.0005	6.47	21.00	1.089
MW-11 field	10-Aug-00					0.036	0.002					
MW-11	1-Nov-00	300	120	190	<0.05	<0.1	<2.0					
MW-11 field	1-Nov-00				0.01	0.003	-1			5.83	20.13	1.264
MW-11	31-Jan-01	330	130	150	<0.05	<0.1	<2.0					
MW-11 field	31-Jan-01									6.35	13.67	1.098
MW-11	26-Apr-01				0.01					5.67	18.00	1210
MW-11	26-Jul-01				0	0.021				6.02	19.85	1120
MW-11	19-Oct-01	NM	NM	NM	0	NM	NM	NM	NM	6.41	21.25	130
MW-11	31-Jan-02	NM	NM	NM	0.05	0.036	NM	NM	NM	6.60	18.50	1090
MW-11	16,17-Apr-02	NM	NM	NM	0.00	0.000	NM	NM	NM	5.87	18.70	1150
MW-11	17,18-Jul-02	NM	NM	NM	0.00	0.021	NM	NM	NM	6.27	18.37	1180
MW-11	23-Oct-02	NM	NM	NM	0.00	0.036	NM	NM	NM	6.62	20.81	1220
Monitoring Wells Installed by LFR												
LFR-1	11-Aug-00	250	110					<0.0005	<0.0005	6.97	19.73	936
LFR-1 field	09-Aug-00			51.1		0.020	-1					
LFR-1	30-Oct-00	240	100	25	<0.05	<0.1	<2					
LFR-1 field/sp	30-Oct-00				0.01/0.01	0.031/0.036	0.001/0.001			6.38	17.94	697
LFR-1-spl	30-Oct-00	220	100	40	<0.05	<0.1	<2					
LFR-1	29-Jan-01	150	76	28	<0.05	<0.1	<2					
LFR-1 field	29-Jan-01				0	0.037				6.82	15.00	870
LFR-1 Dup	29-Jan-01	150	75	26	<0.05	<0.1	<2					
LFR-1	26-Apr-01				0.004					5.76	16.80	980
LFR-1	26-Jul-01				0.05	0.008				6.48	19.38	772
LFR-1	26-Jul-01	NM	NM	NM	0.42	NM	NM	NM	NM	6.73	20.83	661
LFR-1	31-Jan-02	NM	NM	NM	0.03	0.011	NM	NM	NM	6.50	16.50	879
LFR-1	16,17-Apr-02	NM	NM	NM	0.75	0.023	NM	NM	NM	5.88	16.37	1120
LFR-1	17,18-Jul-02	NM	NM	NM	0.22	0.006	NM	NM	NM	6.40	17.02	832
LFR-1	23-Oct-02	NM	NM	NM	0.30	0.000	NM	NM	NM	6.54	20.09	803

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/cm)
LFR-2	11-Aug-00	590	33	174				<0.0005	0.0017	6.84	19.87	1088
LFR-2 field	11-Aug-00				2.95	-1	0.005					
LFR-2	02-Nov-00	550	40	180	6.20	<0.1	<2					
LFR-2 field	02-Nov-00				7.45	0.007	0.003			6.19	19.67	1306
LFR-2	30-Jan-01	480	21	130	4.60	<0.1	<2					
LFR-2 field	30-Jan-01				1.04	0.007				6.60	12.73	945
LFR-2	27-Apr-01				2.97					5.64	16.40	921
LFR-2	26-Jul-01				4.60	0.011				6.31	18.66	970
LFR-2	18-Oct-01	NM	NM	NM	8.20	NM	NM	NM	NM	6.78	19.56	109
LFR-2	31-Jan-02	NM	NM	NM	1.97	0.046	NM	NM	NM	6.5	16.60	644
LFR-2	16,17-Apr-02	NM	NM	NM	7.60	0.063	NM	NM	NM	6.19	16.43	845
LFR-2	17,18-Jul-02	NM	NM	NM	8.80	0.000	NM	NM	NM	6.52	16.24	986
LFR-2	23-Oct-02	NM	NM	NM	3.30	0.057	NM	NM	NM	6.84	18.09	812
LFR-3	10-Aug-00	310	85	162	<0.1	0.150	0.040	<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					0.058	-1					
LFR-3	01-Nov-00	350	66	160	<0.05	<0.1	<2					
LFR-3 field	01-Nov-00				0.01	0.011	0.002			6.16	17.71	1164
LFR-3	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	11-Jun-01				0.01					5.43	18.00	613
LFR-3	26-Jul-01				0.70	0.027				6.25	20.50	602
LFR-3	18-Oct-01	NM	NM	NM	0.12	NM	NM	NM	NM	6.50	21.39	645
LFR-3	31-Jan-02	NM	NM	NM	0.06	0.024	NM	NM	NM	6.30	19.10	566
LFR-3	16,17-Apr-02	NM	NM	NM	1.20	0.041	NM	NM	NM	5.78	18.68	566
LFR-3	17,18-Jul-02	NM	NM	NM	0.08	0.010	NM	NM	NM	6.17	18.42	585
LFR-3	23-Oct-02	NM	NM	NM	1.35	0.000	NM	NM	NM	6.32	20.65	457

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/cm)
LFR-4	11-Aug-00	630	71	161								
LFR-4 field	11-Aug-00				0.22	0.018	0.002	<0.0005	<0.0005	6.90	20.11	1240
LFR-4	31-Oct-00	490	28	130	1.00	<0.1	<2					
LFR-4 field	31-Oct-00				0.67	0.022	0			6.21	18.11	830
B-10 FB	10-Aug-00							<0.0005	<0.0005			
LFR-4	01-Feb-01	460	25	120	1.30	<0.1	<2					
LFR-4 field	01-Feb-01				1.43	0.017				6.55	15.28	916
LFR-4	27-Apr-01				1.44					5.79	18.30	1060
LFR-4	26-Jul-01				0.95	0				6.26	19.23	866
LFR-4	16,17-Apr-02	NM	NM	NM	5.1	0.027	NM	NM	NM	6.19	18.04	925
LFR-4	17,18-Jul-02	NM	NM	NM	>3.3	0.008	NM	NM	NM	5.92	17.28	878
LFR-4	23-Oct-02	NM	NM	NM	3.30	0	NM	NM	NM	6.69	19.90	602
Monitoring Wells Installed by SOMA												
SOMA-1	19-Oct-01	NM	NM	NM	0.75	NM	NM	NM	NM	6.77	18.15	146
SOMA-1	31-Jan-02	NM	NM	NM	0	0	NM	NM	NM	6.70	17.50	1160
SOMA-1	16,17-Apr-02	NM	NM	NM	0.17	0.032	NM	NM	NM	6.01	17.98	1280
SOMA-1	17,18-Jul-02	NM	NM	NM	0.11	0.013	NM	NM	NM	6.52	16.21	1270
SOMA-1	23-Oct-02	NM	NM	NM	0.24	0.009	NM	NM	NM	6.60	17.77	1270
SOMA-2	19-Oct-01	NM	NM	NM	44.00	NM	NM	NM	NM	6.87	16.93	122
SOMA-2	31-Jan-02	NM	NM	NM	10.50	0.344	NM	NM	NM	6.90	15.20	1140
SOMA-2	16,17-Apr-02	NM	NM	NM	8.70	0.009	NM	NM	NM	6.30	15.25	1170
SOMA-2	17,18-Jul-02	NM	NM	NM	>3.3	0.000	NM	NM	NM	6.86	14.19	1170
SOMA-2	23-Oct-02	NM	NM	NM	3.30	0.000	NM	NM	NM	6.97	16.47	1380
SOMA-3	19-Oct-01	NM	NM	NM	0.40	NM	NM	NM	NM	6.91	17.09	158
SOMA-3	31-Jan-02	NM	NM	NM	0.78	0.375	NM	NM	NM	6.50	14.90	1320
SOMA-3	16,17-Apr-02	NM	NM	NM	1.03	0	NM	NM	NM	6.23	15.83	1260
SOMA-3	17,18-Jul-02	NM	NM	NM	>3.3	0.000	NM	NM	NM	6.77	15.03	1290
SOMA-3	23-Oct-02	NM	NM	NM	3.30	0.031	NM	NM	NM	7.02	16.44	970
SOMA-4	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

Table 4
Historical Analytical Results and Field Measurements for
Dissolved Anions, Cations, Methane Gas, pH, Temperature, and Electrical Conductivity
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
(Concentrations are in milligram per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Alkalinity	Chloride	Carbon Dioxide	Total Iron	Nitrite	Sulfide	Ethane	Ethene	pH Standard Unit	Temp. Celcius	Electrical Cond. (uS/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 Colorimeter
NM= not measured

Table 5
Analytical Results of Groundwater Samples Analyzed for Petroleum Hydrocarbons
October 22-23, 2002
Former Glovatorium Site
3815 Broadway, Oakland, California

Well	Stoddard Solvent C7-C12 (ug/L)	Gasoline C7-C12 (ug/L)	MTBE ¹ (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
GW-2	<50	<50	<5.0	<5.0	<5.0	<5.0	<5.0
GW-3	110 YZ	140 YZ	<7.1	<7.1	<7.1	<7.1	<7.1
GW-4	550	700 HY	<5.0	<5.0	<5.0	<5.0	<5.0
MW-11	<50	<50	<5.0	<5.0	<5.0	<5.0	<5.0
LFR-1	<50	78 YZ	<5.0	<5.0	<5.0	<5.0	<5.0
LFR-2	3,100	5000 HY	<5.0	<5.0	<5.0	<5.0	<5.0
LFR-3	<50	<50	<5.0	<5.0	<5.0	<5.0	<5.0
LFR-4	110 Y	170	8.0	<5.0	<5.0	<5.0	<5.0
SOMA-1	<50	53	140	<5.0	<5.0	<5.0	<5.0
SOMA-2	370	600 HY	300.0	<7.1	<7.1	<7.1	<7.1
SOMA-3	3,000	4700 HY	<170	<170	<170	<170	<170
SOMA-4	FP	FP	FP	FP	FP	FP	FP

< : not detected above the laboratory reporting limits

¹ MTBE confirmed by EPA 8260B.

^H Heavier hydrocarbons contributed to the quantitation.

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

^Z Sample exhibits unknown single peak or peaks.

FP: Free product was observed in the well Soma 4, and no analysis was performed on sample.

Table 6
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
All results are expressed in milligrams per liter (mg/L)

Location	Date Sampled	TPH, Purgable Stoddard	TPH, Purgable Gasoline	MtBE	Benzene	Toluene	Ethyl benzene	Total Xylenes
Temporary Sampling Points installed by GBSO, Inc.								
B-2	24-Jan-00	20 ^J	31 ^{YJ}	<0.05	<0.013	<0.013	0.11 ^C	0.22 ^C
B-3	24-Jan-00	4.9 ^J	8.8 ^{YJ}	<0.01	0.0048	<0.0025	<0.0025	0.0714
B-7	27-Jul-01	2.5	5.2 ^{HY}	0.0057	0.0070	0.051	0.0082	0.0740
B-7	31-Jan-01	5.3	7.9	0.0100	0.0089	0.059	0.0097	0.0870
B-7	26-Apr-01	4.5	8.9 ^H	0.0069	0.0110	0.071	0.077 ^C	0.2080
B-7	31-Oct-00	62 ^J	98 ^{YHJ}	0.01 ^J	0.0091 ^J	0.061 ^J	<0.0005	0.237 ^J
B-7	11-Aug-00	3.7 ^J	6.8 ^{YHJ}	0.0200	0.0077 ^J	0.047 ^J	0.007 ^J	0.065 ^{CJ}
B-7	24-Jan-00	19	30 ^J	<0.05	<0.013	0.062	<0.013	0.2070
B-8	24-Jan-00	11 ^J	19 ^{YJ}	<0.01	<0.0025	<0.0025	<0.0025	0.17 ^C
B-9	24-Jan-00	1 ^{YJ}	1.8 ^{YHJ}	<0.002	<0.0005	<0.0005	0.01 ^C	0.0089 ^C
B-10	27-Jul-01	1.7	3.6 ^H	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
B-10	31-Jan-01	2.4 ^Z	3.6 ^{HYZ}	<0.002	0.0031	0.010	0.00076 ^C	0.0197
B-10	26-Apr-01	2.4 ^Z	4.7 ^Z	0.0025	0.0041	0.013	ND	0.0290
B-10	31-Oct-00	2.2 ^{YZ}	3.5 ^Z	<0.002	0.0038	0.011	<0.0005	0.0182
B-10	10-Aug-00	2.8 ^Y	6.1 ^Y	0.1600	0.0073	0.012	<0.005	0.0241
B-10	24-Jan-00	2.4 ^Y	4.2	0.0140 ^C	0.0072	0.027	0.025 ^C	0.0320
B-13	24-Jan-00	1.7 ^J	3 ^{YJ}	<0.01	<0.0025	<0.0025	<0.0025	0.0200
Temporary Sampling Points installed by ER								
GW-2	19-Jul-99	<0.05	<0.05	0.0025	<0.0005	0.00071	<0.0005	0.00074
GW-2	20-Jan-00	0.15	0.25 ^Y	0.0044	<0.0005	<0.0005	0.00097 ^C	0.0013
GW-2	28-Apr-00	<0.05	0.095 ^{YZ}	<0.0021	<0.0005	<0.0005	<0.0005	<0.0005
GW-2	2-Nov-00	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
GW-2	1-Feb-01	<0.05	ND	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
GW-2	27-Apr-01	<0.05	0.086 ^{YZ}	0.0022	<0.0005	0.0240	<0.0005	<0.0005
GW-2	27-Jul-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
GW-2	19-Oct-01	<0.05	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
GW2	31-Jan-02	<0.05	<0.050	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b
GW-2	16,17-Apr-02	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
GW-2	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
GW-2	22-Oct-02	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
GW-3	19-Jul-99	0.070 ^Z	0.100 ^Z	<0.0020	<0.0005	<0.0005	<0.0005	0.00064
GW-3	20-Jan-00	0.150	0.260 ^Y	<0.0020	<0.0005	<0.0005	<0.0005	0.00130 ^C
GW-3	27-Apr-00	0.200 ^{YZ}	0.380 ^{YZ}	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
Split	27-Apr-00	0.300 ^Z	0.570 ^{YZ}	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
GW-3	11-Aug-00	<0.050	0.077 ^{YZ}	<0.0020	<0.0005	<0.0005	<0.0005	0.00051
GW-3	2-Nov-00	<0.050	0.050 ^{YZ}	0.0026	<0.0005	<0.0005	<0.0005	<0.00050
GW-3	1-Feb-01	<0.050	<0.050	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
GW-3	27-Apr-01	<0.050	0.062 ^{YZ}	0.0056	<0.0005	<0.0005	<0.0005	<0.00050
GW-3	27-Jul-01	<0.050	<0.050	0.0008	<0.0005	<0.0005	<0.0005	<0.00050
GW-3	19-Oct-01	0.054	0.11	<0.0100	<0.0100	<0.0100	<0.0100	<0.02000
GW-3	31-Jan-02	<0.050	0.070 ^{YZ}	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.00500 ^b
GW-3	16,17-Apr-02	<0.050	0.055 ^{YZ}	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
GW-3	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
GW-3	22,23-Oct-02	0.110 ^{YZ}	0.140 ^{YZ}	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071

Table 6
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
All results are expressed in milligrams per liter (mg/L)

Location	Date Sampled	TPH, Purgable Stoddard	TPH, Purgable Gasoline	MtBE	Benzene	Toluene	Ethyl benzene	Total Xylenes
GW-4	21-Jul-99	6.80 ^J	10 ^{YHJ}	0.0022	<0.0005	<0.0005	<0.0005	0.0029 ^J
GW-4	20-Jan-00	0.97 ^J	1.60 ^{YJ}	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Split	20-Jan-00	0.85 ^J	1.50 ^{YJ}	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
GW-4	27-Apr-00	0.31	0.60 ^Y	<0.0020	<0.0005	<0.0005	<0.0005	0.0027
GW-4	30-Jan-01	0.39	0.58 ^{HY}	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
GW-4	27-Jul-01	0.42	0.86 ^{HY}	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
GW-4	19-Oct-01	0.83	1.60	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100
GW-4	31-Jan-02	0.92	1.70 ^{HY}	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b
GW-4	16,17-Apr-02	0.40	0.67 ^{HY}	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
GW-4	17,18-Jul-02	0.97	1.7 ^{HY}	<0.005	<0.005	<0.005	<0.005	<0.005
GW-4	22,23-Oct-02	0.550	0.700 ^{HY}	<0.005	<0.005	<0.005	<0.005	<0.005
GW-5	27-Aug-99	<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
GW-5	20-Jan-00	<0.05	0.057 ^Y	0.0007	<0.0005	<0.0005	<0.0005	<0.0005
GW-5	27-Apr-00	0.05 ^Y	0.096 ^Y	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
GW-6A	27-Aug-99	<0.05	0.054 ^Y	0.0089	<0.0005	<0.0005	<0.0005	<0.0005
Split	27-Aug-99	<0.05	0.057 ^Y	0.0087	<0.0005	<0.0005	<0.0005	<0.0005
GW-6A	25-Jan-00	<0.05	<0.05	0.0022	<0.0005	<0.0005	<0.0005	<0.0005
GW-6A	27-Apr-00	<0.05	0.087 ^Y	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
GW-7	15-Jul-99	NA	NA	<0.0025	0.05 ^J	<0.0005	0.000727	0.00313 ^J
Split	15-Jul-99	NA	NA	NA	NA	NA	NA	NA
GW-7	15-Jul-99	NA	NA	NA	0.0567 ^J	<0.002	<0.002	<0.002
Split	15-Jul-99	NA	NA	NA	0.0755 ^J	<0.002	<0.002	<0.002
GW-8	19-Jul-99	<0.05	<0.05	0.0078	<0.0005	0.00084	<0.0005	0.00151
GW-8	20-Jan-00	0.19	0.33 ^Y	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
Split	20-Jan-00	0.20	0.37 ^Y	<0.002	0.00058	<0.0005	<0.0005	<0.0005
GW-8	28-Apr-00	0.064 ^{YZ}	0.12 ^{YZ}	0.013	<0.0005	<0.0005	<0.0005	<0.0005
OSGO								
MW-11	25-Jan-00	<0.050	<0.05	0.0090	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	28-Apr-00	<0.050	<0.05	<0.0087	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	10-Aug-00	<0.050	<0.05	0.0110	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	1-Nov-00	<0.050	<0.05	0.0068	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	31-Jan-01	<0.050	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	Jul-27-01	<0.050	0.10 ^{HY}	0.0010	<0.0005	<0.0005	<0.0005	0.0007
MW-11	Oct-19-01	<0.050	<0.05	<0.0050	<0.0050	<0.005	<0.005	<0.010
MW-11	Jan-31-02	<0.050	0.071 ^Y	<0.0050 ^b	<0.0050 ^b	<0.005 ^b	<0.005 ^b	<0.005 ^b
MW-11	Apr-16-17-02	<0.050	<0.050	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
MW-11	22,23-Oct-02	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005

Table 6
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE
in Groundwater Samples
Former Giovatorium Site
3815 Broadway, Oakland, California
All results are expressed in milligrams per liter (mg/L)

Location	Date Sampled	TPH, Purgable Stoddard	TPH, Purgable Gasoline	MtBE	Benzene	Toluene	Ethyl benzene	Total Xylenes
LFR-1	9-Aug-00	0.53	1.2	0.0095	<0.0005	<0.0005	<0.0005	<0.0005
LFR-1	30-Oct-00	0.24 ^{YZ}	0.37 ^{YZ}	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
Split	30-Oct-00	0.24 ^{YZ}	0.37 ^{YZ}	0.0043	<0.0005	<0.0005	<0.0005	<0.0005
LFR-1	29-Jan-01	0.21 ^{YZ}	0.31 ^{YZ}	0.0033	<0.0005	<0.0005	<0.0005	<0.0005
LFR-1	Apr-26-01	0.092	0.18 ^{YZ}	0.0044	<0.0005	0.002	<0.0005	<0.0005
LFR-1	Jul-27-01	0.086	0.18 ^{YZ}	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
LFR-1	Oct-18-01	0.19	0.38	<0.031	<0.031	<0.031	<0.031	<0.062
LFR-1	Jan-31-02	0.15 ^{YZ}	0.27 ^{YZ}	<0.013 ^b	<0.013 ^b	<0.013 ^b	<0.013 ^b	<0.013 ^b
LFR-1	Apr-16-17-02	0.10 ^{YZ}	0.17 ^{YZ}	<0.013	<0.0005	<0.0005	<0.0005	<0.0005
LFR-1	17,18-Jul-02	0.084 ^{YZ}	0.14 ^{YZ}	<0.013	<0.013	<0.013	<0.013	<0.013
LFR-1	22,23-Oct-02	<0.050	0.078 ^{YZ}	<0.005	<0.005	<0.005	<0.005	<0.005
LFR-2	11-Aug-00	0.59	1.10 ^{YH}	0.0022	0.0018	<0.0005	<0.0005	0.0013 ^C
LFR-2	2-Nov-00	0.38	0.70 ^{YH}	0.003	0.0035	0.0011	0.0042	0.01184 ^C
LFR-2	30-Jan-01	0.36	0.54 ^{HY}	0.0034	0.00057	<0.0005	<0.0005	<0.0005
LFR-2	Apr-27-01	0.33	0.66 ^{HY}	<0.002	<0.0005	0.0013	<0.0005	<0.0005
LFR-2-2	Apr-27-01	0.36	0.72 ^{HY}	<0.002	0.00059	0.0019	<0.0005	0.013
LFR-2	Jul-27-01	0.33	0.76 ^{HY}	<0.0005	0.0013	<0.0005	<0.0005	0.0006
LFR-2	Oct-18-01	0.73	1.50	<0.0071	<0.0071	<0.0071	<0.0071	<0.0142
LFR-2	Jan-31-02	0.76	1.40 ^{HY}	<0.005 ^b	<0.005 ^b	<0.005 ^b	<0.005 ^b	<0.005 ^b
LFR-2	Apr-16-17-02	1.10	1.90 ^{HY}	<0.002	<0.0005	<0.0005	<0.0005	0.019 ^C
LFR-2	17,18-Jul-02	0.97	1.7 ^{HY}	<0.005	<0.005	<0.005	<0.005	<0.005
LFR-2	22,23-Oct-02	3.10	5.000 ^{HY}	<0.005	<0.005	<0.005	<0.005	<0.005
LFR-3	10-Aug-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
Split	10-Aug-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	1-Nov-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	30-Jan-01	<0.05	<0.05	0.0036	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	Apr-27-01	<0.05	<0.05	0.0024	<0.0005	0.0054	<0.0005	<0.0005
LFR-3	Jul-27-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	Oct-18-01	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.01
LFR-3	Jan-31-02	<0.05	0.067 ^Y	<0.005 ^b	<0.005 ^b	<0.005 ^b	<0.005 ^b	<0.005 ^b
LFR-3	Apr-16-17-02	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
LFR-3	22,23-Oct-02	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
LFR-4	11-Aug-00	0.22 ^Y	0.41 ^Y	0.0051	0.01100	<0.0005	<0.0005	0.00182 ^C
LFR-4	31-Oct-00	0.17 ^Y	0.27	0.0065	0.00084	<0.0005	<0.0005	<0.0005
LFR-4	1-Feb-01	0.16 ^Y	0.22	0.0097	0.00330	<0.0005	<0.0005	<0.0005
LFR-4	Apr-27-01	0.22 ^Y	0.44	0.0058	0.02700	0.0036	<0.0005	<0.0005
LFR-4	Jul-27-01	0.091 ^Y	0.19	0.011	0.00090	<0.0005	<0.0005	<0.0005
LFR-4	Jan-31-02	NA	NA	NA	NA	NA	NA	NA
LFR-4	Apr-16-17-02	0.40 ^Y	0.67	<0.005	0.05300	<0.0005	<0.0005	<0.0005
LFR-4	17,18-Jul-02	0.21 ^Y	0.36 ^Y	0.0075	0.007	<0.005	<0.005	<0.005
LFR-4	22,23-Oct-02	0.110 ^Y	0.17	0.0080	<0.005	<0.005	<0.005	<0.005

Table 6
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE
in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California
All results are expressed in milligrams per liter (mg/L)

Location	Date Sampled	TPH, Purgable Stoddard	TPH, Purgable Gasoline	MtBE	Benzene	Toluene	Ethyl benzene	Total Xylenes
Monitoring Well - SOMA-1								
SOMA-1	Oct-19-01	0.22	0.440	0.034	<0.0050	<0.0050	<0.0050	<0.0100
SOMA-1	Jan-31-02	0.058	0.100 ^{HY}	0.110 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b
SOMA-1	Apr-16-17-02	<0.050	0.052 ^Y	0.120	0.0008	<0.0005	<0.0005	<0.0005
SOMA-1	Jul-17-18-02	<0.05	<0.05	0.120	<0.005	<0.005	<0.005	<0.005
SOMA-1	Oct-22,23-02	<0.050	0.053	0.140	<0.005	<0.005	<0.005	<0.005
Monitoring Well - SOMA-2								
SOMA-2	Oct-19-01	1.4	2.8	<0.250	<0.2500	<0.250	<0.250	<0.500
SOMA-2	Jan-31-02	1.3	2.4 ^{HY}	<0.071 ^b	<0.0710 ^b	<0.071 ^b	<0.071 ^b	<0.071 ^b
SOMA-2	Apr-16-17-02	1.3 ^L	2.2 ^H	<0.130	0.0067	0.046	0.012	0.044
SOMA-2	17,18-Jul-02	2.6	4.4 ^{HY}	<0.063	<0.063	<0.063	<0.063	<0.063
SOMA-2	22,23-Oct-02	0.370	0.600 ^{HY}	0.3	<0.0071	<0.0071	<0.0071	<0.0071
Monitoring Well - SOMA-3								
SOMA-3	Oct-19-01	0.420	0.83	0.65	<0.02500	<0.02500	<0.0250	<0.0500
SOMA-3	Jan-31-02	0.230	0.41 ^{HY}	0.31 ^b	<0.01300 ^b	<0.01300 ^b	<0.0130 ^b	<0.0130 ^b
SOMA-3	Apr-16-17-02	0.610	1.00 ^{HY}	0.42	0.00078	0.00068	<0.0005	<0.0005
SOMA-3	17,18-Jul-02	0.41	0.69 ^{HY}	0.38	<0.017	<0.017	<0.017	<0.017
SOMA-3	22,23-Oct-02	3.00	4.700 ^{HY}	<0.170	<0.170	<0.170	<0.170	<0.170
Monitoring Well - SOMA-4								
SOMA-4	Oct-19-01	2.5	5	0.63	<0.13	<0.13	<0.13	<0.26
SOMA-4	Jan-31-02	FP	FP	FP	FP	FP	FP	FP
SOMA-4	Apr-16-17-02	FP	FP	FP	FP	FP	FP	FP
SOMA-4	17,18-Jul-02	FP	FP	FP	FP	FP	FP	FP
SOMA-4	22,23-Oct-02	FP	FP	FP	FP	FP	FP	FP

Notes:

- ^b Analysis was carried out npast the hold date, no analytical problems were encountered
 - ^c Presence of this compound confirmed by second column, however, the confirmation concentration different from reported results by more than a factor of two.
 - ^H Heavier hydrocarbons than the standard are present in the sample.
 - ^J Result is estimated.
 - ^L Lighter hydrocarbons contributed to the quantitation
 - ^Y Sample exhibits fuel pattern which does not resemble standard.
 - ^Z Sample exhibits unknown single peak or peaks.
- FP: Free product detected in SOMA 4.
 NA = Not analyzed, LFR-4 was not analyzed during the Second Quarter 2002 due to the well being inaccessible.
 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.

