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ENVIRONMENTAL ENGINEERING, INC

November 27, 2006

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

Subject: Texaco Gasoline Service Station (Formerly Freedom ARCO Station)
Site Address: 15101 Freedom Avenue, San Leandro, California
STID 4473/RO0000473

Dear Mr. Plunkett:

SOMA's "Additional Soil and Groundwater Investigation Report and Initial Site Conceptual Model" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

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

Sincerely,

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

cc: Mr. Mohammad Pazdel w/report enclosure

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ADDITIONAL SOIL AND GROUNDWATER INVESTIGATION REPORT AND INITIAL SITE CONCEPTUAL MODEL

Texaco Gasoline Service Station
15101 Freedom Avenue
San Leandro, California

November 27, 2006

Project 2552

Prepared for

Mr. Mohammad Pazdel
1770 Pistacia Court
Fairfield, California 94533

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. (SOMA) on behalf of Mr. Mohammad Pazdel, the owner of the property located at 15101 Freedom Avenue, San Leandro, California. This report has been prepared in accordance with SOMA's work plan entitled "*Work Plan to Conduct an Additional Soil and Groundwater Investigation at the Texaco Gasoline Service Station, 15101 Freedom Avenue, San Leandro, California,*" dated December, 2005, and to comply with the Alameda County Health Care Services–Environmental Health Services' correspondence granting approval of the work plan, dated May 29, 2006. This report also presents SOMA's Initial Site Conceptual Model (SCM) and Interim Remediation and Migration Control Evaluation for 15101 Freedom Avenue, San Leandro, California.

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

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1.0 INTRODUCTION

On behalf of the property owner, Mr. Mohammad Pazdel, SOMA Environmental Engineering, Inc. (SOMA) has prepared this report describing the results of an additional soil and groundwater investigation conducted at the property located at 15101 Freedom Avenue, San Leandro, California, hereby referred to as "the Site." This report also presents SOMA's Initial Site Conceptual Model (SCM) and Interim Remediation and Migration Control Evaluation for the Site. This report has been prepared in accordance with SOMA's work plan entitled "*Work Plan to Conduct an Additional Soil and Groundwater Investigation at the Texaco Gasoline Service Station, 15101 Freedom Avenue, San Leandro, California,*" dated December, 2005, and to comply with the Alameda County Health Care Services-Environmental Health Services' (ACHCS's) correspondence granting approval of the work plan, dated May 29, 2006. The Initial SCM includes a summary of the Site's history, constituents of concern, their representative concentrations and known lateral and vertical extent, and the known physical characteristics of the Site (geology and hydrogeology). The Interim Remediation and Migration Control Evaluation provides a framework for on- and off-site specific corrective action methodologies and processes, and identifies required pilot studies necessary to assess the most technically feasible and cost effective remediation strategies that can be used to decrease the soil and groundwater contamination on and off-site to levels within established remediation goals.

1.1 Site Location and Description

The Site is located at the foot of the San Leandro Hills, along the west side of San Leandro Valley, at 15101 Freedom Avenue, San Leandro, California (Figure 1). The Site is bound on the north by Freedom Avenue, on the east by Fairmont Avenue, on the south by residential properties and on the west by 151st Avenue. The Site is currently operating as a gasoline service station (Valero) with mini-mart, and retails Texaco-branded gasoline and diesel fuel. No automotive repair

facility is on the Site. The Site has three canopied product dispenser islands and three underground storage tanks (USTs): one 6,000-gallon diesel UST, one 8,000-gallon gasoline UST, and one 10,000-gallon gasoline UST. Figure 2 illustrates the features on the Site.

Since the 1960's the Site has been operated as a gasoline service station. In May 1985 the present owner purchased the station facilities on the Site, and in 1992 purchased the property. The Site operated as Freedom ARCO Station from 1985 to 1997, until the present owner sold the station facilities on the Site.

1.2 Regional Geology/Hydrogeology

The Site is located in the San Leandro Valley at an elevation of approximately 54 feet above mean sea level with a moderate topographic gradient towards the south. The San Leandro Valley is within the San Francisco Bay-Santa Clara Valley depression, a northwest to southeast trending basin bounded on the east and west by mountains. The basin is characterized by Quaternary alluvium, chiefly fan and terrace deposits that are generally several hundred feet thick and are flat lying.

There is no water body within a 0.5-mile radius of the Site. The nearest water body, Estudillo Canal, is located about 0.6 miles southwest of the Site. The next closest water body is San Leandro Creek, which is located approximately 1.5 miles south of the Site. The Site is located approximately four miles north of San Francisco Bay. To the east of the Site are the northwest-trending Hayward Fault Zone, the San Leandro Hills and an assemblage of ultramafic metamorphic and volcanic rocks (California Division of Mines and Geology, 1990).

The United States Geological Survey (USGS) mapped the Site on Late Pleistocene age (10,000 to 70,000 years old) alluvium consisting of irregularly interbedded clay, silt, sand and gravel. Due to the age of this alluvium, these

stream-deposited sediments are typically more consolidated than alluvial deposits of Holocene age. In developed urban areas such as the Bay Area, earthwork construction often involves the emplacement of artificial fill derived from nearby cuts or quarries. Artificial fill is emplaced over native earth materials to provide level building pads and base rock for roadways.

The Site is located in the East Bay Groundwater Basin of the San Francisco Bay hydrologic study area. Water-bearing formations include the Santa Clara Formation of Plio-Pleistocene Age and late Pleistocene and recent sediments that have been grouped as Late Quaternary alluvium. Non water-bearing units underlie the water-bearing formations and are exposed along the surface in the Diablo Range east of the Site and Coyote Hills, near Newark, which is south of the Site.

1.3 Previous Activities

In May 1999, three 10,000-gallon USTs, approximately 250 feet of product piping, and six product dispensers were removed from the Site (Geo-Logic, 1999). A total of 21 soil samples were collected for laboratory analyses from the removal areas, including seven soil samples collected from the east and west sides of the UST removal excavation, at depths ranging from 12 to 14 feet below ground surface (bgs), and 14 soil samples collected from beneath the fuel dispensers and product delivery piping ranging in depth from 2.5 to 3.5 feet bgs. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ehtylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MtBE). The results of the laboratory analyses necessitated additional removal of soil from the product piping areas and the UST removal excavation. Concentrations of TPH-g, BTEX and MtBE were elevated in the soil samples collected from the UST removal excavation relative to those samples collected from the product piping and dispenser areas, which were relatively low. Following the overexcavation activities, 3 soil samples were collected for

laboratory analyses from the enlarged UST removal excavation ranging in depth from 16.5 to 24.5 feet bgs, and one sample was collected from the product delivery piping at 5 feet bgs. The results of the laboratory analyses detected elevated concentrations in the soil samples collected at 24.5 feet bgs from the UST removal excavation relative to those samples collected at 16.5 and 19.5 feet bgs. Low concentrations were detected in the soil sample collected from the product delivery piping.

In July 1999, one 20,000-gallon gasoline UST, one 8,000-gallon gasoline UST, and one 6,000-gallon diesel UST were installed at the Site (Geo-Logic, 1999).

On January 3, 2000 the ACHCS notified the owner of the property, Mr. Pazdel, of an unauthorized release that had occurred during the removal of the old USTs in May 1999. The ACHCS requested a preliminary site assessment (PSA) be conducted on the Site.

On July 5, 2001, a soil and groundwater investigation was conducted at the Site to delineate the extent of soil and groundwater impact discovered during the removal of the USTs, product delivery piping and product dispensers in May 1999 (CSS Environmental Services, 2001). Five soil borings (SB-1 thru SB-5) were advanced on the Site using direct-push methods. The locations of the borings are illustrated on Figure 2. The soil borings were advanced to a maximum depth of 31 feet bgs. Groundwater was encountered in the soil borings at depths ranging from 29 to 30 feet bgs, and stabilized at depths ranging from 17 to 20 feet bgs. A total of ten soil samples were collected from the soil borings for laboratory analyses of TPH-g, BTEX and MtBE. The analytical results revealed elevated concentrations between 19 and 25.5 feet bgs. Maximum concentrations of TPH-g and BTEX in the soil samples collected were 470,000 micrograms per kilogram (µg/kg), 2,600 µg/kg, 16,000 µg/kg, 12,000 µg/kg, and 73,000 µg/kg, respectively. MtBE was not detected in any of the soil samples. Grab groundwater samples were collected from each boring for

laboratory analyses of TPH-g, BTEX and MtBE. The maximum concentrations of TPH-g and benzene in the groundwater samples collected from the soil borings were 83,000 micrograms per liter (µg/l) and 19,000 µg/l, respectively. MtBE was detected in four of the five grab groundwater samples. The maximum MtBE concentration was 87,000 µg/l.

In April 2002, five groundwater monitoring wells (MW-1 thru MW-5) were installed on the Site to a total depth of 30 feet bgs, and competed with well screens installed between 15 and 30 feet bgs. The locations of the wells are illustrated on Figure 2. The wells were installed to evaluate the groundwater flow gradient and the extent of dissolved-phase fuel hydrocarbons in the groundwater beneath the Site (SOMA, 2002). Groundwater was first encountered at depths ranging from approximately 25 to 29 feet bgs, and stabilized at depths ranging from 21 to 23 feet bgs. A total of five soil samples were collected from the soil borings for laboratory analyses of TPH-g, BTEX and MtBE. The analytical results revealed elevated concentrations of TPH-g and BTEX between 21 and 26 feet bgs, coincident with the depth at which groundwater was first encountered in the boreholes. Concentrations of MtBE were not detected in the soil samples. Groundwater samples were initially collected from each monitoring well during the Second Quarter 2002 (May 2002) for laboratory analyses of TPH-g, BTEX and MtBE (SOMA, 2002a). The maximum concentrations of TPH-g, benzene and MtBE in the groundwater samples collected from the monitoring wells were 44,000 µg/l, 6,000 µg/l and 12,000 µg/l, respectively. The groundwater gradient was determined to flow south across the Site. Due to the presence of elevated levels of dissolved-phase hydrocarbons in the furthest downgradient monitoring well, off-site migration was apparent.

Between August and October 2003, a soil and groundwater investigation was conducted to evaluate the off-site extent of the dissolved-phase hydrocarbon migration with groundwater (SOMA, 2003). The investigation included conducting a sensitive receptor survey to locate water supply wells and/or water

bodies within a 2,000-foot radius of the Site, and a conduit study to identify underground utilities adjacent to the Site beneath Freedom Avenue, Fairmont Drive and 153rd Avenue. Six soil borings (TWB-1 thru TWB-6) were advanced to depths ranging from 30 to 44 feet bgs, at locations ranging from 125 to 750 feet hydraulically downgradient from the Site. Figure 3 illustrates the locations of the off-site soil borings. A total of 14 soil samples were collected from the soil borings at depths ranging from 16 to 39 feet bgs for laboratory analyses of TPH-g, BTEX, MtBE and 1,2-DCE. The analytical results revealed soil impact off-site to a maximum distance of 265 feet hydraulically downgradient of the Site, and at depths ranging from 18 to 31.5 feet bgs. Elevated concentrations were detected at depths ranging from 21.5 to 24.5 feet bgs approximately 125 feet hydraulically downgradient from the Site. Concentrations of benzene, MtBE and 1,2 DCE were not detected in the soil samples. Grab groundwater samples were collected from each boring for laboratory analyses of TPH-g, BTEX, MtBE and 1,2-dichloroethane (1,2 DCA). The maximum concentrations of TPH-g and benzene were 410,000 µg/l and 2,200 µg/l, respectively, detected in a grab groundwater sample collected from a soil boring located 125 feet hydraulically downgradient of the Site. The maximum concentration of MtBE was 34 µg/l, which was detected in a grab groundwater sample collected from a soil boring located 265 feet hydraulically downgradient of the Site. The investigation resulted in the preliminary identification of two water-bearing zones beneath the Site and proximity. The sensitive receptor survey identified 10 wells within 2,000 feet of the Site. Three of the wells are located hydraulically downgradient of the Site; there is one irrigation well and two wells of unknown use. The remaining wells are either hydraulically upgradient or crossgradient of the Site. No water body was identified within a 0.5-mile distance from the Site. The conduit study revealed two sewer lines beneath Fairmont Drive and 153rd Avenue. Both lines were determined not to be submerged by groundwater.

In September 2004, an additional soil and groundwater investigation was conducted to further evaluate the extent of dissolved-phase hydrocarbon

migration with groundwater off the Site (SOMA 2004). Four groundwater monitoring wells (MW-6 thru MW-9) were installed at locations downgradient from the Site. The locations of the monitoring wells are illustrated on Figure 3. The four wells were installed to total depths ranging from 21 to 33 feet bgs, and completed with well screens ranging from 4 to 15 feet in length installed at the base of each well. Groundwater was first encountered at depths ranging from approximately 15 to 20 feet bgs, and stabilized at depths ranging from 12 to 17 feet bgs. A total of four soil samples were collected from one of the four monitoring well boreholes. Soil samples were not collected from the other well boreholes due to extensive and unexpected lateral lithologic changes encountered between the well boreholes during drilling, necessitating continuous coring which precluded collecting soil samples for laboratory analyses. The soil samples were analyzed for TPH-g and BTEX, but were not detected.

Also during this investigation, an attempt was made to collect a groundwater sample from an irrigation well hydraulically downgradient from the Site, identified by the sensitive receptor survey conducted between August and October 2003. The irrigation well was found not to have been used for some time, and, subsequently, no groundwater sample could be collected from the irrigation well.

Additionally, an attempt was made to locate another well of unknown use hydraulically downgradient from the Site, also identified by the sensitive receptor survey. This well could not be located despite efforts at canvassing the surrounding residential neighborhood with written notification. Based on the results of this investigation and the previous investigation conducted between August and October 2003, one water-bearing zone was identified to consist of discontinuous water-bearing layers and stringers separated by discontinuous clay lenses of varying thickness. Additionally, a preferential flow pathway was proposed consisting of a possible buried stream channel trending north to south beneath the eastern portion of the Site, and extending off-site to the south,

beneath the intersection of 153rd Avenue, Fairmont Drive and Liberty Avenue, which is hydraulically downgradient from the Site.

On November 21, 2005, the ACHCS requested that the owner of the property submit a work plan for a soil and water investigation by January 21, 2006. On December 28, 2005, a work plan was submitted to the ACHCS (SOMA, 2005) proposing the installation of eight cone penetrometer test (CPT) membrane interface probe (MIP) borings to refine hydrogeologic conditions using CPT technology on and off the Site. The purpose of this investigation was to define the horizontal and vertical extent of the soil and groundwater impact on and off the Site using MIP technology, and to collect soil and groundwater samples for laboratory analyses to support the MIP findings.

Based on a telephone conversation between SOMA and the ACHCS, on March 3, 2006, an addendum to SOMA's December 2005 workplan was prepared and submitted to the ACHCS. The work plan provided further clarification for advancing the CPT/MIP as requested by the ACHCS.

On April 10, 2006, SOMA oversaw the drilling of the CPT/MIP boreholes, per our approved workplan. Fisch Drilling (Fisch), SOMA's subcontractor, used a Geoprobe 6600 to drill the CPT/MIP boreholes. Due to unforeseen subsurface drilling conditions, and the fact that Fisch's drilling rig was not strong enough to drill through the hard subsurface materials, the drilling depth could not be advanced beyond 35 feet bgs in any of the CPT/MIP locations, despite a three day struggle. During this operation a representative of the ACHCS was present at the Site. On April 26, using a hollow stem auger, a calibration borehole was drilled to 47 feet bgs. Since the CPT/MIP boreholes could not be advanced to the targeted depths, SOMA negotiated with Fisch and it was decided that Gregg Drilling would perform the CPT/MIP drilling boreholes at a later date, and Fisch would be compensated for a substantially reduced amount.

In a letter dated May 29, 2006 the ACHCS reduced the number of the on-site CPT/MIP borings from six to five, altered the locations of some of the CPT/MIP borings, adjusted the depths at which the groundwater samples would be collected, and requested the development of a site conceptual model (SCM) and corrective action plan (CAP) for the Site along with an interim remediation and migration control evaluation. The ACHCS subsequently directed that the investigative report be submitted by November 30, 2006.

Quarterly groundwater monitoring/sampling has been routinely conducted at the Site since Second Quarter 2002. Currently there are 9 groundwater monitoring wells at the Site, six on-site and three off-site.

2.0 SCOPE OF WORK

The primary objectives of this investigation were to determine the hydrogeology of the Site and to evaluate the lateral and vertical distribution of soil and groundwater impact, both on and off-site.

SOMA's work plan, dated December 28, 2005, and the ACHCS's revision, dated May 29, 2006, proposed defining the hydrogeologic conditions in the on- and off-site locations using CPT technology, defining the horizontal and vertical extent of the soil and groundwater impact using MIP technology, and collecting soil and groundwater samples to support the MIP findings.

This report describes the field investigation activities conducted and field/laboratory analytical data derived, and presents an initial SCM that incorporates the results of this and previous investigations and an interim remediation and migration control evaluation.

2.1 Work Tasks

The following tasks were implemented to conduct the scope of work:

Task 1: **Permit Acquisition, Health and Safety Plan Preparation, and Subsurface Utility Clearance**

Task 2: **Cone Penetration Test/Membrane Interface Probe Study**

Task 3: **Soil and Groundwater Sampling and Laboratory Analyses**

Task 4: **Initial Conceptual Site Model**

Task 5: **Evaluation of Interim Remediation and Migration Control**

3.0 INVESTIGATIVE ACTIVITIES

Prior to commencing field activities, SOMA obtained an encroachment permit from the County of Alameda Public Works Agency to conduct work in the public-right-of way of Fairmont Drive and 153rd Avenue, and a drilling permit from the Alameda County Public Works Agency, Water Resources Section. Both permits are included in Appendix A.

Before conducting field activities, SOMA prepared a site-specific health and safety plan (HASP). The HASP was designed to address safety provisions during field activities. The plan provided procedures to protect the field crew from physical and chemical hazards resulting from drilling, well installation, and groundwater monitoring and sampling. The HASP established personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans.

To protect the field crew from underground utility hazards, SOMA contacted Underground Service Alert, who contacted the appropriate utility companies to clear the drilling locations. Following clearance, SOMA retained a private utility locator to re-survey the drilling areas and to locate any additional subsurface conduits that may interfere with safe drilling operations.

3.1 Field Activities

On September 7, 2006 the field investigation resumed. To characterize the Site's lithology and hydrogeology, and to evaluate the lateral and vertical distribution of the soil and groundwater impact both on and off the Site, SOMA supervised the advancement of eight CPT/MIP borings using a 25-ton CPT rig. Following the completion of the CPT/MIP program, eight borings were advanced using direct-push drilling methods, in the immediate proximity of the CPT/MIP borings. These borings were advanced to collect soil and groundwater samples for laboratory analyses to support the MIP findings. The locations of the CPT/MIP and soil/groundwater sample borings are illustrated on Figure 4.

3.1.1 CPT/MIP Calibration Borehole Drilling and Sampling

To verify that the CPT/MIP produced reliable logs, a hollow stem auger (HSA) borehole was drilled adjacent to one of the CPT boreholes (CPT/MIP-1) to calibrate the CPT lithology and MIP logs. By comparing the borehole log with the log of borehole CPT/MIP-1, and photo-ionization detector (PID) readings of soil cores, SOMA's field geologist evaluated the CPT/MIP software. The results are discussed in Section 4.1.4.

The HSA borehole (HSA-1) was drilled adjacent to CPT/MIP-1 (Figure 4). The boring was drilled to a total depth of 46.5 feet bgs. Lithologic cores were collected using an unlined split-spoon California Modified Sampler. Between 5 and 25 feet bgs, lithologic cores were collected every five feet. Between 30 and 46.5 feet bgs, the boring was continuously cored. SOMA's field geologist notated the observed soil characteristics encountered and documented them on the geologic log for HSA-1, included as Appendix B.

To characterize the volatile hydrocarbon content of the soil cores, the geologist collected baggie samples from the soil cores for volatile-vapor measurement

using a PID. The PID values are presented on the geologic log (Appendix B). Fragments of sediment samples were placed into a freezer-grade re-sealable plastic bag and heated in the sun for a few minutes before measuring the volatile organic vapor content of the bag sample with the PID.

After completing the sample collection, borehole HSA-1 was tremie grouted from the bottom of the borehole to one-foot bgs with Portland I/II cement. The cement grout was mixed at an approximate ratio of one 94-pound bag of cement to approximately six gallons of water with about 5% bentonite. The remaining borehole depth was then backfilled with concrete to existing grade.

3.1.2 CPT/MIP Study

To evaluate the subsurface soil lithology, the presence of different water-bearing zones, and the vertical distribution of petroleum hydrocarbons in the subsurface soils, a CPT/MIP study was conducted at the Site. A brief summary of the field procedures of the CPT sounding and MIP testing is described in the following paragraphs.

CPT was implemented using an integrated electronic cone system that involved hydraulically pushing a sounding probe into the ground at a constant rate. Continuous measurements are fed into a data acquisition system that records tip resistance, sleeve friction, pore pressure, and friction ratio. Tip resistance is the total force acting on the end or cone of the probe divided by the projected area of the cone. Sleeve friction is the total frictional force acting on the side, or friction sleeve, of the probe, divided by the area of the sleeve. Pore pressure is measured just behind the tip of the probe and these measurements qualitatively evaluate the hydraulic conductivity of the sedimentary interval. Friction ratio is the ratio expressed as a percentage of the sleeve friction to the tip resistance and the CPT software also uses this parameter for soil classification. By qualitatively integrating these parameters, CPT provides a rapid, reliable and

economical means of determining stratigraphy, relative density, strength and hydrogeologic information. The geologic information gathered during the CPT drilling was used to identify different water-bearing zones and aquitards, as well as, confining layers beneath the Site.

By qualitatively integrating the above-referenced parameters, CPT provided a rapid means of determining relative soil lithology and hydrogeologic information. The CPT data reduction and interpretation was performed in real time, facilitating on-site decision making by SOMA's field geologist. The hydrogeologic information gathered was used to identify different water-bearing zones, as well as any confining layers beneath the Site.

Concurrent with the CPT study, a MIP was utilized to evaluate the vertical distribution of petroleum hydrocarbons. The MIP provided information regarding residual levels of petroleum hydrocarbons that may exist at different depth intervals. The MIP collects vapors from contaminated zones with a permeable membrane that is housed within a heating block that releases vaporized contaminants from soil and groundwater and hastens the diffusion of contaminant vapors across the membrane into three narrow gauge tubes. The three tubes conduct the vaporized contaminants up from the subsurface into three separate detectors mounted on the gas chromatograph housed within a trailer:

- Photoionization detector (PID) for ring structure hydrocarbons,
- Flame-ionization detector (FID) for straight-chain hydrocarbons, and
- Electron capture device (ECD) for chlorinated compounds.

The three separate influent streams from the MIP were analyzed and displayed on a FC4000 Field Instrument.

The CPT characterized the underlying sediments at the Site as consisting primarily of clayey silt to silty clay, silty clay to clay, sandy silt to clayey silt, silty sand to sandy silt, and sand to cemented sand. The CPT also characterized two distinct water-bearing zones between 18 and 28 feet bgs and 45 to 60 feet bgs. The MIP indicated that the most significant contaminant concentrations are located between 22 and 36 feet bgs. The logs of the CPT/MIP generated data are included in Appendix C. Following completion of the CPT/MIP activities at each location, the boring was tremie grouted from the bottom of the borehole to one-foot bgs with Portland I/II cement. The cement grout was mixed at an approximate ratio of one 94-pound bag of cement to approximately six gallons of water with about 5% bentonite. The remaining borehole depth was then backfilled with asphalt cold-patch to surface grade.

The results of the CPT/MIP study are discussed further in Section 4.

3.1.3 Soil and Groundwater Sample Collection

Following the completion of the CPT/MIP program, eight borings were advanced, using direct-push drilling methods, in the immediate proximity of the CPT/MIP borings. The borings were advanced to collect soil and groundwater samples for laboratory analyses to support the MIP findings. The locations of the CPT/MIP and soil/groundwater sample borings are illustrated on Figure 4.

Soil samples were collected at each of the eight locations using direct push drilling methods. Depth-discrete sampling intervals were selected based on the MIP readings indicating the presence of significant petroleum hydrocarbon concentrations. Each soil sample was collected using a 4-foot long by 2-inch diameter sampling rod lined with a polybutryate sleeve. The sampler was advanced to the MIP identified depth interval, the sampling point on the sampler tip disengaged, and the sampler driven 4 feet to fill the liner. The sampler was retrieved and the liner removed. The sample sleeve was then segmented into

one-foot long portions, which were sealed at both ends with Teflon™ sheet and plastic end caps. Each segment was then labeled with sample identifier, date and time of sample collection, recorded on a chain-of-custody form, and placed in a cooled ice chest pending transport to a California state-certified analytical laboratory for analyses. A total of 19 soil samples were collected for laboratory analyses.

Groundwater samples were also collected at each of the eight locations using direct push drilling methods. Depth-discrete intervals identified as potential water-bearing zones intervals by the CPT software were selected for collecting groundwater samples. The groundwater samples were collected using a Geoprobe Screen Point 16 discrete water sampler. The sampler was operated by advancing 1¾-inch hollow push rods, with the filter tip in a closed configuration, to the base of the desired sampling interval. The push rods were then retracted, exposing the 4-foot long encased filter screen and allowing groundwater to infiltrate hydrostatically into the inlet screen. Once the sampler was full, the groundwater sample was collected using a stainless steel bailer, and transferred into the appropriate sample containers. The sample containers included 40-milliliter (ml) VOA vials, pre-preserved with hydrochloric acid, which were completely filled and sealed properly to prevent the inclusion of air bubbles within the headspace of the vials. The samples were then labeled with sample identifier, date and time of sample collection, recorded on a chain-of-custody form, and placed in a cooled ice chest pending transport to a California state-certified analytical laboratory for analyses. A total of 9 groundwater samples were collected for laboratory analyses. Groundwater samples were not collected from DPW-2 and DPW-7 due to the absence of groundwater for sample collection at these two locations.

After collecting the groundwater samples, each boring was tremie grouted from the bottom of the borehole to one-foot bgs with Portland I/II cement. The cement grout was mixed at an approximate ratio of one 94-pound bag of cement to

approximately six gallons of water with about 5% bentonite. The remaining borehole depth was then backfilled with asphalt cold-patch to surface grade.

3.2 Laboratory Analyses

The soil and groundwater samples collected were submitted to Pacific Analytical Laboratory (PAL), a CDHS accredited environmental analytical laboratory, for analyses. The soil and groundwater samples were analyzed for the following constituents, using EPA Method 8260B:

- TPH-g
- BTEX
- MtBE
- Gasoline oxygenates, consisting of tertiary Butyl Alcohol (TBA), Di-Isopropyl Ether (DIPE), Ethyl tertiary Butyl Ether (ETBE), and Methyl tertiary Amyl Ether (TAME)
- Lead scavengers, consisting of 1,2-dichloroethane (EDC), and 1,2-dibromoethane (EDB), and
- Ethanol.

In addition, the soil and groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPH-d) using EPA Method 8015 DRO.

3.2.1 Soil Analyses

Soil analytical data is presented in Table 1. In general, elevated concentrations were detected in the soil samples collected at shallow depths between 20 and 28 feet bgs. The soil laboratory analytical report is included in Appendix D.

Concentrations of TPH-d were either not detected or detected at trace concentrations. Only 4 samples, DPS-1 (26-27), DPS-2 (26-27), DPS-5 (22-23) and DPS-8 (20-21), contained detectable concentrations of TPH-d. The detected

concentrations were flagged by the laboratory as having a chromatogram not resembling diesel, and unidentified hydrocarbon between C9 and C16. The highest TPH-d concentration was detected at 0.292 µg/kg in sample DPS-5 (22-23); the lowest concentration was detected at 0.0565 µg/kg in sample DPS-2 (26-27).

Concentrations of TPH-g were detected in 11 samples, DPS-1 (26-27), DPS-2 (26-27) and (42-43), DPS-5 (22-23), (31-32) and (41-42), DPS-6 (21-22), (29-30) and (58-60), and DPS-8 (20-21) and (30-31). The laboratory did not flag any of the TPH-g analytical results. Concentrations of TPH-g decreased with increasing sampling depth. Elevated TPH-g concentrations were detected in the shallow soil samples between 20 and 27 feet bgs. The highest TPH-g concentration was detected at 259,700 µg/kg in sample DPS-6 (21-22); the lowest concentration was detected at 69.36 µg/kg in sample DPS-6 (29-30).

Concentrations of benzene were detected in 7 samples, DPS-2 (26-27) and (42-43), DPS-3 (27-28), DPS-5 (22-23), (31-32) and (41-42), and DPS-8 (20-21). The laboratory did not flag any of the benzene analytical results. Concentrations of benzene decreased with increasing sampling depth. Elevated benzene concentrations were detected in the shallow soil samples between 20 and 27 feet bgs. The highest benzene concentrations were detected at 51.14 µg/kg and 46.41 µg/kg in samples DPS-8 (20-21) and DPS-2 (26-27), respectively; the lowest concentration was detected at 0.52 µg/kg in sample DPS-5 (41-42).

Toluene concentrations were detected in 9 samples, DPS-1 (26-27), DPS-2 (26-27) and (42-43), DPS-5 (22-23), (31-32) and (41-42), DPS-6 (21-22), and DPS-8 (20-21) and (30-31). The laboratory did not flag any of the toluene analytical results. Concentrations of toluene decreased with increasing sampling depth. Elevated toluene concentrations were detected in the shallow soil samples between 20 and 27 feet bgs. The highest toluene concentration was detected at

1,195 µg/kg in sample DPS-5 (22-23), and the lowest concentration was detected at 2.97 µg/kg in sample DPS-8 (30-31).

Ethylbenzene concentrations were not detected in sample DPS-4 (39-40), but were detected in the remaining 18 samples. The laboratory did not flag any of the ethylbenzene analytical results. Concentrations of ethylbenzene decreased with increasing sampling depth, except at DPS-1 where the concentration increased from 713 µg/kg at DPS-1 (26-27) to 2,100 µg/kg at DPS-1 (53-54). Elevated ethylbenzene concentrations were detected in the shallow soil samples between 20 and 27 feet bgs, except at DPS-1 as described previously. The highest ethylbenzene concentration was detected at 4,327 µg/kg in sample DPS-6 (21-22), and the lowest concentration was detected at 2.04 µg/kg in sample DPS-6 (58-60).

Xylene concentrations were detected in 12 samples, DPS-1 (26-27), DPS-2 (26-27) and (42-43), DPS-3 (27-28), DPS-5 (22-23), (31-32) and (41-42), DPS-6 (21-22) and (58-60), and DPS-8 (20-21), (30-31) and (40.5-41). The laboratory did not flag any of the xylenes analytical results. Concentrations of xylenes decreased with increasing sampling depth, except at DPS-6 where the concentration increased from <0.51 µg/kg at DPS-6 (29-30) to 4.83 µg/kg at DPS-6 (58-60). Elevated xylenes concentrations were detected in the shallow soil samples between 20 and 27 feet bgs, except at DPS-6 as described previously. The highest xylenes concentration was detected at 6,431µg/kg in sample DPS-6 (21-22), and the lowest concentration was detected at 1.74 µg/kg in sample DPS-8 (40.5-41).

MtBE concentrations were detected in 7 samples, DPS-2 (42-43), DPS-3 (27-28), DPS-5 (31-32), DPS-7 (24-25) and (34-35), and DPS-8 (30-31) and (40.5-41). The laboratory did not flag any of the MtBE analytical results. Concentrations of MtBE decreased with increasing sampling depth, except at DPS-2 where the concentration increased from <21.5 µg/kg at DPS-2 (26-27) to 84.8 µg/kg at

DPS-2 (42-43), at DPS-5 where the concentration increased from <21.5 µg/kg at DPS-5 (22-23) to 7.1 µg/kg at DPS-5 (31-32), and at DPS-8 where the concentration increased from <21.5 µg/kg at DPS-8 (20-21) to 43.6 µg/kg at DPS-8 (30-31). Elevated MtBE concentrations were detected in the depth interval 30 to 43 feet bgs. The highest MtBE concentration was detected at 84.8 µg/kg in sample DPS-2 (42-43), and the lowest concentration was detected at 3.16 µg/kg in samples DPS-7 (24-25) and (34-35).

TAME was detected in 1 sample, DPS-3 (27-28) at 2.19 µg/kg; TBA was detected in two samples, DPS-2 (42-43) at 107 µg/kg, and DPS-3 (27-28) at 13.7 µg/kg. Concentrations of DIPE, ETBE, EDC, EDB and ethanol were not detected in any of the 19 soil samples submitted for analyses. The laboratory did not flag any of the TAME, DIPE, ETBE, EDC, EDB or ethanol analytical results.

3.2.2 Groundwater Analyses

Groundwater analytical data is presented in Table 2. In general, elevated petroleum hydrocarbon concentrations were detected in the groundwater samples collected from the Site. The groundwater sample laboratory analytical report is included in Appendix D.

Concentrations of TPH-d were detected in all 9 samples. The detected concentrations were flagged by the laboratory as having a chromatogram not resembling diesel, and unidentified hydrocarbon between C9 and C16. In addition, the samples were filtered to remove sediment entrained during sample collection, and only 500 ml was available for analyses following filtration. The highest TPH-d concentration was detected at 22,000 µg/l in sample DPW-5 (18-22), and the lowest concentration was at 82 µg/l in sample DPW-8 (52.5-56.5).

Concentrations of TPH-g were not detected (<50 µg/l) in sample DPW-8 (52.5-56.6), but were detected in the remaining 8 samples. The laboratory did not flag

any of the TPH-g analytical results. The highest TPH-g concentration was detected at 119,000 µg/l in sample DPW-5 (18-22), and the lowest concentration was detected at 374 µg/l in sample DPW-1 (55-59).

Concentrations of benzene were not detected (<0.5 µg/l) in sample DPW-8 (52.5-56.6), but were detected in the remaining 8 samples. The laboratory did not flag any of the benzene analytical results. The highest benzene concentration was detected at 3,930 µg/l in sample DPW-5 (18-22), and the lowest concentration was detected at 1.95 µg/l in sample DPW-1 (55-59) collected from the Second WBZ.

Toluene was detected in 2 samples, at 6,910 µg/l in sample DPW-5 (18-22) and at 4.11 µg/l in sample DPW-6 (20-22). The laboratory did not flag any of the toluene analytical results.

Ethylbenzene concentrations were detected in all 9 samples. The laboratory did not flag any of the ethylbenzene analytical results. Elevated ethylbenzene concentrations were detected at 6,030 µg/l in sample DPW-5 (18-22), and the lowest concentration was detected at 2.45 µg/l in sample DPW-8 (52.5-56.5).

Xylenes concentrations were detected in all 9 samples. The laboratory did not flag any of the xylenes analytical results. Elevated xylenes concentrations were detected at 14,260 µg/l in sample DPW-5 (18-22), and the lowest concentration was detected at 0.5 µg/l in sample DPW-8 (52.5-56.5).

MtBE concentrations were not detected (<2.15 µg/l) in DPW-4 (24-28), but were detected in the remaining 8 samples. The laboratory did not flag any of the MtBE analytical results. The highest MtBE concentrations were detected at 3,330 µg/l in sample DPW-3 (56-60) and 2,860 µg/l in sample DPW-8 (16-20). The lowest MtBE concentration was detected at 1.94 µg/l in sample DPW-4 (20-22).

TAME concentrations were detected in 4 samples, DPW-3 (56-60) at 944 µg/l, DPW-5 (18-22) at 109 µg/l, DPW-8 (16-20) at 252 µg/l and DPW-8 (52.5-56.5) at 2.43 µg/l. TBA concentrations were detected in two samples, DPW-3 (56-60) at 537 µg/l, and DPW-8 (16-20) at 221 µg/l. ETBE was detected in one sample, at 6.22 µg/l in sample DPW-8 (16-20). Concentrations of DIPE, EDC, EDB and ethanol were not detected in any of the 9 groundwater samples submitted for analyses. The laboratory did not flag any of the DIPE, ETBE, EDC, EDB or ethanol analytical results.

4.0 RESULTS

The following sections describe the results of the field investigation activities. The results of this and prior investigative data were used to evaluate the hydrogeology of the Site and characterize the nature and distribution of petroleum hydrocarbons in the soil and groundwater on and off the Site.

4.1 Hydrogeology of the Site and Proximity

The results of the CPT/MIP study and borehole logs of the existing groundwater monitoring wells and earlier soil borings were used to construct three geologic cross-sections. Figure 5 shows the locations of geologic cross-section A-A', B-B' and C-C'. As shown in the diagrams, an unconsolidated sequence of permeable and relatively impermeable sediments underlies the Site and adjacent areas.

4.1.1 Water-Bearing Zones

Two main water-bearing zones were encountered within the depths explored by the CPT/MIP and are designated the First and Second water-bearing zones (WBZs). Based on the CPT data and borehole logs of the groundwater monitoring wells and soil borings, both WBZs appear to be laterally continuous across the Site and hydraulically downgradient of the Site, and are separated by a laterally continuous non water-bearing unit.

4.1.1.1 First WBZ

The groundwater monitoring well network in the on- and off-site areas is completed within the First WBZ. During well borehole drilling, groundwater in the First WBZ was encountered between approximately 25 and 30 feet bgs. Following well completion and development, groundwater elevations were measured above the depth at which groundwater was encountered during drilling. Over the period of record for quarterly groundwater monitoring at the Site (Second Quarter 2002 to Third Quarter 2006), groundwater elevations in the monitoring wells have consistently been measured above the depth at which groundwater was first encountered in the well borings during drilling, and suggest groundwater elevations in the First WBZ reflect potentiometric pressure. Therefore, the First WBZ can be considered a confined aquifer. Over the period of record for quarterly groundwater monitoring at the Site, depth to groundwater in the First WBZ has ranged from approximately 17 to 23 feet bgs (approximately 26 to 31 feet above mean sea level), with the groundwater flow gradient in the First WBZ predominately towards the south/southwest.

