ENVIRONMENTAL ENGINEERING, INC
6620 Owens Drive, Suite A • Pleasanton, CA 94588-3334
TEL (925)734-6400 • FAX(925)734-6401

November 3, 2005

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

Project: 01-2512

Subject: Site Located at 3822 Manila Avenue, Oakland, California
Formerly 3815 Broadway, Oakland, Glovatorium Facility

Dear Mr. Wickham:

SOMA's "Re-Evaluation of Preferential Pathways Report" for the subject property has been uploaded to the State's geotracker database for your review.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have any questions or comments.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist

Stuart Depper
Clean Tech Machinery

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

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RE-EVALUATION OF PREFERENTIAL PATHWAYS

3822 MANILA AVENUE
OAKLAND, CALIFORNIA

November 3, 2005

Project 2512

Prepared for

Stuart Depper
1260 B Street, Suite 220
Hayward, California 94541

Prepared by

SOMA Environmental Engineering, Inc.
6620 Owens Drive, Suite A
Pleasanton, California 94588

CERTIFICATION

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Stuart Depper, the property owner of 3822 Manila Avenue, Oakland, California. This report details the potential for contamination transport along preferential pathways, as requested by Alameda County Health Care Services in their letter dated June 21, 2005, entitled, “Fuel Leak Case No. RO0000458, Glovatorium, 3815 Broadway, Oakland, CA”.

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

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1.0 INTRODUCTION

On behalf of Mr. Stuart Depper, SOMA Environmental Engineering, Inc. (SOMA) has prepared this evaluation of preferential pathways for the property located at 3822 Manila Avenue (formerly 3815 Broadway Avenue), Oakland, California, hereafter referred to as "the Site". Pursuant to the Alameda County Health Care Services' (ACHCS) letter dated June 21, 2005, SOMA evaluated the potential for contamination transport along preferential pathways to further define the horizontal extent of the groundwater contamination plume emanating from the Site. This report documents the summary of activities conducted to date to identify and characterize preferential pathways; presents maps and cross-section diagrams that illustrate the locations and depths of preferential pathways; address data gaps needed for the evaluation of preferential pathways and recommendations for addressing those data gaps.

1.1 Site Description

As shown in Figure 1, the Site is located between Manila Avenue and Broadway, near the intersection of 38th Street in Oakland, California. The ground surface of the Site is concrete and asphalt that 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. The storm drain closely follows the path of a historical creek (Cemetery or Glen Echo Creek) that appears on maps from the City of Oakland Public Works Department (Figure 1A). The depth to the top of the storm conduit is approximately 8.5 feet below ground surface (bgs) on the eastern side of Manila Avenue at manhole MH-1 and approximately 13.2 feet bgs at the manhole MH-2 in the middle of 38th Street. 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. Figure 2 shows the locations of the storm and sanitary sewer conduits.

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 reported as ranging from 800 gallons to 5,000 gallons. They reportedly contained Stoddard solvent, fuel oil, and possibly waste oil. In June 1997, HK2 obtained the City of Oakland Fire Prevention Bureau permit No. 52-97 to decommission the existing USTs. In August 1997, the six USTs were abandoned in-place by backfilling the tanks with either cement-sand slurry or pea gravel. In addition, there are three USTs located under the sidewalk on 38th Street, in front of property owned by Mr. Earl Thompson.

The surrounding properties are primarily commercial businesses and residential housing. TOSCO Marketing Company (TOSCO) is located north and up-gradient of the Site, at 40th Street and Broadway, and contains a number of groundwater monitoring wells, as shown in Figure 2. The groundwater monitoring wells are currently monitored on a semi-annual basis. Past groundwater monitoring events have indicated the presence of volatile organic compounds (VOCs) and petroleum hydrocarbons in the groundwater beneath the Site. The source of the contamination is believed to be either the former USTs, which were used to store Stoddard solvent and VOCs at the Site, or releases from the piping on the washer system and from washing the floors with Stoddard solvent.

1.2 Summary 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 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) 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 approximate depths of 19 to 25 feet bgs. The 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 upon the request of the ACHCS, an investigation of potential groundwater preferential flow paths was initiated by Levine.Fricke.Recon (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 July and August 2000, LFR installed four groundwater monitoring wells, 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 results from this sampling event 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.

SOMA installed five on-site groundwater monitoring wells, SOMA-1 through SOMA-5, on October 4, 11 and 12, 2001.

Due to the presence of several feet of free phase petroleum hydrocarbons in SOMA-4, a passive skimmer pump (Durham Geo-Enterprise Model TR-254) was installed inside this well in June 2002. That system removed 19.75 gallons of free product between June and mid-October 2002. From mid-October 2002 until February 2004 no product was removed from SOMA-4. In February 2004, a Flexible Axial Peristaltic (FAP) pump

was installed in SOMA-4, and from February 2004 until June 2004, over 400 gallons of free product was removed from SOMA-4. From February 2004 until the present time, over 400 gallons of oil and water has been removed from SOMA-4.

In August 2004, SOMA converted B-3 and B-8 into two-inch diameter product removal wells and initiated free product removal from these locations. Free-phase petroleum product still exists in SOMA-4, B-3 and B-8 and SOMA is actively removing free product from SOMA-4 and B-8.

1.3 Site Geology and Hydrogeology

The Site is located on the alluvial plain between the San Francisco Bay shoreline and the Oakland hills. Surface sediments in the Site's vicinity consist of Holocene alluvial deposits that are representative of an alluvial fan depositional environment. These deposits consist of brown, medium dense sand that fines upward to sandy or silty clay. The pattern of stream channel deposition results in a three-dimensional network of coarse-grained sediments interspersed with finer grained silts and clays. The individual units tend to be discontinuous lenses aligned parallel to the axis of the former stream flow direction (LFR, 2001).

Sediments encountered in the on-site soil borings 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. 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. Figure 2 shows the locations of the soil borings and groundwater monitoring wells.

To better define the Site hydrogeology and evaluate whether or not the underground utility conduits, such as the storm drain and sewer lines are acting as a preferential flow pathways, geologic cross-sections along the storm drain and sewer lines were sketched. Appendix A contains the boring logs used during the construction of geologic cross sections. Figure 3 shows the locations of the geologic cross-sections and fence diagram.

As shown on fence diagram A-A' (Figure 4), the sediments encountered in the borings drilled by GeoSolv and LFR consisted predominantly of silty clay, sandy clay, and clayey sand. Materials consisting of silty gravel, silty sand, and gravelly clay were encountered in borings GW-1, GW-4, GW-5, and GW-6a at depths from approximately 7 to 13 feet below ground surface (bgs). These units are discontinuous and were not encountered in borings E-21 and GW-8. Sand-clay mixtures were encountered in borings E-21and GW-8 at depths from approximately 7 to 15 feet bgs. A silty clay layer was encountered in these borings at depths of approximately 13 to 18 feet bgs and 15 to 19 feet bgs, respectively.

As shown on cross section B-B' (Figure 5), sediments encountered in borings drilled consisted predominantly of silty clay, sandy clay, and clayey sand. Sand-clay mixtures were encountered in borings GW-1, GW-2, and GW-8 at depths from approximately 4.5 to 12 feet bgs. These units are discontinuous and were not encountered in boring GW-3. Materials consisting of clayey gravel and silty sand were encountered at depths from approximately 6 to 12 feet bgs. A silty clay layer was encountered in these borings at depths of approximately 13 to 18 feet bgs and 15 to 19 feet bgs, respectively.

As shown on cross-section C-C' (Figure 6), sediments encountered in borings drilled consisted predominantly of silty clay, sandy clay, and clayey sand. Sand-clay mixtures were encountered in borings B-9, B-10, E-15, and GW-8 at depths from approximately 7 to 16 feet bgs. Gravelly sand was encountered in borings B-9 and B-10 at depths from approximately 15 to 16.5 bgs and 14 to 15.5 bgs, respectively. A silty clay layer was encountered in all of the borings at a depth of approximately 16 feet bgs.

As indicated from the fence diagram and geologic cross-sections, groundwater was generally encountered at depths from approximately 8 to 14 feet bgs. According to the results of the historical groundwater monitoring activities, groundwater occurs at 4 to 14 feet bgs, and 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 ranged between 1.2×10^{-4} and 6.9×10^{-4} cm/sec, which are 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.

1.4 Nature and Extent of Groundwater Contamination

The monitoring events at the Site indicate that the groundwater contains petroleum hydrocarbons and volatile organic compounds (VOCs). Petroleum hydrocarbons and its additives detected in the groundwater at the Site include:

- Stoddard Solvent (TPH-ss);
- Total Petroleum Hydrocarbons as gasoline (TPH-g);
- Methyl tertiary Butyl Ether (MtBE); and
- Benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX).

VOCs detected in the groundwater at the Site include:

- Tetrachloroethene (PCE);
- Trichloroethene (TCE);
- cis-1,2-dichloroethene (cis-1,2-DCE);
- trans-1,2-dichloroethene (trans-1,2-DCE);
- Vinyl Chloride; and
- 1,2-Dichloropropane (1,2-DCP).

2.0 Storm Drain and Sewer Line

In June 1993, a conduit survey using videotape was conducted at the Site to evaluate the integrity of the storm drain and sanitary sewer line. Unfortunately, a copy of the videotape is no longer available for further review. However, LFR reviewed the videotapes to determine the type of construction and the overall condition of the underground storm drain and sanitary sewer line. The purpose of the conduit study was to determine the location and depth of the storm drain that runs beneath the Site and of the sanitary sewer line that runs from the existing and former floor drains inside the building to Manila Street, on the western side of the Glovatorium building. Figure 2 shows the locations of the storm drain and sanitary sewer line.

In 1999, in addition to the videotape study, LFR retained Subdynamic Locating Services (Subdynamic) to survey the physical dimensions and elevations of the storm drain and sewer lines. The following results are documented in LFR's May 6, 1999 report, entitled "Results of Utility Survey and Work Plan for Soil and Grab Groundwater Investigation".

2.1 Storm Drain Survey

The videotape of the storm drain showed the segment of the storm drain that extends southeast from manhole MH-1, on the western side of Manila Avenue. From this manhole, the storm drain runs generally southeast, passes under the Glovatorium

building, and continues southwest to manhole MH-2, in the approximate center of 38th Street, south of the Glovatorium building.

LFR made the following observations of the storm drain while reviewing the videotape. The distances were measured down gradient from manhole MH-1 on the western side of Manila Avenue (LFR, May 1999).

The direction of flow in the storm drain is southerly from north of manhole MH-1 on Manila Avenue, toward 38th Street. The storm drain appears to be constructed of concrete, or possibly brick lined with concrete, and approximately the first 100 feet is circular in cross section. At approximately 83 feet, the top of the storm drain appears to have been patched. This location is approximately under the sidewalk on the eastern side of Manila Avenue, west of the former Glovatorium building.

At approximately 100 feet, the walls of the storm drain become vertical, and the floor becomes flat, while the roof is arched. This is approximately where the storm drain passes under the west wall of the Glovatorium building.

At approximately 112, 135, 164, 190, and 238 feet, vertical joints in the concrete extend up the walls and around the roof arch of the storm drain. At approximately 164, 190, and 238 feet, water was observed seeping into the storm drain in the vicinity of the vertical joints.

At approximately 260 feet, there is a short ramp downward in the floor of the storm drain. The floor of the storm drain is approximately one-foot deeper from this point to at least as far as manhole MH-2 on 38th Street. At approximately 291 feet, an approximately 10-inch diameter lateral connects to the storm drain, near the top of the western wall, below the roof arch. At approximately 324 feet, the storm drain runs under manhole MH-2 on 38th Street.

Subdynamic marked the location and depth of the centerline of the inside roof of the storm drain on the ground surface and on the floor inside the Glovatorium building. After marking the centerline of the storm drain, Subdynamic used a tape to measure and mark the locations of the sidewalls of the storm drain on the surface. The storm drain width was measured at approximately 54 inches (LFR, May 1999).

The depth of the inside roof of the storm drain ranges from approximately four feet under the sidewalk on the eastern side of Manila Avenue to approximately 8.7 feet bgs at a location approximately 64 feet upgradient of manhole MH-2 on 38th Street. The elevations of the inside of the storm drain roof and floor at the manholes on Manila Avenue and 38th Street are shown in Table 1.

The average slope of the roof of the storm conduit between manhole MH-1 and MH-2 was determined to be 0.010 foot per foot. The floor of the storm drain generally slopes at the same rate as the roof, with the exception of an approximately one foot drop in the floor of the storm conduit, 260 feet down gradient from manhole MH-1 on Manila Avenue (approximately 64 feet upgradient of manhole MH-2 on 38th Street).

Fence Diagram A-A' (Figure 4) illustrates approximated vertical and horizontal extent of the storm drain conduit beneath the subject site. Table 2 summarizes the estimated depth to the utility conduits derived from the utility survey data.

2.2 Sanitary Sewer Survey

The videotape of the sanitary sewer line shows a segment that extends from manhole MH-3 in the approximate center of Manila Avenue to a manhole inside the building. Figure 2 shows the location of sanitary sewer conduits and manholes. LFR made the following observations of the sanitary sewer while reviewing the videotape; distances are measured from MH-3 in Manila Avenue (LFR 1999).

The direction of flow in the sanitary sewer line is from the building toward Manila Avenue. The section of the sanitary sewer line extending from MH-3 in Manila Avenue to approximately 6 feet west of the west wall of the Glovatorium building (approximately 26 feet) is constructed of a six inch diameter, cast iron pipe. No holes or cracks were observed in the pipe.

At approximately 26 feet, the six inch diameter pipe connects to a ten inch diameter cast iron pipe. From approximately 26 to 40 feet, the sanitary sewer line was not videotaped because the line dipped too steeply for the camera to pass through it. From approximately 40 to 110 feet, the pipe dips less steeply and was videotaped by running the camera through the pipe from the manhole inside the building. There were no holes or cracks observed in the 10-inch diameter cast iron pipe. There were joints in the pipe at approximately four foot intervals.

At approximately 82 feet, a clean-out connection from the upstairs washroom connects to the sanitary sewer. At approximately 106 feet, there is a service connection to the sanitary sewer, entering from the south. The source of this service connection was not identified. At approximately 110 feet, the sanitary sewer connects to manhole MH-5 inside the building.

As described and documented in LFR's May 6, 1999 report, the drain lines connecting the floor drains to the manhole inside the building are less than 2 feet below the surface. The depth of the sanitary sewer line increases from approximately 3.75 to 5 feet, from the manhole inside the building to a point approximately 25 feet west of this manhole. This seems to indicate the sanitary sewer line slopes at approximately 0.05 foot per foot, assuming the floor surface is level.

Based on LFR's review of the videotape, the sanitary sewer slopes more steeply downward from approximately 7 feet east to approximately 6 feet west of the western wall of the building, where it plunges underneath the storm drain. The sanitary sewer

line is 12.25 feet below the rim of the manhole on Manila Avenue, where it connects to the sanitary sewer line that runs roughly north to south down the middle of Manila Avenue.

Geologic cross-section C-C' (Figure 6) illustrates approximated vertical and horizontal extent of the sanitary sewer drain connection conduit.

The location and depth to the sanitary sewer conduit, which extends from manhole MH-3 on Manila Avenue to manhole MH-4 on the intersection of Manila and 38th Street, was determined upon review of the City of Oakland Public Works Department's maps (Figure 1a).

Geologic cross-section B-B' (Figure 5) illustrates the approximate vertical and horizontal extent of the sanitary sewer conduit. Table 2 summarizes the depth to the 54 inch storm conduit, 16 inch sanitary sewer conduit, as well as 10 inch sanitary sewer site's connection.

3.0 Further Evaluation of Preferential Flow Pathways

In order to better assess the potential for preferential flow pathways, each utility conduit was further analyzed using the historical water level elevations and contaminant levels in the groundwater monitoring wells next to each conduit. As Figure 7 shows, along each utility line certain groundwater monitoring well/soil or groundwater boreholes were used to understand the hydraulic communication between the shallow water-bearing zone and given utility line. Table 3 summarizes the historical depth of the groundwater, as well as the minimum and the maximum depths of the groundwater measured during the groundwater monitoring events from October 1997 through July 2005. (Table 4 summarizes historical groundwater elevation data).

In order to evaluate whether or not the utility conduits are acting as preferential flow pathways, the depth of each utility line in relation to the fluctuating groundwater elevations were compared. The following describes the results of our evaluation.

3.1 Storm Drain Line

The hydraulic communication between the 54-inch storm drain and the shallow water-bearing zone along the storm drain line were further studied at four different locations. As Figure 7 presents, next to the storm drain there are four clusters of groundwater monitoring wells/groundwater boreholes, which were historically monitored. These clusters are shown on Figure 7 as locations A-A'(1) through A-A'(4), along the fence diagram A-A'. Figure 4 shows the physical depths of the storm drain line along hydrogeologic fence diagram A-A'.

To determine whether or not the storm drain is acting as a preferential flow pathway, groundwater data at four different locations along the storm drain were evaluated.

In general, at location A-A'(1) along A-A' as Figure 8 shows, the historical groundwater elevation reported LFR-1 and GW-8 are at or slightly below the bottom of the storm drain. However, at well GW-1 the reported groundwater elevations are higher than the bottom of the storm drain line. Since LFR-1 and GW-8 are closely located next to the storm drain line and groundwater elevations on these wells are at or slightly below the bottom of the storm drain, the possibility of entering groundwater into the storm drain still exist.

