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First Semi-Annual 2004
Groundwater Monitoring Report
The Former Glovatorium Facility

3815 Broadway

Oakland, California

March 3, 2004

Project 2511

Prepared for

Smiland and Khachigian

601 West Fifth Street, 7th Floor

Los Angeles, California 90071

Prepared by

SOMA Environmental Engineering, Inc.

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ENVIRONMENTAL ENGINEERING, INC.

March 16, 2005

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

Project: 01-2511

Subject: Site Located at 3820 Manila Avenue, Oakland, California
Former Glovatorium Facility

Dear Mr. Levi:

Enclosed for your review is a copy of SOMA's "First Semi-Annual 2005 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., PE
Principal Hydrogeologist

REGISTERED PROFESSIONAL ENGINEER
MANSOUR SEPEHR
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CIVIL
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Stuart Depper
Clean Tech Machinery

Enclosure

cc: Mr. Albert M. Cohen, LOEB&LOEB LLP w/enclosure
Ms. Betty Graham, Regional Water Quality Control Board w/enclosure
Dr. Bruce Page, Bruce W. Page Consulting w/enclosure
Mr. Peter W. McGaw, ARCHER NORRIS w/enclosure

ENVIRONMENTAL ENGINEERING, INC
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March 4, 2004

Mr. Scott Seery, CHMM
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Project: 01-2510

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

Dear Mr. Seery:

Enclosed for your review is a copy of SOMA's "First Semi-Annual 2004 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., PE
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
Mr. Peter W. McGaw, ARCHER NORRIS w/enclosure

Certification

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 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 groundwater monitoring event conducted from January 28, 2004 to January 29, 2004, at the Site. Included in this report are laboratory results of groundwater samples, which were analyzed for:

- Total petroleum hydrocarbons as Stoddard solvents (TPH-ss) and gasoline (TPH-g) using EPA Method 8015;
- Volatile organic compounds (VOCs), such as tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), vinyl chloride, 1,2-dichloropropane and 1,1-dichloroethene, using EPA Method 8260B;
- Benzene, toluene, ethylbenzene, total xylenes (collectively referred to as BTEX) using EPA Method 8260B; and
- Methyl tertiary Butyl Ether (MtBE) using EPA Method 8260B.

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 PCE and other VOCs found in the groundwater were biodegrading. Therefore, groundwater samples collected during this monitoring event were analyzed for common electron acceptors and other

geochemical indicators. The results of these analyses are also 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 whether contamination is affecting the neighboring Thompson property. This information is needed to defend against the claim Mr. Thompson brought against the owners of the Glovatorium, the Deppers. This work may also provide data that can 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 semi-annual basis. Past groundwater monitoring events have indicated the presence of VOCs and petroleum hydrocarbons in the groundwater beneath the Site. This report includes both the results of the historical groundwater monitoring events and the results of the First Semi-Annual 2004 groundwater monitoring event.

1.2 Background

The following is a brief description of previous Site investigations.

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 Geolsolv, 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.

SOMA conducted the Third Quarter 2001 groundwater monitoring event 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 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.

SOMA conducted the Fourth Quarter 2001 groundwater monitoring event 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.

The Fourth Quarter 2002 groundwater monitoring event was conducted by SOMA on October 22 and 23, 2002. During this monitoring event, 11 groundwater monitoring wells were sampled, depths to groundwater and free product were measured in 24 wells and temporary sampling points.

SOMA's workplan dated June 15, 2001, as approved by the Alameda County Health Care Services (ACHCS) on August 27, 2001, proposed a two-phase approach for assessing the nature and extent of soil and groundwater contamination and defining the Site's regulatory status. The first phase included installation of additional groundwater monitoring wells, soil and groundwater sampling, conducting hydraulic testing, and a sensitive receptor survey. Phase II of the workplan included the definition of the Site's regulatory status by conducting groundwater flow, chemical fate and transport modeling, and a Risk-Based Corrective Action (RBCA). SOMA's "Report on Conducting Additional Field Investigation to Evaluate the Site's Conceptual Model," dated January 3, 2002 described the results of the investigations conducted in Phase I. The modeling aspect of Phase II was conducted using the results collected in Phase I and the analytical data from quarterly monitoring events. The main objective of groundwater flow and chemical transport modeling was to predict groundwater chemical concentrations down-gradient from the Site, beneath the nearest residential neighboring property, in order to assess the Site's regulatory status and restore groundwater quality conditions to an acceptable level per RBCA recommendations.

Groundwater flow, chemical transport and bioattenuation modeling for the Site was conducted by SOMA in the first quarter of 2003. The modeling results confirmed the occurrence of biodegradation beneath the Site and indicated that the bioattenuation processes would be able to remove PCE in groundwater in seven to ten years, TCE in approximately three to nine years, and cis-1,2-DCE in approximately four to thirteen years. SOMA's March 7, 2003 report entitled "Groundwater Flow, Chemical Transport and Bioattenuation Modeling" describes the details of this study.

The First Quarter 2003 groundwater monitoring event was conducted by SOMA on February 18 and 19, 2003. During this monitoring event, 11 groundwater monitoring wells were sampled. The data collected from this monitoring event and previous monitoring events are sufficient to completely define the extent of groundwater and soil contamination and the occurrence of biodegradation at the Site. Consequently, SOMA recommended that groundwater monitoring be conducted on a semi-annual basis instead of a quarterly basis in the modeling report and the First Quarter 2003 monitoring report. SOMA's recommendation was approved by the ACEHS upon their review of these reports. Therefore, the Second Quarter 2003 monitoring event was not conducted, and the Third Quarter 2003 monitoring was named as "Semi-Annual Groundwater Monitoring Report" which was performed in July 2003. During this monitoring event 11 groundwater monitoring wells were sampled and bioattenuation parameters were measured in the field.

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.

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 January 28 and 29, 2004, during which 10 groundwater monitoring wells were sampled. Depths to groundwater were measured in 22 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 during this groundwater monitoring event.

On January 28, 2004, 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 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 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, nitrite, sulfate, total iron, ferrous iron and dissolved manganese concentrations, once stabilization occurred, using the Hach Colorimeter (Model 890). The Hach 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 ampules.

Nitrate was measured colorimetrically using Method 8039, the Cadmium Reduction Method. Cadmium metal in the NitraVer 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.

Nitrite was measured colorimetrically using Method 8507, the Diazotization Method. Nitrite in the sample reacts with sulfanilic acid in the NitriVer 3 Nitrite Reagent to form an intermediate diazonium salt. The salt couples with chromotropic acid to produce a pink colored complex. The intensity of the color is proportional to the nitrite concentration in the sample.

Sulfate was measured colorimetrically using Method 8051, the SulfaVer 4 Method. Sulfate ions in the sample react with barium in the SulfaVer 4 Sulfate Reagent to form insoluble barium sulfate. The intensity of the subsequent color development is proportional to the sulfate concentration.

Ferrous iron was measured colorimetrically using Method 8146 (1,10-phenanthroline Method). The 1,10-phenathroline 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.

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 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 January 29, 2004. Samples for methane analysis were collected in a 40-mL VOA vial were maintained at 4°C in a cooler. These samples were sent to Microseeps Laboratory in Pittsburgh, Pennsylvania on January 29, 2004.

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. BTEX, MtBE, and VOCs were prepared using EPA Method 5030B and analyzed

using EPA Method 8260B. Methane analysis of the groundwater samples was conducted by Microseeps Laboratory.

3.0 Results

This section describes the results of the 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, groundwater elevations ranged from 67.44 feet in LFR-3 to 77.44 feet in MW-8. Table 2 also shows the historical water level elevations at different groundwater monitoring wells and sampling points. Since the previous monitoring event, groundwater elevations have increased in sampling points B-2, B-3, B-7, B-9, B-10, and decreased slightly in B-13. In monitoring wells GW-3, GW-4, GW-6A, MW-8, MW-9, MW-11, LFR-1, LFR-3, LFR-4, SOMA-1 to SOMA-3, groundwater elevations increased. The increase can be attributed to the recent rainfall events.

In evaluating the groundwater flow direction and gradient, water level data from all B wells, GW-4, SOMA-1, SOMA-3, SOMA-4, and SOMA-5 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 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, 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 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, groundwater flows from the northeast to southwest at an average gradient of 0.021 ft/ft. The direction of groundwater flow is consistent, however, the groundwater gradient has slightly decreased, since the previous monitoring event. It should be noted that our knowledge of the groundwater flow direction does not extend beyond LFR-3, the most down-gradient 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 3, along with their historical values. Water temperatures ranged from 13.00°C in GW-4 to 20.00°C in LFR-3. The variation in temperature may reflect the changes in air temperature during sampling. Measurements of pH ranged from 6.51 in SOMA-1 to 6.85 in GW-4. The EC measurements ranged from 393 µS/cm in LFR-3 to 1000 µS/cm in MW-11.

3.2 Groundwater Quality

Table 4 displays the results of the laboratory analyses for TPH-ss, TPH-g, MtBE and BTEX. As shown in Table 4, TPH-ss was below the laboratory reporting limit in wells GW-2, MW-11, LFR-3, and SOMA-1. Detectable TPH-ss levels ranged from 51 µg/L in GW-3 to 4,100 µg/L in SOMA-3. However, in monitoring well GW-3, the groundwater sample exhibited a fuel pattern that does not resemble the standard Stoddard solvent pattern and also exhibited unknown single peak or peaks. A contour map of TPH-ss concentrations in groundwater is shown in Figure 4.

TPH-g was below the laboratory reporting limit in wells GW-2, MW-11, LFR-3 and SOMA-1. Detectable TPH-g concentrations ranged from 86 µg/L in GW-3 to 6,800 µg/L in SOMA-3. However, groundwater sample in GW-3, exhibited a fuel pattern that does not resemble the standard gasoline pattern and also exhibited unknown single peak or peaks. The groundwater in SOMA-3 may contain heavier hydrocarbons, which contributed to the quantification of TPH-g concentrations and also exhibit a fuel pattern which did not resemble the standard fuel pattern. A contour map of TPH-g concentrations in groundwater is shown in Figure 5.

MtBE was only detected in SOMA-1 and SOMA-2 at levels of 190 µg/L and 270 µg/L, respectively. A contour map of MtBE is not presented due to the mostly non-detectable concentrations in groundwater.

Benzene was only detected in LFR-4 at a level of 11 µg/L and was not detected in any other wells. Toluene, ethylbenzene and total xylenes were not detected

above the laboratory reporting limits in all the wells that were sampled. A contour map of benzene is not presented due to the mostly non-detectable concentrations in groundwater.

Table 4 also shows the historical analytical results for total petroleum hydrocarbons, MtBE and BTEX. Several concentration trends were observed since the previous monitoring event. TPH-ss concentrations decreased in GW-3 GW-4, and SOMA-2 and increased in LFR-1, LFR-4, and SOMA-3, and remained below the laboratory reporting limits in all other wells. TPH-g concentrations decreased in GW-3, GW-4, and SOMA-2, and increased in LFR-1, LFR-4, and SOMA-3, and remained below the laboratory reporting limits in all other wells. MtBE concentrations remained constant in SOMA-1, decreased in SOMA 2, and remained non-detectable in all the other wells. BTEX concentrations, with the exception of benzene in LFR-4, have remained non-detectable in all the wells. The benzene concentration in LFR-4 increased since the previous monitoring event.

Table 5 shows the historical concentrations of VOCs in the groundwater. Tetrachloroethene (PCE) was below the laboratory reporting limit in wells MW-11, LFR-3, LFR-4, and SOMA-3. The detectable concentrations of PCE ranged from 8.1 µg/L in monitoring well GW-4 to 170 µg/L in GW-3. A contour map of PCE concentrations in groundwater is shown in Figure 6. Trichloroethene (TCE) was detected in GW-2 at 6.9 µg/L and in LFR-1 and 23 µg/L. A contour map of TCE is not presented due to the mostly non-detectable concentrations in groundwater. Cis-1,2-dichloroethene was detected in GW-4, LFR-1, SOMA-1, SOMA-2 and SOMA-3 at concentrations of 10 µg/L, 7.7 µg/L, 44 µg/L, 430 µg/L and 7,700 µg/L, respectively. Figure 7 shows a contour map of cis-1,2-DCE concentrations in groundwater. Trans-1,2-dichloroethene, and vinyl chloride were below the laboratory reporting limit in all samples. 1,2-dichloropropane was detected in only SOMA-1 at 5.9 µg/L.

Table 5 also shows the historical concentration of VOCs in the groundwater. Several concentration trends were observed since the previous monitoring event. PCE concentrations increased in GW-2, GW-4, SOMA-1, and SOMA-2, decreased in GW-3 and SOMA-3, remained constant in LFR-1, and remained below the laboratory detection limits in all other wells. TCE concentrations increased in GW-2, decreased in LFR-1 and SOMA-3, and remained below the laboratory reporting limits in all other wells. Cis-1,2-DCE increased in GW-4, LFR-1, SOMA-1 and SOMA-3, decreased in SOMA-2, and remained non-detectable in all other wells. 1,2-Dichloropropane concentrations slightly decreased in SOMA-1, but remained below the laboratory reporting limits in the other wells. Concentrations of trans-1,2-DCE and vinyl chloride remained below the detection limits in all the groundwater samples.

3.3 Bioattenuation Parameter Analysis Results

SOMA continued to collect natural attenuation parameters during this groundwater monitoring event. 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 events, 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 before collecting a groundwater sample.

Naturally occurring biological processes can enhance the removal rate of contaminants in the subsurface. During the degradation process, indigenous bacteria that exist in the subsurface utilize the energy released from the transfer

of electrons to drive the redox reactions that remove organic mass from contaminated groundwater. The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor. Based on thermodynamic considerations, the most energetically preferred electron acceptor for redox reactions is DO, followed by nitrate, manganese, ferric iron, sulfate, and carbon dioxide, in descending order of preference. 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 the evaluation of bioattenuation processes underneath the Site, 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 oxygen during ex-situ measurement (R. Borden, 1998, M. Sepehr 1999). Therefore, during recent monitoring events, DO measurements were conducted in-situ by SOMA's field crew. DO levels ranged from 0.29 mg/L in SOMA-1 to 7.32 mg/L in MW-11. Figure 8 presents the DO concentration contour map in the groundwater using in-situ measurements.

Due to the presence of floating product, DO measurements were not collected 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. Table 6 presents the current and historical DO concentrations in groundwater. Except for GW-3 and GW-4, DO levels have increased since the previous monitoring event.

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. A contour map of nitrate concentrations is not presented due to non-detect values in general throughout the site. Nitrate levels were only observed in wells GW-2 and GW-3 at 3.3 mg/L and 0.8 mg/L, respectively.

Manganese. After DO and nitrate have been depleted, manganese may be used as an electron acceptor for anaerobic biodegradation. Therefore, increased dissolved manganese concentrations in groundwater are indicative of reductive dechlorination. Detectable manganese concentrations ranged from 0.2 mg/L in SOMA-2 to 5.9 mg/L in GW-4. Manganese was not detected in wells GW-2, GW-3, MW-11, and LFR-3. A contour map of dissolved manganese concentrations in groundwater is presented in Figure 9. As shown in Table 6, dissolved manganese concentrations have increased in LFR-1, SOMA-1, and SOMA-3, but decreased in GW-2, GW-4, MW-11, LFR-3, LFR-4 and SOMA-2 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 GW-4, LFR-3, LFR-4, SOMA-2 and SOMA-3. Detectable sulfate levels ranged from 13 mg/L in SOMA-1 to 80 mg/L in MW-11. Figure 10 shows a contour map of sulfate concentrations in groundwater using

the field data. Sulfate levels increased in GW-2, GW-3, MW-11, LFR-1, SOMA-1, and decreased in LFR-3.

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. Ferrous iron was not detected in GW-2, GW-3, MW-11, and LFR-1. The highest ferrous iron concentrations were found in GW-4, LFR-3, and SOMA-3, each at a level of 3.3 mg/L. A contour map of ferrous iron concentrations is shown in Figure 11. Ferrous iron levels have increased in LFR-3, SOMA-1, and SOMA-2, and decreased in LFR-4.

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 0.00042 mg/L in GW-3 to 8.4 mg/L in SOMA-3. The higher concentrations of methane in the vicinity of LFR-4, SOMA-2, and SOMA-3 indicate conditions that are conducive to anaerobic biodegradation. A contour map of methane concentrations in the groundwater is shown in Figure 12. Methane concentrations have increased in MW-11, LFR-1, LFR-4, and SOMA-2, and decreased in all other monitoring wells since the previous monitoring event, as shown in Table 6.

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 –85 mV in SOMA-3 to +143 mV in GW-2. Negative ORP values were found in the wells GW-4, apparent source area (SOMA-2), and SOMA-3 and at a low positive

value in the cross-gradient well LFR-4. 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 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 this and previous 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 was not detected in GW-2, GW-3, MW-11, LFR-1 and SOMA-2. Detectable total iron concentrations ranged from 0.71 mg/L in LFR-4 to 3.3 mg/L in wells GW-4, and SOMA-3. The results of the total iron analysis are presented in Table 3.

Nitrite. Nitrate may reduce to nitrite during the process of anaerobic biodegradation. Nitrite concentrations were only detected in wells MW-11 and LFR-1. Nitrite concentrations in groundwater for this monitoring event and historical nitrite results are shown in Table 3.

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 3.

Appendix B includes the COC forms and laboratory reports for the First ~~Quarter~~ Semi-Annual 2004 groundwater monitoring event.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the data obtained during the First ~~Quarter~~ Semi-Annual 2004 groundwater monitoring event, our conclusions are as follows:

1. Since the year 2000 until Third Quarter 2003, groundwater monitoring data has been collected on a quarterly basis. This data has been sufficient to completely define the extent of groundwater contamination and occurrence of biodegradation at the Site. Based on SOMA's request, and

concurrence from the ACEHS, SOMA is currently conducting groundwater monitoring events on a semi-annual basis.

2. Due to the presence of over 9 feet of free product in SOMA-4 this well could not be sampled.

3. 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.

4. The data collected to date regarding the distribution of PCE and other VOCs in 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 well~~ LFR-1 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 wells GW-4, LFR-1 and SOMA-1 is also indicative of biodegradation.

5. 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.

4.1 Recommendations

Prior to installation of a skimmer pump ~~on~~ in SOMA-4, On January 28, 2004 there was over 9 feet of free product ~~over~~ on the groundwater. On February 6,

2004 SOMA installed a flexible axial peristaltic pump (FAP system) in SOMA-4 to remove free product from this location. Since installation of the FAP system in SOMA-4, over 200 gallons of product mixed with some water has been removed from this well. SOMA will continue removing free product from this well until the product thickness disappears.

SOMA began implementing Phase II of the approved Workplan (dated June 15, 2001). SOMA had recently completed groundwater flow and chemical transport modeling to simulate the future extent of chlorinated solvents and other chemicals beneath the Site. In light of the groundwater modeling results, which confirm that biodegradation is occurring, SOMA believes that the site should likely be characterized as a "Low" risk site according to the California Regional Water Quality Control Board's Interim Guidance Document dated December 8, 1995. In order to do so, however, the Interim Guidance document requires conducting a human health risk assessment to evaluate the impact of the Site's contaminant in soil and groundwater on the current and future Site's workers and the nearby residents. Subsequently, SOMA is planning to conduct human health risk assessment and continuing groundwater monitoring events on semi-annual basis in order to validate the conclusions of the chemical fate and transport modeling.

In order to define the Site's regulatory status, SOMA will develop the Site's conceptual model and conduct a 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 will be proposed to the ACEHS. Meanwhile SOMA will continue to conduct groundwater monitoring events on a semi-annual basis.

5.0 REFERENCES

Borden, R.C., 1998. "Hand book of Bioremediation" Section 9 Natural Bioremediation of Hydrocarbon-Contaminated Ground Water, pp 177-199.

EPA 1998. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater, EPA/600/R-98/128. September.

Helley, E.J., K.R. Lajoie, and D.B. Burke. 1972. Geologic Map of Late Cenozoic Deposits, Alameda County, California.

LFR. 1999. Results of Utility Survey and Work Plan for Soil and Grab Groundwater Investigation. May 6.

LFR. 2000a. Soil and Groundwater Investigation Report. March 20.

LFR. 2000b. Work Plan for Installation of Groundwater Monitoring Wells, Former Glovatorium, 3815 Broadway, Oakland, California. June 14.

LFR. 2000c. Groundwater Monitoring Report, Second Quarter 2000, Former Glovatorium, 3815 Broadway, Oakland, California. July 7.

LFR. 2000d. Groundwater Monitoring Report, Third Quarter 2000, Former Glovatorium, 3815 Broadway, Oakland, California. November 2.

LFR. 2001. Groundwater Monitoring Report, Fourth Quarter 2000, Former Glovatorium, 3815 Broadway, Oakland, California. November 2.

Microseeps. 2000. Monitored Natural Attenuation As a Remedial Alternative In Groundwater Contamination. Lecture at LFR Levine - Fricke (LFR) Emeryville office by Robert J. Pirkle, Ph.D. of Microseeps. May 31.

Sepehr, M. 1999. "Methanogenesis and Anaerobic Biodegradation of Petroleum Hydrocarbons in Soil and Groundwater" a Paper Presented in 4th IAA Annual Conference at Petrochemical, Energy and Environment, September 1999, New York.

SOMA Environmental Engineering, Inc. 2001. First Quarter 2001 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, May 7, 2001.

SOMA Environmental Engineering, Inc. 2001. Second Quarter 2001 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, May 7, 2001.

SOMA Environmental Engineering, Inc. 2001. Third Quarter 2001 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, May 7, 2001.

SOMA Environmental Engineering, Inc. 2001. Workplan to Conduct Additional Investigation at the Former Glovatorium Facility, 3815 Broadway, Oakland, California, June 15, 2001.

SOMA Environmental Engineering, Inc. Fourth Quarter 2001 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, December 11, 2001.

SOMA Environmental Engineering, Inc. First Quarter 2002 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, March 27, 2002.

SOMA Environmental Engineering, Inc. Second Quarter 2002 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, May 16, 2002.

SOMA Environmental Engineering, Inc. Third Quarter 2002 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, September 10, 2002.

SOMA Environmental Engineering, Inc. Fourth Quarter 2002 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, December 3, 2002.

SOMA Environmental Engineering, Inc. Groundwater Flow, Chemical Transport and Bioattenuation Modeling, Former Glovatorium Facility, 3815 Broadway, Oakland, California, February 28, 2003.

SOMA Environmental Engineering, Inc. First Quarter 2003 Groundwater Monitoring Report, Former Glovatorium Facility, 3815 Broadway, Oakland, California, April 2002.

SOMA Environmental Engineering, Inc. Semi-Annual Groundwater Monitoring Report, June 2003 through December 2003, Former Glovatorium Facility, 3815 Broadway, Oakland, California.

U.S. Geological Survey. Quaternary Geology of Alameda Cty, and Parts of Contra Costa, Santa Clara, San Mateo, San Francisco, Stanislaus, and San Joaquin Counties, CA: A Digital Database. U.S. Dept of the Interior.