From approximately 12 to 22 feet bgs the First WBZ occurs as an approximate 10- to 15-foot thick interbedded sequence of CPT-interpreted sand, silty sand to sandy silt, cemented sand, and silt to clayey silt. As illustrated on cross-section A-A' and B-B' (Figures 6 and 7, respectively), the top of the First WBZ is inferred at greater than 15 feet bgs but less than 20 feet bgs beneath the Site. In addition, as illustrated on cross-section C-C' (Figure 8), the top of the First WBZ is inferred to be shallower (approximately 12 feet bgs) hydraulically downgradient of the Site from MW-5 to TWB-1, but increases with depth beyond TWB-1 to TWB-4 (approximately 20 feet bgs). Also, the thickness of the First WBZ is inferred to increase to approximately 30 feet beyond CPT/MIP-7 to CPT/MIP-6 and at TWB-1, and is inferred to decrease to approximately 5 feet to 2 feet beyond TWB-1 to TWB-6 and at TWB-4, respectively. The First WBZ is overlain

by CPT-interpreted clay and clayey silt with thin interbeds of sand and silty sand, approximately 1 to 2 feet thick in the upper portion of the sequence (< 10 feet bgs) beneath the Site, with massive clay and clayey silt to the top of the First WBZ (12 to 22 feet bgs). Based on the CPT and monitoring well and soil boring borehole log data, this layer seems to be an unsaturated layer.

4.1.1.2 Second WBZ

No groundwater monitoring wells are completed in the Second WBZ either on or off the Site. However, during grab groundwater sampling activities (Section 3.1.3), following setting the discrete water sampler, groundwater elevations rose immediately above the top of the sampler and into the hollow push rods. This infers that groundwater in the Second WBZ reflects potentiometric pressure. Therefore, the Second WBZ can also be considered a confined aquifer.

From approximately 32 to 50 feet bgs, the Second WBZ occurs as an approximate 5 to at least 35-foot thick interbedded sequence of the same CPT-interpreted lithologic type as seen in the First WBZ. The least minimum thickness observed (5 feet) was determined at CPT/MIP-1 as illustrated on cross-section B-B' (Figure 7), and the maximum thickness observed (35 feet) was determined at CPT/MIP-3 as illustrated on cross-section A-A' (Figure 6). Thicknesses greater than 35 feet are inferred on all three cross-sections. Beneath the Site, the Second WBZ is inferred to be greater than 30 feet bgs but less than 50 feet bgs, as illustrated on cross-section A-A' and B-B' (Figures 6 and 7, respectively). Hydraulically downgradient of the Site, the top of the Second WBZ is inferred to occur at approximately 40 feet bgs, and is inferred to be shallower at TWB-4 (approximately 32 feet bgs), as illustrated on cross-section A-A' and B-B' (Figures 6 and 7). The CPT data collected from below the Second WBZ from approximately 56 feet bgs at CPT/MIP-1 (Figure 6) and 62 feet bgs at CPT/MIP-3 (Figure 7) identified predominately stiff fine-grained material (inferred

to be clay). Based on the CPT data, the material underlying the Second WBZ appears to be unsaturated.

4.1.1.3 Aquitard

A 5 to 25-foot thick laterally continuous CPT-interpreted unsaturated layer of clay, clayey silt, and silt separate the First and Second WBZs. This unit is referred to as an aquitard. The thinner thickness of the aquitard is inferred at the northeast (CPT/MIP-3) and southwest (CPT/MIP-4) portions of the Site, as illustrated on cross-section A-A' (Figure 6). At CPT/MIP-2 the thickness of the aquitard increases to approximately 10 feet. Hydraulically downgradient of the Site, as illustrated on cross-section A-A' and B-B' (Figures 6 and 7), the top of the aquitard is inferred to occur at approximately 20 feet bgs at CPT/MIP-7 and CPT/MIP–8, and increases with depth to approximately 30 feet bgs at CTP/MIP-6 and at the same depth further downgradient at TWB-1, TWB-6 and TWB-4. The aquitard is thickest (approximately 25 feet) at CPT/MIP-7 and CPT/MIP–8, but thins to approximately 15 feet at CTP/MIP-6, and thins more (approximately 10 feet and 5 feet) further downgradient at TWB-6 and TWB-4, respectively.

4.1.2 Calibration of CPT Software

The HSA calibration borehole (Section 3.1.1) indicated that the CPT software accurately detected vertical intervals of potential water-bearing zones and the upper and lower boundaries of the intervening confining zone. However, the CPT software also appeared to skew the actual sedimentary texture toward the fine-grained side (e.g., the CPT software interpreted clayey sand as clayey silt to silty clay). Some minor differences in lithologic depth intervals were also noted. However, there are inherent limitations to soil-behavior based lithologic characterization, and channelization can account for slight differences in depth interval sequences. Based on the above, SOMA considers the observed minor textural and depth interval sequence discrepancies acceptable.

4.2 Nature and Extent of Soil Impact

The results of the MIP program indicated the presence of straight-chain and ring structure hydrocarbons in the soil profile of the First WBZ, the aquitard, and the Second WBZ. In general, the PID/FID data suggest the presence of moderately weathered fuel hydrocarbons adsorbed to the soil or dissolved in groundwater within the First and Second WBZs. The distribution of the PID/FID data indicates concentrations of fuel hydrocarbons are much lower in the aquitard relative to the First and Second WBZ, suggesting that the aquitard is not a source of impact to groundwater in the Second WBZ, and is effectively preventing cross-contamination between both aquifers.

The results of laboratory analyses conducted on the soil samples collected from the Site during the present field investigation, and during the November 2003 and October 2004 investigations, are listed on Table 1. The data indicates soil impact beneath the Site occurs in the saturated soil profile of the First WBZ, the aquitard, and the saturated soil profile of the Second WBZ. Petroleum hydrocarbons detected in the soil samples collected from the Site include TPH-g, TPH-d, BTEX, MtBE, TBA and TAME.

4.2.1 Impact to First WBZ

Impact to the First WBZ extends from approximately 16 to 30 feet bgs. In general, concentrations of fuel hydrocarbons detected in the soil samples collected from the upper portion of the First WBZ are elevated relative to those detected in the lower portion of the First WBZ. For example, concentrations of TPH-g were detected at 259,700 µg/kg in soil sample DPS-6 (21-22) and at 69.36 µg/kg in soil sample DPS-6 (29-30). Similarly, concentrations of MtBE decreased from 6,431 µg/kg to <0.51 µg/kg (non-detect) in the same soil samples, respectively.

The calculated 95% upper confidence level (UCL) concentrations of TPH-g, TPH-d, BTEX, MtBE and TAME for soil samples collected from the First WBZ are listed in Table 1. The data indicates that the concentrations of TPH-g, ethylbenzene and total xylenes exceed their respective environmental screening level (ESL) values for residential land use for shallow soil (greater than 3 meters or 9 feet) where groundwater is a potential drinking water source, as set forth by the RWQCB.

The lateral extent of soil impact in the First WBZ is illustrated on Figure 9 and is based on the historical soil analyses listed in Table 1. The lateral extent indicates impact is situated beneath the northwest, central, and southeast portions of the Site, in the area of the UST cluster and product dispensers in the north and southeast portions of the Site. The lateral extent off the Site is inferred to continue south/southeast beneath the northeast corner of the residential area south of the Site, and continuing further southeast and east beneath the intersection of Fairmont Avenue, 152nd Avenue and Liberty Street.

4.2.2 Impact to Aquitard

Impact to the aquitard extends from approximately 24 to 40 feet bgs. Soil samples collected from the aquitard are:

- TWB-6 @ 3-39
- DPS-5 (31-32)
- DPS-7 (24-25) and DPS-7 (34-35), and
- DPS-8 (30-31) and DPS-8 (40.5-41).

Table 1 lists the analytical results. In general, with the exception of MtBE, concentrations of fuel hydrocarbons detected in the soil samples collected from the aquitard beneath the Site were elevated relative to those collected off the Site to the southeast. For example, concentrations of TPH-g were detected at 490.1 µg/kg in soil sample DPS-5 (31-32) and at 321.2 µg/kg in soil sample DPS-8 (30-

31). Conversely, concentrations of MtBE were detected at 7.1 µg/kg and at 43.6 µg/kg in the same soil samples, respectively.

The calculated 95% UCL concentrations of TPH-g, TPH-d, BTEX, MtBE and TAME for soil samples collected from the aquitard are listed in Table 1. The data indicates that none of the concentrations exceed their respective ESL values for residential land use for shallow soil (greater than 3 meters or 9 feet) where groundwater is a potential drinking water source, as set forth by the RWQCB.

The lateral extent of the soil impact in the aquitard is illustrated on Figure 10, and is based on the historical soil analyses listed in Table 1. The lateral extent indicates impact is situated beneath the southeast portions of the Site in the area of the product dispenser. The lateral extent off the Site is inferred to continue southeast beneath the northeast corner of the residential area south of the Site, and continuing further southeast beneath the 152nd Avenue and Liberty Street.

4.2.3 Impact to Second WBZ

Soil samples collected from the Second WBZ are:

- DPS-1 (39-40)
- DPS-2 (42-43)
- DPS-3 (57-58)
- DPS-4 (39-40)
- DPS-5 (41-42) and
- DPS-6 (58-60)

The analytical results are listed in Table 1. In general, concentrations of fuel hydrocarbons detected in the soil samples collected from the Second WBZ beneath the Site were elevated relative to those collected off the Site to the southeast (DPS-6). For example, concentrations of TPH-g were detected at 372.1 µg/kg and 257.3 µg/kg in soil samples DPS-2 (42-43) and DPS-5 (41-42), respectively. Conversely, concentrations of TPH-g were not detected in the soil

sample collected from DPS-6 (58-60). Only xylenes were detected in the soil sample collected from DPS-6 (58-60) at 4.83 µg/kg. MtBE and TBA were only detected in soil sample DPS-2 (42-43) at 84.8 µg/kg and 107 µg/kg, respectively.

The calculated 95% UCL concentrations of TPH-g, TPH-d, BTEX, MtBE and TAME for soil samples collected from the Second WBZ are listed in Table 1. The data indicates that only MtBE exceeds its ESL value for residential land use for shallow soil (greater than 3 meters or 9 feet) where groundwater is a potential drinking water source, as set forth by the RWQCB.

The lateral extent of soil impact in the Second WBZ is illustrated on Figure 11 and is based on the historical soil analyses listed in Table 1. The lateral extent indicates impact is situated beneath the southeast portions of the Site in the area of the product dispenser. The lateral extent off the Site is inferred to continue slightly southeast beneath the northeast corner of the residential area south of the Site.

4.3 Nature and Extent of Groundwater Impact

Based on the results of analyses conducted on grab groundwater samples collected during the current CPT/MIP investigation and the investigation conducted in October 2003, as well as the analytical data derived from quarterly groundwater monitoring/sampling conducted at the Site since Second Quarter 2002 for groundwater monitoring wells MW-1 thru MW-5 on the Site, and since Third Quarter 2004 for groundwater monitoring wells MW-6 thru MW-9 off the Site, the First and Second WBZs beneath the Site and off-site to the south and southeast are impacted by dissolved-phase fuel hydrocarbons. The First WBZ contains concentrations of dissolved-phase fuel hydrocarbons that are significantly greater than those detected in the Second WBZ.

The existing groundwater monitoring well network on the Site (MW-1 thru MW-5) and off the Site (MW-6 thru MW-9) is completed only within the First WBZ. Quarterly groundwater monitoring and sampling of the First WBZ has been continuously conducted since Second Quarter 2002 for groundwater monitoring wells MW-1 thru MW-5 on the Site, and since Third Quarter 2004 for groundwater monitoring wells MW-6 thru MW-9 off the Site. The analytical results of the limited grab groundwater sampling conducted during the current CPT/MIP investigation were used to evaluate the presence of dissolved-phase hydrocarbons in the Second WBZ.

Over the period of record for quarterly groundwater monitoring at the Site (Second Quarter 2002 to Third Quarter 2006) groundwater elevations in the monitoring wells have consistently been measured above the depth at which groundwater was first encountered in the well borings during drilling, and suggest groundwater elevations in the First WBZ reflect potentiometric pressure. Therefore, the First WBZ can be considered a confined aquifer.

No groundwater monitoring wells are completed in the Second WBZ, either on or off the Site. However, during grab groundwater sampling activities (Section 3.1.3), following setting the discrete water sampler, groundwater elevations rose immediately above the top of the sampler and into the hollow push rods. This infers that groundwater in the Second WBZ reflects potentiometric pressure. Therefore, the Second WBZ can also be considered a confined aquifer.

Because none of the existing groundwater monitoring wells are completed in the Second WBZ, differences in groundwater elevations and vertical flow gradients between the First and Second WBZs cannot be determined. Determining vertical flow gradients is a necessary factor in evaluating options for groundwater remediation. To determine vertical flow gradients between the WBZs, groundwater monitoring wells will need to be completed with well screens installed within the Second WBZ.

4.3.1 Impact to First WBZ

Over the period of record for quarterly monitoring and sampling at the Site, the detection of dissolved-phase hydrocarbons in the First WBZ, including TPH-g, BTEX, MtBE, TBA, ETBE and TAME, has been limited to groundwater samples collected from groundwater monitoring wells MW-1 thru MW-5 located on the Site and groundwater monitoring wells MW-6 thru MW-7 located off the Site. Concentrations of TPH-d have also been detected in the First WBZ, but are limited to the grab groundwater samples collected from the First WBZ during the current CPT/MIP investigation. Table 2 lists the concentrations of dissolved-phase hydrocarbons detected in groundwater samples collected from the First WBZ over the period of record since Second Quarter 2002 for groundwater monitoring wells MW-1 thru MW-5 on the Site, since Third Quarter 2004 for groundwater monitoring wells MW-6 thru MW-9 off the Site, and during the current CPT/MIP investigation.

Table 2 also lists the average dissolved-phase concentrations and the 95% UCL. The 95% UCLs were compared with ESLs for these constituents as developed by the RWQCB for the protection of groundwater as a drinking water source. The ESLs for these constituents are listed in Table 2. As Table 2 indicates, the 95% UCLs for TPH-g, TPH-d, BTEX, MtBE and TBA significantly exceed the ESLs for these constituents, with elevated concentrations in groundwater monitoring well MW-3 relative to the remaining wells where dissolved-phase hydrocarbons have been detected. In general, dissolved-phase hydrocarbon concentrations are elevated in groundwater monitoring wells on the Site (MW-1 thru MW-5) relative to those groundwater monitoring wells off the Site (MW-6 and MW-7).

The results of analyses conducted on the grab groundwater samples collected from soil borings completed in the First WBZ in September and October 2003

(TWB-1 thru TWB-6) detected dissolved-phase hydrocarbons including TPH-g, BTEX and MtBE in proximity of groundwater monitoring well MW-6 (TWB-1), MW-7 (TWB-2), and east of MW-8 (TWB-3). Elevated concentrations were detected in TWB-1. Low concentrations were detected in TWB-3.

The results of analyses conducted on the grab groundwater samples collected from the soil borings completed in the First WBZ during the current CPT/MIP investigation (DPW-4 thru DPW-6 and DPW-8) detected dissolved-phase hydrocarbons including TPH-g, BTEX, MtBE, TBA, DIPE and ETBE in the southern portion of the Site (DPW-4 and DPW-5), and south of the Site in DPW-6 and DPW-8. Elevated concentrations were detected in DPW-5 and DPW-6. Lower concentrations were detected in DPW-4 and DPW-8.

The lateral extent of impact in the First WBZ is illustrated on Figure 12. This figure is based on the period of record for quarterly monitoring and sampling of the First WBZ, the results of analyses conducted on the grab groundwater samples collected from soil borings completed in the First WBZ in September and October 2003, and during the current CPT/MIP investigation. The lateral extent indicates impact to the First WBZ occurs beneath the greater part of the footprint of the Site, including the area of the UST cluster and product dispensers, and is inferred to continue south/southeast beneath the northeast corner of the residential area south of the Site, continuing further southeast and east beneath the intersection of Fairmont Avenue, 152nd Avenue and Liberty Street, and beyond to the southeast corner of the commercial area at the intersection of Fairmont Drive and Liberty Street.

4.3.2 Impact to Second WBZ

Groundwater in the Second WBZ was sampled for the first time during the current CPT/MIP investigation, with the data set consisting of three grab groundwater samples:

- DPW-1 (55-59)
- DPW-3 (56-60), and
- DPW-8 (52.5-56.5).

The analytical results are listed in Table 2. The dissolved-phase hydrocarbon concentrations detected in the grab groundwater samples beneath the Site were elevated relative to those collected off the Site to the southeast (DPW-8).

The calculated 95% UCL concentrations of TPH-d, TPH-g, BTEX, MtBE, TBA and TAME for the grab groundwater samples collected from the Second WBZ are listed in Table 2. The limited data indicates that all of the dissolved-phase hydrocarbons detected exceed their respective ESL values for residential land use for shallow soils (greater than 3 meters or 9 feet) where groundwater is a potential drinking water source, as set forth by the RWQCB. However, the concentrations detected here are significantly less than those detected in the First WBZ.

The lateral extent of impact in the Second WBZ is illustrated on Figure 13, and is based on the results of analyses conducted on grab groundwater samples collected from the Second WBZ during the current CPT/MIP investigation. The lateral extent indicates impact to the Second WBZ occurs beneath the northern portion of the Site, including the area of the north product dispensers, with an isolated area (CPT/MIP-8) in proximity to the intersection of 152nd Avenue and Fairmont Drive.

Due to the limited analytical data set, and because none of the existing groundwater monitoring wells are completed in the Second WBZ, the distribution of dissolved-phase hydrocarbons in the groundwater of the Second WBZ cannot be determined. To determine the limit of distribution and monitor the dissolved-phase hydrocarbons in the groundwater of the Second WBZ, as well as monitoring the effectiveness of any alternative for remediating groundwater in the

Second WBZ, if needed, groundwater monitoring wells will need to be completed with well screens installed within the Second WBZ.

5.0 SENSITIVE RECEPTOR SURVEY

A sensitive receptor survey was conducted in September and October 2003 (SOMA, 2003) to locate water supply wells and surface water bodies within a 2,000-foot radius of the Site, and a conduit study to identify underground utilities adjacent to the Site beneath Freedom Avenue, Fairmont Drive and 153rd Avenue.

Well location information was obtained from the California Department of Water Resources (DWR). Information regarding surface water bodies was obtained from USGS topographic maps of the Site area. Information regarding underground utilities was obtained from utility providers in the vicinity of the Site.

5.1 Water Well Survey

Based on DWR records, only 10 wells were located within 2,000 feet of the Site. Three of the wells are located hydraulically downgradient of the Site; there is one irrigation well and two wells of unknown use. The remaining wells are either hydraulically upgradient or crossgradient of the Site. The locations of the ten wells relative to the Site are illustrated on Figure 14.

The results of the sensitive receptor survey indicated that the off-site groundwater plume could impact two private wells (SOMA, 2004). One of the wells was reportedly located at 1575 153rd Street and the other at an unidentified address along Oriole Avenue.

In September 2004, an attempt was made to collect groundwater samples from these two wells. No residential address for 1575 153rd Street was found. However, the owner of the residence at 1573 153rd Street indicated that there is

a non-operational well on his property. The owner stated that water from this well was previously used only for irrigation since potable water for the residence is provided through the local utilities. The well consists of an approximately six-inch diameter black plastic casing with a heavy-gauge steel lid bolted on top. From the well, two hoses connect to an aboveground dispensing device. A spigot had been mounted on front of the pump to allow for groundwater withdrawal. The owner started the well pump and stated that he would leave the pump running for several hours to increase the probability of obtaining a groundwater sample from the well. Several hours later, an attempt was made to collect a groundwater sample from the well. However, opening the well spigot produced no groundwater. An attempt was then made to unbolt the cap. However, it was noted that pre-existing cracks in the casing were exhibiting signs of stress resulting from this procedure. Removal of the cap was terminated to avoid damaging the well casing and no groundwater sample was collected from the well (SOMA, 2004).

Because the well survey findings did not indicate a specific address for the private well installed along Oriole Avenue, written notification was distributed to all residents on the potentially affected avenue (SOMA, 2004). Besides notifying the residents of the potential exposure risk to contaminated water from private wells, the notification requested that private well owners contact SOMA in order to allow personnel to access and sample the wells at no cost to the homeowners. However, none of the contacted homeowners responded to the notification (SOMA, 2004).

5.2 Surface Water Bodies

Based on USGS topographic maps, there is no water body within a 0.5-mile radius of the Site (SOMA, 2003). The nearest water body, Estudillo Canal, is located about 0.6 miles southwest of the Site. The next closest water body is San Leandro Creek, which is located approximately 1.5 miles south of the Site.

These water bodies are located considerably more than 2,000 feet from the Site, and are not considered probable sensitive receptors (SOMA, 2003).

5.3 Adjacent Underground Utilities

To evaluate the potential preferential flow pathways at and in the vicinity of the Site, records documenting the locations and relative depths of utility line trenches were obtained from Oro Loma Sanitary District (OLSD) (SOMA, 2003). The OLSD provided a utility map showing a sewer line at a depth of approximately 4.8 feet bgs located approximately 40 feet southeast of the Site along 152nd Avenue with a gradient to the southwest. The OLSD map also illustrated a sewer main at a depth of approximately 10.2 feet bgs located approximately 80 feet east of the Site along Fairmont Avenue, with a gradient to the south (SOMA, 2003).

Because groundwater in the First WBZ occurs at depths ranging from 17 to 23 feet bgs, the sewer line along 152nd Avenue and the sewer main along Fairmont Drive are situated above the minimum depth of groundwater in the First WBZ. Thus the trenches carrying these sewer utilities are not submerged, and are not considered a preferential pathway for the migration of dissolved-phase hydrocarbons to south and southeast of the Site.

6.0 SITE CONCEPTUAL MODEL

The site conceptual model (SCM) was developed for the Site based on the results of previous soil and groundwater investigations, conducted both on and off the Site, and quarterly groundwater monitoring and sampling events conducted at the Site since Second Quarter 2002.

The SCM synthesizes site characterization data (geology, hydrogeology, contaminant distribution, migration pathways and potential human receptors) to

provide a framework for selecting pathways for quantitative analysis in implementing a Corrective Action Plan (CAP).

The SCM integrates and interprets all data obtained to date to increase the understanding of the extent, stability and impact of the contamination on public health and the environment. The primary source of chemical contamination is identified at the point of release of contaminants from the on-site USTs and product dispensers. Secondary sources of contamination include the dissolved groundwater plume and saturated sediments. Potential transport mechanisms from subsurface soils are by volatilization and atmospheric dispersion. Potential transport mechanisms from the dissolved groundwater plume are by volatilization and entering into closed spaces. The chemicals of concern, such as TPH-g, TPH-d, BTEX, MtBE and TBA, detected in the groundwater within the First WBZ can volatilize and travel by diffusion toward the land surface and possibly enter into nearby commercial buildings and residential properties. At these exposure points, they may cause adverse health effects to workers in the commercial buildings and residents living nearby. The current and future on-site workers, and downgradient residential properties, have been identified as the potential receptors of the Site's contaminants. Figure 15 shows the comprehensive SCM flowchart based on the *ASTM E-1689-55 Standard Guide for Developing SCM for Contaminated Sites*. Figure 16 graphically represents SOMA's site specific SCM.

6.1 Identification of Exposure Pathways and Potential Receptors

The Site is located in an area primarily consisting of residential properties with a commercial property located east of the Site, across Fairmont Drive. Currently, the on-site single story building houses the station's offices and food mini-mart. Residential properties abut the Site on the south and west. Residential properties are located beyond to the southeast, south, southwest and west.

Therefore, the exposed population/receptors to the on- and off-site contaminants are:

1. Current and future on-site workers and
2. Current off-site commercial workers and residents.

For the current and future workers on the Site, and receptors off the Site, particularly the residences that abut the Site to the southwest, the source of chemicals are fuel hydrocarbons dissolved in the First WBZ. Due to the presence of low levels of hydrocarbons in the groundwater in off-site areas, the inhalation pathway is not a complete exposure route. In the off-site areas the incidental ingestion of groundwater of the First WBZ may be the only exposure pathway.

7.0 INTERIM REMEDIATION AND MIGRATION CONTROL EVALUATION

This evaluation will focus on interim remediation alternatives that would be appropriate for the short-term remediation of soil and groundwater within the source area on the Site, and controlling migration of dissolved-phase hydrocarbons in groundwater emanating from the Site to areas off the Site.

Based on the results of previous and current soil and groundwater assessments conducted on and off the Site, as well as the results of quarterly groundwater monitoring/sampling conducted at the Site and vicinity since Second Quarter 2002, soil and groundwater in the First WBZ exhibit concentrations of fuel hydrocarbons that exceed the appropriate ESLs, and are much greater than the fuel hydrocarbon concentrations detected in the soil and groundwater of the Second WBZ. Therefore, only the interim remediation of soil and groundwater within the source area of the First WBZ will be considered.

The source area in the First WBZ appears to be situated in proximity of the location of the former USTs and the existing fuel dispensers, in both the northern and southeast portions of the Site.

Soil and groundwater analytical data for the Second WBZ is limited. A source area for the Second WBZ is indeterminate at this time. Additional soil and groundwater analytical data for the Second WBZ needs to be generated to further define the extent of soil and groundwater impact in the Second WBZ, as well as determine the source area for the Second WBZ.

No remediation feasibility studies, including appropriate pilot tests, have been conducted at the Site or in areas off the Site. Conducting feasibility studies and pilot tests are necessary to determine the most appropriate, technically effective, and cost effective interim remedial alternative to remediate the soil and groundwater in the source area of the First WBZ, and to control migration of dissolved-phase hydrocarbons in the groundwater within the First WBZ emanating from the Site to areas off the Site.

7.1 Soil Interim Remediation Alternatives

7.1.1 Soil Excavation

Excavation would involve soil removal to a minimum depth of 16 feet bgs, and a maximum of at least 30 feet bgs, over an area of approximately 3,100 square feet. This would result in a total volume of approximately 5,700 cubic yards. Although this alternative would probably remove the source area, this option was not considered suitable because of the long-term impact on the station's operation.

7.1.2 Soil Vapor Extraction

Impact to the First WBZ extends from approximately 16 to 30 feet bgs. Because depth to groundwater in the First WBZ has ranged from approximately 17 to 23 feet bgs, the majority of the soil impact is below groundwater elevations in the

First WBZ. Thus, this alternative would not be suitable for interim remediation of soil in the source area.

7.1.3 Multi-Phase Extraction

Because the majority of the soil impact is below groundwater in the First WBZ, as described in Section 7.2.2, Multi-phase extraction (MPE) would appear to be a favorable interim alternative to remediate the soil in the source area of the First WBZ. In addition, the use of MPE would also include the interim remediation of impacted groundwater in the source area of the First WBZ.

MPE involves the use of high-vacuum pressures to remove fuel hydrocarbons from the soil as soil vapor and groundwater as dissolved-phase. MPE systems have two primary configurations: dual-phase extraction (DPE) and two-phase extraction (TPE). DPE utilizes separate mechanical systems for pumping groundwater and extracting soil vapor. TPE utilizes a single vacuum pump to extract both groundwater and soil vapor through small diameter drop tube (stinger) piping inserted in the well. The most cost-effective MPE configuration is determined by aquifer permeability and the corresponding yield of both air and water.

However, specific MPE pilot testing would be required to determine whether TPE would be appropriate for interim remediation of the soil and groundwater in the First WBZ on the Site.

7.2 Groundwater Interim Remediation Alternatives

7.2.1 Groundwater Extraction

Groundwater extraction using extraction wells installed at the source area would have the dual interim effect of extracting impacted groundwater at the source

area and providing effective hydraulic control of dissolved-phase hydrocarbons migrating with groundwater from the source area. Pumping within the source area through the application of groundwater extraction may reduce the concentration of dissolved-phase hydrocarbons in the source area and may successfully mitigate the migration of dissolved-phase hydrocarbons off the Site.

However, aquifer pump testing would be required to determine aquifer hydraulic characteristics in order to properly install the extraction wells with respect to well screen length(s) and location(s), capture zone, and to establish extraction rate(s).

7.2.2 Ozone Sparging

The introduction of ozone through several ozone sparge points directly destroys dissolved petroleum hydrocarbons and MtBE and stimulates in-situ aerobic biodegradation of dissolved-phase petroleum hydrocarbons by increasing subsurface oxygen concentrations. Though concentrations may initially increase due to the desorption of petroleum hydrocarbons from soil caused by the aggressive mechanical scrubbing action of the ozone microbubbles, ozone sparging is capable of facilitating subsequent rapid degradation of the dissolved-phase petroleum hydrocarbon plume beneath the Site. However, ozone sparging does carry the potential for an explosive hazard, particularly if conducted in close proximity of the USTs, due to the microbubble scrubbing action resulting in the deterioration of the UST sidewalls and the exothermic reaction resulting from generation of the hydroxyl radical from the injected ozone. Because ozone sparging at the Site would necessarily need to be conducted in proximity of the existing USTs, there is the potential for an explosive hazard; therefore, ozone sparging is not considered a feasible alternative for interim remediation of groundwater in the source area of the First WBZ.

7.2.3 Hydrogen Peroxide Injection

Hydrogen peroxide reduces hydrocarbon masses in two ways. After introducing the solution into the subsurface, the chemical reaction produces a hydroxyl radical that is a strong oxidizer and ultimately oxidizes hydrocarbons to water and carbon dioxide. This reaction is strongly exothermic and results in increased soil and groundwater temperatures when used in-situ. In the presence of metals that are commonly found in the subsurface, it also produces elevated dissolved oxygen (DO) concentrations in the groundwater that can accelerate naturally occurring hydrocarbon biodegradation. The combination of chemical hydrocarbon oxidation within the treatment zone and enhanced biodegradation can rapidly reduce hydrocarbon mass.

Although the hydrogen peroxide injection provides hydrocarbon mass reduction at a relatively low cost, it would not biodegrade MtBE and TBA, which have been detected at high concentrations in groundwater monitoring wells MW-3, MW-4 and MW-5, which are all within the source area. Therefore, hydrogen peroxide injection as in interim groundwater remediation at the source area of the First WBZ is not recommended.

7.3 Dissolved-Phase Hydrocarbon Migration Control Evaluation

This section discusses different mitigation measures that prevent further migration of the plumes within the off-site areas.

7.3.1 Groundwater Extraction

Groundwater extraction would be used to control further migration of the dissolved-phase hydrocarbons down the prevailing hydraulic gradient to the south/southwest. Extraction wells would be situated along the leading edge of the existing plume in proximity of the intersection of 152nd Avenue, Fairmont Drive and Liberty Street.

However, aquifer pump testing would be required to determine aquifer hydraulic characteristics in order to properly install the extraction wells with respect to well screen length(s) and location(s), capture zone, and to establish extraction rate(s).

7.3.2 Ozone Sparging

Ozone sparging would be an effective migration control measure, particularly if the sparging is implemented hydraulically downgradient from the source area of the First WBZ and away from the existing USTs on the Site. In addition, the introduction of ozone through sparge points will stimulate in-situ aerobic biodegradation of organic contaminants by increasing subsurface oxygen concentrations. Hydrocarbon concentrations may increase initially, due to desorption of the petroleum hydrocarbon and fuel oxygenate constituents from soil caused by the aggressive mechanical scrubbing action of the ozone microbubbles. However, subsequent to this potential initial increase, dissolved-phase hydrocarbon concentrations will decrease as formed hydroxyl free radicals destroy dissolved hydrocarbons in groundwater and enhanced biodegradation occurs. Enhanced dissolved oxygen in groundwater will migrate down the hydraulic gradient of the First WBZ with groundwater to stimulate in-situ biodegradation of dissolved-phase hydrocarbons in areas off the Site to the south and southwest that are impacted, specifically in the vicinity of monitoring wells MW-6 and MW-7, where moderate to low concentrations of TPH-g and MtBE have been detected during quarterly groundwater sampling events.

However, to evaluate the feasibility of ozone sparging, a series of in-situ soil permeability tests will need to be conducted to evaluate the injection rate of ozone into the subsurface.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on the current and previous soil and groundwater investigation results.

8.1 Conclusions

Two main water-bearing zones were encountered within the depths explored by the CPT/MIP and are designated as the First and Second water-bearing zones (WBZs). Based on the CPT data, and the borehole logs of groundwater monitoring wells and soil borings, both WBZs appear to be laterally continuous across the Site and hydraulically downgradient of the Site. The First and Second WBZs are separated by a laterally continuous CPT-interpreted unsaturated layer of clay, clayey silt, and silt. This unit is referred to as an aquitard.

The results of the MIP program indicated the presence of straight-chain and ring structure hydrocarbons in the soil profile of the First WBZ, the aquitard, and the Second WBZ. In general, the PID/FID data suggest the presence of moderately weathered fuel hydrocarbons adsorbed to the soil or dissolved in the groundwater within the First and Second WBZs. The distribution of the PID/FID data indicates concentrations of fuel hydrocarbons are much lower in the aquitard relative to the First and Second WBZ, suggesting that the aquitard is not a source of impact to the groundwater in the Second WBZ, and is effectively preventing cross-contamination between both aquifers.

The results of analyses conducted on the soil samples indicate that impact to the First WBZ extends from approximately 16 to 30 feet bgs, from approximately 24 to 40 feet bgs in the aquitard, and from approximately 40 to 60 feet bgs in the Second WBZ. Concentrations are elevated in the First WBZ relative to those detected in the aquitard or the Second WBZ. The lowest concentrations were detected in the aquitard, again suggesting that the aquitard is not a source of

impact to the groundwater in the Second WBZ, and is effectively preventing cross-contamination between both aquifers.

The lateral extent of impact in the First WBZ beneath the Site is situated beneath the northwestern, central, and southeastern portions of the Site, in the area of the UST cluster, and product dispensers in the northern and southeastern portions of the Site. The lateral off-site extent is inferred to continue south/southeast beneath the northeast corner of the residential area south of the Site and continuing further southeast and east beneath the intersection of Fairmont Avenue, 152nd Avenue and Liberty Street.

The lateral extent of soil impact in the aquitard beneath the Site is situated beneath the southeastern portions of the Site in the area of the product dispenser.

The lateral extent of soil impact in the Second WBZ beneath the Site is situated beneath the southeast portions of the Site in the area of the product dispenser.

Based on the results of analyses conducted on the grab groundwater samples collected during the current CPT/MIP investigation, and the investigation conducted in October 2003, as well as the analytical data derived from quarterly groundwater monitoring/sampling conducted at the Site since Second Quarter 2002, the First and Second WBZs beneath the Site and off-site to the south and southeast are impacted by dissolved-phase fuel hydrocarbons. The First WBZ contains concentrations of dissolved-phase fuel hydrocarbons that are significantly greater than those detected in the Second WBZ. Groundwater in the Second WBZ was sampled for the first time during the current CPT/MIP investigation, with the data set consisting of three grab groundwater samples.

The existing groundwater monitoring wells on and off the Site are completed and screened in the First WBZ. Over the period of record for quarterly groundwater

monitoring at the Site (Second Quarter 2002 to Third Quarter 2006) groundwater elevations in the monitoring wells have consistently been measured above the depth at which groundwater was first encountered in the well borings during drilling, and suggest groundwater elevations in the First WBZ reflect potentiometric pressure. Therefore, the First WBZ can be considered a confined aquifer.

No groundwater monitoring wells are completed in the Second WBZ, either on or off the Site. However, during grab groundwater sampling activities groundwater elevations rose immediately above the top of the sampler and into the hollow push rods. This infers that groundwater in the Second WBZ reflects potentiometric pressure. Therefore, the Second WBZ can also be considered a confined aquifer.

The lateral extent of groundwater impact in the First WBZ occurs beneath the greater part of the footprint of the Site, including the area of the UST cluster and product dispensers, and is inferred to continue south/southeast beneath the northeast corner of the residential area south of the Site, and continuing further southeast and east beneath the intersection of Fairmont Avenue, 152nd Avenue and Liberty Street, and beyond to the southeast corner of the commercial area at the intersection of Fairmont Drive and Liberty Street.

The lateral extent of impact in the Second WBZ occurs beneath the northern portion of the Site, including the area of the north product dispensers, with an isolated area in proximity to the intersection of 152nd Avenue and Fairmont Drive.

The results of a sensitive receptor survey previously conducted in 2003 indicated two private wells located hydraulically downgradient of the Site. In September 2004, an attempt was made to collect groundwater samples from these two wells. One of the wells was located and the other was not. An attempt was made to collect a groundwater sample from the well that was located, however,

no sample could be collected. Written notification was issued to residents in the vicinity of the well that was not located in an attempt to identify and locate this well. No residents responded to this notification. Thus, the well was not located.

Based on records obtained from Oro Loma Sanitary District (OLSD) in 2003, two potential preferential flow pathways at and in the vicinity of the Site were identified. The first one is a sewer line at approximately 4.8 feet bgs that is located approximately 40 feet southeast of the Site, along 152nd Avenue, with a gradient to the southwest. The second one is a sewer main at approximately 10.2 feet bgs that is located approximately 80 feet east of the Site, along Fairmont Avenue, with a gradient to the south. Because groundwater in the First WBZ occurs at depths ranging from 17 to 23 feet bgs, the sewer line along 152nd Avenue and the sewer main along Fairmont Drive are situated above the minimum depth of groundwater in the First WBZ. Thus the trenches carrying these sewer utilities are not submerged and are not considered preferential pathways for the migration of dissolved-phase hydrocarbons to south and southeast of the Site.