Due to the downward dipping of the storm drain in a southerly direction (see Figure 4), at location A-A'(2), the reported groundwater elevation in groundwater borehole E-21 is well above the bottom of the storm drain, therefore it is theoretically possible that the chemically-impacted groundwater in this area to discharge into the storm drain line. In another word, the groundwater level at this location is above the storm drain, but we do not know whether or not any chemical is present in groundwater at this location. As

Figure 9 shows, at locations A-A'(3) and A-A'(4) also due to further dipping of the storm drain in southerly direction, and the fact that the reported water level at GW-4, GW-5 and GW-6 is also above the bottom of the storm drain, groundwater could potentially discharge into the storm drain line

On October 12, 2005 the storm drain manholes along Manila Avenue (MH-1) and 38th Street (MH-2) were inspected by SOMA's field technician. Based on his observation water was observed in both manholes, and was flowing in a southerly direction. The flow rate in MH-2 location was higher than MH-1as was expected.

3.2 Sanitary Sewer Lines

The hydraulic communications between the shallow groundwater and main sanitary sewer line along Manila Avenue was also studied at three locations: LFR-1, GW-2 and GW-3, as depicted in Figure 7. As Figure 10 shows at all three locations the comparison of the historical groundwater elevation in LFR-1, GW-2 and GW-3, with the bottom elevation of the sanitary sewer system, indicates that sanitary sewer along Manila Avenue is always submerged and therefore, could be acting as a groundwater preferential flow pathway.

Figure 11 compares the historical groundwater elevations with the bottom elevation of the 10-inch diameter on-site sewer line at two locations. The two locations have been illustrated in Figure 7. As the results show, at the inlet of the 10-inch diameter on-site sanitary sewer line (Location C-C'(1)) the groundwater elevations in B-10 is far below the bottom elevation of the sewer line. However, at Location C-C'(2) the six inch diameter sewer line is completely submerged and could act as a preferential flow pathway.

4.0 CONCLUSION AND RECOMMENDATIONS

The results of our evaluation indicate that the Site is underlain by fine-grained materials consisting of silty clay or clayey sands/sandy clay materials. As the geologic cross-sections and fence diagram show due to the absence of high permeable material under the Site, the groundwater flow and velocity is very limited and naturally there is no high permeable zone(s) that promote movement of chemically-impacted groundwater from the Site to the off-site areas. However, the presence of man-made structures, such as utility lines could serve as preferential flow pathways.

The results of our preferential flow pathway study also indicate that a 54-inch diameter storm drain and main sanitary sewer line along Manila Avenue are among those structures that could act as preferential flow pathways.

FIGURES

N

approximate scale in feet

0 250 500

Figure 1: Site vicinity map.

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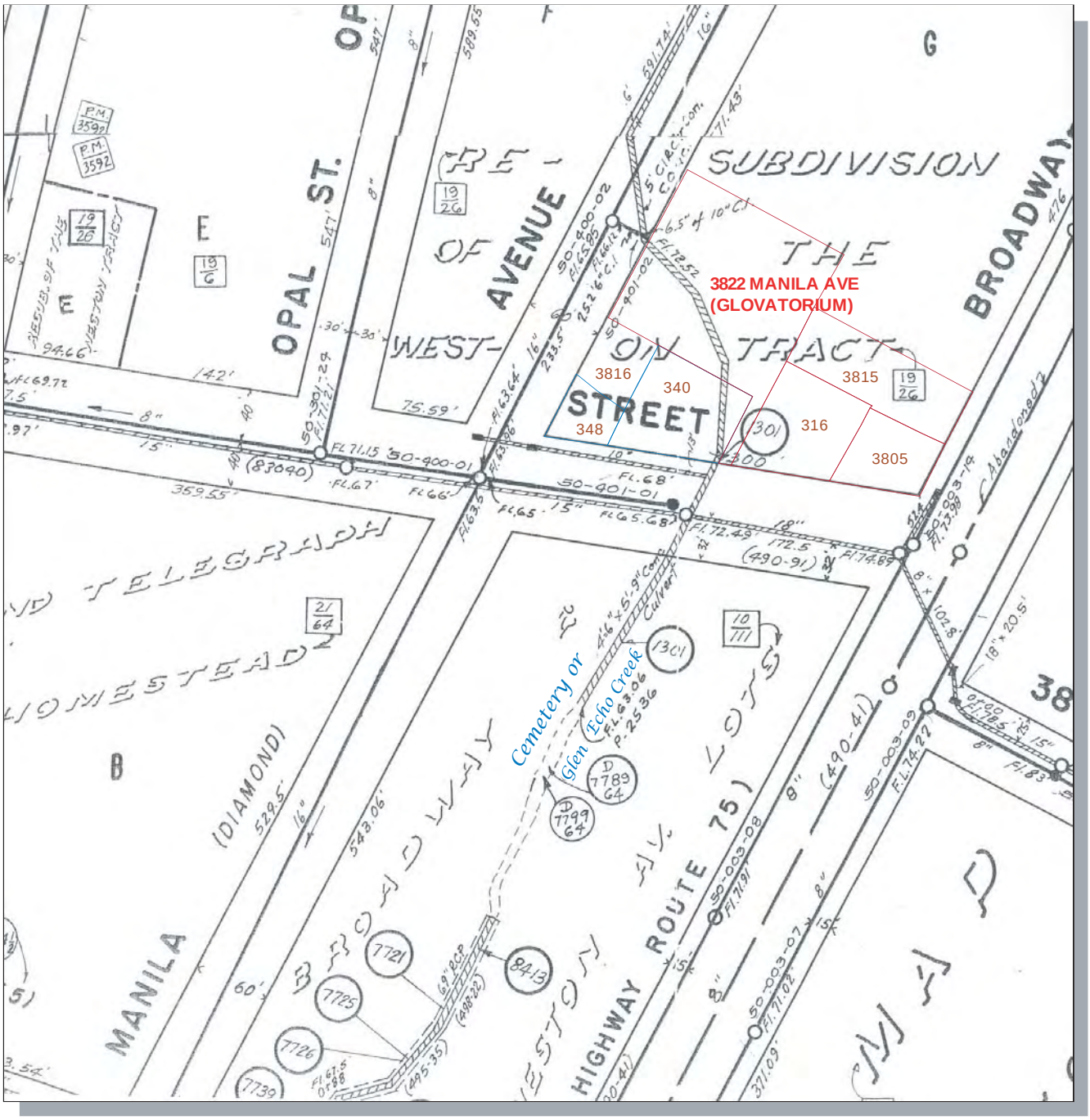

LEGEND

- SANITARY SEWER
- STORM CONDUIT
- MANHOLE
- LAMPHOLE
- INLET
- DEED REFERENCE
- MAP REFERENCE
- ADDRESS 3805

N
W E
S

Map Source: City of Oakland Public Works Department Utility Map (1491 B486)

approximate scale in feet

0 125 250

Figure 1a: City of Oakland Public Works Department Site Map Showing Underground Utilities in the Vicinity of Former Glovatorium Building.

SOMA ENVIRONMENTAL ENGINEERING, INC.

N

COMMERCIAL AREA

COMMERCIAL AREA

PARKING AREA

PARKING AREA

MW-8

MW-9

MW-11

MH-1

MH-3

Sanitary Sewer Manhole

GW-1

GW-8

LFR-1

10" Diameter Cast Iron Sanitary Sewer

THE GLOVATORIUM

E-16

E-25

E-15

MH-5

B-8

E-17

E-18

B-2

B-10

B-9

B-1

SOMA-2

SOMA-3

E-20

B-7

E-19

SOMA-4

B-4

B-6

SOMA-5

B-5

B-3

B-13

GW-2

54" Diameter Storm Drain

E-21

E-22

E-26

LFR-2

E-23

SOMA-1

GW-4

E-24

RESIDENCES

MANILA AVENUE

RESIDENCE

PARKING

RESIDENCE

DRIVE

RESIDENCE

DRIVE

Earl Thompson

THE GLOVATORIUM

BROADWAY

Inlet

GW-3

10" Storm Conduit

B-12

MH-4

GW-5A

B-11

GW-5

GW-7

LFR-4

Lamphole

GW-6A

GW-6

LFR-3

38TH ST

MH-2

SOMA Monitoring Well

TOSCO Monitoring Well

Geosolv Monitoring Well

LFR Monitoring Wells

54" Diameter Storm Conduit

Storm Conduit Manhole

10" Diameter Cast Iron Sanitary Sewer w/ Floor Drains

Sanitary Sewer Manhole

USTs Owned by Earl Thompson

approximate scale in feet

0 40 80

Figure 2: Site map showing locations of monitoring wells, soil borings, and preferential flow pathways.

SOMA ENVIRONMENTAL ENGINEERING, INC.

N

COMMERCIAL AREA

COMMERCIAL AREA

PARKING AREA

PARKING AREA

MW-8

MW-9

MW-11

MH-1

B

C'

A

GW-1

10" Diameter Cast Iron Sanitary Sewer

THE GLOVATORIUM

Sanitary Sewer Manhole **MH-3**

GW-8

LFR-1

E-16

E-25

E-15

MH-5

B-8

E-17

E-18

B-2

B-9

B-10

B-1

C

SOMA-2

SOMA-3

B-7

E-20

E-19

SOMA-4

B-4

B-6

SOMA-5

B-5

B-3

B-13

GW-2

54" Diameter Storm Drain

E-21

E-22

E-26

E-23

LFR-2

SOMA-1

GW-4

E-24

RESIDENCES

MANILA AVENUE

RESIDENCE

PARKING

RESIDENCE

DRIVE

RESIDENCE

DRIVE

Earl Thompson

THE GLOVATORIUM

RED CROSS BUILDING

BROADWAY

Inlet

B'

GW-3

10" Storm Conduit

B-12

GW-5A

B-11

GW-5

GW-7

LFR-4

MH-4

Lamphole

A'

GW-6A

GW-6

LFR-3

38TH ST

MH-2

Fence Diagram A-A'

Geologic Cross Section B-B'

Geologic Cross Section C-C"

SOMA Monitoring Well

TOSCO Monitoring Well

Geosolv Monitoring Well

LFR Monitoring Wells

54" Diameter Storm Conduit

Storm Conduit Manhole

10" Diameter Cast Iron Sanitary Sewer w/ Floor Drains

Sanitary Sewer Manhole

USTs Owned by Earl Thompson

approximate scale in feet

0 40 80

Figure 3: Locations of Fence Diagram A-A' and Geologic Cross-Sections B-B', and C-C'.

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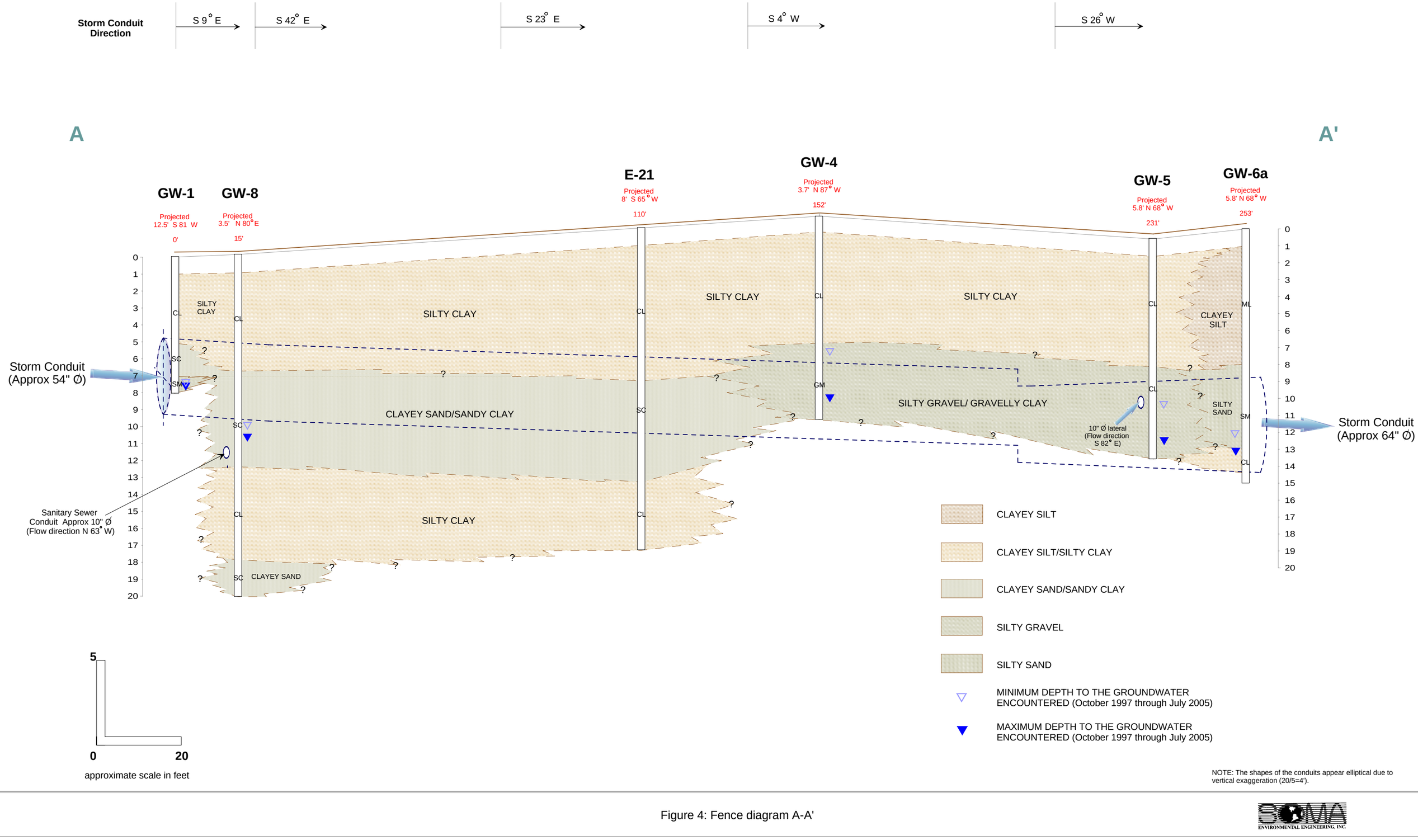


NOTE: The shapes of the conduits appear elliptical due to vertical exaggeration (20/5=4').

Figure 4: Fence diagram A-A'

SOMA ENVIRONMENTAL ENGINEERING, INC.

B'

B

Sanitary Sewer
Conduit Direction

S 27°W

GW-3

Projected
29' N 67°W

200'

GW-2

Projected
30' N 67°W

89'

GW-8

Projected
26' N 67°W

21.5'

GW-1

Projected
31' N 67°W

0'

MANHOLE

(1)

(2)

SILTY CLAY

CLAYEY GRAVEL

CLAYEY SAND/SANDY CLAY

SILTY SAND

CLAYEY SAND

CL

GC

SC

SM

?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Sanitary Sewer
Conduit Approx 16" Ø
(Flow direction S 27° W)

CLAYEY SILT/SILTY CLAY

CLAYEY SAND/SANDY CLAY

SILTY GRAVEL

SILTY SAND

(1) STORM CONDUIT (Approx. 54" ϕ)

(2) SANITARY SEWER CONDUIT CONNECTION
(Approx. 6" Ø , Flow direction N 63 °W)

MINIMUM DEPTH TO THE GROUNDWATER ENCOUNTERED (October 1997 through July 2005)

MAXIMUM DEPTH TO THE GROUNDWATER ENCOUNTERED (October 1997 through July 2005)

5

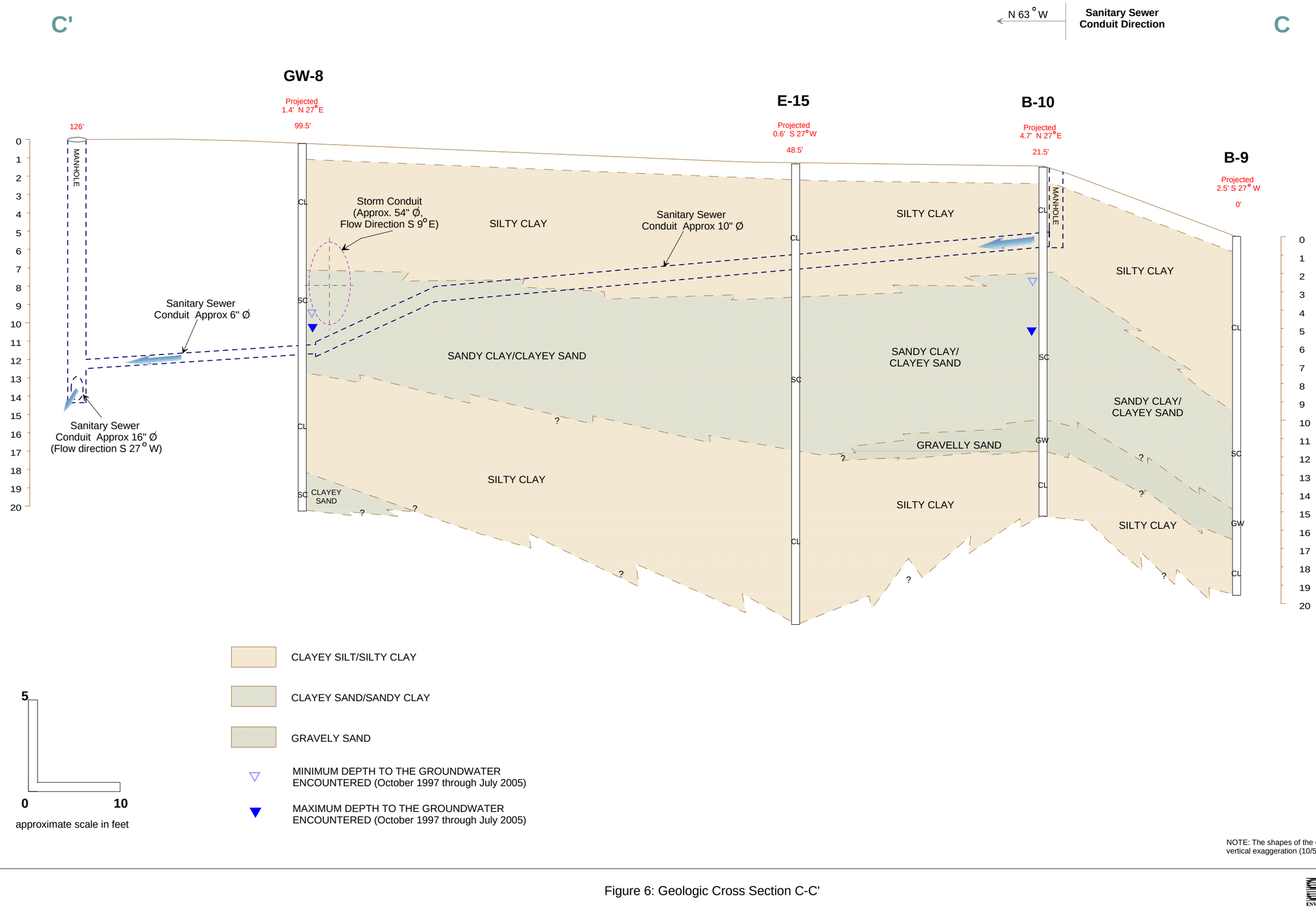
0 20

approximate scale in feet

NOTE: The shapes of the conduits appear elliptical due to vertical exaggeration (20/5=4').