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)
Temporary Sampling Points Installed by Geosolv, LLC						
B-2	19-Aug-97	82.20	82.09	21	5 to 21	77.2 to 61.2
B-3[1]	19-Aug-97	82.60	82.57	18	5 to 18	77.6 to 64.6
B-7	20-Aug-97	77.33	76.96	17.5	5 to 17.5	72.3 to 59.8
B-8	20-Aug-97	82.06	81.82	24	9 to 24	73.1 to 58.1
B-9	21-Aug-97	77.57	77.37	19.5	4.5 to 19.5	73.1 to 58.1
B-10	21-Aug-97	81.65	81.50	19	4 to 9	77.7 to 62.7
B-13	22-Aug-97	85.12	84.58	20	5 to 20	80.1 to 65.1
Temporary Sampling Points Installed by LFR						
GW-1	16-Jul-99	80.24	79.94	8	3 to 8	77.2 to 72.2
GW-2	16-Jul-99	79.44	79.14	20	10 to 20	69.4 to 59.4
GW-3	15-Jul-99	78.48	77.92	20	10 to 20	68.5 to 58.5
GW-4	16-Jul-99	82.55	82.37	12	7 to 12	75.6 to 70.6
GW-5	15-Jul-99	81.31	81.01	13	8 to 13	73.3 to 68.3
GW-6[2]	15-Jul-99	81.91	81.65	13.5	7.5 to 13.5	74.4 to 68.4
GW-6A[2]	16-Jul-99	81.93	81.61	15	5 to 15	76.9 to 66.9
GW-7[2]	15-Jul-99	81.30	NS	20	10 to 20	71.3 to 61.3
GW-8[2]	16-Jul-99	80.28	80.10	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	unknown
LFR-2	27-Jul-00	NS	81.89	19	9 to 19	unknown
LFR-3	27-Jul-00	NS	77.96	22	12 to 22	unknown
LFR-4	28-Jul-00	NS	81.65	19	9 to 19	unknown
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	81.50	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
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
29-Jan-04	**74.99**	**75.31**	**70.01**	**NM**	**69.24**	**73.07**	**75.66**
29-Jul-03	73.99	73.83	68.53	72.39	68.67	72.58	75.80
18-Feb-03	75.83	75.55	69.94	73.01	70.00	73.87	75.77
22-Oct-02	73.29	73.06	67.98	71.43	68.10	72.09	NM
17-Jul-02	74.02	73.82	NM	72.37	68.59	72.51	NM
16-Apr-02	75.16	75.34	69.41	73.54	69.38	73.21	NM
31-Jan-02	77.35 (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	74.00	69.60	73.19	69.80	73.61	
29-Jan-01	74.63	75.06	69.11	74.23	69.33	73.20	
2-Nov-00							
31-Oct-00							
30-Oct-00	74.34	74.84 (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	73.70	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 2
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
29-Jan-04	**NM**	**68.37**	**68.05**	**74.69**	**68.71**	**68.00**	**NM**	**77.82**	**78.76**	**74.08**
29-Jul-03	NM*	68.69	67.67	72.61	68.82	67.97	NM	77.44	77.11	73.78
18-Feb-03	NM*	69.02	68.26	74.75	70.35	67.97	NM	78.82	78.59	74.68
22-Oct-02	NM*	67.92	67.78	71.70	68.67	67.85	NM	76.89	76.51	73.12
17-Jul-02	NM*	68.61	67.78	72.65	68.76	67.95	NM	77.27	77.12	73.90
16-Apr-02	NM	69.76	68.14	74.11	68.68	68.07	NM	77.97	NM	74.98
31-Jan-02	-	69.77	68.28	74.83	68.78	68.06		78.86	79.41	75.48
18-Oct-01	NM	67.91	67.67	74.22	68.41	67.81		76.81	76.46	72.97
26-Jul-01	NM	68.55	67.84	73.85	68.77	68.00		77.40	77.03	73.73
26-Apr-01	NM	69.41	67.93	74.59	68.43	68.43				74.81
29-Jan-01	71.99	68.62	67.89	74.92	68.61	67.90		78.14	77.95	73.79
2-Nov-00								78.38	78.31	
31-Oct-00										
30-Oct-00		68.45	67.95	74.55	68.64	68.16				73.62
10-Aug-00								77.26	77.14	
9-Aug-00	DRY	69.11	66.54	DRY	68.71	67.88				74.12
27-Apr-00	DRY	70.59	68.16	73.97	68.70	68.00	71.34	79.15	77.25	75.35
25-Jan-00										73.48
24-Jan-00										
21-Jan-00		68.32		74.33						
20-Jan-00			67.93		68.61		70.42			
19-Jan-00	DRY	68.24	67.86	74.71	68.61	67.63	70.44			
27-Aug-99	DRY	68.46	67.66	NM	68.71	67.71	70.60			
18-Feb-98										
26-Oct-97										

Table 2
Historical Groundwater Elevation Data
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
28-Jan-04	**70.41**	**NM**	**67.44**	**69.13**	**68.33**	**70.35**	**73.00**	**FP**	**58.50**
29-Jul-03	70.18	70.96	66.71	68.37	67.84	69.84	72.48	FP	57.18
18-Feb-03	70.63	73.08	67.61	69.44	68.77	70.74	73.77	NM	56.59
22-Oct-02	70.00	70.48	66.13	67.85	66.92	69.00	72.01	NM	59.43
17-Jul-02	70.18	70.98	67.67	68.33	67.62	72.40	69.64	NM	59.53
16-Apr-02	70.36	71.71	67.60	69.27	68.85	73.06	70.90	68.56	59.48
31-Jan-02	70.56	71.92	67.72	NM	69.36	73.98	71.46	69.79[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	71.90	67.62	68.87					
29-Jan-01	70.44	72.04	66.96	67.92					
2-Nov-00									
31-Oct-00				68.14					
30-Oct-00	70.22	71.62	66.99						
10-Aug-00									
9-Aug-00	70.16	69.99	66.76	68.39					
27-Apr-00									
25-Jan-00									
24-Jan-00									
21-Jan-00									
20-Jan-00									
19-Jan-00									
27-Aug-99									
18-Feb-98									
26-Oct-97									

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 3
Historical Analytical Results and Field Measurements for
Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
Temporary Sampling Points Installed by Geosyn, LLC												
B-7	11-Aug-00	760	39	202				<0.0005	<0.0005	6.86	17.55	1279
B-7 field	11-Aug-00					-1.00	0.05					
	31-Oct-00	760	42	200	14.00	<0.1	<2.0					
B-7 field	31-Oct-00				17.22	-1.00	-1.00			6.16	16.05	1454
	31-Jan-00	720	43	170	12.00	<0.1	<2.0					
B-7 field	31-Jan-00									6.79	13.90	1424
	26-Apr-01				>3.3	0.24				6.59	16.30	1340
	26-Jul-01				15.30	0.02				6.39	15.97	1400
B-10 field	10-Aug-00					0.02	0.06					
B-10	31-Oct-00	500	76	120	6.60	<0.1	<2.0					
	31-Oct-00				8.35	0.00	0.00			6.21	16.62	1051
	31-Jan-01	480	81	72	6.10	<0.1	<2.0					
	31-Jan-01				1.44	0.07				6.81	14.66	1117
	11-Jun-01				1.31					6.65	16.70	1090
	26-Jul-01				6.50	0.00				6.38	16.09	1160
	10-Aug-01	520	74	145	6.00	<0.05	<0.04	<0.0005	0.00	6.86	16.80	1130
Temporary Sampling Points Installed by LFR												
GW-2	01-Nov-00									6.31	18.97	1218
	30-Jan-01			63								
GW-2 field	31-Jan-01									6.82	13.75	846
	26-Apr-01				0.02					6.80	19.50	874
	26-Jul-01				0.03	0.02				6.74	20.30	803
	19-Oct-01	NM	NM	NM	NM	NM	NM	NM	NM	6.84	21.30	786
	31-Jan-02	NM	NM	NM	1.05	0.01	NM	NM	NM	6.70	17.70	797
	16,17-Apr-02	NM	NM	NM	0.65	0.02	NM	NM	NM	6.38	17.00	707
	17,18-Jul-02	NM	NM	NM	1.39	0.00	NM	NM	NM	6.35	17.75	798
	23-Oct-02	NM	NM	NM	0.12	0.04	NM	NM	NM	6.73	19.78	670
	19-Feb-03	NM	NM	NM	0.10	0.02	NM	NM	NM	6.86	18.10	607
	29-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	7.26	20.10	651
	29-Jan-04	**NM**	**NM**	**NM**	**0.00**	**0.00**	**NM**	**NM**	**NM**	**6.72**	**18.00**	**542**
GW-3	11-Aug-00	340	25	54				<0.0005	<0.0005	7.05	21.43	860
GW-3 field	11-Aug-00					0.05	-1.00					
GW-3 field	1-Nov-00									6.52	18.83	967
	1-Feb-01			54								
GW-3 field	29-Jan-01									6.89	17.29	602
	11-Jun-01				0.00	0.70				5.68	16.20	673
	26-Jul-01				0.14	0.00				6.53	22.25	547
	19-Oct-01	NM	NM	NM	0.00	NM	NM	NM	NM	6.84	22.56	590
	31-Jan-02	NM	NM	NM	0.14	0.01	NM	NM	NM	6.70	18.40	593
	16,17-Apr-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.64	16.61	526
	17,18-Jul-02	NM	NM	NM	1.08	0.01	NM	NM	NM	6.32	17.10	545
	23-Oct-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.36	19.60	425
	19-Feb-03	NM	NM	NM	0.08	0.01	NM	NM	NM	6.77	17.80	412
	29-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	7.07	19.40	490
	29-Jan-04	**NM**	**NM**	**NM**	**0.00**	**0.00**	**NM**	**NM**	**NM**	**6.65**	**18.20**	**450**
GW-4	30-Jan-01									6.60	13.48	479
	26-Jul-01				2.00	0.04				6.45	19.44	827
	19-Oct-01	NM	NM	NM	11.00	NM	NM	NM	NM	6.79	18.36	732
	31-Jan-02	NM	NM	NM	12.70	0.01	NM	NM	NM	6.50	12.00	414
	16,17-Apr-02	NM	NM	NM	6.40	0.03	NM	NM	NM	6.34	13.98	467
	17,18-Jul-02	NM	NM	NM	>3.3	0.03	NM	NM	NM	6.49	21.93	572
	23-Oct-02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.67	13.60	466
	30-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.30	18.70	430
	29-Jan-04	**NM**	**NM**	**NM**	**3.30**	**0.00**	**NM**	**NM**	**NM**	**6.85**	**13.00**	**534**

Table 3
Historical Analytical Results and Field Measurements for
Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
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
MW-11 field	10-Aug-00					0.04	0.00					
	1-Nov-00	300	120	190	<0.05	<0.1	<2.0					
MW-11 field	1-Nov-00				0.01	0.00	-1.00			5.83	20.13	1
	31-Jan-01	330	130	150	<0.05	<0.1	<2.0					
MW-11 field	31-Jan-01									6.35	13.67	1
	26-Apr-01				0.01					5.67	18.00	1210
	26-Jul-01				0.00	0.02				6.02	19.85	1120
	19-Oct-01	NM	NM	NM	0.00	NM	NM	NM	NM	6.41	21.25	130
	31-Jan-02	NM	NM	NM	0.05	0.04	NM	NM	NM	6.60	18.50	1090
	16,17-Apr-02	NM	NM	NM	0.00	0.00	NM	NM	NM	5.87	18.70	1150
	17,18-Jul-02	NM	NM	NM	0.00	0.02	NM	NM	NM	6.27	18.37	1180
	23-Oct-02	NM	NM	NM	0.00	0.04	NM	NM	NM	6.62	20.81	1220
	18-Feb-03	NM	NM	NM	0.00	0.04	NM	NM	NM	6.49	19.50	1170
	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.92	19.70	941
	29-Jan-04	**NM**	**NM**	**NM**	**0.00**	**1.80**	**NM**	**NM**	**NM**	**6.61**	**19.00**	**1000**
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		0.02	-1.00					
	30-Oct-00	240	100	25	<0.05	<0.1	<2					
LFR-1 field/sp	30-Oct-00				0.01/0.01	0.031/0.03	0.001/0.001			6.38	17.94	697
LFR-1-spl	30-Oct-00	220	100	40	<0.05	<0.1	<2					
	29-Jan-01	150	76	28	<0.05	<0.1	<2					
LFR-1 field	29-Jan-01				0.00	0.04				6.82	15.00	870
LFR-1 Dup	29-Jan-01	150	75	26	<0.05	<0.1	<2					
	26-Apr-01				0.00					5.76	16.80	980
	26-Jul-01				0.05	0.01				6.48	19.38	772
	26-Jul-01	NM	NM	NM	0.42	NM	NM	NM	NM	6.73	20.83	661
	31-Jan-02	NM	NM	NM	0.03	0.01	NM	NM	NM	6.50	16.50	879
	16,17-Apr-02	NM	NM	NM	0.75	0.02	NM	NM	NM	5.88	16.37	1120
	17,18-Jul-02	NM	NM	NM	0.22	0.01	NM	NM	NM	6.40	17.02	832
	23-Oct-02	NM	NM	NM	0.30	0.00	NM	NM	NM	6.54	20.09	803
	18-Feb-03	NM	NM	NM	0.40	0.00	NM	NM	NM	6.47	16.90	607
	30-Jul-03	NM	NM	NM	0.02	0.00	NM	NM	NM	6.92	19.20	1330
	29-Jan-04	**NM**	**NM**	**NM**	**0.00**	**5.10**	**NM**	**NM**	**NM**	**6.62**	**18.00**	**830**
LFR-2	11-Aug-00	590	33	174				<0.0005	0.00	7.15	19.87	1088
LFR-2 field	11-Aug-00				2.95	-1.00	0.01					
	02-Nov-00	550	40	180	6.20	<0.1	<2					
LFR-2 field	02-Nov-00				7.45	0.01	0.00			6.19	19.67	1306
	30-Jan-01	460	21	130	4.60	<0.1	<2					
LFR-2 field	30-Jan-01				1.04	0.01				6.60	12.73	945
	27-Apr-01				2.97					5.64	16.40	921
	26-Jul-01				4.60	0.01				6.31	18.66	970
	18-Oct-01	NM	NM	NM	6.20	NM	NM	NM	NM	6.78	19.56	109
	31-Jan-02	NM	NM	NM	1.97	0.05	NM	NM	NM	6.50	16.60	644
	16,17-Apr- 02	NM	NM	NM	7.60	0.06	NM	NM	NM	6.19	16.43	845
	17,18-Jul-02	NM	NM	NM	6.80	0.00	NM	NM	NM	6.52	16.24	986
	23-Oct-02	NM	NM	NM	3.30	0.06	NM	NM	NM	6.84	18.09	812
	18-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.50	16.90	617
	30-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.15	17.30	861
	29-Jan-04	NM	NM	NM	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**

Table 3
Historical Analytical Results and Field Measurements for
Dissolved Ions and Gas, pH, Temperature, and Electrical Conductivity in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Alkalinity (mg/L)	Chloride (mg/L)	Carbon Dioxide (mg/L)	Total Iron (mg/L)	Nitrite (mg/L)	Sulfide (mg/L)	Ethane (mg/L)	Ethene (mg/L)	pH	Temp (°C)	Electrical Conductivity (µS/cm)
LFR-3	10-Aug-00	310	85	162	<0.1	0.15	0.04	<0.0005	<0.0005	6.57	19.92	951
LFR-3 split	10-Aug-00	300	85	152				<0.0005	<0.0005			
LFR-3 field	10-Aug-00					0.06	-1.00					
	01-Nov-00	350	66	160	<0.05	<0.1	<2					
LFR-3 field	01-Nov-00				0.01	0.01	0.00			6.16	17.71	1164
	30-Jan-01	250	31	71	<0.05	<0.1	<2					
LFR-3 field	30-Jan-01				0.03					6.64	17.29	541
	11-Jun-01				0.01					5.43	18.00	613
	26-Jul-01				0.70	0.03				6.25	20.50	602
	18-Oct-01	NM	NM	NM	0.12	NM	NM	NM	NM	6.50	21.39	645
	31-Jan-02	NM	NM	NM	0.06	0.02	NM	NM	NM	6.30	19.10	566
	16,17-Apr-02	NM	NM	NM	1.20	0.04	NM	NM	NM	5.78	18.68	566
	17,18-Jul-02	NM	NM	NM	0.08	0.01	NM	NM	NM	6.17	18.42	585
	23-Oct-02	NM	NM	NM	1.35	0.00	NM	NM	NM	6.32	20.65	457
	19-Feb-03	NM	NM	NM	0.74	0.00	NM	NM	NM	6.34	19.30	497
	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.87	19.80	457
	29-Jan-04	**NM**	**NM**	**NM**	**1.70**	**0.00**	**NM**	**NM**	**NM**	**6.60**	**20.00**	**393**
LFR-4	11-Aug-00	630	71	161				<0.0005	<0.0005	6.90	20.11	1240
LFR-4 field	11-Aug-00				0.22	0.02	0.00					
	31-Oct-00	490	28	130	1.00	<0.1	<2					
LFR-4 field	31-Oct-00				0.67	0.02	0.00			6.21	18.11	830
B-10 FB	10-Aug-00							<0.0005	<0.0005			
	01-Feb-01	460	25	120	1.30	<0.1	<2					
LFR-4 field	01-Feb-01				1.43	0.02				6.55	15.28	916
	27-Apr-01				1.44					5.79	18.30	1060
	26-Jul-01				0.95	0.00				6.26	19.23	866
	16,17-Apr-02	NM	NM	NM	5.10	0.03	NM	NM	NM	6.19	18.04	925
	17,18-Jul-02	NM	NM	NM	>3.3	0.01	NM	NM	NM	5.92	17.28	878
	23-Oct-02	NM	NM	NM	3.30	0.00	NM	NM	NM	6.69	19.90	602
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.38	19.10	994
	29-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.94	19.00	994
	29-Jan-04	**NM**	**NM**	**NM**	**0.71**	**0.00**	NM	NM	NM	**6.53**	**19.50**	**689**
Monitoring Wells Installed by SOMA												
SOMA-1	19-Oct-01	NM	NM	NM	0.75	NM	NM	NM	NM	6.77	18.15	146
	31-Jan-02	NM	NM	NM	0.00	0.00	NM	NM	NM	6.70	17.50	1160
	16,17-Apr-02	NM	NM	NM	0.17	0.03	NM	NM	NM	6.01	17.98	1280
	17,18-Jul-02	NM	NM	NM	0.11	0.01	NM	NM	NM	6.52	16.21	1270
	23-Oct-02	NM	NM	NM	0.24	0.01	NM	NM	NM	6.60	17.77	1270
	19-Feb-03	NM	NM	NM	0.00	0.01	NM	NM	NM	6.33	17.40	1350
	30-Jul-03	NM	NM	NM	0.00	0.00	NM	NM	NM	6.90	17.80	1300
	29-Jan-04	**NM**	**NM**	**NM**	**2.10**	**0.00**	**NM**	**NM**	**NM**	**6.51**	**17.60**	**959**
SOMA-2	19-Oct-01	NM	NM	NM	44.00	NM	NM	NM	NM	6.87	16.93	122
	31-Jan-02	NM	NM	NM	10.50	0.34	NM	NM	NM	6.90	15.20	1140
	16,17-Apr-02	NM	NM	NM	8.70	0.01	NM	NM	NM	6.30	15.25	1170
	17,18-Jul-02	NM	NM	NM	>3.3	0.00	NM	NM	NM	6.86	14.19	1170
	23-Oct-02	NM	NM	NM	3.30	0.00	NM	NM	NM	6.97	16.47	1380
	19-Feb-03	NM	NM	NM	2.93	0.01	NM	NM	NM	6.86	15.70	1420
	29-Jul-03	NM	NM	NM	1.37	0.00	NM	NM	NM	7.91	16.80	1290
	28-Jan-04	**NM**	**NM**	**NM**	**0.00**	**0.00**	**NM**	**NM**	**NM**	**6.65**	**16.60**	**835**
SOMA-3	19-Oct-01	NM	NM	NM	0.40	NM	NM	NM	NM	6.91	17.09	158
	31-Jan-02	NM	NM	NM	0.78	0.38	NM	NM	NM	6.50	14.90	1320
	16,17-Apr-02	NM	NM	NM	1.03	0.00	NM	NM	NM	6.23	15.83	1260
	17,18-Jul-02	NM	NM	NM	>3.3	0.00	NM	NM	NM	6.77	15.03	1290
	23-Oct-02	NM	NM	NM	3.30	0.03	NM	NM	NM	7.02	16.44	970
	19-Feb-03	NM	NM	NM	3.30	0.00	NM	NM	NM	6.87	15.80	1350
	29-Jul-03	NM	NM	NM	3.30	0.00	NM	NM	NM	7.27	16.20	1200
	29-Jan-04	**NM**	**NM**	**NM**	**3.30**	**0.00**	**NM**	**NM**	**NM**	**6.75**	**16.20**	**925**
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
	19-Feb-03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	29-Jul-03	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**

Notes

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

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

NM= not measured

Table 4
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
Temporary Sampling Points Installed by Geosolv, LLC								
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 LFR								
GW-2	19-Jul-99	<0.05	<0.05	0.0025	<0.0005	0.00071	<0.0005	0.00074
	20-Jan-00	0.15	0.25 Y	0.0044	<0.0005	<0.0005	0.00097 C	0.0013
	28-Apr-00	<0.05	0.095 YZ	<0.0021	<0.0005	<0.0005	<0.0005	<0.0005
	2-Nov-00	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	1-Feb-01	<0.05	ND	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-01	<0.05	0.086 YZ	0.0022	<0.0005	0.0240	<0.0005	<0.0005
	27-Jul-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	<0.05	<0.05	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	31-Jan-02	<0.05	<0.050	<0.0050 b	<0.0050 b	<0.0050 b	<0.0050 b	<0.0050 b
	16,17-Apr-02	<0.05	<0.05	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22-Oct-02	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	19-Feb-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jul-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	**<0.050**	**<0.050**	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.005**

Table 4
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
GW-3	19-Jul-99	0.070 [Z]	0.100 [Z]	<0.0020	<0.0005	<0.0005	<0.0005	0.00064
	20-Jan-00	0.150	0.260 [Y]	<0.0020	<0.0005	<0.0005	<0.0005	0.00130 [C]
	27-Apr-00	0.200 [YZ]	0.380 [YZ]	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
	27-Apr-00	0.300 [Z]	0.570 [YZ]	<0.0020	<0.0005	<0.0005	<0.0005	<0.00050
	11-Aug-00	<0.050	0.077 [YZ]	<0.0020	<0.0005	<0.0005	<0.0005	0.00051
	2-Nov-00	<0.050	0.050 [YZ]	0.0026	<0.0005	<0.0005	<0.0005	<0.00050
	1-Feb-01	<0.050	<0.050	<.0020	<.0005	<0.0005	<0.0005	<0.00050
	27-Apr-01	<0.050	0.062 [YZ]	0.0056	<0.0005	<0.0005	<0.0005	<0.00050
	27-Jul-01	<0.050	<0.050	0.0008	<0.0005	<0.0005	<0.0005	<0.00050
	19-Oct-01	0.054	0.11	<0.0100	<0.0100	<0.0100	<0.0100	<0.02000
	31-Jan-02	<0.050	0.070 [YZ]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.00500 [b]
	16,17-Apr-02	<0.050	0.055 [YZ]	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	0.110 YZ	0.140 YZ	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
	19-Feb-03	0.068 YZ	0.100 YZ	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jul-03	0.120 YZ	0.180 YZ	<0.010	<0.010	<0.010	<0.010	<0.010
	28-Jan-04	**0.051 YZ**	**0.086 YZ**	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.005**
GW-4	21-Jul-99	6.80 [J]	10 [YHJ]	0.0022	<0.0005	<0.0005	<0.0005	0.0029 [J]
	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
	27-Apr-00	0.31	0.60 [Y]	<0.0020	<0.0005	<0.0005	<0.0005	0.0027
	30-Jan-01	0.39	0.58 [HY]	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.42	0.86 [HY]	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	0.83	1.60	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100
	31-Jan-02	0.92	1.70 [HY]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]
	16,17-Apr-02	0.40	0.67 [HY]	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.97	1.7 [HY]	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	0.550	0.700 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	0.580	0.880 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	0.390	0.580 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	**0.310**	**0.520 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
	20-Jan-00	<0.05	0.057 [Y]	0.0007	<0.0005	<0.0005	<0.0005	<0.0005
	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
	25-Jan-00	<0.05	<0.05	0.0022	<0.0005	<0.0005	<0.0005	<0.0005
	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
	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	0.00064	<0.0005	0.00151
	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
	28-Apr-00	0.064 [YZ]	0.12 [YZ]	0.013	<0.0005	<0.0005	<0.0005	<0.0005