The Site is located in an area primarily consisting of residential properties with a commercial property located east of the Site, across Fairmont Drive. Therefore, the exposed population/receptors to the fuel hydrocarbons in the soil and groundwater of the First WBZ on and off the Site include:

1. Current and future on-site workers and
2. Current off-site commercial workers and residents.

For the current and future workers on the Site, and receptors off the Site, particularly the residences that abut the Site to the southwest, the sources are the fuel hydrocarbons adsorbed to the soil profile of the First WBZ and the dissolved-phase hydrocarbons in the groundwater of the First WBZ. The exposure pathways for on-site receptors are inhalation of volatile emissions from the impacted soil and groundwater of the First WBZ. The only exposure pathway

for the off-site residents appears to be the incidental ingestion of groundwater from the First and the Second WBZ.

Since soil and groundwater in the First WBZ exhibiting concentrations of fuel hydrocarbons that are much greater than fuel hydrocarbon concentrations detected in soil and groundwater of the Second WBZ, an evaluation of interim soil and groundwater remediation alternatives, and alternatives to control migration of dissolved-phase hydrocarbons, was made. The source area in the First WBZ appears to be situated in proximity to the location of the former USTs and the existing fuel dispensers in both the north and southeast portion of the Site.

The soil interim remediation alternatives that were evaluated included soil excavation, soil vapor extraction, and Multi-Phase Extraction (MPE). Soil excavation was not considered economically feasible due to the impact to long-term station operations at the Site. Soil vapor extraction was not considered suitable because the majority of soil impact in the First WBZ is below groundwater elevations in the First WBZ. MPE was considered a suitable alternative for interim remediation of the soil and groundwater at the source area; however, specific pilot testing would be required to determine whether this method would be appropriate.

Groundwater interim remediation alternatives included groundwater extraction, ozone sparging and hydrogen peroxide injection. Groundwater extraction was considered a favorable alternative, however, aquifer pump testing would be required to determine aquifer hydraulic characteristics in order to properly install the extraction wells with respect to well screen length(s) and location(s), capture zone, and to establish extraction rate(s). Ozone sparging was not considered feasible at the source area because ozone sparging would necessarily need to be conducted in proximity to the existing USTs, with the potential for an explosive hazard. Hydrogen peroxide injection was not considered a viable alternative

because it does not biodegrade MtBE and TBA, which have been detected at high concentrations in groundwater monitoring wells MW-3, MW-4 and MW-5, which are all within the source area.

The methods evaluated for controlling the migration of dissolved-phase hydrocarbons in the groundwater of the First WBZ included groundwater extraction and ozone sparging. Groundwater extraction would be used to control further migration of the dissolved-phase hydrocarbons down the prevailing hydraulic gradient to the south/southwest. Extraction wells would be situated along the leading edge of the existing plume in proximity to the intersection of 152nd Avenue, Fairmont Drive and Liberty Street. Aquifer pump testing would be required to determine aquifer hydraulic characteristics in order to properly install the extraction wells with respect to well screen length(s) and location(s), capture zone, and to establish extraction rate(s). Ozone sparging would be an effective migration control measure, particularly if the sparging is implemented hydraulically downgradient from the source area of the First WBZ and away from the existing USTs on the Site. However, to evaluate the feasibility of ozone sparging, a series of in-situ soil permeability tests will need to be conducted to evaluate the injection rate of ozone into the subsurface.

8.2 Recommendations

Based upon the conclusions described above, the following presents SOMA's recommendations:

- Conduct a soil vapor study to evaluate the potential of vapor intrusion into residences that abut the Site to the south and southwest.

- Because none of the existing groundwater monitoring wells are completed in the Second WBZ, differences in groundwater elevations, vertical flow gradients between the First and Second WBZs, and the distribution of

dissolved-phase hydrocarbons in the groundwater in the Second WBZ cannot be determined. Groundwater monitoring wells need to be completed with well screens installed within the Second WBZ.

- Soil and groundwater analytical data for the Second WBZ is limited. A source area for the Second WBZ is indeterminate based on the data generated by this investigation. Additional soil and groundwater assessments targeting the Second WBZ need to be conducted to further define the extent of soil and groundwater impact in the Second WBZ, as well as determine the source area for the Second WBZ.

- No remediation feasibility studies, including appropriate pilot tests, have been conducted at the Site or in areas off the Site. Conducting feasibility studies and pilot tests are necessary to determine the most appropriate, technically effective, and cost effective interim remedial alternative to remediate the soil and groundwater in the source area of the First WBZ, and control migration of dissolved-phase hydrocarbons in the groundwater within the First WBZ emanating from the Site to areas off the Site. The pilot testing should include, at a minimum, aquifer pump testing, MPE pilot testing, and ozone injection permeability testing.

- Another attempt should be made to collect a groundwater sample from the irrigation well located hydraulically downgradient of the Site at 1573 153rd Street. Likewise, another attempt should be made to locate the unknown use well located hydraulically downgradient of the Site on Oriole Avenue. Once it is located, a groundwater sample should be collected from this well.

Upon the request of the ACHCS, SOMA will prepare a detailed work plan for implementing the recommendations.

9.0 REFERENCES

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California Regional Water Quality Control Board, san Francisco Bay Region, July 2003, "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater"

TABLES

Table 1
Historical Soil Sample Analytical Results
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits
15101 Freedom Avenue
San Leandro, California

SAMPLE DATE	SAMPLE ID	8260B	8015 DRO	8260B											
		TPH-g[3] ug/kg	TPH-d[3] ug/kg	Benzene ug/kg	Toluene ug/kg	Ethyl-benzene ug/kg	Xylenes ug/kg	MTBE ug/kg	TAME ug/kg	ETBE ug/kg	DIPE ug/kg	TBA ug/kg	EDC ug/kg	EDB ug/kg	Ethanol ug/kg
FIRST WATER-BEARING ZONE															
10/1/2003	TWB-1 @ 16-16.5	<1000	NA	<5.2	<5.2	<5.2	<5.2	<4.8	NA	NA	NA	NA	<4.8	NA	NA
10/1/2003	TWB-1 @ 18-18.5	1,800[E]	NA	<5.2	<5.2	<5.2	<5.2	<4.8	NA	NA	NA	NA	<4.8	NA	NA
10/1/2003	TWB-1 @ 21.5-22	3,300,000.00	NA	<500	<500	56,000.00	182,000.00	<1,800	NA	NA	NA	NA	<1,800	NA	NA
10/1/2003	TWB-1 @ 24-24.5	4,000,000.00	NA	<1,000	12,000.00	84,000.00	365,000.00	<1.300	NA	NA	NA	NA	<1,300	NA	NA
10/1/2003	TWB-2 @ 22-20.5	29,000[E]	NA	<25	<25	53.00	288[C]	<4.8	NA	NA	NA	NA	<4.8	NA	NA
10/1/2003	TWB-2 @ 29.5-30	<990	NA	<5.0	<5.0	<5.0	<5.0	<4.5	NA	NA	NA	NA	<4.5	NA	NA
10/1/2003	TWB-2 @ 31-31.5	1,600.00	NA	<5.3	<5.3	9.7[D]	7.50	<4.6	NA	NA	NA	NA	<4.6	NA	NA
10/1/2003	TWB-2 @ 33-33.25	<1,100	NA	<5.4	<5.4	<5.4	<5.4	<4.6	NA	NA	NA	NA	<4.6	NA	NA
9/17/2003	TWB-3 @ 20-20.5	<1,000	NA	<5.2	<5.2	<5.2	<5.2	<4.9	NA	NA	NA	NA	<4.9	NA	NA
9/16/2003	TWB-4A @ 33-33.5	<1,100	NA	<5.3	<5.3	<5.3	<5.3	<5.0	NA	NA	NA	NA	<5.0	NA	NA
9/16/2003	TWB-5 @ 32-32.5	<1,100	NA	<5.3	<5.3	<5.3	<5.3	<4.4	NA	NA	NA	NA	<4.4	NA	NA
9/16/2003	TWB-6 @ 20-20.5	<1,000	NA	<5.2	<5.2	<5.2	<5.2	<4.5	NA	NA	NA	NA	<4.5	NA	NA
9/16/2003	TWB-6 @ 28-30	<960	NA	<4.8	<4.8	<4.8	<4.8	<4.7	NA	NA	NA	NA	<4.7	NA	NA
8/25/2004	MW-6 (5.5-6)	<1,100	<5.3	<5.3	<5.3	<5.3	<5.3	NA	NA	NA	NA	NA	NA	NA	NA
8/25/2004	MW-6 (6-6.5)	<1,100	<5.3	<5.3	<5.3	<5.3	<5.3	NA	NA	NA	NA	NA	NA	NA	NA
8/25/2004	MW-6 (8.5-9)	<1,100	<5.3	<5.3	<5.3	<5.3	<5.3	NA	NA	NA	NA	NA	NA	NA	NA
8/25/2004	MW-6 (9-9.5)	<1,100	<5.3	<5.3	<5.3	<5.3	<5.3	NA	NA	NA	NA	NA	NA	NA	NA
9/19/2006	DPS-1 (26-27)	**157000**	0.114[(a)(b)]	<21.50	<21.50	<21.50	763.6	<21.5	<86	<21.5	<21.5	<430	<21.5	<21.5	<43000
9/20/2006	DPS-2 (26-27)	14080	0.0565[(a)(b)]	**46.41**	**46.41**	**46.41**	267.7	<21.5	<86	<21.5	<21.5	<430	<21.5	<21.5	<43000
9/19/2006	DPS-3 (27-28)	<50	<0.05	0.88	0.88	0.88	1.85	18.3	2.19	<0.5	<0.5	13.7	<0.5	<0.5	<1000
9/19/2006	DPS-4 (27-28)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/20/2006	DPS-5 (22-23)	**241100**	0.292[(a)(b)]	34.63	34.63	34.63	2261	<21.5	<86	<21.5	<21.5	<430	<21.5	<21.5	<43000
9/18/2006	DPS-6 (29-30)	69.36	<0.05	<0.5	<0.5	<0.5	<0.51	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-6 (21-22)	**259700**	<0.05	<21.5	<21.5	<21.5	**6431**	<21.5	<86	<21.5	<21.5	<430	<21.5	<21.5	<1000
9/18/2006	DPS-7 (24-25)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	3.16	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-7 (34-35)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	3.16	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000

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15101 Freedom Avenue
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SAMPLE DATE	SAMPLE ID	8260B	8015 DRO	8260B											
		TPH-g[3]	TPH-d[3]	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	TAME	ETBE	DIPE	TBA	EDC	EDB	Ethanol
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
9/18/2006	DPS-8 (20-21)	**216400**	0.071[(a)(b)]	**51.14**	**51.14**	**51.14**	1651.5	<21.5	<86	<21.5	<21.5	<430	<21.5	<21.5	<43000
Maximum		4,000,000	0.292	51.14	12,000	84,000	365000	43.6	3.2	0	0	0	0	0	0
Sample Size		28	14	28	28	28	28	24	10	10	10	10	24	10	10
Average		293609.6629	0.038107143	4.75214286	433.323571	5,006.99	19952.73536	2.8675	0.859	0	0	0	0	0	0
Standard Deviation		955962.0064	0.0814121	14.0592383	2266.89891	18747.88867	75829.19621	9.52432823	1.41017296	0	0	0	0	0	0
95% Confidence		354086.2516	0.042645419	5.20751133	839.654435	6944.17726	28086.96964	3.81044924	0.874016901						
95% Uppler Confidence Limit		647,695.91	0.080752562	9.95965418	1,272.98	11951.16869	48039.70499	6.67794924	1.733016901						
ESLs*		**100,000.00**	**100,000.00**	**44.00**	**2,900.00**	**3,300.00**	**2,300.00**	**23.00**	**100,000.00**	**NL**	**NL**	**73.00**	**0.33**	**0.33**	**4.50**
AQUITARD															
9/16/2003	TWB-6 @ 38-39	<1,100	NA	<5.4	<5.4	<5.4	<5.4	<4.8	NA	NA	NA	NA	<4.8	NA	NA
9/20/2006	DPS-5 (31-32)	490.1	<0.05	2.75	2.75	2.75	42.61	7.1	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-7 (24-25)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	3.16	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-7 (34-35)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	3.16	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-8 (30-31)	321.2	<0.05	<0.50	<0.50	<0.50	2.7	**43.6**	3.2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-8 (40.5-41)	<50	<0.05	<0.5	<0.5	<0.5	1.74	6.92	3.2	<0.5	<0.5	<10	<0.5	<0.5	<1000
Maximum		490.10	0.00	2.75	2.75	2.75	42.61	43.60	3.20	0.00	0.00	0.00	0.00	0.00	0.00
Sample Size		5	5	5	5	5	5	5	5	5	5	5	5	5	5
Average		162.26	0.00	0.55	0.55	0.55	9.41	12.79	1.28	0.00	0.00	0	0.00	0.00	0.00
Standard Deviation		230.07	0.00	1.23	1.23	1.23	18.60	17.33	1.75	0.00	0.00	0	0.00	0.00	0.00
95% Confidence		201.66		1.08	1.08	1.08	16.30	15.19	1.54						
Limit		363.92		1.63	1.63	1.63	25.71	27.98	2.82						
ESLs*		**100,000.00**	**100,000.00**	**44.00**	**2,900.00**	**3,300.00**	**2,300.00**	**23.00**	**100,000.00**	**NL**	**NL**	**73.00**	**0.33**	**0.33**	**4.50**
SECOND WATER-BEARING ZONE															
9/19/2006	DPS-4 (39-40)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/19/2006	DPS-1 (53-54)	<50	<0.05	<0.5	<0.5	<0.5	<1.5	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/20/2006	DPS-2 (42-43)	372.1	<0.05	2.83	2.83	2.83	23.52	**84.8**	<2	<0.50	<0.50	**107**	<0.5	<0.5	<1000
9/19/2006	DPS-3 (57-58)	<50	<0.05	<0.50	<0.50	<0.50	<1.5	<0.50	<2	<0.50	<0.50	<10	<0.5	<0.5	<1000
9/20/2006	DPS-5 (41-42)	257.3	<0.05	0.52	0.52	0.52	19.38	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
9/18/2006	DPS-6 (58-60)	<0.50	<0.05	<0.5	<0.5	<0.5	4.83	<0.5	<2	<0.5	<0.5	<10	<0.5	<0.5	<1000
Maximum		372.10	0.00	2.83	2.83	2.83	23.52	84.80	0.00	0.00	0.00	107.00	0.00	0.00	0.00
Sample Size		6	6	6	6	6	6	6	6	6	6	6	6	6	6
Average		104.90	0.00	0.56	0.56	0.56	7.96	14.13	0.00	0.00	0.00	17.83333	0.00	0.00	0.00
Standard Deviation		166.52	0.00	1.13	1.13	1.13	10.70	34.62	0.00	0.00	0.00	43.68257	0.00	0.00	0.00
95% Confidence		133.24		0.91	0.91	0.91	8.56	27.70				34.95264			
95% Uppler Confidence Limit		238.14		1.46	1.46	1.46	16.52	41.83				52.78597			
ESLs*		**100,000.00**	**100,000.00**	**44.00**	**2,900.00**	**3,300.00**	**2,300.00**	**23.00**	**100,000.00**	**NL**	**NL**	**73.00**	**0.33**	**0.33**	**4.50**

Table 1
Historical Soil Sample Analytical Results
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits
15101 Freedom Avenue
San Leandro, California

SAMPLE DATE	SAMPLE ID	8260B	8015 DRO	8260B											
		TPH-g[3]	TPH-d[3]	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	TAME	ETBE	DIPE	TBA	EDC	EDB	Ethanol
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Notes:

(a) The sample chromatographic pattern does not resemble the fuel standard for quantiation

(b) Unidentified hydrocarbon C9-C16

(c) Environmental Screening Levels

(d) Sample exhibits chromatographic pattern that does not resemble standard

(e) Presence confirmed but RPD between columns exceeds 40%

Environmental Screening Levels per CRWQCB SFBay Region, February 2005, Summary Table C (soil >3m, residential land use, groundwater is potential drinking source)

NL No level

Table 2

Historical Groundwater Elevation Data &
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits

15101 Freedom Avenue
San Leandro, California

Well/ Boring	Date	Top of casing elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* (µg/L) EPA 8260B	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	EDC (µg/L)	EDB (µg/L)
FIRST WATER-BEARING ZONE																		
TWB-1	10/1/2003	NA	NA	NA	410,000	NA	2200[Z]	2200[Z]	9,400	25,700	<20	NA	NA	NA	NA	NA	NA	NA
TWB-2	10/1/2003	NA	NA	NA	1,700	NA	<0.5	<0.5	31	51	34	NA	NA	NA	NA	NA	NA	NA
TWB-3	9/17/2003	NA	NA	NA	150 [(H)(Y)]	NA	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
TWB-4	9/11/2003	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	2	NA	NA	NA	NA	NA	NA	NA
TWB-5	9/16/2003	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
TWB-6	9/17/2003	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
DPW-4 (24-28)	9/19/2006	NA	NA	NA	4450	3600 (a)(b)(c)(d)	84.2	<8.60	244	222.49	<2.15	<43.0	<2.15	<2.15	<8.60	<4300	<2.15	<2.15
DPW-5 (18-22)	9/20/2006	NA	NA	NA	119000	22000 (a)(b)	3930	6910	6030	14260	338	<430	<21.5	<21.5	109	<43000	<21.5	<21.5
DPW-6 (20-22)	9/18/2006	NA	NA	NA	16800	5090 (a)(b)(c)(d)	12.9	4.11	602	639	1.94	<20.0	<1.0	<1.0	<4.0	<2000	<1.0	<1.0
DPW-8 (16-20)	9/18/2006	NA	NA	NA	1730	1060 (a)(b)	7.54	<22.0	49.7	92.1	2860	221	<5.50	6.22	252	<11000	<5.50	<5.50
DPW-8 (52.5-56.5)	9/18/2006	NA	NA	NA	<50.0	82.0 (a)(b)	<0.500	<2.0	2.45	0.5	40.9	<10.0	<0.5	<0.5	2.43	<1000	<0.5	<0.5
MW-1	5/10/2002	51.71	22.85	28.86	5,700	NA	360	4.5	340	450	2	NA	NA	NA	NA	NA	NA	NA
	8/8/2002	51.71	23.31	28.40	9,100	NA	590	2.6	830	362	<1.3	78	<1.3	<1.3	<1.3	NA	NA	NA
	11/8/2002	51.71	23.58	28.13	7,900	NA	570	3.1	680	392	< 1.0	42	< 1.0	< 1.0	< 1.0	NA	NA	NA
	2/21/2003	51.71	22.62	29.09	2,900	NA	160	1.6 C	170	211	<0.5	47	<0.5	<0.5	<0.5	NA	NA	NA
	5/28/2003	51.71	22.43	29.28	1,700	NA	55	<0.5	90	115	2.00	25	<0.5	<0.5	<0.5	NA	NA	NA
	8/12/2003	51.71	21.30	30.41	2,600	NA	2.5	<0.5	190	130	<0.5	<10	<0.5	<0.5	<0.5	NA	NA	NA
	10/9/2003	51.71	23.49	28.22	9,200	NA	560.0	2.7 C	670	648	<1.0	70	<1.0	<1.0	<1.0	NA	NA	NA
	1/15/2004	51.71	22.43	29.28	5,500	NA	190	<1.0	220	124.4	<0.5	55	<0.5	<0.5	<0.5	NA	NA	NA
	5/25/2004	51.71	22.94	28.77	8,000	NA	400	1.50	420	393	3.40	62	<0.7	<0.7	<0.7	NA	NA	NA
	9/21/2004	54.46	23.49	30.97	9,300	NA	580	9.30	690	683	4.60	<10	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/2004	54.46	23.01	31.45	7,360	NA	337	<4.3	731	633	<4.3	<21.5	<4.3	<4.3	<17.2	NA	NA	NA
	3/11/2005	54.46	21.48	32.98	2,510	NA	45.2	<0.5	23.2	39.63	2.80	81	<0.5	<0.5	<2.0	NA	NA	NA
	6/15/2005	54.46	22.42	32.04	1,690	NA	36.3	<2.0	59.5	28.73	2.01	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/26/2005	54.46	23.00	31.46	7,310	NA	318	<8.60	475	316	5.15	68.9	<2.15	<2.15	<8.6	NA	NA	NA
	11/11/2005	54.46	21.40	33.06	9,640	NA	341	<8.6	467	329.7	6.04	46	<2.15	<2.15	<8.6	NA	NA	NA
	2/9/2006	54.46	21.81	32.65	775	NA	14	<2.0	12.6	10.32	4.01	11.3	<0.5	<0.5	<2.0	NA	NA	NA
	5/9/2006	54.46	21.68	32.78	444	NA	7.80	<2.0	12.1	6.31	1.75	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	54.46	22.79	31.67	5,090	NA	324	<8.60	108	59.9	8.24	<43	<2.15	<2.15	<8.60	NA	NA	NA
MW-2	5/10/2002	49.66	22.83	26.83 *	3,100	NA	67	8	250	215	56	NA	NA	NA	NA	NA	NA	NA
	8/8/2002	49.66	21.41	28.25	2,700	NA	4.6	<0.5	310	140	<0.5	21	<0.5	<0.5	<0.5	NA	NA	NA
	11/8/2002	49.66	21.79	27.87	3,400	NA	4.6	< 0.5	310	160	< 0.5	15	<0.5	<0.5	<0.5	NA	NA	NA
	2/21/2003	49.66	20.51	29.15	890	NA	1.7 C	0.80 C	68	38.92 C	<0.5	12	<0.5	<0.5	<0.5	NA	NA	NA
	5/28/2003	49.66	20.33	29.33	2,700	NA	5.2 C	<0.5	120	140	1.2	31	<0.5	<0.5	<0.5	NA	NA	NA
	8/12/2003	49.66	23.18	26.48*	8,500	NA	640	<2.5	560	659	<0.8	69	<0.8	<0.8	<0.8	NA	NA	NA
	10/9/2003	49.66	21.71	27.95	3100 H	NA	4.3 C	<0.5	210	160	<0.5	12	<0.5	<0.5	<0.5	NA	NA	NA
	1/15/2004	49.66	20.31	29.35	660 H	NA	1.5 C	<0.5	8.9	25	<0.5	<10	<0.5	<0.5	<0.5	NA	NA	NA
	5/25/2004	49.66	21.09	28.57	4,500	NA	5.1 C	<0.5	190	230	0.70	14	<0.5	<0.5	<0.5	NA	NA	NA
	9/21/2004	52.41	21.71	30.70	370	NA	0.76 C	<0.5	25	16	0.50	<10	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/2004	52.41	21.20	31.21	880	NA	1.0	<0.5	66	52	<0.5	<2.5	<0.5	<0.5	<2.0	NA	NA	NA

Table 2

Historical Groundwater Elevation Data &
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits

15101 Freedom Avenue
San Leandro, California

Well/ Boring	Date	Top of casing elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* (µg/L) EPA 8260B	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	EDC (µg/L)	EDB (µg/L)
	3/11/2005	52.41	19.15	33.26	564	NA	<0.5	<0.5	21	11.9	<0.5	<2.5	<0.5	<0.5	<2.0	NA	NA	NA
	6/15/2005	52.41	20.30	32.11	2,040	NA	1.2	<2.0	78.2	22	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/26/2005	52.41	20.97	31.44	1,500	NA	0.930	<2.00	87.6	21	0.86	<10	<0.5	<0.5	<2.0	NA	NA	NA
	11/11/2005	52.41	25.30	27.11	2,140	NA	1.08	<2.0	104	29	0.79	<10	<0.5	<0.5	<2.0	NA	NA	NA
	2/9/2006	52.41	19.41	33.00	1,410	NA	<0.5	<2.0	99.6	21.4	0.72	<10	<0.5	<0.5	<2.0	NA	NA	NA
	5/9/2006	52.41	19.41	33.00	1,100	NA	<0.5	<2.0	86.5	17	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	52.41	20.8	31.61	3,180	NA	2.87	<2.0	88.9	24.8	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
MW-3	5/10/2002	51.16	22.28	28.88	44,000	NA	6,000	900	1,500	6,200	2,400	NA	NA	NA	NA	NA	NA	NA
	8/8/2002	51.16	22.88	28.28	40,000	NA	5,800	1,100	1,600	6,500	1,300	<330	<8.3	<8.3	330	NA	NA	NA
	11/8/2002	51.16	23.19	27.97	47,000	NA	5,300	1,200	2,200	8,600	1,000	85	< 1.3	<1.3	220	NA	NA	NA
	2/21/2003	51.16	22.02	29.14	39,000	NA	5,500	1,500	2,000	8,600	1,300	140	<5.0	<5.0	320	NA	NA	NA
	5/28/2003	51.16	21.89	29.27	52,000	NA	7,300	3,000	2,800	12,700	2,100	520	<10	<10	530	NA	NA	NA
	8/12/2003	51.16	22.66	28.50	31,000	NA	6,100	860	1,500	6,900	1,200	180	<4.2	<4.2	270	NA	NA	NA
	10/9/2003	51.16	23.06	28.10	41,000	NA	6,100	1,100	2,200	10,200	960	<170	<8.3	<8.3	200	NA	NA	NA
	1/15/2004	51.16	21.85	29.31	51,000	NA	4,100	1,100	2,000	8,400	590	<100	<5.0	<5.0	150	NA	NA	NA
	5/25/2004	51.16	22.55	28.61	65,000	NA	4,300	1,300	2,500	10,500	720	<100	<5.0	<5.0	270	NA	NA	NA
	9/21/2004	53.91	23.08	30.83	42,000	NA	4,900	890	2,200	8,700	480	<140	<7.1	<7.1	110	NA	NA	NA
	12/14/2004	53.91	22.52	31.39	35,151	NA	4,066	972	2,942	13,032	491	<100	<20	<20	154	NA	NA	NA
	3/11/2005	53.91	20.90	33.01	42,600	NA	3,040	1,100	1,530	6,670	968	<215	<43	<43	256	NA	NA	NA
	6/15/2005	53.91	21.85	32.06	84,100	NA	5,110	2,160	3,030	8,800	2,670	<215	<10.8	<10.8	374	NA	NA	NA
	8/26/2005	53.91	22.49	31.42	43,500	NA	3,630	1,080	2,500	6,830	1,440	699	<21.5	<21.5	277	NA	NA	NA
	11/11/2005	53.91	22.81	31.10	47,700	NA	4,240	520	2,170	6,320	1,390	<430	<21.5	<21.5	171	NA	NA	NA
	2/9/2006	53.91	21.12	32.79	44,500	NA	5,070	1360	1,920	4,840	3,280	<430	<21.5	<21.5	620	NA	NA	NA
	5/9/2006	53.91	21.09	32.82	48,100	NA	2,510	1,140	1,950	5,030	2,210	367	<10.8	<10.8	594	NA	NA	NA
	8/10/2006	53.91	22.26	31.65	42,100	NA	3,450	869	1,760	5,650	3,570	365	<10.8	<10.8	727	NA	NA	NA
MW-4	5/10/2002	50.54	21.78	28.76	880	NA	25	1.0C	110	52	12,000	NA	NA	NA	NA	NA	NA	NA
	8/8/2002	50.54	22.50	28.04	3,800	NA	70	<5.0	300	115	4,800	1500	<17	<17	18	NA	NA	NA
	11/8/2002	50.54	22.81	27.73	5,100	NA	150	10	460	258	2,400	580	< 5.0	6	13	NA	NA	NA
	2/21/2003	50.54	21.48	29.06	3,200	NA	98	66	220	360	6,600	1600	<20	22	<20	NA	NA	NA
	5/28/2003	50.54	21.24	29.30	6,200	NA	140	46	200	790	2,300	690	<8.3	<8.3	17	NA	NA	NA
	8/12/2003	50.54	22.32	28.22	7,500	NA	180	57	220	1450	1,900	550	<7.1	7.3	18	NA	NA	NA
	10/9/2003	50.54	22.74	27.80	5,800	NA	250	32	300	970	7,800	1400	<31	50	<31	NA	NA	NA
	1/15/2004	50.54	21.19	29.35	5,900	NA	270	17 C	150	640	7,300	1,300	<20	25	21	NA	NA	NA
	5/25/2004	50.54	22.03	28.51	9,100	NA	210	51	200	1190	1800	560	<8.3	<8.3	24	NA	NA	NA
	9/21/2004	53.31	22.76	30.55	5,200	NA	290	12	370	600	7300	1,300	<50	<50	<50	NA	NA	NA
	12/14/2004	53.31	21.99	31.32	8,937	NA	538	114	416	2379	5021	826	<10.75	21	49	NA	NA	NA
	3/11/2005	53.31	20.01	33.30	12,300	NA	225	39.6	80.1	1465	3870	1,110	<10.8	12.1	<43	NA	NA	NA
	6/15/2005	53.31	21.25	32.06	7,690	NA	114	32.6	77.1	555	1150	<110	<5.5	<5.5	22.9	NA	NA	NA
	8/26/2005	53.31	22.03	31.28	8,850	NA	175	24.6	150	851	1380	902	<5.50	<5.50	37.4	NA	NA	NA
	11/11/2005	53.31	22.43	30.88	9,990	NA	356	<43	196	700	3,640	884	<10.8	<10.8	<43	NA	NA	NA
	2/9/2006	53.31	20.31	33.00	6,850	NA	205	<43	67.2	255.2	5,120	769	<10.8	16.4	45.6	NA	NA	NA
	5/9/2006	53.31	20.33	32.98	1,290	NA	18.1	<8.6	12.9	25.87	799	405	<2.15	2.95	31.3	NA	NA	NA
	8/10/2006	53.31	21.74	31.57	7,830	NA	118	<8.60	25.3	174.6	919	306	<2.15	<2.15	35.3	NA	NA	NA

Table 2

Historical Groundwater Elevation Data &
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits

15101 Freedom Avenue
San Leandro, California

Well/ Boring	Date	Top of casing elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* (µg/L) EPA 8260B	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	EDC (µg/L)	EDB (µg/L)
MW-5	5/10/2002	47.79	19.02	28.77	25,000	NA	1,000	1200	1,100	3,060	1,800	NA	NA	NA	NA	NA	NA	NA
	8/8/2002	47.79	19.80	27.99	18,000	NA	1,000	660	950	1,720	1,500	<250	<6.3	<6.3	510	NA	NA	NA
	11/8/2002	47.79	20.14	27.65	16,000	NA	1,300	380	930	1,550	1,200	66	< 2.0	< 2.0	560	NA	NA	NA
	2/21/2003	47.79	18.70	29.09	12,000	NA	390	71	770	1,100	860	<63	<3.1	<3.1	280	NA	NA	NA
	5/28/2003	47.79	18.52	29.27	9,100	NA	210	31	560	790	600	<33	<1.7	<1.7	110	NA	NA	NA
	8/12/2003	47.79	19.54	28.25	12,000	NA	660	75	660	1,110	1,000	130	<3.6	<3.6	270	NA	NA	NA
	10/9/2003	47.79	20.06	27.73	15,000	NA	1,000	130	1,000	1,430	1,700	<100	<5.0	<5.0	740	NA	NA	NA
	1/15/2004	47.79	18.42	29.37	9,900	NA	450 C	16	500	431	1,100	<63	<3.1	<3.1	300	NA	NA	NA
	5/25/2004	47.79	19.30	28.49	9,200	NA	380	24	490	536	720	<100	<5.0	<5.0	210	NA	NA	NA
	9/21/2004	50.53	20.15	30.38	10,000	NA	980	71	560	770	1200	<130	<6.3	<6.3	550	NA	NA	NA
	12/14/2004	50.53	19.30	31.23	10,502	NA	587	64	1040	1133	1015	40	<5.5	<5.5	444	NA	NA	NA
	3/11/2005	50.53	17.20	33.33	8,390	NA	407	<5.5	83	42.5	1530	88.8	<5.5	<5.5	448	NA	NA	NA
	6/15/2005	50.53	18.54	31.99	9,350	NA	147	18.3	435	146.2	573	<43	<2.15	<2.15	88.1	NA	NA	NA
	8/26/2005	50.53	19.31	31.22	9,500	NA	261	<22	726	321.3	749	274	<5.50	<5.50	195	NA	NA	NA
	11/11/2005	50.53	19.75	30.78	10,000	NA	443	41.5	527	278.5	1,430	192	<5.50	<5.50	360	NA	NA	NA
	2/9/2006	50.53	17.58	32.95	7,640	NA	237	<22	187	50.2	2,050	218	<5.50	<5.50	523	NA	NA	NA
	5/9/2006	50.53	17.54	32.99	8,360	NA	111	<8.6	300	75.84	566	91.8	<2.15	<2.15	163	NA	NA	NA
	8/10/2006	50.53	19.02	31.51	16,100	NA	250	<22	455	187.4	1,590	138	<5.50	<5.50	342	NA	NA	NA
MW-6	9/21/2004	45.82	17.64	28.18	34,000	NA	150	130	2200	8100	0.6	<10	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/2004	45.82	15.75	30.07	5,161	NA	137	7	436	1136	<5.5	<5.5	<5.5	<5.5	<22	NA	NA	NA
	3/11/2005	45.82	13.80	32.02	6,040	NA	125	3.22	260	722.1	4.94	2.54	<0.5	<0.5	<2.0	NA	NA	NA
	6/15/2005	45.82	14.78	31.04	5,590	NA	44.3	6.60	272	382	5.85	<20	<1.0	<1.0	<4.0	NA	NA	NA
	8/26/2005	45.82	15.91	29.91	6,130	NA	99	<8.6	378	492.9	5.66	<43	<2.15	<2.15	<8.6	NA	NA	NA
	11/11/2005	45.82	16.55	29.27	11,400	NA	101	<8.6	645	834.7	4.33	<43	<2.15	<2.15	<8.6	NA	NA	NA
	2/9/2006	45.82	13.92	31.90	2,790	NA	32.3	<8.6	131	131.22	7.30	<43	<2.15	<2.15	<8.6	NA	NA	NA
	5/9/2006	45.82	13.95	31.87	3,730	NA	25	<2.0	213	207.82	5.87	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	45.82	15.28	30.54	4,800	NA	41.9	<2.0	201	189	10.4	<10	<0.5	<0.5	<2.0	NA	NA	NA
MW-7	9/21/2004	44.74	15.21	29.53	2,900	NA	<0.5	<0.5	52	61	8.1	<10	<0.5	<0.5	1.5	NA	NA	NA
	12/14/2004	44.74	13.90	30.84	<50	NA	1.6	<0.5	29	58	6.0	<2.5	<0.5	<0.5	<2.0	NA	NA	NA
	3/11/2005	44.74	11.46	33.28	2,230	NA	<2.5	<2.5	39.4	51.4	12.4	<12.5	<2.5	<2.5	<10	NA	NA	NA
	6/15/2005	44.74	12.97	31.77	2,940	NA	0.85	<2.0	50.6	31.9	13.7	<10	<0.5	<0.5	2.23	NA	NA	NA
	8/26/2005	44.74	14.10	30.64	2,310	NA	<0.50	<2.0	55.7	29.6	4.01	<10	<0.5	<0.5	<2.0	NA	NA	NA
	11/11/2005	44.74	14.59	30.15	3,030	NA	<0.5	<2.0	66.5	42.3	9.76	<10	<0.5	<0.5	<2.0	NA	NA	NA
	2/9/2006	44.74	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/9/2006	44.74	12.02	32.72	1,400	NA	<0.5	<2.0	19.8	12.4	2.30	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	44.74	13.72	31.02	604	NA	<0.50	<2.0	6.2	4.63	1.42	<10	<0.5	<0.5	<2.0	NA	NA	NA
MW-8	9/21/2004	41.14	12.98	28.16	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/2004	41.14	11.22	29.92	<50	NA	<0.5	<0.5	<0.5	<1.0	<0.5	<2.5	<0.5	<0.5	<2.0	NA	NA	NA
	3/11/2005	41.14	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/2005	41.14	10.46	30.68	<200	NA	0.53	<2.0	<0.5	<1.0	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/26/2005	41.14	11.53	29.61	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	11/11/2005	41.14	11.92	29.22	<50	NA	<0.5	<2.0	1.36	1.8	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	2/9/2006	41.14	9.74	31.40	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	5/9/2006	41.14	9.90	31.24	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	41.14	10.9	30.24	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA

Table 2

Historical Groundwater Elevation Data &
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits

15101 Freedom Avenue
San Leandro, California

Well/ Boring	Date	Top of casing elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* (µg/L) EPA 8260B	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	EDC (µg/L)	EDB (µg/L)
MW-9	9/21/2004	40.26	12.18	28.08	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/2004	40.26	10.91	29.35	<50	NA	<0.5	<0.5	<0.5	<1.0	<0.5	<2.5	<0.5	<0.5	<2.0	NA	NA	NA
	3/11/2005	40.26	10.52	29.74	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5	<2.5	<0.5	<0.5	<2.0	NA	NA	NA
	6/15/2005	40.26	14.73	25.53	<200	NA	<0.5	<2.0	<0.5	<1.0	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/26/2005	40.26	10.59	29.67	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	11/11/2005	40.26	11.25	29.01	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5	<10	<0.5	<0.5	<2.0	NA	NA	NA
	2/9/2006	40.26	10.05	30.21	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	5/9/2006	40.26	9.06	31.20	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
	8/10/2006	40.26	10.01	30.25	<50	NA	<0.50	<2.0	<0.50	<1.0	<0.50	<10	<0.5	<0.5	<2.0	NA	NA	NA
			Maximum		410,000	22,000	7,300	6,910	9,400	25,700	12,000	1,600	0	50	740	0	0	0
			Sample Size		134	5	133	135	135	130	135	124	124	124	124	5	5	5
			Average		14,631	6,366	845	257	618	1,785	954	155	0	1	100			
			Standard Deviation		38,937	8,963	1,693	764	1,154	3,752	1,838	341	0	6	179			
			95% Confidence		6,592.6	7,856.3	287.7	128.9	194.7	645.0	310.1	60.1		1.0	31.4			
			95% Uppler Confidence Limit		21,224	14,223	1,133	386	813	2,430	1,264	215		2	131			
			ESLs		**100**	**100**	**1**	**40**	**30**	**20**	**5**	**120**	**NL**	**NL**	**NL**	**50000**	**0.05**	**0.5**
SECOND WATER-BEARING ZONE																		
DPW-1 (55-59)	9/19/2006				374	209(a)(b)(c)(d)	1.95	<2.0	9.62	11.48	2.28	<10.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
DPW-3 (56-60)	9/19/2006				1760	202(a)(b)(c)(d)	22.6	<22.0	35.7	86.1	3330	537	<5.50	<5.50	944	<11000	<5.50	<5.50
DPW-8 (52.5-56.5)	9/18/2006				<50.0	82.0(a)(b)	<0.500	<2.0	2.45	0.5	40.9	<10.0	<0.5	<0.5	2.43	<1000	<0.5	<0.5
			Maximum		1,760	209	23	0	36	86	3,330	537	0	0	944	0	0	0
			Sample Size		3	3	3	3	3	3	3	3	3	3	3	3	3	3
			Average		711	164	8	0	16	33	1,124	179	0	0	315	0	0	0
			Standard Deviation		927	71	13	0	17	47	1,910	310	0	0	544	0	0	0
			95% Confidence		1,049.2	80.8	14.2		19.8	52.7	2,161.6	350.8			615.9			
			95% Uppler Confidence Limit		1,761	245	22	0	36	85	3,286	530	0	0	931	0	0	0
			ESLs		**100**	**100**	**1**	**40**	**30**	**20**	**5**	**120**	**NL**	**NL**	**NL**	**50000**	**0.05**	**0.5**

Table 2

Historical Groundwater Elevation Data &
Comparison with Environmental Screening Levels (ESLs) and Upper Confidence Limits

15101 Freedom Avenue
San Leandro, California

Well/ Boring	Date	Top of casing elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* (µg/L) EPA 8260B	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	EDC (µg/L)	EDB (µg/L)

Notes:
August 8, 2002 was the first time that samples were analyzed for Gasoline Oxygenates
<: Not detected above the laboratory reporting limit.
NA: Not Analyzed or Not Aplicable. Well MW-8 was inaccessible during the 1Q05 & well MW-7 (1Q06) car was parked over each well.