Table 7
Thickness of Free Product
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Location	Thickness of Free Product (ft)		
	10/3/02	10/8/02	10/14/02
SOMA-4	5.30	6.36	6.98
B-2	0	0	0
B-3	0.35	0.24	0.27
B-8	0.76	0.60	0.61
B-9	0	0	0

Table 8**Analytical Results of Groundwater Samples Analyzed for Volatile Organic Compounds****October 22-23, 2002****Former Glovatorium Site****3815 Broadway, Oakland, California**

Sample ID	Tetrachloro ethene (ug/L)	Trichloro ethene (ug/L)	cis-1,2-Dichloro ethene (ug/L)	trans-1,2-Dichloro ethene (ug/L)	Vinyl Chloride (ug/L)	1,2-Dichloro propane (ug/L)	1,1-Dichloro ethene (ug/L)
GW-2	27	<5.0	<5.0	<5.0	<10	<5.0	<5.0
GW-3	200	<7.1	<7.1	<7.1	<14	<7.1	<7.1
GW-4	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0
MW-11	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0
LFR-1	180	24	6.7	<5.0	<10	<5.0	<5.0
LFR-2	<5.0	<5.0	66	<5.0	<10	<5.0	<5.0
LFR-3	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0
LFR-4	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0
SOMA-1	8.4	<5.0	41	<5.0	<10	7	<5.0
SOMA-2	17	8.2	350	<7.1	<14	<7.1	<7.1
SOMA-3	<170	<170	5900	<170	<330	<170	<170
SOMA-4	FP	FP	FP	FP	FP	FP	FP

FP: Free Product observed in well SOMA-4

< : not detected above laboratory reporting limits

Table 9
Historical Analytical Results For Volatile Organic Compound Analyses in
Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California
All results expressed in milligrams per liter (mg/L)

Location	Date Sampled	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-DCP
Temporary Sampling Points Installed by Geosyn, LLC							
B-2	24-Jan-00	<0.0013	<0.0013	0.27	0.0014	< 0.0013	< 0.0013
B-3	24-Jan-00	< 0.0020	< 0.002	0.61	< 0.002	< 0.002	< 0.002
B-7	27-Jul-01	0.0098	0.017	0.86	0.005	<0.0031	<0.0031
B-7	27-Apr-01	<0.0031	<0.0031	1.1	0.0069	<0.0031	<0.0031
B-7	31-Jan-01	< 0.0042	< 0.0042	0.92	0.0048	< 0.0042	< 0.0042
B-7	31-Oct-00	< 0.0042	< 0.0042	0.91	0.0042	< 0.0042	< 0.0042
B-7	11-Aug-00	< 0.0031	< 0.0031	0.86	0.0048	< 0.0031	< 0.0031
B-7	24-Jan-00	< 0.0036	< 0.0036	0.92	0.0043	< 0.0036	< 0.0036
B-8	24-Jan-00	< 0.0005	< 0.0005	0.035	< 0.0005	< 0.0005	< 0.0005
B-9	24-Jan-00	< 0.0005	0.0006	0.0032	< 0.0005	< 0.0005	< 0.0005
B-10	27-Jul-01	1.7000	1.4	7.3	0.043	<0.025	<0.025
B-10	27-Jul-01	0.8700	0.81	6.6	0.041	<0.025	<0.025
B-10	31-Jan-01	2.1000	1.6	6.6	0.044	< 0.025	< 0.025
B-10	31-Oct-00	2.4000	1.9	7.1	0.061	< 0.025	< 0.025
B-10	10-Aug-00	2.9000	1.6	6.5	0.05	< 0.025	< 0.025
B-10	24-Jan-00	1.2000	2.4	14	0.09	< 0.063	< 0.063
B-13	24-Jan-00	0.0200	0.029	0.13	0.0049	< 0.0005	< 0.0005
Temporary Sampling Points Installed by IFR							
GW-2	19-Jul-99	0.0140	0.0014	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-2	20-Jan-00	0.1300	0.0190	0.0055	< 0.0005	< 0.0005	< 0.0005
GW-2	28-Apr-00	0.1200	0.0160	0.0033	< 0.0005	< 0.0005	< 0.0005
GW-2	2-Nov-00	0.0078	0.0008	0.0032	< 0.0005	< 0.0005	< 0.0005
GW-2	1-Feb-01	0.0077	0.0006	0.0028	< 0.0005	< 0.0005	< 0.0005
GW-2	27-Apr-01	0.0096	0.0018	0.0024	< 0.0005	< 0.0005	< 0.0005
GW-2	27-Jul-01	0.0330	0.0043	0.0024	< 0.0005	< 0.0005	< 0.0005
GW-2	19-Oct-01	0.0190	< 0.0050	< 0.0050	< 0.0050	< 0.0100	< 0.0050
GW-2	31-Jan-02	0.0092 ^b	< 0.0050 ^b	< 0.0050 ^b	< 0.0050 ^b	< 0.0100 ^b	< 0.0050 ^b
GW-2	16,17-Apr-02	0.0140	< 0.0050	< 0.0050	< 0.0050	< 0.0100	< 0.0050
GW-2	17-18-Jul-02	0.014	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
GW-2	22,23-Oct-02	0.027	< 0.005	< 0.005	< 0.005	< 0.010	< 0.005
GW-3	19-Jul-99	0.2200	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
GW-3	20-Jan-00	0.0550	0.0010	0.0200	< 0.0005	< 0.0005	< 0.0005
GW-3	27-Apr-00	0.3500	0.0023	0.0056	< 0.0005	< 0.0005	< 0.0005
Split	27-Apr-00	0.2700	0.0015	0.0023	< 0.0013	< 0.0013	< 0.0013
GW-3	11-Aug-00	0.0680	0.0028	0.0120	< 0.0005	< 0.0005	< 0.0005
GW-3	2-Nov-00	0.0590	0.0008	0.0024	< 0.0005	< 0.0005	< 0.0005
GW-3	1-Feb-01	0.0460	0.0006	0.0011	< 0.0005	< 0.0005	< 0.0005
GW-3	27-Apr-01	0.0790	0.0007	0.0015	< 0.0005	< 0.0005	< 0.0005
GW-3	27-Jul-01	0.0900	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-3	19-Oct-01	0.1800	< 0.0100	< 0.0100	< 0.0100	< 0.0200	< 0.0100
GW-3	31-Jan-02	0.0960 ^b	< 0.0050 ^b	< 0.0050 ^b	< 0.0050 ^b	< 0.0100 ^b	< 0.0050 ^b
GW-3	16,17-Apr-02	0.1600	< 0.0050	< 0.0050	< 0.0050	< 0.0100	< 0.0050
GW-3	17,18-Jul-02	0.086	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
GW-3	22,23-Oct-02	0.200	< 0.0071	< 0.0071	< 0.0071	< 0.014	< 0.0071

Table 9
Historical Analytical Results For Volatile Organic Compound Analyses in
Groundwater Samples
at the Former Giovatorium Site
3815 Broadway, Oakland, California
All results expressed in milligrams per liter (mg/L)

Location	Date Sampled	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-DCP
GW-4	19-Jul-99	< 0.0005	< 0.0005	0.0035	< 0.0005	< 0.0005	0.0017
GW-4	20-Jan-00	0.0008	< 0.0005	0.0036	< 0.0005	< 0.0005	0.0015
Split	20-Jan-00	0.0006	< 0.0005	0.0044	< 0.0005	< 0.0005	0.0021
GW-4	27-Apr-00	0.0017	< 0.0005	0.0010	< 0.0005	< 0.0005	0.0006
GW-4	30-Jan-01	< 0.0005	< 0.0005	0.0024	< 0.0005	< 0.0005	0.0014
GW-4	27-Jul-01	< 0.0005	< 0.0005	0.0030	< 0.0005	0.0006	0.0019
GW-4	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
GW-4	31-Jan-02	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0100 ^b	<0.0050 ^b
GW-4	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
GW-4	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
GW-4	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
GW-5	27-Aug-99	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
GW-5	20-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-5	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-6A	27-Aug-99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Split	27-Aug-99	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-6A	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-6A	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-7	15-Jul-99	< 0.0005	< 0.0005	0.00358	< 0.0005	< 0.0005	0.000632
GW-7	15-Jul-99	< 0.0020	< 0.0020	0.00398	< 0.0020	< 0.0020	< 0.0020
Split	15-Jul-99	< 0.0020	< 0.0020	0.00383	< 0.0020	< 0.0020	< 0.0020
GW-8	19-Jul-99	0.0240	0.0150	0.0038	0.0017	0.0012	< 0.0005
GW-8	20-Jan-00	0.1500	0.1900	0.0530	0.0120	0.0045	< 0.0007
Split	20-Jan-00	0.1500	0.1800	0.0520	0.0110	0.0046	< 0.0005
GW-8	28-Apr-00	0.1200	0.1100	0.0290	0.0053	0.0023	< 0.0005
Monitoring wells owned by IOSCO							
MW-11	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	28-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	31-Jan-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	27-Apr-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
MW-11	27-Jul-01	0.0017	0.0010	0.0062	< 0.0005	< 0.0005	< 0.0005
MW-11	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
MW-11	31-Jan-02	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0100 ^b	<0.0050 ^b
MW-11	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
MW-11	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
MW-11	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005

Table 9
Historical Analytical Results For Volatile Organic Compound Analyses in
Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California
All results expressed in milligrams per liter (mg/L)

Location	Date Sampled	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-DCP
LFR-1	9-Aug-00	2.80	0.064	0.0410	< 0.0083	< 0.0083	< 0.0083
LFR-1	30-Oct-00	0.82	0.034	0.0100	< 0.0031	< 0.0031	< 0.0031
Split	30-Oct-00	0.87	0.035	0.0140	< 0.0031	< 0.0031	< 0.0031
LFR-1	29-Jan-01	0.77	0.026	0.0073	<0.0025	<0.0025	<0.0025
LFR-1	26-Apr-01	0.44	0.013	0.0050	<0.0013	<0.0013	<0.0013
LFR-1	27-Jul-01	0.38	0.031	0.0098	<0.0013	<0.0013	<0.0013
LFR-1	18-Oct-01	0.78	0.093	<0.0310	<0.0310	<0.0630	<0.0310
LFR-1	31-Jan-02	0.37 ^b	0.035 ^b	<0.0130 ^b	<0.0130 ^b	<0.0250 ^b	<0.0130 ^b
LFR-1	16,17-Apr-02	0.38	0.040	<0.0130	<0.0130	<0.0250	<0.0130
LFR-1	17,18-Jul-02	0.36	0.041	<0.013	<0.013	<0.025	<0.013
LFR-1	22,23-Oct-02	0.18	0.024	0.0067	<0.005	<0.010	<0.005
LFR-2	11-Aug-00	< 0.0005	< 0.0005	0.0350	< 0.0005	0.0045	< 0.0005
LFR-2	2-Nov-00	< 0.0005	< 0.0005	0.1300	0.0010	0.0150	0.0006
LFR-2	29-Jan-01	<0.0005	<0.0005	0.0056	<0.0005	0.0016	<0.0005
LFR-2	27-Apr-01	0.0007	<0.0005	0.0056	<0.0005	0.0013	<0.0005
LFR-2	27-Jul-01	0.0014	0.0007	0.0190	<0.0005	<0.0005	<0.0005
LFR-2	18-Oct-01	<0.0071	<0.0071	0.1600	<0.0071	<0.0140	<0.0071
LFR-2-2	27-Apr-01	0.0007	<0.0005	0.0065	<0.0005	0.0019	<0.0005
LFR-2	31-Jan-02	<0.0050 ^b	<0.0050 ^b	0.0069 ^b	<0.0050 ^b	<0.0100 ^b	<0.0050 ^b
LFR-2	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
LFR-2	17,18-Jul-02	<0.005	<0.005	0.012	<0.005	<0.01	<0.005
LFR-2	22,23-Oct-02	<0.005	<0.005	0.066	<0.005	<0.010	<0.005
LFR-3	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Split	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
LFR-3	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
LFR-3	30-Jan-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	27-Apr-01	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	27-Jul-01	0.0022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LFR-3	18-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
LFR-3	31-Jan-02	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0050 ^b	<0.0100 ^b	<0.0050 ^b
LFR-3	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
LFR-3	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
LFR-3	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
LFR-4	11-Aug-00	< 0.0005	< 0.0005	0.0012	< 0.0005	< 0.0005	< 0.0005
LFR-4	31-Oct-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
LFR-4	30-Jan-01	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	<0.0005
LFR-4	27-Apr-01	<0.0005	<0.0005	0.0016	<0.0005	<0.0005	<0.0005
LFR-4	27-Jul-01	0.0005	<0.0005	0.0021	<0.0005	<0.0005	<0.0005
LFR-4	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
LFR-4	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
LFR-4	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005

Table 9
Historical Analytical Results For Volatile Organic Compound Analyses in
Groundwater Samples
at the Former Giovatorium Site
3815 Broadway, Oakland, California
All results expressed in milligrams per liter (mg/L)

Location	Date Sampled	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-DCP
Monitoring wells installed by SOMA							
SOMA-1	19-Oct-01	<0.0050	<0.0050	0.0140	<0.0050	<0.0100	<0.0050
SOMA-1	31-Jan-02	0.0056 ^b	<0.0050 ^b	0.0070 ^b	<0.0050 ^b	<0.0100 ^b	0.0057 ^b
SOMA-1	16,17-Apr-02	0.0059	<0.0050	0.0066	<0.0050	<0.0100	<0.0050
SOMA-1	17,18-Jul-02	<0.005	<0.005	0.016	<0.005	<0.01	<0.005
SOMA-1	22,23-Oct-02	0.0084	<0.005	0.041	<0.005	<0.010	0.007
Monitoring wells installed by SOMA							
SOMA-2	19-Oct-01	1.400	0.350	5.0	<0.250	<0.500	<0.250
SOMA-2	31-Jan-02	<0.071 ^b	<0.071 ^b	1.8 ^b	<0.071 ^b	<0.140 ^b	<0.071 ^b
SOMA-2	16,17-Apr-02	<0.130	<0.130	2.9	<0.130	<0.250	<0.130
SOMA-2	17,18-Jul-02	<0.063	<0.063	1.6	<0.063	<0.13	<0.063
SOMA-2	22,23-Oct-02	0.017	0.0082	0.35	<0.0071	<0.014	<0.0071
Monitoring wells installed by SOMA							
SOMA-3	19-Oct-01	0.042	0.057	0.44	<0.025	<0.050	<0.025
SOMA-3	31-Jan-02	0.018 ^b	0.023 ^b	0.38 ^b	<0.013 ^b	<0.025 ^b	<0.013 ^b
SOMA-3	16,17-Apr-02	0.025	0.018	0.36	<0.017	<0.033	<0.017
SOMA-3	17,18-Jul-02	0.027	<0.017	0.44	<0.017	<0.033	<0.017
SOMA-3	22,23-Oct-02	<0.170	<0.170	5.9	<0.170	<0.330	<0.170
Monitoring wells installed by SOMA							
SOMA-4	19-Oct-01	<0.13	<0.13	2.6	<0.13	<0.25	<0.13
SOMA-4	31-Jan-02	FP	FP	FP	FP	FP	FP
SOMA-4	16,17-Apr-02	FP	FP	FP	FP	FP	FP
SOMA-4	17,18-Jul-02	FP	FP	FP	FP	FP	FP
SOMA-4	22,23-Oct-02	FP	FP	FP	FP	FP	FP

^b analysis was carried out past hold date, no analytical problems were encountered
FP: Not Analyzed due to Free Product

Table 10
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters
in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California
(concentrations in milligrams per liter (mg/L) unless otherwise noted)

Well ID	Date Sampled	Dissolved Oxygen	Manganese (dissolved)	Nitrate	Sulfate	Ferrous Iron (Fe + 2)	Methane*	ORP (milliVolts)	Hydrogen (nano-Moles)
B-7	11-Aug-00						11.0	193.00	
B-7-field	11-Aug-00	0.63		-1.0	3				
B-7	31-Oct-00	0.62	2.6	< 0.10	< 1.0	11.000	2.4		-3
B-7-field	31-Oct-00	0.25		0.40	-1	15.850		-62.50	
B-7	1-Feb-01	0.78	2.2	0.78	<1.0	15.000	13.0		
B-7-field	31-Jan-01	0.48						28.00	
B-7 Field	26-Apr-01	0.60	1.7	2.50	5	>3.3	7.6	-28.00	
B-7 Field	26-Jul-01	1.98	7.3	0	8	11.600	7.0	-40.00	
B-8 field	31-Jan-01	0.45						58.00	
B-10	10-Aug-00			< 0.05	< 0.05	5.700	10.0	213.00	
B-10-field	10-Aug-00	0.44		-1.0	-2				
B-10	31-Oct-00	2.40	1.4	< 0.10	< 1.0	5.900	6.7		0.81
B-10-field	31-Oct-00	0.44		0	0	7.600		-22.20	
B-10	31-Jan-01	6.40	1.3	< 0.10	< 2.0	7.700	24.0		1.3
B-10-field	31-Jan-01	0.46						64.00	
B-10 Field	11-Jun-01	0.90	0	0	0	1.250	3.9	-8.00	NM
B-10 Field	26-Jun-01	1.87	1.3	0	3	6.200	5.6	-22.00	
GW-2-field	1-Nov-00	2.32						77.00	
GW-2	1-Feb-01	3.80					0.04100		
GW-2-field	1-Feb-01	0.58						159.00	
GW-2	26-Apr-01	4.00	1.0	7.10	36	0.015	0.00022	152.00	NM
GW-2	26-Jul-01	1.93	0	3.90	60	0.000	0.01600	233.00	
GW-2 field	Not En. Sample						0.00091		
GW-2	31-Jan-02	2.80	0	0.80	45	0.360	0.00690	179.00	NM
GW-2	16,17-Apr-02	1.76	0	4.70	70	0.090	0.00029	198.00	
GW-2	17,18-Jul-02	1.39	0.6	0.00	69	0.00	0.00210	161.00	
GW-2	22,23-Oct-02	3.86	0.60	11.50	40.00	0.07	0.00073	166.00	
GW-3	11-Aug-00						< 0.0005	395.00	
GW-3-field	11-Aug-00	0.72		1.00	46				
GW-3	1-Nov-00							81.00	
GW-3-field		7.76							
GW-3	29-Jan-01	8.80					0.01200		
GW-3-field	1-Feb-01	8.99						235.00	
GW-3	27-Apr-01	2.90	0	0.70	30	0.000	0.01500	212.00	NM
GW-3	26-Jul-01	2.48	0	2.40	52	0.120	0.00830	214.00	
GW-3 field	18-Oct-01	3.76	0	5.20	4.9	0.000	0.00410	131.00	NM
GW-3	31-Jan-02	3.70	0.2	1.30	52	0.000	0.00810	163.00	
GW-3	16,17-Apr-02	7.55	0.0	4.20	59	0.000	0.00064	133.00	
GW-3	17,18-Jul-02	3.50	0.0	0.00	47	0.220	0.01000	155.00	
GW-3	22,23-Oct-02	2.19	0.0	1.60	33	0.000	0.00065	178.00	
GW-4-field	30-Jan-01	0.83						67.00	
GW-4-field	26-Jul-01	2.59	0.2	10.50	25	1.290	0.0028	-3.00	
GW-4-field	18-Oct-01	1.00	0.1	0.00	0	4.800	4.8	-84.00	NM
GW-4	31-Jan-02	0.90	0.8	0.00	0.0	8.000	3.5	-91.00	
GW-4	16,17-Apr-02	0.41	0.1	5.20	0.0	5.700	4.7	-2.10	
GW-4	17,18-Jul-02	2.38	3.0	0.00	0.0	>3.3	4.6	-68.00	
GW-4	22,23-Oct-02	NM	NM	NM	NM	NM	0.3	NM	

Table 10
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters
in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California
(concentrations in milligrams per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Dissolved Oxygen	Manganese (dissolved)	Nitrate	Sulfate	Ferrous Iron (Fe + 2)	Methane*	ORP (milliVolts)	Hydrogen (nano-Moles)
MW-11	10-Aug-00			2.8	63	< 0.1	< 0.0005	476	
MW-11-field	10-Aug-00	2.52		4.1	67				
MW-11	1-Nov-00	4.10	< 0.010	15	90	< 0.1	0.00004		130
MW-11-field	1-Nov-00	4.01		3.3	73	0		87.4	
MW-11	31-Jan-01	6.30	< 0.010	15	94	< 1.0	0.00005		1.1
MW-11-field	1-Nov-00	3.97		27.3	74	0		319	
MW-11 Field	26-Apr-01	7.40	0	6.8	52	0	0.0014	229	NM
MW-11 Field	26-Jul-01	1.85	0	5.2	77	0	0.0049	233	
MW-11 Field	18-Oct-01	5.58	0	10.1	NM	0	0.0066	155	NM
MW-11	31-Jan-02	4.90	0	2.8	79	0.0	0.0077	218	
MW-11	16,17-Apr-02	3.18	0	2.8	88	0.0	0.0092	242	
MW-11	17,18-Jul-02	2.82	0	4.1	79	0.0	0.0088	357	
MW-11	22,23-Oct-02	4.47	0	3.7	69	0.0	0.0025	118	
LFR-1	9-Aug-00							462	
LFR-1	11-Aug-00						0.0096		
LFR-1-field	9-Aug-00	3.63		5.5	30				1.5
LFR-1	30-Oct-00	2.70	0.03	39	42	< 1.0	0.00038		
FR-1-field/sp	30-Oct-00	2.95		10.3/10.0	29/29	0.01/0.01		77.4	1
LFR-1 split	30-Oct-00	3.40	0.03	40	43	< 1.0	0.00069		
LFR-1	29-Jan-01	5.10	<0.01	<0.10	51	<1.0	0.00012		0.43
LFR-1-field	29-Jan-01	3.78	0		36	0		383	
LFR-1 Dup	29-Jan-01	4.60	<0.01	<0.10	50	<1.0	0.000011		0.32
LFR-1	26-Apr-01	3.20	0.02	12.9	16	0	0.0003	224	NM
LFR-1	26-Jul-01	1.07	0	8	25	0.01	0.0084	238	
LFR-1 filed	18-Oct-01	1.03	0	6.9	24	0.18	0.0054	119	NM
LFR-1	31-Jan-02	1.80	0.30	5.50	31	0.00	0.0062	163	
LFR-1	16,17-Apr-02	1.68	0.30	1.50	38	0.39	0.003	240	
LFR-1	17,18-Jul-02	0.00	0.00	6.1	3.0	0.07	0.0047	209	
LFR-1	22,23-Oct-02	0.00	0.40	0.0	23.0	0.15	0.00081	265	
LFR-2	11-Aug-00						6.6	270	
LFR-2-field	11-Aug-00	0.48		1.5	-1	2.7			1200
LFR-2	2-Nov-00	2.20	8.80	0.33	5.4	5.3	8.5		
LFR-2-field	2-Nov-00	0.47		0.5	-1	6.05		-23.7	
LFR-2	30-Jan-01	4.40	8.90	1	8.3	4.6	4.6		1.1
LFR-2-field	30-Jan-01	0.61	10.70	2.9		1.02		210	
LFR-2	27-Apr-01	1.40	0.40	1.6	1	2.66	14	9	NM
LFR-2	26-Jul-01	0.55	0.20	0	0	4.5	10	-20	
LFR-2 field	18-Oct-01	0.43	0	0	0	6.5	11	-75	NM
LFR-2	31-Jan-02	1.00	0.0	2.60	19	1.81	11	-14	
LFR-2	16,17-Apr-02	0.00	0.0	1.70	0	7.20	16	-5.7	
LFR-2	17,18-Jul-02	0.00	13.9	0.00	0	7.20	9.6	-64	
LFR-2	22,23-Oct-02	0.00	10.7	0.50	0	3.30	4.7	-82	