Table 4
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
Monitoring Wells Owned by TOSCO								
MW-11	25-Jan-00	< 0.050	<0.05	0.0090	<0.0005	<0.0005	<0.0005	<0.0005
	28-Apr-00	<0.050	<0.05	<0.0087	<0.0005	<0.0005	<0.0005	<0.0005
	10-Aug-00	<0.050	<0.05	0.0110	<0.0005	<0.0005	<0.0005	<0.0005
	1-Nov-00	<0.050	<0.05	0.0068	<0.0005	<0.0005	<0.0005	<0.0005
	31-Jan-01	< 0.050	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Jul-27-01	<0.050	0.10 HY	0.0010	<0.0005	<0.0005	<0.0005	0.0007
	Oct-19-01	<0.050	<0.05	<0.0050	<0.0050	<0.005	<0.005	<0.010
	Jan-31-02	<0.050	0.071 Y	<0.0050 b	<0.0050 b	<0.005 b	<0.005 b	<0.005 b
	Apr-16-17-02	<0.050	<0.050	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	28-Jan-04	**<0.050**	**<0.050**	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.005**
Monitoring Wells Installed by LFR								
LFR-1	9-Aug-00	0.53	1.2	0.0095	<0.0005	<0.0005	<0.0005	<0.0005
	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
	29-Jan-01	0.21 YZ	0.31 YZ	0.0033	<0.0005	<0.0005	<0.0005	<0.0005
	Apr-26-01	0.092	0.18 YZ	0.0044	<0.0005	0.002	<0.0005	<0.0005
	Jul-27-01	0.086	0.18 YZ	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	Oct-18-01	0.19	0.38	<0.031	<0.031	<0.031	<0.031	<0.062
	Jan-31-02	0.15 YZ	0.27 YZ	<0.013 b	<0.013 b	<0.013 b	<0.013 b	<0.013 b
	Apr-16-17-02	0.10 YZ	0.17 YZ	< 0.013	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.084 YZ	0.14 YZ	<0.013	<0.013	<0.013	<0.013	<0.013
	22,23-Oct-02	<0.050	0.078 YZ	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	0.076 YZ	0.110 YZ	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.050	0.068 YZ	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	**0.060 YZ**	**0.100 YZ**	**<0.0063**	**<0.0063**	**<0.0063**	**<0.0063**	**<0.0063**
LFR-2	11-Aug-00	0.59	1.10 YH	0.0022	0.0018	<0.0005	<0.0005	0.0013 C
	2-Nov-00	0.38	0.70 YH	0.003	0.0035	0.0011	0.0042	0.01184 C
	30-Jan-01	0.36	0.54 HY	0.0034	0.00057	<0.0005	<0.0005	<0.0005
	Apr-27-01	0.33	0.66 HY	<0.002	<0.0005	0.0013	<0.0005	<0.0005
	Apr-27-01	0.36	0.72 HY	<0.002	0.00059	0.0019	<0.0005	0.013
	Jul-27-01	0.33	0.76 HY	<0.0005	0.0013	<0.0005	<0.0005	0.0006
	Oct-18-01	0.73	1.50	<0.0071	<0.0071	<0.0071	<0.0071	<0.0142
	Jan-31-02	0.76	1.40 HY	<0.005 b	<0.005 b	<0.005 b	<0.005 b	<0.005 b
	Apr-16-17-02	1.10	1.90 HY	<0.002	<0.0005	<0.0005	<0.0005	0.019 C
	17,18-Jul-02	0.97	1.7 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	3.10	5.000 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	18-Feb-03	1.50	2.300 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	4.10	6.000 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Table 4
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
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
	1-Nov-00	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	30-Jan-01	<0.05	<0.05	0.0036	<0.0005	<0.0005	<0.0005	<0.0005
	Apr-27-01	<0.05	<0.05	0.0024	<0.0005	0.0054	<0.0005	<0.0005
	Jul-27-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	Oct-18-01	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.01
	Jan-31-02	<0.05	0.067 Y	<0.005 b	<0.005 b	<0.005 b	<0.005 b	<0.005 b
	Apr-16-17-02	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	30-Jul-03	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	**<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	0.00162 C
	31-Oct-00	0.17 Y	0.270	0.0065	0.00084	<0.0005	<0.0005	<0.0005
	1-Feb-01	0.16 Y	0.220	0.0097	0.00330	<0.0005	<0.0005	<0.0005
	Apr-27-01	0.22 Y	0.440	0.0058	0.02700	0.0036	<0.0005	<0.0005
	Jul-27-01	0.091 Y	0.190	0.011	0.00090	<0.0005	<0.0005	<0.0005
	Jan-31-02	NA	NA	NA	NA	NA	NA	NA
	Apr-16-17-02	0.40 Y	0.670	< 0.005	0.05300	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.21 Y	0.36 Y	0.0075	0.007	<0.005	<0.005	<0.005
	22,23-Oct-02	0.110 Y	0.170	0.0080	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	0.490 Y	0.740	<0.005	0.055	<0.005	<0.005	<0.005
	30-Jul-03	0.400 Y	0.590	<0.005	0.010	<0.005	<0.005	<0.005
	29-Jan-04	**0.42 Y**	**0.700 Y**	**<0.005**	**0.011**	**<0.005**	**<0.005**	**<0.005**
Monitoring Wells Installed by SOMA								
SOMA-1	Oct-19-01	0.22	0.440	0.034	<0.0050	<0.0050	<0.0050	<0.0100
	Jan-31-02	0.058	0.100 HY	0.110 b	<0.0050 b	<0.0050 b	<0.0050 b	<0.0050 b
	Apr-16-17-02	<0.050	0.052 Y	0.120	0.0008	<0.0005	<0.0005	<0.0005
	Jul-17-18-02	<0.05	<0.05	0.120	<0.005	<0.005	<0.005	<0.005
	Oct-22,23-02	<0.050	0.053	0.140	<0.005	<0.005	<0.005	<0.005
	19-Feb-03	<0.050	<0.050	0.150	<0.0071	<0.0071	<0.0071	<0.0071
	30-Jul-03	<0.050	<0.050	0.190	<0.005	<0.005	<0.005	<0.005
	29-Jan-04	**<0.050**	**<0.050**	**0.190**	**<0.005**	**<0.005**	**<0.005**	**<0.005**
SOMA-2	Oct-19-01	1.4	2.8	<0.250	<0.2500	<0.250	<0.250	<0.500
	Jan-31-02	1.3	2.4 HY	<0.071 b	<0.0710 b	<0.071 b	<0.071 b	<0.071 b
	Apr-16-17-02	1.3 L	2.2 H	< 0.130	0.0067	0.046	0.012	0.044
	17,18-Jul-02	2.6	4.4 HY	<0.063	<0.063	<0.063	<0.063	<0.063
	22,23-Oct-02	0.370	0.600 HY	0.300	<0.0071	<0.0071	<0.0071	<0.0071
	19-Feb-03	0.300	0.460 HY	0.210	<0.017	<0.017	<0.017	<0.017
	29-Jul-03	0.270	0.400 HY	0.300	<0.020	<0.020	<0.020	<0.020
	28-Jan-04	**0.230**	**0.38 HY**	**0.270**	**<0.017**	**<0.017**	**<0.017**	**<0.017**

Table 4
Historical Analytical Results for Total Petroleum Hydrocarbon, BTEX and MtBE in Groundwater Samples
Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	TPH-ss (mg/L)	TPH-g (mg/L)	MtBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
SOMA-3	Oct-19-01	0.420	0.83	0.65	<0.02500	<0.02500	<0.0250	<0.0500
	Jan-31-02	0.230	0.41 HY	0.31 b	<0.01300 b	<0.01300 b	<0.0130 b	<0.0130 b
	Apr-16-17-02	0.610	1.00 HY	0.42	0.00078	0.00068	<0.0005	<0.0005
	17,18-Jul-02	0.410	0.69 HY	0.38	<0.017	<0.017	<0.017	<0.017
	22,23-Oct-02	3.000	4.700 HY	<0.170	<0.170	<0.170	<0.170	<0.170
	19-Feb-03	2.500	3.800 HY	<0.130	<0.130	<0.130	<0.130	<0.130
	29-Jul-03	2.100	3.100 HY	<0.130	<0.130	<0.130	<0.130	<0.130
	29-Jan-04	**4.100**	**6.8 HY**	**<0.310**	**<0.310**	**<0.310**	**<0.310**	**<0.310**
SOMA-4	Oct-19-01	2.5	5	0.63	<0.13	<0.13	<0.13	<0.26
	Jan-31-02	FP	FP	FP	FP	FP	FP	FP
	Apr-16-17-02	FP	FP	FP	FP	FP	FP	FP
	17,18-Jul-02	FP	FP	FP	FP	FP	FP	FP
	22,23-Oct-02	FP	FP	FP	FP	FP	FP	FP
	18-Feb-03	FP	FP	FP	FP	FP	FP	FP
	29-Jul-03	**FP**	**FP**	**FP**	**FP**	**FP**	**FP**	**FP**

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 analzed 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 5
Historical Analytical Results For Volatile Organic Compound Analyses in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
Temporary Sampling Points Installed by Geosolv, LLC							
B-2	24-Jan-00	<0.0013	<0.0013	0.270	0.001	< 0.0013	< 0.0013
B-3	24-Jan-00	< 0.0020	< 0.002	0.610	< 0.002	< 0.002	< 0.002
B-7	27-Jul-01	0.010	0.017	0.860	0.005	<0.0031	<0.0031
B-7	27-Apr-01	<0.0031	<0.0031	1.100	0.007	<0.0031	<0.0031
B-7	31-Jan-01	< 0.0042	< 0.0042	0.920	0.005	< 0.0042	< 0.0042
B-7	31-Oct-00	< 0.0042	< 0.0042	0.910	0.004	< 0.0042	< 0.0042
B-7	11-Aug-00	< 0.0031	< 0.0031	0.860	0.005	< 0.0031	< 0.0031
B-7	24-Jan-00	< 0.0036	< 0.0036	0.920	0.004	< 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	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
B-10	27-Jul-01	1.700	1.400	7.300	0.043	<0.025	<0.025
B-10	27-Jul-01	0.870	0.810	6.600	0.041	<0.025	<0.025
B-10	31-Jan-01	2.100	1.600	6.600	0.044	< 0.025	< 0.025
B-10	31-Oct-00	2.400	1.900	7.100	0.061	< 0.025	< 0.025
B-10	10-Aug-00	2.900	1.600	6.500	0.050	< 0.025	< 0.025
B-10	24-Jan-00	1.200	2.400	14.000	0.090	< 0.063	< 0.063
B-13	24-Jan-00	0.020	0.029	0.130	0.005	< 0.0005	< 0.0005
Temporary Sampling Points Installed by LFR							
GW-2	19-Jul-99	0.014	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	20-Jan-00	0.130	0.019	0.006	< 0.0005	< 0.0005	< 0.0005
	28-Apr-00	0.120	0.016	0.003	< 0.0005	< 0.0005	< 0.0005
	2-Nov-00	0.008	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
	1-Feb-01	0.008	0.001	0.003	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	0.010	0.002	0.002	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.033	0.004	0.002	<0.0005	<0.0005	<0.0005
	19-Oct-01	0.019	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	0.0092 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	0.014	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17-18-Jul-02	0.014	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	0.027	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	0.057	0.007	<0.005	<0.005	<0.010	<0.005
	29-Jul-03	0.043	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	**0.057**	**0.0069**	**<0.005**	**<0.005**	**<0.010**	**<0.005**
GW-3	19-Jul-99	0.220	<0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	20-Jan-00	0.055	0.001	0.020	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	0.350	0.002	0.006	< 0.0005	< 0.0005	< 0.0005
Split	27-Apr-00	0.270	0.002	0.002	< 0.0013	< 0.0013	< 0.0013
	11-Aug-00	0.068	0.003	0.012	< 0.0005	< 0.0005	< 0.0005
	2-Nov-00	0.059	0.001	0.002	< 0.0005	< 0.0005	< 0.0005
	1-Feb-01	0.046	0.001	0.001	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	0.079	0.001	0.002	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.090	0.001	<0.0005	<0.0005	<0.0005	<0.0005
	19-Oct-01	0.180	<0.0100	<0.0100	<0.0100	<0.0200	<0.0100
	31-Jan-02	0.0960 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	0.160	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	0.086	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	0.200	<0.0071	<0.0071	<0.0071	<0.014	<0.0071
	19-Feb-03	0.240	<0.005	0.006	<0.005	<0.010	<0.005
	29-Jul-03	0.430	<0.010	<0.010	<0.010	<0.010	<0.010
	28-Jan-04	**0.170**	**<0.005**	**<0.005**	**<0.005**	**<0.010**	**<0.005**

Table 5
Historical Analytical Results For Volatile Organic Compound Analyses in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
GW-4	19-Jul-99	< 0.0005	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
	20-Jan-00	0.001	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
Split	20-Jan-00	0.001	< 0.0005	0.004	< 0.0005	< 0.0005	0.002
	27-Apr-00	0.002	< 0.0005	0.001	< 0.0005	< 0.0005	0.001
	30-Jan-01	< 0.0005	< 0.0005	0.002	< 0.0005	< 0.0005	0.001
	27-Jul-01	< 0.0005	< 0.0005	0.003	< 0.0005	0.001	0.002
	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	**0.0081**	**<0.005**	**0.010**	**<0.005**	**<0.010**	**<0.005**
GW-5	27-Aug-99	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	20-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
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
	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
GW-7	15-Jul-99	< 0.0005	< 0.0005	0.004	< 0.0005	< 0.0005	0.001
	15-Jul-99	< 0.0020	< 0.0020	0.004	< 0.0020	< 0.0020	< 0.0020
Split	15-Jul-99	< 0.0020	< 0.0020	0.004	< 0.0020	< 0.0020	< 0.0020
GW-8	19-Jul-99	0.024	0.015	0.004	0.002	0.001	< 0.0005
	20-Jan-00	0.150	0.190	0.053	0.012	0.005	< 0.0007
Split	20-Jan-00	0.150	0.180	0.052	0.011	0.005	< 0.0005
	28-Apr-00	0.120	0.110	0.029	0.005	0.002	< 0.0005
			Monitoring wells owned by TOSCO				
MW-11	25-Jan-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	28-Apr-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	10-Aug-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	31-Jan-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Apr-01	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	27-Jul-01	0.002	0.001	0.006	< 0.0005	< 0.0005	< 0.0005
	19-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	18-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	28-Jan-04	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.010**	**<0.005**

Table 5
Historical Analytical Results For Volatile Organic Compound Analyses in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
Monitoring wells installed by LFR							
LFR-1	9-Aug-00	2.800	0.064	0.041	< 0.0083	< 0.0083	< 0.0083
	30-Oct-00	0.820	0.034	0.010	< 0.0031	< 0.0031	< 0.0031
Split	30-Oct-00	0.870	0.035	0.014	< 0.0031	< 0.0031	< 0.0031
	29-Jan-01	0.770	0.026	0.007	<0.0025	<0.0025	<0.0025
	26-Apr-01	0.440	0.013	0.005	<0.0013	<0.0013	<0.0013
	27-Jul-01	0.380	0.031	0.010	<0.0013	<0.0013	<0.0013
	18-Oct-01	0.780	0.093	<0.0310	<0.0310	<0.0630	<0.0310
	31-Jan-02	0.37 [b]	0.035 [b]	<0.0130 [b]	<0.0130 [b]	<0.0250 [b]	<0.0130 [b]
	16,17-Apr-02	0.380	0.040	<0.0130	<0.0130	<0.0250	<0.0130
	17,18-Jul-02	0.360	0.041	<0.013	<0.013	<0.025	<0.013
	22,23-Oct-02	0.180	0.024	0.007	<0.005	<0.010	<0.005
	18-Feb-03	0.280	0.032	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	0.150	0.027	0.007	<0.005	<0.010	<0.005
	29-Jan-04	**0.150**	**0.023**	**0.0077**	**<0.0063**	**<0.013**	**<0.0063**
LFR-2	11-Aug-00	< 0.0005	< 0.0005	0.035	< 0.0005	0.005	< 0.0005
	2-Nov-00	< 0.0005	< 0.0005	0.130	0.001	0.015	0.001
	29-Jan-01	<0.0005	<0.0005	0.006	<0.0005	0.002	<0.0005
	27-Apr-01	0.001	<0.0005	0.006	<0.0005	0.001	<0.0005
	27-Jul-01	0.001	0.001	0.019	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.0071	<0.0071	0.160	<0.0071	<0.0140	<0.0071
	27-Apr-01	0.001	<0.0005	0.007	<0.0005	0.002	<0.0005
	31-Jan-02	<0.0050 [b]	<0.0050 [b]	0.0069 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	0.012	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	0.066	<0.005	<0.010	<0.005
	18-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	0.011	<0.005	<0.010	<0.005
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
	1-Nov-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	30-Jan-01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Apr-01	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	31-Jan-02	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0050 [b]	<0.0100 [b]	<0.0050 [b]
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	29-Jan-04	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.010**	**<0.005**
LFR-4	11-Aug-00	< 0.0005	< 0.0005	0.001	< 0.0005	< 0.0005	< 0.0005
	31-Oct-00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	30-Jan-01	<0.0005	<0.0005	0.001	<0.0005	< 0.0005	< 0.0005
	27-Apr-01	<0.0005	<0.0005	0.002	<0.0005	<0.0005	<0.0005
	27-Jul-01	0.001	<0.0005	0.002	<0.0005	<0.0005	<0.0005
	16,17-Apr-02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005
	22,23-Oct-02	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	19-Feb-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	30-Jul-03	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	29-Jan-04	**<0.005**	**<0.005**	**<0.005**	**<0.005**	**<0.010**	**<0.005**

Table 5
Historical Analytical Results For Volatile Organic Compound Analyses in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
Monitoring wells installed by SOMA							
SOMA-1	19-Oct-01	<0.0050	<0.0050	0.014	<0.0050	<0.0100	<0.0050
	31-Jan-02	0.0056 [b]	<0.0050 [b]	0.0070 [b]	<0.0050 [b]	<0.0100 [b]	0.0057 [b]
	16,17-Apr-02	0.006	<0.0050	0.007	<0.0050	<0.0100	<0.0050
	17,18-Jul-02	<0.005	<0.005	0.016	<0.005	<0.01	<0.005
	22,23-Oct-02	0.008	<0.005	0.041	<0.005	<0.010	0.007
	19-Feb-03	0.009	<0.0071	0.016	<0.0071	<0.014	<0.0071
	30-Jul-03	0.016	<0.005	0.042	<0.005	<0.010	0.006
	29-Jan-04	**0.019**	**<0.005**	**0.044**	**<0.005**	**<0.010**	**0.0059**
SOMA-2	19-Oct-01	1.400	0.350	5.000	<0.250	<0.500	<0.250
	31-Jan-02	<0.071 [b]	<0.071 [b]	1.8 [b]	<0.071 [b]	<0.140 [b]	<0.071 [b]
	16,17-Apr-02	<0.130	<0.130	2.900	<0.130	<0.250	<0.130
	17,18-Jul-02	<0.063	<0.063	1.600	<0.063	<0.13	<0.063
	22,23-Oct-02	0.017	0.008	0.350	<0.0071	<0.014	<0.0071
	19-Feb-03	<0.017	<0.017	0.790	<0.017	<0.033	<0.017
	29-Jul-03	0.032	<0.020	0.580	<0.040	<0.040	<0.020
	28-Jan-04	**0.036**	**<0.017**	**0.430**	**<0.017**	**<0.033**	**<0.017**
SOMA-3	19-Oct-01	0.042	0.057	0.440	<0.025	<0.050	<0.025
	31-Jan-02	0.018 [b]	0.023 [b]	0.38 [b]	<0.013 [b]	<0.025 [b]	<0.013 [b]
	16,17-Apr-02	0.025	0.018	0.360	<0.017	<0.033	<0.017
	17,18-Jul-02	0.027	<0.017	0.440	<0.017	<0.033	<0.017
	22,23-Oct-02	<0.170	<0.170	5.900	<0.170	<0.330	<0.170
	19-Feb-03	<0.130	<0.130	4.100	<0.130	<0.250	<0.130
	29-Jul-03	0.150	0.220	4.700	<0.130	<0.250	<0.130
	29-Jan-04	**<0.310**	**<0.310**	**7.700**	**<0.310**	**<0.630**	**<0.310**
SOMA-4	19-Oct-01	<0.13	<0.13	2.600	<0.13	<0.25	<0.13
	31-Jan-02	FP	FP	FP	FP	FP	FP
	16,17-Apr-02	FP	FP	FP	FP	FP	FP
	17,18-Jul-02	FP	FP	FP	FP	FP	FP
	22,23-Oct-02	FP	FP	FP	FP	FP	FP
	18-Feb-03	FP	FP	FP	FP	FP	FP
	29-Jul-03	FP	FP	FP	FP	FP	FP

Notes:

<: Not detected above the laboratory reporting limits.

[b] analysis was carried out past hold date, no analytical problems were encountered

FP: Not Analyzed due to Free Product

Table 6
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
B-7	11-Aug-00						11.0000	193	
B-7-field	11-Aug-00	0.63		-1.0	3.0				
	31-Oct-00	0.62	2.6	< 0.10	< 1.0	11.00	2.4000		-3
B-7-field	31-Oct-00	0.25		0.4	-1.0	15.85		-63	
	1-Feb-01	0.78	2.2	0.8	<1.0	15.00	13.0000		
B-7-field	31-Jan-01	0.48						28	
B-7 Field	26-Apr-01	0.60	1.7	2.5	5.0	>3.3	7.6000	-28	
B-7 Field	26-Jul-01	1.98	7.3	0.0	8.0	11.60	7.0000	-40	
B-8 field	31-Jan-01	0.45						58	
B-10	10-Aug-00			< 0.05	< 0.05	5.70	10.0000	213	
B-10-field	10-Aug-00	0.44		-1.0	-2.0				
	31-Oct-00	2.40	1.4	< 0.10	< 1.0	5.90	6.7000		0.81
B-10-field	31-Oct-00	0.44		0.0	0.0	7.60		-22	
	31-Jan-01	6.40	1.3	< 0.10	<2.0	7.70	24		1.3
B-10-field	31-Jan-01	0.46						64	
B-10 Field	11-Jun-01	0.90	0.0	0.0	0.0	1.25	3.9000	-8	NM
B-10 Field	26-Jun-01	1.87	1.3	0.0	3.0	6.20	5.6000	-22	
GW-2-field	1-Nov-00	2.32						77	
GW-2	1-Feb-01	3.80					0.0410		
GW-2-field	1-Feb-01	0.58						159	
	26-Apr-01	4.00	1.0	7.1	36.0	0.02	0.0002	152	NM
	26-Jul-01	1.93	0.0	3.9	60.0	0.00	0.0160	233	
GW-2 field	Not En. Sample						0.0009		
	31-Jan-02	2.80	0.0	0.8	45.0	0.36	0.0069	179	NM
	16,17-Apr-02	1.76	0.0	4.7	70.0	0.09	0.0003	198	
	17,18-Jul-02	1.39	0.6	0.0	69.0	0.00	0.0021	161	
	22,23-Oct-02	3.86	0.6	11.5	40.0	0.07	0.0007	166	
	19-Feb-03	7.24	0.1	10.3	49.0	0.03	0.0012	169	
	29-Jul-03	4.21	0.2	0.0	44.0	0.00	0.0007	47	
	28-Jan-04	**6.02**	**0.0**	**3.3**	**56.0**	**0.00**	**0.00046**	**143**	
GW-3	11-Aug-00						< 0.0005	395	
GW-3-field	11-Aug-00	0.72		1.0	46.0				
	1-Nov-00								
GW-3-field		7.76						81	
	29-Jan-01	8.80					0.0120		
GW-3-field	1-Feb-01	8.99						235	
	27-Apr-01	2.90	0.0	0.7	30.0	0.00	0.0150	212	NM
	26-Jul-01	2.48	0.0	2.4	52.0	0.12	0.0083	214	
GW-3 field	18-Oct-01	3.76	0.0	5.2	4.9	0.00	0.0041	131	NM
	31-Jan-02	3.70	0.2	1.3	52.0	0.00	0.0081	163	
	16,17-Apr-02	7.55	0.0	4.2	59.0	0.00	0.0006	133	
	17,18-Jul-02	3.50	0.0	0.0	47.0	0.22	0.0100	155	
	22,23-Oct-02	2.19	0.0	1.6	33.0	0.00	0.0007	178	
	19-Feb-03	5.28	0.4	4.0	43.0	0.02	0.0007	123	
	29-Jul-03	6.12	0.0	0.0	31.0	0.00	0.0005	96	
	28-Jan-04	**4.21**	**0.0**	**0.8**	**61.0**	**0.00**	**0.00042**	**141**	
GW-4-field	30-Jan-01	0.83						67	
GW-4-field	26-Jul-01	2.59	0.2	10.5	25.0	1.29	0.0028	-3	
GW-4-field	18-Oct-01	1.00	0.1	0.0	0.0	4.80	4.8000	-84	NM
GW-4	31-Jan-02	0.90	0.8	0.0	0.0	8.00	3.5000	-91	
	16,17-Apr-02	0.41	0.1	5.2	0.0	5.70	4.7000	-2	
	17,18-Jul-02	2.38	3.0	0.0	0.0	>3.3	4.6000	-68	
	22,23-Oct-02	NM	NM	NM	NM	NM	0.3000	NM	
	19-Feb-03	7.76	0.4	5.4	0.0	3.30	2.3000	-57	
	30-Jul-03	5.38	6.1	0.0	0.0	3.30	1.3000	-141	
	28-Jan-04	**2.17**	**5.9**	**0.0**	**0.0**	**3.30**	**0.2200**	**-73**	

Table 6
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
MW-11	10-Aug-00			2.8	63.0	< 0.1	< 0.0005	476	
MW-11-field	10-Aug-00	2.52		4.1	67.0				
	1-Nov-00	4.10	< 0.010	15.0	90.0	< 0.1	0.0000		130
MW-11-field	1-Nov-00	4.01		3.3	73.0	0.00		87	
	31-Jan-01	6.30	< 0.010	15.0	94.0	< 1.0	0.0001		1.1
MW-11-field	1-Nov-00	3.97		27.3	74.0	0.00		319	
MW-11 Field	26-Apr-01	7.40	0.0	6.8	52.0	0.00	0.0014	229	NM
MW-11 Field	26-Jul-01	1.85	0.0	5.2	77.0	0.00	0.0049	233	
MW-11 Field	18-Oct-01	5.58	0.0	10.1	NM	0.00	0.0066	155	NM
	31-Jan-02	4.90	0.0	2.8	79.0	0.00	0.0077	218	
	16,17-Apr-02	3.18	0.0	2.8	88.0	0.00	0.0092	242	
	17,18-Jul-02	2.82	0.0	4.1	79.0	0.00	0.0088	357	
	22,23-Oct-02	4.47	0.0	3.7	69.0	0.00	0.0025	118	
	18-Feb-03	5.65	0.6	2.3	73.0	0.00	0.0022	304	
	30-Jul-03	3.80	0.1	0.0	54.0	0.00	0.0010	224	
	28-Jan-04	**7.32**	**0.0**	**0.0**	**80.0**	**0.00**	**0.0200**	**130**	
LFR-1	9-Aug-00							462	
	11-Aug-00						0.0096		
LFR-1-field	9-Aug-00	3.63		5.5	30.0				1.5
	30-Oct-00	2.70	0.0	39.0	42.0	< 1.0	0.0004		
LFR-1-field/split	30-Oct-00	2.95		10.3/10.0	29/29	0.01/0.01		77	1
LFR-1 split	30-Oct-00	3.40	0.0	40.0	43.0	< 1.0	0.0007		
	29-Jan-01	5.10	<0.01	<0.10	51.0	<1.0	0.0001		0.43
LFR-1-field	29-Jan-01	3.78	0.0		36.0	0.00		383	
LFR-1 Dup	29-Jan-01	4.60	<0.01	<0.10	50.0	<1.0	0.0000		0.32
	26-Apr-01	3.20	0.0	12.9	16.0	0.00	0.0003	224	NM
	26-Jul-01	1.07	0.0	8.0	25.0	0.01	0.0084	238	
LFR-1 filed	18-Oct-01	1.03	0.0	6.9	24.0	0.18	0.0054	119	NM
	31-Jan-02	1.80	0.3	5.5	31.0	0.00	0.0062	163	
	16,17-Apr-02	1.68	0.3	1.5	38.0	0.39	0.0030	240	
	17,18-Jul-02	0.00	0.0	6.1	3.0	0.07	0.0047	209	
	22,23-Oct-02	0.00	0.4	0.0	23.0	0.15	0.0008	265	
	18-Feb-03	7.76	0.0	4.3	30.0	0.00	0.0008	260	
	30-Jul-03	0.58	0.3	0.0	10.0	0.00	0.0004	190	
	29-Jan-04	**3.12**	**0.5**	**0.0**	**57.0**	**0.00**	**0.0011**	**19**	
LFR-2	11-Aug-00						6.6000	270	
LFR-2-field	11-Aug-00	0.48		1.5	-1.0	2.70			1200
	2-Nov-00	2.20	8.8	0.3	5.4	5.30	8.5000		
LFR-2-field	2-Nov-00	0.47		0.5	-1.0	6.05		-24	
	30-Jan-01	4.40	8.9	1.0	8.3	4.60	4.6000		1.1
LFR-2-field	30-Jan-01	0.61	10.7	2.9		1.02		210	
	27-Apr-01	1.40	0.4	1.6	1.0	2.66	14.0000	9	NM
	26-Jul-01	0.55	0.2	0.0	0.0	4.50	10.0000	-20	
LFR-2 field	18-Oct-01	0.43	0.0	0.0	0.0	6.50	11.0000	-75	NM
	31-Jan-02	1.00	0.0	2.6	19.0	1.81	11.0000	-14	
	16,17-Apr-02	0.00	0.0	1.7	0.0	7.20	16.0000	-6	
	17,18-Jul-02	0.00	13.9	0.0	0.0	7.20	9.6000	-64	
	22,23-Oct-02	0.00	10.7	0.5	0.0	3.30	4.7000	-82	
	18-Feb-03	0.42	9.0	0.0	0.0	3.30	9.6000	-53	
	30-Jul-03	0.00	3.0	0.0	0.0	3.30	8.7000	-85	