(a) The sample chromatographic pattern does not resemble the fuel standard for quantiation
(b) Unidentified hydrocarbon C9-C16
(c) The sample was filtered prior to analysis
(d) Only 500 milliliters available for analysis after filtration
(e) Environmental Screening Levels
NL No level
(H) heavier hydrocarbons contributed to the quantitation
(Y) Sample exhibits chromatographic pattern that does not resemble standard
(Z) Presence confirmed but RPD between columns exceeds 40%

Environmental Screening Levels per CRWQCB SFBay Region, February 2005, Summary Table C (soil >3m, residential land use, groundwater is potential drinking source)
NL No level

TBA: tert-Butyl Alcohol
DIPE: Isopropyl Ether
ETBE: Ethyl tert-Butyl Ether
TAME: Methyl tert-Amyl Ether
EDC: 1,2-dichloroethane
EDB: 1,2-dibromomethane

FIGURES

N

approximate scale in feet

0 150 300

Figure 1: Site vicinity map.

SOMA ENVIRONMENTAL ENGINEERING, INC.

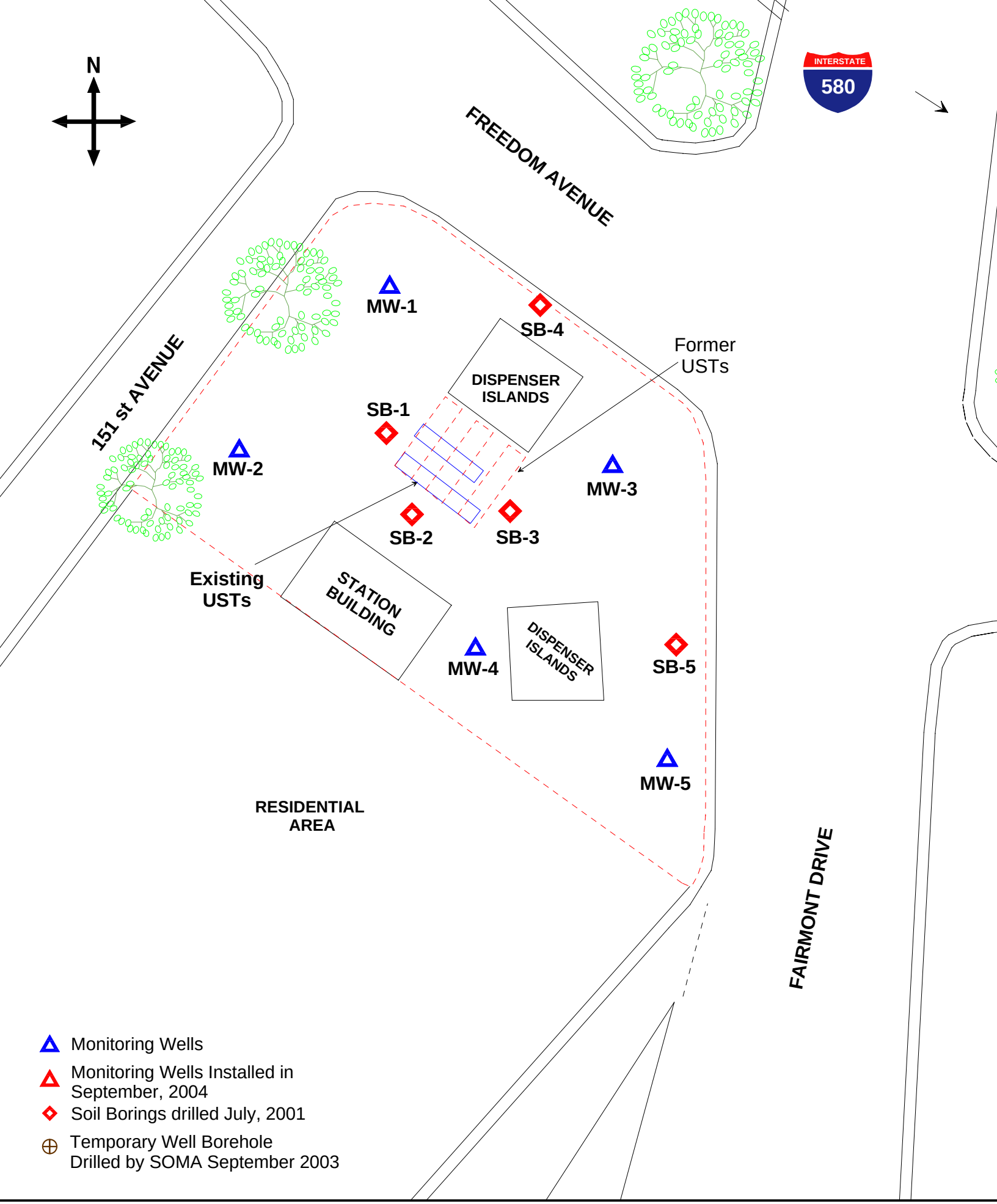
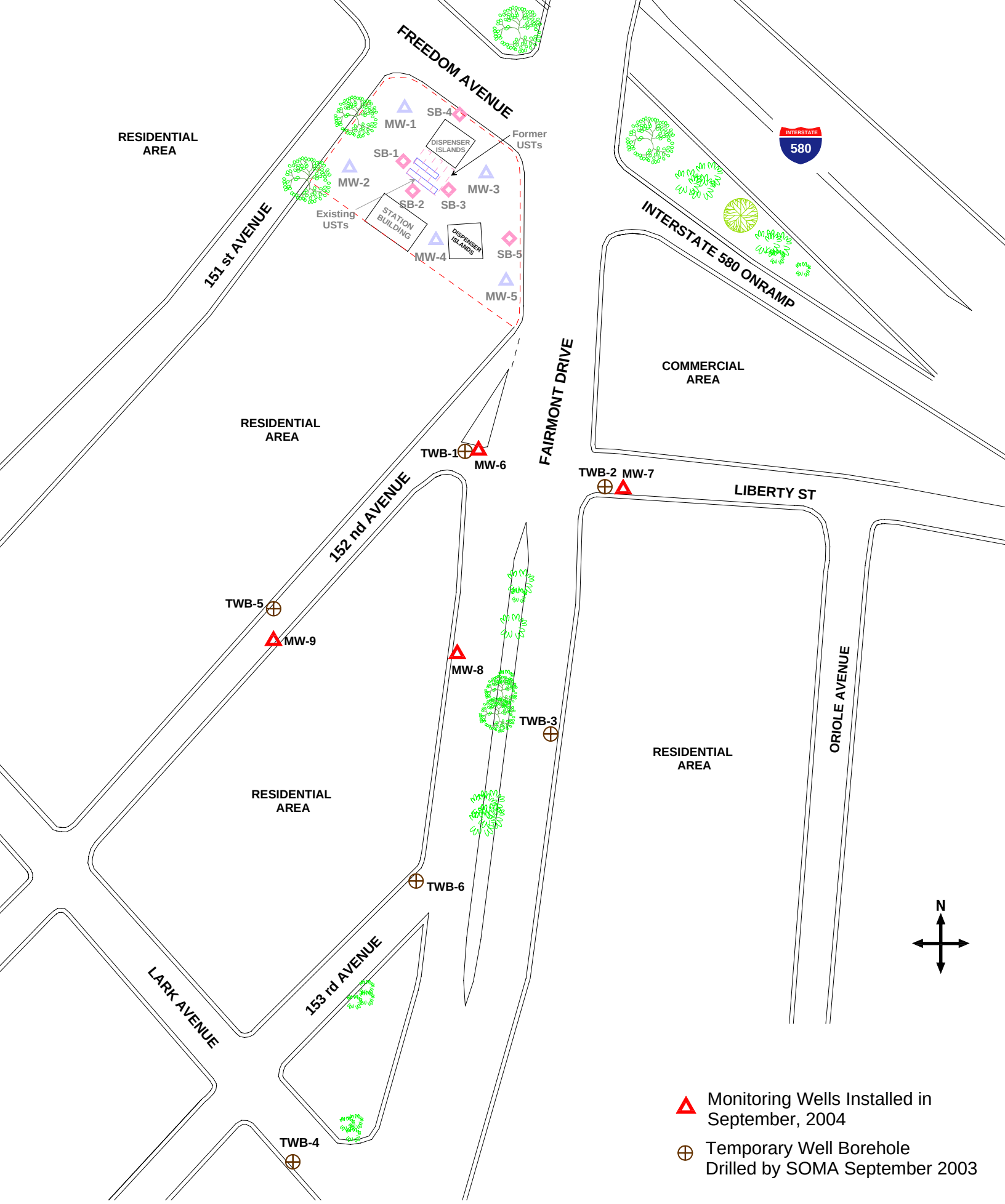


Figure 2: Locations of USTs, Fuel Dispensers, Soil Borings, and Groundwater Monitoring Wells On the Site

SOMA ENVIRONMENTAL ENGINEERING, INC.

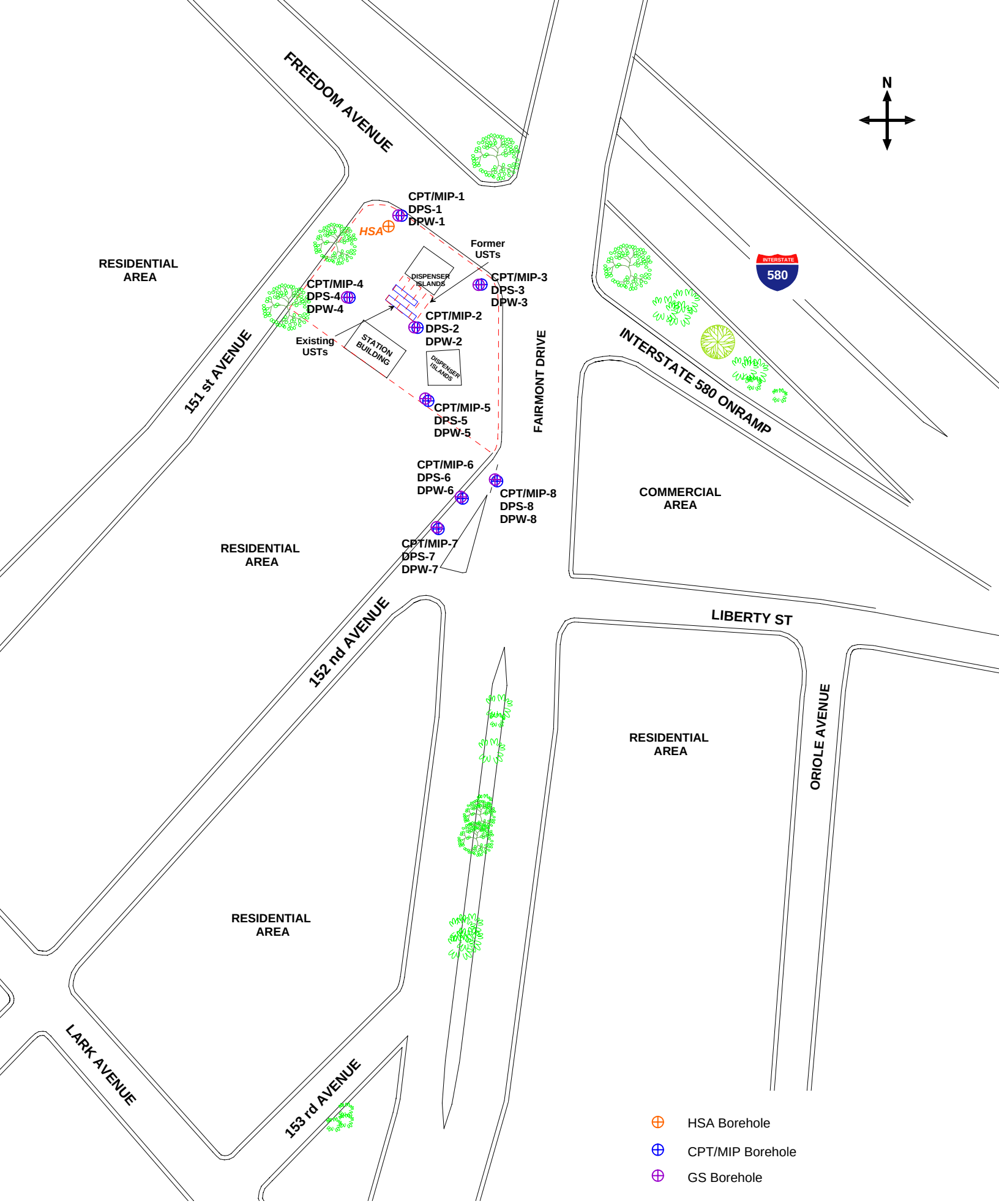


approximate scale in feet

0 50 100

Figure 3: Locations of Soil Borings and Groundwater Monitoring Wells Off the Site

SOMA ENVIRONMENTAL ENGINEERING, INC.



approximate scale in feet

0 50 100

Figure 4: Locations of CPT/MIP and Soil/Groundwater Sample Borings

SOMA ENVIRONMENTAL ENGINEERING, INC.

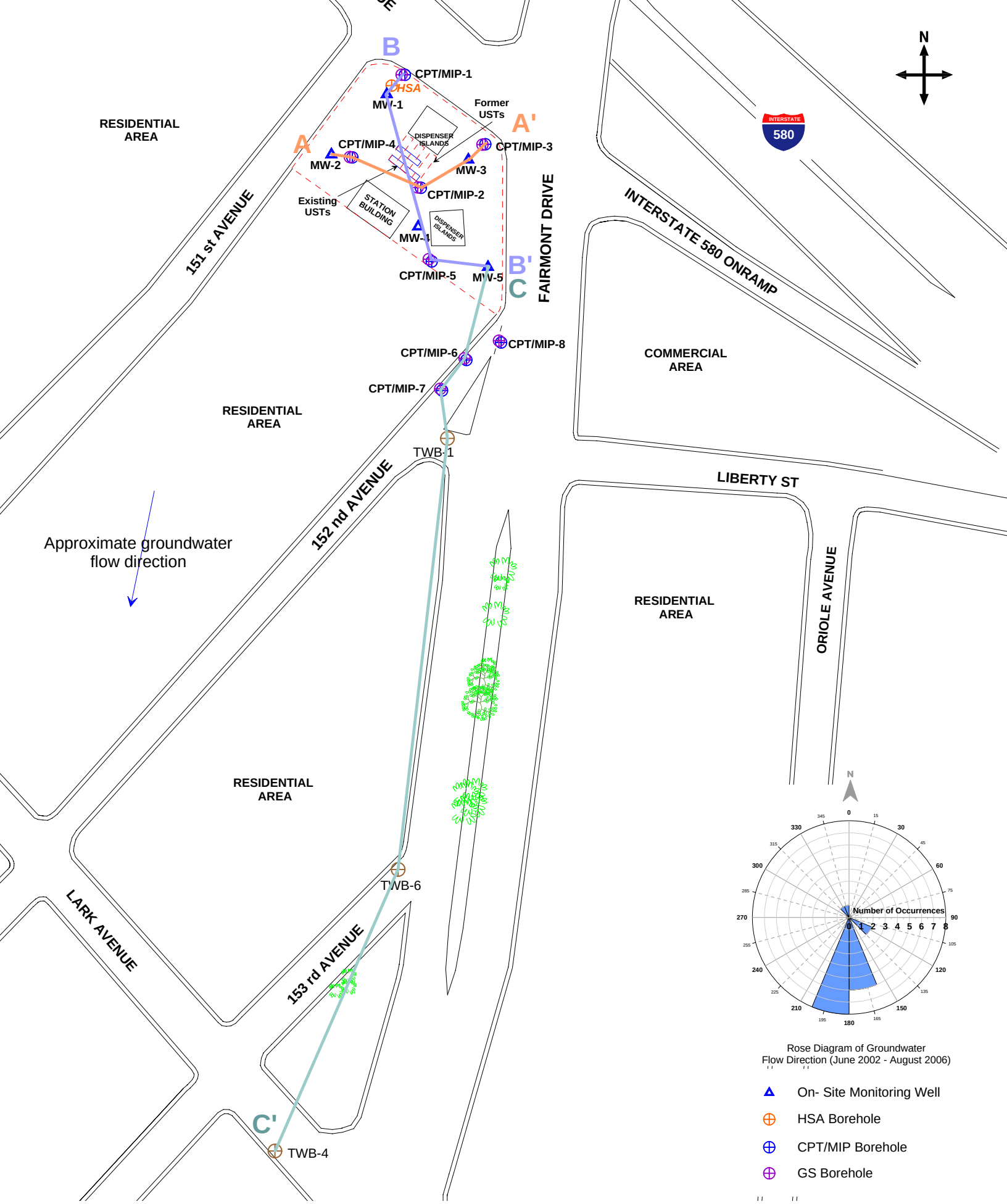


Figure 5: Locations of Geologic Cross-Sections A-A', B-B' and C-C'

ENVIRONMENTAL ENGINEERING, INC.

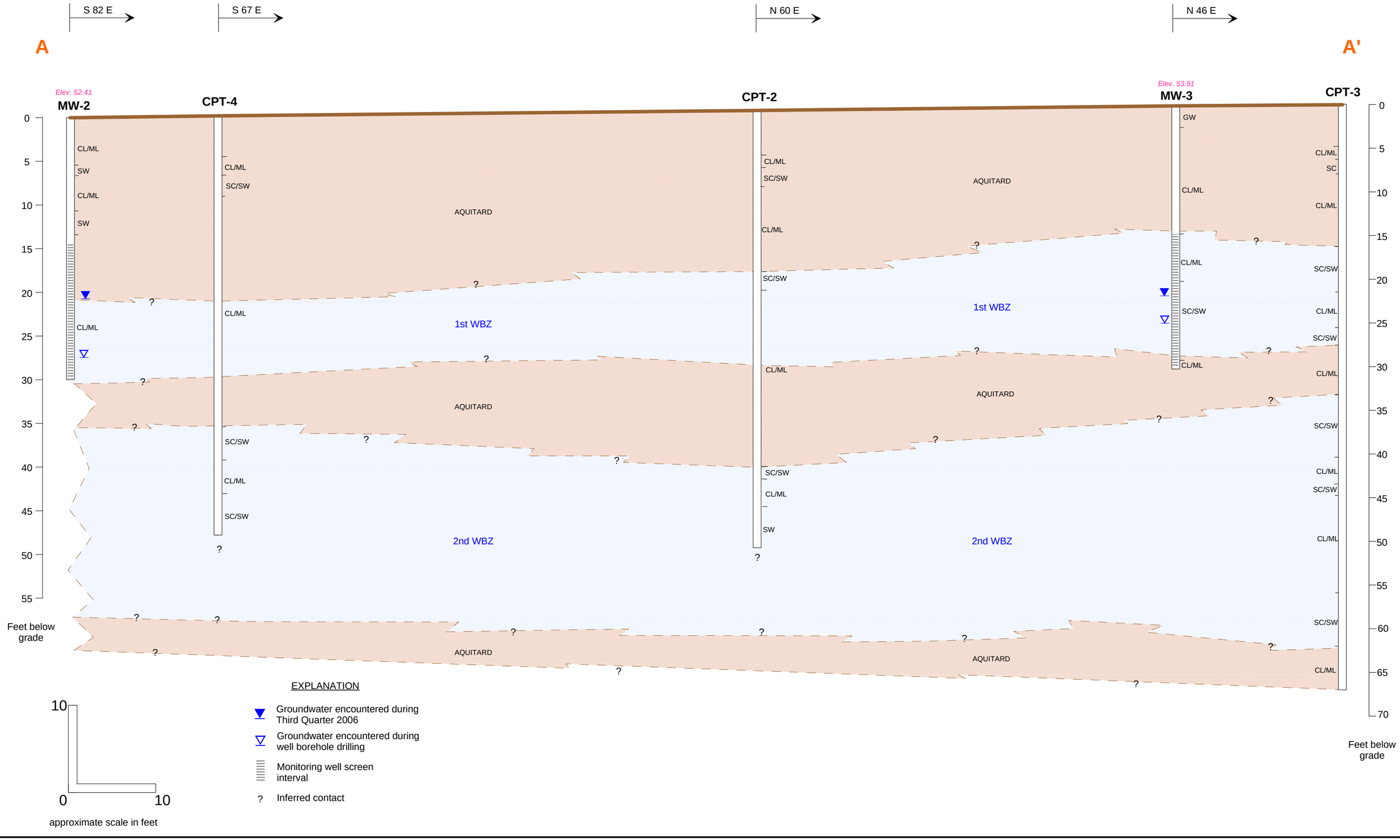


Figure 6: Geologic Cross-Section A-A'

ENVIRONMENTAL ENGINEERING, INC.

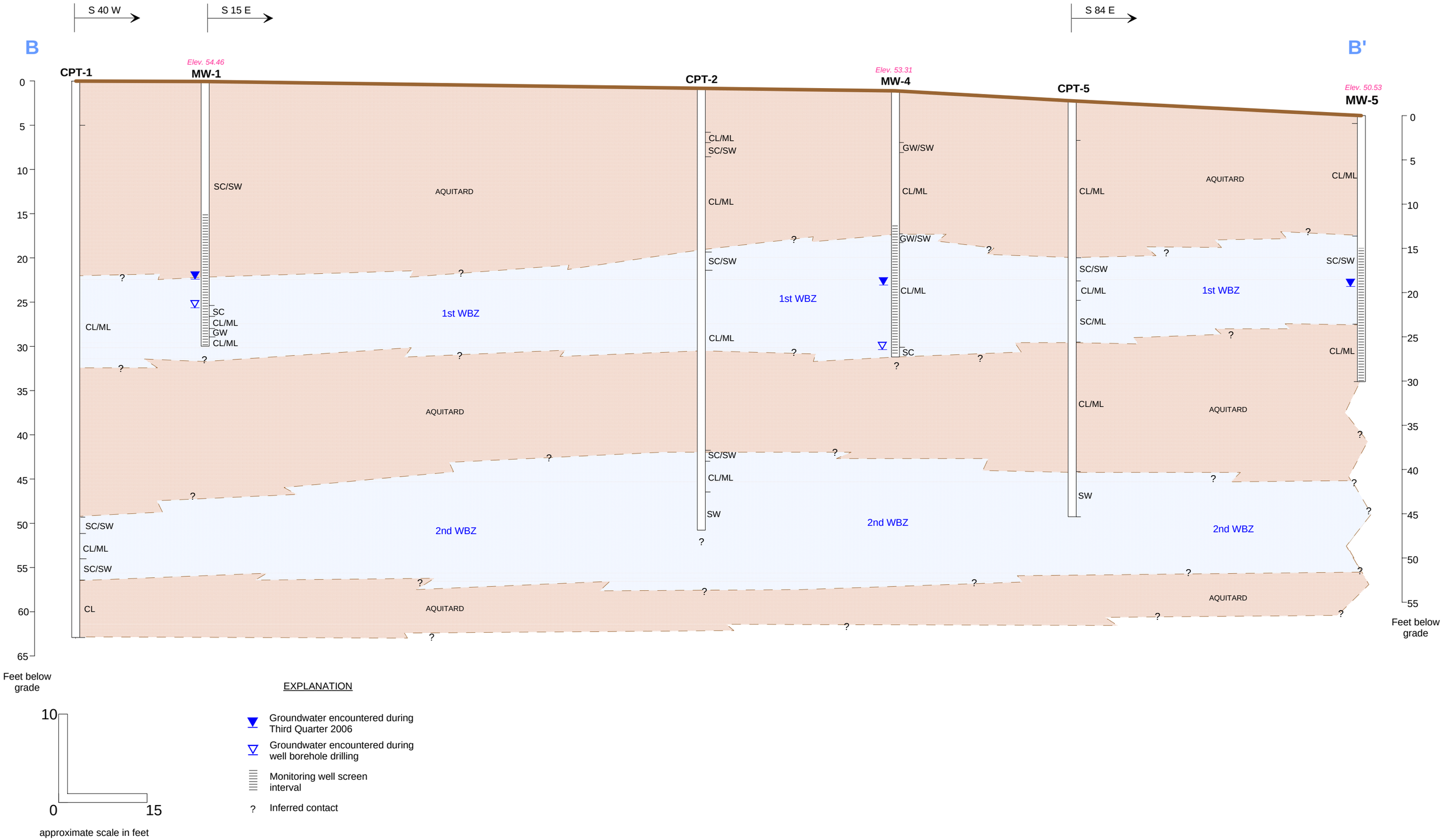


Figure 7: Geologic Cross-Section B-B'

ENVIRONMENTAL ENGINEERING, INC.

C

C'

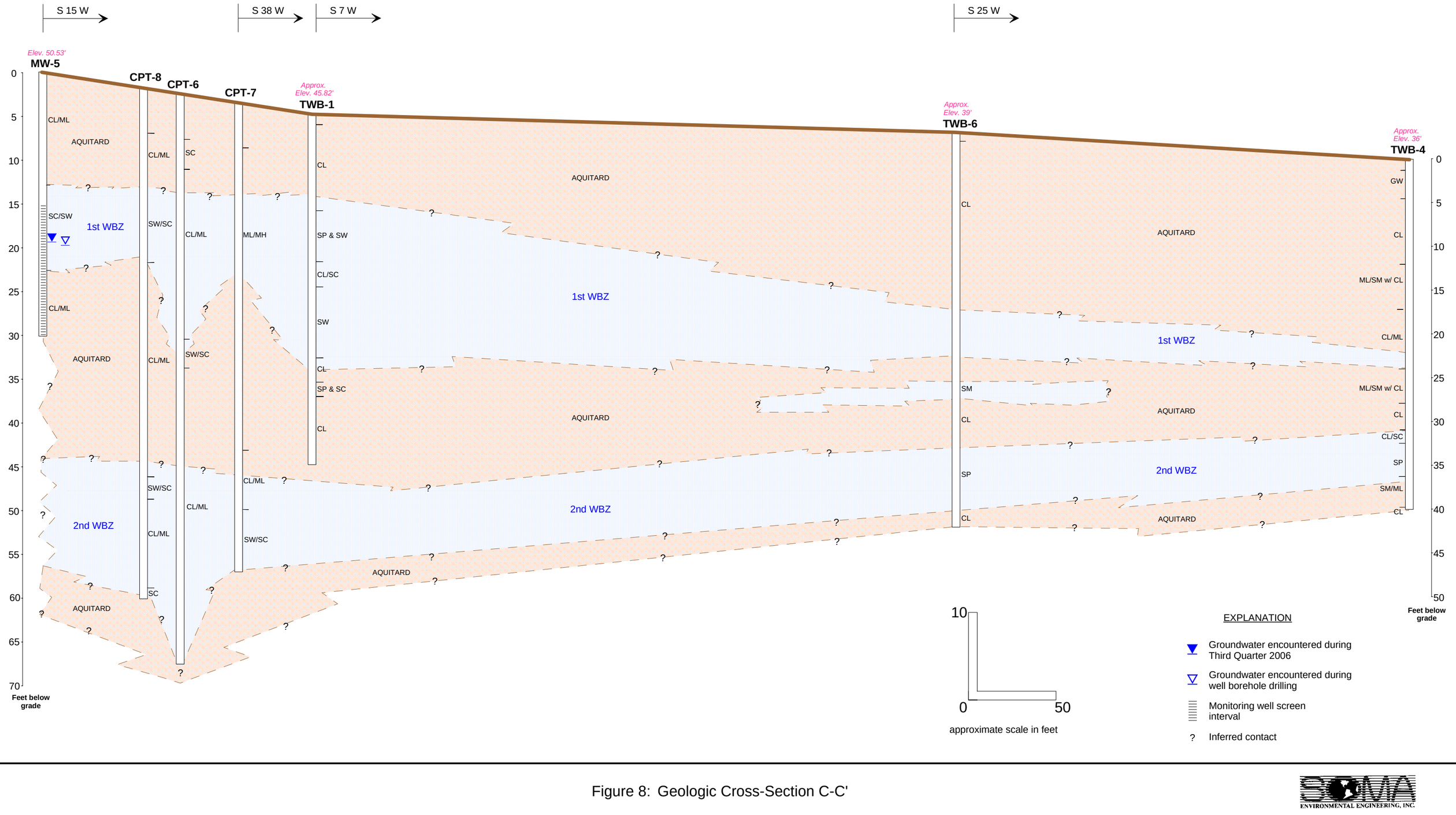


Figure 8: Geologic Cross-Section C-C'

ENVIRONMENTAL ENGINEERING, INC.

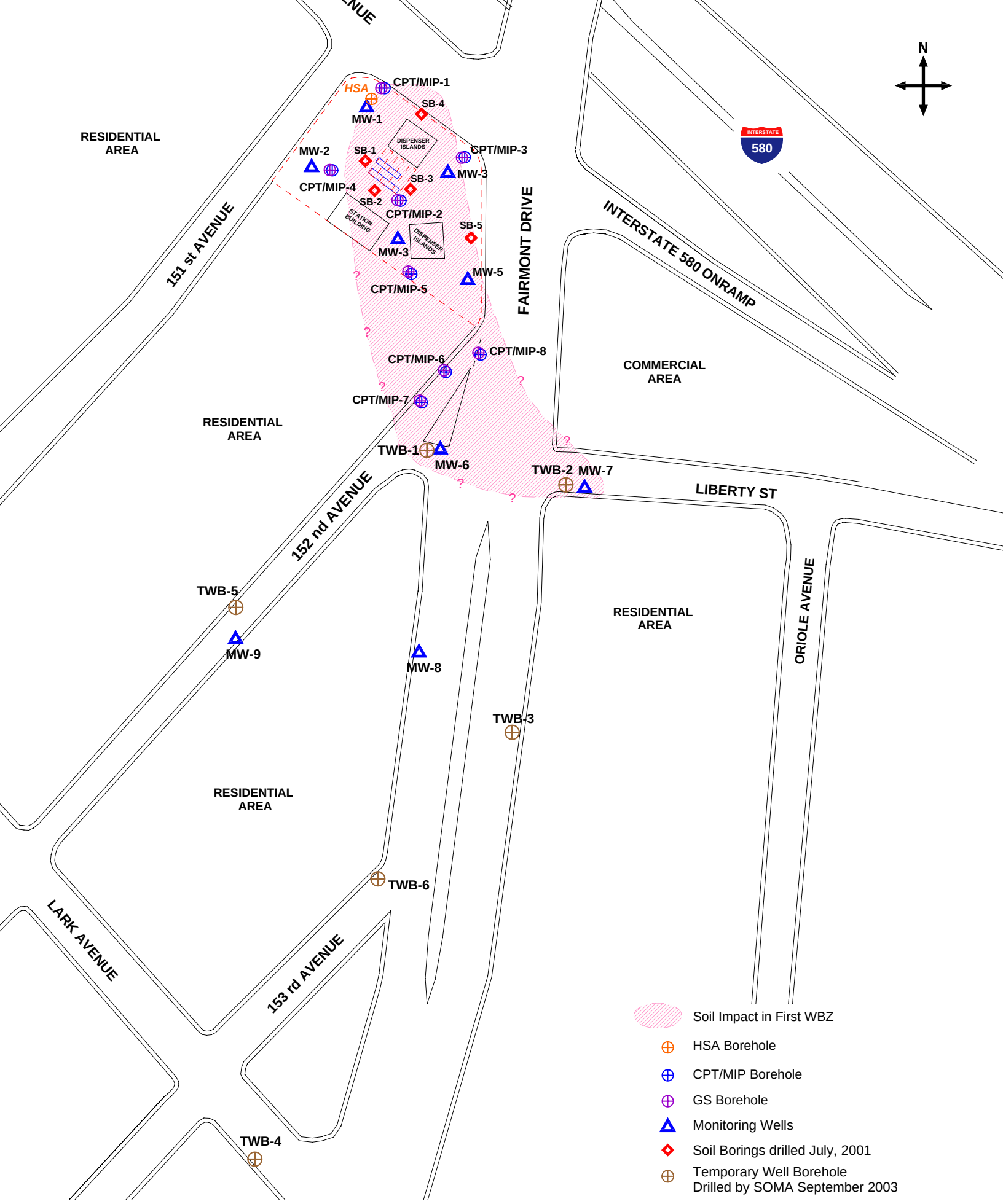


Figure 9: Soil Impact in First WBZ

SOMA ENVIRONMENTAL ENGINEERING, INC.