Figure 5: Geologic Cross Section B-B'

ENVIRONMENTAL ENGINEERING, INC.



NOTE: The shapes of the conduits appear elliptical due to vertical exaggeration (10/5=2').

Figure 6: Geologic Cross Section C-C'

ENVIRONMENTAL ENGINEERING, INC.

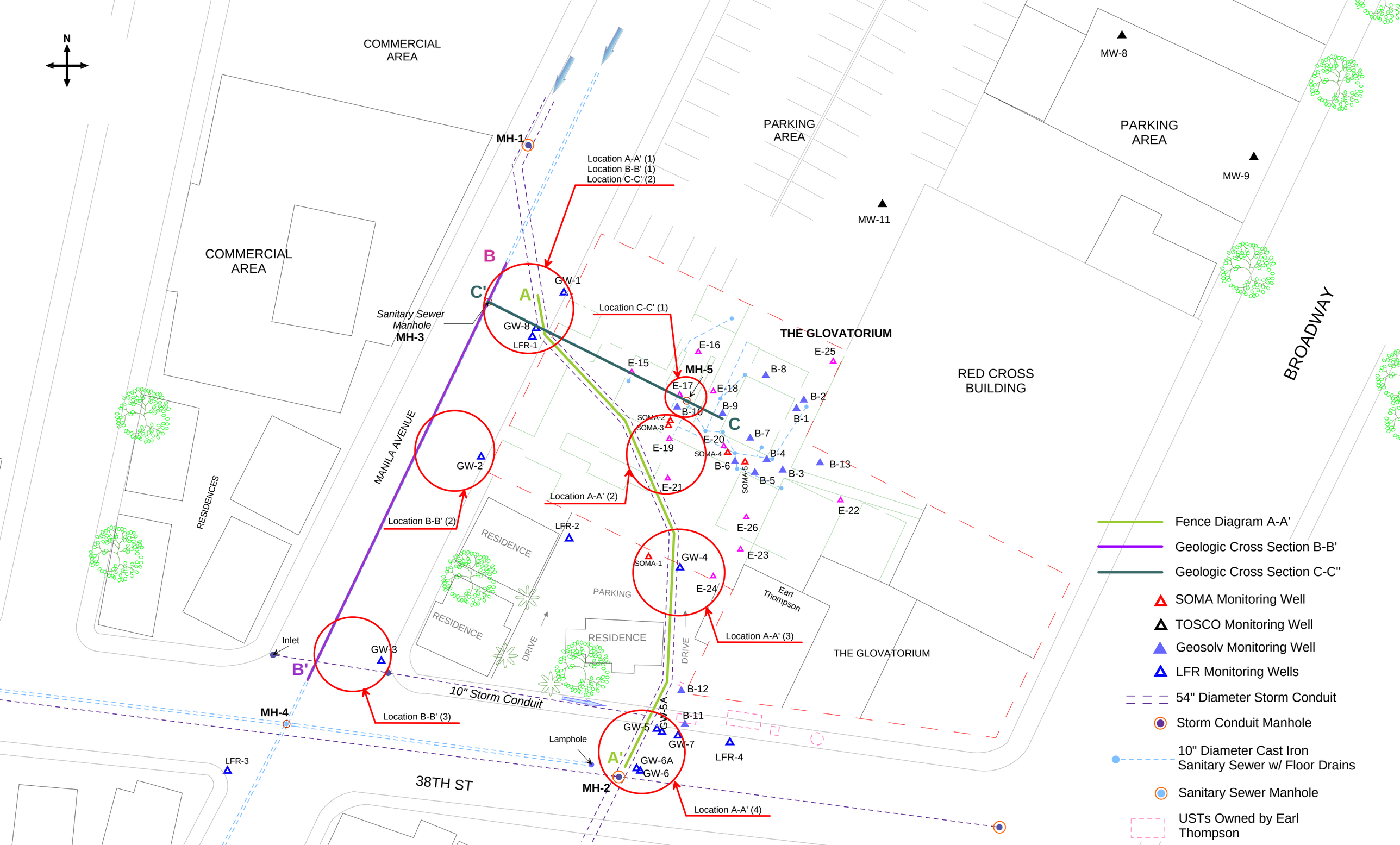
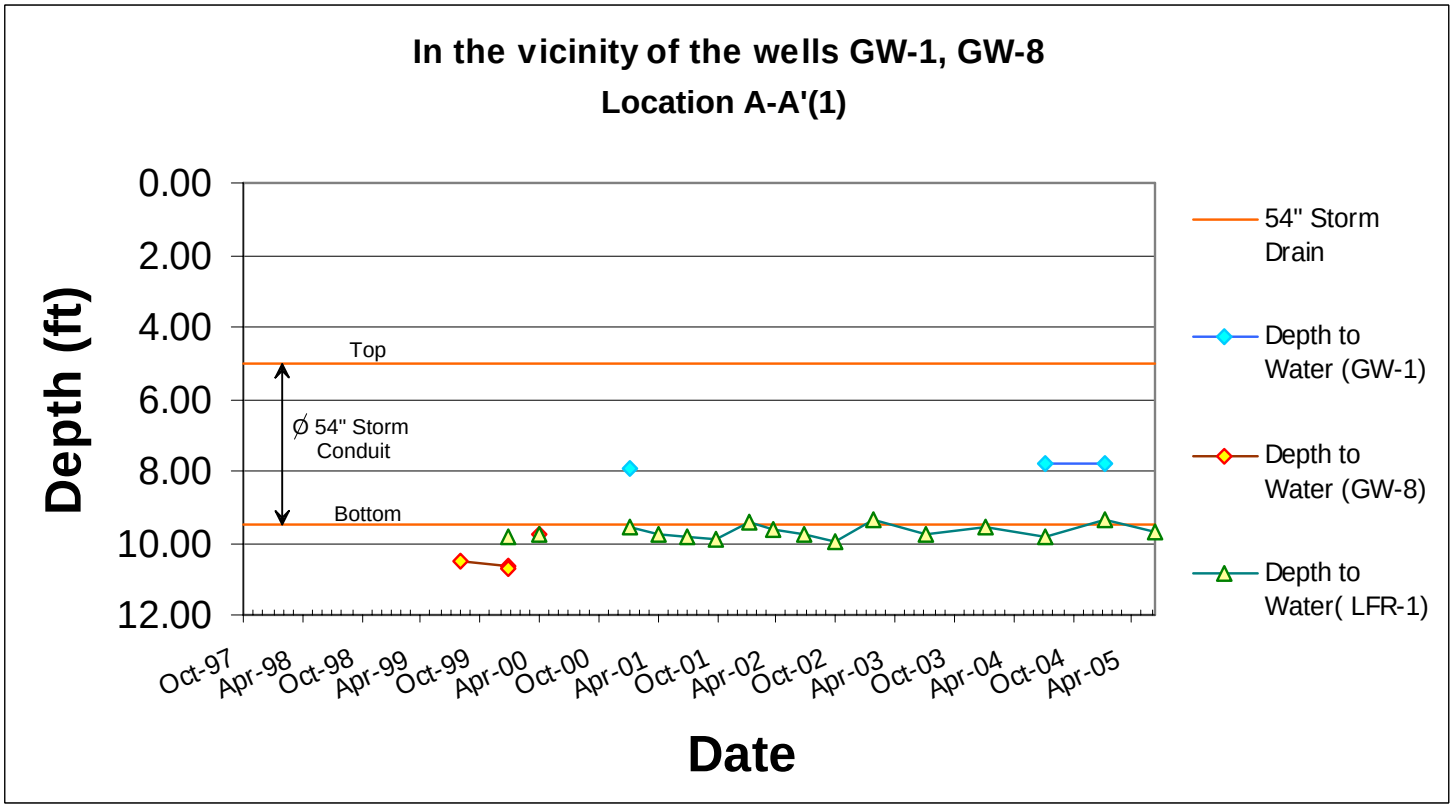


Figure 7: Locations of Fence Diagram, Geologic Cross Sections, and Locations of Interest (Stations).

SOMA ENVIRONMENTAL ENGINEERING, INC.



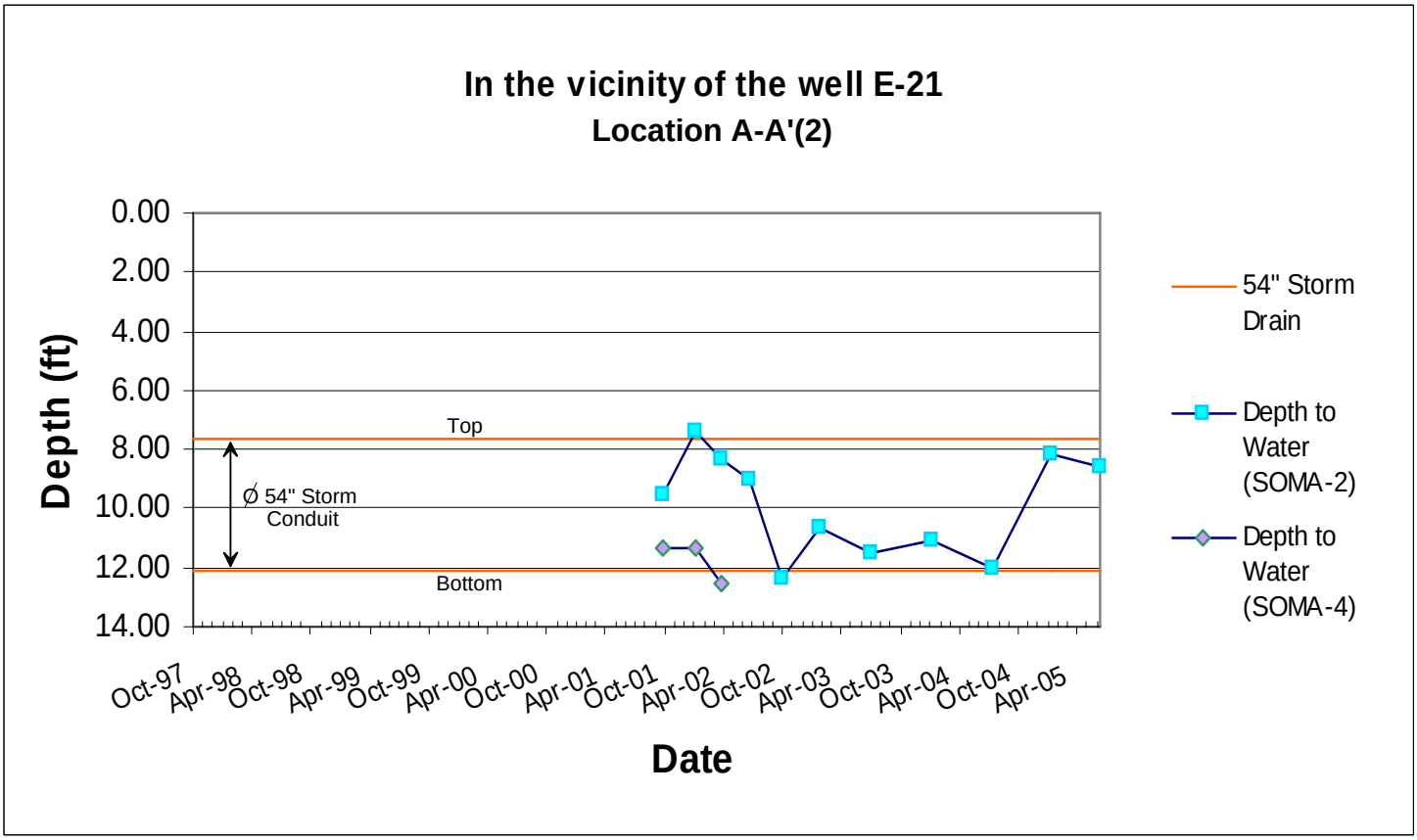
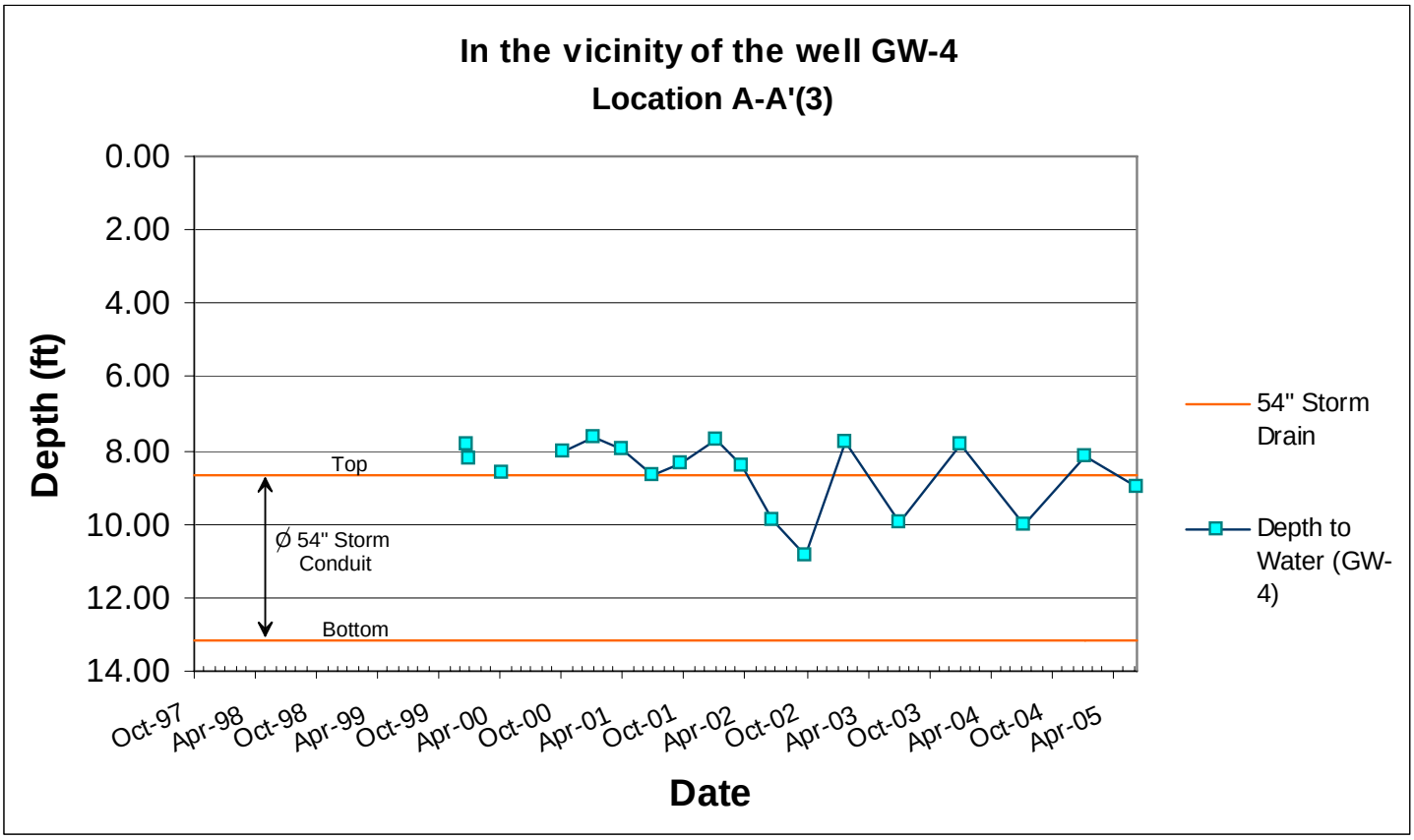


Figure 8: Historical Groundwater Levels at Locations A-A'(1) and A-A'(2)

SOMA ENVIRONMENTAL ENGINEERING, INC.