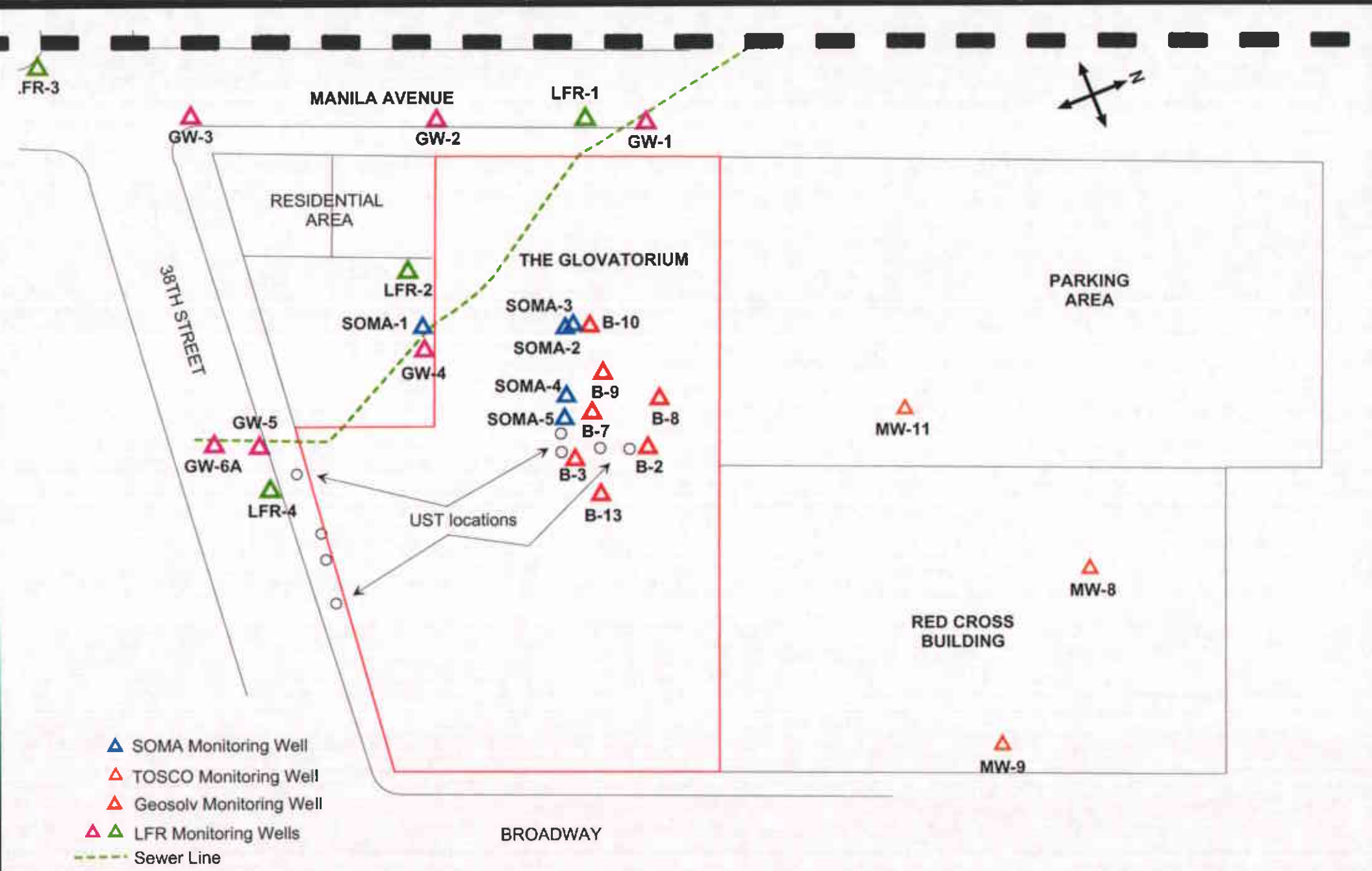
Table 6
Historical In-Situ and Ex-Situ Analyses Results for Bioattenuation Parameters in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

Well Name	Date Sampled	Dissolved Oxygen (mg/L)	Dissolved Manganese (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane* (mg/L)	ORP	Hydrogen (nanoMoles)
LFR-3	10-Aug-00			2.4	64.0	< 0.1	0.0005	464	
LFR-3 split	10-Aug-00							< 0.0005	
LFR-3-field	10-Aug-00	1.30		2.4	64.0				850
	1-Nov-00	4.70	0.0	8.8	74.0	< 1.0	0.0003		
LFR-3-field	1-Nov-00	0.58		1.8	57.0	0.00		75	
	31-Jan-01	4.10	<0.01	1.2	58.0	< 1.0	0.0004		
LFR-3-field	30-Jan-01	1.75		0.0	44.0	0.00		195	
LFR-3 Field	11-Jun-01	1.00	0.0	0.8	28.0	0.00	0.0086	201	NM
LFR-3 Field	26-Jul-01	1.29	0.4	0.0	51.0	0.60	0.0035	228	
LFR-3 Field	18-Oct-01	0.54	0.0	0.8	30.0	0.11	0.0093	139	NM
	31-Jan-02	0.80	0.4	2.6	32.0	0.00	0.0072	212	
	16,17-Apr-02	0.19	0.4	0.0	55.0	0.79	0.0096	228	
	17,18-Jul-02	0.00	0.2	1.7	42.0	0.00	0.0068	166	
	22,23-Oct-02	0.11	0.5	0.0	36.0	0.00	0.0035	186	
	19-Feb-03	1.10	0.5	0.0	19.0	0.54	0.0069	217	
	30-Jul-03	0.17	0.1	0.0	21.0	0.00	0.0069	167	
	29-Jan-04	**1.39**	**0.0**	**0.0**	**0.0**	**3.30**	**0.0011**	**64**	
LFR-4	11-Aug-00						0.0620	402	
LFR-4-field	11-Aug-00	1.13		0.7	1.0	0.14			1.1
	31-Oct-00	1.90	2.2	< 0.10	2.9	1.10	3.2000		
LFR-4-field	31-Oct-00	0.64		1.0		0.61		-80	
	1-Feb-01	3.20	2.8	1.5	2.8	1.80	2.2000		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	7.0000	14	NM
LFR-4 Field	26-Jul-01	1.65	0.0	0.0	0.0	0.84	1.2000	18	
	16,17-Apr-02	0.00	1.0	2.6	6.0	4.80	12.0000	-4	
	17,18-Jul-02	0.79	6.8	0.0	0.0	>3.3	2.8000	3	
	22,23-Oct-02	0.00	4.0	0.0	0.0	2.55	1.3000	-63	
	19-Feb-03	0.50	6.8	0.0	18.0	3.30	4.4000	-41	
	30-Jul-03	0.28	5.1	0.0	0.0	3.30	3.9000	-49	
	29-Jan-04	**1.64**	**5.0**	**0.0**	**0.0**	**0.52**	**4.0000**	**1**	
SOMA-1	18-Oct-01	4.19	0.3	0.2	33.0	0.52	0.1200	151	NM
	31-Jan-02	0.40	0.0	0.0	18.0	0.00	0.5800	141	NM
	16,17-Apr-02	0.00	0.0	0.6	31.0	0.10	0.8200	213	
	17,18-Jul-02	0.00	0.0	1.8	28.0	0.05	0.4400	149	
	22,23-Oct-02	0.00	0.7	0.0	4.0	0.00	0.6800	131	
	18-Feb-03	5.12	0.4	0.0	1.0	0.00	0.4100	258	
	30-Jul-03	0.00	0.4	0.0	1.0	0.00	0.9900	74	
	29-Jan-04	**0.29**	**0.5**	**0.0**	**13.0**	**0.47**	**0.8500**	**133**	
SOMA-2	18-Oct-01	0.57	0.0	0.4	0.0	40.00	6.6000	-89	NM
	31-Jan-02	0.70	3.8	0.8	0.0	9.00	13.0000	103	NM
	16,17-Apr-02	0.00	0.5	0.1	0.0	7.40	14.0000	-69	
	17,18-Jul-02	0.00	5.7	0.0	0.0	>3.3	9.4000	-87	
	22,23-Oct-02	0.35	1.7	2.8	15.0	3.30	2.2000	-98	
	19-Feb-03	3.17	1.9	1.7	0.0	2.89	2.4000	-72	
	30-Jul-03	2.71	1.0	0.0	0.0	0.83	1.0000	-53	
	28-Jan-04	**4.52**	**0.2**	**0.0**	**0.0**	**1.46**	**1.7000**	**-8**	
SOMA-3	18-Oct-01	1.32	0.0	0.0	33.0	0.22	1.0000	2	NM
	31-Jan-02	1.00	22.0	2.0	54.0	0.62	0.4600	-71	NM
	16,17-Apr-02	2.60	0.0	0.6	42.0	0.77	0.4100	29	
	17,18-Jul-02	0.97	10.9	0.0	23.0	>3.3	0.9400	-51	
	22,23-Oct-02	0.30	2.7	0.1	7.0	3.26	4.2000	-98	
	19-Feb-03	0.18	0.0	0.0	0.0	3.30	9.0000	-88	
	30-Jul-03	0.00	2.0	0.0	0.0	3.30	8.7000	-106	
	29-Jan-04	**2.30**	**3.5**	**0.0**	**0.0**	**3.30**	**8.4000**	**-85**	
SOMA-4	18-Oct-01	0.83	4.0	22.0	17.0	0.22	1.2000	88	NM

Notes:
Samples with "field" in the well number indicate that the results are from field measurements obtained using a Hach spectrophotometer or a Hydrolab Quanta flow-through instrument.
since April 2001, field measurements have been obtained by a Hach Calorimeter
*) Methane was measured by 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

0 25 50

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

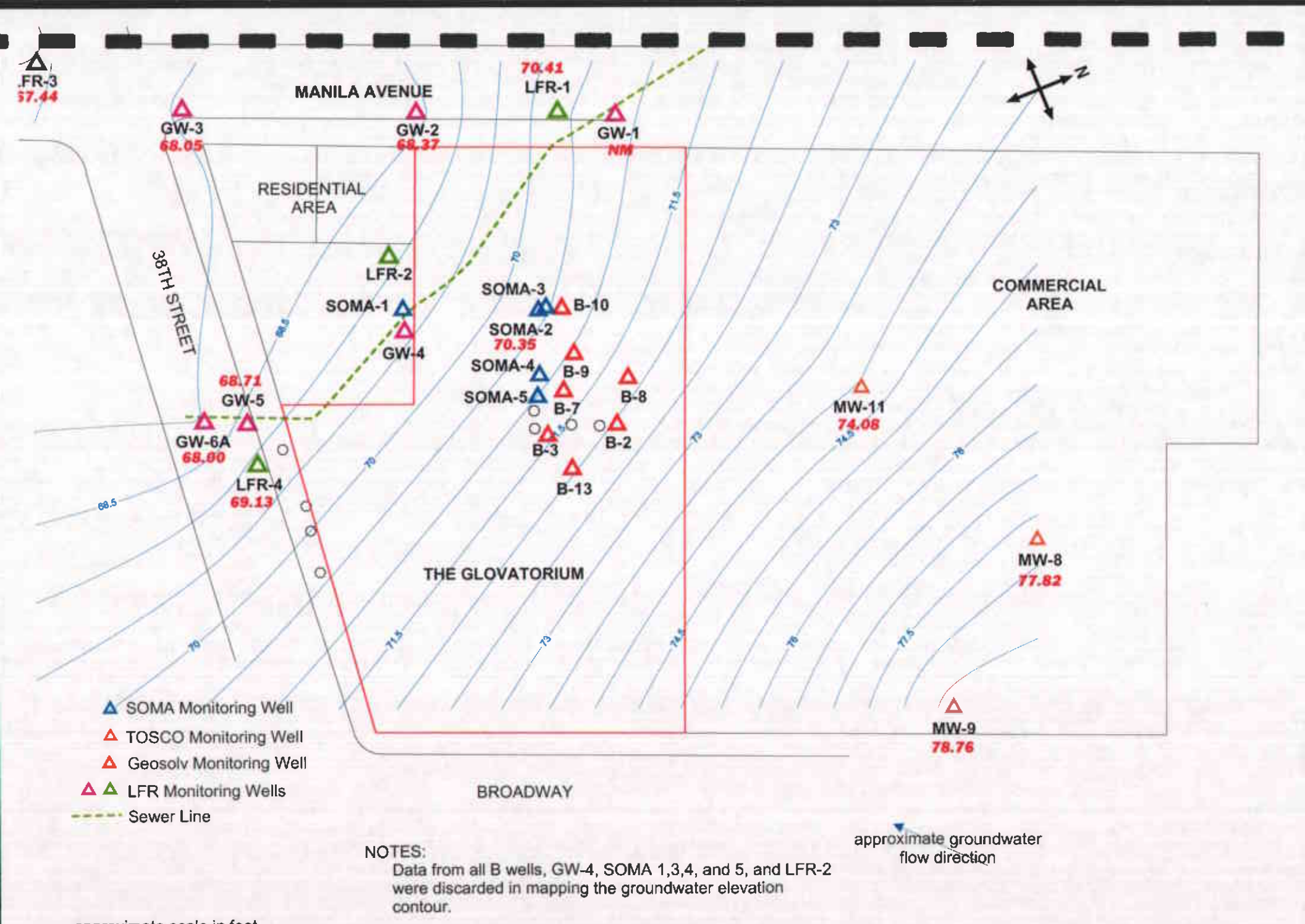


Figure 3: Groundwater elevation contour map in feet.
January 28, 2004.

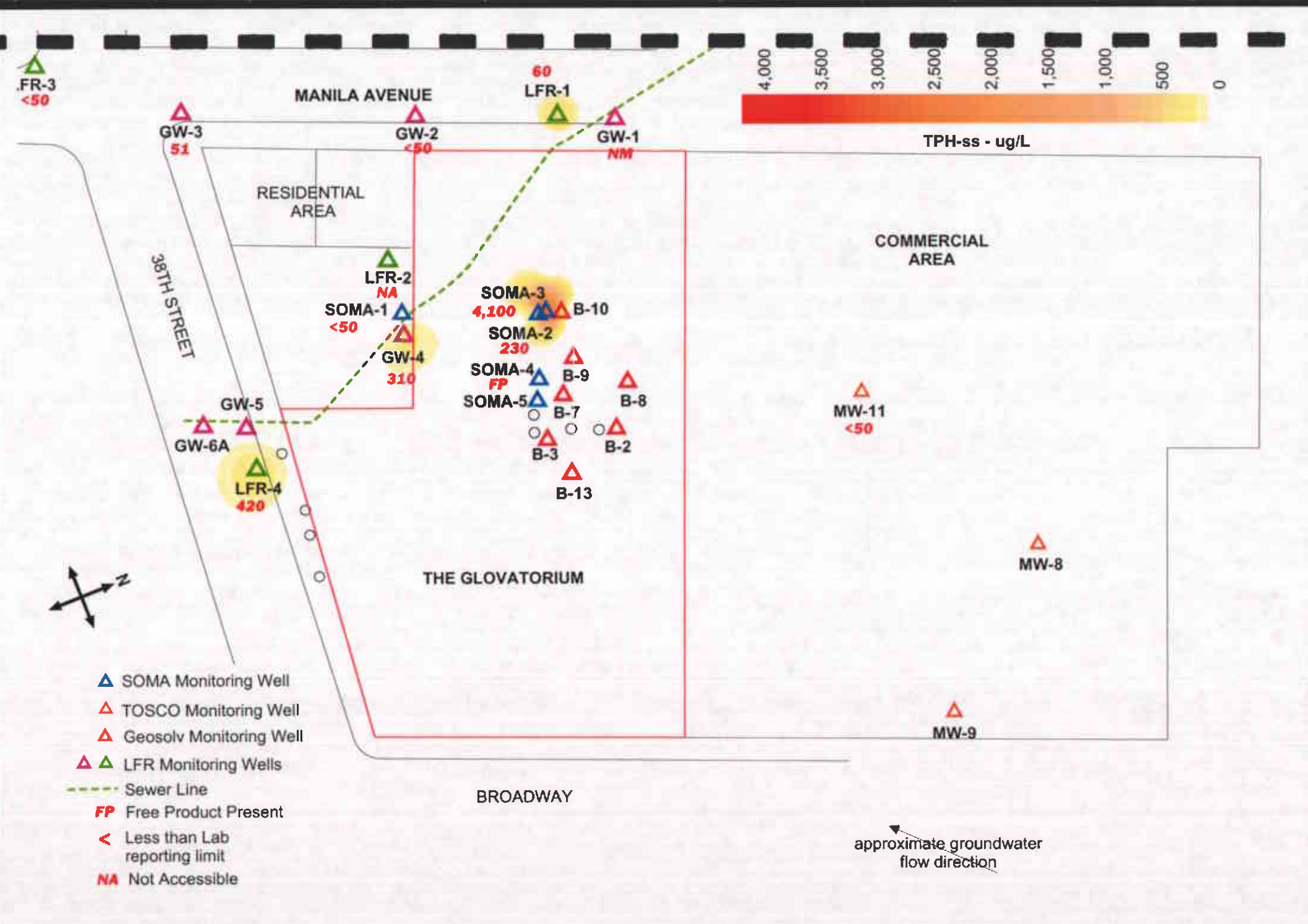


Figure 4: Contour map of TPH-ss concentrations in the groundwater.
January 28-29, 2004.

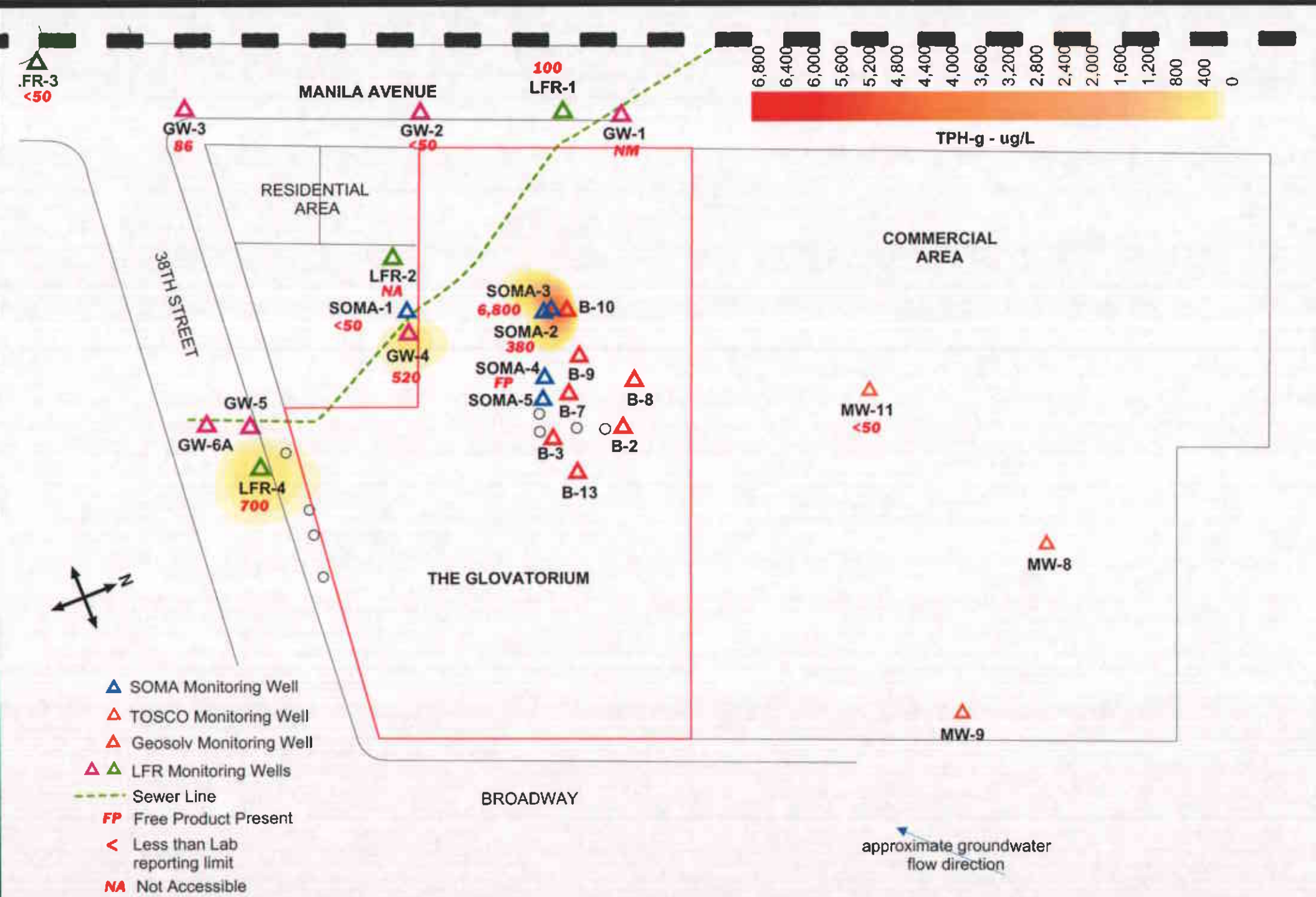


Figure 5: Contour map of TPH-g concentrations in the groundwater.
January 28-29, 2004

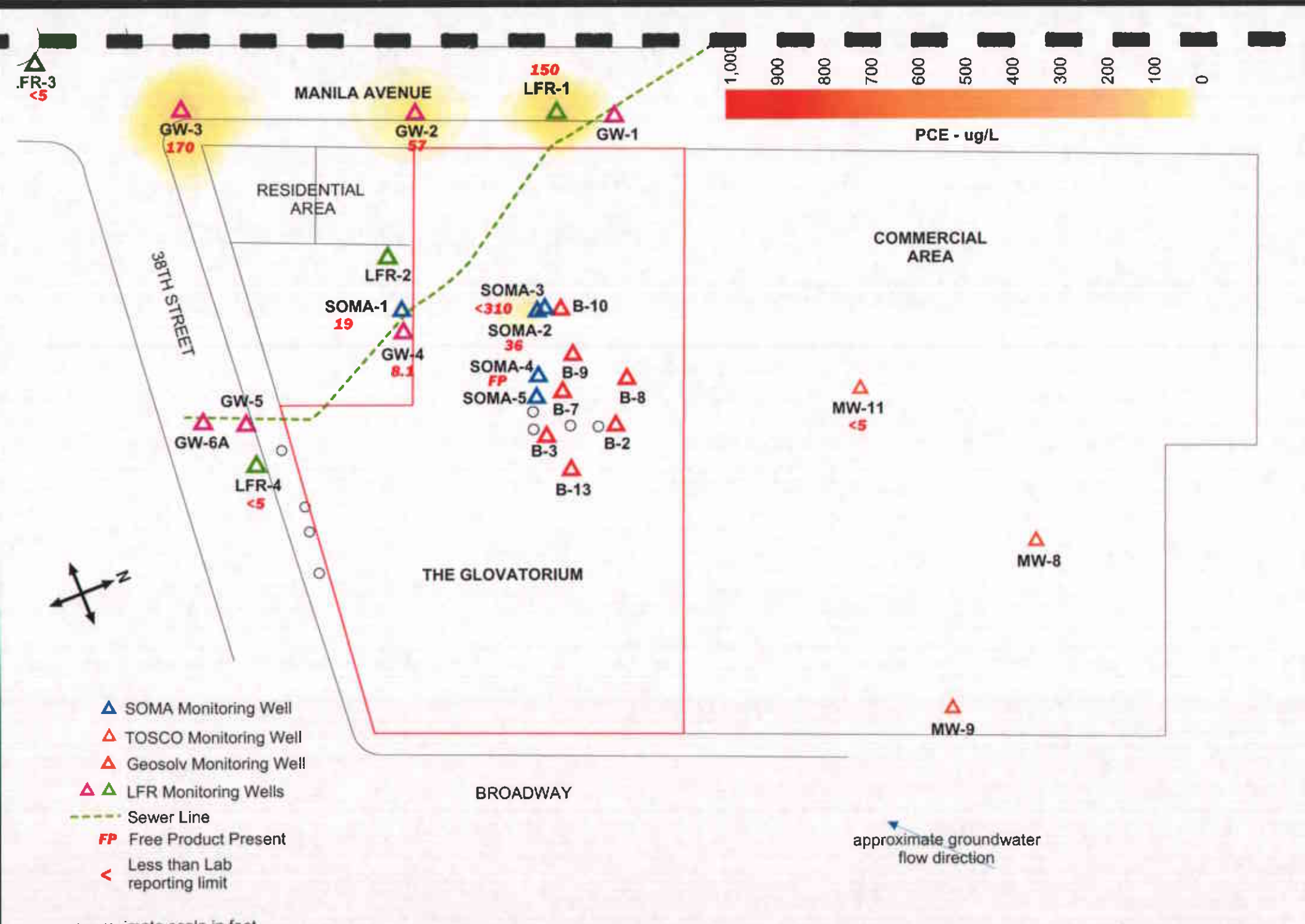


Figure 6: Contour map of PCE concentrations in the groundwater.
January 28-29, 2004.