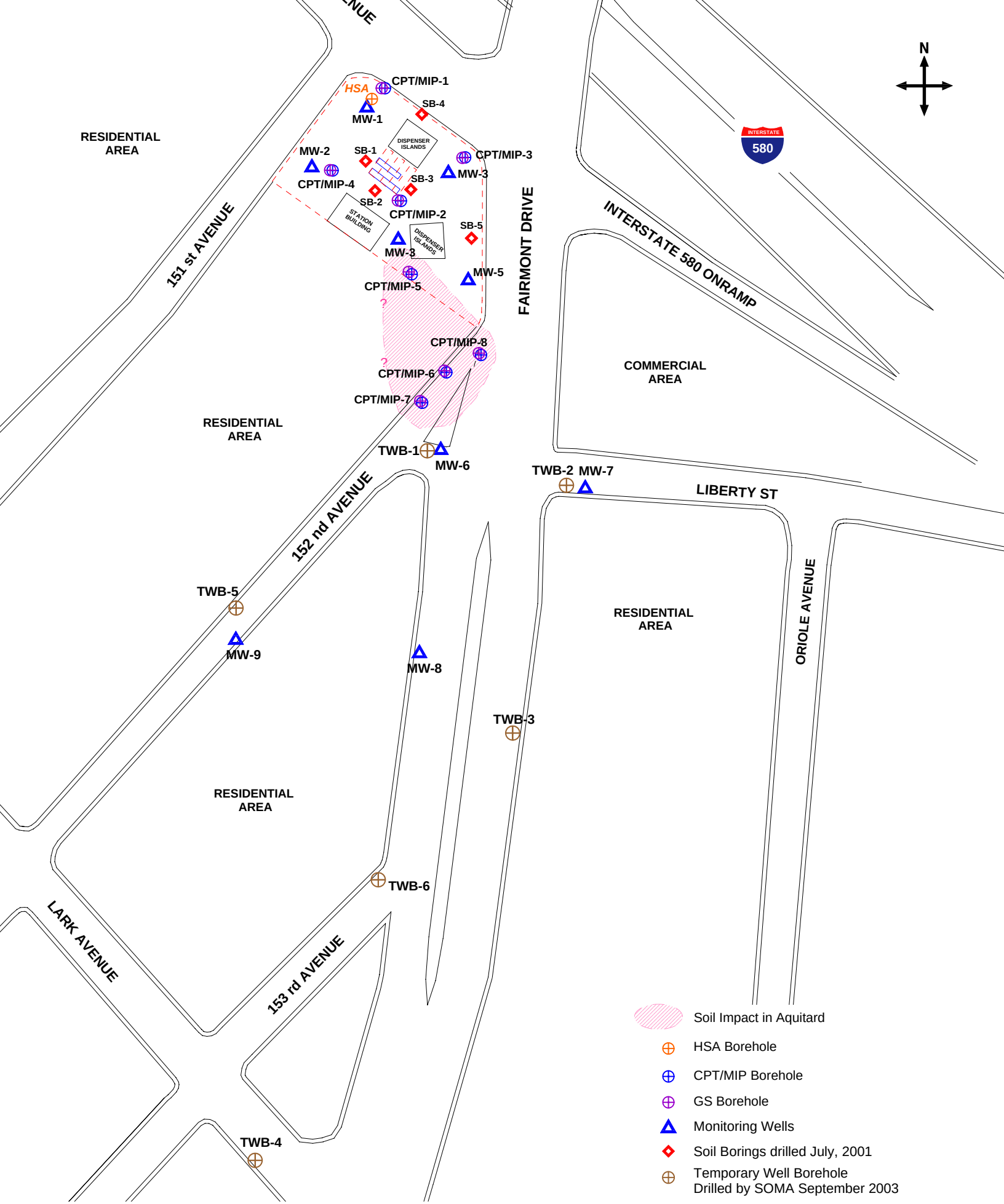
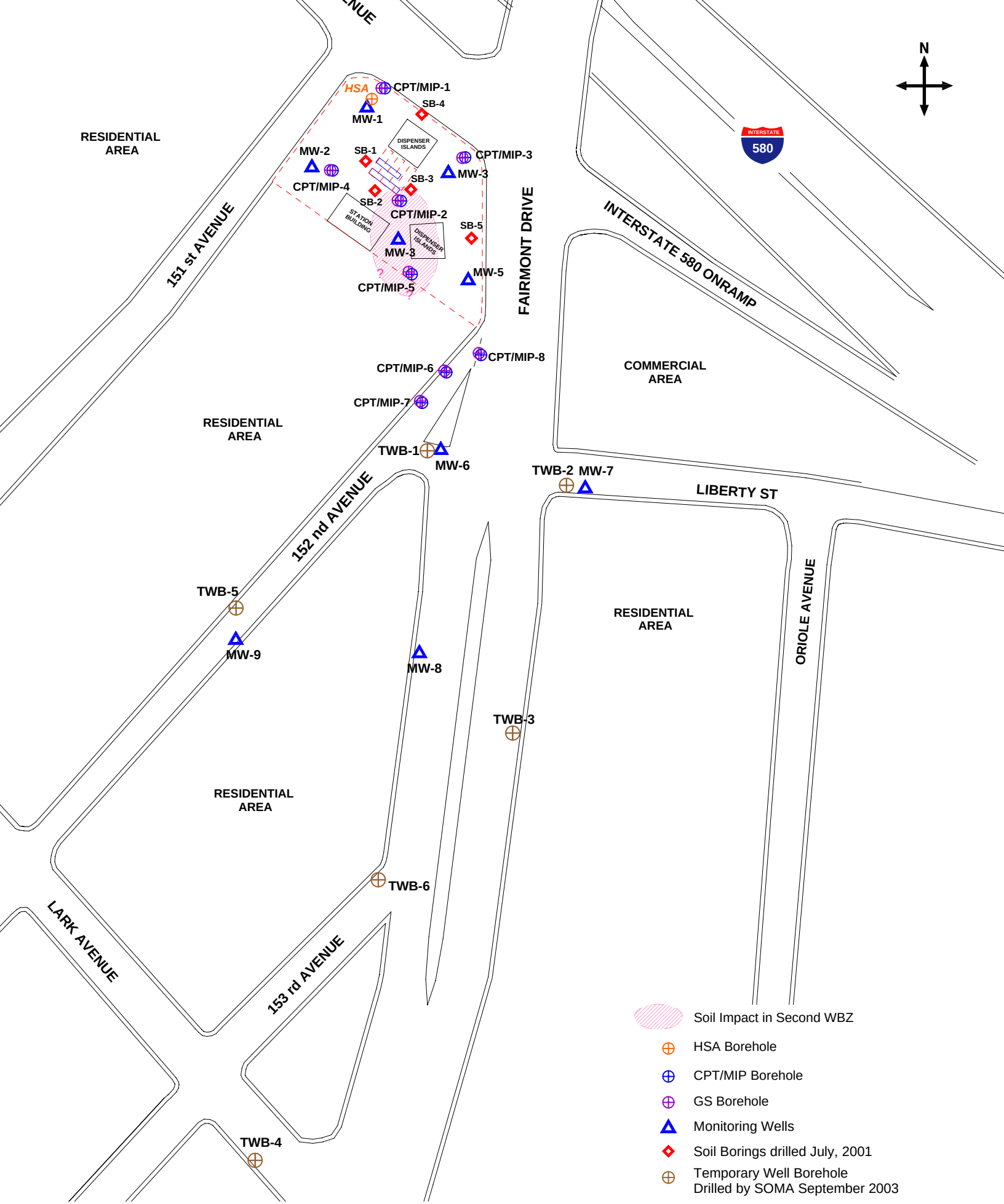


Figure 10: Soil Impact in Aquitard

SOMA ENVIRONMENTAL ENGINEERING, INC.



approximate scale in feet

0 50 100

Figure 11: Soil Impact in Second WBZ

SOMA ENVIRONMENTAL ENGINEERING, INC.

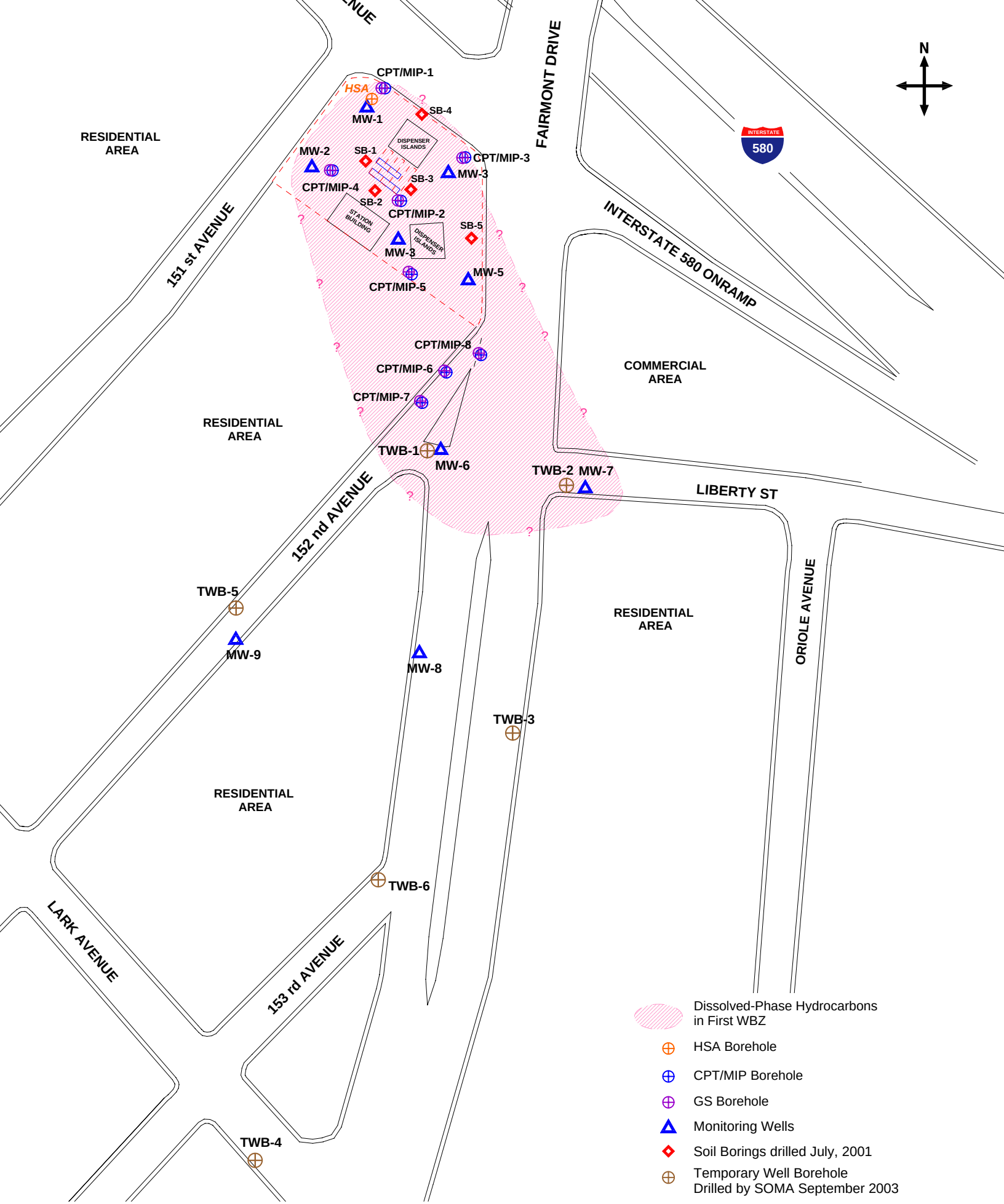


Figure 12: Dissolved-Phase Hydrocarbons in First WBZ

SOMA ENVIRONMENTAL ENGINEERING, INC.

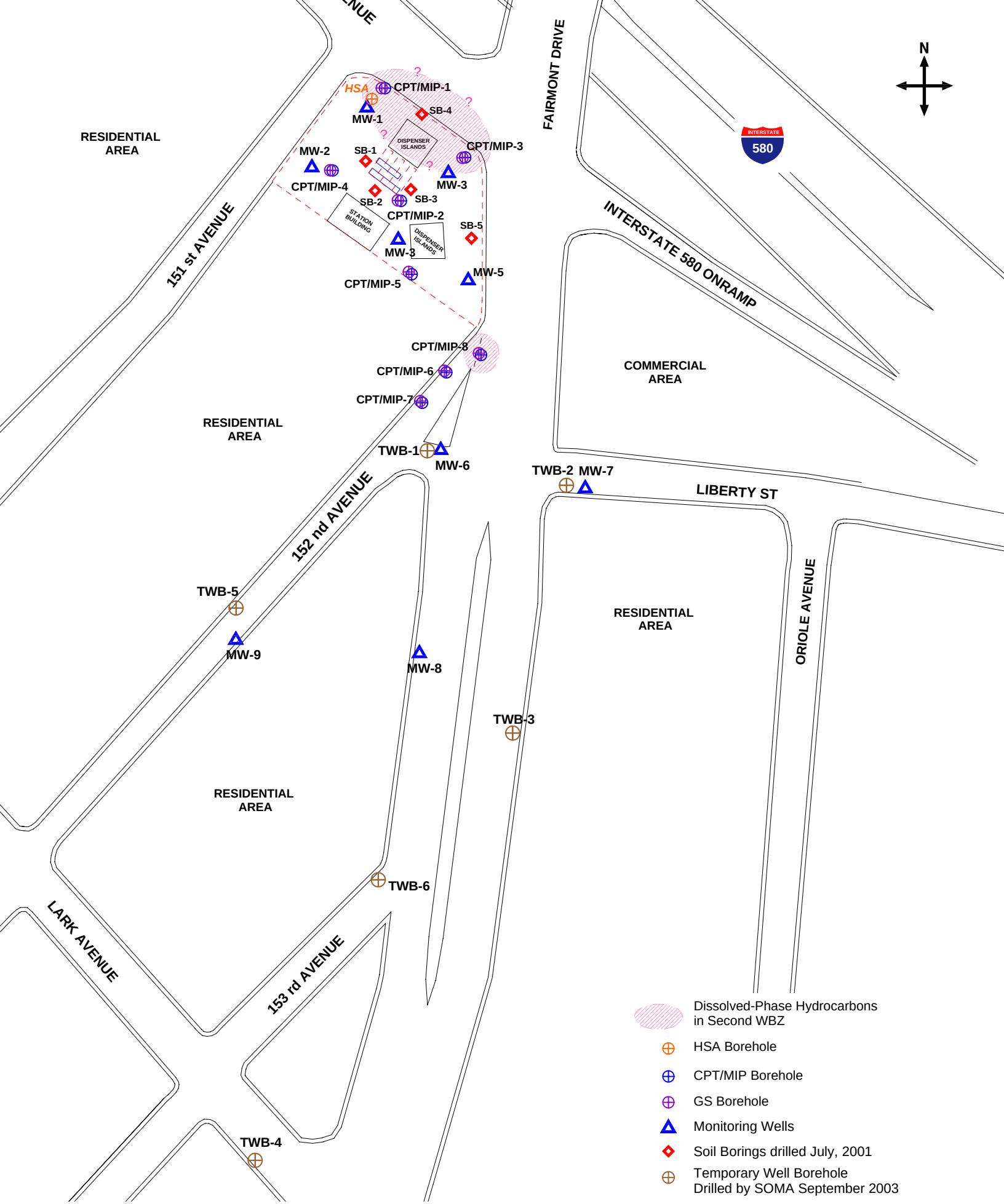
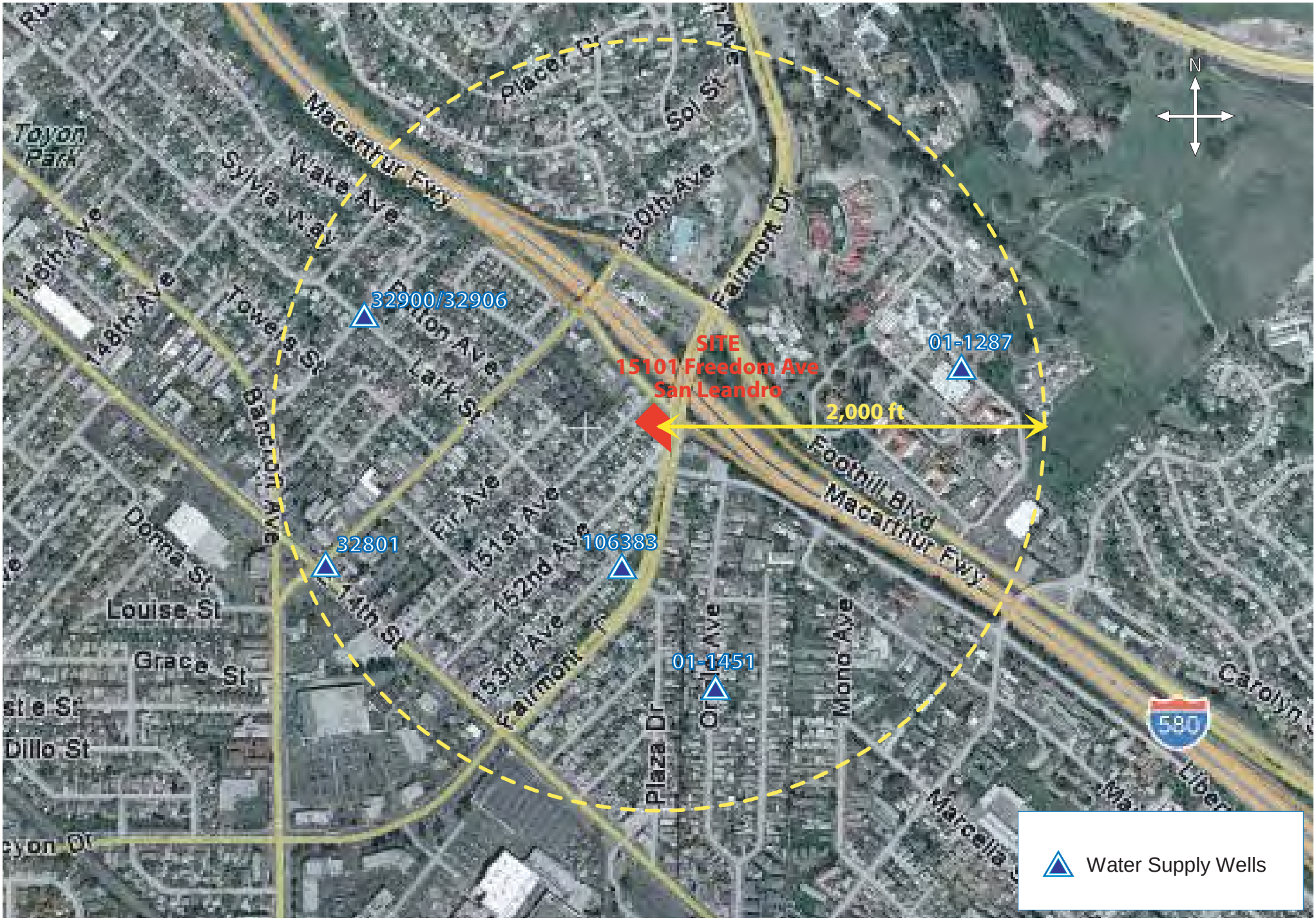


Figure 13: Dissolved-Phase Hydrocarbons in Second WBZ

SOMA ENVIRONMENTAL ENGINEERING, INC.



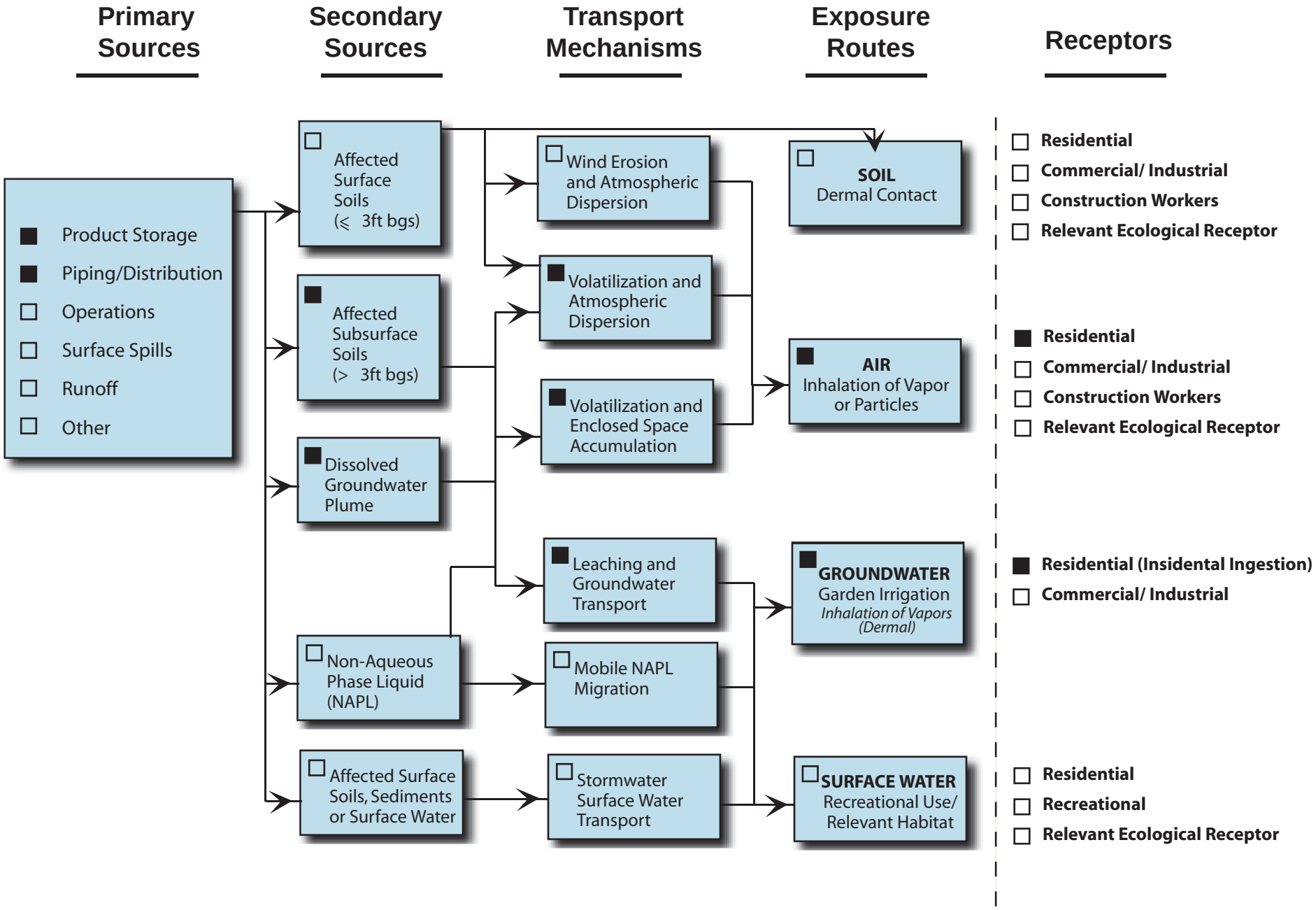
approximate scale in feet

0 650 1,300

Figure 14: Sensitive Receptor Survey – Water Supply Wells

SOMA ENVIRONMENTAL ENGINEERING, INC.

15101 Freedom Avenue, San Leandro, CA



Source: ASTM E-1689-95 Standard Guide for Developing Conceptual Site Models for Contaminated Sites

Figure 15: Conceptual Site Model Flow Chart

Dissolved-Phase
(ug/L)
October 2006

33,000
30,000
27,000
24,000
21,000
18,000
15,000
12,000
9,000
6,000
3,000
0

RESIDENTIAL AREA
LARK AVENUE
152 nd AVENUE
151 st AVENUE
153 rd AVENUE
FAIRMONT DRIVE
FREEDOM AVENUE
Residential Well
Residential Well (projected)
TWB-4
TWB-6
TWB-3
TWB-1
TWB-2
MW-9
TWB-5
MW-8
MW-6
MW-7
MW-5
MW-4
MW-3
MW-2
MW-1
Old and New USTs
UST's Canopy
UST's Canopy
Extent of Dissolved-Phase in 1st WBZ
Excavated OLD and NEW USTs
1st WBZ
2nd WBZ
Extent of Soil Impact in 1st WBZ
Soil Impact in Aquitard
Extent of Dissolved-Phase in 2nd WBZ
Feet below Grade
Groundwater Flow Direction

Soil Impact in First WBZ
Soil Impact in Aquitard

NOTE:
Field of View -45 ; Tilt -24
Rotation- 257 ; Projection Orthographic
All wells were projected
Approximate scale 1"=80 feet

Not to scale

Figure 16: Graphic Representation of the Site-Specific Conceptual Site Model

SOMA ENVIRONMENTAL ENGINEERING, INC.

APPENDIX A

Encroachment and Drilling Permit

Work Order Number:* 80001	Permit Number: R06-0507257
*This WO is ___ / is not ✓ open for charges.	Permit Issuance Date: 4-4-06
	Permit Expiration Date: 4-4-07

COUNTY OF ALAMEDA PUBLIC WORKS AGENCY
ROADWAY ENCROACHMENT PERMIT

This Permit is issued in accordance with Chapter 12.08 of the Alameda County General Ordinance Code

Name & Address of Property Owner:
MOHAMMAD PAYDEL
1770 PISTACIA COURT
FAIRFIELD, CA 94533

Phone Number: 707-399-7723

Name & Address of Contractor: SOMA
6620 OWENS DRIVE, SUITE A
PLEASANTON, CA 94588

Phone Number: 925-734-6400

Job Site Address:
15101 FREEDOM AVENUE
SAN LEANDRO

(This statement to be completed by the Agency)
This permit is issued to the owner ___ / contractor X; if "owner" is checked, he/she is ___ / is not ___ exempt from the requirement that work in the roadway be performed by a licensed contractor.

The Applicant intends to perform the following work scope:

SOIL & GROUNDWATER INVESTIGATION — TWO CPT/MIP/GS BORING LOCATIONS

Licensed Contractor Declaration:
I hereby affirm, under penalty of perjury, that I hold the following contractor's license, which is in full force and effect, under the applicable provisions of the State Business and Professions Code.

License Class and No. CLASS A 657 HAZ-ENDORS 803-805
Contractor's Signature: SOMA (FOR ERIC FUNNING) ERIC FUNNING

Worker's Compensation Insurance Declaration:
I hereby affirm, under penalty of perjury, that I will, during the performance of any and all work authorized by this permit, satisfy the requirements of the State Labor Code with regard to Worker's Compensation Insurance, as declared below:

___ I will maintain a certificate of consent to self-insure.
___ I will maintain the following insurance policy:
Carrier's Name and Policy No.:
___ I will not employ any person in any manner so as to become subject to the worker's compensation laws of the State.
Owner's/Contractor's Signature:

All work and/or access shall be performed in accordance with the requirements of Chapter 12.08 and, unless otherwise specified below, shall be fully compliant with each of the terms and conditions of the attached General Provisions:

Tom Ringot

CALL THIS NUMBER FOR INSPECTIONS: 670 5979

Bond Information: 250 00	Insp. Fee ___ or Deposit ___: 95 00 225
BY: M Hubbard, Alameda County	Work Completed (Date): ___
	Inspector:

I certify that the information that I have entered into this permit application is correct, and I agree to comply with all of the terms and conditions and other requirements of the issued Permit.

ERIC FUNNING — Signature of Applicant
APRIL 3, 2006 — Date

THIS PERMIT IS INCOMPLETE WITHOUT THE ATTACHED GENERAL PROVISIONS

INSPECTION REQUIREMENTS

- **All encroachments authorized by this Permit shall be subject to monitoring, inspection, and/or testing by a County representative; notify the County before you start work by calling the number on the front of this form.**

- If the face of this Permit is marked to indicate that the assigned County work order is open for charges, a job account will be opened and the assigned inspectors and other representatives will charge the actual cost of all required tests and inspections against this account. All cost overruns must be resolved prior to closeout of this Permit. Any underruns will be returned to the Permittee as soon as possible following the closeout.

CAUTION!

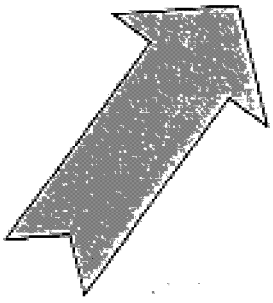
Most traffic signals and some streetlights are connected to their power sources with underground wiring. Many signals are also wired to traffic detector loops buried in the roadway. None of these County-owned wiring runs are included in the Underground Service Alert (USA) review and marking processes.

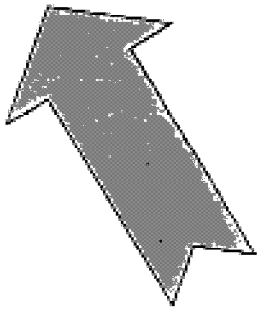
If you intend to excavate within 500' of a traffic signal, or in proximity to County-owned streetlights, you must contact the County traffic signal maintenance office at

→(510) 670 - 5537←

at least 48 hours in advance of the start of your planned work.

If you cause a signal outage, a streetlight failure, or other damage to County signal or streetlight facilities because you failed to contact the signal office to get the facilities marked, you will be billed for the full cost of our emergency response and repairs.





Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 03/31/2006 By jamesy **Receipt Number: WR2006-0145**
Permits Issued: W2006-0232 **Permits Valid from 05/15/2006 to 05/18/2006**

Application Id: 1143742300075 **City of Project Site:** San Leandro
Site Location: 15101 Freedom Avenue
Project Start Date: 05/15/2006 **Completion Date:** 05/18/2006

Applicant: SOMA Environmental Engineering - Mansour Sepehr **Phone:** 925-734-6400
6620 Owens Drive, Suite A, Pleasanton, CA 94588
Property Owner: Mohammad Pazdel **Phone:** --
1770 Pistacia Court, Fairfield, CA 94533
Client: ** same as Property Owner **
Contact: Eric Jennings **Phone:** 925-734-6400
Cell: --

Total Due: $200.00
Total Amount Paid: $200.00
Payer Name : Mansour Sepehr Paid By: MC **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 17 Boreholes
Driller: Gregg Drilling - Lic #: 485165 - Method: DP **Work Total: $200.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006-0232	03/31/2006	07/09/2006	17	2.00 in.	60.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

5. Cuttings may also be left on site or spread out as long as the applicants has approval from the property owner and the cuttings will not violate the State and County Clean Water laws (NPDES).

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

8. Spot Check Only
Inspector does not have to be present for grout Inspection.

Borehole(s) for Investigation-Geotechnical Study/CPT's - 0 Boreholes
Driller: Gregg Drilling - Lic #: 485165 - Method: hstem **Work Total: ** $0.00**

**** Cancelled Work. Total amount adjusted. ****

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
* Cancelled *			1	6.00 in.	60.00 ft

APPENDIX B

Geologic Log for HSA-1

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE: HSA

PROJECT: 2552

SITE LOCATION: 15101 FREEDOM AVENUE, SAN LEANDRO

DRILLER: Gregg Drilling and Testing, Inc.

DRILLING METHOD: HSA Drilling Technology

BORING DIAMETER: 6-inches

LOGGED BY: E. Jennings

DATE DRILLED: April 26, 2006

CASING ELEVATION: NA

DEPTH TO GW: 28 feet bgs (projected)

T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

APPROVED BY: M. Sepehr. Ph. D., P.E

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SAMPLED (SPLIT SPOON / CORE)	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM NA
				4-inches of asphalt				
0			CL	SILTY CLAY: dark gray brown; firm; moist; medium plasticity; low estimated permeability; no petroleum hydrocarbon odor.	Hand Auger top 5'			
0	5		ML/CL	CLAYEY SILT/SILTY CLAY: olive gray mottled light gray; moist; soft to firm; slight to medium plasticity; small percentage of fine sand; low estimated permeability; no petroleum hydrocarbon odor.			4 10 11	
0	10		ML/CL	CLAYEY SILT/SILTY CLAY: olive gray and gray brown (with depth); moist; soft to firm; slight to medium plasticity; small percentage of fine sand; trace amount subangular to subrounded gravel to 1-inch; low estimated permeability; no petroleum hydrocarbon odor.			6 11 12	
0	15		ML/CL	CLAYEY SILT/SILTY CLAY: olive gray; moist; soft to firm; slight to low plasticity; small percentage of fine sand; low estimated permeability; no petroleum hydrocarbon odor.			7 7 8	
			CL	SILTY CLAY/SANDY CLAY: olive gray; moist; loose to medium dense; slight to low plasticity; trace amount subangular to subrounded gravel to 1-inch; low estimated permeability; no petroleum hydrocarbon odor.				
3	20		ML/CL	CLAYEY SILT/SILTY CLAY: olive gray; moist; soft to firm; slight to low plasticity; small percentage of fine sand; low estimated permeability; slight petroleum hydrocarbon odor.			4 5 7	
	25							

ENVIRONMENTAL ENGINEERING, INC

GEOLOGIC LOG OF BOREHOLE: HSA

PROJECT: 2552

SITE LOCATION: 15101 FREEDOM AVENUE, SAN LEANDRO

DRILLER: Gregg Drilling and Testing, Inc.

DRILLING METHOD: HSA Drilling Technology

BORING DIAMETER: 6-inches

LOGGED BY: E. Jennings

DATE DRILLED: April 26, 2006

CASING ELEVATION: NA

DEPTH TO GW: 28 feet bgs (projected)

T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

APPROVED BY: M. Sepehr. Ph. D., P.E

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SAMPLED: SPLIT SPOON	SAMPLED: CORE	GW LEVEL	BLOWCOUNTS	WELL DIAGRAM NA
1,000			ML/CL	CLAYEY SILT/SILTY CLAY: brown and olive gray; moist; firm to stiff; slight to low plasticity; small percentage of fine sand; low estimated permeability; moderate petroleum hydrocarbon odor.				5 9 14	
			CL	SILTY CLAY/SANDY CLAY: olive gray; moist; medium dense; slight to low plasticity; low estimated permeability; slight petroleum hydrocarbon odor.			▼		
0	30		CL	SILTY CLAY: light gray/white; wet; soft; medium to high plasticity; medium estimated permeability; no petroleum hydrocarbon odor.				5 9 19	
			CL	SILTY CLAY/SANDY CLAY: brown; moist; loose to medium dense; medium estimated permeability; no petroleum hydrocarbon odor.				9 11	
			CL	SILTY CLAY: brown/red brown slight mottled gray white; damp to moist; very stiff; low to medium plasticity; low to medium estimated permeability; no petroleum hydrocarbon odor.				10 14 18 19 19	
0	35							4 12 16	
								6 8 11 17 18 23 38	
0	40		ML/CL	CLAYEY SILT/SILTY CLAY: Brown/red brown/yellow brown; damp to moist; very stiff to hard; slight to low plasticity; small percentage of very fine sand; low estimated permeability; no petroleum hydrocarbon odor.				26 32 40 19 23 24 50 50	
				Very stiff fine-grained weathered siltstone/sandstone				NA	
0	45							16 35 52	
	50								

APPENDIX C

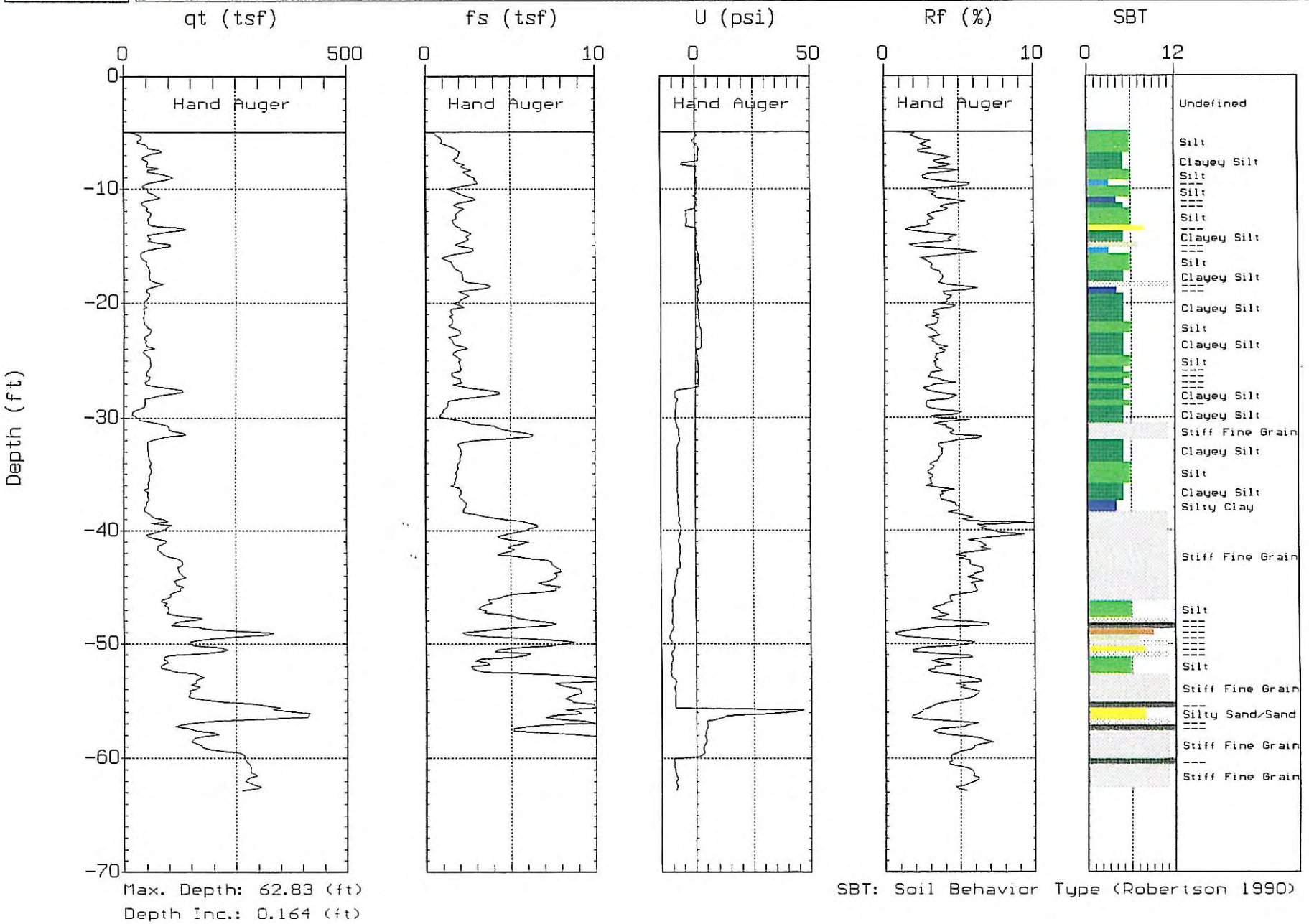
CPT/MIP Logs

GREGG

SOMA ENVIRONMENTAL

Site: 15101 FREEDOM AVE.
Location: CPT-01

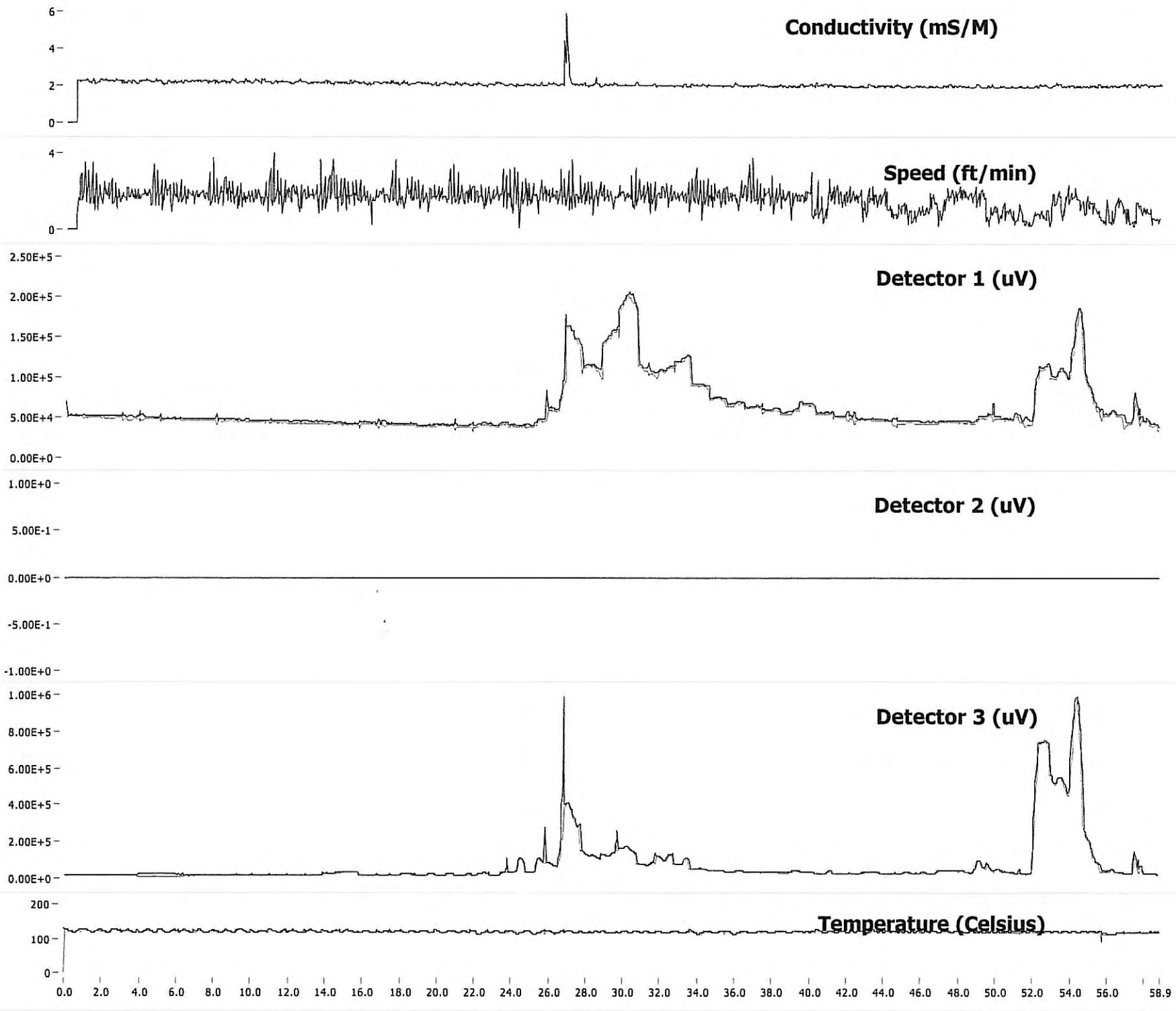
Engineer: M.SPIELMAN
Date: 09:11:06 07:42