Table 10
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters
in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

(concentrations in milligrams per liter [mg/L] unless otherwise noted)

Well ID	Date Sampled	Dissolved Oxygen	Manganese (dissolved)	Nitrate	Sulfate	Ferrous Iron (Fe + 2)	Methane*	ORP (milliVolts)	Hydrogen (nano-Moles)
LFR-3	10-Aug-00			2.4	64	< 0.1	0.00051	464	
LFR-3 split	10-Aug-00							< 0.0005	
LFR-3-field	10-Aug-00	1.30		2.4	64				850
LFR-3	1-Nov-00	4.70	0.022	8.8	74	< 1.0	0.00028		
LFR-3-field	1-Nov-00	0.58		1.8	57	0		75.2	
LFR-3	31-Jan-01	4.10	<0.01	1.2	58	< 1.0	0.00038		
LFR-3-field	30-Jan-01	1.75		0.023	44	0		195	
LFR-3 Field	11-Jun-01	1.00	0	0.8	28	0	0.0086	201	NM
LFR-3 Field	26-Jul-01	1.29	0.40	0	51	0.6	0.0035	228	
LFR-3 Field	18-Oct-01	0.54	0	0.8	30	0.11	0.0093	139	NM
LFR-3	31-Jan-02	0.80	0.40	2.60	32	0.00	0.0072	212	
LFR-3	16,17-Apr-02	0.19	0.40	0.0	55	0.79	0.0096	228	
LFR-3	17,18-Jul-02	0.00	0.20	1.7	42	0.00	0.0068	166	
LFR-3	22,23-Oct-02	0.11	0.50	0.0	36	0.00	0.0035	186	
LFR-4	11-Aug-00						0.062	402	
LFR-4-field	11-Aug-00	1.13		0.7	1.0	0.14			1.1
LFR-4	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	
LFR-4	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	
LFR-4	16,17-Apr-02	0.00	1.0	2.6	6.0	4.80	12.00	-4	
LFR-4	17,18-Jul-02	0.79	6.8	0.0	0.0	>3.3	2.80	3	
LFR-4	22,23-Oct-02	0.00	4.0	0.0	0.0	2.55	1.30	-63	

Table 10
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters
in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California
(concentrations in milligrams per liter (mg/L) unless otherwise noted)

Well ID	Date Sampled	Dissolved Oxygen	Manganese (dissolved)	Nitrate	Sulfate	Ferrous Iron (Fe + 2)	Methane*	ORP (milliVolts)	Hydrogen (nano-Moles)
SOMA-1	18-Oct-01	4.19	0.3	0.2	33.0	0.52	0.120	151	NM
SOMA-1	31-Jan-02	0.40	0.0	0.0	18.0	0.00	0.580	141	NM
SOMA-1	16,17-Apr-02	0.00	0.0	0.6	31.0	0.10	0.820	213	
SOMA-1	17,18-Jul-02	0.00	0.0	1.8	28.0	0.05	0.440	149	
SOMA-1	22,23-Oct-02	0.00	0.7	0.0	4.0	0.00	0.680	131	
SOMA-2	18-Oct-01	0.57	0.0	0.4	0.0	40.00	6.60	-89	NM
SOMA-2	31-Jan-02	0.70	3.8	0.8	0.0	9.00	13.00	103	NM
SOMA-2	16,17-Apr-02	0.00	0.5	0.1	0.0	7.40	14.00	-69	
SOMA-2	17,18-Jul-02	0.00	5.7	0.0	0.0	>3.3	9.40	-87	
SOMA-2	22,23-Oct-02	0.35	1.7	2.8	15.0	3.30	2.20	-98	
SOMA-3	18-Oct-01	1.32	0.0	0.0	33.0	0.22	1.00	2	NM
SOMA-3	31-Jan-02	1.00	22.0	2.0	54.0	0.62	0.460	-71	NM
SOMA-3	16,17-Apr-02	2.60	0.0	0.6	42.0	0.77	0.410	29	
SOMA-3	17,18-Jul-02	0.97	10.9	0.0	23.0	>3.3	0.940	-51	
SOMA-3	22,23-Oct-02	0.30	2.7	0.1	7.0	3.26	4.200	-98	
SOMA-4	18-Oct-01	0.83	4.0	22.0	17.0	0.22	1.20	88	NM
SOMA-5	Dry	NM	NM	NM	NM	NM	NM	NM	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 Colorimeter

*) Methane was measured by Microseep Laboratory.

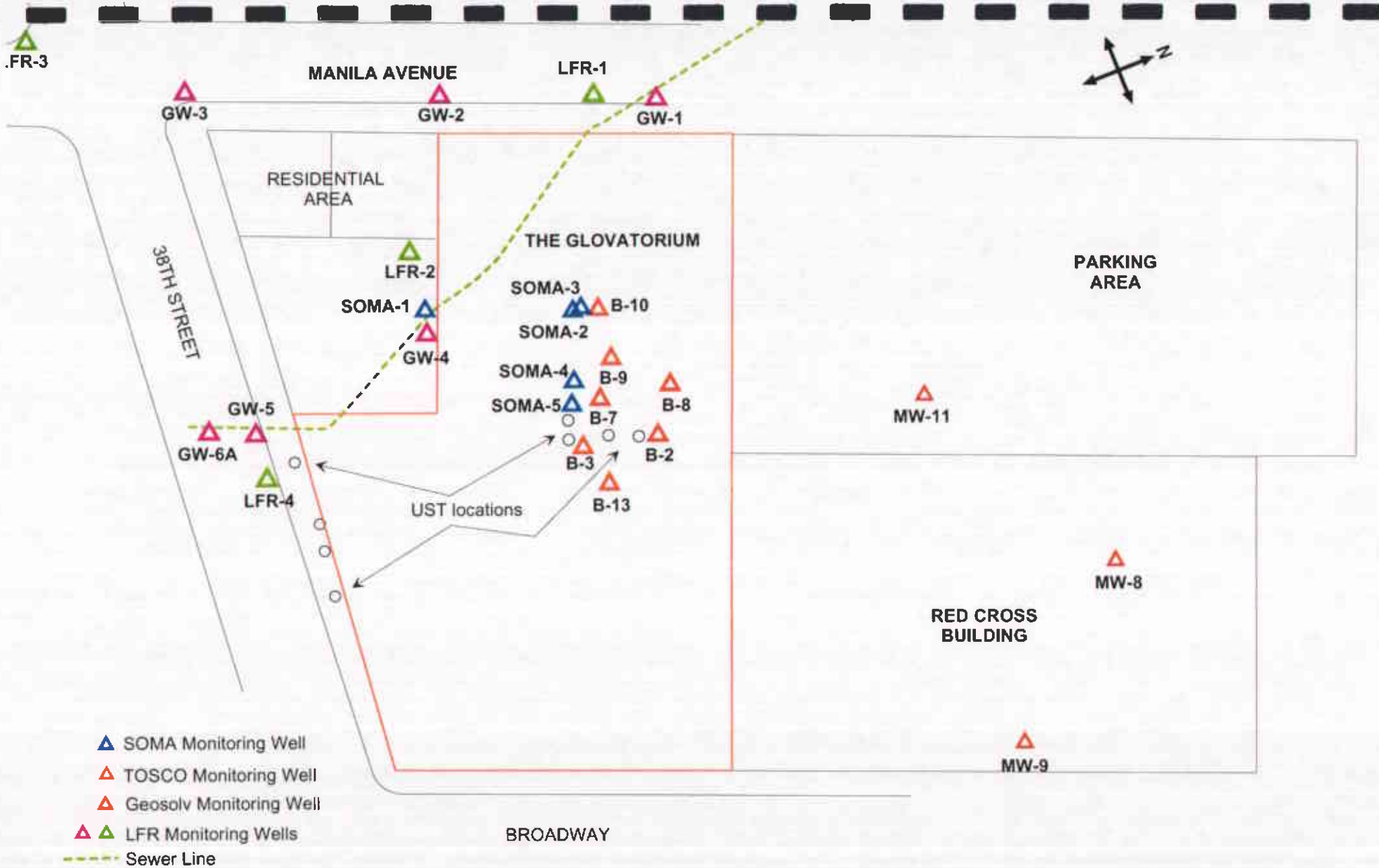
(1) Sample concentration was too dilute to be reproducibly measured using the Hach spectrophotometer.

(2) Field measurement was not recorded.

FIGURES



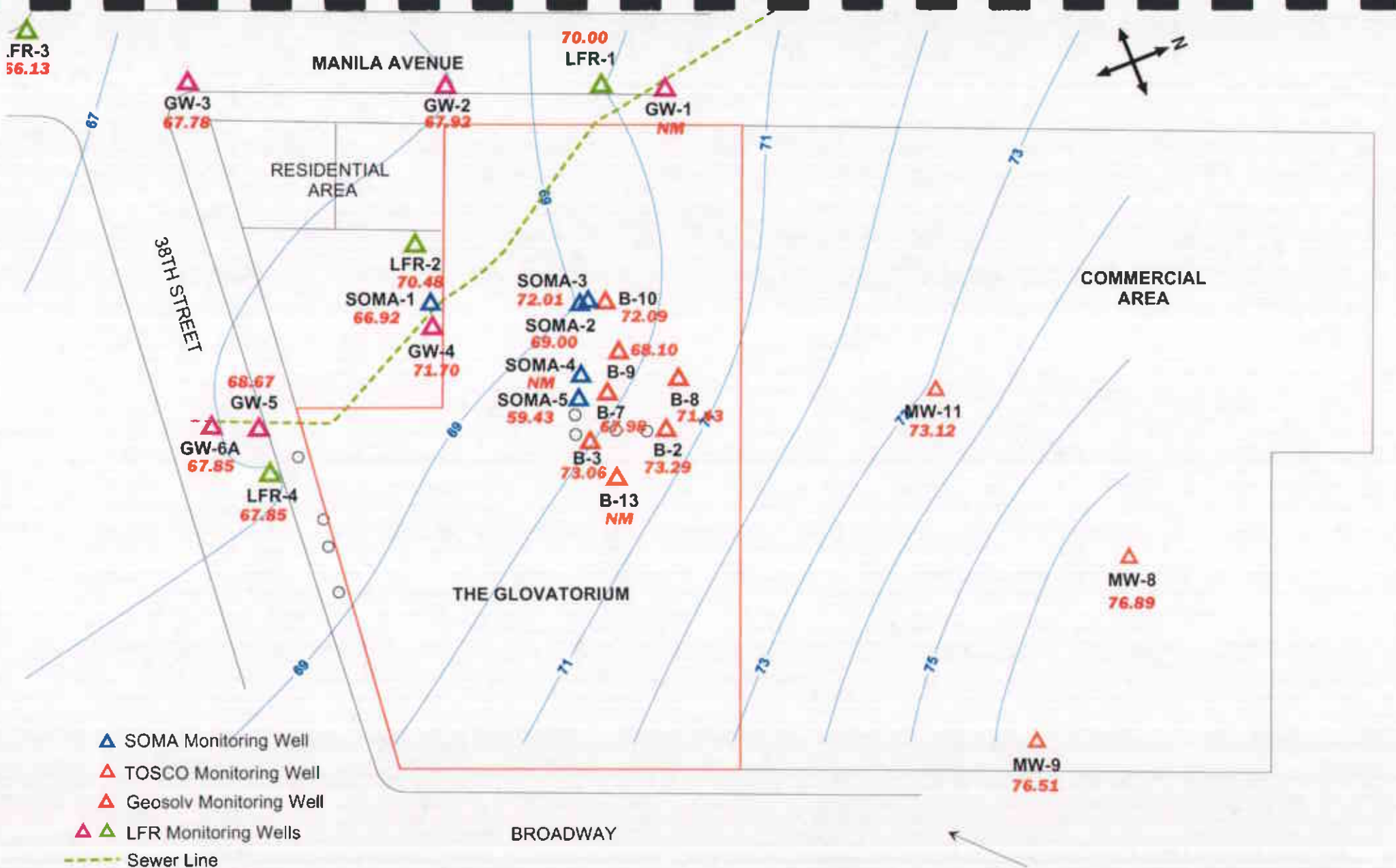
Figure 1: Site vicinity map.



approximate scale in feet



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



NOTES:
 Data from all B wells, GW-4, SOMA 1,3,4, and 5 were discarded in mapping the groundwater elevation contour.

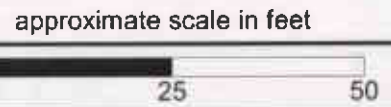


Figure 3: Groundwater elevation contour map in feet.
 October 22, 2002.

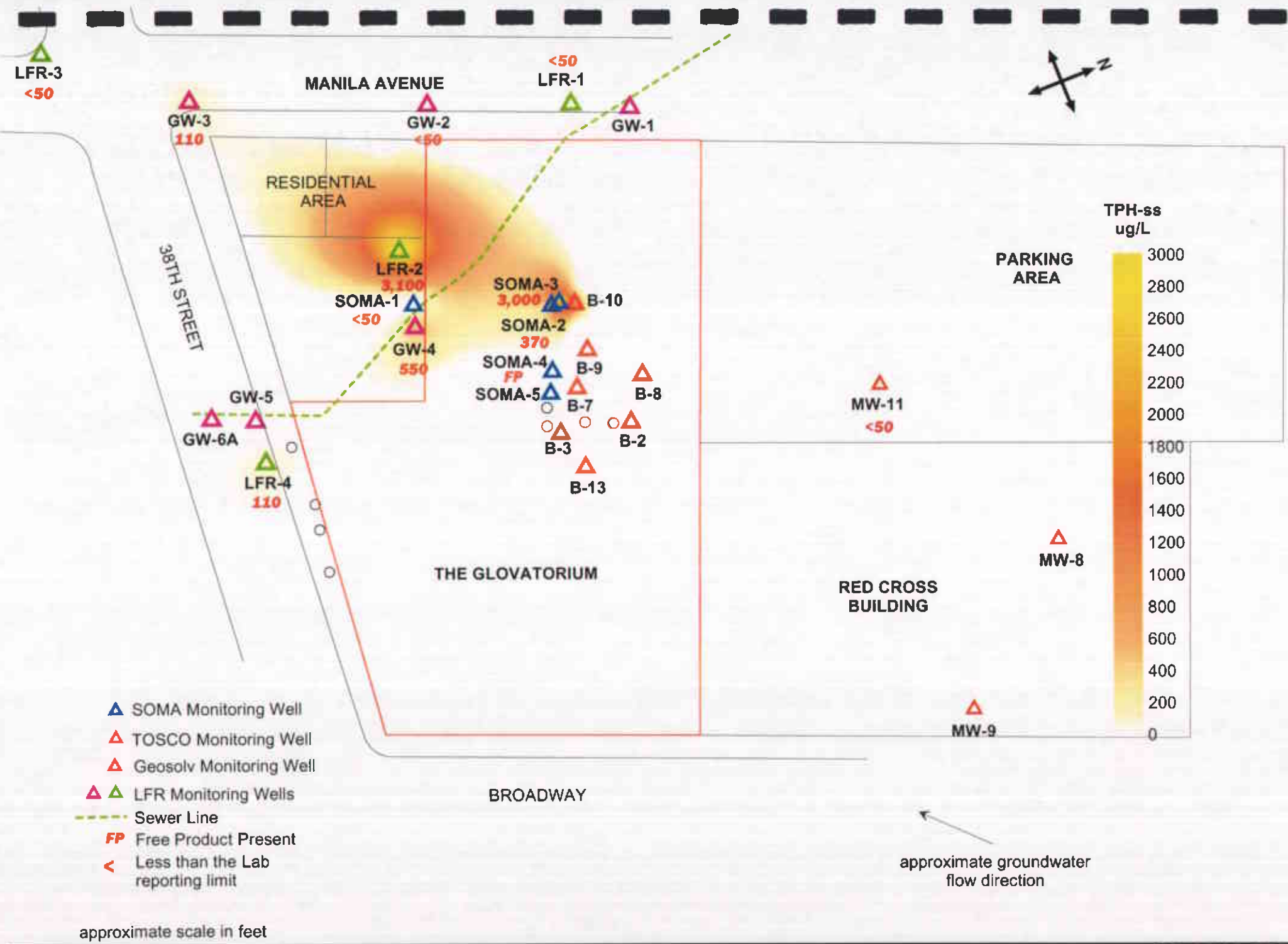
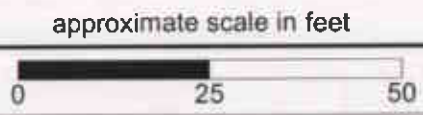


Figure 4: Contour map of TPH-ss concentrations in groundwater.
October 22, 2002



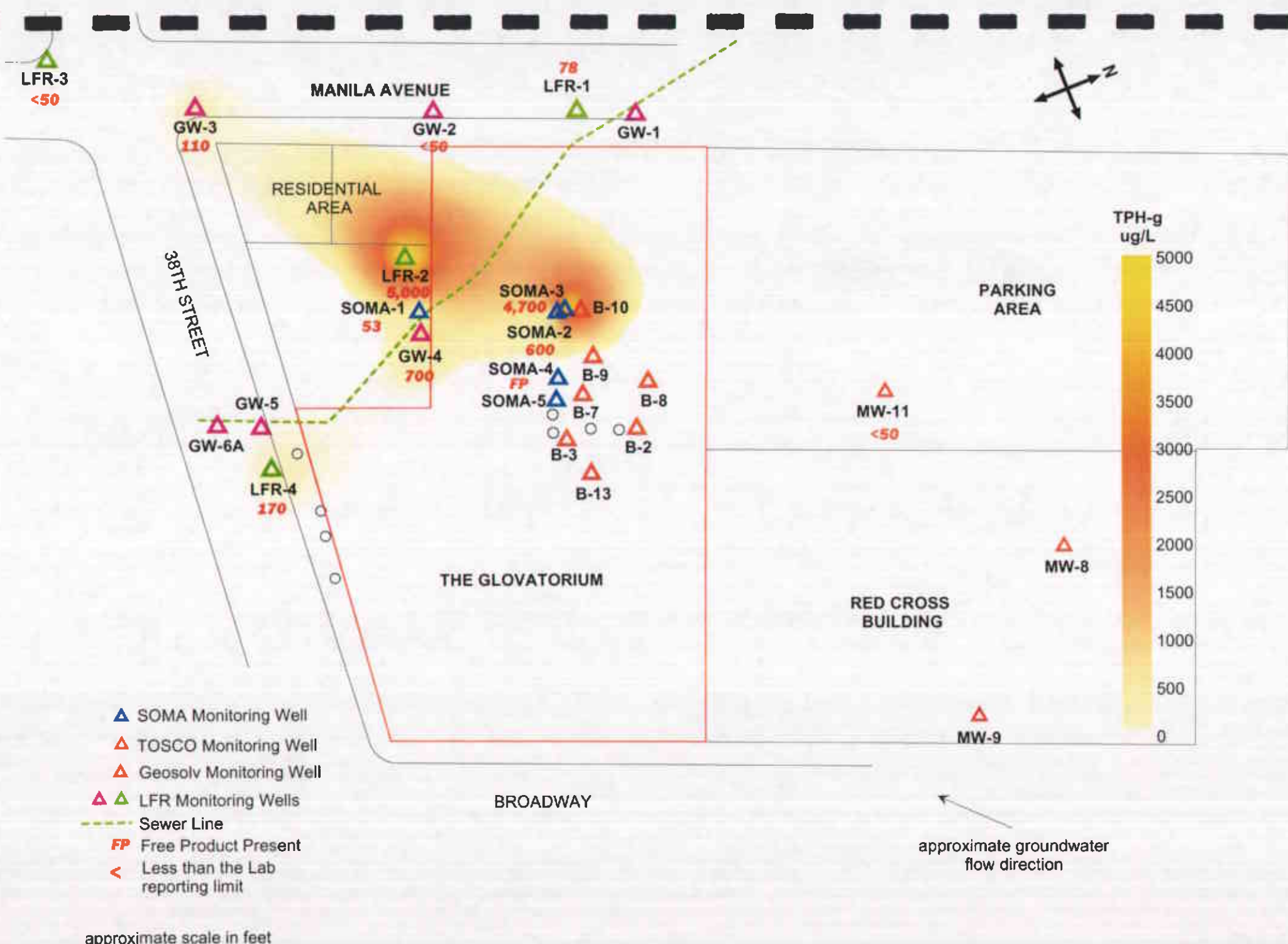
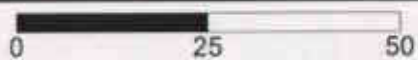