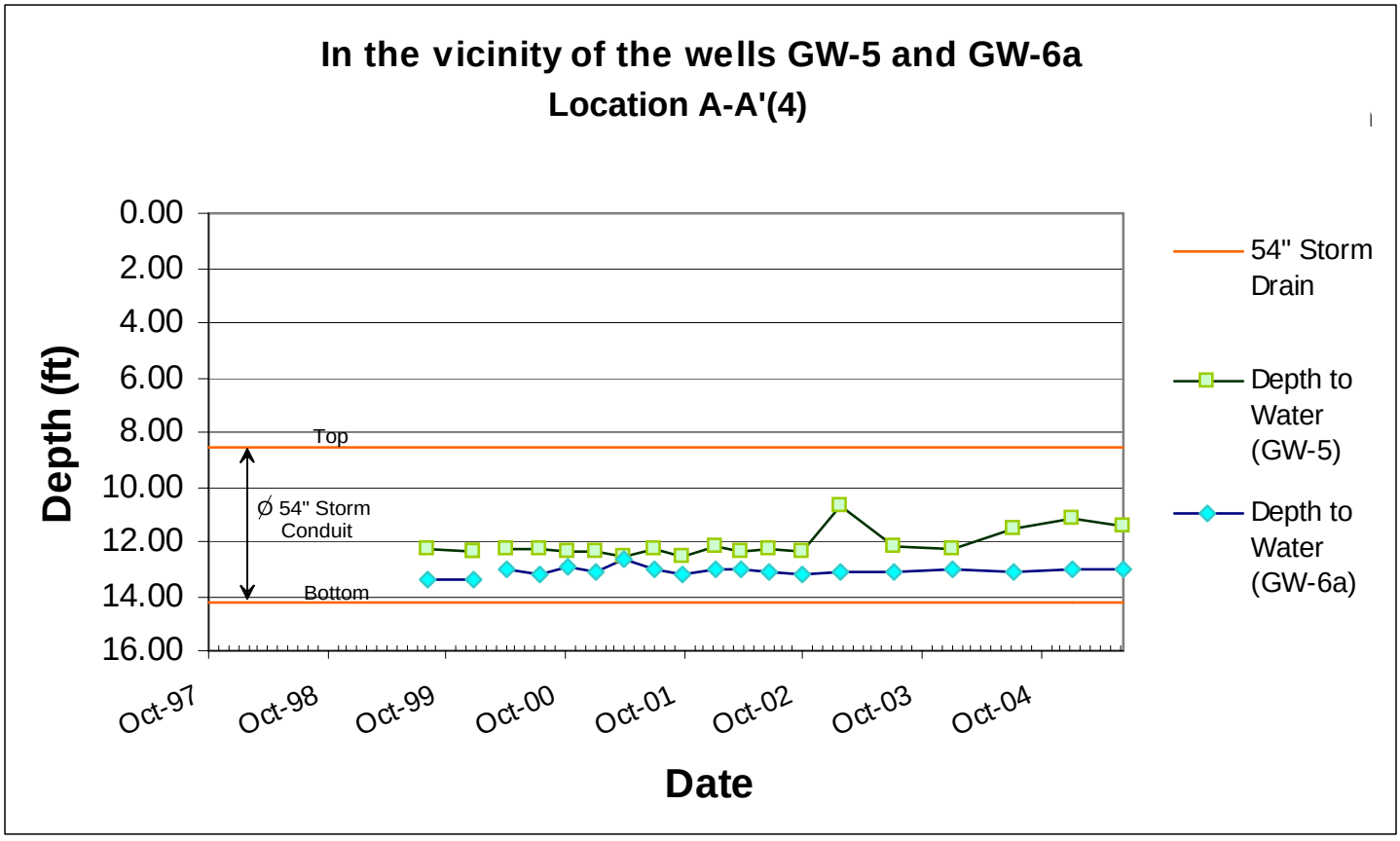
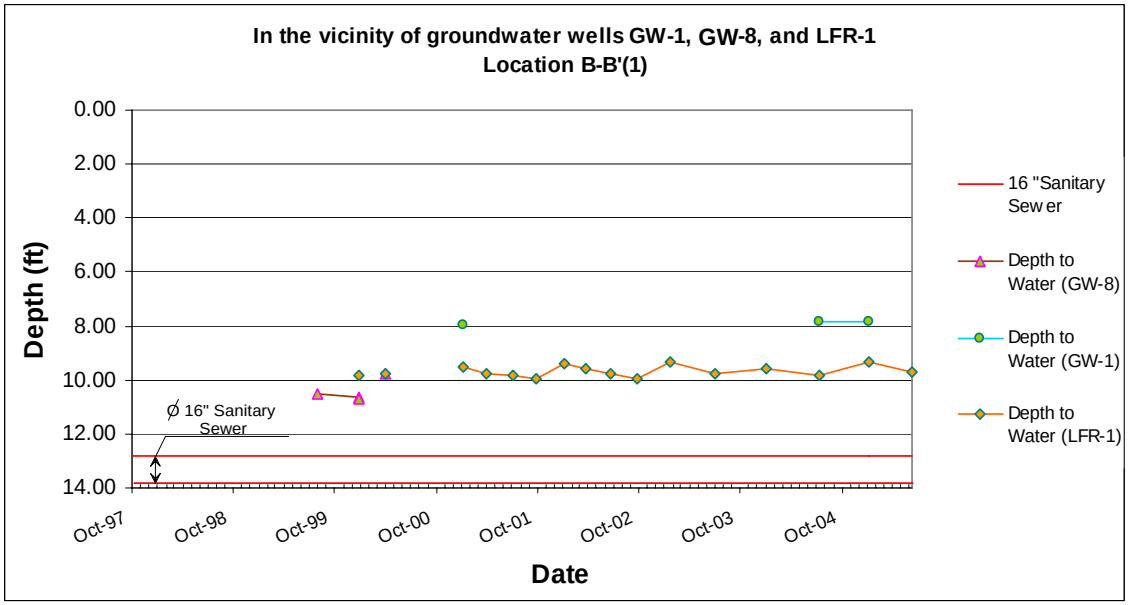
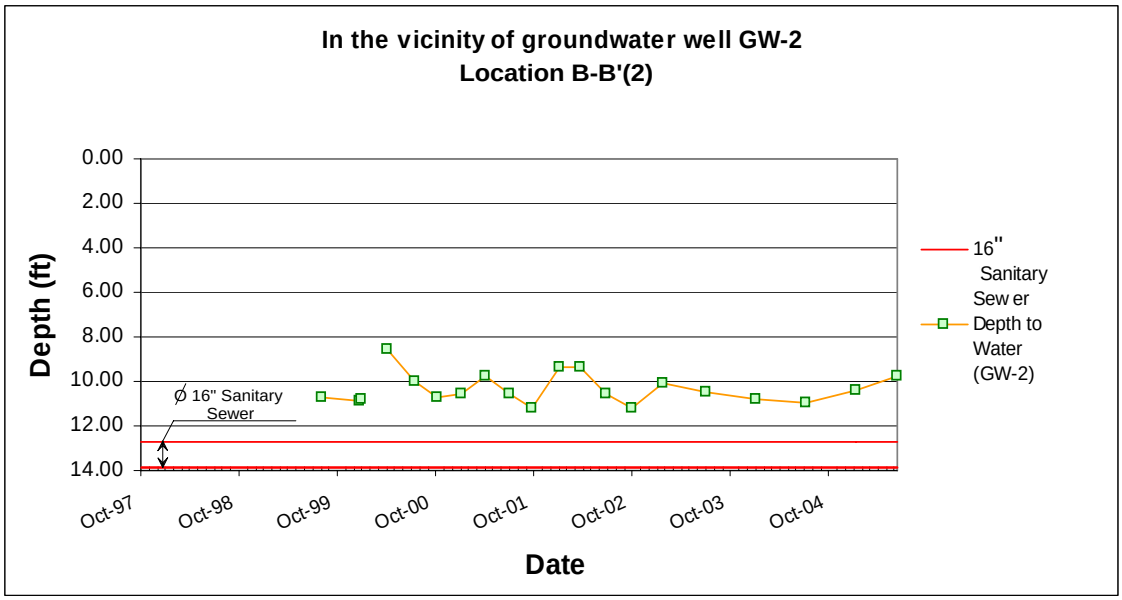


Figure 9: Historical Groundwater Levels at Locations A-A'(3) and A-A'(4)





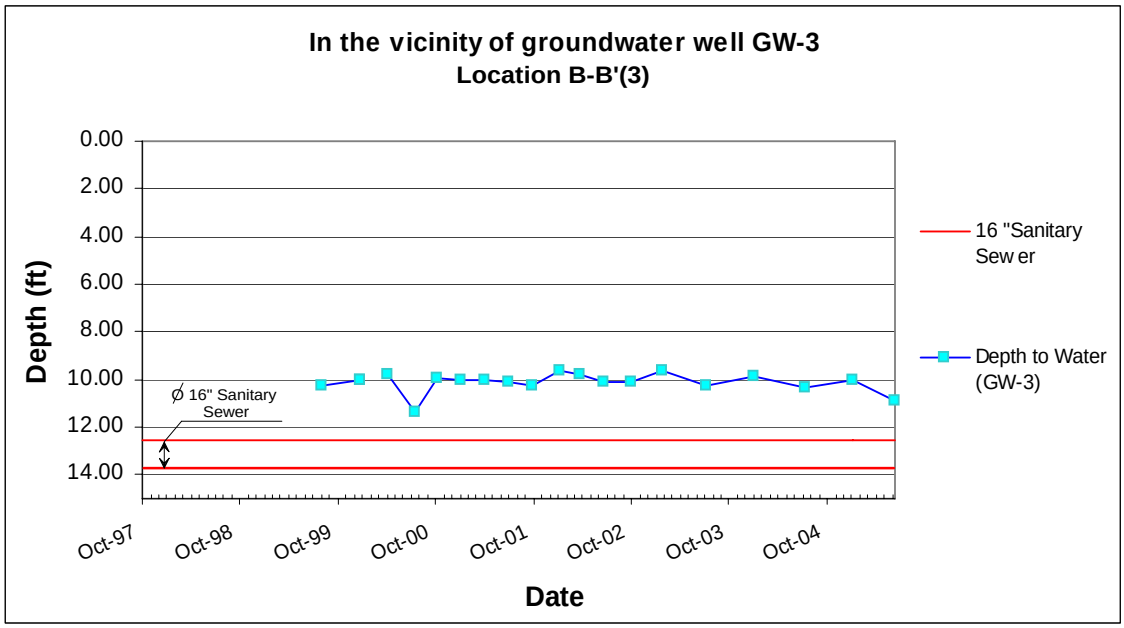
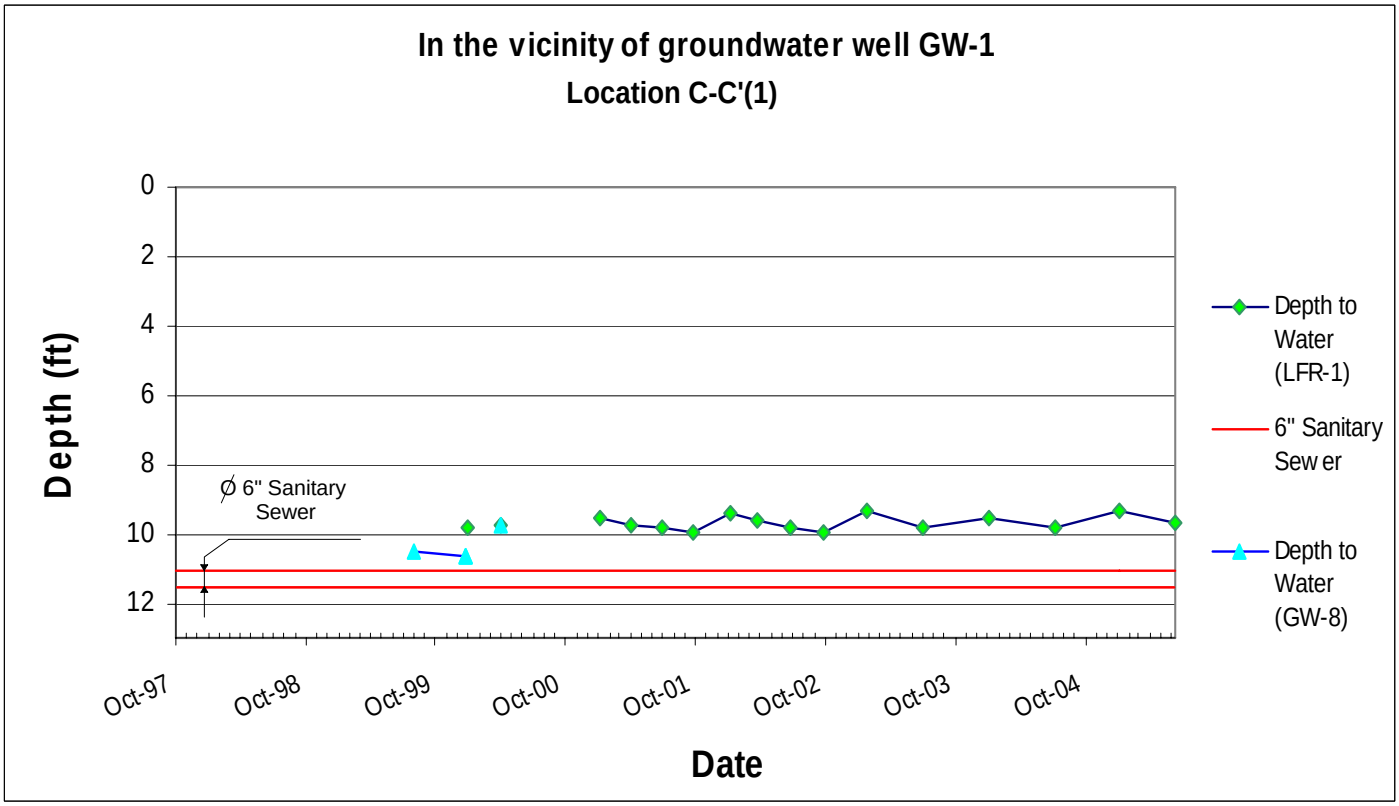


Figure 10: Historical Groundwater Levels at Locations B-B'(1), B-B'(2), and B-B'(3)



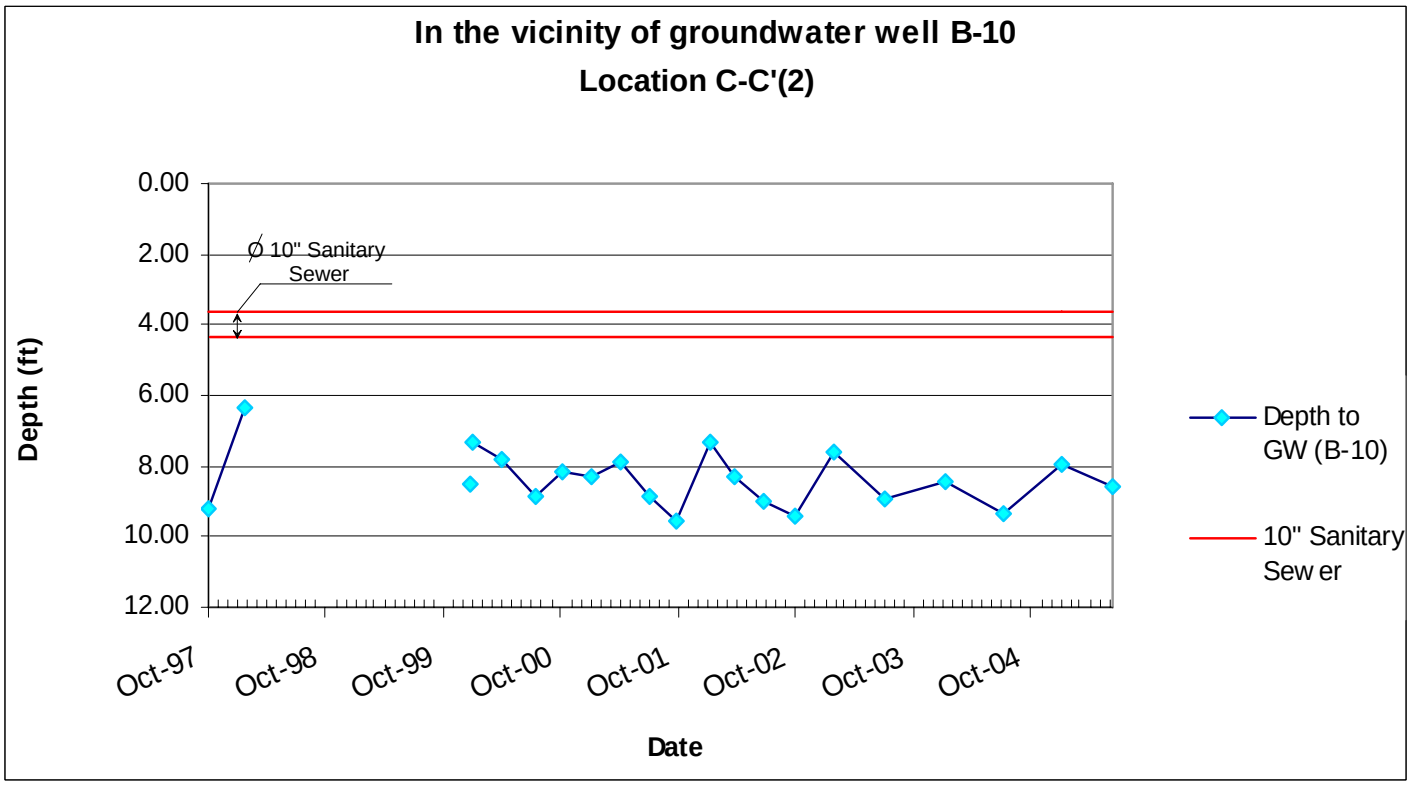


Figure 11: Historical Groundwater Levels at Locations C-C'(1) and A-A'(2)

ENVIRONMENTAL ENGINEERING, INC.