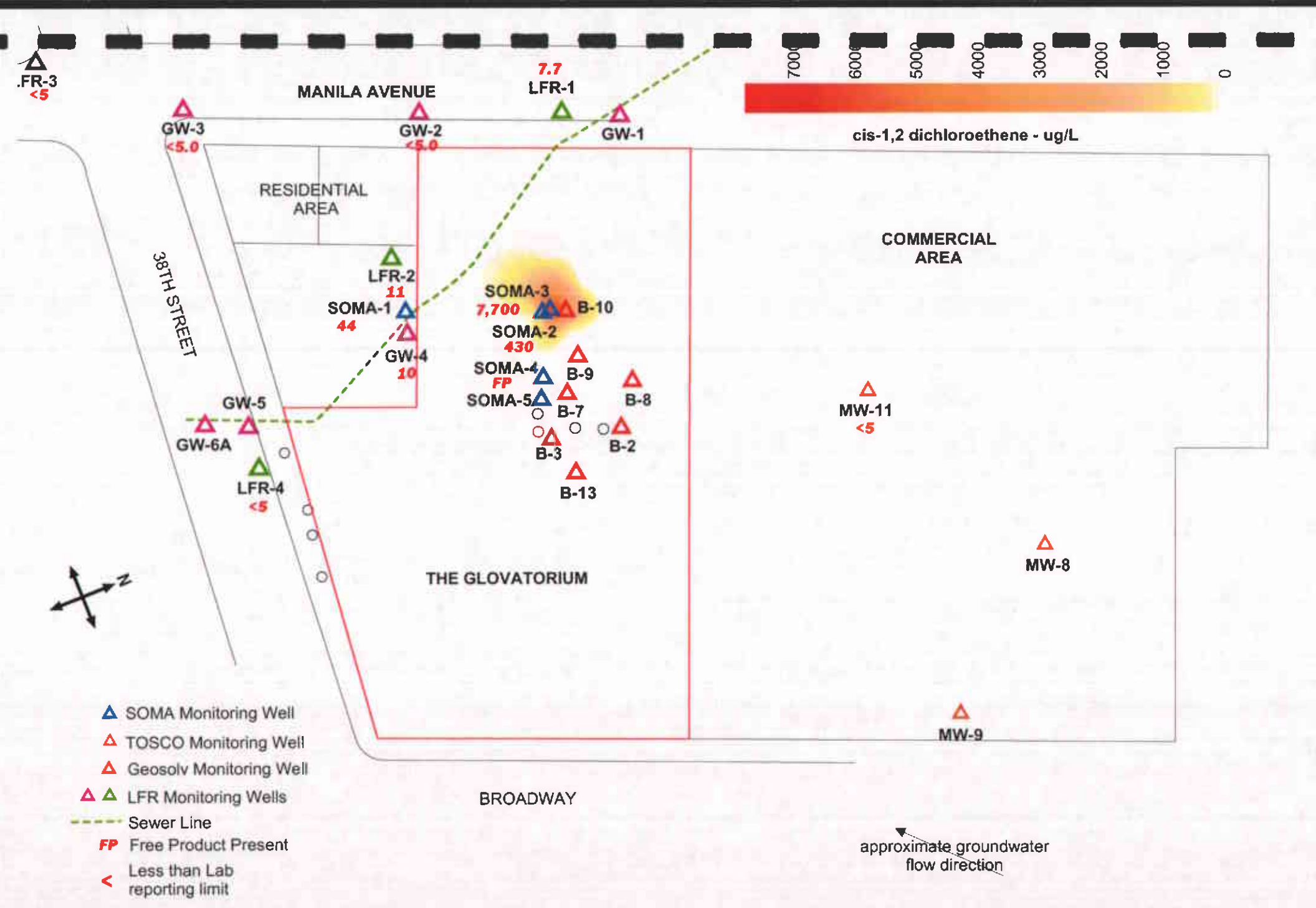


Figure 7: Contour map of cis-1,2 dichloroethene concentrations in the groundwater. January 28-29, 2004.

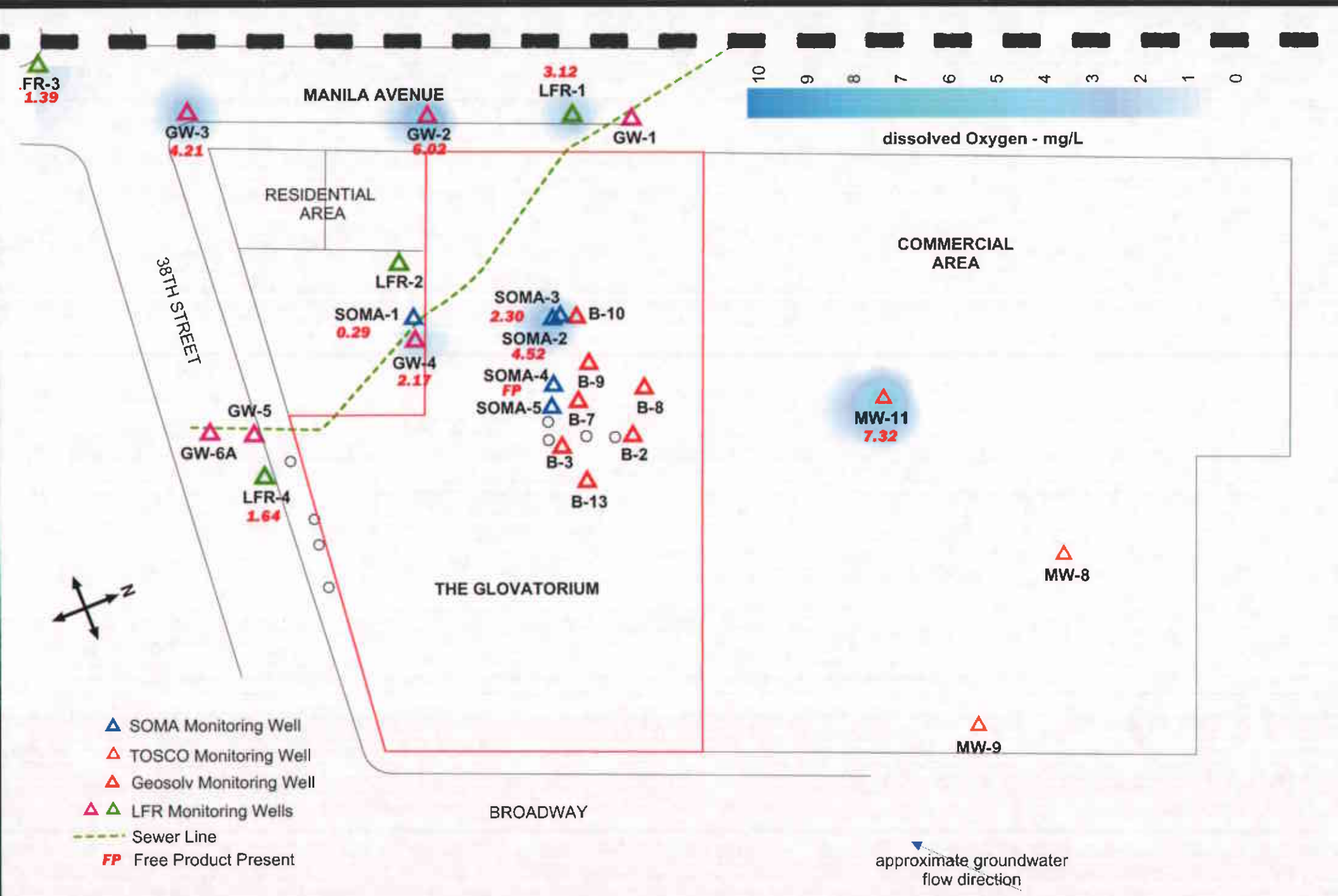


Figure 8: Contour map of dissolved Oxygen concentrations in the groundwater.
January 28-29, 2004.

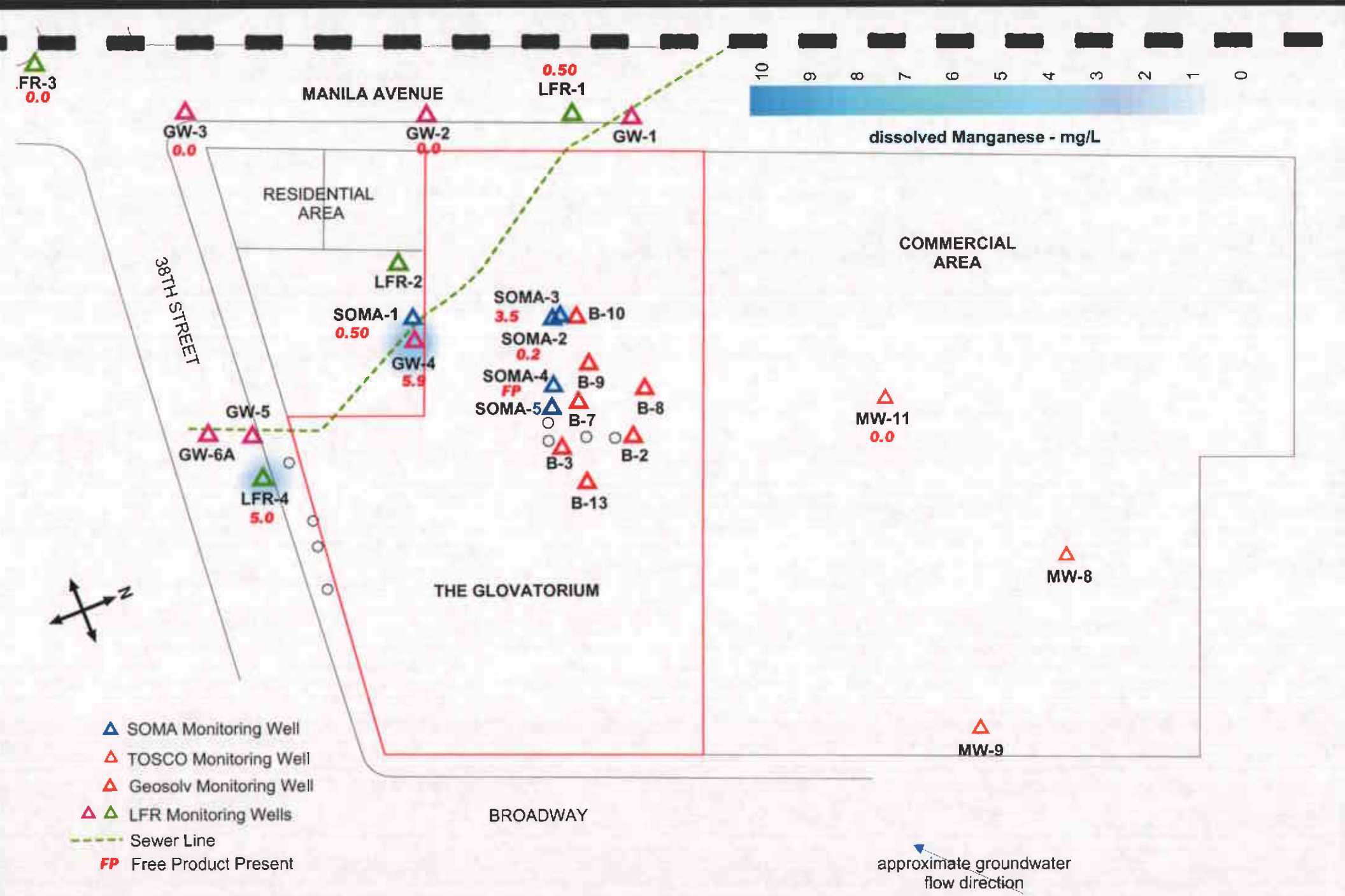


Figure 9: Contour map of dissolved Manganese concentrations in the groundwater.
January 28-29, 2004.

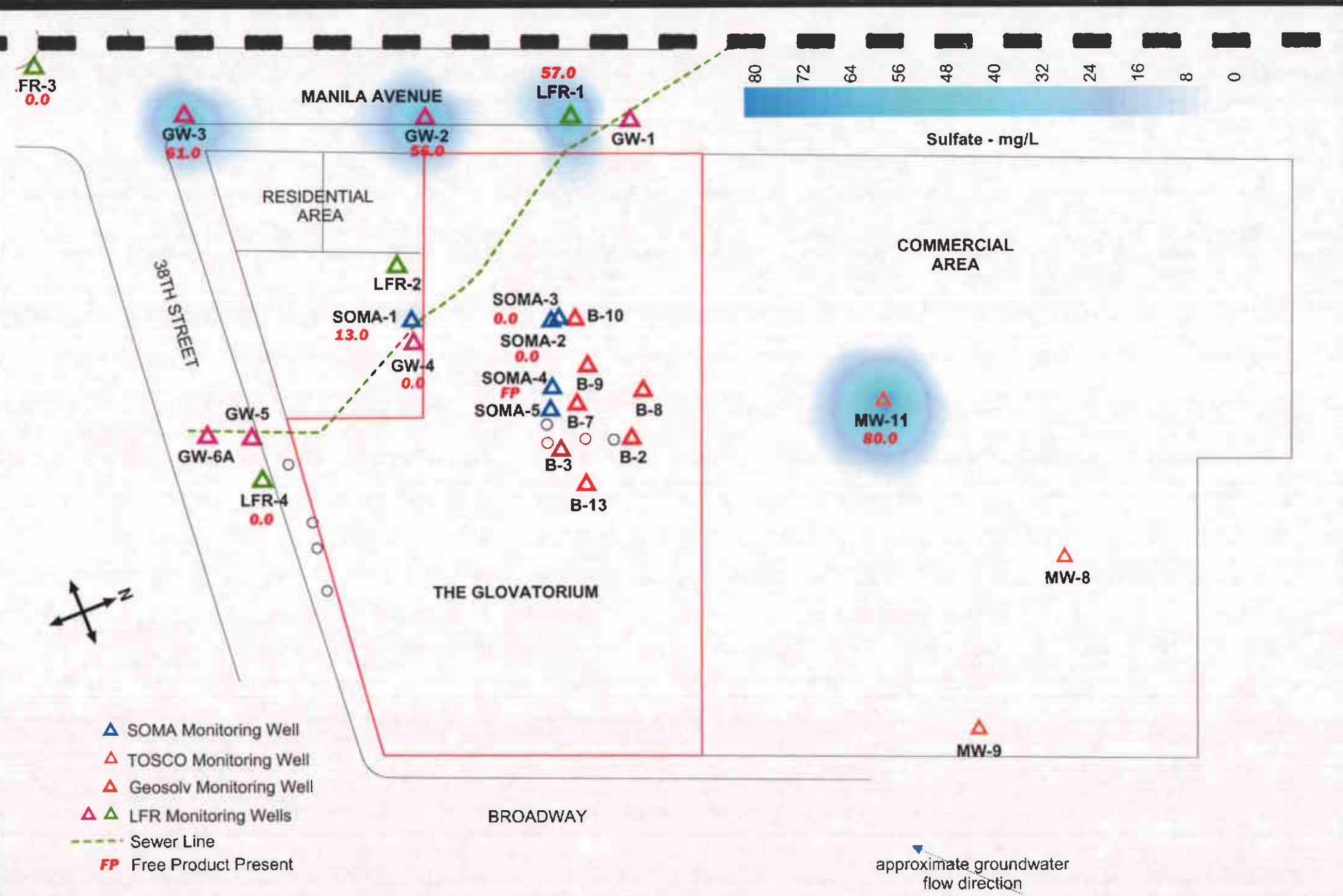


Figure 10: Contour map of Sulfate concentrations in the groundwater.
January 28-29, 2004.

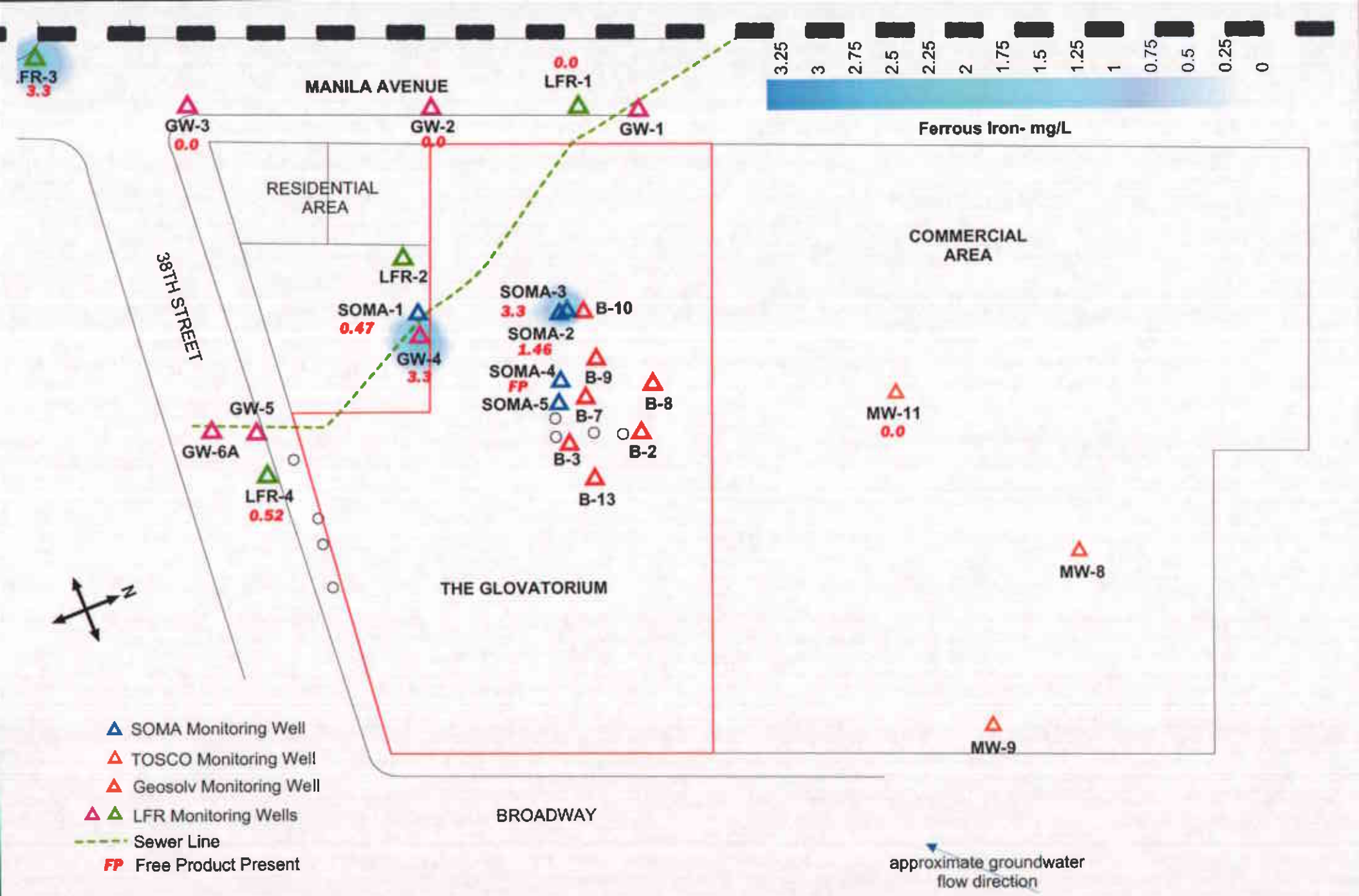


Figure 11: Contour map of Ferrous Iron concentrations in the groundwater.
January 28-29, 2004.

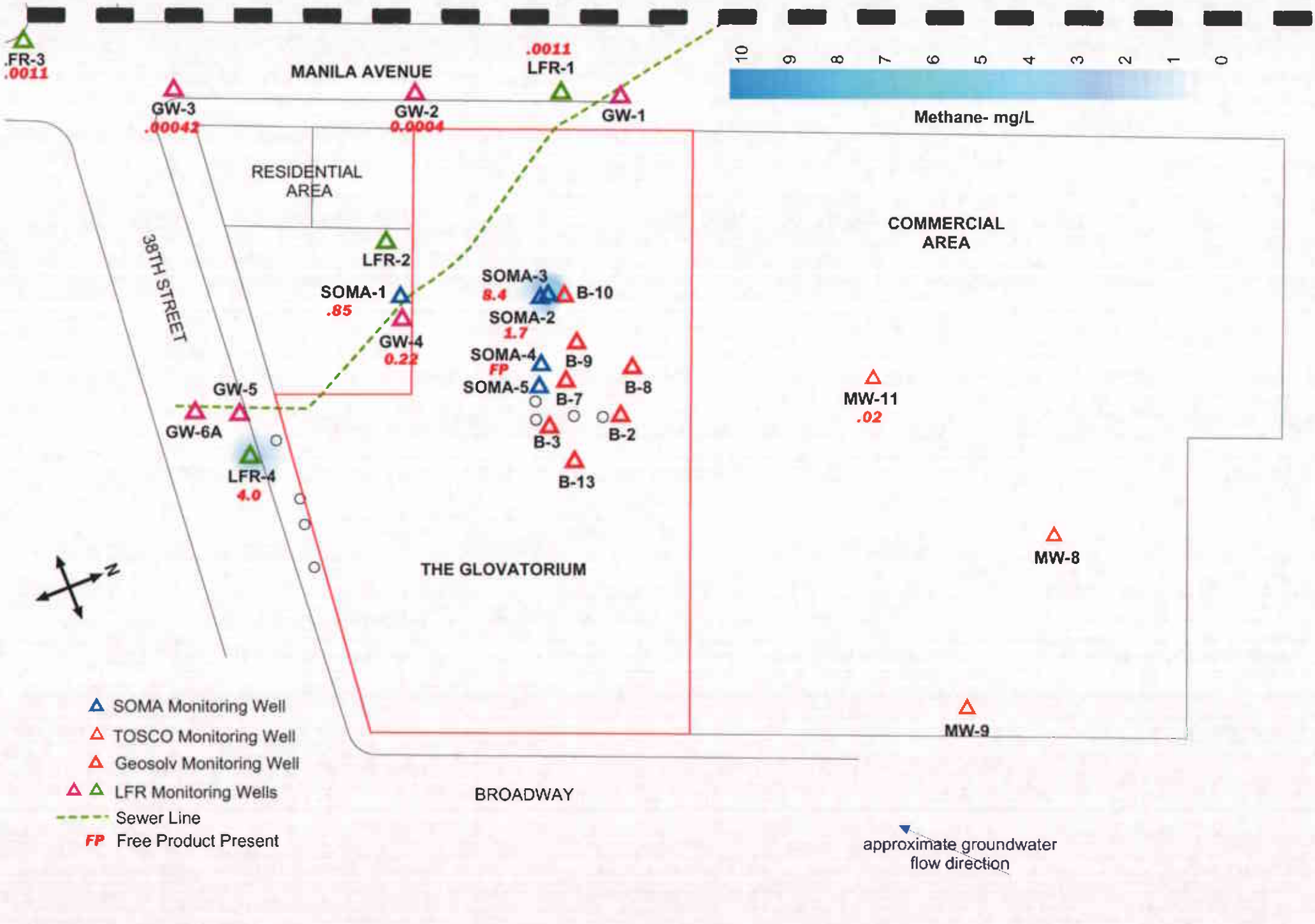


Figure 12: Contour map of Methane concentrations in the groundwater.
January 28-29, 2004.