Max. Depth: 62.83 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT1.DAT

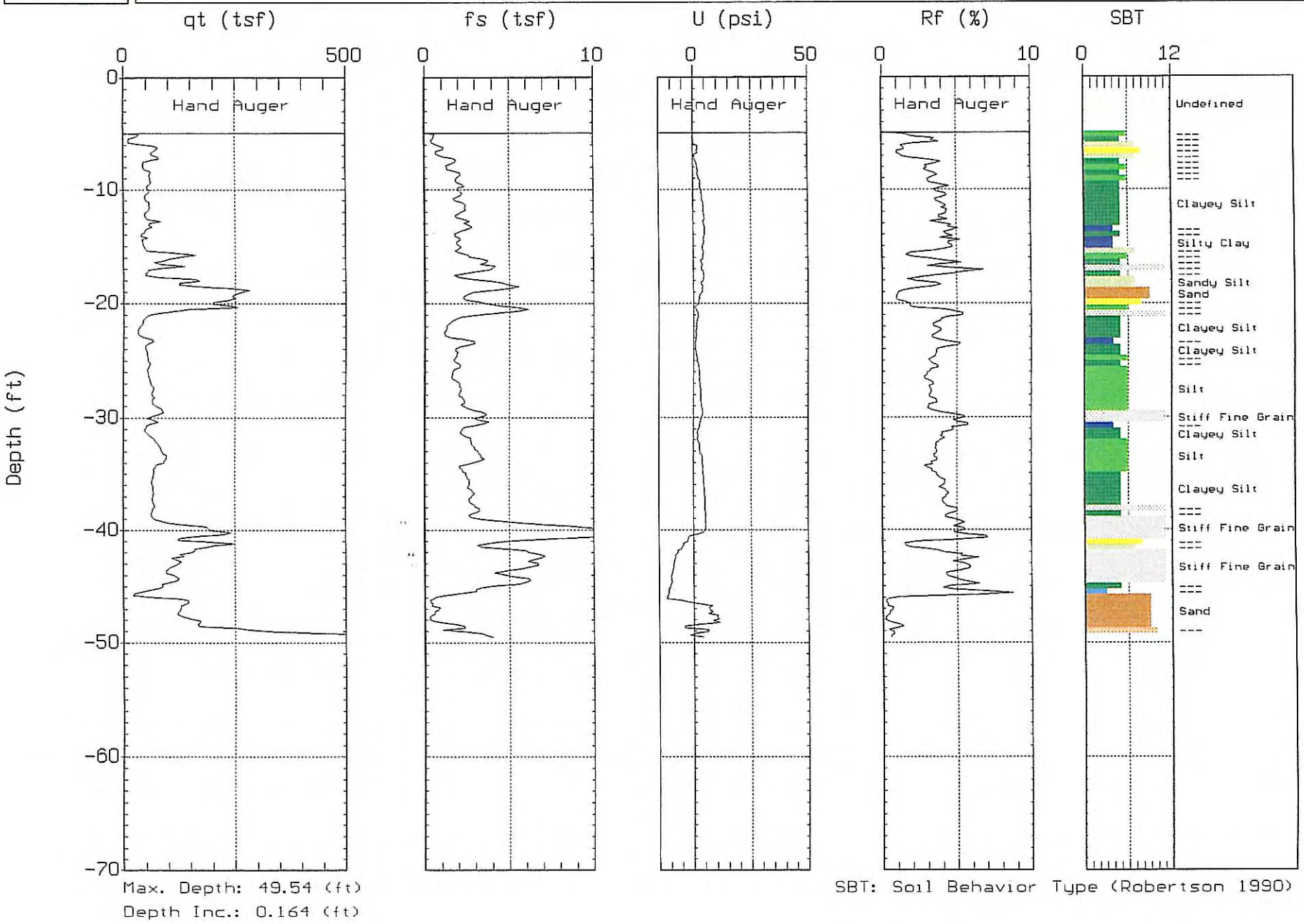


GREGG

SOMA ENVIRONMENTAL

Site: 15101 FREEDOM AVE.
Location: CPT-02

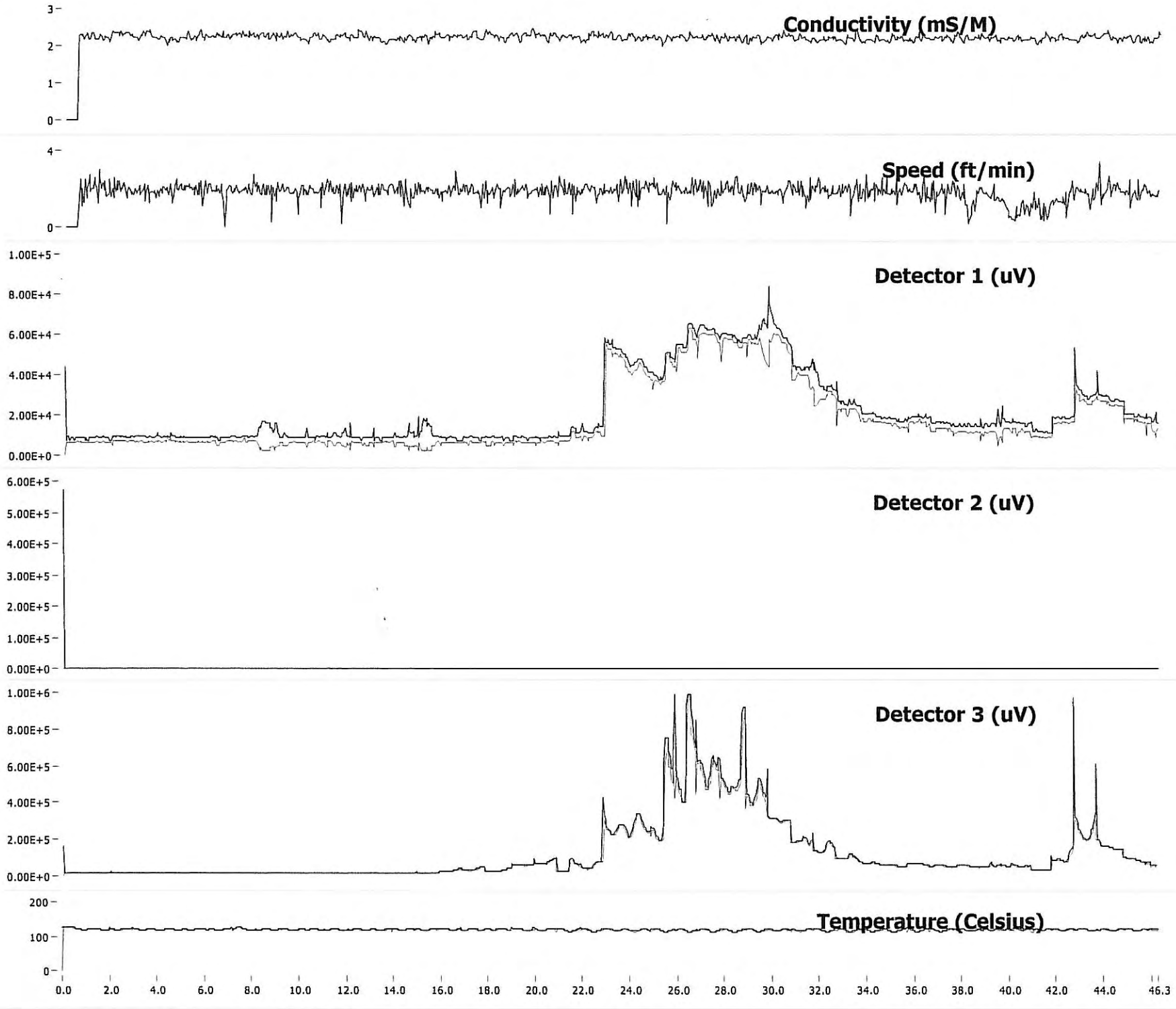
Engineer: M.SPIELMAN
Date: 09:11:06 13:22



Max. Depth: 49.54 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT2.DAT

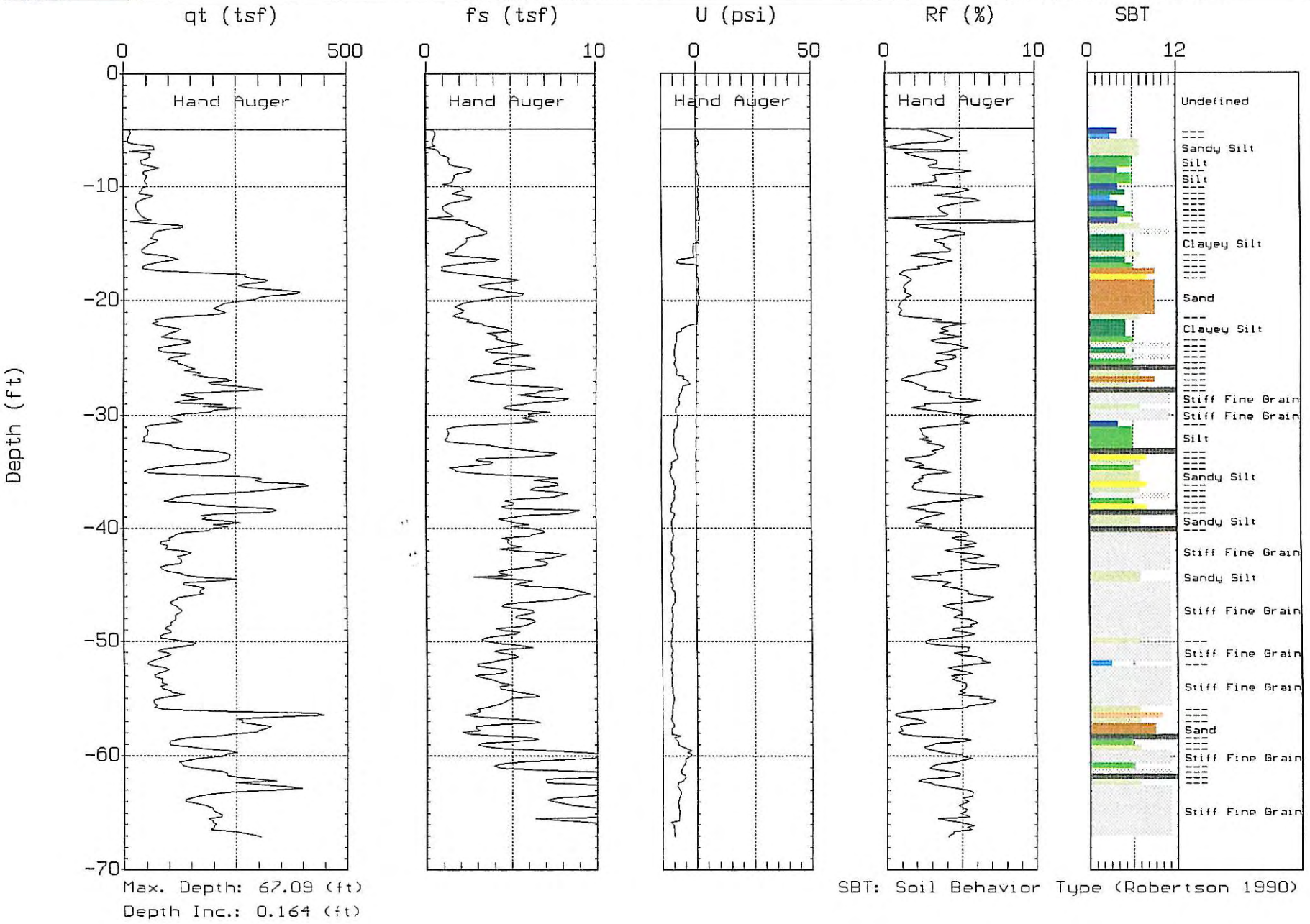


GREGG

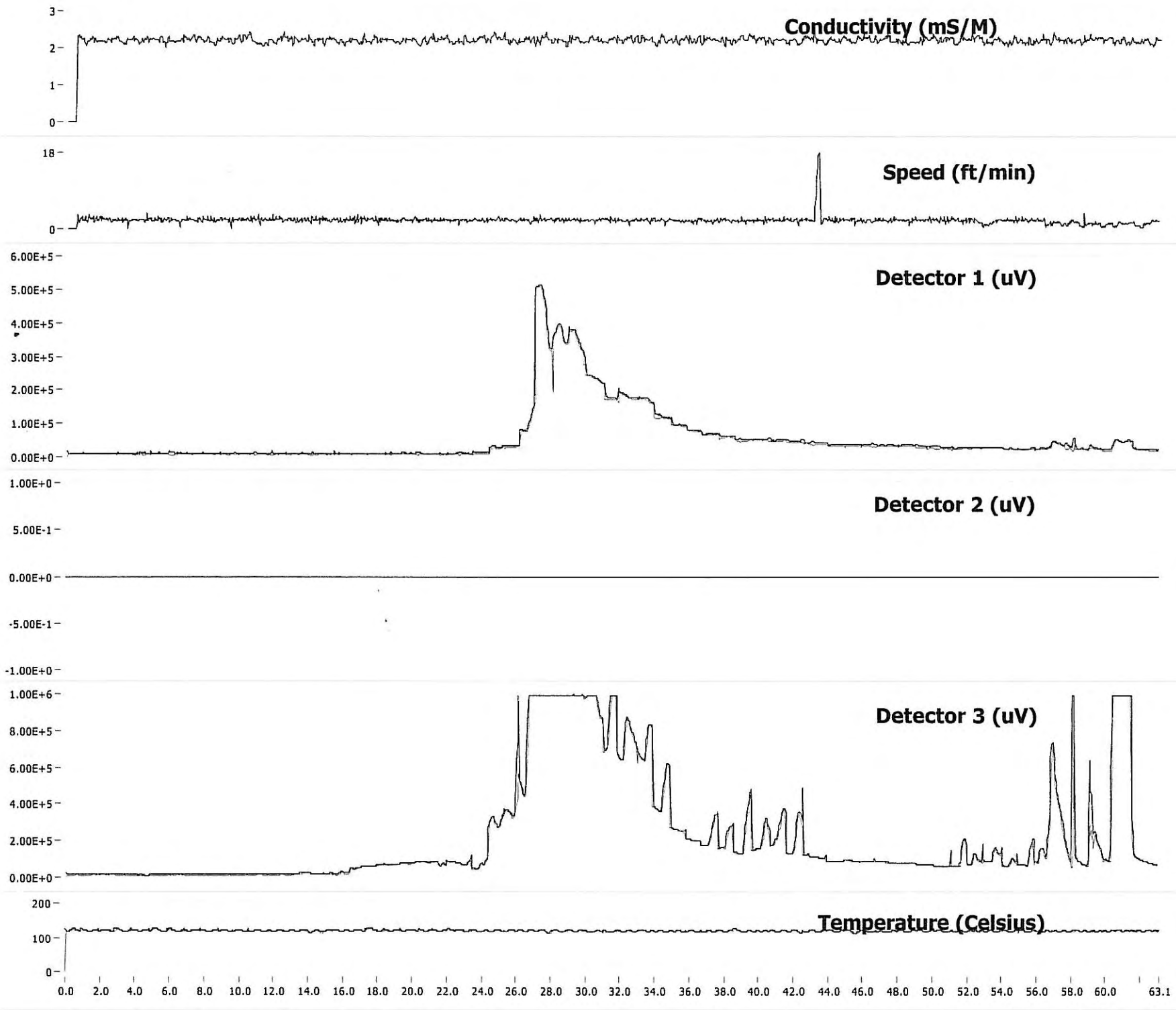
SOMA ENVIRONMENTAL

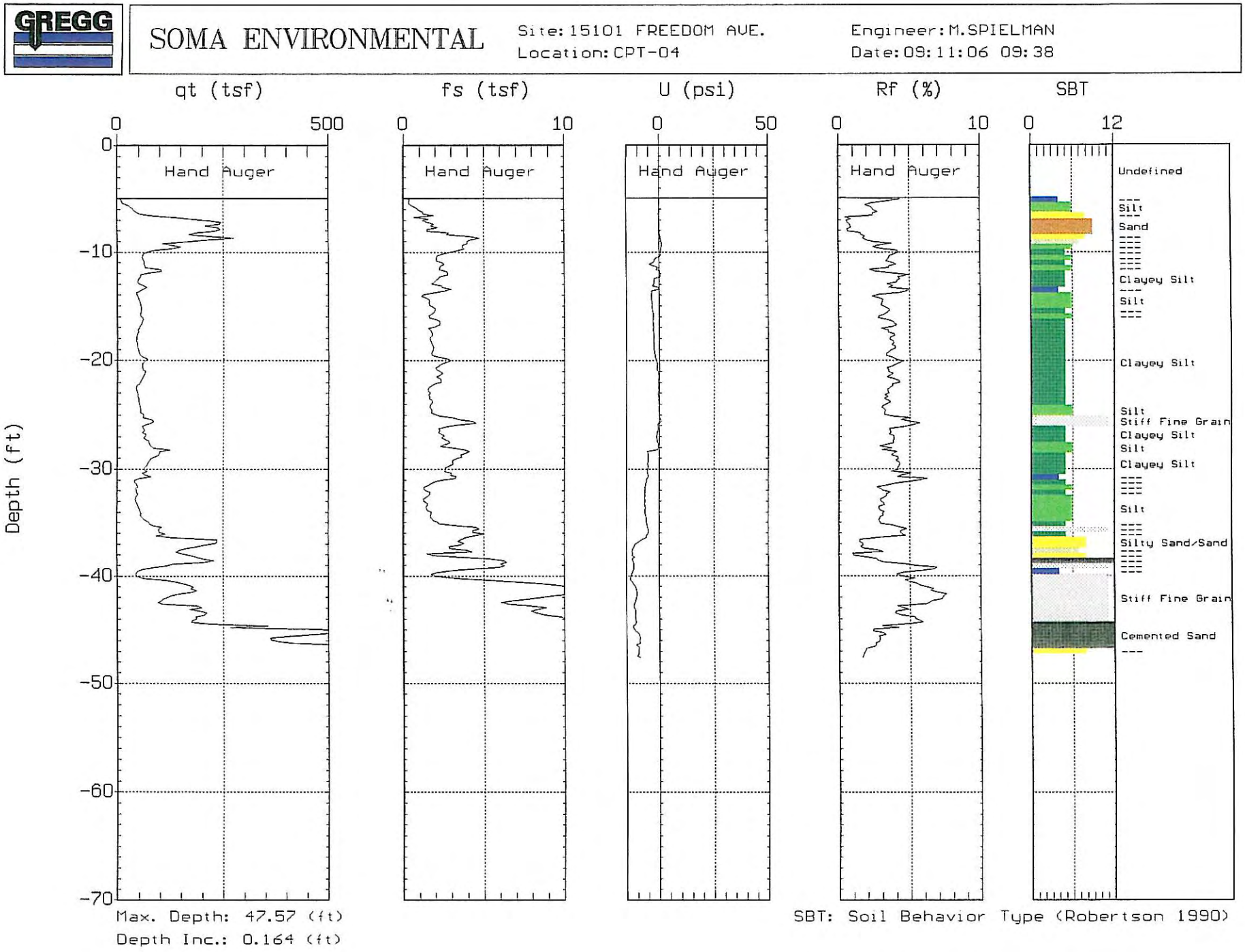
Site: 15101 FREEDOM AVE.
Location: CPT-03

Engineer: M.SPIELMAN
Date: 09:11:06 11:13

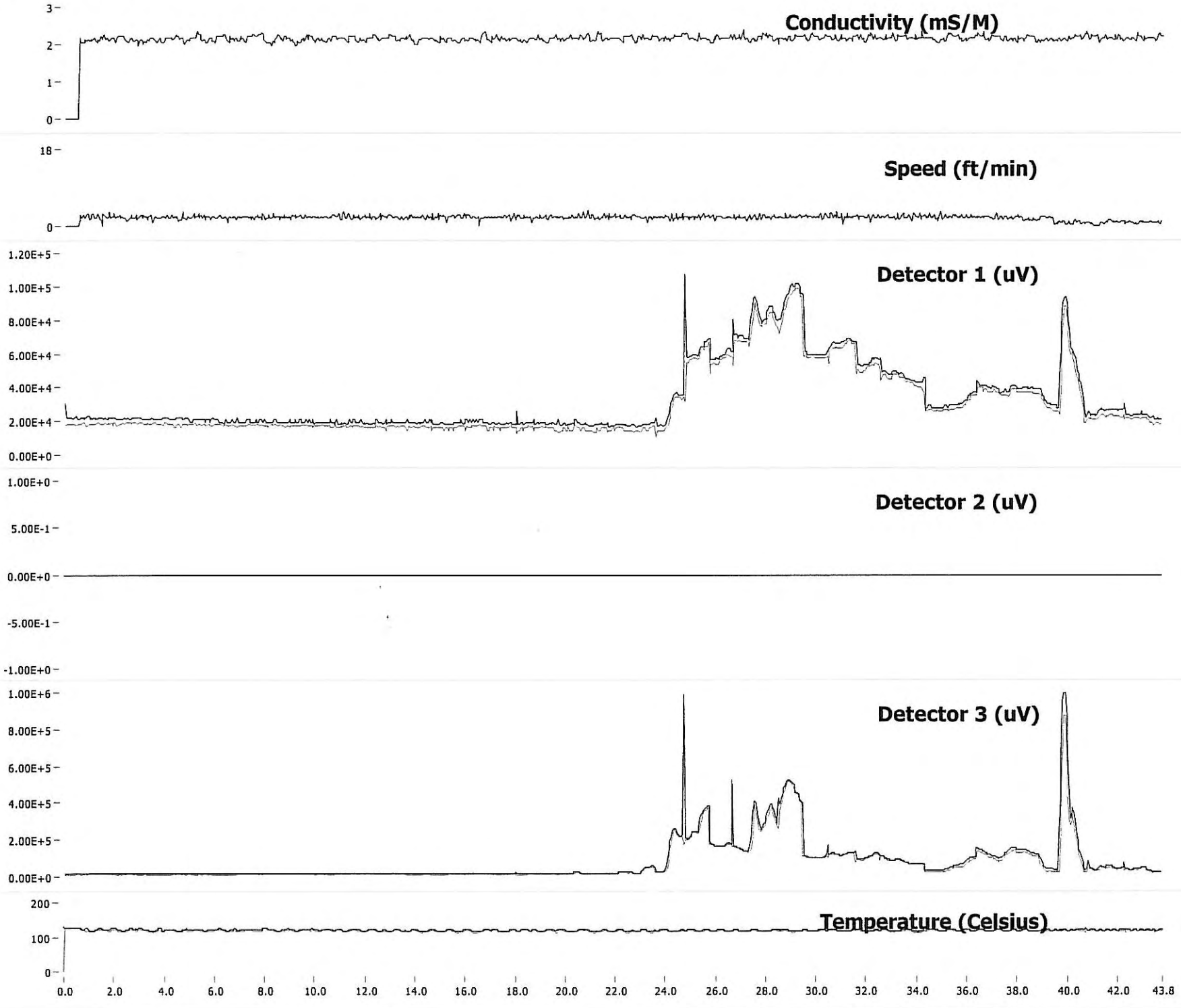


Log: E:\CPT3.DAT




GREGG
SOMA ENVIRONMENTAL
Site: 15101 FREEDOM AVE.
Location: CPT-04
Engineer: M.SPIELMAN
Date: 09:11:06 09:38
qt (tsf)
fs (tsf)
U (psi)
Rf (%)
SBT
0
500
10
50
12
Hand Auger
Depth (ft)
0
-10
-20
-30
-40
-50
-60
-70
Undefined
Silt
Sand
Clayey Silt
Silt
Clayey Silt
Silt
Stiff Fine Grain
Clayey Silt
Silt
Clayey Silt
Silt
Silty Sand/Sand
Stiff Fine Grain
Cemented Sand
Max. Depth: 47.57 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT4.DAT

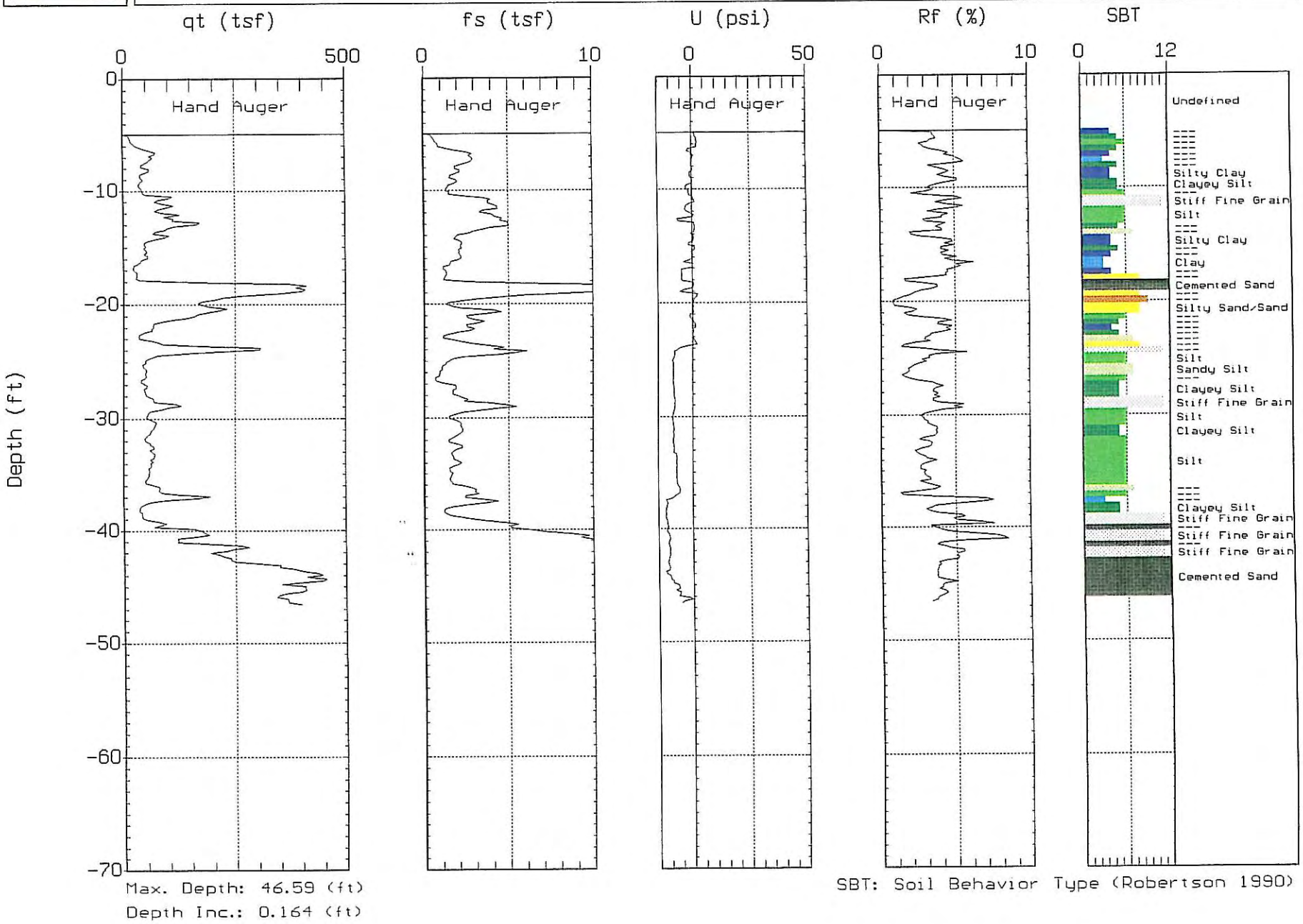


GREGG

SOMA ENVIRONMENTAL

Site: 15101 FREEDOM AVE.
Location: CPT-05

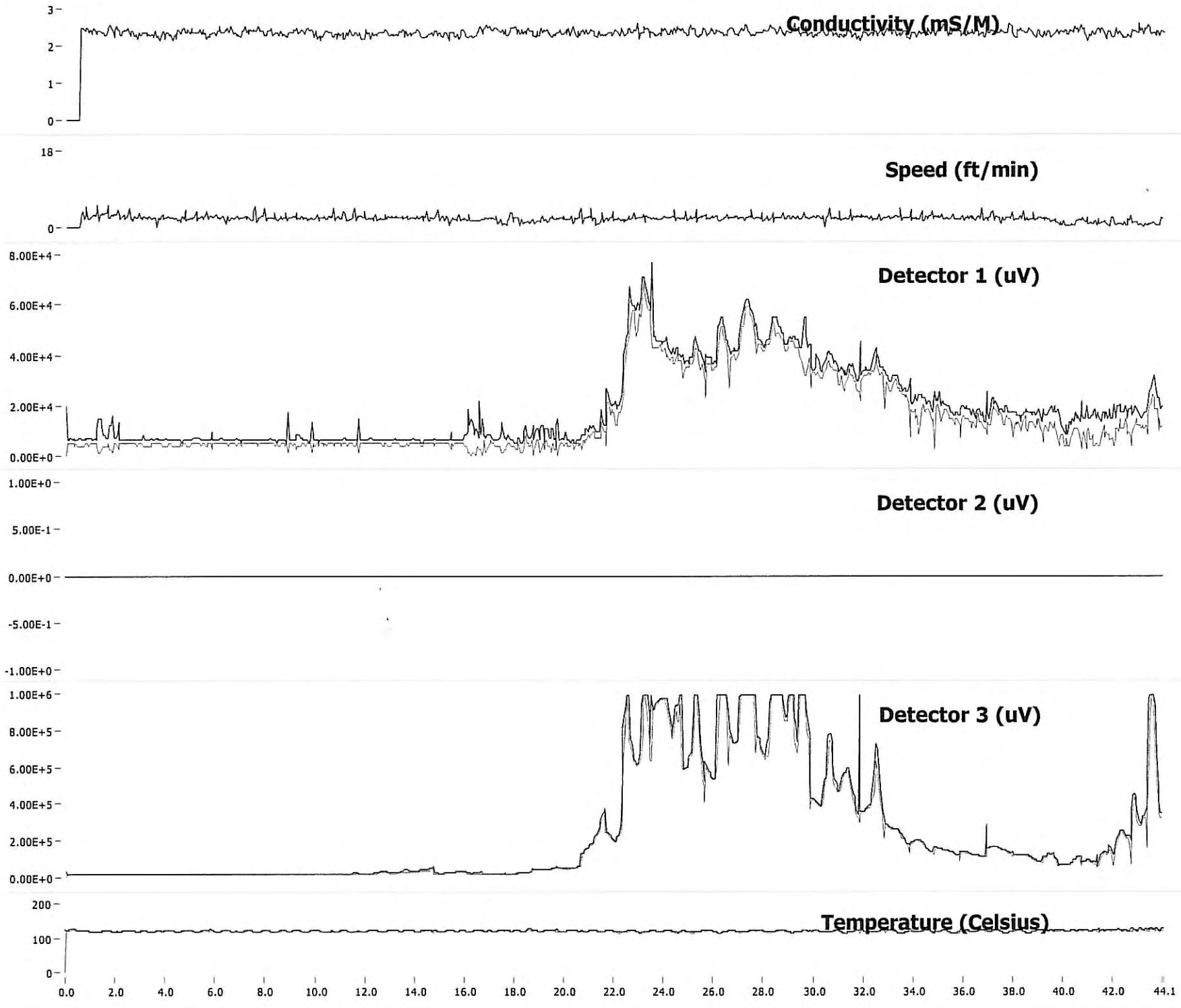
Engineer: M.SPIELMAN
Date: 09:11:06 14:51



Max. Depth: 46.59 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT5.DAT

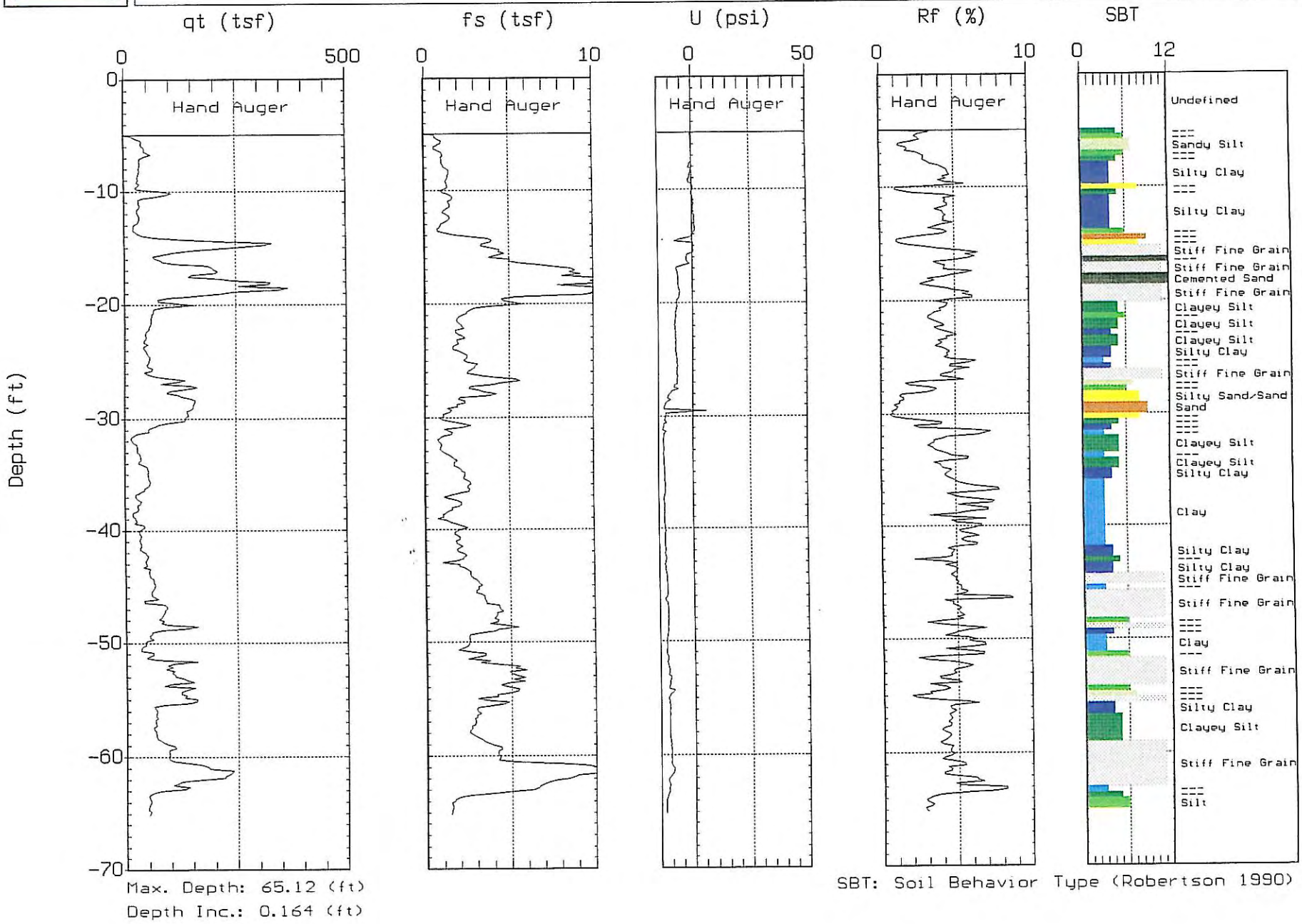


GREGG

SOMA ENVIRONMENTAL

Site: 15101 FREEDOM AVE.
Location: CPT-06

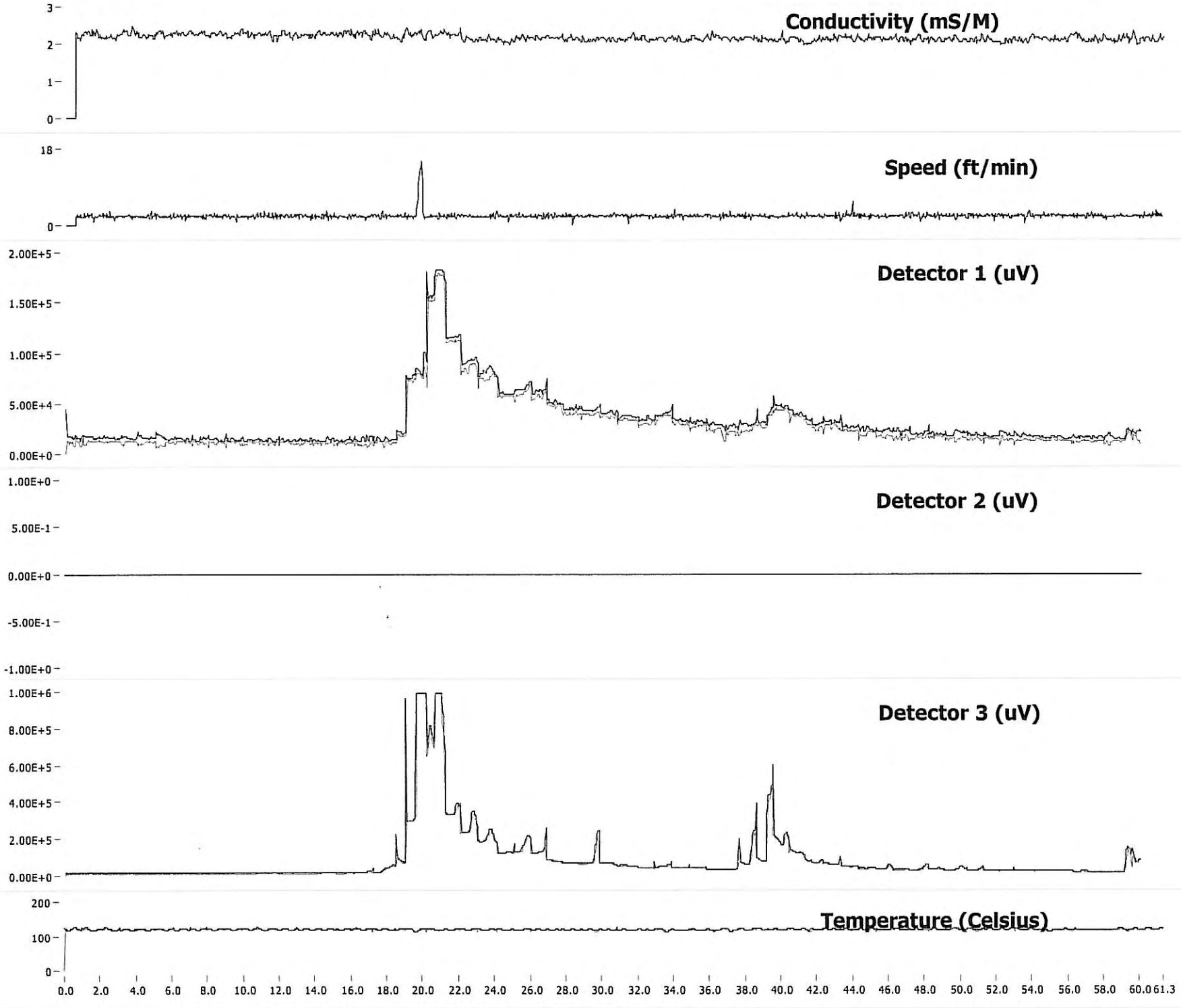
Engineer: M.SPIELMAN
Date: 09:08:06 15:49