Figure 5: Contour map of TPH-g concentrations in groundwater.
October 22, 2002

approximate scale in feet



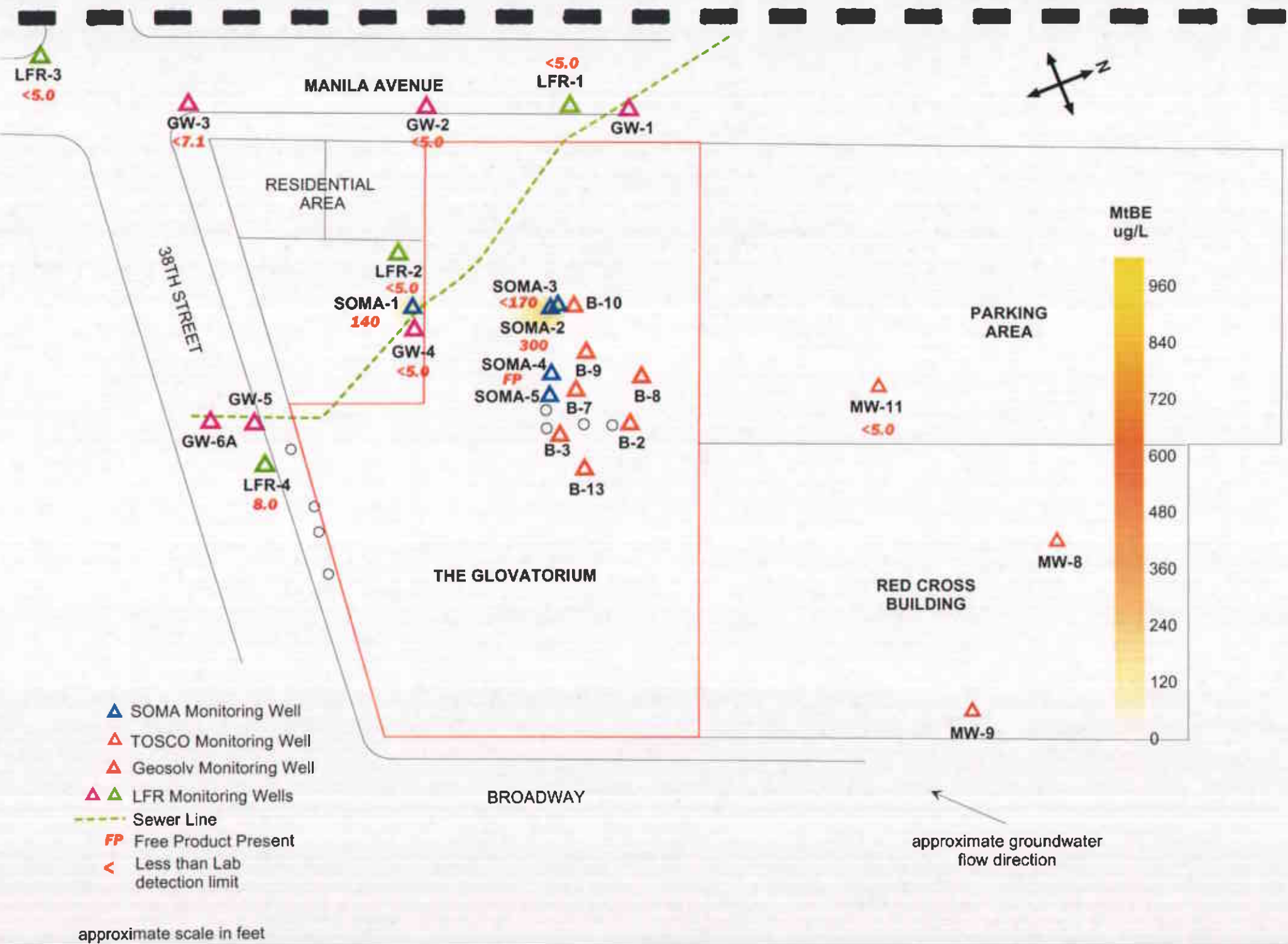


Figure 6: Contour map of MtBE concentrations in groundwater. October 22, 2002

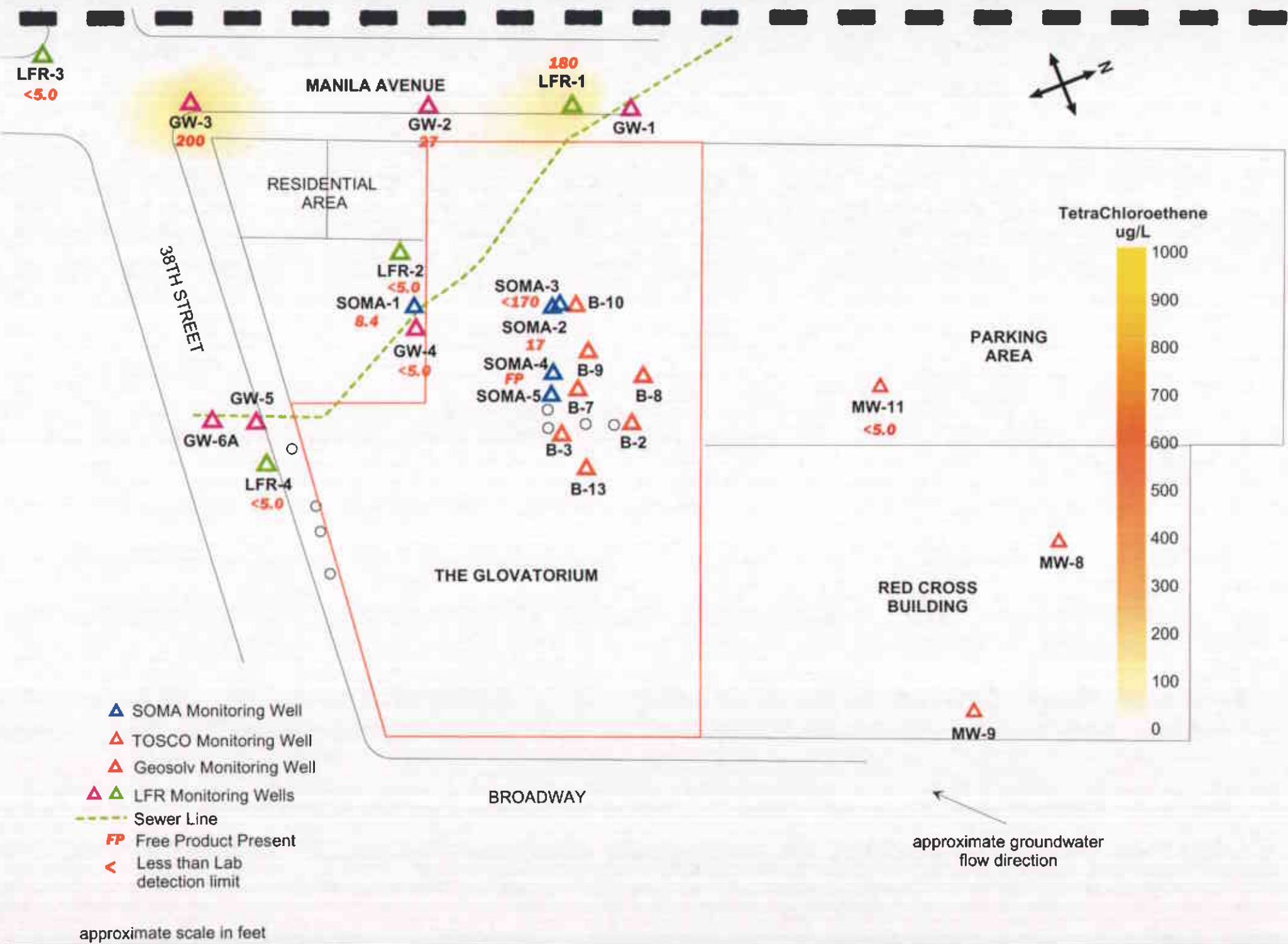


Figure 7: Contour map of TetraChloroethene concentrations in groundwater. October 22, 2002

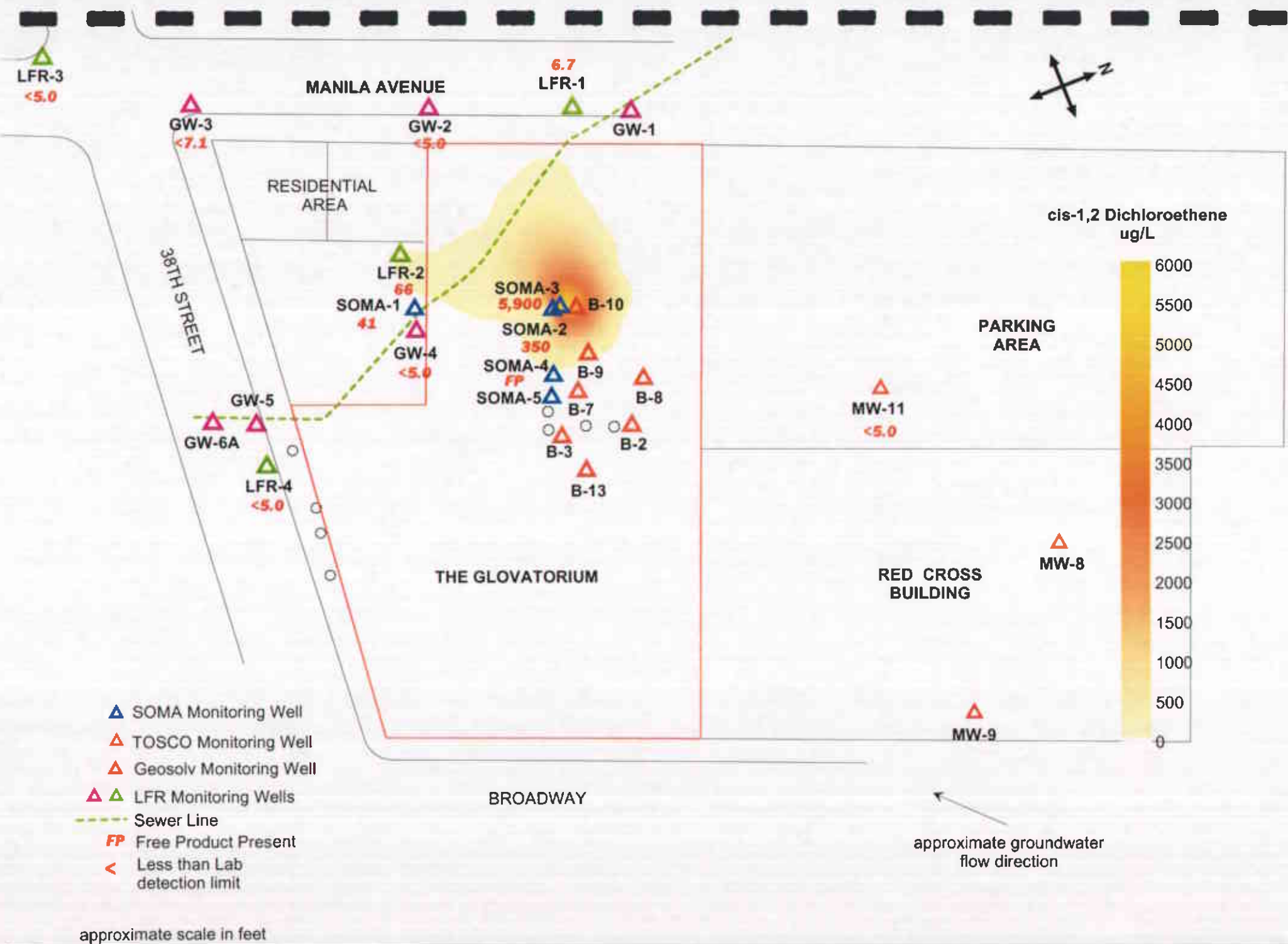


Figure 8: Contour map of cis-1,2 Dichloroethene concentrations in groundwater. October 22, 2002

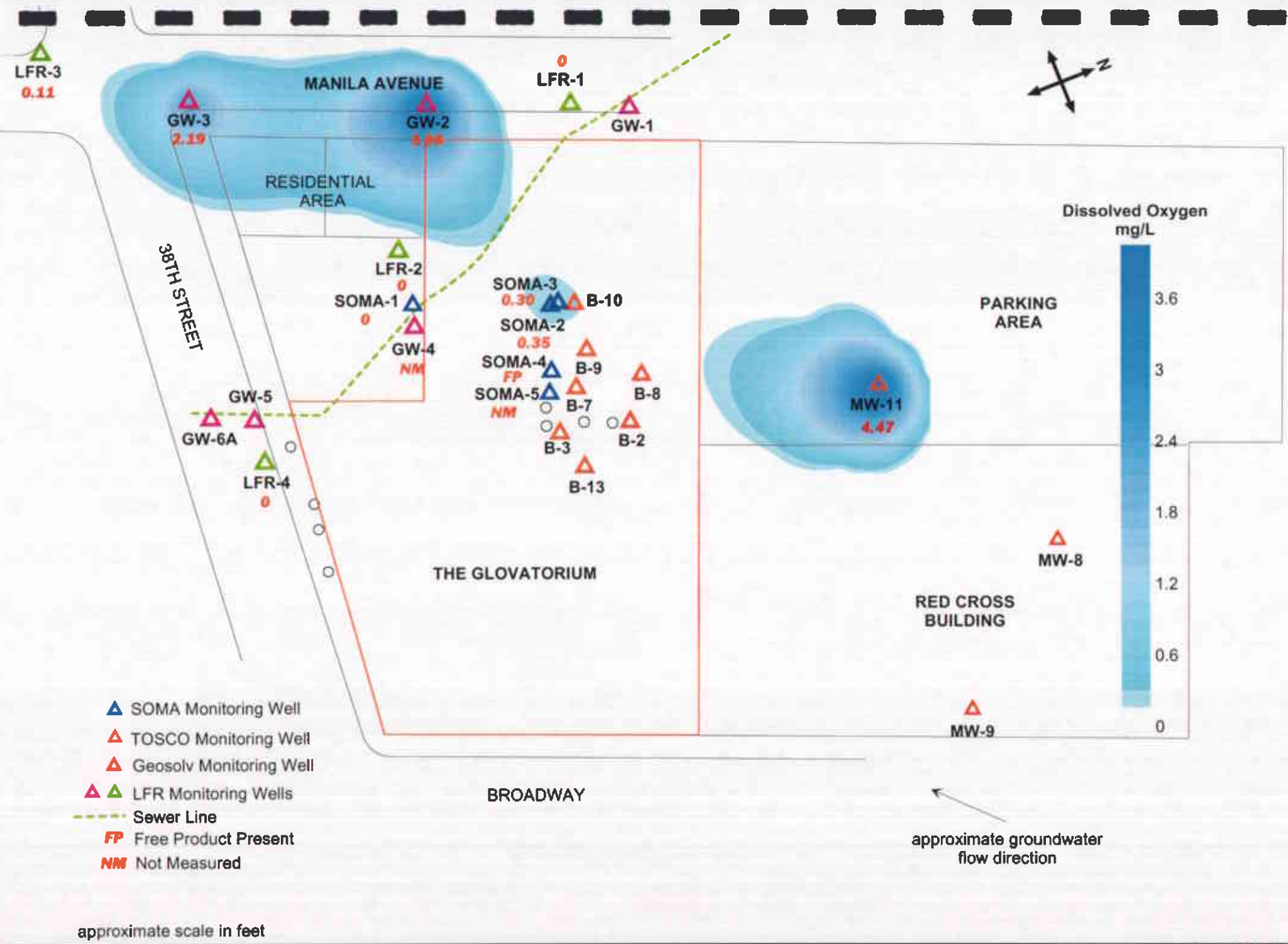


Figure 9: Contour map of Dissolved Oxygen concentrations in groundwater.
October 22, 2002

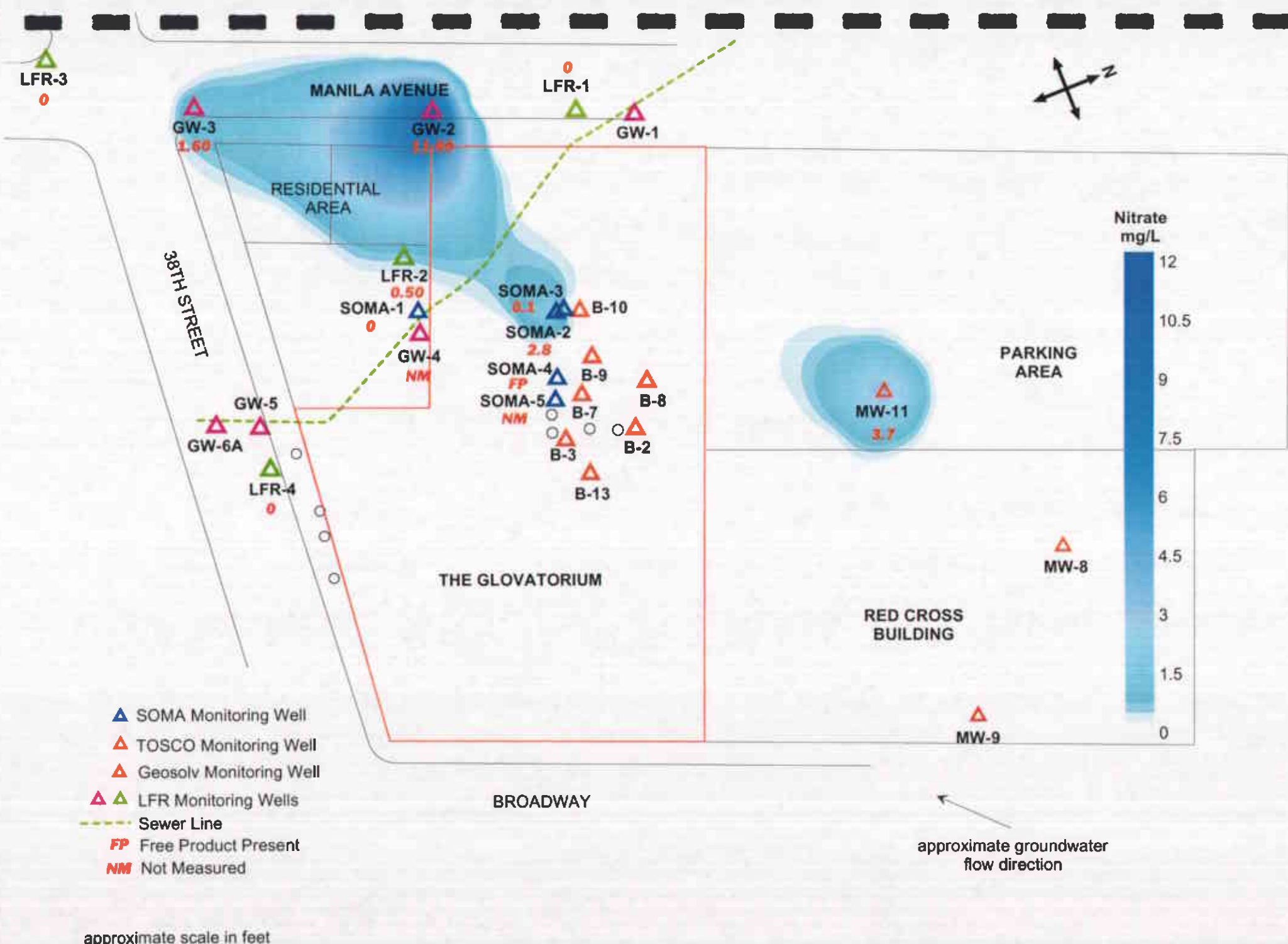
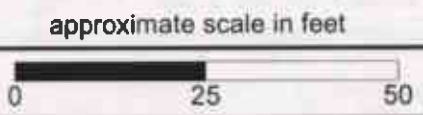
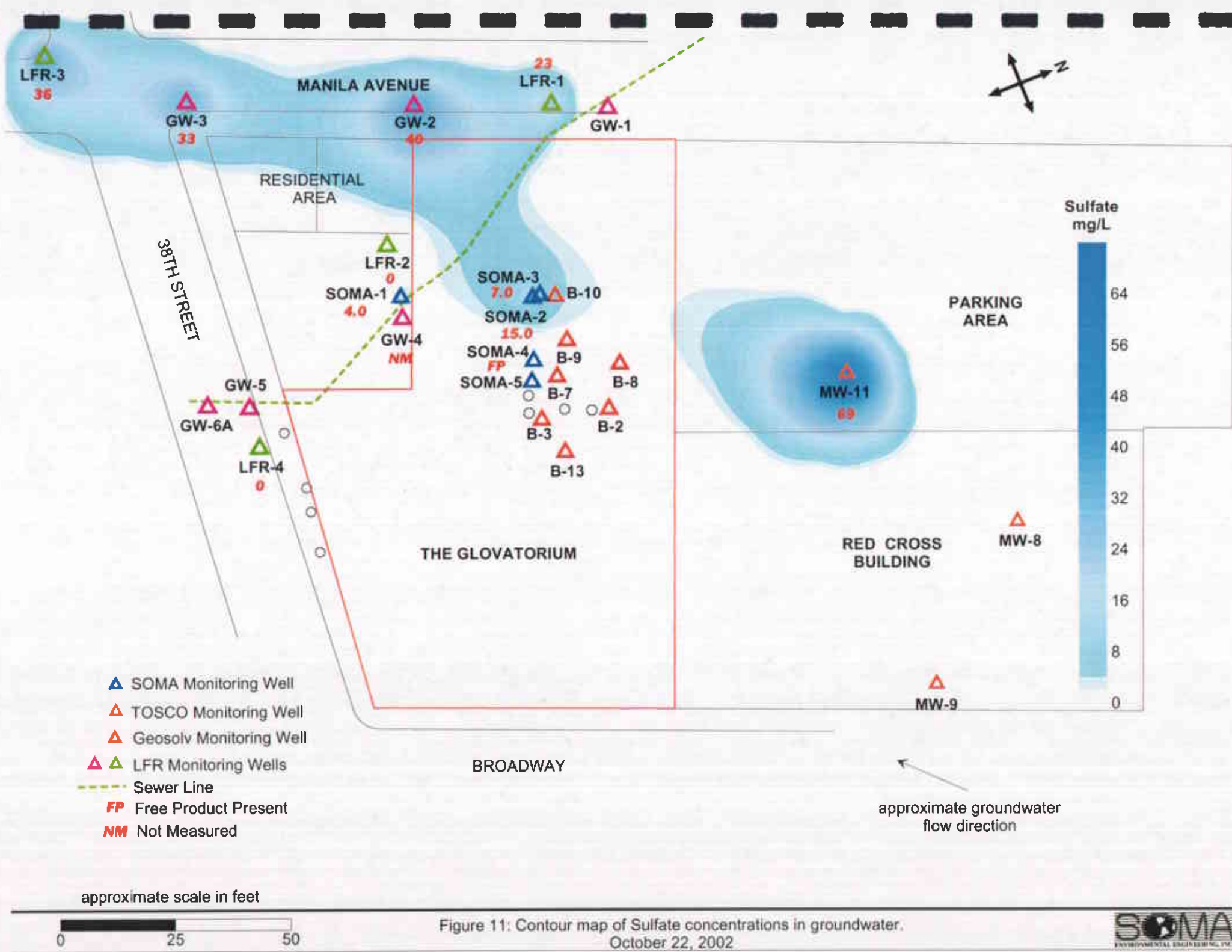


Figure 10: Contour map of Nitrate concentrations in groundwater.
October 22, 2002





approximate scale in feet



Figure 11: Contour map of Sulfate concentrations in groundwater.
October 22, 2002

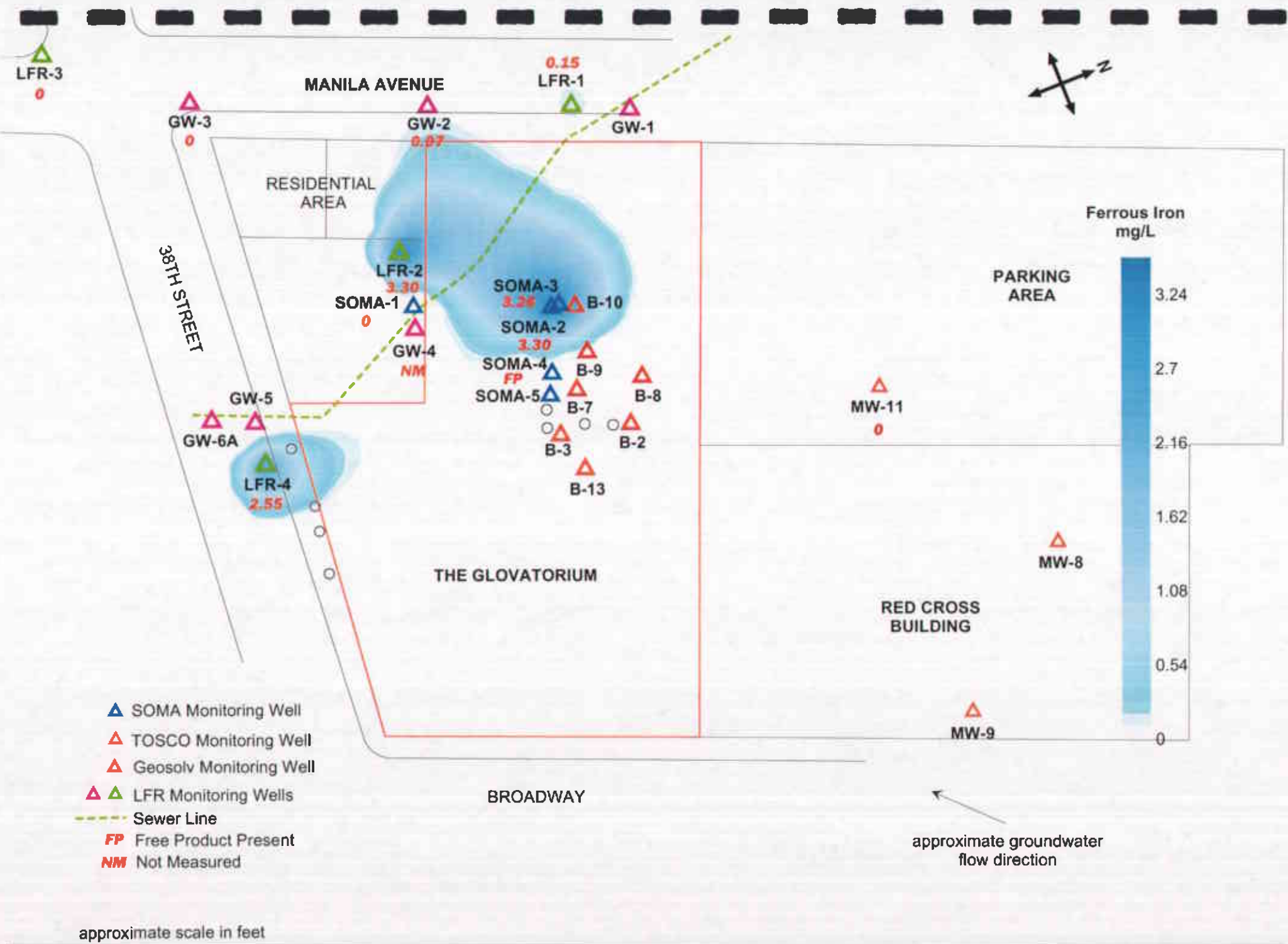
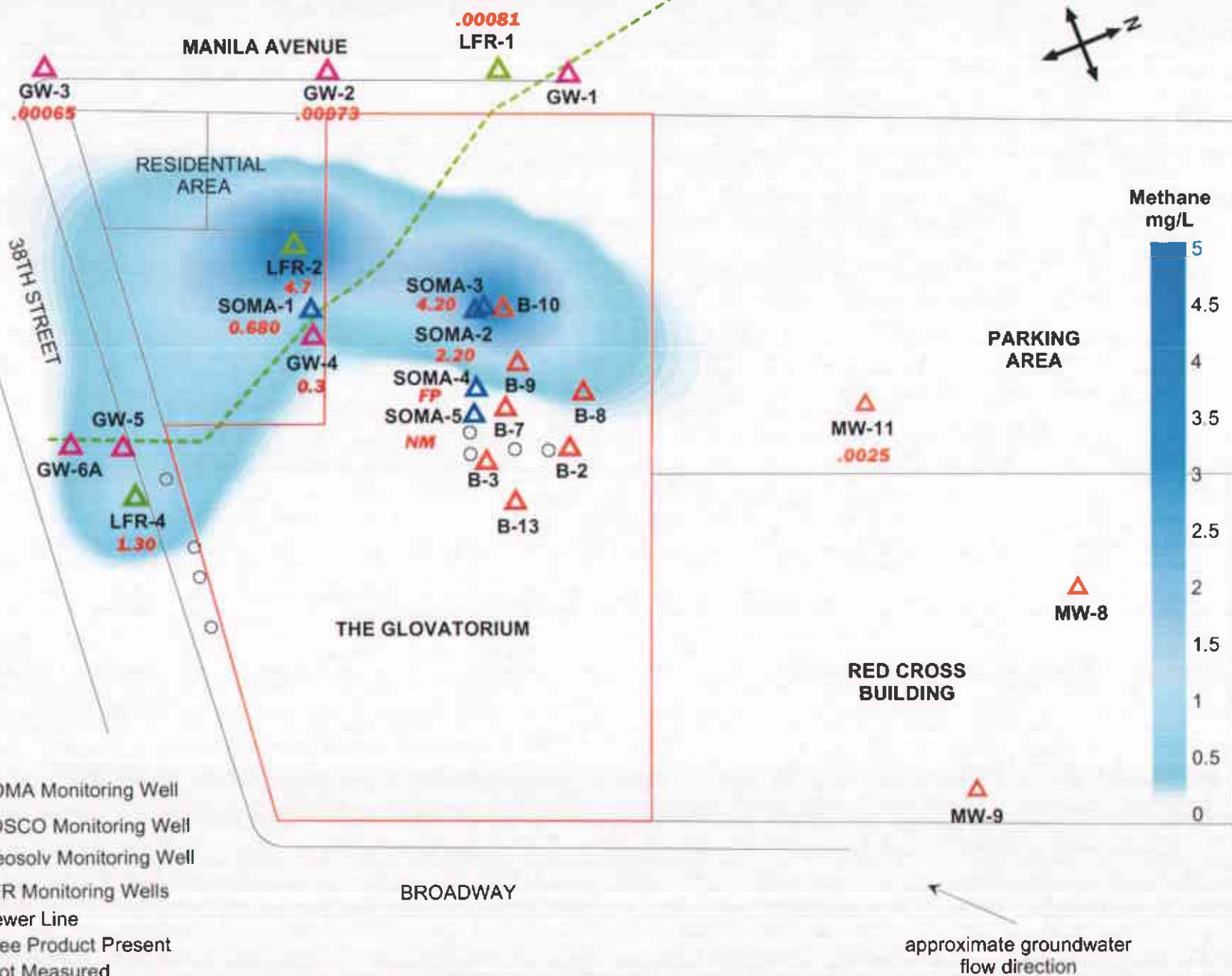