APPENDIX A

Field Notes, Field Measured Physical and Chemical Parameter Values

ENVIRONMENTAL ENGINEERING, INC

Well Name:	GW-2	**Project #:**	2511
Casing Diameter:	3/4 inch	**Address:**	3815 Broadway
Depth of Well:	20 feet		Oakland, California
Top of Casing Elevation:	79.14 feet	**Date:**	~~1/27/09~~ 1/28/09
Depth to Groundwater:	10.72 feet	**Sampler:**	Eric Jennings
Groundwater Elevation:	68.37 feet		Roy Zarrin
Water Column Height:	9.23 feet		
Purged Volume:	1.0 gallons		

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
4:00PM	0.2	6.74	17.9	7.28	539	66.0	139
4:03PM	0.5	6.74	18.0	7.31	541	84.1	139
4:05	1	6.72	18.00	6.02	542	94.8	143
4:07		Sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
4:10	0.0	0.0	3.3	0.0	56	0.0

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name:	GW-3	**Project #:**	2511
Casing Diameter:	3/4 inch	**Address:**	3815 Broadway
Depth of Well:	20 feet		Oakland, California
Top of Casing Elevation:	77.92 feet	**Date:**	~~1/27/08~~ 1/28/08
Depth to Groundwater:	9.87 feet	**Sampler:**	Eric Jennings
Groundwater Elevation:	68.05 feet		Roy Zarrin
Water Column Height:	10.13 feet		
Purged Volume:	1.0 gallons		

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
3:38PM	0.2	6.96	18.0	5.03	~~340~~ 460	30.1	140
3:42PM	0.6	6.65	18.1	4.62	450	94.5	140
3:45 PM	1	6.65	18.2	4.21	450	92.5	141
3:46PM		DRY	—				
3:50	SAMPLED						

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
350	0.0	0.0	0.8	0.0	61	0.0

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name:	GW-4	**Project #:**	2511
Casing Diameter:	3/4 inch	**Address:**	3815 Broadway
Depth of Well:	12 feet		Oakland, California
Top of Casing Elevation:	82.37 feet	**Date:**	~~1/27/08~~ 1/28/08
Depth to Groundwater:	7.68 feet	**Sampler:**	Eric Jennings
Groundwater Elevation:	74.69 feet		Roy Zarrin
Water Column Height:	4.32 feet		
Purged Volume:	0.6 gallons		

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
5:15PM	0.1	6.87	13.0	4.44	532	128	-63
5:17PM	0.3	6.87	13.0	2.97	533	63.4	-74
5:22PM	0.6	6.85	13.0	2.17	534	55.5	-73
5:25PM		Samples					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
5:25PM	3.3	3.3	0.0	0.0	0.0	5.9

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name:	MW-11	**Project #:**	2511
Casing Diameter:	2 inch	**Address:**	3815 Broadway
Depth of Well:	18.94 feet		Oakland, California
Top of Casing Elevation:	84.13 feet	**Date:**	~~1/27/09~~ 1/28/09
Depth to Groundwater:	10.05 feet	**Sampler:**	Eric Jennings
Groundwater Elevation:	74.08 feet		Roy Zarrin
Water Column Height:	8.89 feet		
Purged Volume:	3.5 gallons		

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
3:00PM	0.5	7.32	19.5	7.61	1020	74.6	138
3:04PM	1.5	6.92	19.3	8.17	1010	102.0	134
3:09PM	2.5	6.62	18.9	7.52	1000	187.0	130
3:12PM	3.5	6.61	19.0	7.32	1000	61.3	
3:15PM	Sample						

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
3:30PM	0.0	0.0	0.0	1.8	~~80~~ 80	0.0

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name:	LFR-1	**Project #:**	2511
Casing Diameter:	2 inch	**Address:**	3815 Broadway
Depth of Well:	19 feet		Oakland, California
Top of Casing Elevation:	79.97 feet	**Date:**	~~1/8/03 - 1/9/03~~ 1/29/04
Depth to Groundwater:	9.56 feet	**Sampler:**	Eric Jennings
Groundwater Elevation:	70.41 feet		Roy Zarrin
Water Column Height:	9.44 feet		
Purged Volume:	7 gallons		

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
1:33 PM	1	7.40	17.6	8.19	831	84.2	-24
1:35 PM	3.5	6.88	17.4	3.82	795	73.5	-2
1:37 PM	5.5	6.61	18.0	3.62	835	59.2	14
1:40 PM	7	6.62	18.0	3.12	830	64.5	19
1:45		sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
1:45 PM	0.0	0.0	0.0	5.1	57	0.5

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name: LFR-2 **Project #:** 2511

Casing Diameter: 8 inch **Address:** 3815 Broadway

Depth of Well: _____ feet Oakland, California

Top of Casing Elevation: _____ feet **Date:** ~~1/27/08 - 1/28/08~~ 1/28/04

Depth to Groundwater: _____ feet **Sampler:** Eric Jennings

Groundwater Elevation: _____ feet Roy Zarrin

Water Column Height: _____ feet

Purged Volume: _____ gallons

NOT Purged

Purging Method: Bailer ☐ Pump ■

Sampling Method: Bailer ■ Pump ☐

Color: No ☐ Yes ☐ **Describe:** _____

Sheen: No ☐ Yes ☐ **Describe:** _____

Odor: No ☐ Yes ☐ **Describe:** _____

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
	NO		Access				

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)

Notes: 2 cars parked on top of the well. (besides each ot

ENVIRONMENTAL ENGINEERING, INC

6

Well Name: LAR-3
Casing Diameter: 2 inch
Depth of Well: 22 feet
Top of Casing Elevation: 77.96 feet
Depth to Groundwater: 10.52 feet
Groundwater Elevation: 67.44 feet
Water Column Height: 11.48 feet
Purged Volume: 10 gallons

Project #: 2511
Address: 3815 Broadway
Oakland, California
Date: ~~1/23/03 - 1/25/03~~ 1/29/04
Sampler: Eric Jennings
Roy Zarrin

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

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
11:50AM	1	7.55	19.4	3.82	376	114	48
11:53	3	7.20	19.5	2.16	375	82.5	54
11:55	5	6.88	19.8	1.71	391	84.6	56
11:58	8	6.65	20.0	1.62	392	168	62
12:00	10	6.60	20.0	1.39	393	164	64
SAMPLE	12:05 PM						

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
12:05	3.3	1.7	6.0	0.0	0.0	0.0

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name: LFR-4
Casing Diameter: 2 inch
Depth of Well: 19 feet
Top of Casing Elevation: 81.65 feet
Depth to Groundwater: 12.52 feet
Groundwater Elevation: 69.13 feet
Water Column Height: 6.48 feet
Purged Volume: 9 gallons

Project #: 2511
Address: 3815 Broadway
Oakland, California
Date: ~~1/25/06 1/26/06~~ 1/29/04
Sampler: Eric Jennings
Roy Zarrin

Purging Method: Bailer ☐ Pump ■
Sampling Method: Bailer ■ Pump ☐

Color: No ☑ Yes ☐ Describe: _____
Sheen: No ☑ Yes ☐ Describe: _____
Odor: No ☑ Yes ☐ Describe: _____

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
10:58 AM	1	7.00	18.8	6.04	530	98.5	25
10:54	4	6.70	19.2	2.31	539	34.8	17
10:58	~~7~~	6.53	19.5	1.64	689	38.5	1
10:59	9	Dry					
11:00		Sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
11:00AM	0.52	0.71	0.0	0.0	0.0	5.0

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name: SoMA-1
Casing Diameter: 4 inch
Depth of Well: 40 feet
Top of Casing Elevation: 81.64 feet
Depth to Groundwater: 13.31 feet
Groundwater Elevation: 68.33 feet
Water Column Height: 26.69 feet
Purged Volume: 16 gallons

Project #: 2511
Address: 3815 Broadway
Oakland, California
Date: ~~1/27/00 - 1/28/00~~ 1/29/04
Sampler: Eric Jennings
Roy Zarrin

Purging Method: Bailer ☐ Pump ■
Sampling Method: Bailer ■ Pump ☐

Color:	No	☑	Yes ☐	**Describe:**	
Sheen:	No	☑	Yes ☐	**Describe:**	
Odor:	No	☑	Yes ☐	**Describe:**	

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
9:50 AM	1	6.95	17.8	2.42	956	359	142
9:55AM	4	6.55	17.8	0.66	958	223	139
10:00	10	6.51	17.8	0.42	959	189	136
10:05	16	6.51	17.6	0.29	959	387	133
10:07		Sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
10:07	.47	2.1	0.0	0.0	13	0.5

Notes:

ENVIRONMENTAL ENGINEERING, INC

Well Name: SoMA-2
Casing Diameter: 3/4 inch
Depth of Well: 20 feet
Top of Casing Elevation: 81.39 feet
Depth to Groundwater: 11.04 feet
Groundwater Elevation: 70.35 feet
Water Column Height: 8.96 feet
Purged Volume: 0.8 gallons

Project #: 2511
Address: 3815 Broadway
Oakland, California
Date: ~~1/27/05 - 1/28/05~~ 1/28/04
Sampler: Eric Jennings
Roy Zarrin

Purging Method: Bailer ☐ Pump ■
Sampling Method: Bailer ■ Pump ☐

Color: No ☑ Yes ☑ **Describe:** Grayish
Sheen: No ☑ Yes ☐ **Describe:**
Odor: No ☑ Yes ☑ **Describe:**

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
4:30PM	0.3	6.63	16.6	5.32	870	266	10
4:36PM	0.8	6.65	16.6	4.52	835	136	-8
4:38PM		Dry					
4:40		Sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
4:40	1.16	0	0	0	0	.2

Notes:

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ENVIRONMENTAL ENGINEERING, INC

Well Name: SoMA-3
Casing Diameter: 2 inch
Depth of Well: 30 feet
Top of Casing Elevation: 81.42 feet
Depth to Groundwater: 8.42 feet
Groundwater Elevation: 73.00 feet
Water Column Height: 21.58 feet
Purged Volume: 11 gallons

Project #: 2511
Address: 3815 Broadway
Oakland, California
Date: ~~1/27/00 - 1/28/00~~ 1,29,04
Sampler: Eric Jennings
Roy Zarrin

Purging Method: Bailer ☐ Pump ■
Sampling Method: Bailer ■ Pump ☐

Color:	No	☑	Yes ☐	**Describe:**	
Sheen:	No	☑	Yes ☐	**Describe:**	
Odor:	No	☐	Yes ☑	**Describe:**	SWEET

Field Measurements:

Time	Volume (gallons)	pH	Temp (°C)	D.O. (mg/L)	E.C. (µs/cm)	Turbidity (NTU)	ORP (mV)
12:57PM	1	6.61	16.1	6.72	907	66.2	13
12:59PM	3.5	6.72	16.0	4.02	917	53.1	-43
1:3PM	7	6.75	16.2	2.70	920	104	-71
1:06	11	6.75	16.2	2.30	925	123	-85
1:10PM		Sampled					

Time	Ferrous Iron (mg/L)	Total Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Dissolved Manganese (mg/L)
1:10PM	3.3	3.3	0.0	0.0	0.0	3.5

Notes:

APPENDIX B

Chain of Custody Forms

and

Laboratory Reports

MICROSEEPS

Client Name: Soma Environmental Engineering
Contact: Tony Perini
Address: 2680 Bishop Drive
Suite 203

San Ramon, CA 94583

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

Laboratory Results

Total pages in data package: 12

Lab Sample #	Client Sample ID
P0401464-01	GW-2
P0401464-02	GW-3
P0401464-03	GW-4
P0401464-04	MW-11
P0401464-05	LFR-1
P0401464-06	LFR-3
P0401464-07	LFR-4
P0401464-08	SOMA-1
P0401464-09	SOMA-2
P0401464-10	SOMA-3

Microseeps test results meet all the requirements of the NELAC standards.

Approved By: Collette Hall

The analytical reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

NOTES:

P0401464

CHAIN - OF - CUSTODY RECORD

Phone: (412) 826-5245 — **Microseeps, Inc. - 220 William Pitt Way - Pittsburgh, PA 15238** — Fax No. : (412) 826-3433

Company : SOMA ENVIRONMENTAL ENGINEERING
Co. Address : 2680 BISHOP Dr. SUIT 203 san ramon, CA
Proj. Manager:
Proj. Location: OAKLAND, CA
Proj. Number: 2511
Phone # : 925 244 6600 Fax # : 925 244 6601

Sampler's signature :

Results to : Tony Pierini

Invoice to : Same as above

	Sample ID	Sample Description	Date	Time	Comp.	Grab	# Cont.	Methane	Remarks
01	GW-2	Grab Sample	1/28/04	4:07p		✓		✓	
02	GW-3		1/28/04	3:50p					
03	GW-4		1/28/04	5:25p					
04	MW-11		1/28/04	3:15p					
05	LFR-1		1/29/04	1:45p					
06	LFR-3		1/29/04	12:05p					
07	LFR-4		1/29/04	11:00am					
08	SOMA-1		1/29/04	10:07a					
09	SOMA-2		1/28/04	4:40p					
10	SOMA-3		1/29/04	1:10p		✓		✓	

Cooler ID | Cooler Temp.

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Roj Zarin	SOMA ENV.	1/29/04		[signature]	Microseeps	1/30/04	0905
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Accompany Samples YELLOW COPY : Laboratory File PINK COPY : Submitter

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-01

Sample Description	Matrix	Sampled Date/Time	Received
GW-2	Water	28 Jan. 04 16:07	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	0.46	0.015	ug/L	AM20GAX	rw	2/15/04

L- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-02

Sample Description	Matrix	Sampled Date/Time	Received
GW-3	Water	28 Jan. 04 15:50	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	0.42	0.015	ug/L	AM20GAX	rw	2/15/04

L - NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-03

Sample Description	Matrix	Sampled Date/Time	Received
MW-4	Water	28 Jan. 04 17:25	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	220	0.015	ug/L	AM20GAX	rw	2/15/04

- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-04

Sample Description	Matrix	Sampled Date/Time	Received
MW-11	Water	28 Jan. 04 15:15	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	20	0.015	ug/L	AM20GAX	rw	2/15/04

- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-05

Sample Description	Matrix	Sampled Date/Time	Received
FR-1	Water	29 Jan. 04 13:45	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	1.1	0.015	ug/L	AM20GAX	rw	2/15/04

L - NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-06

Sample Description	Matrix	Sampled Date/Time	Received
LFR-3	Water	29 Jan. 04 12:05	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	1.1	0.015	ug/L	AM20GAX	rw	2/15/04

- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-07

Sample Description	Matrix	Sampled Date/Time	Received
MFR-4	Water	29 Jan. 04 11:00	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	4000	0.015	ug/L	AM20GAX	rw	2/15/04

L- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-08

Sample Description	Matrix	Sampled Date/Time	Received
SOMA-1	Water	29 Jan. 04 10:07	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	850	0.015	ug/L	AM20GAX	rw	2/15/04

N - NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-09

Sample Description	Matrix	Sampled Date/Time	Received
SOMA-2	Water	28 Jan. 04 16:40	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	1700	0.015	ug/L	AM20GAX	rw	2/15/04

L- NELAC certified analysis

Order #: P0401464
Report Date: 02/16/04
Client Proj Name: Oakland CA 2511
Client Proj #: Oakland CA 2511

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

Lab Sample #: P0401464-10

Sample Description	Matrix	Sampled Date/Time	Received
SOMA-3	Water	29 Jan. 04 13:10	30 Jan. 04

Analyte(s)	Result	PQL	Units	Method #	Analyst	Analysis Date
RiskAnalysis						
Water						
Methane	8400	0.015	ug/L	AM20GAX	rw	2/15/04

N - NELAC certified analysis

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: 12-FEB-04
Lab Job Number: 170270
Project ID: 2511
Location: 3815 Broadway, Oakland

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

Curtis & Tompkins, Ltd.

Laboratory Number: **170270**
Client: **SOMA Environmental Engineering Inc.**
Project: **2511**
Request Date: **1/29/04**

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for ten water samples requested from the above referenced project on January 29, 2004. The samples were received cold and intact.

Total Volatile Hydrocarbons:
The recoveries for the surrogate bromofluorobenzene in samples SOMA-3, GW-4, LFR-4, and the matrix spikes due to the coelution of the surrogate peak with other hydrocarbon peaks. The associated surrogate trifluorotoluene recoveries were acceptable.

No other analytical problems were encountered.

Purgeable Organics (EPA 8260):
No analytical problems were encountered.

CHAIN OF CUSTODY

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

C&T LOGIN # 170270

Sampler: Roy, Mehran

Report To: Tony Perini

Company : SOMA Environmental

Telephone: 925-244-6600

Fax: 925-244-6601

Project No: 2511

Project Name: 3815 Broadway, Oakland, CA

Turnaround Time: Standard

Analyses

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	TPHg (including Stoddard Solvent) 8015	BTEX + MtBE 8021 GC	8260 (Full List)
-1	LFR-1	1/29/04 1:45 ~~11:00~~		✓		6 40ml VOAs	✓			✓	✓	✓	✓
-2	LFR-3	1/29/04 12:05		↓		6	↓			↓	↓	↓	↓
-3	SOMA-3	1/29/04 1:10p				6							
-4	GW-2	1/28/04 4:07				4 VOAs							
-5	GW-3	1/28/04 3:50				↓							
-6	GW-4	1/28/04 5:25											
-7	MW-11	1/28/04 3:15											
-8	LFR-4	1/29/04 11:00											
-9	SOMA-1	1/29/04 10:07											
-10	SOMA-2	1/28/04 4:40		↓		↓	↓			↓			

Notes:

Received ☐ On ice ☐ Cold ☐ Ambient ☐ Intact

RELINQUISHED BY:

Roy Torrin 1/29/04 4:10 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

1-29-04 4:10 DATE/TIME

DATE/TIME

DATE/TIME

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	88068
Units:	ug/L	Received:	01/29/04

Field ID:	LFR-1	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/29/04
Lab ID:	170270-001	Analyzed:	01/30/04

Analyte	Result	RL
Gasoline C7-C12	100 Y Z	50
Stoddard Solvent C7-C12	60 Y Z	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	57-150
Bromofluorobenzene (FID)	124	65-144

Field ID:	LFR-3	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/29/04
Lab ID:	170270-002	Analyzed:	01/31/04

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	93	57-150
Bromofluorobenzene (FID)	117	65-144

Field ID:	SOMA-3	Diln Fac:	2.000
Type:	SAMPLE	Sampled:	01/29/04
Lab ID:	170270-003	Analyzed:	01/31/04

Analyte	Result	RL
Gasoline C7-C12	6,800 H Y	100
Stoddard Solvent C7-C12	4,100	100

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	57-150
Bromofluorobenzene (FID)	239 *	>LR b 65-144

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic 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

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	88068
Units:	ug/L	Received:	01/29/04

Field ID:	GW-2	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/28/04
Lab ID:	170270-004	Analyzed:	01/30/04

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	57-150
Bromofluorobenzene (FID)	118	65-144

Field ID:	GW-3	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/28/04
Lab ID:	170270-005	Analyzed:	01/30/04

Analyte	Result	RL
Gasoline C7-C12	86 Y Z	50
Stoddard Solvent C7-C12	51 Y Z	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	57-150
Bromofluorobenzene (FID)	121	65-144

Field ID:	GW-4	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/28/04
Lab ID:	170270-006	Analyzed:	01/30/04

Analyte	Result	RL
Gasoline C7-C12	520 H Y	50
Stoddard Solvent C7-C12	310	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	57-150
Bromofluorobenzene (FID)	175 *	65-144

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic 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

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	88068
Units:	ug/L	Received:	01/29/04

Field ID:	MW-11	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/28/04
Lab ID:	170270-007	Analyzed:	01/30/04

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	57-150
Bromofluorobenzene (FID)	122	65-144

Field ID:	LFR-4	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/29/04
Lab ID:	170270-008	Analyzed:	01/31/04

Analyte	Result	RL
Gasoline C7-C12	700 Y	50
Stoddard Solvent C7-C12	420 Y	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	57-150
Bromofluorobenzene (FID)	149 *	65-144

Field ID:	SOMA-1	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/29/04
Lab ID:	170270-009	Analyzed:	01/31/04

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	66	57-150
Bromofluorobenzene (FID)	77	65-144

*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic 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

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	88068
Units:	ug/L	Received:	01/29/04

Field ID:	SOMA-2	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	01/28/04
Lab ID:	170270-010	Analyzed:	01/31/04

Analyte	Result	RL
Gasoline C7-C12	380 H Y	50
Stoddard Solvent C7-C12	230	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	57-150
Bromofluorobenzene (FID)	144	65-144

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239451	Analyzed:	01/30/04

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

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	57-150
Bromofluorobenzene (FID)	116	65-144

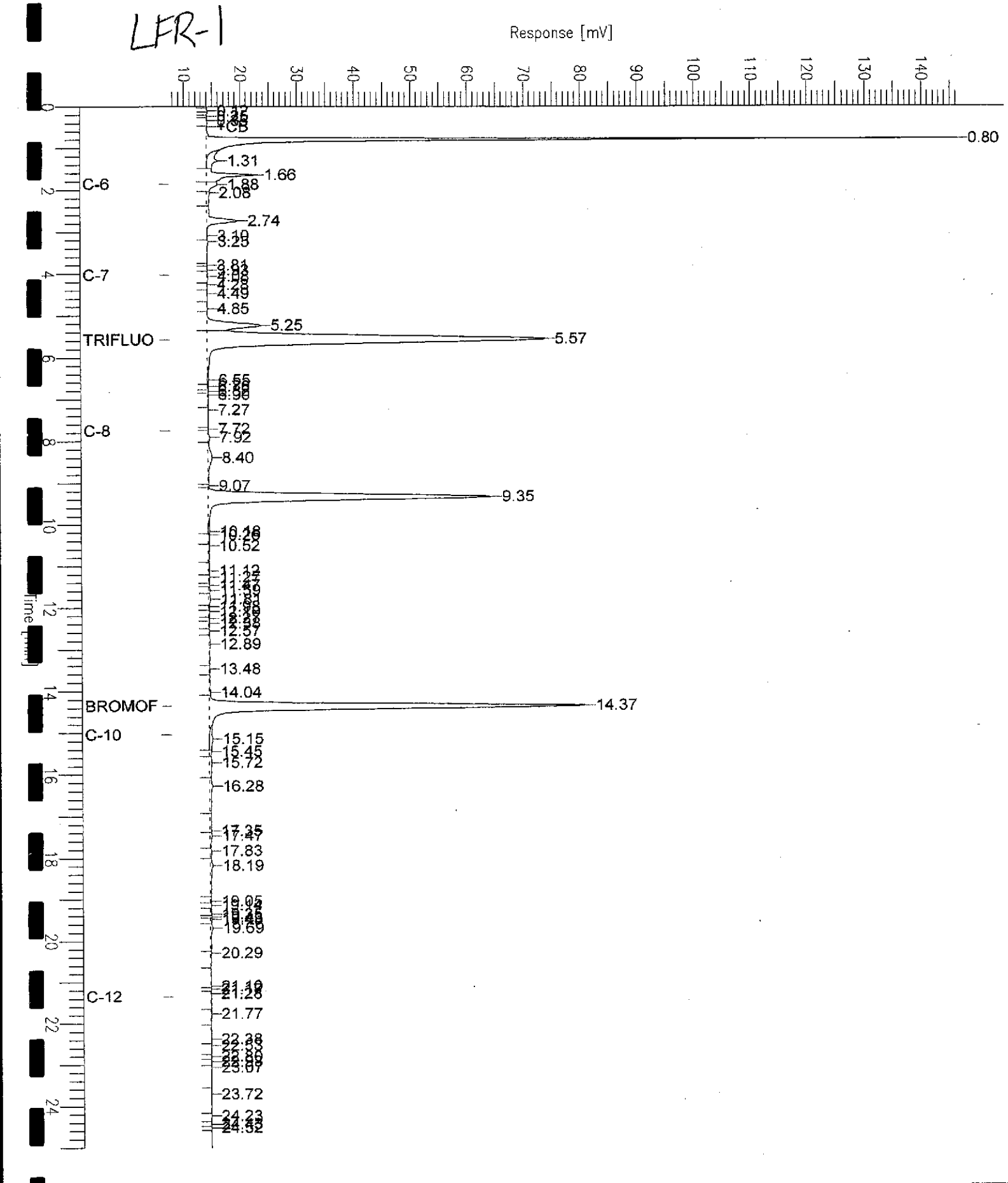
*= Value outside of QC limits; see narrative
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
b= See narrative
ND= Not Detected
RL= Reporting Limit
LR= Response exceeds instrument's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

Chromatogram

Sample Name : 170270-001,88068,tvh
FileName : G:\GC05\DATA\030G018.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: 7 mV

Sample #: b1.3 Page 1 of 1
Date : 1/30/04 08:44 PM
Time of Injection: 1/30/04 08:19 PM
Low Point : 7.40 mV High Point : 146.44 mV
Plot Scale: 139.0 mV