Max. Depth: 65.12 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT6.DAT

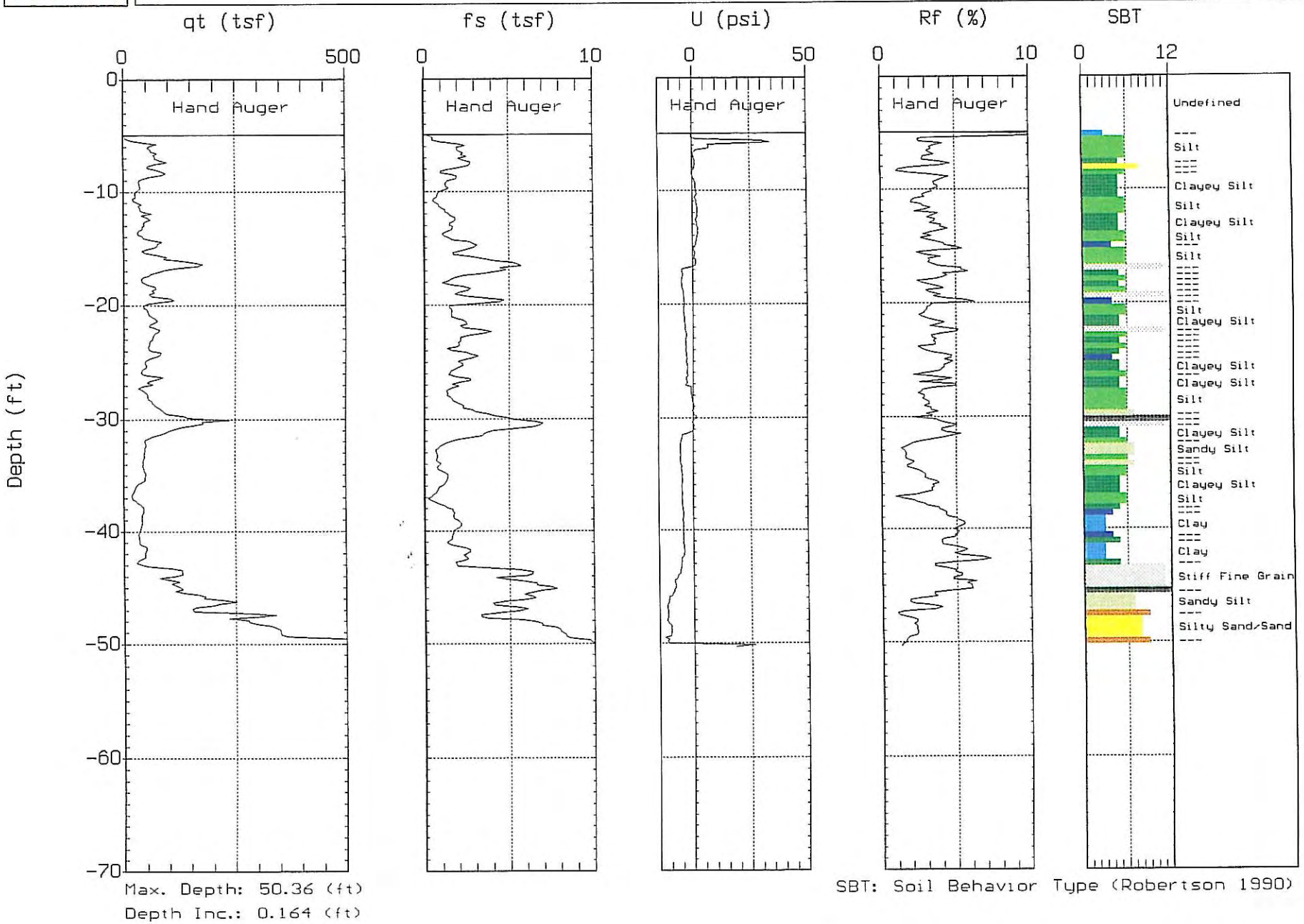


GREGG

SOMA ENVIRONMENTAL

Site: 15101 FREEDOM AVE.
Location: CPT-07

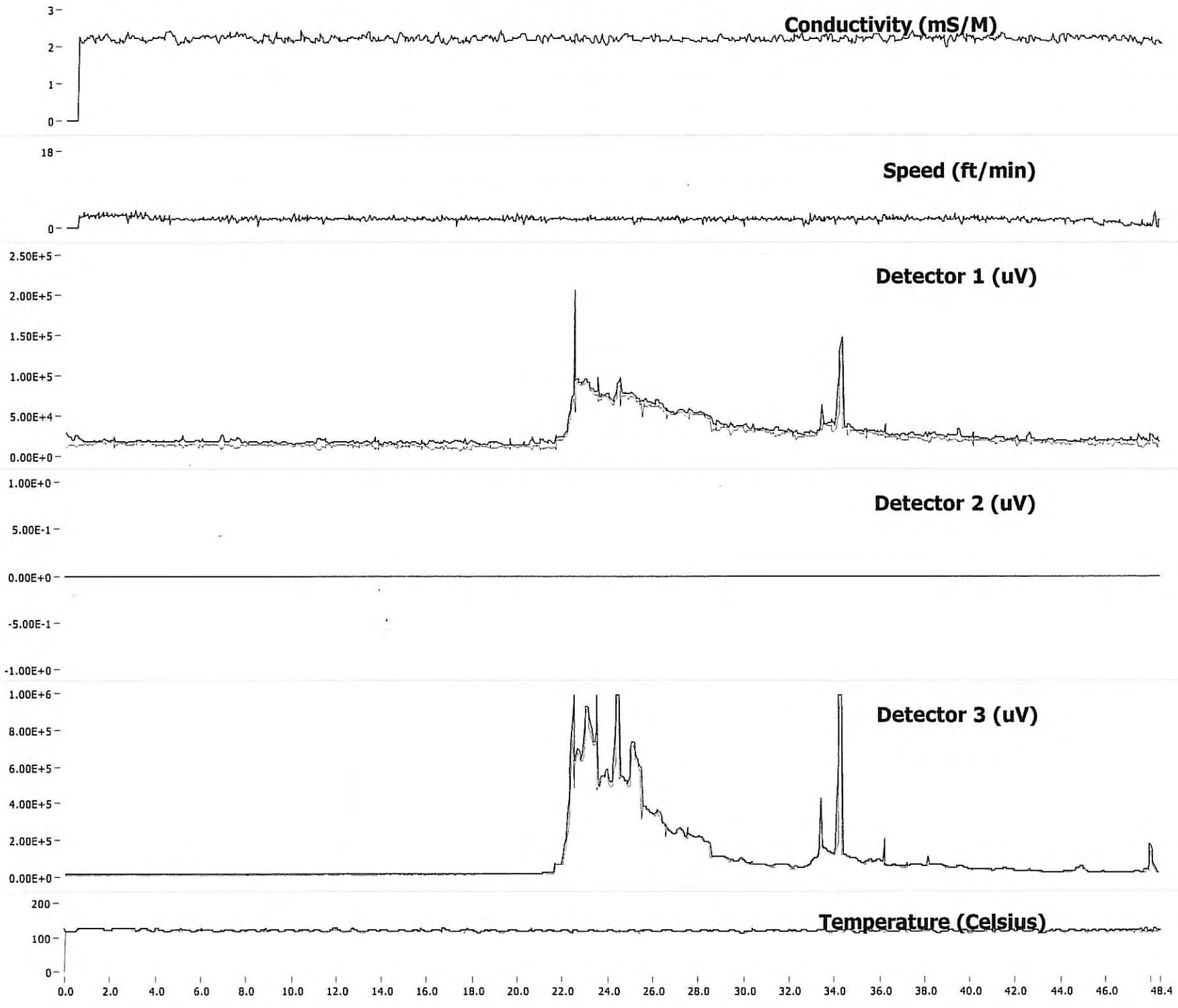
Engineer: M.SPIELMAN
Date: 09:08:06 14:18

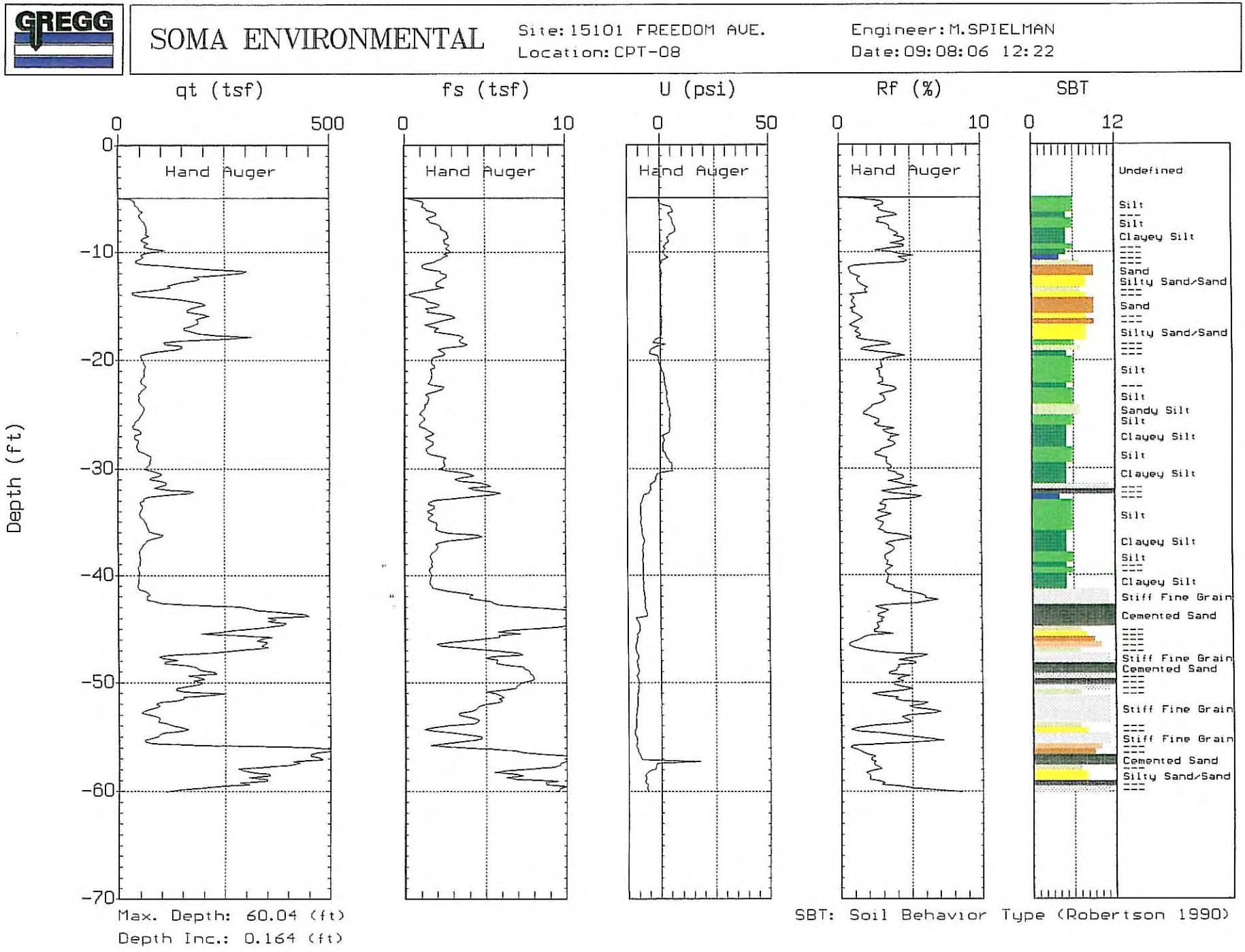


Max. Depth: 50.36 (ft)
Depth Inc.: 0.164 (ft)

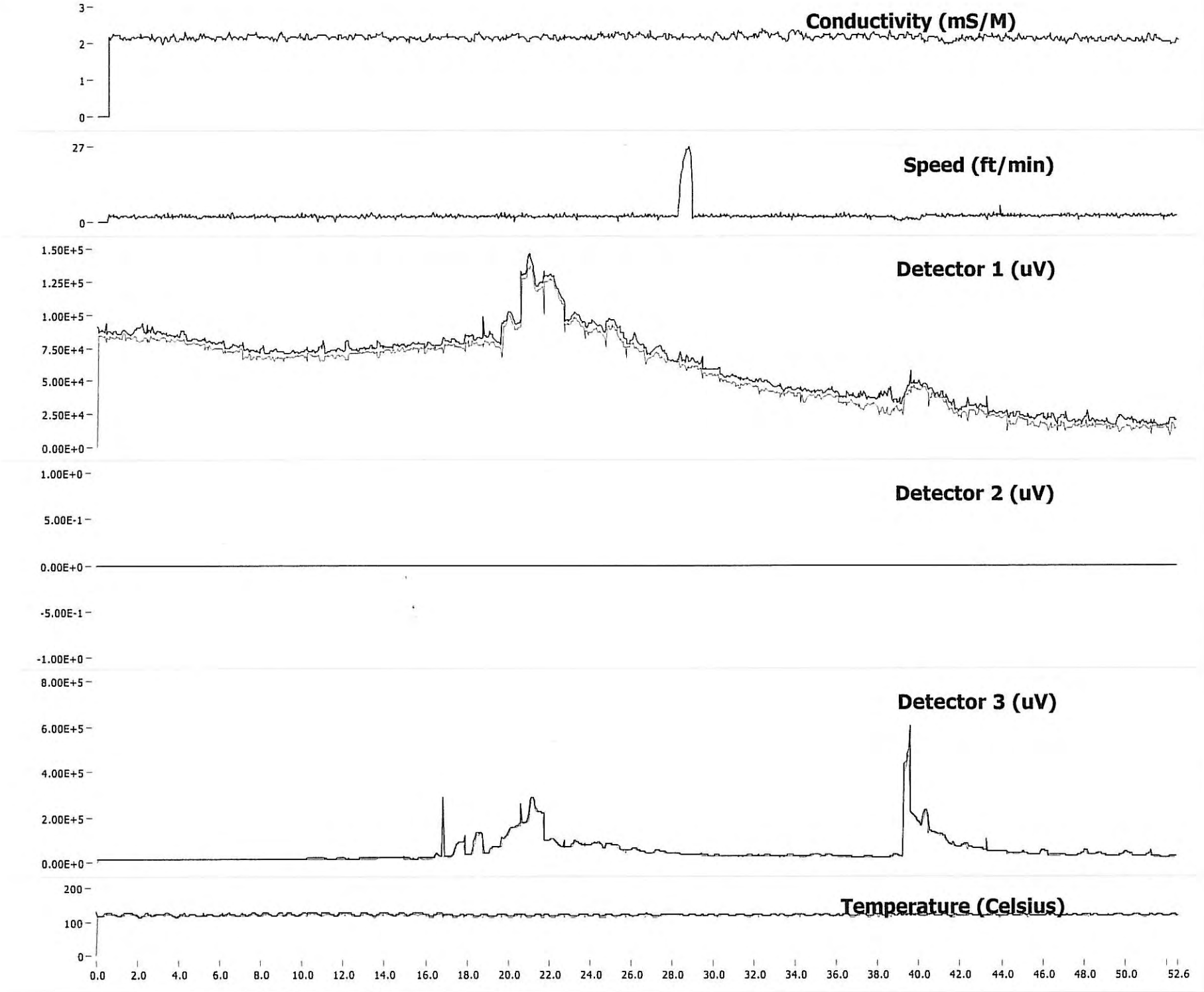
SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT7.DAT




GREGG
SOMA ENVIRONMENTAL
Site: 15101 FREEDOM AVE.
Location: CPT-08
Engineer: M.SPIELMAN
Date: 09:08:06 12:22
qt (tsf)
fs (tsf)
U (psi)
RF (%)
SBT
0
500
10
50
12
Hand Auger
Depth (ft)
0
-10
-20
-30
-40
-50
-60
-70
Undefined
Silt
Clayey Silt
Sand
Silty Sand/Sand
Sandy Silt
Stiff Fine Grain
Cemented Sand
Max. Depth: 60.04 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)

Log: E:\CPT8.DAT



APPENDIX D

Results of Laboratory Analyses on Soil and Groundwater Samples

CHAIN OF CUSTODY FORM

PAL Pacific Analytical Laboratory
851 West Midway Ave., Suite 201B
Alameda, CA 94501
510-864-0364 Telephone
510-864-0365 Fax

PAL
Login# 6090014

Project No: 2552	Sampler: M. Spielmann		
Project Name: 15101 Freedom Avenue San Leandro, CA.	Report To: Joyce Bobek		
Project P.O.: ---- 2552	Company: SOMA Environmental Engineering, Inc.		
Turnaround Time: Standard	Tel: ~~925-244-6600~~ 925-734-6400 Fax: ~~925-244-6601~~ 925-734-6401		

Lab No.	Sample ID	Sampling Date/Time: Date	Time	Matrix: Soil	Water	Waste	# of Containers	Preservatives: HCL	H_2SO_4	HNO_3	ICE	Field Notes	Analyses/Method: TPHg 8260B	BTEX 8260B	MTBE, TAME, 8260B ETBE, DIPE	TBA, ethanol 8260B EDB, EDC	TPH,D 8015M			
	DPS-8 (20-21)	9/18/06	0830	X			1				X	acetate liner	X	X	X	X	X			
	DPS-8 (30-31)	9/18/06	0845	X			1				X	"	X	X	X	X	X			
	DPS-8 (40.5-41)	9/18/06	0905	X			1				X	"	X	X	X	X	X			
	DPW-8 (16-20)	9/18/06	1045		X		6, 40ml VOA's	X			X	six 40 ml VOA's	X	X	X	X				
	DPW-8 (16-20)	9/18/06	1045		X		1, 1 Liter				X	one 1 liter amber					X			
	DPW-8 (52.5-56.5)	9/18/06	1120		X		6, 40ml VOA's	X			X	six 40 ml VOA's	X	X	X	X				
	DPW-8 (52.5-56.5)	9/18/06	1120		X		1, 1 liter				X	one 1 liter amber					X			
	DPS-7 (24-25)	9/18/06	1330	X							X	acetate liner	X	X	X	X	X			
	DPS-7 (34-35)	9/18/06	1400	X							X	acetate liner	X	X	X	X	X			

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Request EDD & EDF	Matthew Spielmann	9/18/06 - 1600		
	[signature]	5:00 P.M. 9/18/06	James Zuniga	5:00PM 9/18/06

PAL Pacific Analytical Laboratory
851 West Midway Ave. Suite 201
Alameda, CA 94501
Phone (510) 864-0364

28 September 2006

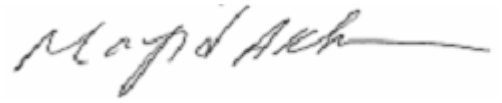
Mansour Sepehr
SOMA Environmental Engineering Inc.
6620 Owens Drive, Suite A
Pleasanton, CA 94588

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 6090014

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



Maiid Akhavan
Laboratorv Director

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DPS-8 (20-21)	6090014-01	Soil	18-Sep-06 08:30	18-Sep-06 17:06
DPS-8 (30-31)	6090014-02	Soil	18-Sep-06 08:45	18-Sep-06 17:06
DPS-8 (40.5-41)	6090014-03	Soil	18-Sep-06 09:05	18-Sep-06 17:06
DPW-8 (16-20)	6090014-04	Water	18-Sep-06 10:45	18-Sep-06 17:06
DPW-8 (52.5-56.5)	6090014-05	Water	18-Sep-06 11:20	18-Sep-06 17:06
DPS-7 (24-25)	6090014-06	Soil	18-Sep-06 13:30	18-Sep-06 17:06
DPS-7 (34-35)	6090014-07	Soil	18-Sep-06 14:00	18-Sep-06 17:06

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Extractable Petroleum Hydrocarbons by 8015 DRO

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-8 (20-21) (6090014-01) Soil Sampled: 18-Sep-06 08:30 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	**71.1**	50.0	mg/kg	1	BI62101	18-Sep-06	21-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*96.8 %*	*70-130*		"	"	"	"	
DPS-8 (30-31) (6090014-02) Soil Sampled: 18-Sep-06 08:45 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	18-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*92.0 %*	*70-130*		"	"	"	"	
DPS-8 (40.5-41) (6090014-03) Soil Sampled: 18-Sep-06 09:05 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	18-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*103 %*	*70-130*		"	"	"	"	
DPW-8 (16-20) (6090014-04) Water Sampled: 18-Sep-06 10:45 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	**1060**	50.0	ug/l	1	BI62701	18-Sep-06	26-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*78.2 %*	*70-130*		"	"	"	"	
DPW-8 (52.5-56.5) (6090014-05) Water Sampled: 18-Sep-06 11:20 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	**82.0**	50.0	ug/l	1	BI62701	18-Sep-06	26-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*72.8 %*	*70-130*		"	"	"	"	
DPS-7 (24-25) (6090014-06) Soil Sampled: 18-Sep-06 13:30 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	18-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*98.0 %*	*70-130*		"	"	"	"	
DPS-7 (34-35) (6090014-07) Soil Sampled: 18-Sep-06 14:00 Received: 18-Sep-06 17:06									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	18-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*97.5 %*	*70-130*		"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-8 (20-21) (6090014-01) Soil	**Sampled: 18-Sep-06 08:30**	**Received: 18-Sep-06 17:06**							
Gasoline (C6-C12)	**216400**	2150	ug/kg	43	BI62703	18-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**51.14**	21.50	"	"	"	"	"	"	
Ethylbenzene	**901.0**	21.50	"	"	"	"	"	"	
m&p-Xylene	**933.6**	43.00	"	"	"	"	"	"	
o-xylene	**717.9**	21.50	"	"	"	"	"	"	
Toluene	**1152**	86.00	"	"	"	"	"	"	
MTBE	ND	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*89.8 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*102 %*		*70-130*		"	"	"	
DPS-8 (30-31) (6090014-02) Soil	**Sampled: 18-Sep-06 08:45**	**Received: 18-Sep-06 17:06**							
Gasoline (C6-C12)	**321.2**	50.00	ug/kg	1	BI62703	18-Sep-06	26-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**3.320**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**1.600**	1.000	"	"	"	"	"	"	
o-xylene	**1.100**	0.5000	"	"	"	"	"	"	
Toluene	**2.970**	2.000	"	"	"	"	"	"	
MTBE	**43.6**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	**3.20**	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.4 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*82.6 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*93.2 %*		*70-130*		"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-8 (40.5-41) (6090014-03) Soil Sampled: 18-Sep-06 09:05 Received: 18-Sep-06 17:06									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	18-Sep-06	26-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.600**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**1.030**	1.000	"	"	"	"	"	"	
o-xylene	**0.7100**	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	**6.92**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.6 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*88.0 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*90.8 %*		*70-130*	"	"	"	"	
DPW-8 (16-20) (6090014-04RE1) Water Sampled: 18-Sep-06 10:45 Received: 18-Sep-06 17:06									
Gasoline (C6-C12)	**1730**	550	ug/l	11	BI62702	18-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**7.54**	5.50	"	"	"	"	"	"	
Ethylbenzene	**49.7**	5.50	"	"	"	"	"	"	
m&p-Xylene	**51.4**	11.0	"	"	"	"	"	"	
o-xylene	**40.7**	5.50	"	"	"	"	"	"	
Toluene	ND	22.0	"	"	"	"	"	"	
MTBE	**2860**	5.50	"	"	"	"	"	"	
DIPE	ND	5.50	"	"	"	"	"	"	
ETBE	**6.22**	5.50	"	"	"	"	"	"	
TAME	**252**	22.0	"	"	"	"	"	"	
TBA	**221**	110	"	"	"	"	"	"	
1,2-dichloroethane	ND	5.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.50	"	"	"	"	"	"	
Ethanol	ND	11000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*88.6 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*94.8 %*		*70-130*	"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPW-8 (52.5-56.5) (6090014-05) Water Sampled: 18-Sep-06 11:20 Received: 18-Sep-06 17:06									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BI62702	18-Sep-06	25-Sep-06	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	**2.45**	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	**0.500**	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	**40.9**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	**2.43**	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.2 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*92.4 %*		*70-130*	"	"	"	"	
DPS-7 (24-25) (6090014-06) Soil Sampled: 18-Sep-06 13:30 Received: 18-Sep-06 17:06									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	18-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.300**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	**3.16**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*84.2 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*88.2 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*89.6 %*		*70-130*	"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-7 (34-35) (6090014-07) Soil	**Sampled: 18-Sep-06 14:00**	**Received: 18-Sep-06 17:06**							
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	18-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.190**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.2 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*90.8 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*89.4 %*		*70-130*	"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62101 - EPA 3550A										
Blank (BI62101-BLK1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62101-BS1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200		122	50-140			
LCS Dup (BI62101-BSD1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.87*		*mg/kg*	*10.0*		*98.7*	*70-130*			
Diesel (C10-C24)	232	50.0	"	200		116	50-140	4.63	40	QR-02
Matrix Spike (BI62101-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.70*		*mg/kg*	*10.0*		*97.0*	*70-130*			
Diesel (C10-C24)	256	50.0	"	200	42.0	107	0-200			
Matrix Spike Dup (BI62101-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.82*		*mg/kg*	*10.0*		*98.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200	42.0	100	0-200	5.21	200	
Batch BI62701 - EPA 3510B										
Blank (BI62701-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*43.4*		*ug/l*	*50.0*		*86.8*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62701-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*42.4*		*ug/l*	*50.0*		*84.8*	*70-130*			
Diesel (C10-C24)	833	50.0	"	1000		83.3	50-130			

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62701 - EPA 3510B										
LCS Dup (BI62701-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*44.7*		*ug/l*	*50.0*		*89.4*	*70-130*			
Diesel (C10-C24)	997	50.0	"	1000		99.7	50-130	17.9	40	

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
Blank (BI62702-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*45.5*		*ug/l*	*50.0*		*91.0*	*70-130*			
Surrogate: Dibromofluoromethane	*52.5*		*"*	*50.0*		*105*	*70-130*			
Surrogate: Perdeuterotoluene	*46.5*		*"*	*50.0*		*93.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.0	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	1.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
LCS (BI62702-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*44.8*		*ug/l*	*50.0*		*89.6*	*70-130*			
Surrogate: Dibromofluoromethane	*45.4*		*"*	*50.0*		*90.8*	*70-130*			
Surrogate: Perdeuterotoluene	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
MTBE	89.3	0.500	"	100		89.3	70-130			
ETBE	83.8	0.500	"	100		83.8	70-130			
TAME	92.7	2.00	"	100		92.7	70-130			
Gasoline (C6-C12)	1850	50.0	"	2000		92.5	70-130			
TBA	473	10.0	"	500		94.6	70-130			
Benzene	94.6	0.500	"	100		94.6	70-130			
Toluene	104	2.00	"	100		104	70-130			

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
LCS Dup (BI62702-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*41.6*		*ug/l*	*50.0*		*83.2*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.5*		*"*	*50.0*		*95.0*	*70-130*			
MTBE	77.2	0.500	"	100		77.2	70-130	14.5	20	
ETBE	82.6	0.500	"	100		82.6	70-130	1.44	20	
TAME	92.2	2.00	"	100		92.2	70-130	0.541	20	
TBA	449	10.0	"	500		89.8	70-130	5.21	20	
Gasoline (C6-C12)	2030	50.0	"	2000		102	70-130	9.28	20	
Benzene	101	0.500	"	100		101	70-130	6.54	20	
Toluene	104	2.00	"	100		104	70-130	0.00	20	
Batch BI62703 - EPA 5030 Soil MS										
Blank (BI62703-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.1*		*ug/kg*	*50.0*		*74.2*	*70-130*			
Surrogate: Dibromofluoromethane	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
Surrogate: Perdeuterotoluene	*46.0*		*"*	*50.0*		*92.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.00	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.5000	"							
Ethylbenzene	ND	0.5000	"							
m&p-Xylene	ND	1.000	"							
o-xylene	ND	0.5000	"							
Toluene	ND	2.000	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
LCS (BI62703-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*40.9*		*ug/kg*	*50.0*		*81.8*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.8*		*"*	*50.0*		*95.6*	*70-130*			
MTBE	75.7	0.500	"	100		75.7	70-130			
ETBE	78.8	0.500	"	100		78.8	70-130			
TAME	79.4	2.00	"	100		79.4	70-130			
Gasoline (C6-C12)	2230	50.00	"	2000		112	70-130			
TBA	627	10.0	"	500		125	70-130			
Benzene	106	0.5000	"	100		106	70-130			
Toluene	106	2.000	"	100		106	70-130			
LCS Dup (BI62703-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*53.8*		*ug/kg*	*50.0*		*108*	*70-130*			
Surrogate: Dibromofluoromethane	*41.2*		*"*	*50.0*		*82.4*	*70-130*			
Surrogate: Perdeuterotoluene	*48.3*		*"*	*50.0*		*96.6*	*70-130*			
MTBE	104	0.500	"	100		104	70-130	31.5	20	QR-02
ETBE	87.8	0.500	"	100		87.8	70-130	10.8	20	
TAME	91.4	2.00	"	100		91.4	70-130	14.1	20	
TBA	468	10.0	"	500		93.6	70-130	29.0	20	QR-02
Gasoline (C6-C12)	1990	50.00	"	2000		99.5	70-130	11.4	20	
Benzene	90.2	0.5000	"	100		90.2	70-130	16.1	20	
Toluene	97.9	2.000	"	100		97.9	70-130	7.95	20	
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.2*		*ug/kg*	*50.0*		*74.4*	*70-130*			
Surrogate: Dibromofluoromethane	*40.3*		*"*	*50.0*		*80.6*	*70-130*			
Surrogate: Perdeuterotoluene	*46.3*		*"*	*50.0*		*92.6*	*70-130*			
MTBE	82.5	0.500	"	100	6.92	75.6	70-130			
DIPE	127	0.500	"	100	ND	127	70-130			
ETBE	114	0.500	"	100	ND	114	70-130			
TAME	101	2.00	"	100	0.990	100	70-130			
Gasoline (C6-C12)	1350	50.00	"	2000	ND	67.5	70-130			QM-05
TBA	621	10.0	"	500	3.10	124	70-130			
Benzene	145	0.5000	"	100	ND	145	70-130			QM-05
Ethylbenzene	165	0.5000	"	100	2.600	162	70-130			QM-05
m&p-Xylene	153	1.000	"	100	1.030	152	70-130			QM-05

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
o-xylene	144	0.5000	ug/kg	100	0.7100	143	70-130			QM-05
Toluene	145	2.000	"	100	0.6300	144	70-130			QM-05
Matrix Spike Dup (BI62703-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.9*		*ug/kg*	*50.0*		*75.8*	*70-130*			
Surrogate: Dibromofluoromethane	*37.0*		*"*	*50.0*		*74.0*	*70-130*			
Surrogate: Perdeuterotoluene	*46.2*		*"*	*50.0*		*92.4*	*70-130*			
MTBE	64.1	0.500	"	100	6.92	57.2	70-130	25.1	20	QR-03, QM-05
DIPE	88.0	0.500	"	100	ND	88.0	70-130	36.3	20	QR-03
ETBE	78.2	0.500	"	100	ND	78.2	70-130	37.3	20	QR-03
TAME	70.4	2.00	"	100	0.990	69.4	70-130	35.7	20	QR-03, QM-05
TBA	370	10.0	"	500	3.10	73.4	70-130	50.7	20	QR-03
Gasoline (C6-C12)	2500	50.00	"	2000	ND	125	70-130	59.7	20	QR-03
Benzene	95.3	0.5000	"	100	ND	95.3	70-130	41.4	20	QR-03
Ethylbenzene	120	0.5000	"	100	2.600	117	70-130	31.6	20	QR-03
m&p-Xylene	114	1.000	"	100	1.030	113	70-130	29.2	20	QR-03
o-xylene	109	0.5000	"	100	0.7100	108	70-130	27.7	20	QR-03
Toluene	96.7	2.000	"	100	0.6300	96.1	70-130	40.0	20	QR-03

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 14:34

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
D-30	Unidentified hydrocarbons C9-C16.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

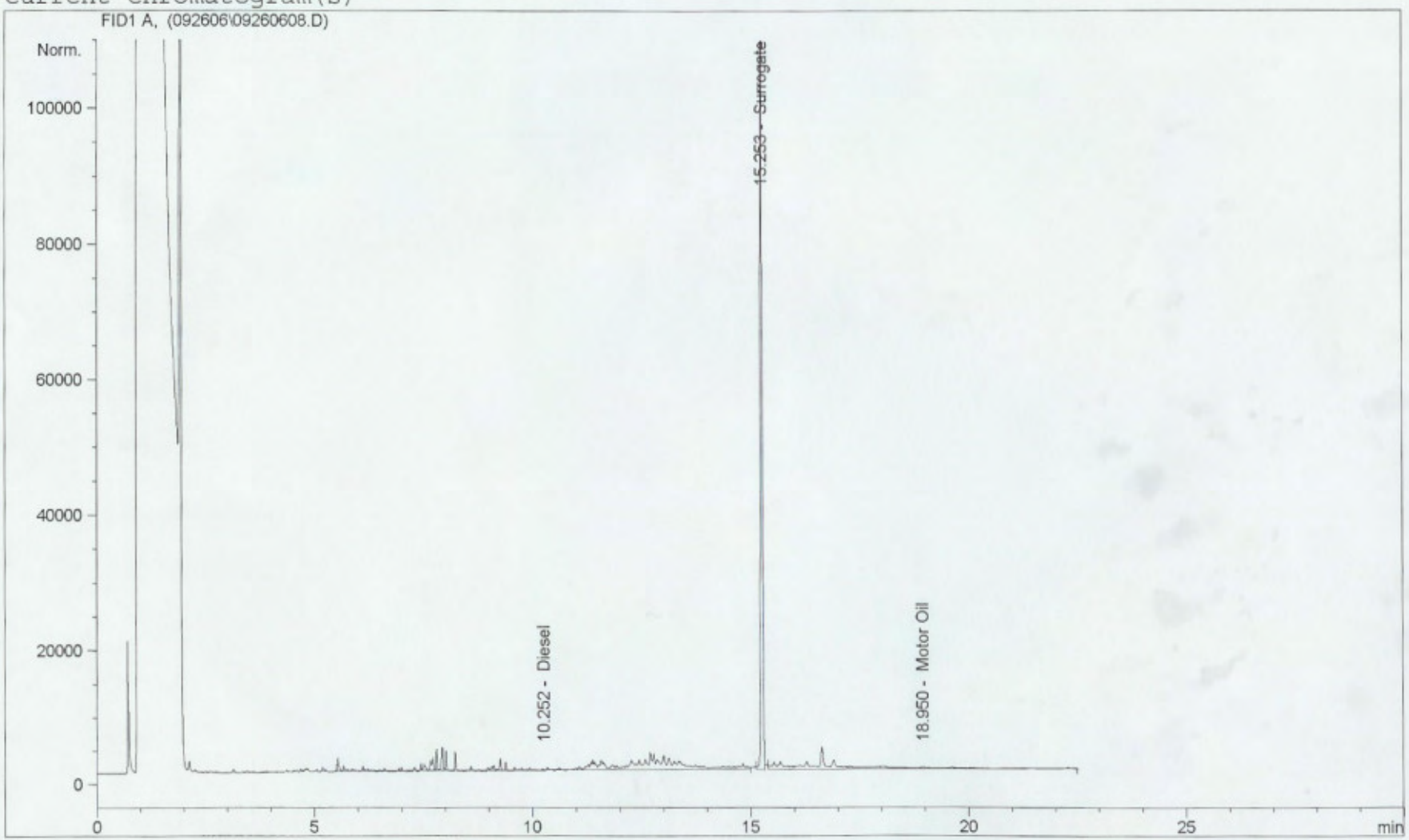
Print of Window 38: Current Chromatogram(s)