Figure 12: Contour map of Ferrous Iron concentrations in groundwater.
October 22, 2002

LFR-3
.0035



- ▲ SOMA Monitoring Well
- ▲ TOSCO Monitoring Well
- ▲ Geosolv Monitoring Well
- ▲ LFR Monitoring Wells
- Sewer Line
- FP Free Product Present
- NM Not Measured

approximate scale in feet



Figure 13: Contour map of Methane concentrations in groundwater.
October 22, 2002

APPENDIX A

Field Notes, Field Measured Physical and Chemical Parameter Values



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Location: Oakland, CA Sampler: Ramin Bet-Yonan
 Tony Perini

Well/Sample ID: GW-2 TOC Elevation: 79.14 # Purge: Pump Bailor
 Dup: _____ Well Depth: 20 # Sample: Pump Bailor
 Blank: _____ DTW: 11.22 # Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 67.92 # Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 8.78 # Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MtBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
Stabilization of 3 successive parameters within:									
3:57 pm		0-1	19.12	0.93	5.37	172	140	6.77	
3:58		0-3	19.43	0.702	4.29	169	61.0	6.71	
3:59		0-5	19.69	0.670	4.02	167	29.7	6.72	
4:00		0-7	19.78	0.670	3.86	166	14.4	6.73	
SAMPLED @		4:02 pm.							

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	0.07	0.12	11.50	0.036	40	0.6
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Address: Oakland, CA Sampler: Ramin Bet-Yonan
Tony Perini

Well/Sample ID: GW-3 TOC ELEVATION: 77.92 ft Purge: Pump Bailer
 Dup: 20 ft Well Depth: 20 ft Sample: Pump Bailer
 Blank: 10.14 ft DTW: 10.14 ft Odor: No Yes Describe: _____
 Purge Volume: 67.78 ft Water Table Elev.: 67.78 ft Sheen: No Yes Describe: _____
 Well Diameter: 9.86 ft Height of Water: 9.86 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MIBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCL Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
2:59 p.m.		0.25	19.42	0.476	2.77	161	42.8	6.58	
3:00		0.3	19.60	0.446	2.01	169	34.7	6.52	
3:01		0.4	19.79	0.416	2.13	175	19.1	6.43	
3:02		0.8	19.80	0.425	2.19	178	45.5	6.36	
SAMPLED @		3:15 p.m.							

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	Ø	Ø	1.60	Ø	33	Ø
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Address: Oakland, CA Sampler: Ramin Be-Yonan
Tony Perini

Well/Sample ID: GW-4 Top Elevation: 82.37 ft. Purge: Pump Bailer
 Dup: _____ Well Depth: 12 ft. Sample: Pump Bailer
 Blank: _____ DTW: 10.67 ft. Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 71.70 ft. Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 1.33 ft. Color: No Yes Describe: _____

Laboratory: _____ **NOT ENOUGH WATER TO DO FIELD MEASUREMENT.**
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MtBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
9:43 a.m.		COULD ONLY COLLECT		500 mL					for lab analysis and bio-parameter readings.

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
						4.4
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02
 Project Name: Glovatorium Sampler: Oakland, CA
Ramin Bet-Yonan
Tony Perini

Well/Sample ID: GW-5 Purge: Pump Bailer
 Dup: _____ Well Depth: _____ Sample: Pump Bailer
 Blank: _____ DTW: 12-34 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: _____ Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: _____ Color: No Yes Describe: _____

Laboratory: _____ Delivery: _____
Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Disolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (B010 list) & MtBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

COULD NOT COLLECT ENOUGH SAMPLE TO BEGIN FIELD MEASUREMENT OR TESTING.

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
Stabilization of 3 successive parameters within: COND ±3%, DO ±10%, ORP ±10mV, TURBIDITY ±10%, pH ±0.1%									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Address: Oakland, CA Sampler: Ramin Bet-Yonan
 Tony Perini

Well/Sample ID: MW-11 TOC Elevation: 84.13 ft Purge: Pump Bailer
 Dup: _____ Well Depth: _____ Sample: Pump Bailer
 Blank: _____ DTW: 11.01 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: _____ Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: _____ Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MIBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H2SO4 Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
1:13 pm		1.5	20.90	1.12	6.19	87	-7.0	7.34	
1:14		2.5	21.31	1.19	8.4	96	-8.0	6.72	
1:15		3.0	20.70	1.24	5.25	109	-5.5	6.65	
1:16		4.0	20.81	1.22	4.47	118	-8.2	6.62	
SAMPLED @		1:17 P.M.							

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	Ø	Ø	3.7	0.036	69	Ø
Dilution:						
Comments:						

(Results in mg/L)



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Location: Oakland, CA Sampler: Ramin Bet-Yonan
 Tony Perini

Well/Sample ID: LFR-1 TOC Elevation: 79.97 ft Purge: Pump Bailor
 Dup: _____ Well Depth: 19 ft Sample: Pump Bailor
 Blank: _____ DTW: 9.97 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 70.00 ft Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 9.03 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MIBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP. (°C)	COND. (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
Stabilization of 3 successive parameters within:									
4:56 pm.		0-8	19.51	1.37	5.26	311	42-1	6.61	
4:57 pm		1.5	20.14	0.602	1.18	293	30.1	6.68	
4:58 pm		3.0	20.24	0.529	1.20	286	41.2	6.67	
5:00 pm		4.0	20.16	0.644	Ø	274	10.3	6.60	
5:02 pm		6.5	20.09	0.803	Ø	265	57.3	6.54	
SAMPLED @ 5:04 p.m									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	0.15	0.30	Ø	Ø	23	0.4
Dilution:						
Comments:						

(Results in mg/L)



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Oakland, CA Sampler: Ramin Bet-Yonan
 Tony Perini

Well/Sample ID: LFR-2 TOC Elevation: 81.89 ft Purge: Pump Bailer
 Dup: Well Depth: 19 ft Sample: Pump Bailer
 Blank: DTW: 11.41 ft Odor: No Yes Describe: _____
 Purge Volume: Water Table Elev.: 70.48 ft Sheen: No Yes Describe: _____
 Well Diameter: Height of Water: 7.59 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MIBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
11:23 am		1	17.83	0.964	6.58	-74	6.0	7.24	
11:25		3	18.30	0.835	∅	-78	6.6	6.87	
11:26		4	18.09	0.812	∅	-82	1.6	6.84	
11:27		DRIED							
SAMPLED @ 11:30 a.m.									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	3.30	3.30	0.50	0.057	∅	10.7
Dilution:						
Comments:						

(Results in mg/L)



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Location: Oakland, CA Sampler: Ramin Bet-Yonan
Tony Perini

Well/Sample ID: LFR-3 TOC Elevation: 77.96 ft Purge: Pump Bailor
 Dup: _____ Well Depth: 22 ft Sample: Pump Bailor
 Blank: _____ DTW: 11.83 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 66.13 ft Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 10.17 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MiBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
1:32 pm		0.5	20.03	4.89	6.71	187	999	5.27	
1:33		2.5	21.23	0.402	2.67	187	314	6.5	
1:35		4	21.03	0.431	1.28	190	513	6.15	
1:37		5.5	20.79	0.440	0.62	189	999	6.24	
1:39		6.5	20.65	0.457	0.11	186	999	6.32	
SAMPLED @ 1:45 pm									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	Ø	1.35	Ø	Ø	36	0.5
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Address: Oakland, CA Sampler: Ramin Bet-Yonan
Tony Perini

Well/Sample ID: LFR-4 TOC Elevation: 81.65 ft Purge: Pump Bailer
 Dup: _____ Well Depth: 19 ft Sample: Pump Bailer
 Blank: _____ DTW: 13.88 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 67.77 ft Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 5.12 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MtBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
8:47		0.5	19.90	0.612	4.43	-32	6.9	6.86	
8:48		1.5	20.04	0.541	0.31	-31	-2.1	6.72	
8:50		2.5	19.90	0.602	∅	-63	-1.2	6.69	
		5.0	DRIED						
SAMPLED @ 8:55 a.m.									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	2.55	3.30	∅	∅	∅	4.0
Dilution:						
Comments:						

(Results in mg/L)



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Address: Oakland, CA Sampler: Ramin Bet-Yonan
Tony Perini

Well/Sample ID: SOMA-1 TOC Elevation: 81.64 ft Purge: Pump Bailer
 Dup: _____ Well Depth: 40 ft Sample: Pump Bailer
 Blank: _____ DTW: 14.72 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 66.92 ft Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 25.28 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Disolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MiBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
10:29 am		1	17.63	1.27	6.13	113	999	6.95	
10:31		3	17.68	1.28	∅	122	646	6.63	
10:33		6.5	17.68	1.27	∅	127	463	6.61	
10:35		8	17.70	1.27	∅	129	449	6.60	
10:37		10	17.73	1.27	∅	131	448	6.60	
10:39		12	17.77	1.27	∅	131	999	6.60	
SAMPLED @ 10:49 a.m									

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	∅	0.24	∅	0.009	4.0	0.7
Dilution:						
Comments:						

(Results in mg/L)



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Sampler: Oakland, CA
Ramin Bet-Yonan
Tony Perini

Well/Sample ID: SOMA-2 TOC Elevation: 81.39 ft Purge: Pump Bailer
 Dup: _____ Well Depth: 20.00 ft Sample: Pump Bailer
 Blank: _____ DTW: 12.39 ft Odor: No Yes Describe: _____
 Purge Volume: _____ Water Table Elev.: 69.00 ft Sheen: No Yes Describe: _____
 Well Diameter: _____ Height of Water: 7.61 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Disolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MIBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND. (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
Stabilization of 3 successive parameters within:									
3:09 pm		0.1	16.42	1.53	4.80	-76	573	7.03	
3:11		0.2	16.46	1.41	∅	-87	227	6.89	
3:12		0.3	16.44	1.37	∅	-99	207	6.93	
3:13		0.4	16.44	1.36	∅	-102	299	6.98	
3:15		0.5	16.47	1.38	0.35	-98	274	6.97	
SAMPLED @ 3:16 p.m.									

Result:	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	3.30	3.30	2.8	∅	15	1.7
Dilution:						
Comments:						
(Results in mg/L)						



Project #: 2511 Address: 2815 Broadway Date: 10/22/02-10/23/02 & 10/24/02
 Project Name: Glovatorium Oakland, CA Sampler: Ramin Bet-Yonan
 Tony Perini

Well/Sample ID: SOMA-3 TOC Elevation: 81.42 ft Purge: Pump Bailer
 Dup: Well Depth: 30 ft Sample: Pump Bailer
 Blank: DTW: 9.41 ft Odor: No Yes Describe: _____
 Purge Volume: Water Table Elev.: 72.01 ft Sheen: No Yes Describe: _____
 Well Diameter: Height of Water: 20.59 ft Color: No Yes Describe: _____

Laboratory: _____
 Delivery: _____
 Analysis/preservative:
 Sulfide: 1 Poly w/ Zn(C₂H₃O₂)₂ + NaOH Dissolved H₂: 1 Septum Vial Alk, Cl-, Sulfate: 1 unpreserved poly L
 Total Iron, Manganese: 1 HNO₃ preserved poly Dissolved Perm Gases: 2 Unpreserved VOAs
 8260 (8010 list) & MtBE & Cation & Anion w/ Nitrate & Nitrite: 1 Unpres. Poly and 1 H₂SO₄ Poly
 BTEX & TPH-g & TPH-ss: 6 VOAs w/ HCL Ferrous Iron: 1 HCl Pres. Poly

TIME	DTW	VOLUME	TEMP (°C)	COND (µS/cm)	DO (mg/L)	ORP (mV)	TURBIDITY (NTU)	pH	COMMENTS
Stabilization of successive parameters within:									
2:11 pm		0.5	16.12	9.52	8.91	-68	295	7.40	
2:12		1.5	16.36	8.30	8.96	-85	198	7.06	
2:13		3	16.40	0.949	8.97	-92	100	7.01	
2:15		6	16.37	0.942	Ø	-100	271	6.99	
2:17		8	16.44	0.970	0.3	-98	88.8	7.02	
SAMPLED @		2:19 pm.							

Result	Ferrous Iron	Total Iron	Nitrate	Nitrite	Sulfate	Dissolved Manganese
	3.26	3.30	0.1	0.031	7	2.7
Dilution:						
Comments:						

(Results in mg/L)

APPENDIX B

Chain of Custody Forms and Laboratory Reports



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

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


A N A L Y T I C A L R E P O R T

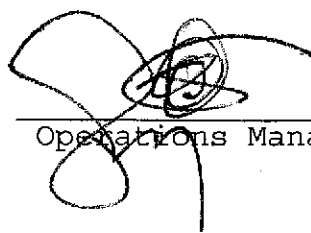
Prepared for:

SOMA Environmental Engineering Inc.
2680 Bishop Dr.
Suite 203
San Ramon, CA 94583

Date: 04-NOV-02
Lab Job Number: 161425
Project ID: 2511
Location: 3815 Broadway, Oakland CA

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 signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: 
Project Manager

Reviewed by: 
Operations Manager

This package may be reproduced only in its entirety.



Laboratory Number: 161425
Client: SOMA Environmental Engineering Inc.
Project Name: 3815 Broadway, Oakland
Project #: 2511
Receipt Date: 10/23/02

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for eleven water samples received from the above referenced project on October 23rd, 2002. The samples were received cold and intact.

Total Volatile Hydrocarbons (EPA 8015B(M)):

A high recovery of bromofluorobenzene was observed for sample LFR-2 due to coelution with this sample matrix.

No other analytical problems were encountered.

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

No analytical problems were encountered.

CHAIN OF CUSTODY FORM

Curtis & Tompkins, Ltd.

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

C&T
 LOGIN # 161425

Analyses

Sampler: Ramin Bet-Yenan/Tony Perini

Report To: Mansour Sepehr/Tony Sepehr

Company: SOMA ENVIRONMENTAL

Telephone: (925) 244-6600

Fax: (925) 244-6601

Project No: 2511

Project Name: 3815 Broadway, Calibird, CA

Project P.O.:

Turnaround Time: Standard

TPH-9 (Including Standard Solvent) - 8015
 BTEX, MTBE 8021 GC
 8260 (Full List)

1
2
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10
11

Laboratory Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes
			Soil	Water	Waste		HCL	H2SO	HNO3	ICE	
Laboratory Use	GW-2	10/22/02, 4:02pm		X		4	X			X	
	GW-3	10/22/02, 3:15pm		X		4	X			X	
	GW-4	10/23/02, 9:43am		X		4	X			X	
	MW-11	10/23/02, 1:17pm		X		4	X			X	
	LFR-1	10/22/02, 5:04pm		X		4	X			X	
	LFR-2	10/23/02, 11:30am		X		4	X			X	
	LFR-3	10/22/02, 1:45pm		X		4	X			X	
	LFR-4	10/23/02, 8:55am		X		4	X			X	
	SOMA-1	10/23/02, 10:24am		X		4	X			X	
	SOMA-2	10/23/02, 3:16pm		X		4	X			X	
	SOMA-3	10/23/02, 2:19pm		X		4	X			X	

Notes:
 Received On Ice
 Cold Ambient Intact

Preservation Correct?
 Yes No N/A

RELINQUISHED BY:		RECEIVED BY:	
<u>Ramin Bet-Yenan</u>	10/23/02 1:59pm	<u>Mansour Sepehr</u>	10/23/02 1:55AM
	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME

Signature



Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B (M)
Matrix:	Water	Received:	10/23/02
Units:	ug/L		

Field ID:	GW-2	Batch#:	76365
Type:	SAMPLE	Sampled:	10/22/02
Lab ID:	161425-001	Analyzed:	10/26/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	68-145
Bromofluorobenzene (FID)	110	66-143

Field ID:	GW-3	Batch#:	76365
Type:	SAMPLE	Sampled:	10/22/02
Lab ID:	161425-002	Analyzed:	10/26/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	140 Y Z	50
Stoddard Solvent C7-C12	110 Y Z	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	68-145
Bromofluorobenzene (FID)	107	66-143

Field ID:	GW-4	Batch#:	76365
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-003	Analyzed:	10/26/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	700 H Y	50
Stoddard Solvent C7-C12	550	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	68-145
Bromofluorobenzene (FID)	140	66-143

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's linear range

Chromatogram

Sample Name : 161425-002,76365,+stodd
File Name : G:\GC05\DATA\299G011.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor: 1.0

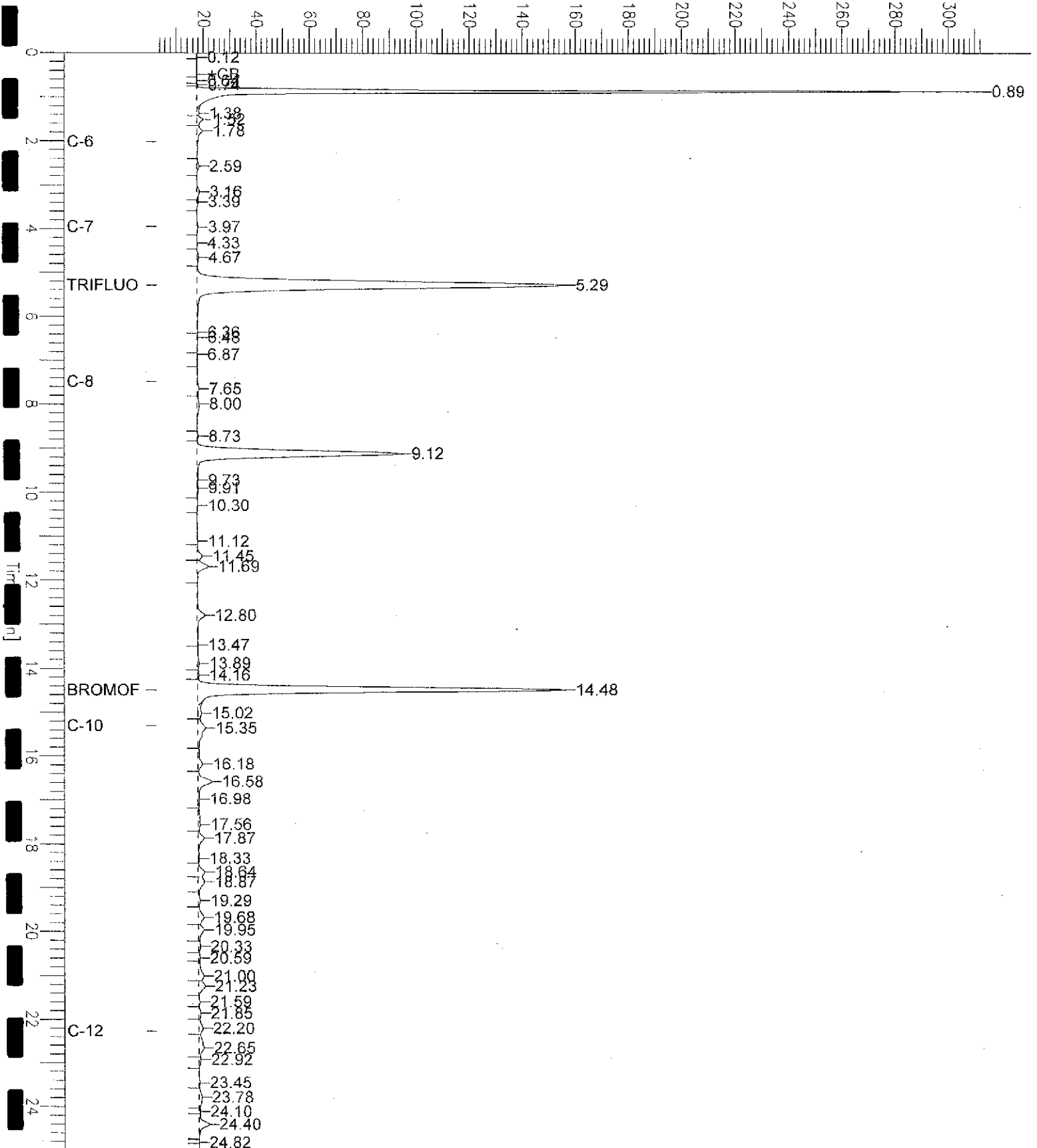
End Time : 25.00 min
Plot Offset: 3 mV

Sample #: d1
Date : 10/26/02 07:16 PM
Time of Injection: 10/26/02 06:51 PM
Low Point : 2.79 mV
Plot Scale: 309.8 mV
High Point : 312.63 mV

Page 1 of 1

GW-3

Response [mV]



Chromatogram

Sample Name : 161425-003,76365,+stodd
File Name : G:\GC05\DATA\299G012.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor : 1.0