LFR-1

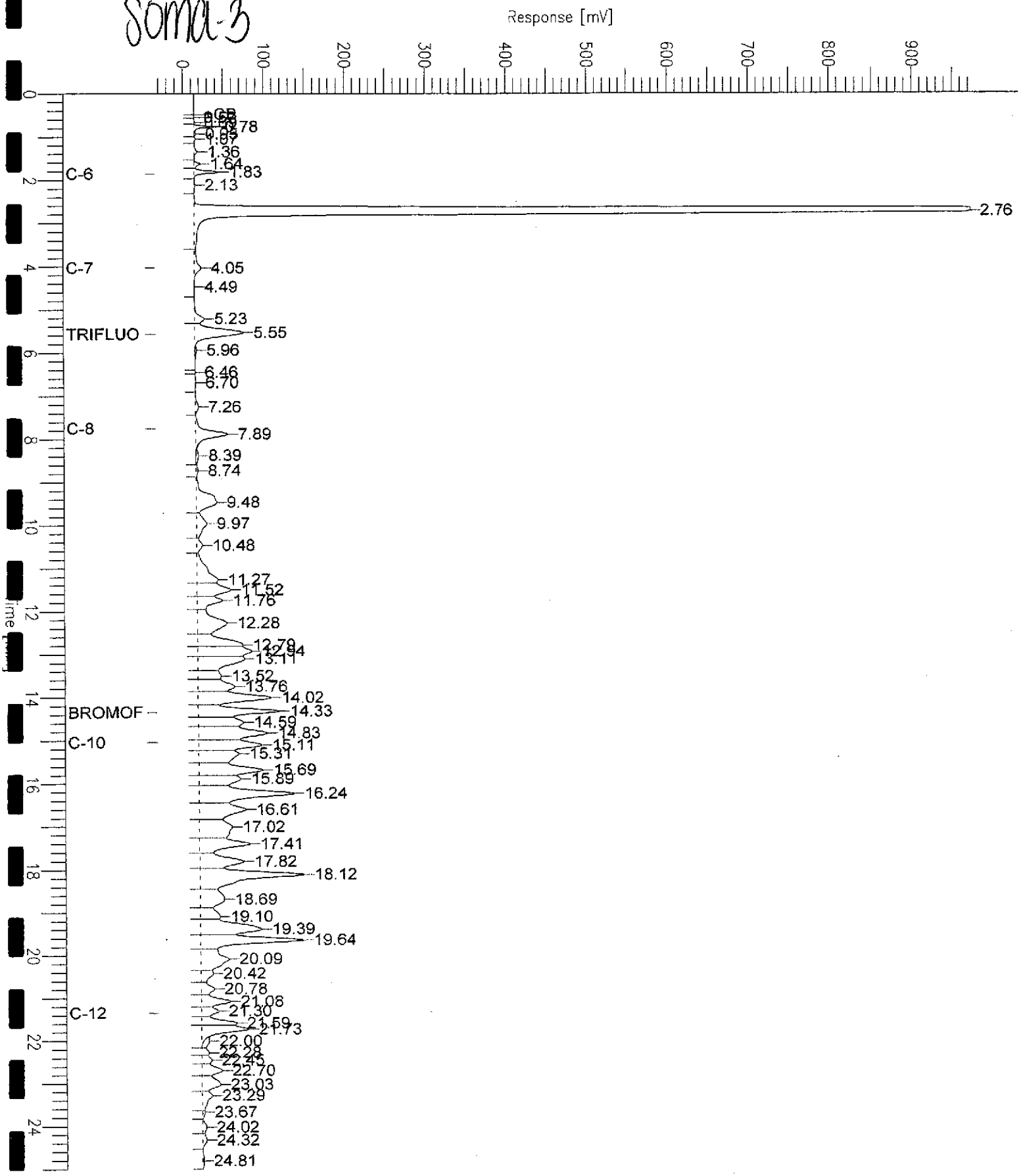


Chromatogram

Sample Name : 170270-003,88068,tvh
FileName : G:\GC05\DATA\030G025.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -34 mV

Sample #: b1.3 Page 1 of 1
Date : 1/31/04 02:19 PM
Time of Injection: 1/31/04 01:54 PM
Low Point : -33.71 mV High Point : 972.80 mV
Plot Scale: 1006.5 mV

SOMA-3

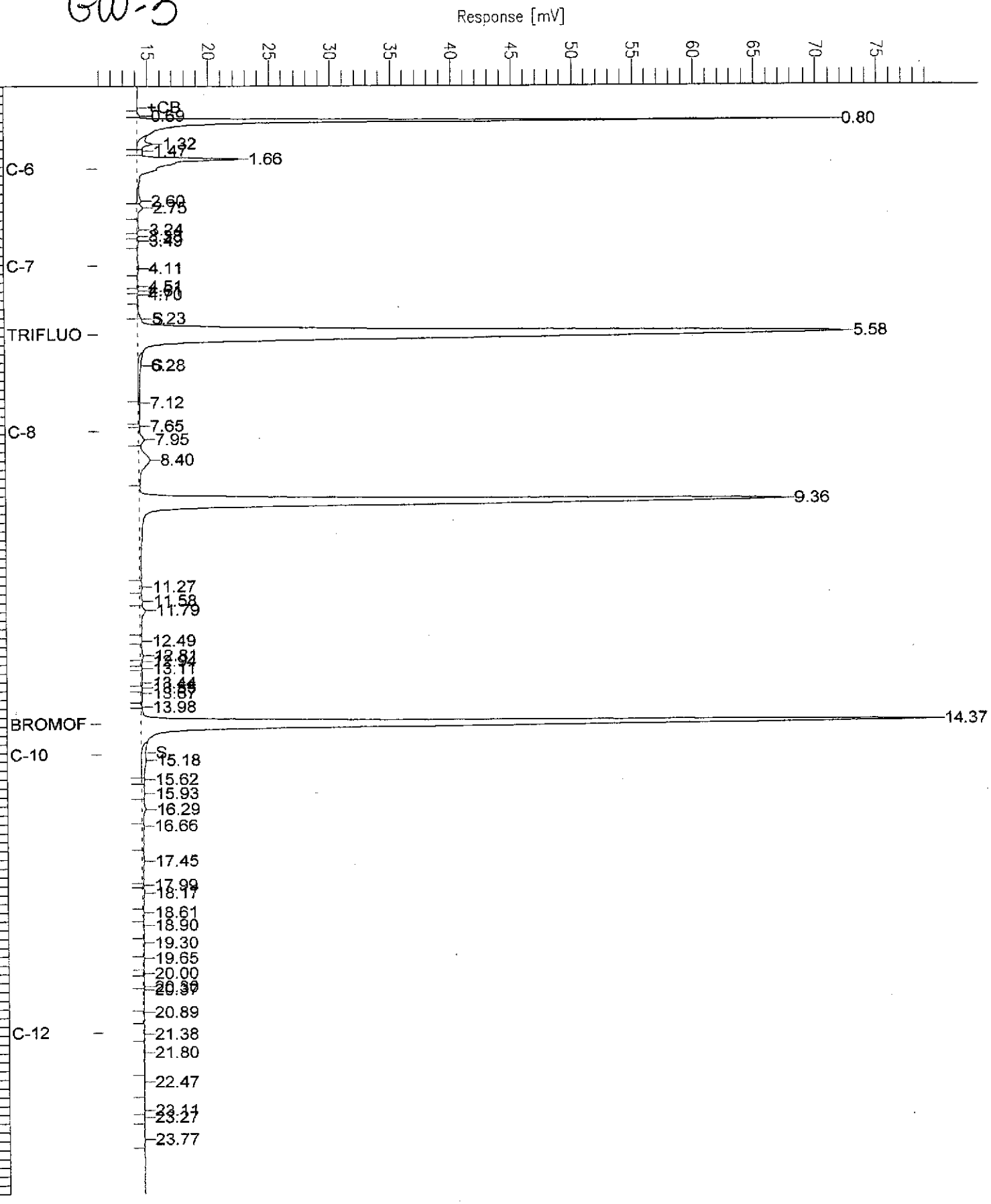


Chromatogram

Sample Name : 170270-005,88068
File Name : G:\GC05\DATA\030G009.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: 11 mV

Sample #: b1.3 Page 1 of 1
Date : 1/30/04 05:45 PM
Time of Injection: 1/30/04 03:08 PM
Low Point : 10.85 mV High Point : 79.35 mV
Plot Scale: 68.5 mV

GW-3

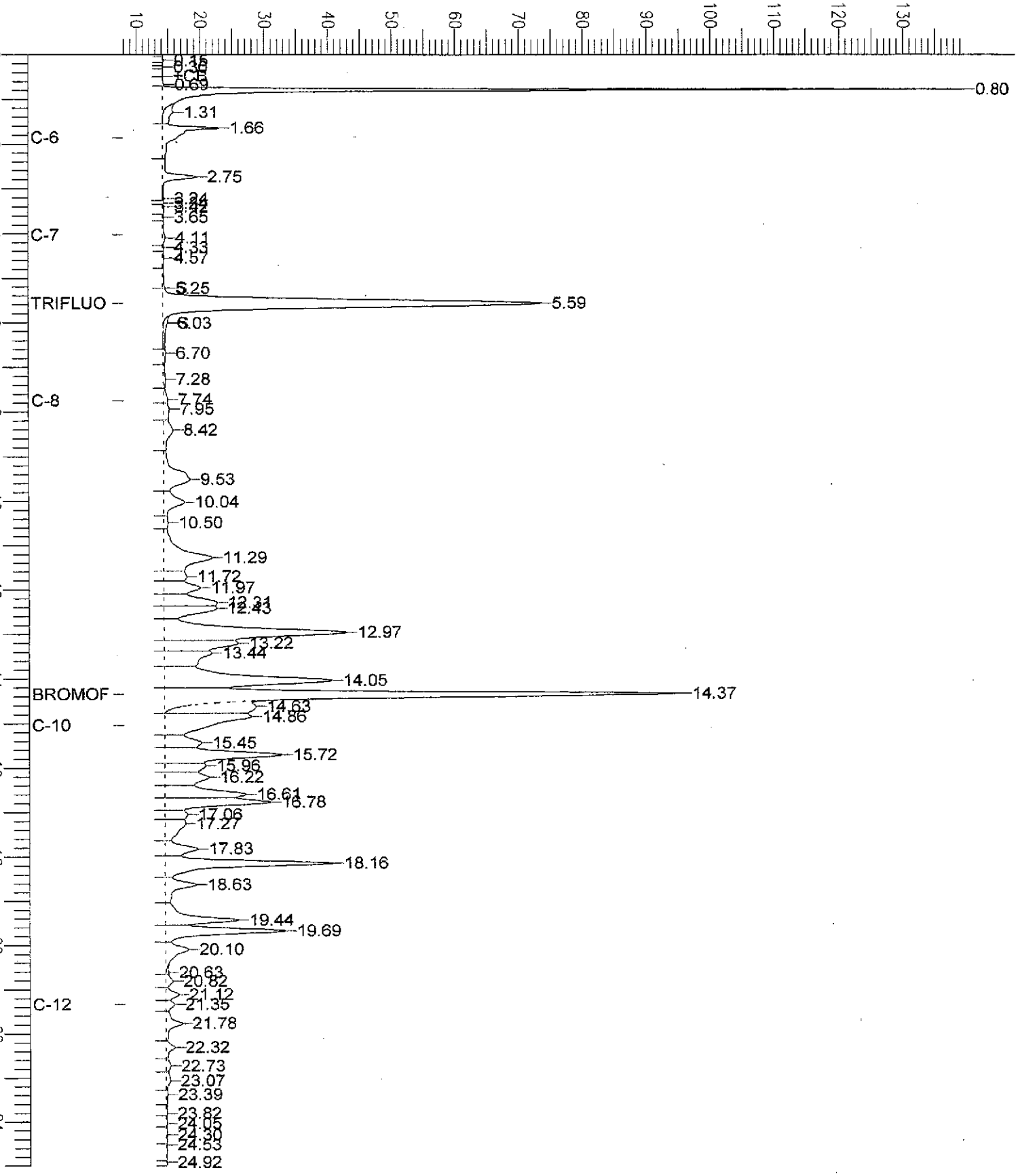


Chromatogram

Sample Name : 170270-006,88068
FileName : G:\GC05\DATA\030G010.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: 8 mV

Sample #: b1.3 Page 1 of 1
Date : 1/30/04 05:45 PM
Time of Injection: 1/30/04 03:42 PM
Low Point : 7.89 mV High Point : 139.74 mV
Plot Scale: 131.8 mV

GW-4

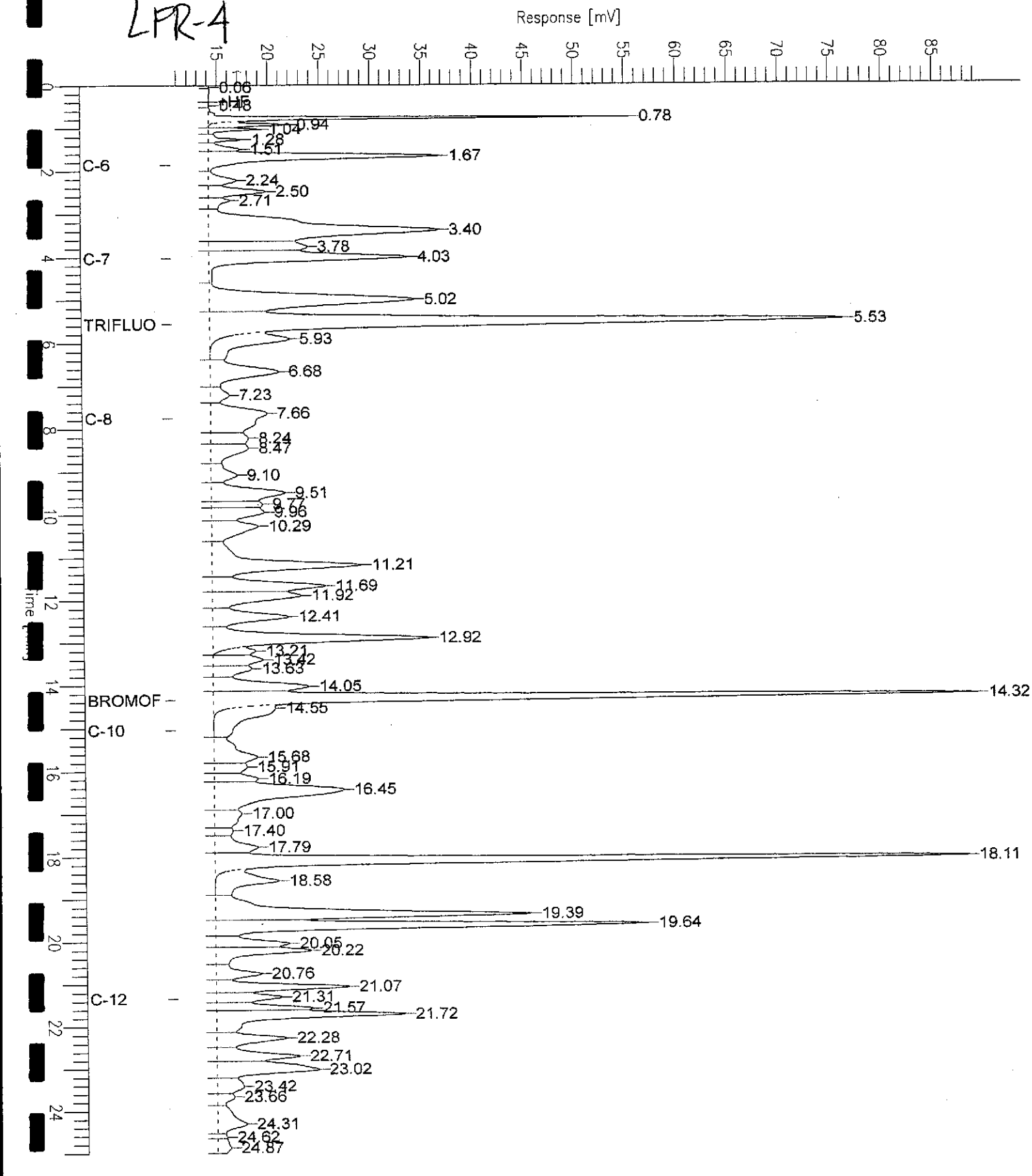


Chromatogram

Sample Name : 170270-008,88068,tvh
FileName : G:\GC05\DATA\030G022.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: 10 mV

Sample #: b1.3
Date : 2/2/04 09:42 AM
Time of Injection: 1/31/04 12:13 PM
Low Point : 10.43 mV High Point : 89.10 mV
Plot Scale: 78.7 mV

LPR-4

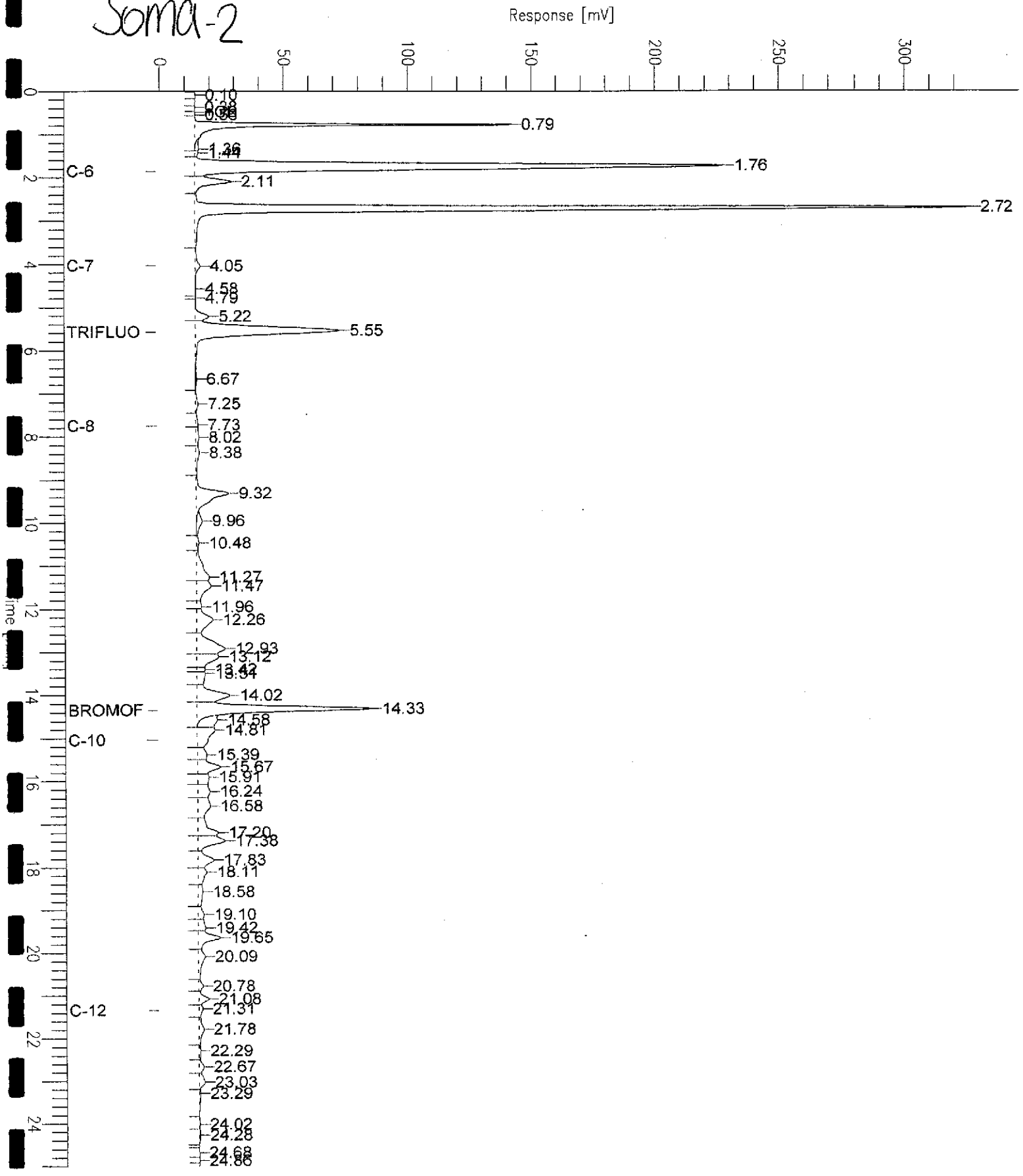


Chromatogram

Sample Name : 170270-010,88068,tvh
FileName : G:\GC05\DATA\030G024.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -1 mV

Sample #: b1.3 Page 1 of 1
Date : 1/31/04 01:45 PM
Time of Injection: 1/31/04 01:20 PM
Low Point : -1.43 mV High Point : 326.67 mV
Plot Scale: 328.1 mV

Soma-2

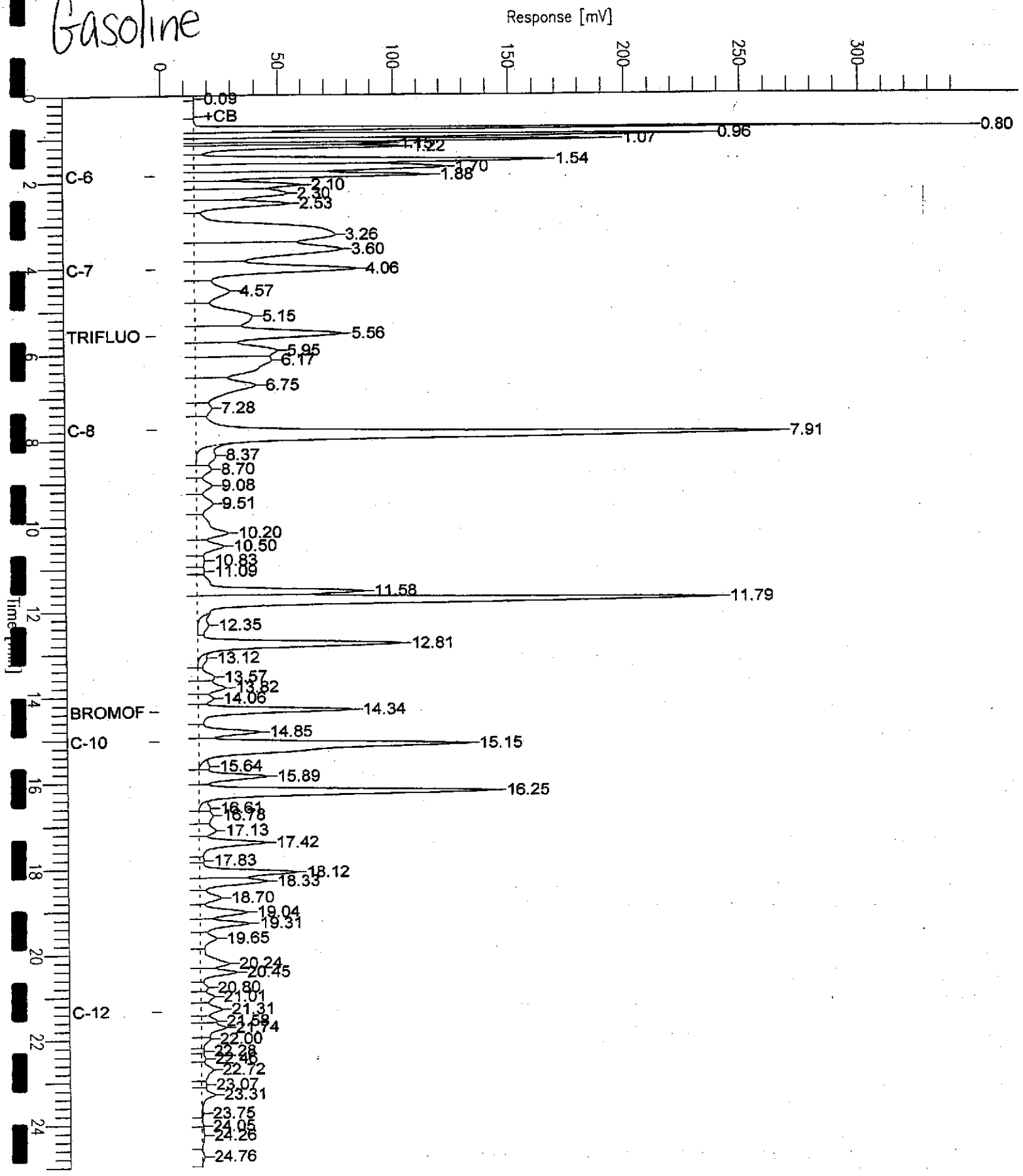


Chromatogram

Sample Name : ccv/lcs,qc239453,88068,04ws0146,5/5000
File Name : G:\GC05\DATA\030G003.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -2 mV

Sample #: Page 1 of 1
Date : 1/30/04 12:09 PM
Time of Injection: 1/30/04 11:43 AM
Low Point : -2.27 mV High Point : 348.44 mV
Plot Scale: 350.7 mV

Gasoline

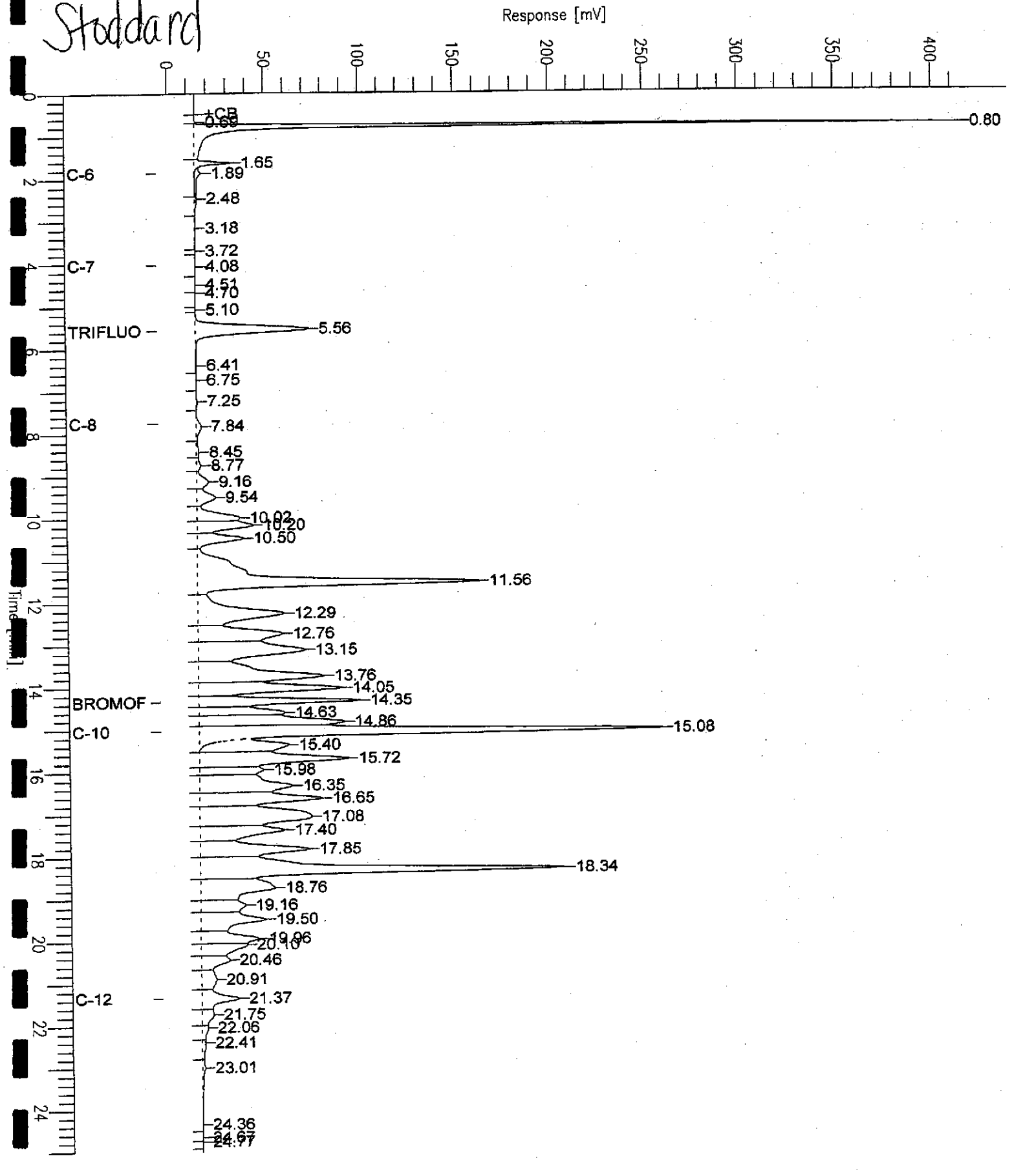


Chromatogram

Sample Name : ccv,stodd,88068,03ws1821,5/5000
FileName : G:\GC05\DATA\030G004.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -6 mV