TABLES

Table 1

54" Storm Conduit Survey Data[1]

Former Glovatorium Site

3822 Manila Ave (3815 Broadway), Oakland, California

Manhole Location	Elevation of Rim (feet msl)	Elevation of Inside Storm Conduit-Roof (feet msl)	Elevation Of Inside Storm Drain Floor (Feet msl)	Storm Conduit Diameter (Feet)
MH-1 (Manila Avenue)	80.94	76.4	71.9	4.5
MH-2 (38th Street)	81.76	72.8	67.2	5.6

Note:

msl- Mean sea level

[1] Results of the Utility Survey prfformed by Subdynamic Locating Servises on April 7, 1999 (

Table 2

Estimated Depth to the Utility Conduit
Former Glovatorium Site
3822 Manila Ave (3815 Broadway), Oakland, California

Well ID	Well Depth (ft toc)	Depth to the Top of the Conduit (ft toc)	Depth to the Bottom of the Conduit (ft toc)
Depth to 54" Storm Conduit (From Fence Diagram A-A')			
GW-1	8	4.81	9.31
GW-8	20	5.22	9.72
E-21	19	7.61	12.11
GW-4	12	8.64	13.14
GW-5	13	8.39	13.99
GW-6a	15	8.78	14.38
Depth to 16" Sanitary Sewer (From Geologic Cross Section B-B')			
GW-3	20	12.57	13.87
GW-2	20	12.69	13.99
GW-8	20	12.97	14.27
GW-1	8	12.63	13.93
Depth to 10" Sanitary Sewer Connection (From Geologic Cross Section C-C')			
GW-8	20	11.03	11.53
E-15	25	5.01	5.84
B-10	19	3.63	4.46

Table 3

Historical Depth to the Groundwater Data (feet)*

Former Glovatorium Site

3822 Manila Ave (3815 Broadway), Oakland, California

Date	B-10	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6A	GW-8	SOMA-2	SOMA-4	LFR-1
Jul-05	8.59		9.76	10.89	8.98	11.48	13.03		8.61		9.71
Feb-05	7.96	7.81	10.42	10.01	8.15	11.12	13.02		8.19		9.36
Aug-04	9.37	7.81	10.95	10.38	10.01	11.55	13.13		12.05		9.84
Jan-04	8.43		10.77	9.87	7.86	12.30	13.06		11.04		9.56
Jul-03	8.92		10.45	10.25	9.94	12.19	13.09		11.55		9.79
Feb-03	7.63		10.12	9.66	7.80	10.66	13.09		10.65		9.34
Oct-02	9.41		11.22	10.14	10.85	12.34	13.21		12.39		9.97
Jul-02	8.99		10.53	10.14	9.90	12.25	13.11		8.99		9.79
Apr-02	8.29		9.38	9.78	8.44	12.33	12.99		8.33	12.53	9.61
Jan-02	7.36		9.37	9.64	7.72	12.23	13.00		7.41	11.30	9.41
Oct-01	9.54		11.23	10.25	8.33	12.60	13.25		9.53	11.32	9.93
Jul-01	8.89		10.59	10.08	8.70	12.24	13.06				9.81
Apr-01	7.89		9.73	9.99	7.96	12.58	12.63				9.74
Jan-01	8.30	7.95	10.52	10.03	7.63	12.40	13.16				9.53
Oct-00	8.15		10.69	9.97	8.00	12.37	12.90				
Aug-00	8.85		10.03	11.38		12.30	13.18				
Apr-00	7.80		8.55	9.76	8.58	12.31	13.06	9.76			9.75
Jan-00	7.35										9.81
Jan-00			10.82		8.22			10.68			
Jan-00				9.99		12.40	13.43	10.66			
Jan-00	8.48		10.90	10.06	7.84	12.40					
Aug-99			10.68	10.26		12.30	13.35	10.50			
Feb-98	6.52										
Oct-97	9.39										

Maximum (feet)	9.54	7.95	11.23	11.38	10.85	12.60	13.43	10.68	12.39	12.53	9.97
Minimum (feet)	6.52	7.81	8.55	9.64	7.63	10.66	12.63	9.76	7.41	11.30	9.34
Average (feet)	8.39	7.86	10.34	10.13	8.61	12.12	13.09	10.40	9.89	11.72	9.68

Notes:

*** -** Feet Below Top of the Casing

Table 4
Historical Groundwater Elevation Data (feet)
Former Glovatorium Site
3815 Broadway, Oakland, California

Date	B-9	B-10	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6A	GW-8	LFR-1	SOMA-2	SOMA-4
05-Jul-05	**69.05**	**72.91**	**DRY**	**69.38**	**67.03**	**73.57**	**69.53**	**68.03**	**NM**	**70.26**	**72.78**	**FP**
1-Feb-05	69.76	73.54	72.13	68.72	67.91	74.40	69.89	68.04	NM	70.61	73.20	NM
03-Aug-04	68.22	72.13	72.13	68.19	67.54	72.54	69.46	67.93	NM	70.13	69.34	NM
29-Jan-04	69.24	73.07	NM	68.37	68.05	74.69	68.71	68.00	NM	70.41	70.35	FP
29-Jul-03	68.67	72.58	NM*	68.69	67.67	72.61	68.82	67.97	NM	70.18	69.84	FP
18-Feb-03	70.00	73.87	NM*	69.02	68.26	74.75	70.35	67.97	NM	70.63	70.74	NM
22-Oct-02	68.10	72.09	NM*	67.92	67.78	71.70	68.67	67.85	NM	70.00	69.00	NM
17-Jul-02	68.59	72.51	NM*	68.61	67.78	72.65	68.76	67.95	NM	70.18	72.40	NM
16-Apr-02	69.38	73.21	NM	69.76	68.14	74.11	68.68	68.07	NM	70.36	73.06	68.56
31-Jan-02	70.43	74.14	-	69.77	68.28	74.83	68.78	68.06		70.56	73.98	69.79(FP 2.5')
18-Oct-01	67.98	71.96	NM	67.91	67.67	74.22	68.41	67.81		70.04	71.86	69.77
26-Jul-01	68.73	72.61	NM	68.55	67.84	73.85	68.77	68.00		70.16		
26-Apr-01	69.80	73.61	NM	69.41	67.93	74.59	68.43	68.43		70.23		
29-Jan-01	69.33	73.20	71.99	68.62	67.89	74.92	68.61	67.90		70.44		
30-Oct-00	69.42	73.35		68.45	67.95	74.55	68.64	68.16		70.22		
9-Aug-00	68.82	72.65	DRY	69.11	66.54	DRY	68.71	67.88		70.16		
27-Apr-00	69.96	73.70	DRY	70.59	68.16	73.97	68.70	68.00	71.34			
24-Jan-00	70.25 (FP)	74.15(FP)										
21-Jan-00				68.32		74.33						
20-Jan-00					67.93		68.61		70.42			
19-Jan-00	68.91(FP)	73.02(FP)	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	71.44(1)	75.13(1)										
26-Oct-97	68.39(1)	72.26(1)										

Notes:

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

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

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

Table 5
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	24-Jan-00	19	30 J	<0.05	<0.013	0.062	<0.013	0.207
	11-Aug-00	3.7 J	6.8 YHJ	0.02	0.0077 J	0.047 J	0.007 J	0.065 CJ
	31-Oct-00	62 J	98 YHJ	0.01 J	0.0091 J	0.061 J	<0.0005	0.237 J
	27-Jul-01	2.5	5.2 HY	0.0057	0.0070	0.051	0.0082	0.0740
	31-Jan-01	5.3	7.9	0.0100	0.0089	0.059	0.0097	0.0870
	26-Apr-01	4.5	8.9 H	0.0069	0.0110	0.071	0.077 C	0.2080
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	24-Jan-00	2.4 Y	4.2	0.0140 c	0.0072	0.027	0.025 C	0.032
	10-Aug-00	2.8 Y	6.1 Y	0.1600	0.0073	0.012	<0.005	0.0241
	31-Oct-00	2.2 YZ	3.5 Z	<0.002	0.0038	0.011	<0.0005	0.0182
	27-Jul-01	1.7	3.6 H	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	31-Jan-01	2.4 Z	3.6 HYZ	<0.002	0.0031	0.010	0.00076 c	0.0197
	26-Apr-01	2.4 Z	4.7 Z	0.0025	0.0041	0.013	ND	0.0290
	6-Jul-05	**3.4 H**	**4.5 HY**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
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
	4-Aug-04	0.054 YZ	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	**<0.050**	**<0.050**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**

Table 5
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
	3-Aug-04	0.170 [YZ]	0.150 [YZ]	<0.017	<0.017	<0.017	<0.017	<0.017
	2-Feb-05	0.190 [Z]	0.250 [HYZ]	<0.031	<0.031	<0.031	<0.031	<0.031
	6-Jul-05	**0.084 [YZ]**	**0.11 [YZ]**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**
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
	3-Aug-04	0.710	0.640 [HY]	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	0.280	0.370 [HY]	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	**0.120**	**0.16 [HY]**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
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 5
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
	27-Jul-01	<0.050	0.10 [HY]	0.0010	<0.0005	<0.0005	<0.0005	0.0007
	19-Oct-01	<0.050	<0.05	<0.0050	<0.0050	<0.005	<0.005	<0.010
	31-Jan-02	<0.050	0.071 [Y]	<0.0050 [b]	<0.0050 [b]	<0.005 [b]	<0.005 [b]	<0.005 [b]
	16,17-Apr-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
	3-Aug-04	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	5-Jul-05	**<0.050**	**<0.050**	**0.0008**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
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
	26-Apr-01	0.092	0.18 [YZ]	0.0044	<0.0005	0.002	<0.0005	<0.0005
	27-Jul-01	0.086	0.18 [YZ]	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	18-Oct-01	0.19	0.38	<0.031	<0.031	<0.031	<0.031	<0.062
	31-Jan-02	0.15 [YZ]	0.27 [YZ]	<0.013 [b]	<0.013 [b]	<0.013 [b]	<0.013 [b]	<0.013 [b]
	16,17-Apr-02	0.10 [YZ]	0.17 [YZ]	< 0.013	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	0.084 [Y Z]	0.14 [Y Z]	<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
	4-Aug-04	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.050	0.056 [YZ]	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	**<0.050**	**<0.050**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
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
	27-Apr-01	0.33	0.66 [HY]	<0.002	<0.0005	0.0013	<0.0005	<0.0005
	27-Apr-01	0.36	0.72 [HY]	<0.002	0.00059	0.0019	<0.0005	0.013
	27-Jul-01	0.33	0.76 [HY]	<0.0005	0.0013	<0.0005	<0.0005	0.0006
	18-Oct-01	0.73	1.50	<0.0071	<0.0071	<0.0071	<0.0071	<0.0142
	31-Jan-02	0.76	1.40 [HY]	<0.005 [b]	<0.005 [b]	<0.005 [b]	<0.005 [b]	<0.005 [b]
	16,17-Apr-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 [H Y]	<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
	4-Aug-04	2.50	2.2 [HY]	<0.005	<0.005	<0.005	<0.005	<0.005
	1-Feb-05	1.10	1.5 [HY]	<0.005	<0.005	<0.005	<0.005	<0.005
	5-Jul-05	**0.950**	**1.3 [HY]**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**

Table 5
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
	27-Apr-01	<0.05	<0.05	0.0024	<0.0005	0.0054	<0.0005	<0.0005
	27-Jul-01	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	18-Oct-01	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.01
	31-Jan-02	<0.05	0.067 Y	<0.005 b	<0.005 b	<0.005 b	<0.005 b	<0.005 b
	16,17-Apr-02	<0.05	<0.05	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.050	<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
	3-Aug-04	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	<0.050	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005
	5-Jul-05	**<0.050**	**<0.050**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
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
	27-Apr-01	0.22 Y	0.440	0.0058	0.02700	0.0036	<0.0005	<0.0005
	27-Jul-01	0.091 Y	0.190	0.011	0.00090	<0.0005	<0.0005	<0.0005
	31-Jan-02	NA	NA	NA	NA	NA	NA	NA
	16,17-Apr-02	0.40 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
	4-Aug-04	NA	NA	NA	NA	NA	NA	NA
	5-Jul-05	**0.510 Y**	**0.680**	**0.0049**	**0.024**	**<0.0005**	**<0.0005**	**<0.0005**
Monitoring Wells Installed by SOMA								
SOMA-1	19-Oct-01	0.22	0.440	0.034	<0.0050	<0.0050	<0.0050	<0.0100
	31-Jan-02	0.058	0.100 HY	0.110 b	<0.0050 b	<0.0050 b	<0.0050 b	<0.0050 b
	16,17-Apr-02	<0.050	0.052 Y	0.120	0.0008	<0.0005	<0.0005	<0.0005
	17,18-Jul-02	<0.05	<0.05	0.120	<0.005	<0.005	<0.005	<0.005
	22,23-Oct-02	<0.050	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
	3-Aug-04	<0.050	<0.050	0.170	<0.013	<0.013	<0.013	<0.013
	1-Feb-05	<0.050	<0.050	0.200	<0.017	<0.017	<0.017	<0.017
	5-Jul-05	**<0.050**	**<0.050**	**0.210**	**<0.0017**	**<0.0017**	**<0.0017**	**<0.0017**
SOMA-2	19-Oct-01	1.4	2.8	<0.250	<0.2500	<0.250	<0.250	<0.500
	31-Jan-02	1.3	2.4 HY	<0.071 b	<0.0710 b	<0.071 b	<0.071 b	<0.071 b
	16,17-Apr-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 H Y	<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
	4-Aug-04	0.310	0.28 HY	0.280	<0.031	<0.031	<0.031	<0.031

Table 5
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)
	2-Feb-05	39	53 HY	<0.31	<0.31	<0.31	<0.31	<0.31
	6-Jul-05	**5.100**	**6.8 HY**	**<0.025**	**<0.025**	**0.053**	**<0.025**	**0.031**

Table 5
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	19-Oct-01	0.420	0.83	0.65	<0.02500	<0.02500	<0.0250	<0.0500
	31-Jan-02	0.230	0.41 HY	0.31 b	<0.01300 b	<0.01300 b	<0.0130 b	<0.0130 b
	16,17-Apr-02	0.610	1.00 HY	0.42	0.00078	0.00068	<0.0005	<0.0005
	17,18-Jul-02	0.410	0.69 H Y	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
	4-Aug-04	4.000	3.6 HY	<0.500	<0.500	<0.500	<0.500	<0.500
	2-Feb-05	0.270	0.36 HY	0.25	<0.063	<0.063	<0.063	<0.063
	6-Jul-05	**0.320**	**0.43 HY**	**0.320**	**0.0017**	**<0.0005**	**<0.0005**	**0.0016**
SOMA-4	19-Oct-01	2.5	5	0.63	<0.13	<0.13	<0.13	<0.26
	31-Jan-02	FP	FP	FP	FP	FP	FP	FP
	16,17-Apr-02	FP	FP	FP	FP	FP	FP	FP
	17,18-Jul-02	FP	FP	FP	FP	FP	FP	FP
	22,23-Oct-02	FP	FP	FP	FP	FP	FP	FP
	18-Feb-03	FP	FP	FP	FP	FP	FP	FP
	29-Jul-03	FP	FP	FP	FP	FP	FP	FP
SOMA-5	4-Aug-04	4.1	3.7 HY	<0.005	<0.005	<0.005	<0.005	<0.005
	2-Feb-05	0.11 Z	0.15 HYZ	<0.005	<0.005	<0.005	<0.005	<0.005
	6-Jul-05	**2.3 H**	**3.1 HY**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**

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

NA = Not analyzed, LFR-4 was not analzed during the Second Quarter 2002 due to the well being inaccessible.
Not Analyzed. Well LFR-4 inaccessible during the Third Quarter 2004 Monitoring Event.