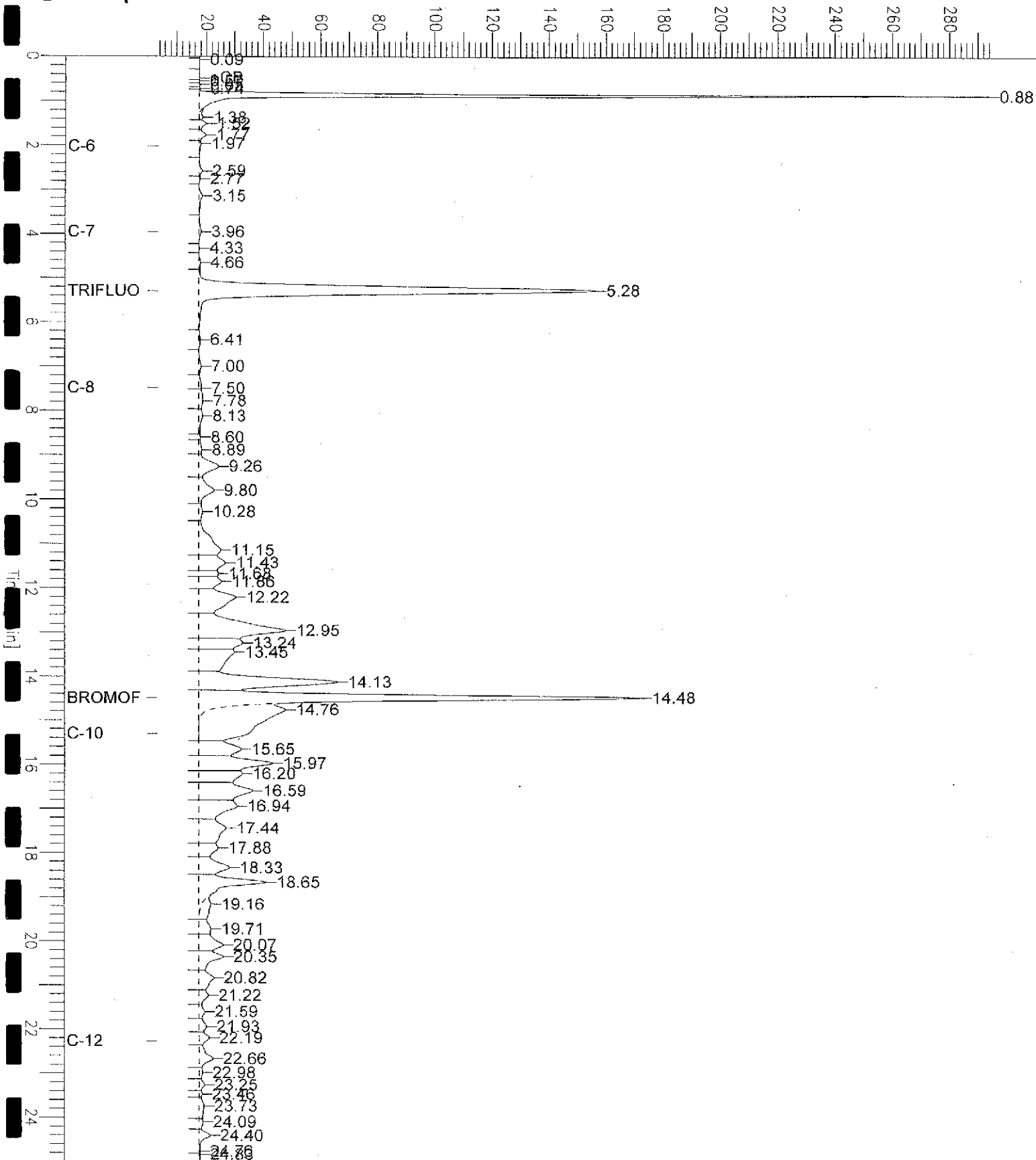
End Time : 25.00 min
Plot Offset: 4 mV

Sample #: c1
Date : 10/26/02 07:49 PM
Time of Injection: 10/26/02 07:24 PM
Low Point : 3.60 mV
High Point : 294.09 mV
Plot Scale: 290.5 mV

Page 1 of 1

GW-4

Response [mV]





Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B (M)
Matrix:	Water	Received:	10/23/02
Units:	ug/L		

Field ID:	MW-11	Batch#:	76365
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-004	Analyzed:	10/26/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	68-145
Bromofluorobenzene (FID)	108	66-143

Field ID:	LFR-1	Batch#:	76404
Type:	SAMPLE	Sampled:	10/22/02
Lab ID:	161425-005	Analyzed:	10/30/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	78 Y Z	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	68-145
Bromofluorobenzene (FID)	99	66-143

Field ID:	LFR-2	Batch#:	76404
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-006	Analyzed:	10/30/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	5,000 H Y	50
Stoddard Solvent C7-C12	3,100	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	68-145
Bromofluorobenzene (FID)	260 *	>LR b 66-143

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's linear range

GC19 TVH 'X' Data File (FID)

Sample Name : 161425-005,76404,tvh+stod
File Name : g:\gc19\data\302x030.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor : 1.0

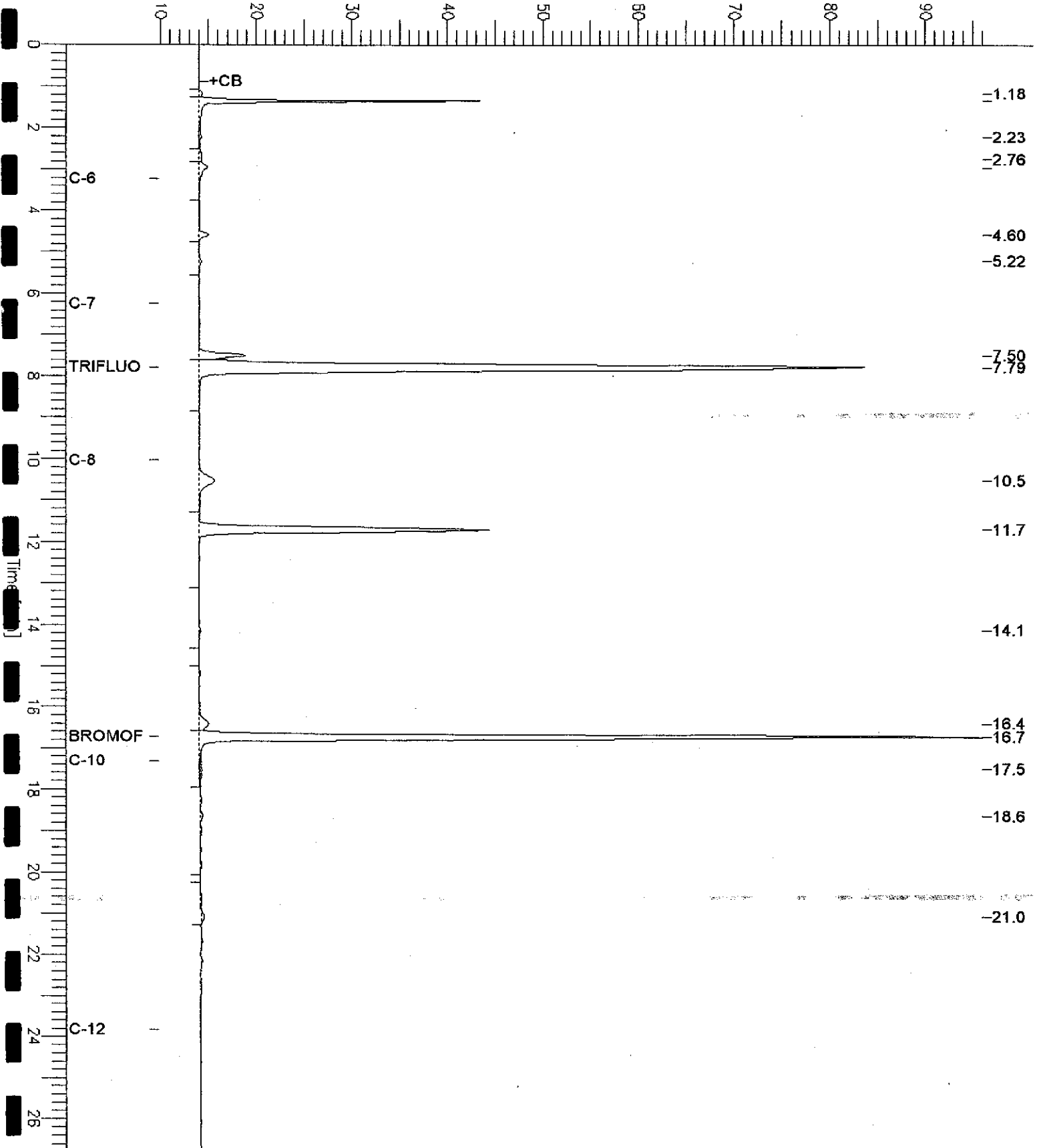
End Time : 26.80 min
Plot Offset : 10 mV

Sample #: c1
Date : 10/30/02 11:38 AM
Time of Injection: 10/30/02 07:34 AM
Low Point : 9.85 mV
High Point : 96.08 mV
Plot Scale: 86.2 mV

Page 1 of 1

LFA-1

Response [mV]



GC19 TVH 'X' Data File (FID)

Sample Name : 161425-006,76404,tvh+stod

Sample #: c1

Page 1 of 1

FileName : g:\gc19\data\302x031.raw

Date : 10/30/02 11:38 AM

Method : TVHBTXE

Time of Injection: 10/30/02 08:12 AM

Start Time : 0.00 min

End Time : 26.80 min

Low Point : 7.07 mV

High Point : 153.07 mV

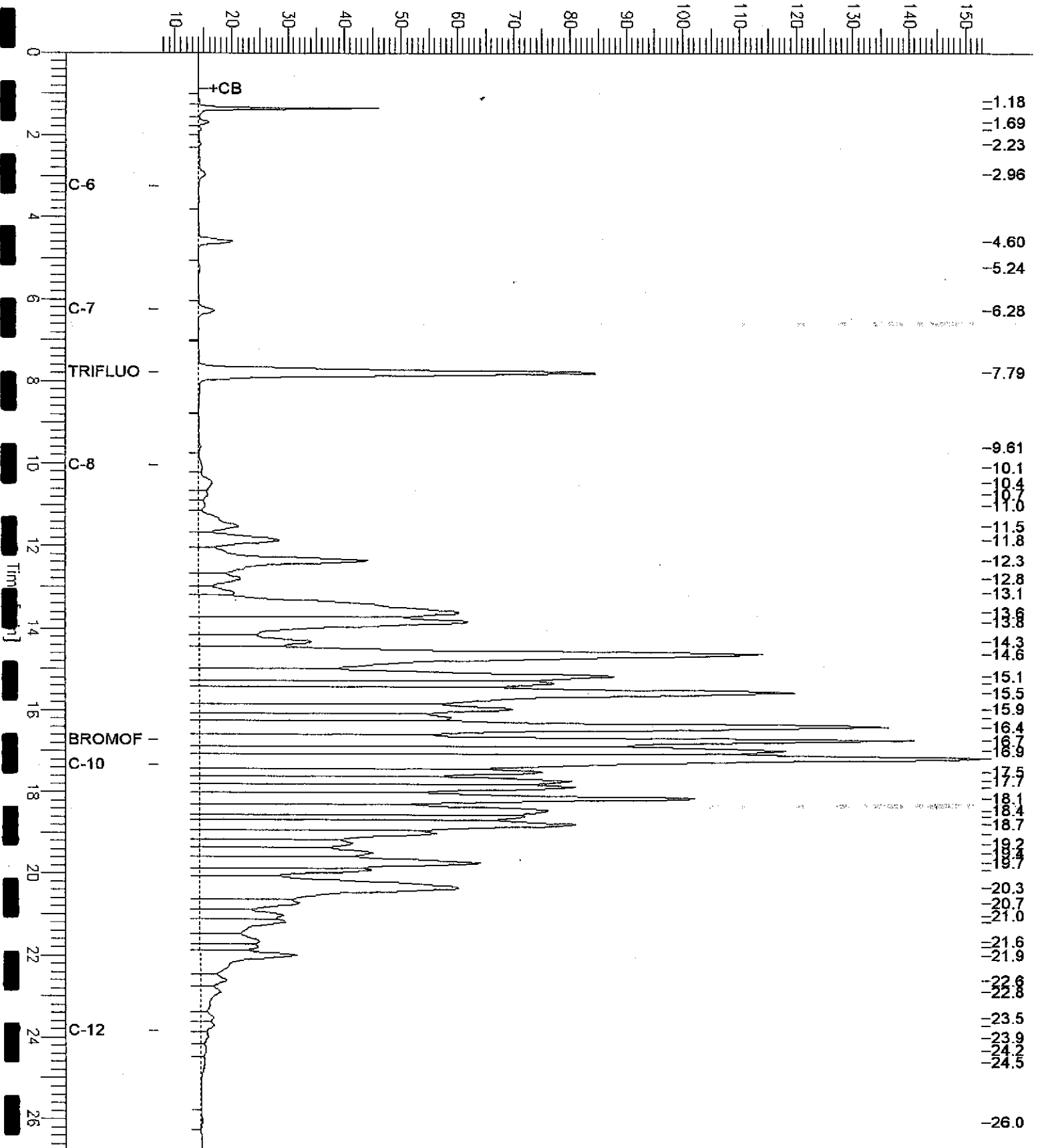
Scale Factor: 1.0

Plot Offset: 7 mV

Plot Scale: 146.0 mV

LFR-2

Response [mV]





Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Matrix:	Water	Received:	10/23/02
Units:	ug/L		

Field ID:	LFR-3	Batch#:	76365
Type:	SAMPLE	Sampled:	10/22/02
Lab ID:	161425-007	Analyzed:	10/27/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	68-145
Bromofluorobenzene (FID)	110	66-143

Field ID:	LFR-4	Batch#:	76404
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-008	Analyzed:	10/29/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	170	50
Stoddard Solvent C7-C12	110 Y	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	68-145
Bromofluorobenzene (FID)	103	66-143

Field ID:	SOMA-1	Batch#:	76365
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-009	Analyzed:	10/27/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	53	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	68-145
Bromofluorobenzene (FID)	110	66-143

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's linear range

GC19 TVH 'X' Data File (FID)

Sample Name : 161425-008,76404,tvh+stodd

Sample #: al hs

Page 1 of 1

File Name : g:\gc19\data\302x015.raw

Date : 10/30/02 11:36 AM

Method : TVHBTXE

Time of Injection: 10/29/02 10:07 PM

Start Time : 0.00 min

End Time : 26.80 min

Low Point : 8.36 mV

High Point : 113.59 mV

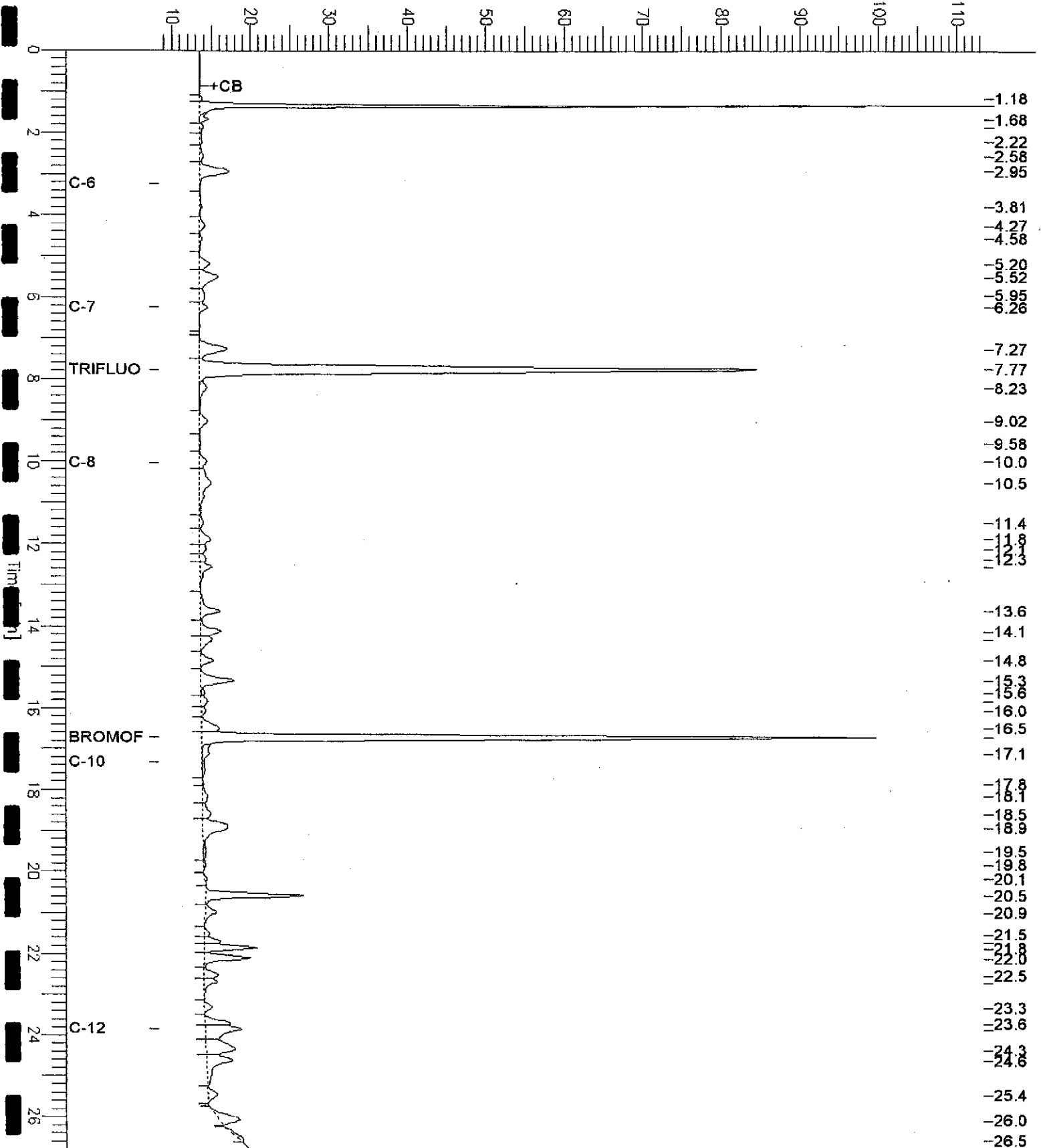
Scale Factor: 1.0

Plot Offset: 8 mV

Plot Scale: 105.2 mV

LFR-4

Response [mV]



Chromatogram

Sample Name : 161425-009,76365,+std
File Name : G:\GC05\DATA\299G023.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor : 1.0

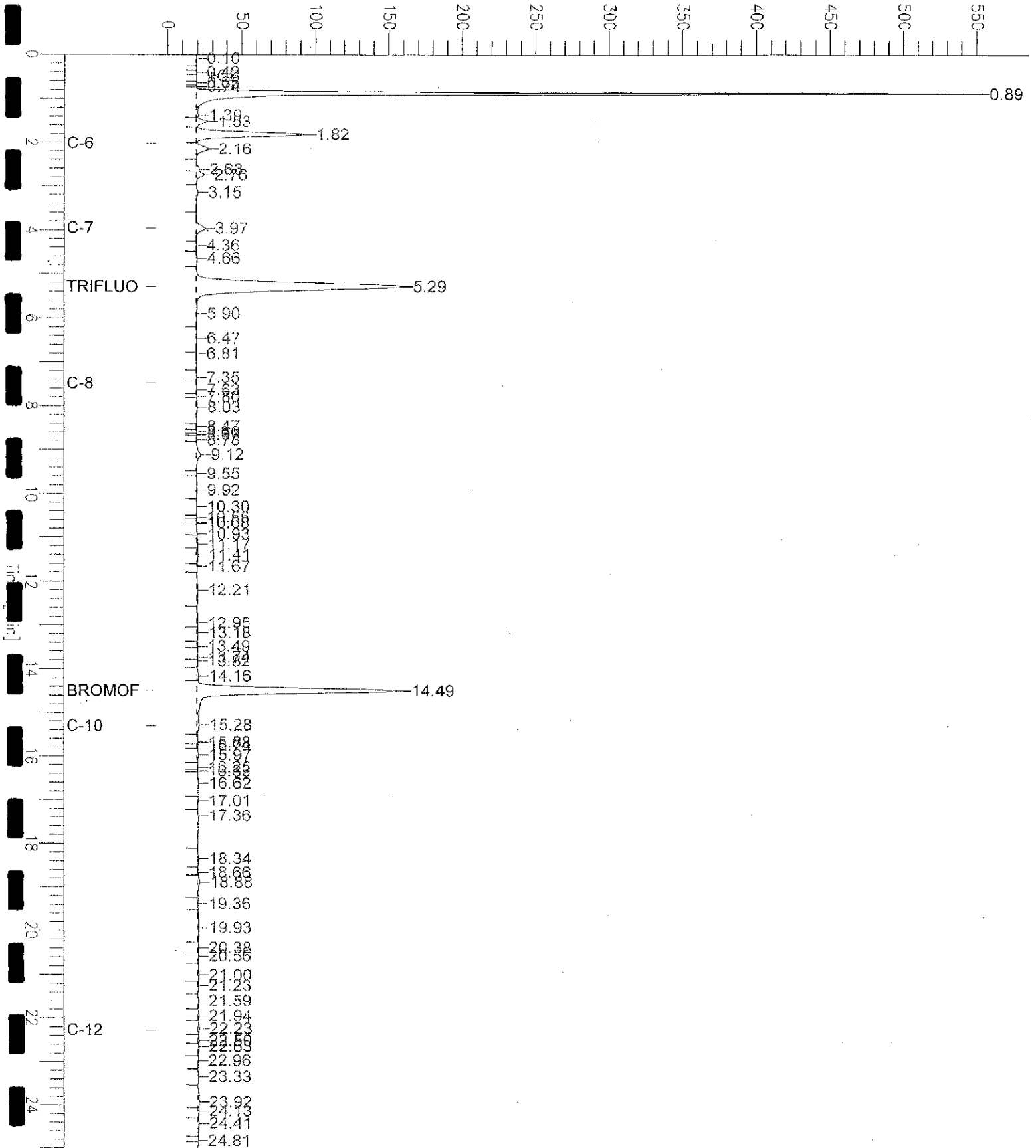
End Time : 25.00 min
Plot Offset : -8 mV

Sample #: d1
Date : 10/27/02 01:57 AM
Time of Injection: 10/27/02 01:32 AM
Low Point : -7.73 mV
Plot Scale: 559.6 mV
High Point : 551.88 mV

Page 1 of 1

SOMA-1

Response [mV]





Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Matrix:	Water	Received:	10/23/02
Units:	ug/L		

Field ID:	SOMA-2	Batch#:	76404
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-010	Analyzed:	10/30/02
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	600 H Y	50
Stoddard Solvent C7-C12	370	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	68-145
Bromofluorobenzene (FID)	115	66-143

Field ID:	SOMA-3	Batch#:	76496
Type:	SAMPLE	Sampled:	10/23/02
Lab ID:	161425-011	Analyzed:	11/01/02
Diln Fac:	20.00		

Analyte	Result	RL
Gasoline C7-C12	4,700 H Y	1,000
Stoddard Solvent C7-C12	3,000	1,000

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	68-145
Bromofluorobenzene (FID)	107	66-143

Type:	BLANK	Batch#:	76365
Lab ID:	QC194018	Analyzed:	10/26/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	68-145
Bromofluorobenzene (FID)	105	66-143

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's linear range

GC19 TVH 'X' Data File (FID)