Sample #: Page 1 of 1
Date : 1/30/04 12:42 PM
Time of Injection: 1/30/04 12:17 PM
Low Point : -5.70 mV High Point : 415.48 mV
Plot Scale: 421.2 mV

Stoddard



Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC239453	Batch#:	88068
Matrix:	Water	Analyzed:	01/30/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,248	112	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	125	57-150
Bromofluorobenzene (FID)	129	65-144

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8015B
Field ID:	LFR-3	Batch#:	88068
MSS Lab ID:	170270-002	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/31/04
Dil'n Fac:	1.000		

Type: MS Lab ID: QC239484

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	18.91	2,000	2,178	108	76-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	57-150
Bromofluorobenzene (FID)	147 *	65-144

Type: MSD Lab ID: QC239485

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,182	108	76-120	0	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	57-150
Bromofluorobenzene (FID)	145 *	65-144

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

3.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	88065
Lab ID:	170270-001	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
Diln Fac:	1.250		

Analyte	Result	RL
Freon 12	ND	13
Chloromethane	ND	13
Vinyl Chloride	ND	13
Bromomethane	ND	13
Chloroethane	ND	13
Trichlorofluoromethane	ND	6.3
Acetone	ND	25
Freon 113	ND	6.3
1,1-Dichloroethene	ND	6.3
Methylene Chloride	ND	25
Carbon Disulfide	ND	6.3
MTBE	ND	6.3
trans-1,2-Dichloroethene	ND	6.3
Vinyl Acetate	ND	63
1,1-Dichloroethane	ND	6.3
2-Butanone	ND	13
cis-1,2-Dichloroethene	7.7	6.3
2,2-Dichloropropane	ND	6.3
Chloroform	ND	6.3
Bromochloromethane	ND	13
1,1,1-Trichloroethane	ND	6.3
1,1-Dichloropropene	ND	6.3
Carbon Tetrachloride	ND	6.3
1,2-Dichloroethane	ND	6.3
Benzene	ND	6.3
Trichloroethene	23	6.3
1,2-Dichloropropane	ND	6.3
Bromodichloromethane	ND	6.3
Dibromomethane	ND	6.3
4-Methyl-2-Pentanone	ND	13
cis-1,3-Dichloropropene	ND	6.3
Toluene	ND	6.3
trans-1,3-Dichloropropene	ND	6.3
1,1,2-Trichloroethane	ND	6.3
2-Hexanone	ND	13
1,3-Dichloropropane	ND	6.3
Tetrachloroethene	150	6.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-1	Batch#:	88065
Lab ID:	170270-001	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
Diln Fac:	1.250		

Analyte	Result	RL
Dibromochloromethane	ND	6.3
1,2-Dibromoethane	ND	6.3
Chlorobenzene	ND	6.3
1,1,1,2-Tetrachloroethane	ND	6.3
Ethylbenzene	ND	6.3
m,p-Xylenes	ND	6.3
o-Xylene	ND	6.3
Styrene	ND	6.3
Bromoform	ND	6.3
Isopropylbenzene	ND	6.3
1,1,2,2-Tetrachloroethane	ND	6.3
1,2,3-Trichloropropane	ND	6.3
Propylbenzene	ND	6.3
Bromobenzene	ND	6.3
1,3,5-Trimethylbenzene	ND	6.3
2-Chlorotoluene	ND	6.3
4-Chlorotoluene	ND	6.3
tert-Butylbenzene	ND	6.3
1,2,4-Trimethylbenzene	ND	6.3
sec-Butylbenzene	ND	6.3
para-Isopropyl Toluene	ND	6.3
1,3-Dichlorobenzene	ND	6.3
1,4-Dichlorobenzene	ND	6.3
n-Butylbenzene	ND	6.3
1,2-Dichlorobenzene	ND	6.3
1,2-Dibromo-3-Chloropropane	ND	6.3
1,2,4-Trichlorobenzene	ND	6.3
Hexachlorobutadiene	ND	6.3
Naphthalene	ND	6.3
1,2,3-Trichlorobenzene	ND	6.3

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	104	77-129
Toluene-d8	95	80-120
Bromofluorobenzene	110	80-123

ND= Not Detected
RL= Reporting Limit

4.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-3	Batch#:	88065
Lab ID:	170270-002	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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

5.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-3	Batch#:	88065
Lab ID:	170270-002	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	100	80-121
1,2-Dichloroethane-d4	101	77-129
Toluene-d8	94	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Batch#:	88065
Lab ID:	170270-003	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/31/04
Diln Fac:	62.50		

Analyte	Result	RL
Freon 12	ND	630
Chloromethane	ND	630
Vinyl Chloride	ND	630
Bromomethane	ND	630
Chloroethane	ND	630
Trichlorofluoromethane	ND	310
Acetone	ND	1,300
Freon 113	ND	310
1,1-Dichloroethene	ND	310
Methylene Chloride	ND	1,300
Carbon Disulfide	ND	310
MTBE	ND	310
trans-1,2-Dichloroethene	ND	310
Vinyl Acetate	ND	3,100
1,1-Dichloroethane	ND	310
2-Butanone	ND	630
cis-1,2-Dichloroethene	7,700	310
2,2-Dichloropropane	ND	310
Chloroform	ND	310
Bromochloromethane	ND	630
1,1,1-Trichloroethane	ND	310
1,1-Dichloropropene	ND	310
Carbon Tetrachloride	ND	310
1,2-Dichloroethane	ND	310
Benzene	ND	310
Trichloroethene	ND	310
1,2-Dichloropropane	ND	310
Bromodichloromethane	ND	310
Dibromomethane	ND	310
4-Methyl-2-Pentanone	ND	630
cis-1,3-Dichloropropene	ND	310
Toluene	ND	310
trans-1,3-Dichloropropene	ND	310
1,1,2-Trichloroethane	ND	310
2-Hexanone	ND	630
1,3-Dichloropropane	ND	310
Tetrachloroethene	ND	310

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-3	Batch#:	88065
Lab ID:	170270-003	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/31/04
Diln Fac:	62.50		

Analyte	Result	RL
Dibromochloromethane	ND	310
1,2-Dibromoethane	ND	310
Chlorobenzene	ND	310
1,1,1,2-Tetrachloroethane	ND	310
Ethylbenzene	ND	310
m,p-Xylenes	ND	310
o-Xylene	ND	310
Styrene	ND	310
Bromoform	ND	310
Isopropylbenzene	ND	310
1,1,2,2-Tetrachloroethane	ND	310
1,2,3-Trichloropropane	ND	310
Propylbenzene	ND	310
Bromobenzene	ND	310
1,3,5-Trimethylbenzene	ND	310
2-Chlorotoluene	ND	310
4-Chlorotoluene	ND	310
tert-Butylbenzene	ND	310
1,2,4-Trimethylbenzene	ND	310
sec-Butylbenzene	ND	310
para-Isopropyl Toluene	ND	310
1,3-Dichlorobenzene	ND	310
1,4-Dichlorobenzene	ND	310
n-Butylbenzene	ND	310
1,2-Dichlorobenzene	ND	310
1,2-Dibromo-3-Chloropropane	ND	310
1,2,4-Trichlorobenzene	ND	310
Hexachlorobutadiene	ND	310
Naphthalene	ND	310
1,2,3-Trichlorobenzene	ND	310

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	105	77-129
Toluene-d8	95	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

6.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	88065
Lab ID:	170270-004	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	6.9	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	57	5.0

ND= Not Detected
RL= Reporting Limit

7.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-2	Batch#:	88065
Lab ID:	170270-004	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	101	80-121
1,2-Dichloroethane-d4	106	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	110	80-123

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Units:	ug/L
Lab ID:	170270-005	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	10	1.000	88065	01/30/04
Chloromethane	ND	10	1.000	88065	01/30/04
Vinyl Chloride	ND	10	1.000	88065	01/30/04
Bromomethane	ND	10	1.000	88065	01/30/04
Chloroethane	ND	10	1.000	88065	01/30/04
Trichlorofluoromethane	ND	5.0	1.000	88065	01/30/04
Acetone	ND	20	1.000	88065	01/30/04
Freon 113	ND	5.0	1.000	88065	01/30/04
1,1-Dichloroethene	ND	5.0	1.000	88065	01/30/04
Methylene Chloride	ND	20	1.000	88065	01/30/04
Carbon Disulfide	ND	5.0	1.000	88065	01/30/04
MTBE	ND	5.0	1.000	88065	01/30/04
trans-1,2-Dichloroethene	ND	5.0	1.000	88065	01/30/04
Vinyl Acetate	ND	50	1.000	88065	01/30/04
1,1-Dichloroethane	ND	5.0	1.000	88065	01/30/04
2-Butanone	ND	10	1.000	88065	01/30/04
cis-1,2-Dichloroethene	ND	5.0	1.000	88065	01/30/04
2,2-Dichloropropane	ND	5.0	1.000	88065	01/30/04
Chloroform	ND	5.0	1.000	88065	01/30/04
Bromochloromethane	ND	10	1.000	88065	01/30/04
1,1,1-Trichloroethane	ND	5.0	1.000	88065	01/30/04
1,1-Dichloropropene	ND	5.0	1.000	88065	01/30/04
Carbon Tetrachloride	ND	5.0	1.000	88065	01/30/04
1,2-Dichloroethane	ND	5.0	1.000	88065	01/30/04
Benzene	ND	5.0	1.000	88065	01/30/04
Trichloroethene	ND	5.0	1.000	88065	01/30/04
1,2-Dichloropropane	ND	5.0	1.000	88065	01/30/04
Bromodichloromethane	ND	5.0	1.000	88065	01/30/04
Dibromomethane	ND	5.0	1.000	88065	01/30/04
4-Methyl-2-Pentanone	ND	10	1.000	88065	01/30/04
cis-1,3-Dichloropropene	ND	5.0	1.000	88065	01/30/04
Toluene	ND	5.0	1.000	88065	01/30/04
trans-1,3-Dichloropropene	ND	5.0	1.000	88065	01/30/04
1,1,2-Trichloroethane	ND	5.0	1.000	88065	01/30/04
2-Hexanone	ND	10	1.000	88065	01/30/04
1,3-Dichloropropane	ND	5.0	1.000	88065	01/30/04
Tetrachloroethene	170	10	2.000	88118	02/02/04
Dibromochloromethane	ND	5.0	1.000	88065	01/30/04
1,2-Dibromoethane	ND	5.0	1.000	88065	01/30/04

ND= Not Detected
RL= Reporting Limit

8.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-3	Units:	ug/L
Lab ID:	170270-005	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04

Analyte	Result	RL	Dil'n Fac	Batch#	Analyzed
Chlorobenzene	ND	5.0	1.000	88065	01/30/04
1,1,1,2-Tetrachloroethane	ND	5.0	1.000	88065	01/30/04
Ethylbenzene	ND	5.0	1.000	88065	01/30/04
m,p-Xylenes	ND	5.0	1.000	88065	01/30/04
o-Xylene	ND	5.0	1.000	88065	01/30/04
Styrene	ND	5.0	1.000	88065	01/30/04
Bromoform	ND	5.0	1.000	88065	01/30/04
Isopropylbenzene	ND	5.0	1.000	88065	01/30/04
1,1,2,2-Tetrachloroethane	ND	5.0	1.000	88065	01/30/04
1,2,3-Trichloropropane	ND	5.0	1.000	88065	01/30/04
Propylbenzene	ND	5.0	1.000	88065	01/30/04
Bromobenzene	ND	5.0	1.000	88065	01/30/04
1,3,5-Trimethylbenzene	ND	5.0	1.000	88065	01/30/04
2-Chlorotoluene	ND	5.0	1.000	88065	01/30/04
4-Chlorotoluene	ND	5.0	1.000	88065	01/30/04
tert-Butylbenzene	ND	5.0	1.000	88065	01/30/04
1,2,4-Trimethylbenzene	ND	5.0	1.000	88065	01/30/04
sec-Butylbenzene	ND	5.0	1.000	88065	01/30/04
para-Isopropyl Toluene	ND	5.0	1.000	88065	01/30/04
1,3-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
1,4-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
n-Butylbenzene	ND	5.0	1.000	88065	01/30/04
1,2-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
1,2-Dibromo-3-Chloropropane	ND	5.0	1.000	88065	01/30/04
1,2,4-Trichlorobenzene	ND	5.0	1.000	88065	01/30/04
Hexachlorobutadiene	ND	5.0	1.000	88065	01/30/04
Naphthalene	ND	5.0	1.000	88065	01/30/04
1,2,3-Trichlorobenzene	ND	5.0	1.000	88065	01/30/04

Surrogate	%REC	Limits	Dil'n Fac	Batch#	Analyzed
Dibromofluoromethane	101	80-121	1.000	88065	01/30/04
1,2-Dichloroethane-d4	104	77-129	1.000	88065	01/30/04
Toluene-d8	97	80-120	1.000	88065	01/30/04
Bromofluorobenzene	111	80-123	1.000	88065	01/30/04

ND= Not Detected
RL= Reporting Limit

B.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-4	Batch#:	88065
Lab ID:	170270-006	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	10	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	8.1	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	GW-4	Batch#:	88065
Lab ID:	170270-006	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	7.7	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	102	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

9.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	88065
Lab ID:	170270-007	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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

10.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	88065
Lab ID:	170270-007	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
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	99	80-121
1,2-Dichloroethane-d4	105	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

10.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-4	Batch#:	88118
Lab ID:	170270-008	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	02/02/04
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	11	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

11.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	LFR-4	Batch#:	88118
Lab ID:	170270-008	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	02/02/04
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	100	80-121
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-123

ND= Not Detected
RL= Reporting Limit

11.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-1	Units:	ug/L
Lab ID:	170270-009	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04

Analyte	Result	RL	Dil'n Fac	Batch#	Analyzed
Freon 12	ND	10	1.000	88065	01/30/04
Chloromethane	ND	10	1.000	88065	01/30/04
Vinyl Chloride	ND	10	1.000	88065	01/30/04
Bromomethane	ND	10	1.000	88065	01/30/04
Chloroethane	ND	10	1.000	88065	01/30/04
Trichlorofluoromethane	ND	5.0	1.000	88065	01/30/04
Acetone	ND	20	1.000	88065	01/30/04
Freon 113	ND	5.0	1.000	88065	01/30/04
1,1-Dichloroethene	ND	5.0	1.000	88065	01/30/04
Methylene Chloride	ND	20	1.000	88065	01/30/04
Carbon Disulfide	ND	5.0	1.000	88065	01/30/04
MTBE	190	10	2.000	88118	02/02/04
trans-1,2-Dichloroethene	ND	5.0	1.000	88065	01/30/04
Vinyl Acetate	ND	50	1.000	88065	01/30/04
1,1-Dichloroethane	ND	5.0	1.000	88065	01/30/04
2-Butanone	ND	10	1.000	88065	01/30/04
cis-1,2-Dichloroethene	44	5.0	1.000	88065	01/30/04
2,2-Dichloropropane	ND	5.0	1.000	88065	01/30/04
Chloroform	ND	5.0	1.000	88065	01/30/04
Bromochloromethane	ND	10	1.000	88065	01/30/04
1,1,1-Trichloroethane	ND	5.0	1.000	88065	01/30/04
1,1-Dichloropropene	ND	5.0	1.000	88065	01/30/04
Carbon Tetrachloride	ND	5.0	1.000	88065	01/30/04
1,2-Dichloroethane	ND	5.0	1.000	88065	01/30/04
Benzene	ND	5.0	1.000	88065	01/30/04
Trichloroethene	ND	5.0	1.000	88065	01/30/04
1,2-Dichloropropane	5.9	5.0	1.000	88065	01/30/04
Bromodichloromethane	ND	5.0	1.000	88065	01/30/04
Dibromomethane	ND	5.0	1.000	88065	01/30/04
4-Methyl-2-Pentanone	ND	10	1.000	88065	01/30/04
cis-1,3-Dichloropropene	ND	5.0	1.000	88065	01/30/04
Toluene	ND	5.0	1.000	88065	01/30/04
trans-1,3-Dichloropropene	ND	5.0	1.000	88065	01/30/04
1,1,2-Trichloroethane	ND	5.0	1.000	88065	01/30/04
2-Hexanone	ND	10	1.000	88065	01/30/04
1,3-Dichloropropane	ND	5.0	1.000	88065	01/30/04
Tetrachloroethene	19	5.0	1.000	88065	01/30/04
Dibromochloromethane	ND	5.0	1.000	88065	01/30/04
1,2-Dibromoethane	ND	5.0	1.000	88065	01/30/04

D= Not Detected
L= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-1	Units:	ug/L
Lab ID:	170270-009	Sampled:	01/29/04
Matrix:	Water	Received:	01/29/04

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Chlorobenzene	ND	5.0	1.000	88065	01/30/04
1,1,1,2-Tetrachloroethane	ND	5.0	1.000	88065	01/30/04
Ethylbenzene	ND	5.0	1.000	88065	01/30/04
m,p-Xylenes	ND	5.0	1.000	88065	01/30/04
o-Xylene	ND	5.0	1.000	88065	01/30/04
Styrene	ND	5.0	1.000	88065	01/30/04
Bromoform	ND	5.0	1.000	88065	01/30/04
Isopropylbenzene	ND	5.0	1.000	88065	01/30/04
1,1,2,2-Tetrachloroethane	ND	5.0	1.000	88065	01/30/04
1,2,3-Trichloropropane	ND	5.0	1.000	88065	01/30/04
Propylbenzene	ND	5.0	1.000	88065	01/30/04
Bromobenzene	ND	5.0	1.000	88065	01/30/04
1,3,5-Trimethylbenzene	ND	5.0	1.000	88065	01/30/04
2-Chlorotoluene	ND	5.0	1.000	88065	01/30/04
4-Chlorotoluene	ND	5.0	1.000	88065	01/30/04
tert-Butylbenzene	ND	5.0	1.000	88065	01/30/04
1,2,4-Trimethylbenzene	ND	5.0	1.000	88065	01/30/04
sec-Butylbenzene	ND	5.0	1.000	88065	01/30/04
para-Isopropyl Toluene	ND	5.0	1.000	88065	01/30/04
1,3-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
1,4-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
n-Butylbenzene	ND	5.0	1.000	88065	01/30/04
1,2-Dichlorobenzene	ND	5.0	1.000	88065	01/30/04
1,2-Dibromo-3-Chloropropane	ND	5.0	1.000	88065	01/30/04
1,2,4-Trichlorobenzene	ND	5.0	1.000	88065	01/30/04
Hexachlorobutadiene	ND	5.0	1.000	88065	01/30/04
Naphthalene	ND	5.0	1.000	88065	01/30/04
1,2,3-Trichlorobenzene	ND	5.0	1.000	88065	01/30/04

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	102	80-121	1.000	88065	01/30/04
1,2-Dichloroethane-d4	107	77-129	1.000	88065	01/30/04
Toluene-d8	99	80-120	1.000	88065	01/30/04
Bromofluorobenzene	112	80-123	1.000	88065	01/30/04

ND= Not Detected
RL= Reporting Limit

12.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-2	Batch#:	88065
Lab ID:	170270-010	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
Diln Fac:	3.333		

Analyte	Result	RL
Freon 12	ND	33
Chloromethane	ND	33
Vinyl Chloride	ND	33
Bromomethane	ND	33
Chloroethane	ND	33
Trichlorofluoromethane	ND	17
Acetone	ND	67
Freon 113	ND	17
1,1-Dichloroethene	ND	17
Methylene Chloride	ND	67
Carbon Disulfide	ND	17
MTBE	270	17
trans-1,2-Dichloroethene	ND	17
Vinyl Acetate	ND	170
1,1-Dichloroethane	ND	17
2-Butanone	ND	33
cis-1,2-Dichloroethene	430	17
2,2-Dichloropropane	ND	17
Chloroform	ND	17
Bromochloromethane	ND	33
1,1,1-Trichloroethane	ND	17
1,1-Dichloropropene	ND	17
Carbon Tetrachloride	ND	17
1,2-Dichloroethane	ND	17
Benzene	ND	17
Trichloroethene	ND	17
1,2-Dichloropropane	ND	17
Bromodichloromethane	ND	17
Dibromomethane	ND	17
4-Methyl-2-Pentanone	ND	33
cis-1,3-Dichloropropene	ND	17
Toluene	ND	17
trans-1,3-Dichloropropene	ND	17
1,1,2-Trichloroethane	ND	17
2-Hexanone	ND	33
1,3-Dichloropropane	ND	17
Tetrachloroethene	36	17

ND= Not Detected
RL= Reporting Limit

13.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Field ID:	SOMA-2	Batch#:	88065
Lab ID:	170270-010	Sampled:	01/28/04
Matrix:	Water	Received:	01/29/04
Units:	ug/L	Analyzed:	01/30/04
Diln Fac:	3.333		

Analyte	Result	RL
Dibromochloromethane	ND	17
1,2-Dibromoethane	ND	17
Chlorobenzene	ND	17
1,1,1,2-Tetrachloroethane	ND	17
Ethylbenzene	ND	17
m,p-Xylenes	ND	17
o-Xylene	ND	17
Styrene	ND	17
Bromoform	ND	17
Isopropylbenzene	ND	17
1,1,2,2-Tetrachloroethane	ND	17
1,2,3-Trichloropropane	ND	17
Propylbenzene	ND	17
Bromobenzene	ND	17
1,3,5-Trimethylbenzene	ND	17
2-Chlorotoluene	ND	17
4-Chlorotoluene	ND	17
tert-Butylbenzene	ND	17
1,2,4-Trimethylbenzene	ND	17
sec-Butylbenzene	ND	17
para-Isopropyl Toluene	ND	17
1,3-Dichlorobenzene	ND	17
1,4-Dichlorobenzene	ND	17
n-Butylbenzene	ND	17
1,2-Dichlorobenzene	ND	17
1,2-Dibromo-3-Chloropropane	ND	17
1,2,4-Trichlorobenzene	ND	17
Hexachlorobutadiene	ND	17
Naphthalene	ND	17
1,2,3-Trichlorobenzene	ND	17

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-121
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

13.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239439	Batch#:	88065
Matrix:	Water	Analyzed:	01/30/04
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

14.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239439	Batch#:	88065
Matrix:	Water	Analyzed:	01/30/04
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	107	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

14.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239635	Batch#:	88118
Matrix:	Water	Analyzed:	02/02/04
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

16.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239635	Batch#:	88118
Matrix:	Water	Analyzed:	02/02/04
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	98	80-121
1,2-Dichloroethane-d4	101	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	112	80-123

ND= Not Detected
RL= Reporting Limit

16.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	88065
Units:	ug/L	Analyzed:	01/30/04
Dil'n Fac:	1.000		

Type: BS Lab ID: QC239437

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	50.39	101	73-126
Benzene	50.00	46.85	94	80-120
Trichloroethene	50.00	48.05	96	79-125
Toluene	50.00	49.38	99	80-120
Chlorobenzene	50.00	49.30	99	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

Type: BSD Lab ID: QC239438

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	47.33	95	73-126	6	20
Benzene	50.00	46.51	93	80-120	1	20
Trichloroethene	50.00	48.27	97	79-125	0	20
Toluene	50.00	49.48	99	80-120	0	20
Chlorobenzene	50.00	50.39	101	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-121
1,2-Dichloroethane-d4	95	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-123

RPD= Relative Percent Difference

17.0

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	170270	Location:	3815 Broadway, Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2511	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	88118
Units:	ug/L	Analyzed:	02/02/04
Diln Fac:	1.000		

Type: BS Lab ID: QC239632

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	52.83	106	73-126
Benzene	50.00	45.53	91	80-120
Trichloroethene	50.00	47.56	95	79-125
Toluene	50.00	47.21	94	80-120
Chlorobenzene	50.00	50.24	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-121
1,2-Dichloroethane-d4	96	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-123

Type: BSD Lab ID: QC239633

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	53.06	106	73-126	0	20
Benzene	50.00	45.10	90	80-120	1	20
Trichloroethene	50.00	47.32	95	79-125	0	20
Toluene	50.00	45.88	92	80-120	3	20
Chlorobenzene	50.00	48.44	97	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-121
1,2-Dichloroethane-d4	95	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-123

RPD= Relative Percent Difference