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.
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 6
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	24-Jan-00	< 0.0036	< 0.0036	0.920	0.004	< 0.0036	< 0.0036
	11-Aug-00	< 0.0031	< 0.0031	0.860	0.005	< 0.0031	< 0.0031
	31-Oct-00	< 0.0042	< 0.0042	0.910	0.004	< 0.0042	< 0.0042
	27-Jul-01	0.010	0.017	0.860	0.005	<0.0031	<0.0031
	27-Apr-01	<0.0031	<0.0031	1.100	0.007	<0.0031	<0.0031
	31-Jan-01	< 0.0042	< 0.0042	0.920	0.005	< 0.0042	< 0.0042
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	24-Jan-00	1.200	2.400	14.000	0.090	< 0.063	< 0.063
	10-Aug-00	2.900	1.600	6.500	0.050	< 0.025	< 0.025
	31-Oct-00	2.400	1.900	7.100	0.061	< 0.025	< 0.025
	27-Jul-01	1.700	1.400	7.300	0.043	<0.025	<0.025
	27-Jul-01	0.870	0.810	6.600	0.041	<0.025	<0.025
	31-Jan-01	2.100	1.600	6.600	0.044	< 0.025	< 0.025
	6-Jul-05	**0.590**	**0.340**	**12.000**	**<0.1**	**<0.1**	**<0.1**
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
	4-Aug-04	0.075	0.0100	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	0.049	0.0066	0.016	<0.005	<0.010	<0.005
	6-Jul-05	**0.082**	**0.0110**	**0.0009**	**<0.0005**	**<0.0005**	**<0.0005**
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
	3-Aug-04	0.440	<0.017	<0.017	<0.017	<0.033	<0.017
	2-Feb-05	0.360	<0.031	<0.031	<0.031	<0.063	<0.031
	6-Jul-05	**0.320**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**

Table 6
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
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	6-Jul-05	**0.0006**	**<0.0005**	**0.0013**	**<0.0005**	**<0.0005**	**0.0011**
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
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**

Table 6
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
	4-Aug-04	0.058	0.016	0.0052	<0.005	<0.010	<0.005
	2-Feb-05	0.089	0.0079	0.0072	<0.005	<0.010	<0.005
	6-Jul-05	**0.096**	**0.0260**	**0.0049**	**<0.0005**	**<0.0005**	**<0.0005**
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
split	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
	4-Aug-04	<0.005	<0.005	0.012	<0.005	<0.010	<0.005
	1-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	**<0.0005**	**<0.0005**	**0.0012**	**<0.0005**	**<0.0005**	**<0.0005**
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
	3-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	5-Jul-05	**0.011**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
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 6
Historical Analytical Results For Volatile Organic Compound Analyses in Groundwater Samples
at the Former Glovatorium Site
3815 Broadway, Oakland, California

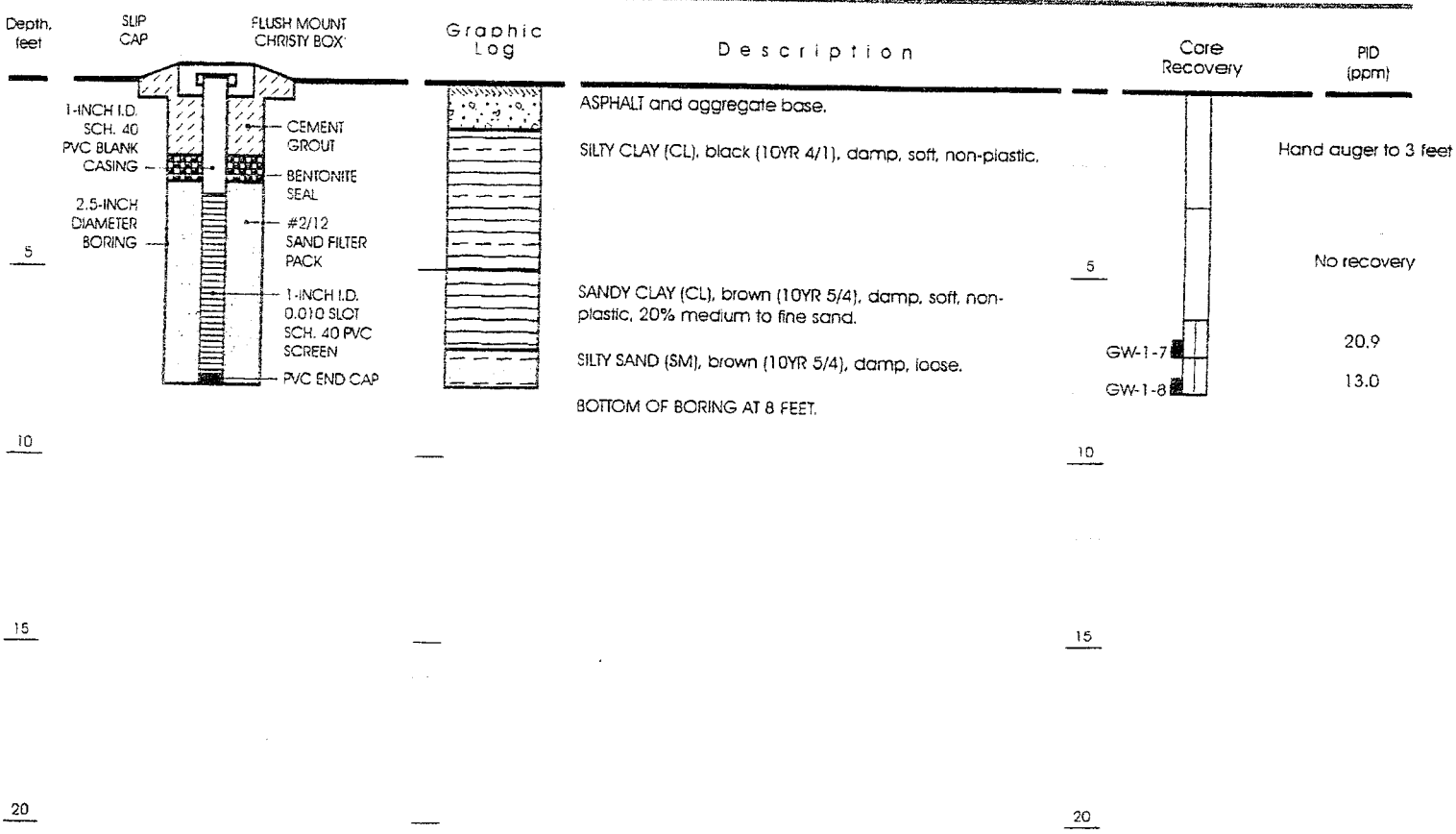
Well Name	Date Sampled	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	Vinyl Chloride (mg/L)	1,2-DCP (mg/L)
	4-Aug-04	NA	NA	NA	NA	NA	NA
	5-Jul-05	**0.0011**	**<0.0005**	**0.0026**	**<0.0005**	**<0.0005**	**<0.0005**

Table 6
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
	3-Aug-04	0.019	<0.013	0.038	<0.013	<0.025	<0.013
	1-Feb-05	0.022	<0.017	0.028	<0.017	<0.033	<0.017
	5-Jul-05	**0.041**	**0.0026**	**0.051**	**<0.0017**	**<0.0017**	**0.0046**
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
	4-Aug-04	<0.031	<0.031	0.430	<0.031	<0.063	<0.031
	2-Feb-05	<0.310	<0.310	6.100	<0.310	<0.630	<0.310
	6-Jul-05	**0.078**	**0.047**	**5.200**	**0.044**	**<0.025**	**<0.025**
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
	4-Aug-04	<0.500	<0.500	6.900	<0.500	<1.0	<0.500
	2-Feb-05	<0.063	<0.063	1.100	<0.063	<0.130	<0.063
	6-Jul-05	**0.031**	**0.014**	**0.890**	**0.0067**	**0.0011**	**0.0032**
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
SOMA-5	4-Aug-04	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	2-Feb-05	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
	6-Jul-05	**<0.0025**	**<0.0025**	**0.0057**	**<0.0025**	**<0.0025**	**<0.0025**

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
NA: Not Analyzed. Well LFR-4 was inaccessible during the Third Quarter 2004 Monitoring Event.

Appendix A



Well Permit No.	99WR340
Date Well Drilled:	July 16, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continuous core
LFR Geologist:	Christopher J. Voci

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel
- Soil sample collected for analysis

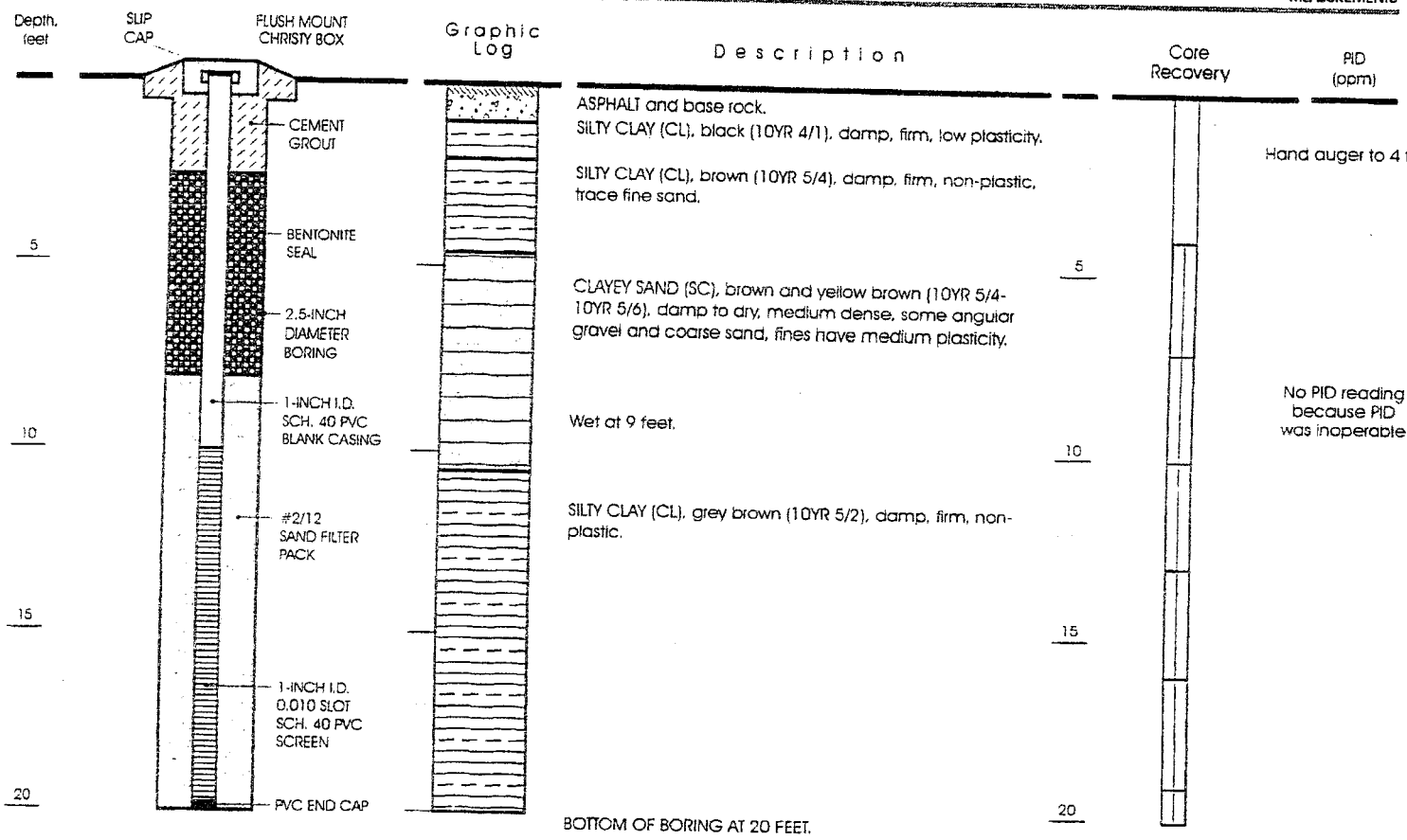
Approved by: Taylor Bennett R.G.#6595

CONSTRUCTION AND LITHOLOGY FOR GW-1

LFR LEVINE•FRICKE

FORMER GLOVATORIUM

6895L100.CDR 030600



Well Permit No.	99WR340
Date Well Drilled:	July 16, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continuous core
LFR Geologist:	Chris Voci

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel

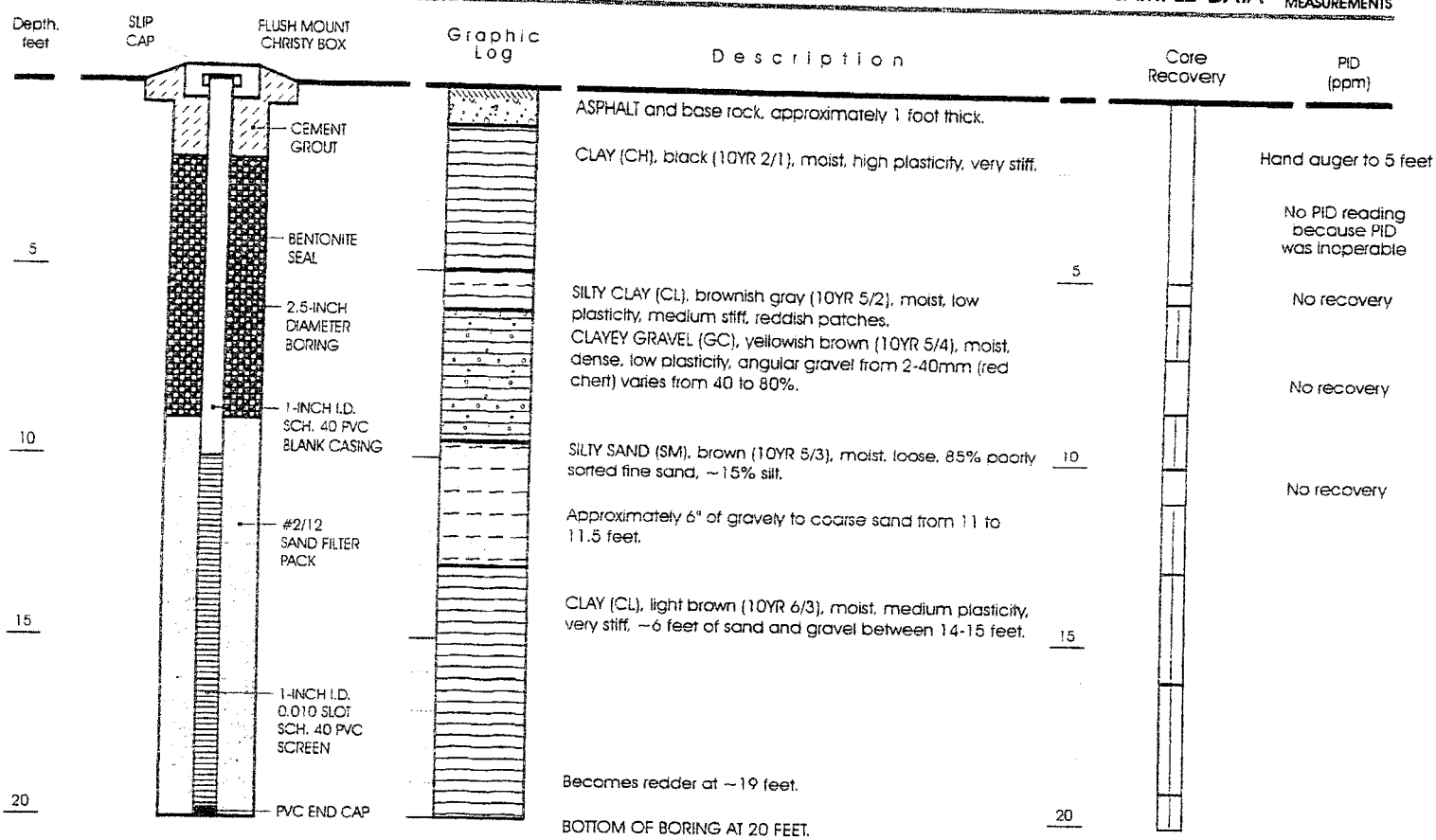
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-2

LFR LEVINE • FRICKE

FORMER GLOVATORIUM

6895L101.CDR 030600



Well Permit No.	99WR340
Date Well Drilled:	July 15, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continuous core
LFR Geologist:	Jim Burke

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel

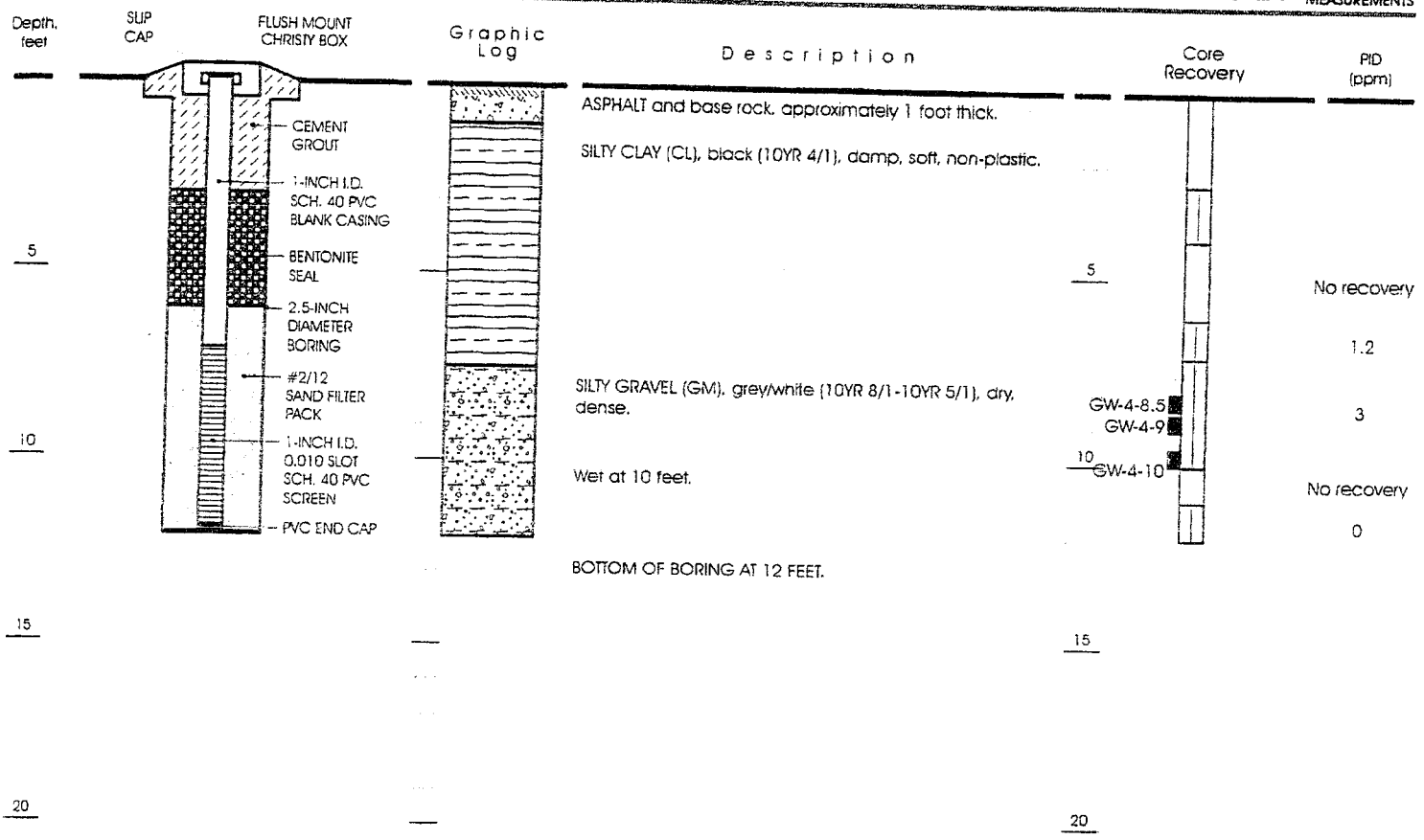
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-3