Sample Name : 161425-010,76404,tvhtstodd

Sample #: d7

Page 1 of 1

FileName : g:\gc19\data\302x021.raw

Date : 10/30/02 11:37 AM

Method : TVHBTXE

Time of Injection: 10/30/02 01:54 AM

Start Time : 0.00 min

End Time : 26.80 min

Low Point : 6.49 mV

High Point : 163.20 mV

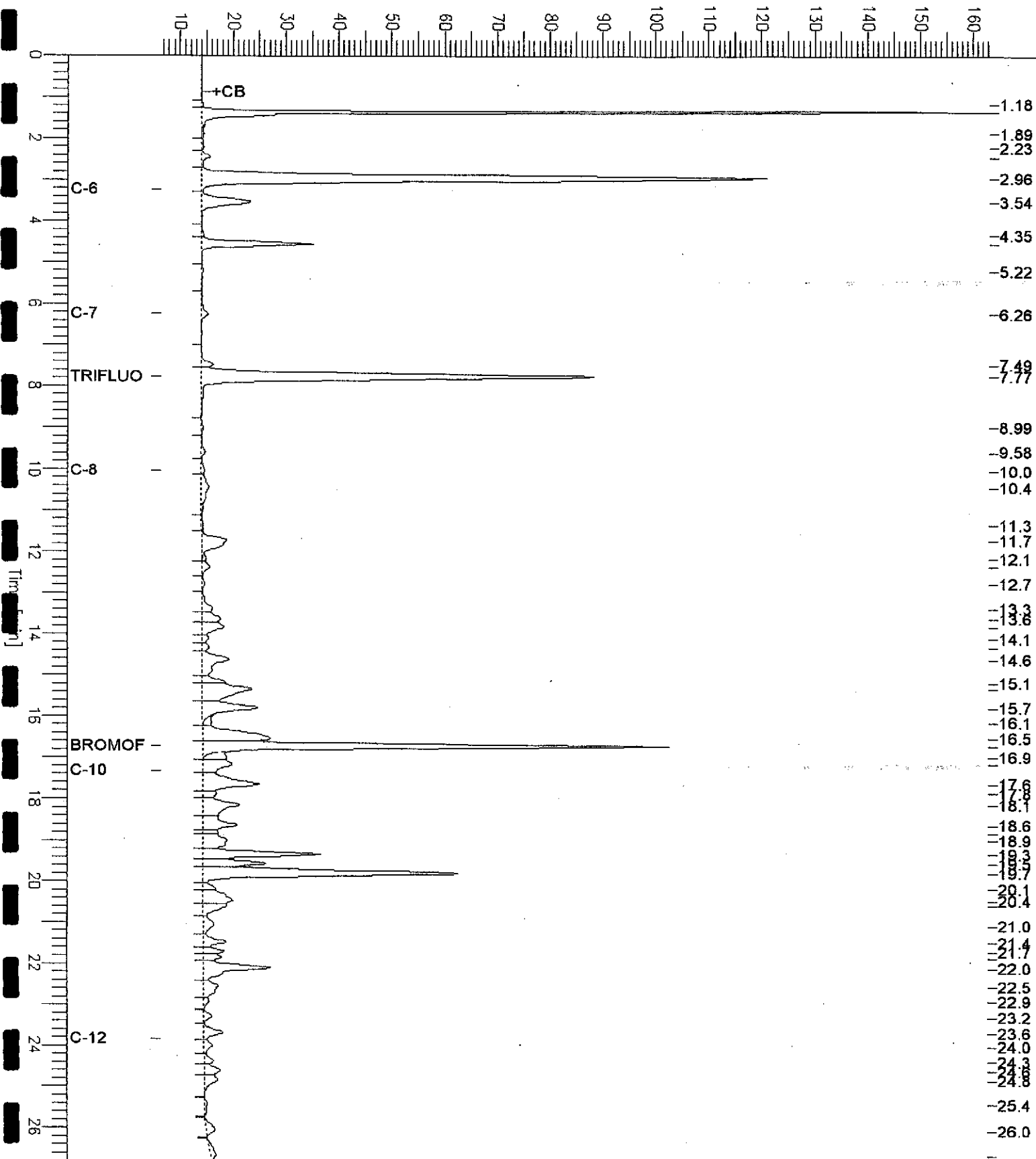
Scale Factor: 1.0

Plot Offset: 6 mV

Plot Scale: 156.7 mV

SOMA-2

Response [mV]



GC07 TVH 'A' Data File RTX 502

Sample Name : 161425-011,76496,tvh+stodd

Sample #: c1HS

Page 1 of 1

File Name : G:\GC07\DATA\304A013.raw

Date : 11/1/02 10:26 AM

Method : TVHBTXE

Time of Injection: 11/1/02 01:57 AM

Start Time : 0.00 min

End Time : 26.00 min

Low Point : 13.58 mV

High Point : 116.46 mV

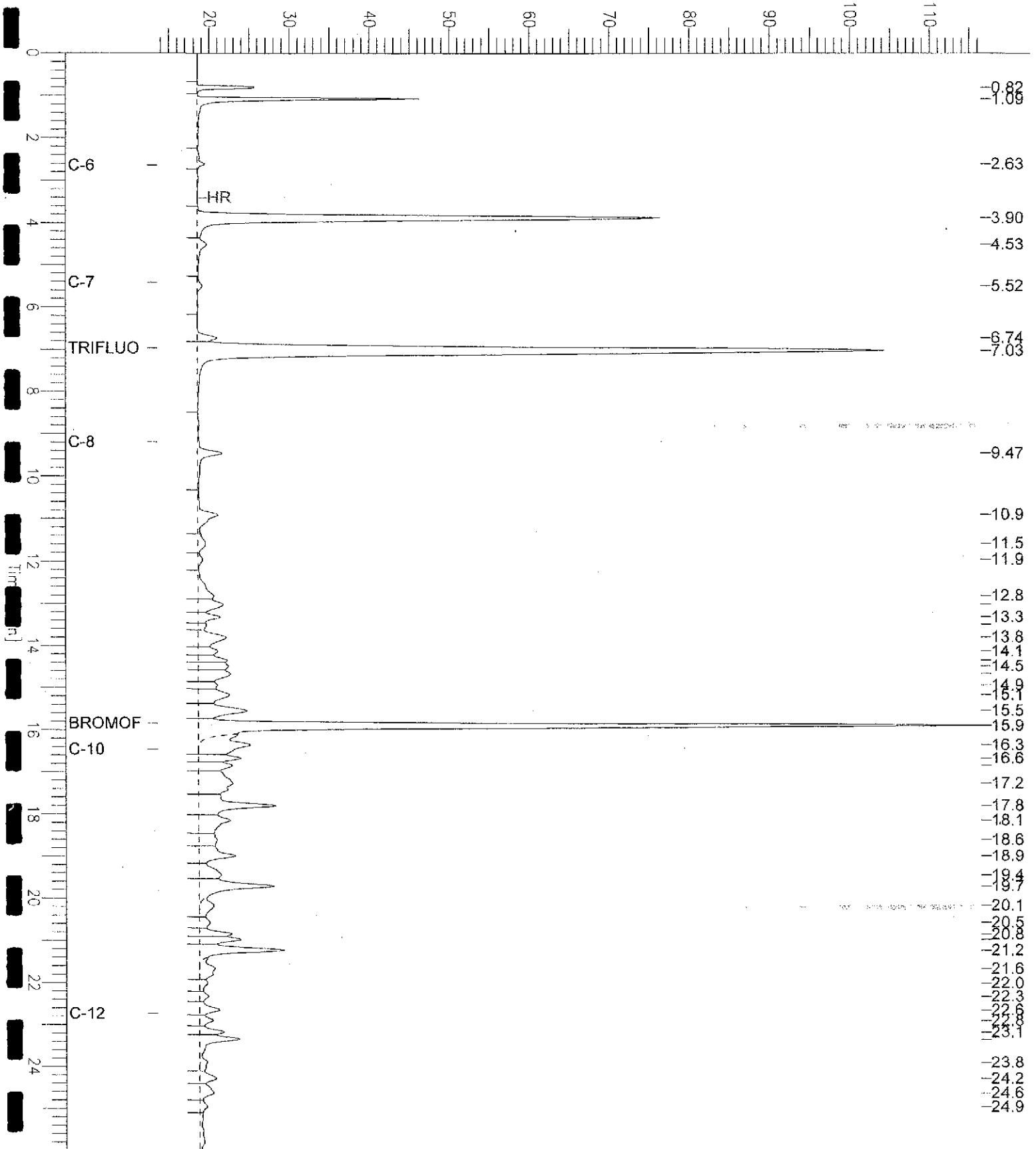
Scale Factor: 1.0

Plot Offset: 14 mV

Plot Scale: 102.9 mV

SOMA-3

Response [mV]

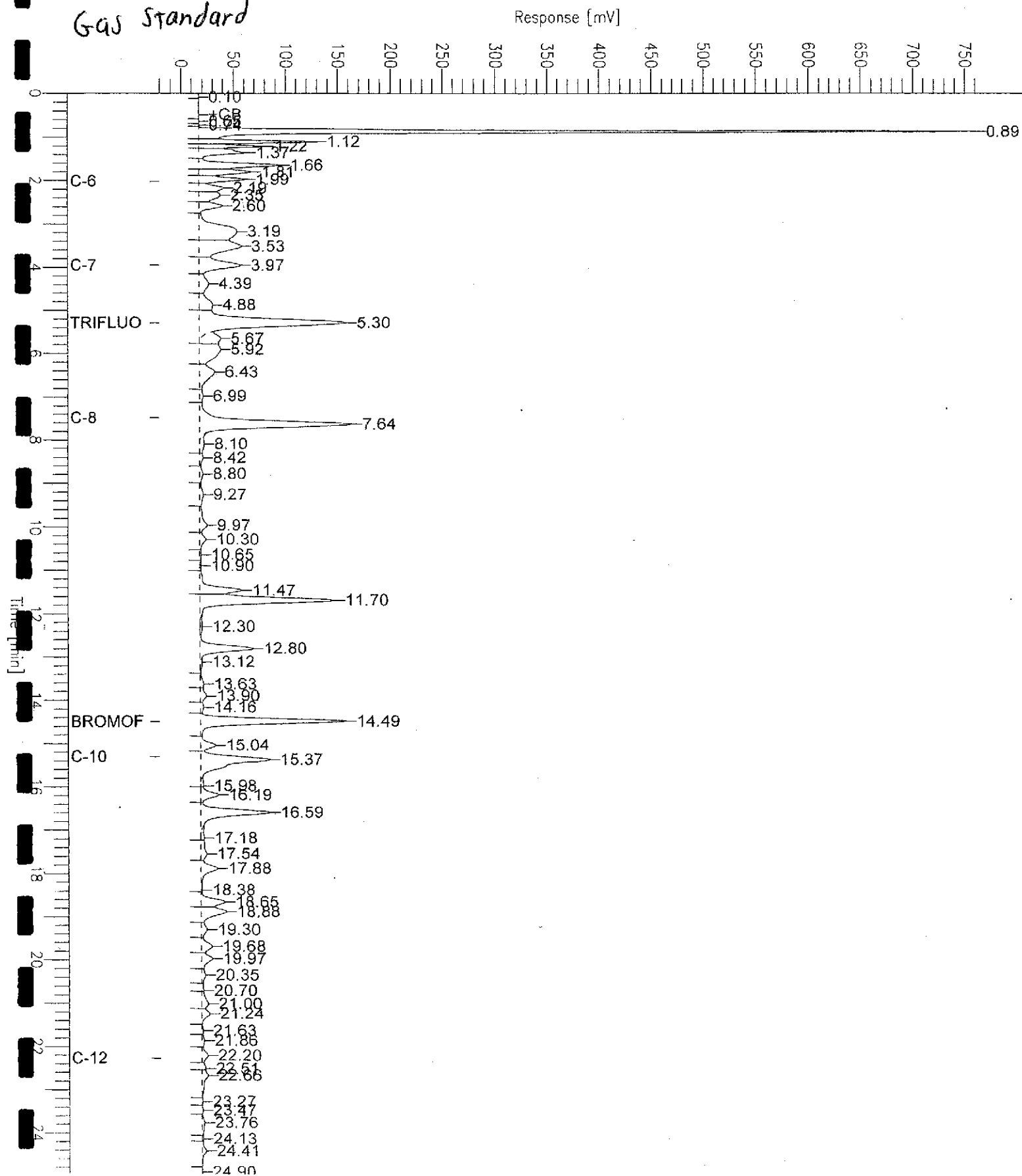


Chromatogram

Sample Name : ccv/lcs,qc194019,76365,02ws1664,2.5/5000
FileName : G:\GC05\DATA\299G004.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -21 mV

Sample #: Page 1 of 1
Date : 10/26/02 03:22 PM
Time of Injection: 10/26/02 02:57 PM
Low Point : -20.56 mV High Point : 760.90 mV
Plot Scale: 781.5 mV

Gas Standard



Chromatogram

Sample Name : ccv,stodd,76365,02ws1767,5/5000
File Name : G:\GC05\DATA\299G002.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor : 1.0

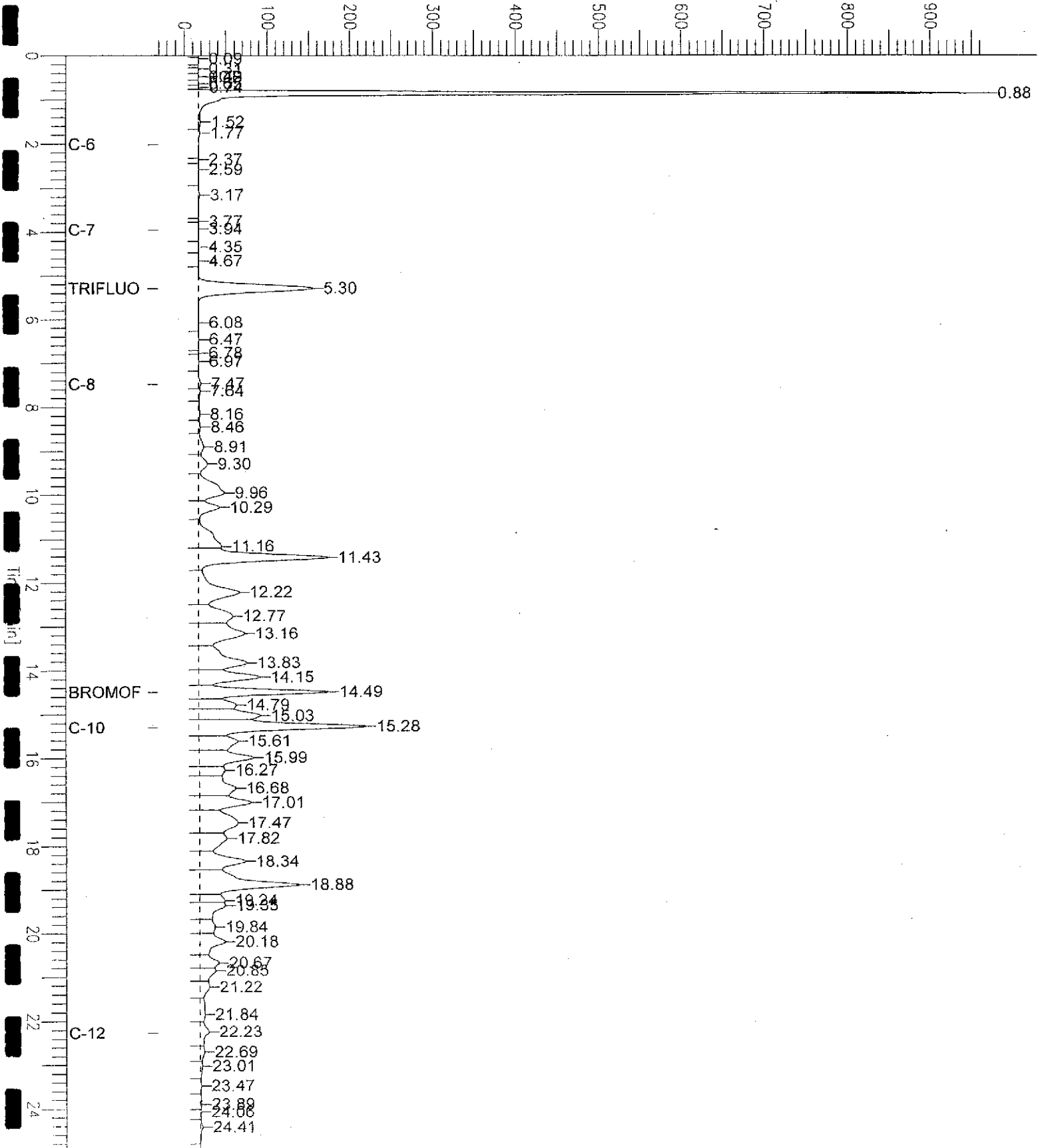
End Time : 25.00 min
Plot Offset: -31 mV

Sample # :
Date : 10/26/02 02:15 PM
Time of Injection: 10/26/02 01:50 PM
Low Point : -30.80 mV
Plot Scale: 999.9 mV
High Point : 969.12 mV

Page 1 of 1

Stoddard Standard

Response [mV]



GC19 TVH 'X' Data File (FID)

Sample Name : ccv, stoddard, 76404, 02ws1767, 5/5000

Sample #:

Page 1 of 1

FileName : G:\GC19\DATA\302X002.raw

Date : 10/29/02 12:11 PM

Method : TVHBTXE

Time of Injection: 10/29/02 11:44 AM

Start Time : 0.00 min End Time : 26.80 min

Low Point : 4.26 mV

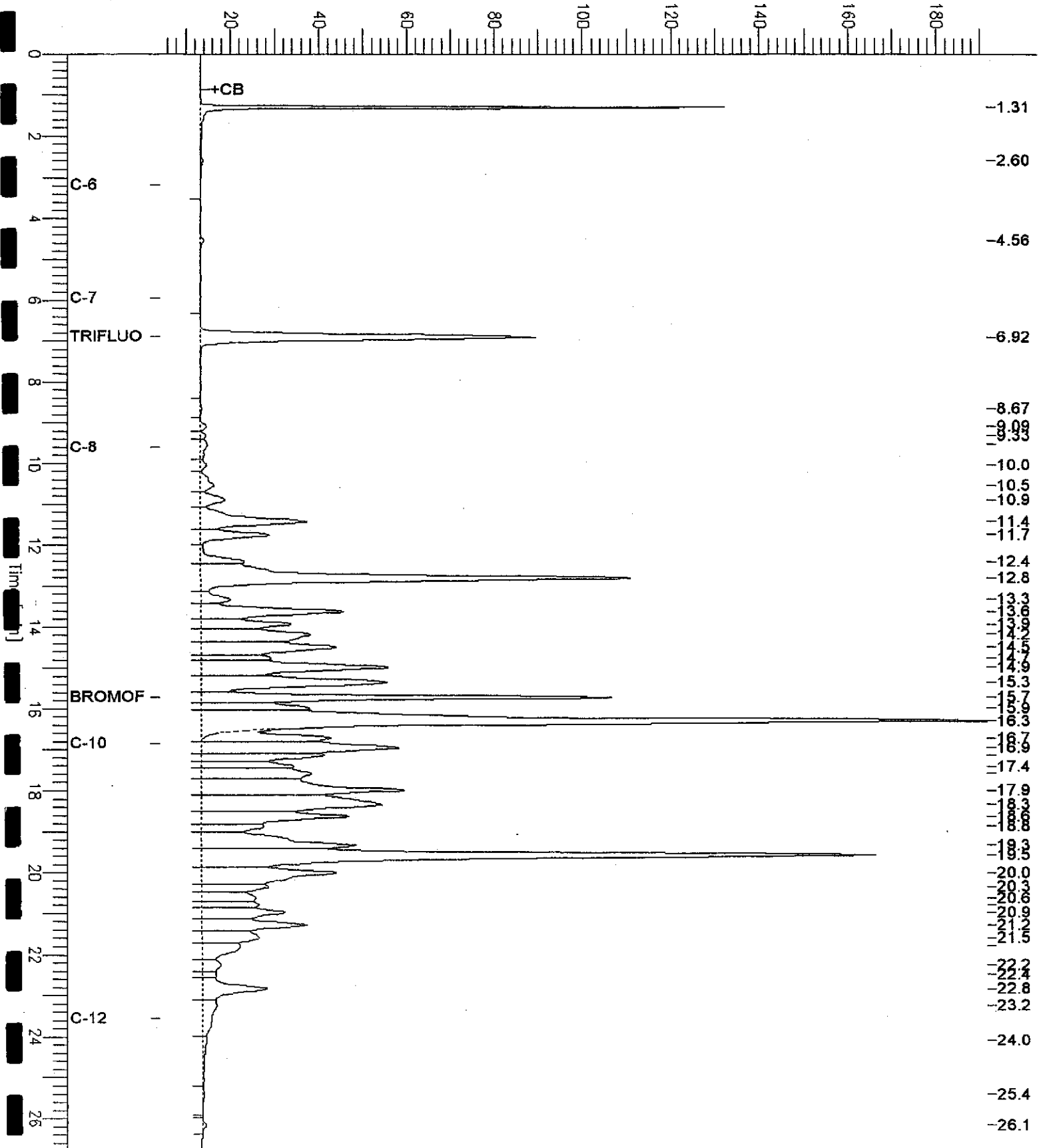
High Point : 191.41 mV

Scale Factor: 1.0 Plot Offset: 4 mV

Plot Scale: 187.2 mV

stoddard standard

Response [mV]



GC07 TVH 'A' Data File RTX 502

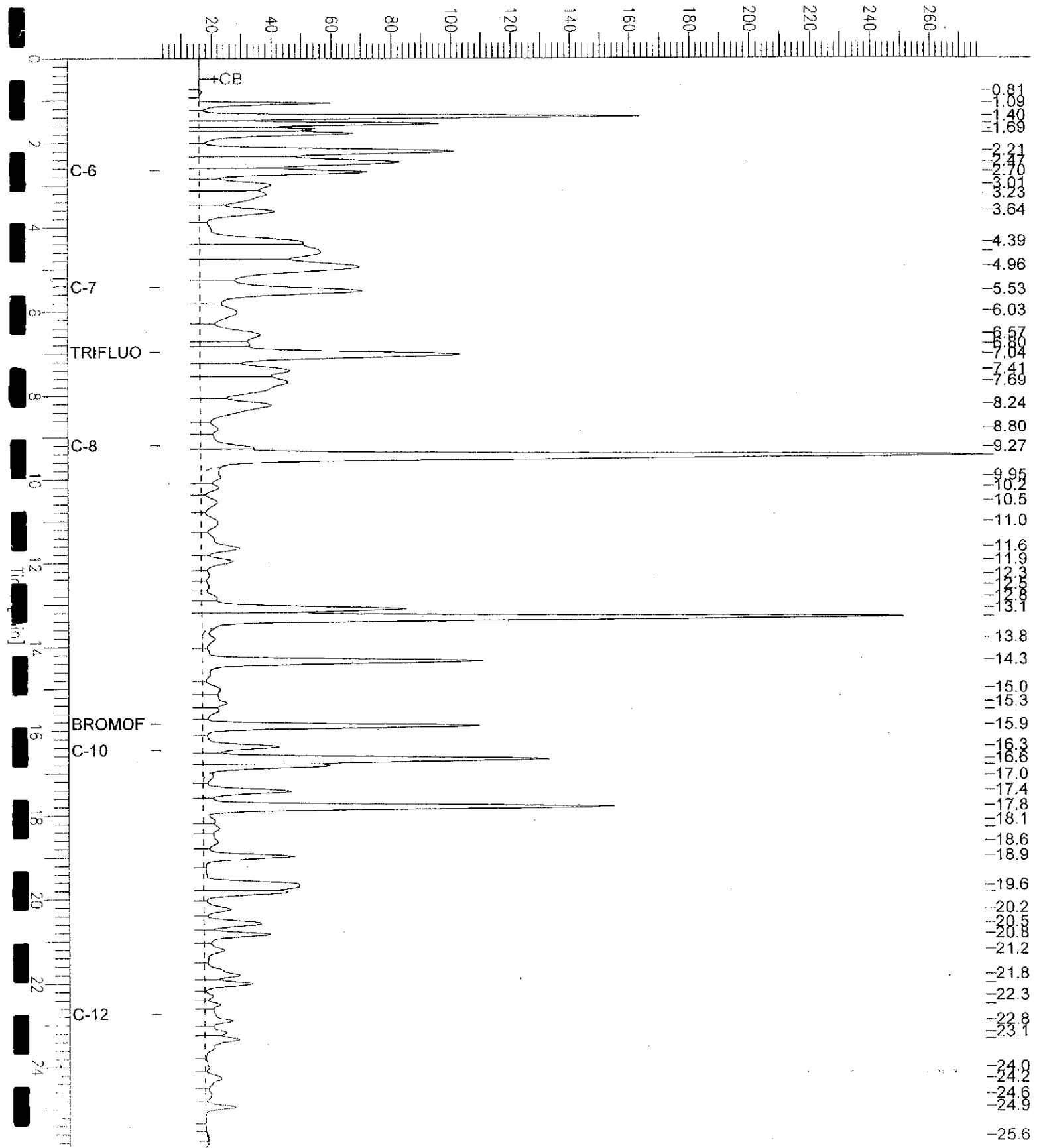
Sample Name : lcs,qc194473,76496,02ws1751,5/5000
 File Name : G:\GC07\DATA\304A002.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Scale Factor : 1.0

Sample # :
 Date : 11/1/02 07:54 AM
 Time of Injection: 10/31/02 07:42 PM
 Low Point : 2.75 mV
 High Point : 277.69 mV
 Plot Offset: 3 mV
 Plot Scale: 274.9 mV

Page 1 of 1

Gas Standard

Response [mV]



GC07 TVH 'A' Data File RTX 502

Sample Name : ccv,stodd,76496,02ws1767,5/5000

Sample #:

Page 1 of 1

File Name : G:\GC07\DATA\304A003.raw

Date : 11/1/02 07:54 AM

Method : TVHETXE

Time of Injection: 10/31/02 08:16 PM

Start Time : 0.00 min

End Time : 26.00 min

Low Point : 4.61 mV

High Point : 251.63 mV

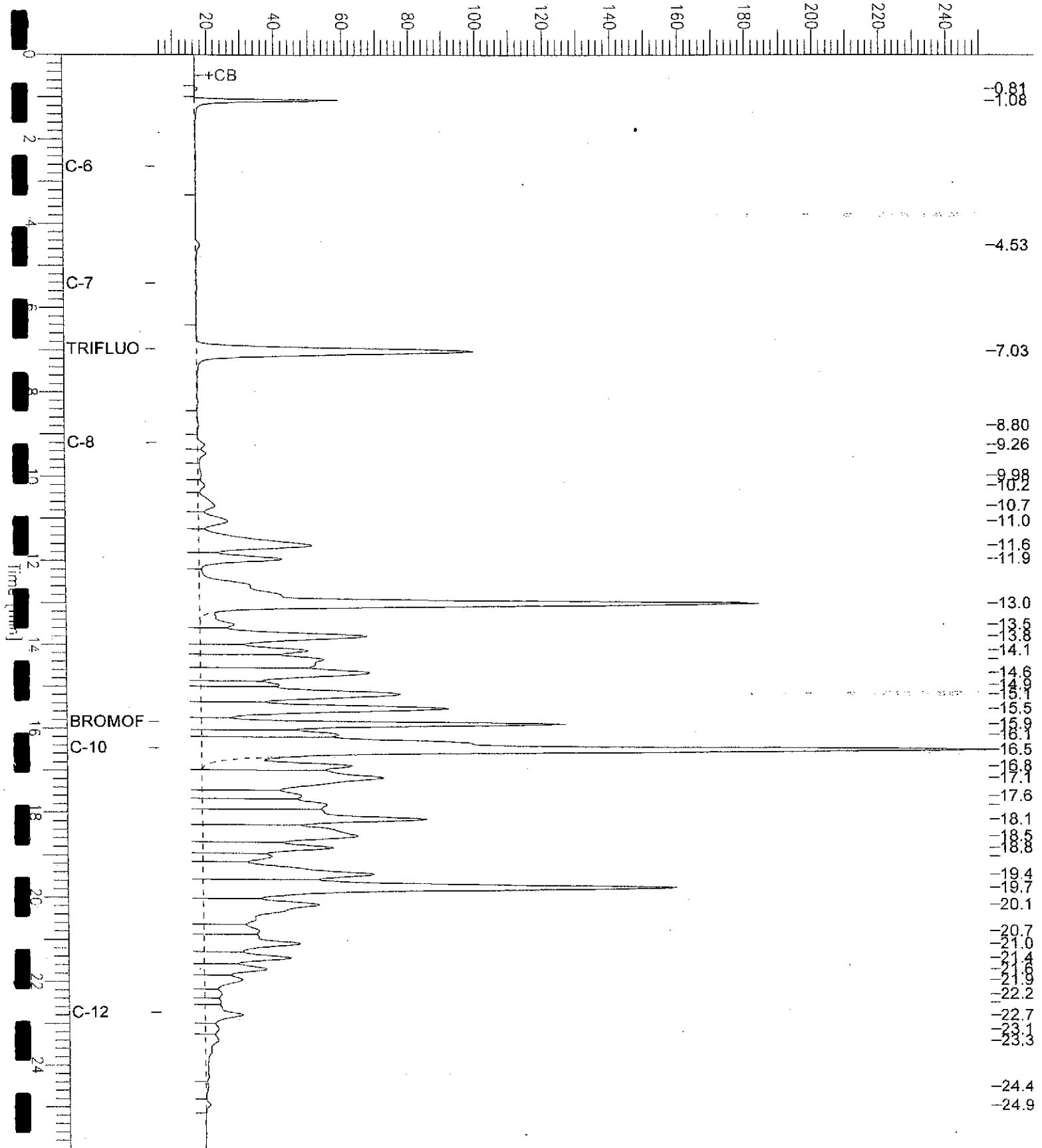
Scale Factor: 1.0

Plot Offset: 5 mV

Plot Scale: 247.0 mV

Stoddard Standard

Response [mV]





Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Matrix:	Water	Received:	10/23/02
Units:	ug/L		

Type:	BLANK	Batch#:	76404
Lab ID:	QC194156	Analyzed:	10/29/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	68-145
Bromofluorobenzene (FID)	105	66-143

Type:	BLANK	Batch#:	76496
Lab ID:	QC194472	Analyzed:	10/31/02
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	68-145
Bromofluorobenzene (FID)	92	66-143

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits fuel pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's linear range



Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC194019	Batch#:	76365
Matrix:	Water	Analyzed:	10/26/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,029	103	79-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	116	68-145
Bromofluorobenzene (FID)	108	66-143

Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B (M)
Type:	BS	Diln Fac:	1.000
Lab ID:	QC194157	Batch#:	76404
Matrix:	Water	Analyzed:	10/29/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	940.4	94	79-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	68-145
Bromofluorobenzene (FID)	104	66-143



Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Type:	BSD	Diln Fac:	1.000
Lab ID:	QC194342	Batch#:	76404
Matrix:	Water	Analyzed:	10/30/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,794	90	79-120	5	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	68-145
Bromofluorobenzene (FID)	84	66-143



Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC194473	Batch#:	76496
Matrix:	Water	Analyzed:	10/31/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,058	103	79-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	68-145
Bromofluorobenzene (FID)	96	66-143

Total Volatile Hydrocarbons

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	8015B(M)
Field ID:	ZZZZZZZZZZ	Batch#:	76496
MSS Lab ID:	161525-001	Sampled:	10/29/02
Matrix:	Water	Received:	10/29/02
Units:	ug/L	Analyzed:	11/01/02
Diln Fac:	1.000		

Type: MS Lab ID: QC194475

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<17.00	2,000	2,009	100	67-120
Surrogate	%REC	Limits			
Trifluorotoluene (FID)	112	68-145			
Bromofluorobenzene (FID)	102	66-143			

Type: MSD Lab ID: QC194476

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,007	100	67-120	0	20
Surrogate	%REC	Limits				
Trifluorotoluene (FID)	111	68-145				
Bromofluorobenzene (FID)	100	66-143				

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	76306
Lab ID:	161425-001	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	27	5.0

ND= Not Detected

L= Reporting Limit



Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	76306
Lab ID:	161425-001	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	102	77-130
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-120

D= Not Detected

L= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Batch#:	76306
Lab ID:	161425-002	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.429		

Analyte	Result	RL
Freon 12	ND	14
Chloromethane	ND	14
Vinyl Chloride	ND	14
Bromomethane	ND	14
Chloroethane	ND	14
Trichlorofluoromethane	ND	7.1
Acetone	ND	29
Freon 113	ND	7.1
1,1-Dichloroethene	ND	7.1
Methylene Chloride	ND	29
Carbon Disulfide	ND	7.1
MTBE	ND	7.1
trans-1,2-Dichloroethene	ND	7.1
Vinyl Acetate	ND	71
1,1-Dichloroethane	ND	7.1
2-Butanone	ND	14
cis-1,2-Dichloroethene	ND	7.1
2,2-Dichloropropane	ND	7.1
Chloroform	ND	7.1
Bromochloromethane	ND	14
1,1,1-Trichloroethane	ND	7.1
1,1-Dichloropropene	ND	7.1
Carbon Tetrachloride	ND	7.1
1,2-Dichloroethane	ND	7.1
Benzene	ND	7.1
Trichloroethene	ND	7.1
1,2-Dichloropropane	ND	7.1
Bromodichloromethane	ND	7.1
Dibromomethane	ND	7.1
4-Methyl-2-Pentanone	ND	14
cis-1,3-Dichloropropene	ND	7.1
Toluene	ND	7.1
trans-1,3-Dichloropropene	ND	7.1
1,1,2-Trichloroethane	ND	7.1
2-Hexanone	ND	14
1,3-Dichloropropane	ND	7.1
Tetrachloroethene	200	7.1

ND = Not Detected
RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Batch#:	76306
Lab ID:	161425-002	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.429		

Analyte	Result	RL
Dibromochloromethane	ND	7.1
1,2-Dibromoethane	ND	7.1
Chlorobenzene	ND	7.1
1,1,1,2-Tetrachloroethane	ND	7.1
Ethylbenzene	ND	7.1
m,p-Xylenes	ND	7.1
o-Xylene	ND	7.1
Styrene	ND	7.1
Bromoform	ND	7.1
Isopropylbenzene	ND	7.1
1,1,2,2-Tetrachloroethane	ND	7.1
1,2,3-Trichloropropane	ND	7.1
Propylbenzene	ND	7.1
Bromobenzene	ND	7.1
1,3,5-Trimethylbenzene	ND	7.1
2-Chlorotoluene	ND	7.1
4-Chlorotoluene	ND	7.1
tert-Butylbenzene	ND	7.1
1,2,4-Trimethylbenzene	ND	7.1
sec-Butylbenzene	ND	7.1
para-Isopropyl Toluene	ND	7.1
1,3-Dichlorobenzene	ND	7.1
1,4-Dichlorobenzene	ND	7.1
n-Butylbenzene	ND	7.1
1,2-Dichlorobenzene	ND	7.1
1,2-Dibromo-3-Chloropropane	ND	7.1
1,2,4-Trichlorobenzene	ND	7.1
Hexachlorobutadiene	ND	7.1
Naphthalene	ND	7.1
1,2,3-Trichlorobenzene	ND	7.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-4	Batch#:	76306
Lab ID:	161425-003	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
 L= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-4	Batch#:	76306
Lab ID:	161425-003	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	100	77-130
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit



Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	76306
Lab ID:	161425-004	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND = Not Detected

RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	76306
Lab ID:	161425-004	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	97	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120

ND = Not Detected
RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	76306
Lab ID:	161425-005	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	6.7	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	24	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	180	5.0

D= Not Detected
 L= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	76306
Lab ID:	161425-005	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-121
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	96	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-2	Batch#:	76306
Lab ID:	161425-006	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	66	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-2	Batch#:	76306
Lab ID:	161425-006	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
m-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%RRC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	100	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	104	80-120

ND = Not Detected
 RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Field ID: LFR-3	Batch#: 76306
Lab ID: 161425-007	Sampled: 10/22/02
Matrix: Water	Received: 10/23/02
Units: ug/L	Analyzed: 10/24/02
Diln Fac: 1.000	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND = Not Detected
 RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-3	Batch#:	76306
Lab ID:	161425-007	Sampled:	10/22/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-121
1,2-Dichloroethane-d4	102	77-130
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
 RL= Reporting Limit



Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-4	Batch#:	76306
Lab ID:	161425-008	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	8.0	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Field ID: LFR-4	Batch#: 76306
Lab ID: 161425-008	Sampled: 10/23/02
Matrix: Water	Received: 10/23/02
Units: ug/L	Analyzed: 10/24/02
Diln Fac: 1.000	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%RRC	Limits
Dibromofluoromethane	108	80-121
1,2-Dichloroethane-d4	102	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

ND = Not Detected
RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-1	Batch#:	76306
Lab ID:	161425-009	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/24/02
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	140	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	41	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	7.0	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	8.4	5.0

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Field ID: SOMA-1	Batch#: 76306
Lab ID: 161425-009	Sampled: 10/23/02
Matrix: Water	Received: 10/23/02
Units: ug/L	Analyzed: 10/24/02
Diln Fac: 1.000	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Field ID: SOMA-2	Sampled: 10/23/02
Lab ID: 161425-010	Received: 10/23/02
Matrix: Water	Analyzed: 10/25/02
Units: ug/L	

Analyte	Result	RL	Diln Fac	Batch#
Freon 12	ND	14	1.429	76306
Chloromethane	ND	14	1.429	76306
Vinyl Chloride	ND	14	1.429	76306
Bromomethane	ND	14	1.429	76306
Chloroethane	ND	14	1.429	76306
Trichlorofluoromethane	ND	7.1	1.429	76306
Acetone	ND	29	1.429	76306
Freon 113	ND	7.1	1.429	76306
1,1-Dichloroethene	ND	7.1	1.429	76306
Methylene Chloride	ND	29	1.429	76306
Carbon Disulfide	ND	7.1	1.429	76306
MTBE	300	13	2.500	76348
trans-1,2-Dichloroethene	ND	7.1	1.429	76306
Vinyl Acetate	ND	71	1.429	76306
1,1-Dichloroethane	ND	7.1	1.429	76306
2-Butanone	ND	14	1.429	76306
cis-1,2-Dichloroethene	350	13	2.500	76348
2,2-Dichloropropane	ND	7.1	1.429	76306
Chloroform	ND	7.1	1.429	76306
Bromochloromethane	ND	14	1.429	76306
1,1,1-Trichloroethane	ND	7.1	1.429	76306
1,1-Dichloropropene	ND	7.1	1.429	76306
Carbon Tetrachloride	ND	7.1	1.429	76306
1,2-Dichloroethane	ND	7.1	1.429	76306
Benzene	ND	7.1	1.429	76306
Trichloroethene	8.2	7.1	1.429	76306
1,2-Dichloropropane	ND	7.1	1.429	76306
Bromodichloromethane	ND	7.1	1.429	76306
Dibromomethane	ND	7.1	1.429	76306
4-Methyl-2-Pentanone	ND	14	1.429	76306
cis-1,3-Dichloropropene	ND	7.1	1.429	76306
Toluene	ND	7.1	1.429	76306
trans-1,3-Dichloropropene	ND	7.1	1.429	76306
1,1,2-Trichloroethane	ND	7.1	1.429	76306
2-Hexanone	ND	14	1.429	76306
1,3-Dichloropropane	ND	7.1	1.429	76306
Tetrachloroethene	17	7.1	1.429	76306
Dibromochloromethane	ND	7.1	1.429	76306

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-2	Sampled:	10/23/02
Lab ID:	161425-010	Received:	10/23/02
Matrix:	Water	Analyzed:	10/25/02
Units:	ug/L		

Analyte	Result	RL	Diln Fac	Batch#
1,2-Dibromoethane	ND	7.1	1.429	76306
Chlorobenzene	ND	7.1	1.429	76306
1,1,1,2-Tetrachloroethane	ND	7.1	1.429	76306
Ethylbenzene	ND	7.1	1.429	76306
m,p-Xylenes	ND	7.1	1.429	76306
o-Xylene	ND	7.1	1.429	76306
Styrene	ND	7.1	1.429	76306
Bromoform	ND	7.1	1.429	76306
Isopropylbenzene	ND	7.1	1.429	76306
1,1,2,2-Tetrachloroethane	ND	7.1	1.429	76306
1,2,3-Trichloropropane	ND	7.1	1.429	76306
Propylbenzene	ND	7.1	1.429	76306
Bromobenzene	ND	7.1	1.429	76306
1,3,5-Trimethylbenzene	ND	7.1	1.429	76306
2-Chlorotoluene	ND	7.1	1.429	76306
4-Chlorotoluene	ND	7.1	1.429	76306
tert-Butylbenzene	ND	7.1	1.429	76306
1,2,4-Trimethylbenzene	ND	7.1	1.429	76306
sec-Butylbenzene	ND	7.1	1.429	76306
para-Isopropyl Toluene	11	7.1	1.429	76306
1,3-Dichlorobenzene	ND	7.1	1.429	76306
1,4-Dichlorobenzene	ND	7.1	1.429	76306
n-Butylbenzene	ND	7.1	1.429	76306
1,2-Dichlorobenzene	ND	7.1	1.429	76306
1,2-Dibromo-3-Chloropropane	ND	7.1	1.429	76306
1,2,4-Trichlorobenzene	ND	7.1	1.429	76306
Hexachlorobutadiene	ND	7.1	1.429	76306
Naphthalene	ND	7.1	1.429	76306
1,2,3-Trichlorobenzene	ND	7.1	1.429	76306

Surrogate	%REC	Limits	Diln Fac	Batch#
Dibromofluoromethane	109	80-121	1.429	76306
1,2-Dichloroethane-d4	105	77-130	1.429	76306
Toluene-d8	104	80-120	1.429	76306
Bromofluorobenzene	101	80-120	1.429	76306

ND= Not Detected
 RL= Reporting Limit
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Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Batch#:	76306
Lab ID:	161425-011	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/25/02
Diln Fac:	33.33		

Analyte	Result	RL
Freon 12	ND	330
Chloromethane	ND	330
Vinyl Chloride	ND	330
Bromomethane	ND	330
Chloroethane	ND	330
Trichlorofluoromethane	ND	170
Acetone	ND	670
Freon 113	ND	170
1,1-Dichloroethene	ND	170
Methylene Chloride	ND	670
Carbon Disulfide	ND	170
MTBE	ND	170
trans-1,2-Dichloroethene	ND	170
Vinyl Acetate	ND	1,700
1,1-Dichloroethane	ND	170
2-Butanone	ND	330
cis-1,2-Dichloroethene	5,900	170
2,2-Dichloropropane	ND	170
Chloroform	ND	170
Bromochloromethane	ND	330
1,1,1-Trichloroethane	ND	170
1,1-Dichloropropene	ND	170
Carbon Tetrachloride	ND	170
1,2-Dichloroethane	ND	170
Benzene	ND	170
Trichloroethene	ND	170
1,2-Dichloropropane	ND	170
Bromodichloromethane	ND	170
Dibromomethane	ND	170
4-Methyl-2-Pentanone	ND	330
cis-1,3-Dichloropropene	ND	170
Toluene	ND	170
trans-1,3-Dichloropropene	ND	170
1,1,2-Trichloroethane	ND	170
2-Hexanone	ND	330
1,3-Dichloropropane	ND	170
Tetrachloroethene	ND	170

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Batch#:	76306
Lab ID:	161425-011	Sampled:	10/23/02
Matrix:	Water	Received:	10/23/02
Units:	ug/L	Analyzed:	10/25/02
Diln Fac:	33.33		

Analyte	Result	RL
Dibromochloromethane	ND	170
1,2-Dibromoethane	ND	170
Chlorobenzene	ND	170
1,1,1,2-Tetrachloroethane	ND	170
Ethylbenzene	ND	170
m,p-Xylenes	ND	170
o-Xylene	ND	170
Styrene	ND	170
Bromoform	ND	170
Isopropylbenzene	ND	170
1,1,2,2-Tetrachloroethane	ND	170
1,2,3-Trichloropropane	ND	170
Propylbenzene	ND	170
Bromobenzene	ND	170
1,3,5-Trimethylbenzene	ND	170
2-Chlorotoluene	ND	170
4-Chlorotoluene	ND	170
tert-Butylbenzene	ND	170
1,2,4-Trimethylbenzene	ND	170
sec-Butylbenzene	ND	170
para-Isopropyl Toluene	ND	170
1,3-Dichlorobenzene	ND	170
1,4-Dichlorobenzene	ND	170
n-Butylbenzene	ND	170
1,2-Dichlorobenzene	ND	170
1,2-Dibromo-3-Chloropropane	ND	170
1,2,4-Trichlorobenzene	ND	170
Hexachlorobutadiene	ND	170
Naphthalene	ND	170
1,2,3-Trichlorobenzene	ND	170

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-121
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-120

ND = Not Detected
RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC193799	Batch#:	76306
Matrix:	Water	Analyzed:	10/24/02
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC193799	Batch#: 76306
Matrix: Water	Analyzed: 10/24/02
Units: ug/L	

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-121
1,2-Dichloroethane-d4	104	77-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-120

ND = Not Detected
 RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC193800	Batch#: 76306
Matrix: Water	Analyzed: 10/24/02
Units: ug/L	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND = Not Detected

RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC193800	Batch#:	76306
Matrix:	Water	Analyzed:	10/24/02
Units:	ug/L		

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	101	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
 RL= Reporting Limit
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Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC193956	Batch#:	76348
Matrix:	Water	Analyzed:	10/25/02
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
2-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND = Not Detected

RL = Reporting Limit

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC193956	Batch#:	76348
Matrix:	Water	Analyzed:	10/25/02
Units:	ug/L		

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	*REC	Limits
Dibromofluoromethane	109	80-121
1,2-Dichloroethane-d4	107	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120

ND = Not Detected
 RL = Reporting Limit
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Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC193798	Batch#:	76306
Matrix:	Water	Analyzed:	10/24/02
Units:	ug/L		

Analyte	Spiked	Result	PREC	Limits
1,1-Dichloroethene	50.00	47.71	95	71-131
Benzene	50.00	45.33	91	76-120
Trichloroethene	50.00	52.80	106	78-120
Toluene	50.00	43.74	87	79-120
Chlorobenzene	50.00	47.34	95	80-120

Surrogate	PREC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	97	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

Purgeable Organics by GC/MS

Lab #: 161425	Location: 3815 Broadway, Oakland CA
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2511	Analysis: EPA 8260B
Type: LCS	Diln Fac: 1.000
Lab ID: QC193955	Batch#: 76348
Matrix: Water	Analyzed: 10/25/02
Units: ug/L	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	42.60	85	71-131
Benzene	50.00	48.07	96	76-120
Trichloroethene	50.00	54.06	108	78-120
Toluene	50.00	47.27	95	79-120
Chlorobenzene	50.00	48.08	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-121
1,2-Dichloroethane-d4	105	77-130
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-120

Purgeable Organics by GC/MS

Lab #:	161425	Location:	3815 Broadway, Oakland CA
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	76348
MSS Lab ID:	161454-007	Sampled:	10/23/02
Matrix:	Water	Received:	10/24/02
Units:	ug/L	Analyzed:	10/25/02
Diln Fac:	1.000		

Type: MS Lab ID: QC193958

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.2500	50.00	49.59	99	71-134
Benzene	<0.2800	50.00	45.54	91	79-120
Trichloroethene	<0.2500	50.00	52.89	106	47-141
Toluene	<0.2200	50.00	44.34	89	75-120
Chlorobenzene	<0.2200	50.00	47.45	95	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-121
1,2-Dichloroethane-d4	102	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

Type: MSD Lab ID: QC193959

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	51.37	103	71-134	4	20
Benzene	50.00	48.19	96	79-120	6	20
Trichloroethene	50.00	54.99	110	47-141	4	20
Toluene	50.00	45.57	91	75-120	3	20
Chlorobenzene	50.00	47.76	96	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-121
1,2-Dichloroethane-d4	106	77-130
Toluene-d8	97	80-120
Bromofluorobenzene	103	80-120

RPD= Relative Percent Difference

MICROSEEPS

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Page 1 of 12
Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Sample Identification

Lab Sample # Client Sample ID

P0210462-01	GW-2
P0210462-02	GW-3
P0210462-03	GW-4
P0210462-04	MW-11
P0210462-05	LFR-1
P0210462-06	LFR-2
P0210462-07	LFR-3
P0210462-08	LFR-4
P0210462-09	SOMA-1
P0210462-10	SOMA-2
P0210462-11	SOMA-3

Approved By: *Albert Hall*

NOTES: Sample GW-4 was crossed off the client COC; however, the sample vials were received. These samples were received at C and should all be analyzed per client instructions.

NON-CONFORMANCE FORM

Date: 10-24-02

Receiver: R. Welsh

Time of Receipt: 0945

Client: SOMA Env.

Number Samples out of Conformance: 10

Reason for Non-Conformance:

Samples recvd. past holding time → Parameters _____

Broken Bottles → Description _____

Incorrect containers → Description _____

Incorrect preservative → Description _____

Sample ID different from COC → Description _____

Labels missing or unreadable → Description _____

Analysis not written on COC → Description _____

Sample received not on COC → Description _____

Sample on COC not received → Description _____

Hold time not observed internally → Description _____

Remarks Cooler temp not between 2 and 6. - Samples require methane
Analysis 9°C no ice

Sample Gw-4 is crossed off COC but sample vials were
received.

Asst. Lab. Dir. Initials: CM

Date: 10/29/02

(See other side for resolution)

Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-01

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
GW-2	Water	22 Oct. 02 16:02	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	0.73	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-02

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
GW-3	Water	22 Oct. 02 15:15	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
<u>RiskAnalysis</u> Water Methane	0.65	0.015	ug/L	AM20GAX	pd	11/4/02

Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-03

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
GW-4	Water	23 Oct. 02 9:43	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	300	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462

Report Date: 11/06/02

Client Proj Name: Oakland CA 2511

Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering

Lab Sample #: P0210462-04

Contact: Mansour Sepher

Address: 2680 Bishop Drive
Suite 203

San Ramon, CA 94583

Sample Description

Matrix

Sampled Date/Time

Received

MW-11

Water

23 Oct. 02 13:17

24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	2.5	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-05

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
LFR-1	Water	22 Oct. 02 17:04	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	0.81	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-06

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
LFR-2	Water	23 Oct. 02 11:30	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	4700	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-07

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
LFR-3	Water	22 Oct. 02 13:45	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	3.5	0.015	ug/L	AM20GAX	pd	11/4/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-08

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
LF-4	Water	23 Oct. 02 8:55	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	1300	0.015	ug/L	AM20GAX	jl	11/5/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-09

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
SOMA-1	Water	23 Oct. 02 10:49	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	680	0.015	ug/L	AM20GAX	jl	11/5/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-10

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
SOMA-2	Water	23 Oct. 02 15:16	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water ethane	2200	0.015	ug/L	AM20GAX	jl	11/5/02
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Order #: P0210462
Report Date: 11/06/02
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Client Name: Soma Environmental Engineering
Contact: Mansour Sepher
Address: 2680 Bishop Drive
Suite 203
San Ramon, CA 94583

Lab Sample #: P0210462-11

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received</u>
SOMA-3	Water	23 Oct. 02 14:19	24 Oct. 02

<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analyst</u>	<u>Analysis Date</u>
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RiskAnalysis

Water Methane	4200	0.015	ug/L	AM20GAX	jl	11/5/02
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