LFR LEVINE•FRICKE

FORMER GLOVATORIUM

6895L102.CDR 030600



Well Permit No. 99WR342
Date Well Drilled: July 16, 1999
Drilling Company: Precision
Driller: Ken Perez
Drilling Method: Direct push
Sampling Method: Hydraulic, continous core
LFR Geologist: Chris Voci

EXPLANATION

Clay
Silt
Sand
Gravel
Interval sampled using continuous core barrel

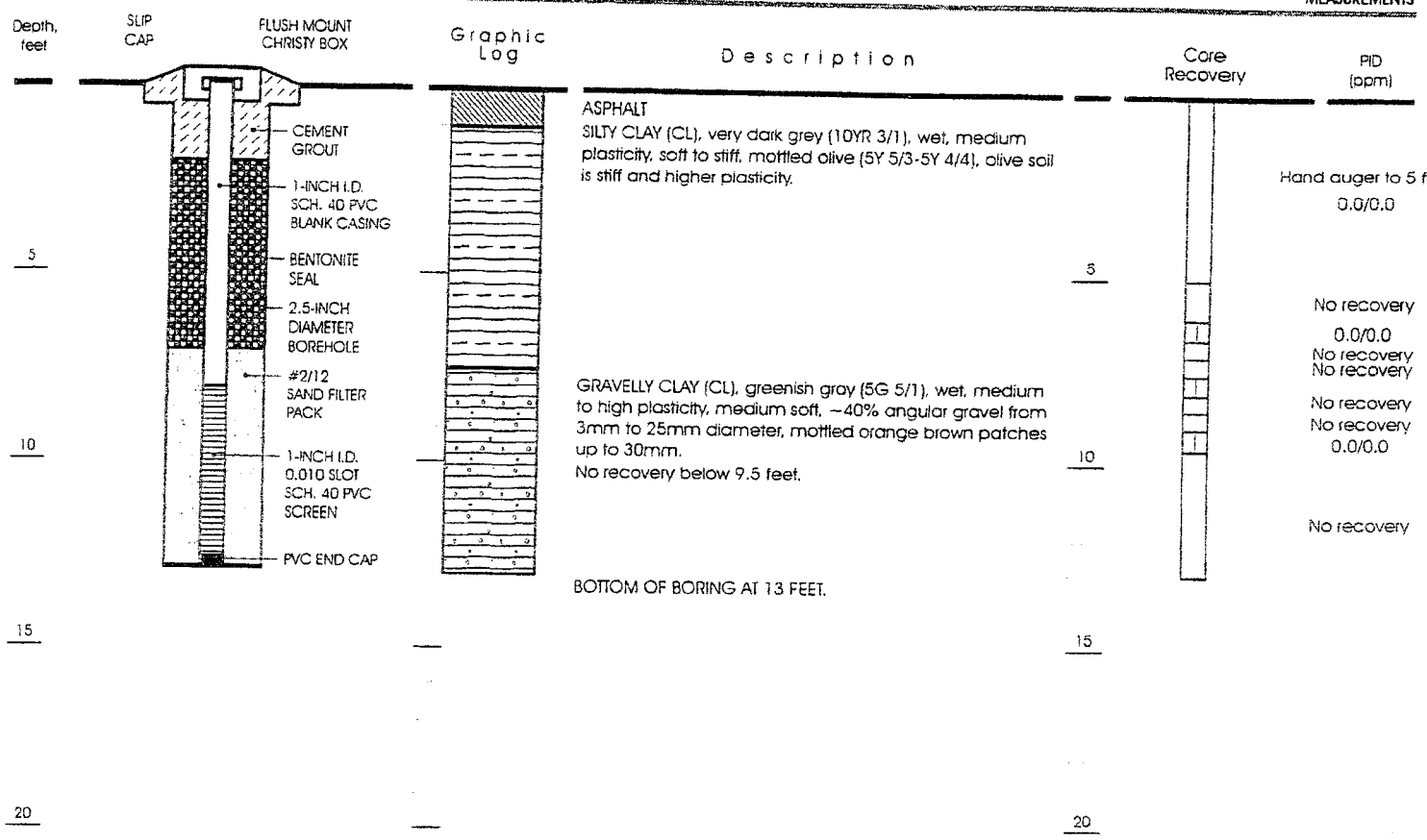
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-4

LFR LEVINE-FRICKE

FORMER GLOVATORIUM

6895L103.CDR 030600



Well Permit No.	99WR341
Date Well Drilled:	July 15, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Jim Burke

EXPLANATION

Clay

Silt

Sand

Gravel

Interval sampled using continuous core barrel

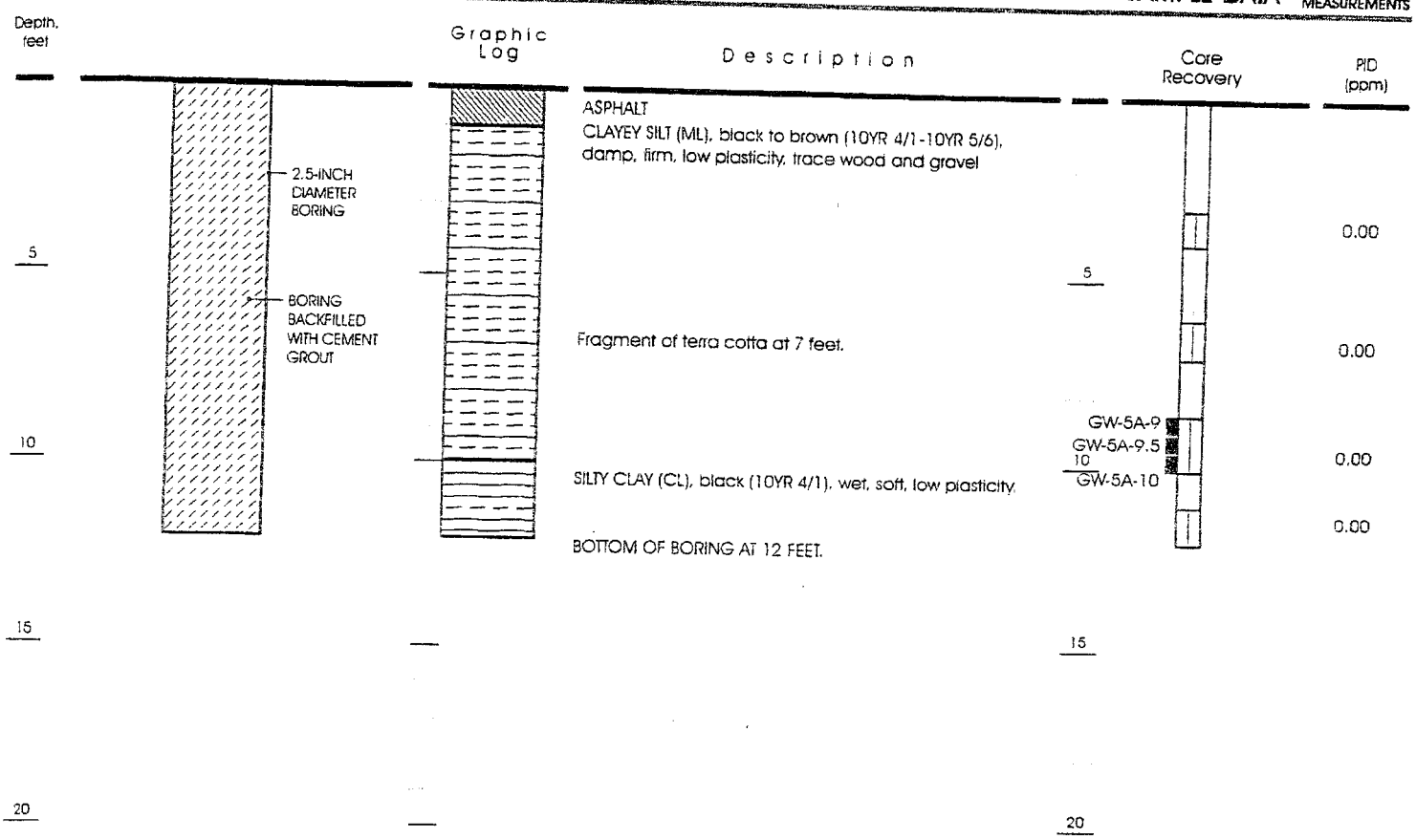
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-5

LFR LEVINE-FRICKE

FORMER GLOVATORIUM

6895L104.CDR 030600



Well Permit No.	99WR341
Date Well Drilled:	July 16, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Chris Voci

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel
- Soil sample collected for analysis

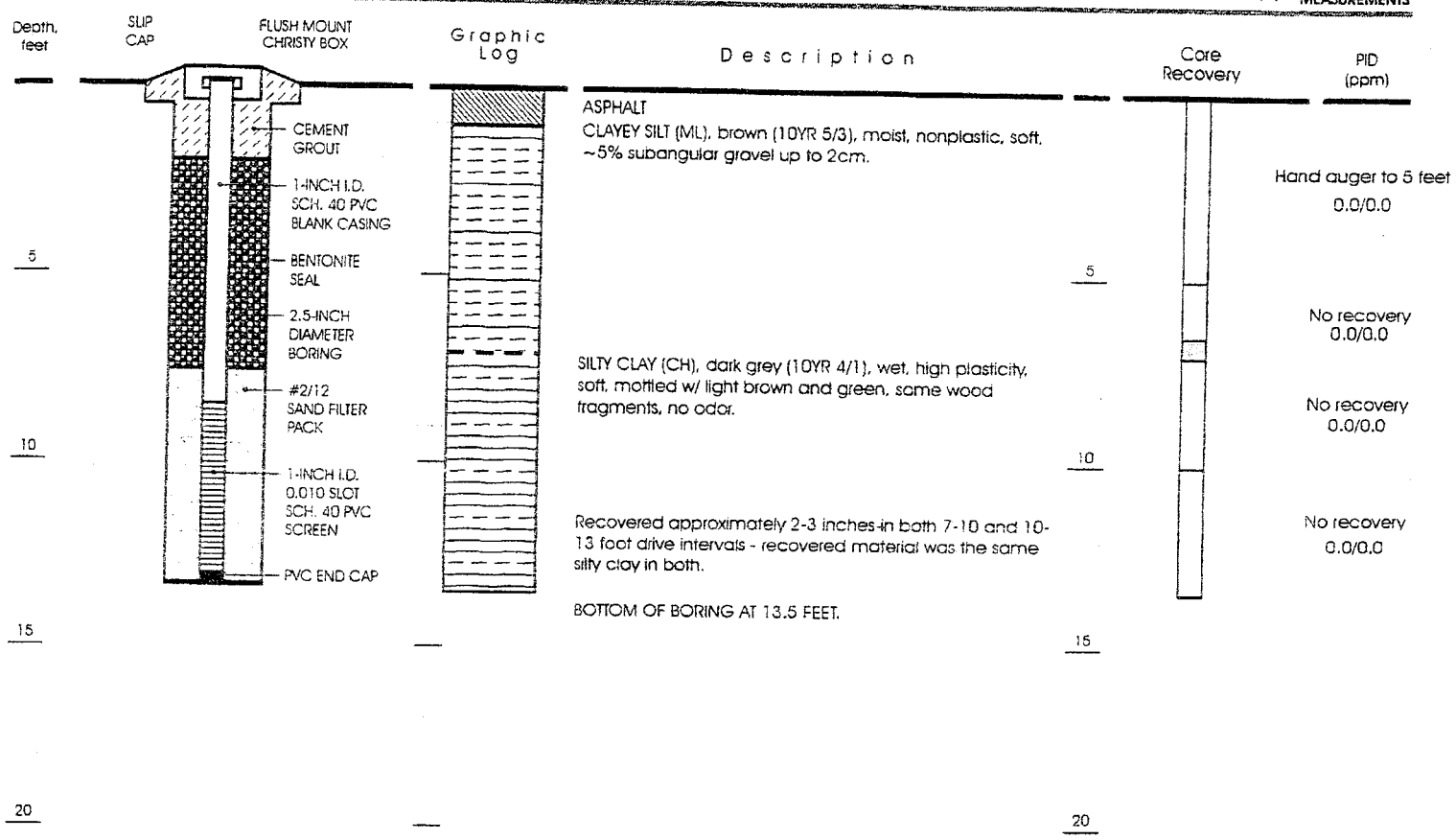
Approved by: Taylor Bennett R.G.#6595

CONSTRUCTION AND LITHOLOGY FOR GW-5A

LFR LEVINE-FRICKE

FORMER GLOVATORIUM

6895L105.CDR 030600



Well Permit No.	99WR341
Date Well Drilled:	July 15, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Jim Burke

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel

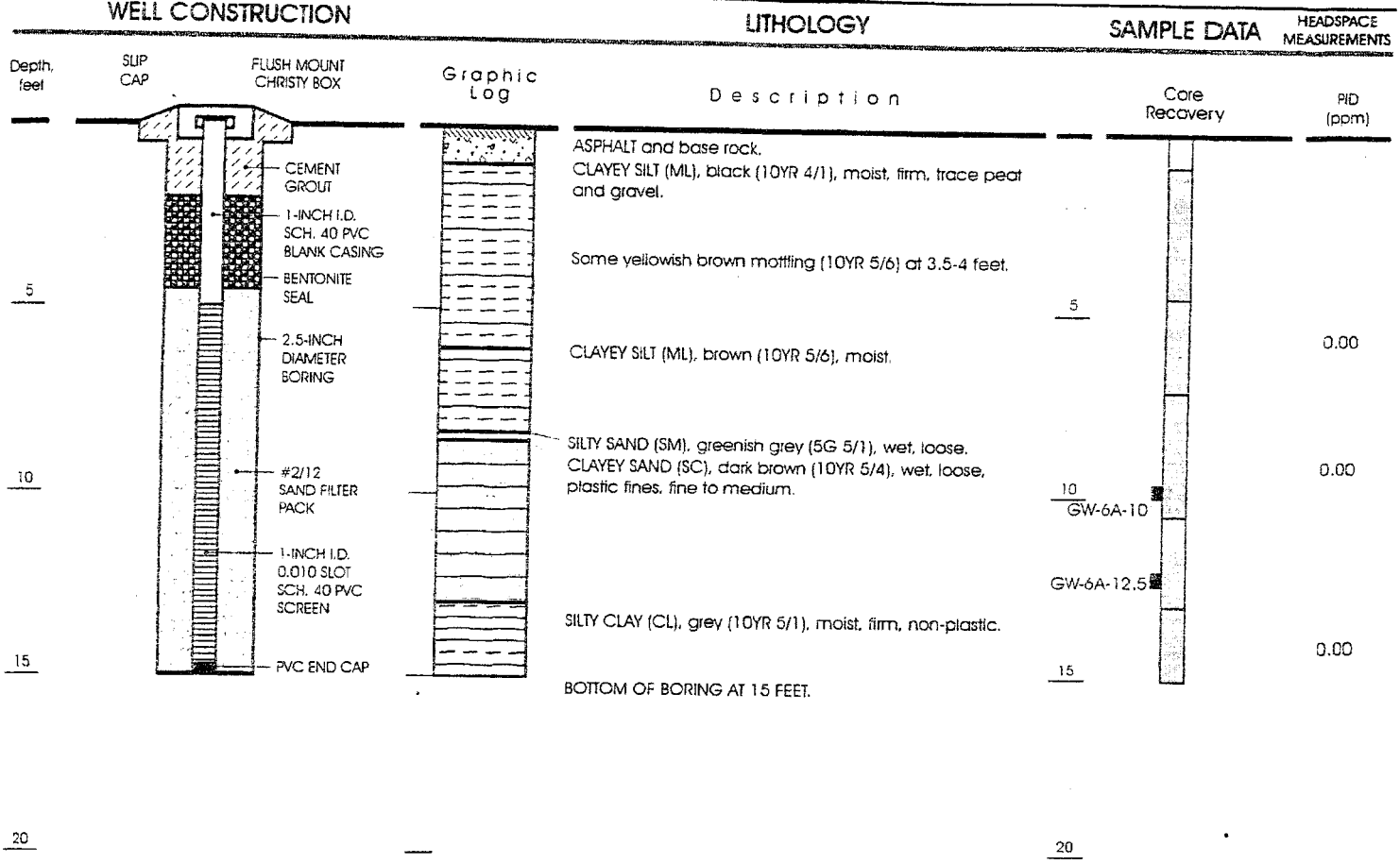
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-6

LFR LEVINE•FRICKE

FORMER GLOVATORIUM

6895L106.CDR 030600



Well Permit No.	99WR341
Date Well Drilled:	July 16, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Chris Voci

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel
- Soil sample collected for analysis

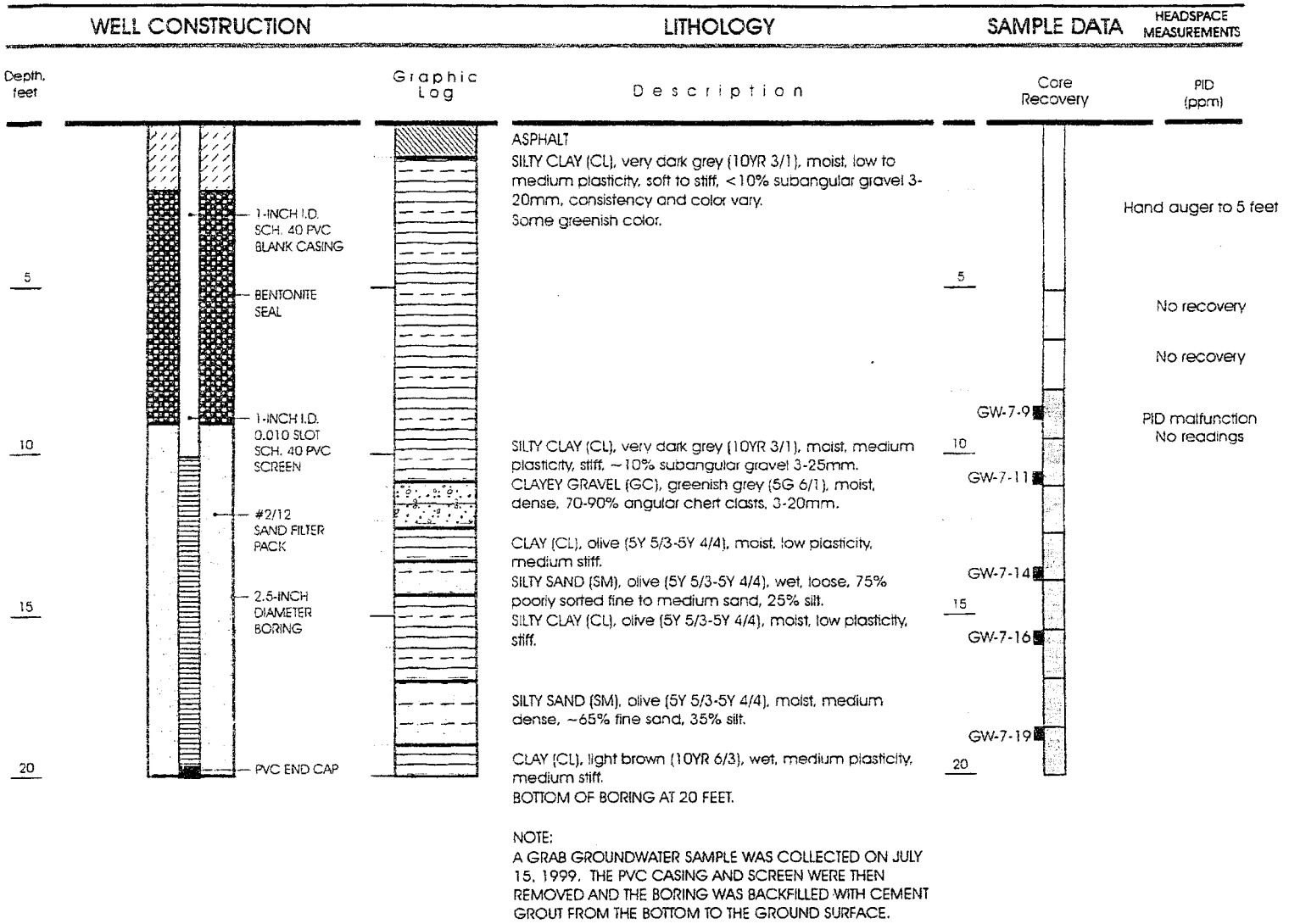
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-6A

LFR LEVINE•FRICKE

FORMER GLOVATORIUM

6895L107.CDR 030600



Well Permit No.	99WR341
Date Well Drilled:	July 15, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Jim Burke

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel
- Soil sample collected for analysis

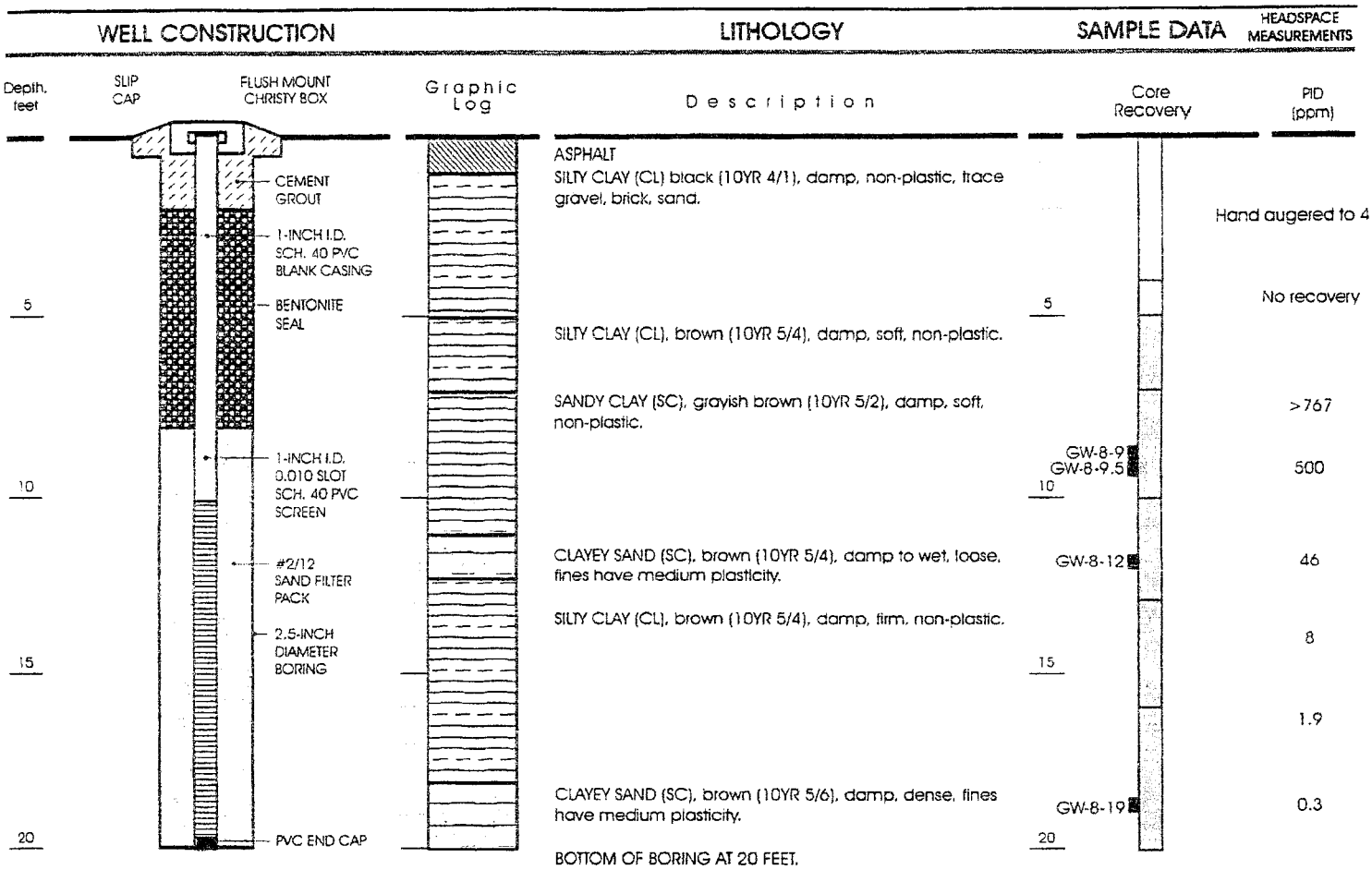
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-7

LFR LEVINE•FRICKE

FORMER GLOVATORIUM

6895L108.CDR 030600



Well Permit No.	99WR340
Date Well Drilled:	July 16, 1999
Drilling Company:	Precision
Driller:	Ken Perez
Drilling Method:	Direct push
Sampling Method:	Hydraulic, continous core
LFR Geologist:	Chris Voci

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Interval sampled using continuous core barrel
- Soil sample collected for analysis

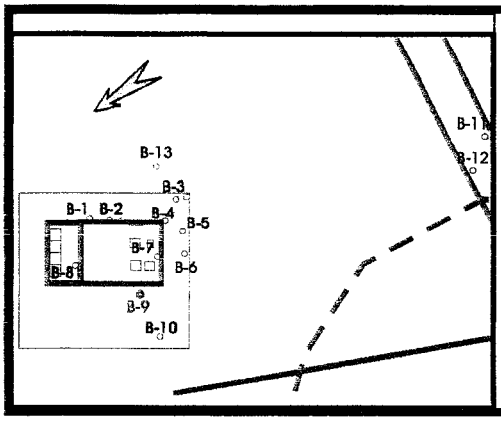
Approved by: Taylor Bennett R.G. #6595

CONSTRUCTION AND LITHOLOGY FOR GW-8

LFR LEVINE • FRICKE

FORMER GLOVATORIUM

6895L109.CDR 030600

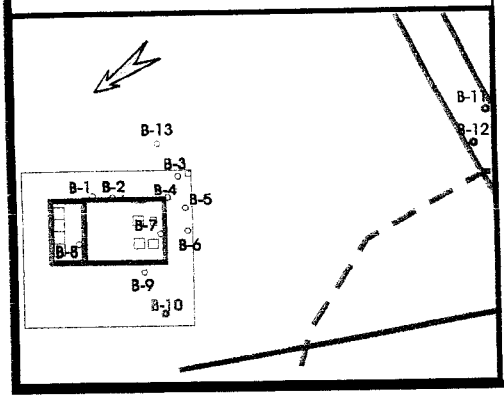


DRILLING LOG

BORING NO. B9

PROJECT NAME:	Depper	PROJECT NO.	
ADDRESS:	3815 Broadway, Oakland, California		
FIELD GEOLOGIST:	Frank Goldman	DATE:	08/21/97
DRILLING COMPANY:	Precision	SAMPLER:	
DRILLING METHOD:		TOTAL DEPTH:	19.5'
BORING DIAMETER:	2.5"		

DEPTH	SAMPLE RECOVERY	BLOW COUNT	PID [ppm]	BORING CONSTR.	LITHOLOGIC LOG	USCS SYMBOLS	LITHOLOGIC DESCRIPTION Description, Grain Size, Sorting, Color, Moisture, Mechanical Properties
						CL	Silty clay, brown, firm, moist.
						CL	Silty clay, black, soft, moist; organics.
						CL	Silty clay, brown, hard, moist.
						CL	End of 2.5" borehole due to hard clay. Resume with 1" split spoon.
						CL	
10						CL	Mild hydrocarbon odor. Sandier with depth.
						CL	Mild solvent odor.
15						SW	Sand with coarse gravel, dark brown, medium dense; strong solvent odor.
						CL	Silty clay, brown, stiff to hard, moist; no odor.
20							
							End of boring at 19.5 feet. Groundwater encountered at 15'. Boring converted into a well.
25							
30							
35							
40							



DRILLING LOG

BORING NO. B10

PROJECT NAME:	Depper	PROJECT NO.	
ADDRESS:	3815 Broadway, Oakland, California		
FIELD GEOLOGIST:	Frank Goldman	DATE:	08/22/97
DRILLING COMPANY:	Precision	SAMPLER:	
DRILLING METHOD:		TOTAL DEPTH:	19'
BORING DIAMETER:	2.5"		

DEPTH	SAMPLE RECOVERY	BLOW COUNT	PID [ppm]	BORING CONSTR.	LITHOLOGIC LOG	USCS SYMBOLS	LITHOLOGIC DESCRIPTION Description, Grain Size, Sorting, Color, Moisture, Mechanical Properties
						CL	Silty clay, brown, firm, moist;no odor.
						CL	Silty clay, black, firm, moist; organics.
						CL	Sandy clay, brown, stiff to hard, moist; no odor.
							End of 2.5" borehole due to hard clay. Resume with 1" split spoon.
							Sandier with depth.
10							
						SW	Sand, coarse, gray, dense,wet; solvent odor.
15						CL	Silty clay, brown, hard, moist; no odor.
20							End of boring at 19 feet. Groundwater encountered at 15'. Boring converted into a well.
25							
30							
35							
40							

EXPLORATORY BORING LOG

DRILL COMPANY: Precision	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER: 2 3/4"	DRILLING METHOD: Envirocore

LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
silty clay, black, soft, moist			1			
silty, clay, med brn, firm moist; no odor, M and sample	X	4½-5	2 3 4 5			
9/10/98 Resume w/ Envirocore @ 5'						
no odor	X	6½-7	6 7			
Sandy clay, Grey & rust, firm, moist Odor begins @ 8			8 9			
mod hydro carbon odor @ 10	X	9½-10	10			
~~Clayey sand, green, med dense, course, moist; mod odor~~						
mod odor ~~none~~	X	11-11½	11			
Sandy clay, green, firm, moist; mod odor	X	12½-13	12 13			
capillary fringe Strong Hydrocarb odor @ 14'	X	14-14½	14			
Very moist @ 15', water zone! to wet (Clayey sand) No odor @ 16'	X	15½-16	15 16			
Silty clay, yel-brn, firm to stiff, moist no odor from 16' to 19'			17			
No odor, @ 18½	X	18½-19	18 19			
			20			

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643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882

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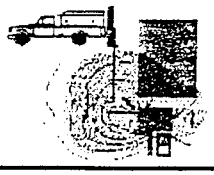

PROJECT NAME: Depper/Glovatorium
ADDRESS: 3815 Broadway, Oakland, CA

BORING NO. E-15
DATE: Sept. 9 1998

EXPLORATORY BORING LOG

DRILL COMPANY: Precision	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER: 2 3/4"	DRILLING METHOD: Envirocore

LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Stiff to hard from 19-25'			21			
~~No odor~~ no odor	X	21½-22	22			
			23			
			24			
Hard no odor	X	24½-25	25			
End @ 25'			26			
Casing set @ 10:45 AM			27			
10' of screen, 15' of blank			28			
			29			
Recharge Rate Depth of 24' @ 10:45			30			
Depth of 12' @ 12:45						
6"/hr.			31			
			32			
			33			
			34			
			35			
			36			
			37			
			38			
			39			
			40			

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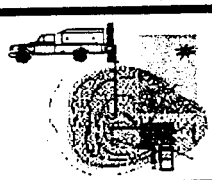

PROJECT NAME: Depper/Glovatorium
ADDRESS: 3815 Broadway, Oakland, CA
BORING number E-15
DATE: Sept. 1998

EXPLORATORY BORING LOG

DRILL COMPANY: Precision	SURFACE ELEVATION:	LOGGED BY: Frank Goldman
DEPTH TO GROUNDWATER:	BORING DIAMETER:	DRILLING METHOD: Envirocore

LITHOLOGIC DESCRIPTION	SAMPLE INTERVALS	LITHOLOGIC LOG	DEPTH	WATER LEVEL	WELL CONSTRUCTION DETAIL	USCS SYMBOLS
Predrill to 3' on 9/9/98			1, 2			
Resume envirocore on 9/11/98 @ 3'			3			
Silty clay, yel brn, soft, moist			4			
Silty clay, black, soft, moist; high organics no odor			5			
Silty clay, brn, stiff, moist no odor	X	5½-6	6, 7			
	X	8-8½	8			
~~Clayey~~ Sandy clay, green, firm moist			9			
clayey sand, green, dense moist	X	9½-10	10			
Silty clay, green, stiff moist			11			
mod odor	X	11½-12	12			
Sandy clay, green, stiff moist						
Clayey sand, green, dense, moist; mod odor red chert pebbles	X	12½-13	13, 14			
Strong odor	X	14½-15	15			
Silty clay, yel brn, firm to stiff moist; disturb sample, rock caught in tube.			16, 17			
no odor	X	18-18½	18			
End @ 19'			19, 20			

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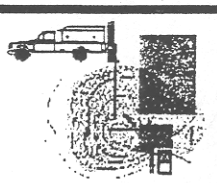

PROJECT NAME:	Depper/Glovatorium	BORING NO.	E-21
ADDRESS:	3815 Broadway Oakland, CA	DATE:	Sept. 9 1998