==========

Injection Date : 9/26/06 5:54:17 PM Seq. Line : 7
Sample Name : ~~MB092606A~~ BI62701-BLK1 Vial : 8
Acq. Operator : jz Inj : 1
Inj Volume : 2 ul

Acq. Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz
Analysis Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/28/06 1:39:22 PM by jz
(modified after loading)

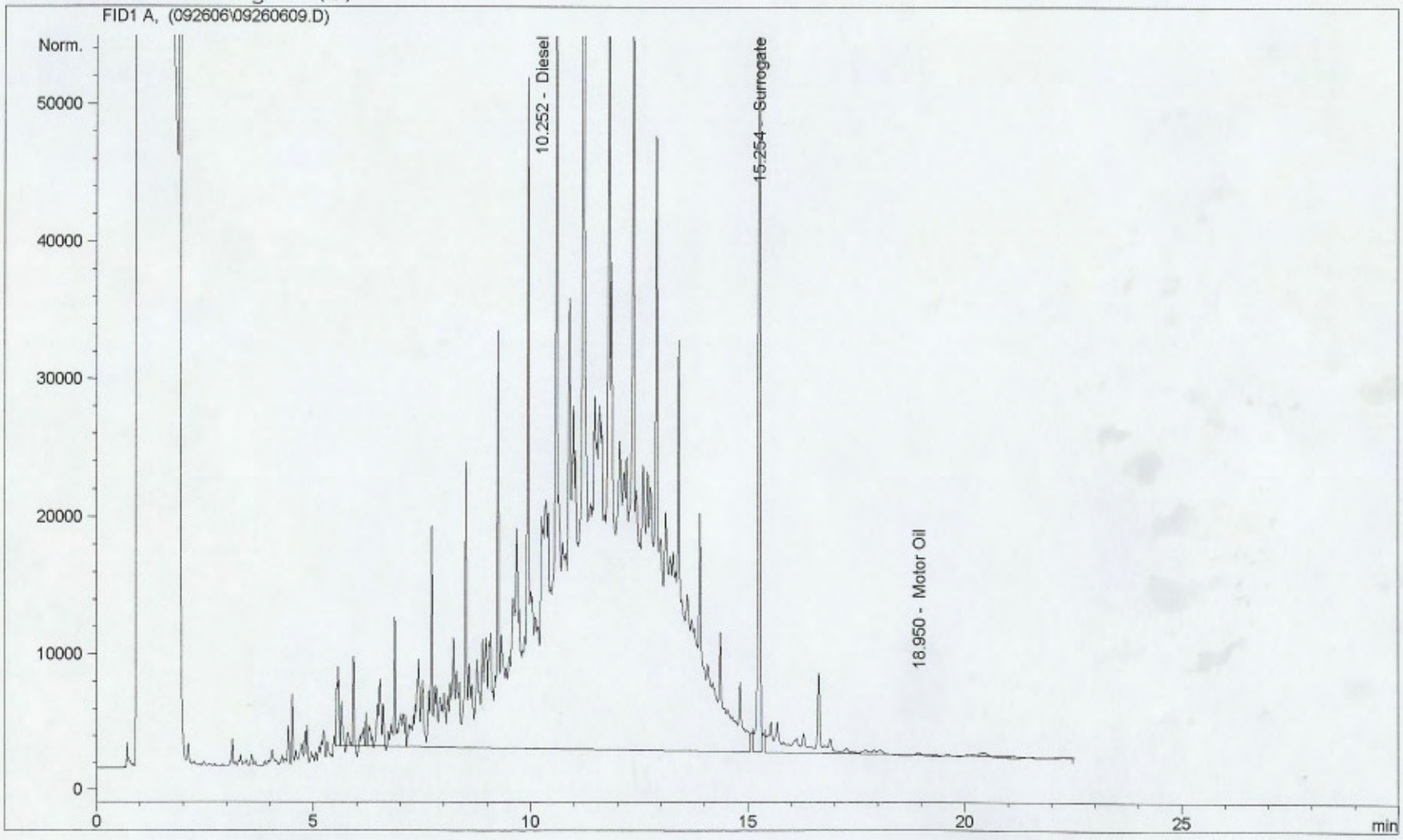
Current Chromatogram(s)



Print of window 38: Current Chromatogram(s)

Injection Date	: 9/26/06 6:27:15 PM	Seq. Line	: 8
Sample Name	: ~~MB092606B~~ BI62701-BS1	Vial	: 9
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Acq. Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		
Analysis Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/28/06 1:39:45 PM by jz (modified after loading)		

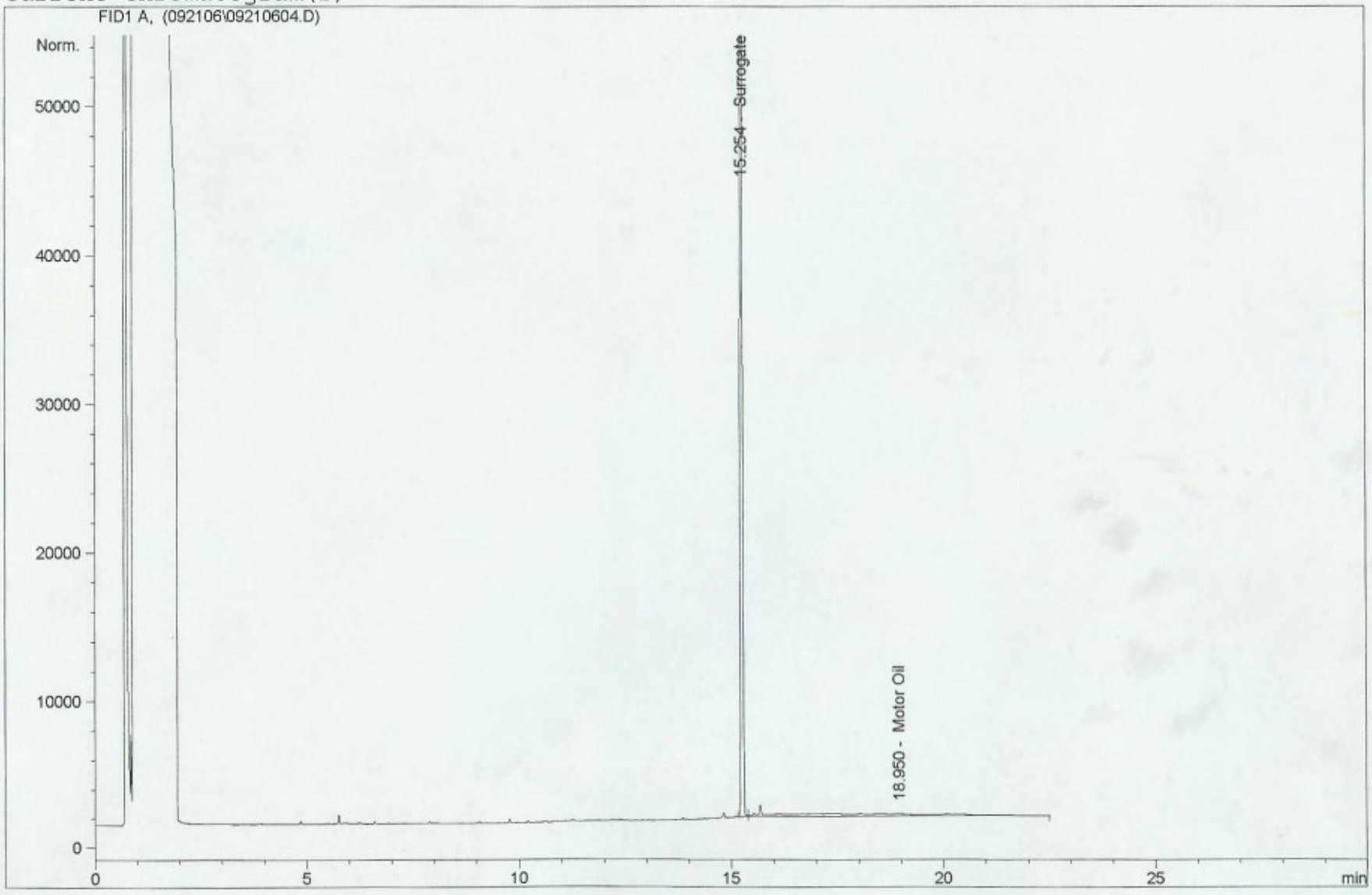
Current Chromatogram(s)



Print of window 38: Current Chromatogram(s)

Injection Date	: 9/21/06 3:54:50 PM	Seq. Line	: 4
Sample Name	: BI62101-BLK1	Vial	: 5
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		

Current Chromatogram(s)



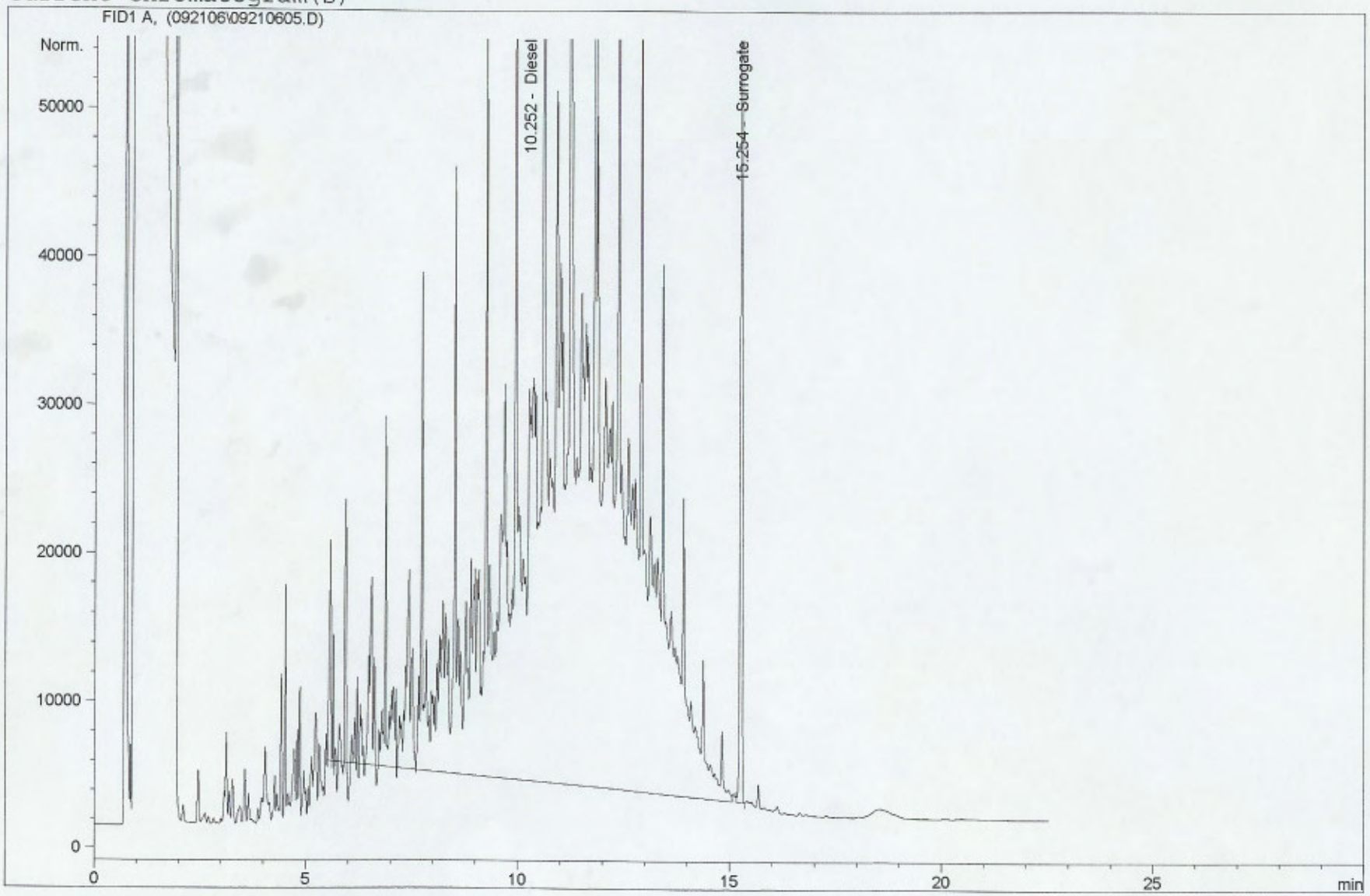
Print of window 38: Current Chromatogram(s)

Injection Date : 9/21/06 4:27:48 PM
Sample Name : BI62101-BS1
Acq. Operator : jz

Seq. Line : 5
Vial : 6
Inj : 1
Inj Volume : 2 ul

Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)



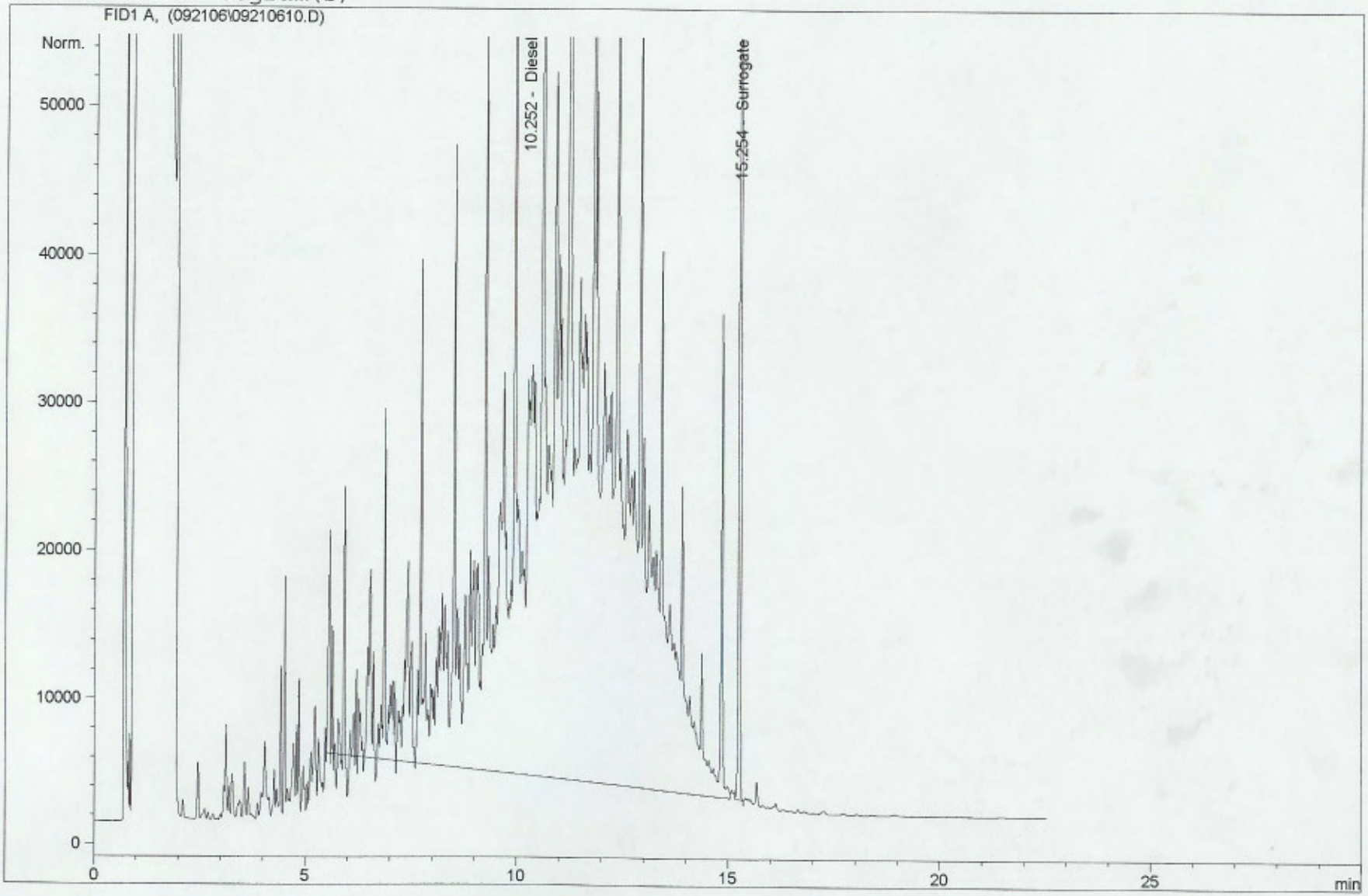
Print of Window 38: Current Chromatogram(s)

Injection Date : 9/21/06 7:12:52 PM
Sample Name : BI62101-MS1
Acq. Operator : jz

Seq. Line : 10
Vial : 11
Inj : 1
Inj Volume : 2 ul

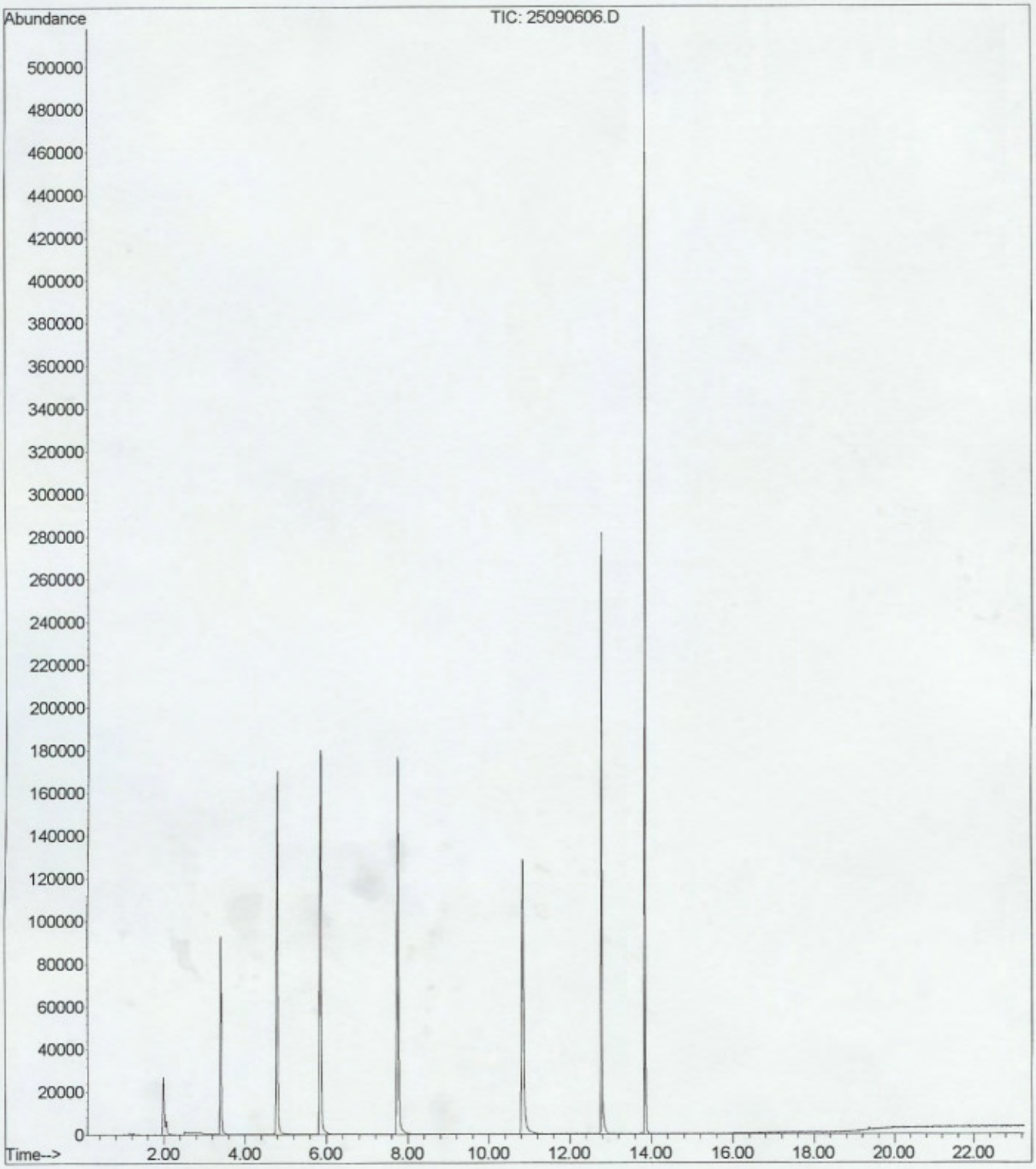
Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)



Instrument 1 9/28/06 1:38:13 PM jz

File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090606.D
Operator :
Acquired : 25 Sep 2006 12:48 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BLK1
Misc Info :
Vial Number: 6



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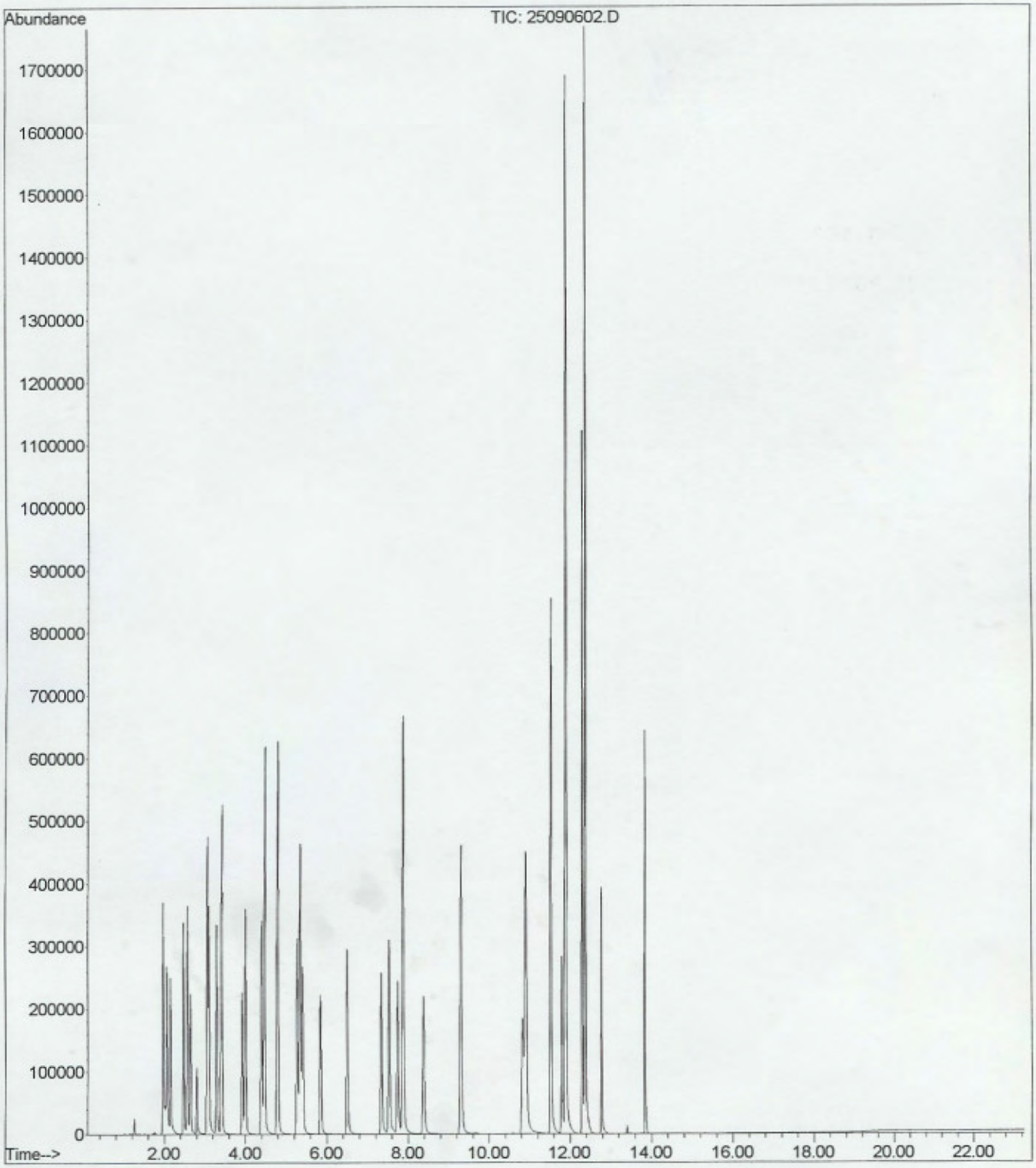
Operator :
Acquired : 25 Sep 2006 10:27 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@voc
Misc Info :
Vial Number: 2



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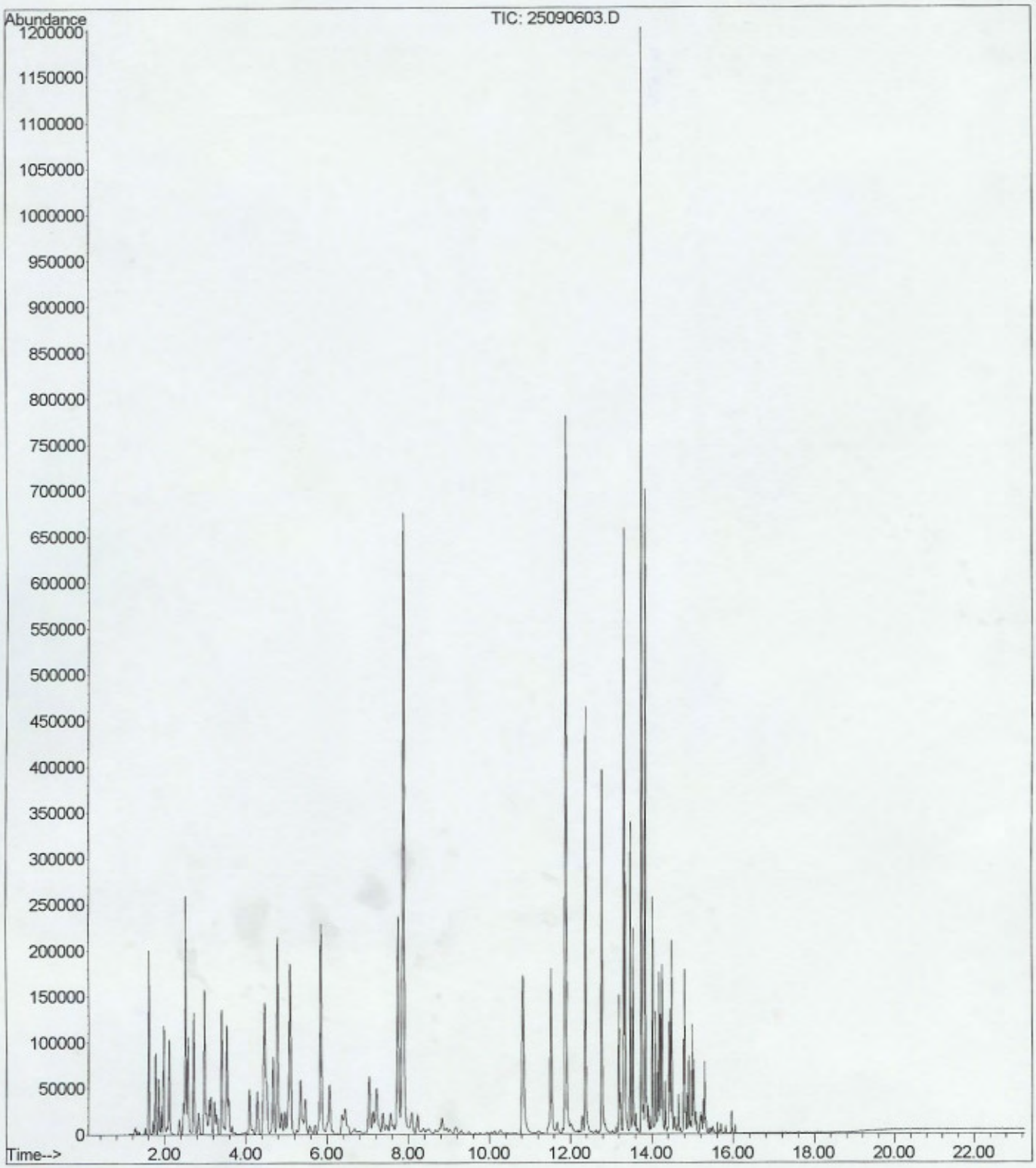
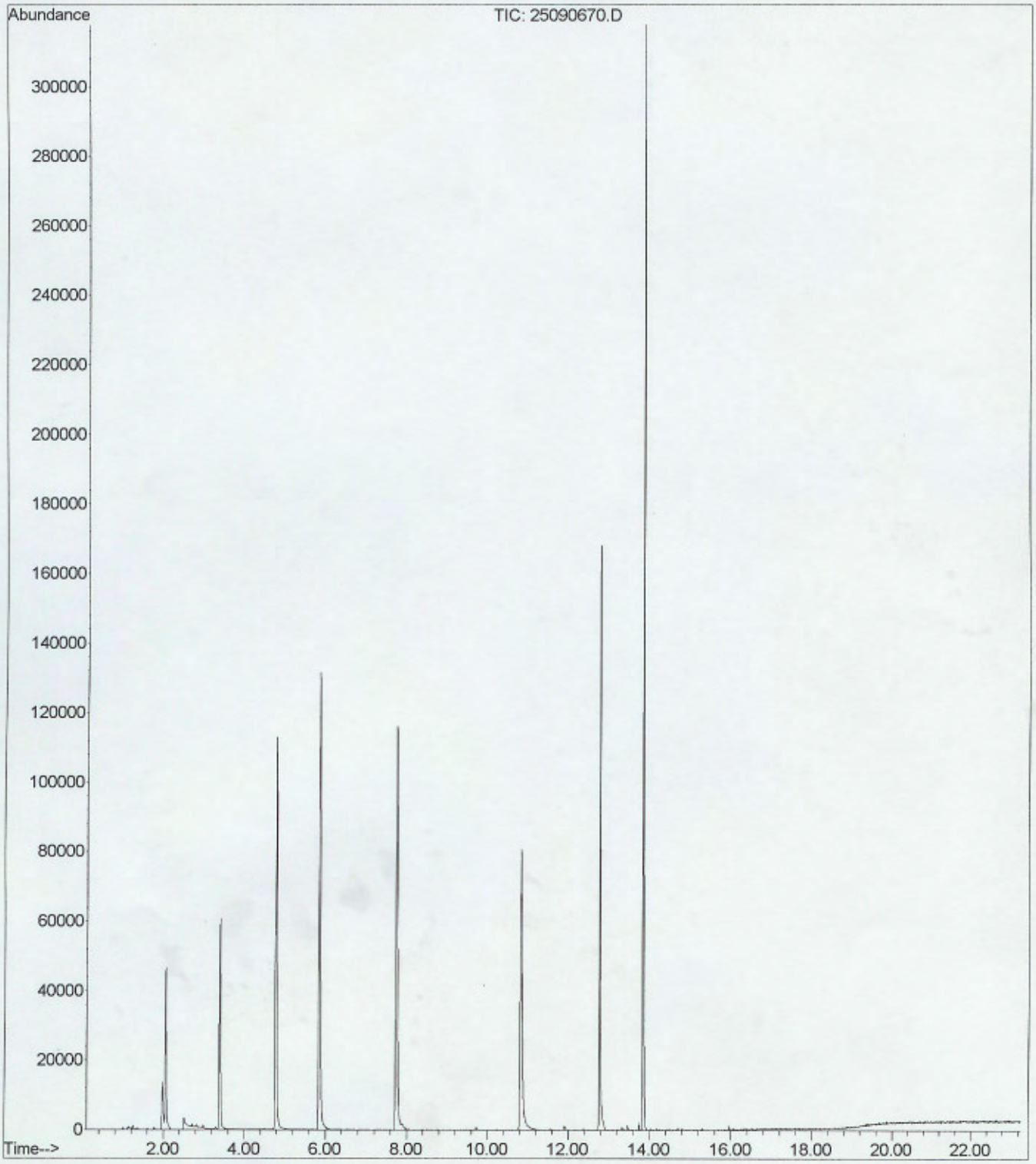
Operator :
Acquired : 25 Sep 2006 11:02 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@gas
Misc Info :
Vial Number: 3



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090670.D
Operator :
Acquired : 27 Sep 2006 12:25 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BLK1
Misc Info :
Vial Number: 70



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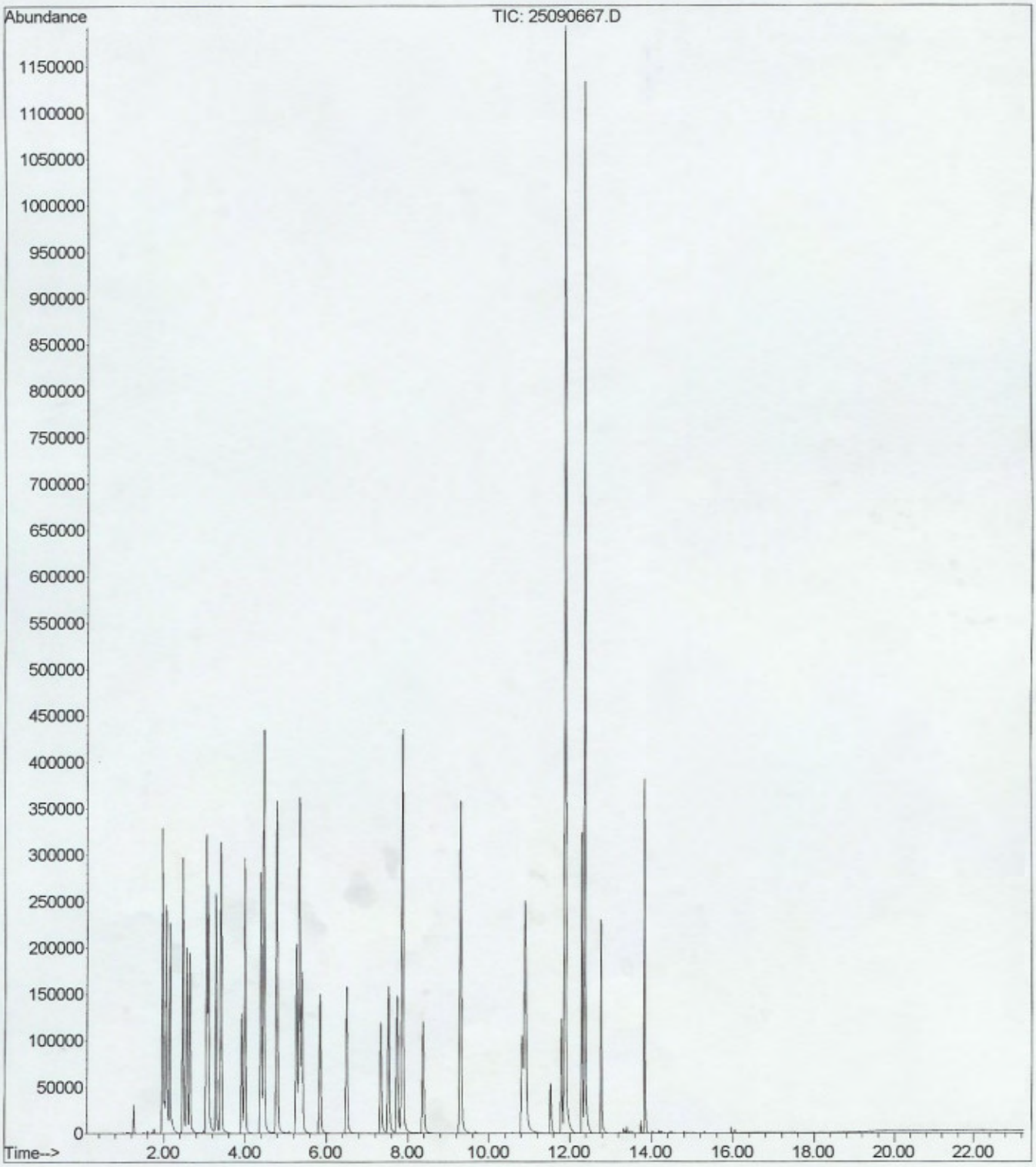
Operator :
Acquired : 27 Sep 2006 7:45 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@voc
Misc Info :
Vial Number: 67



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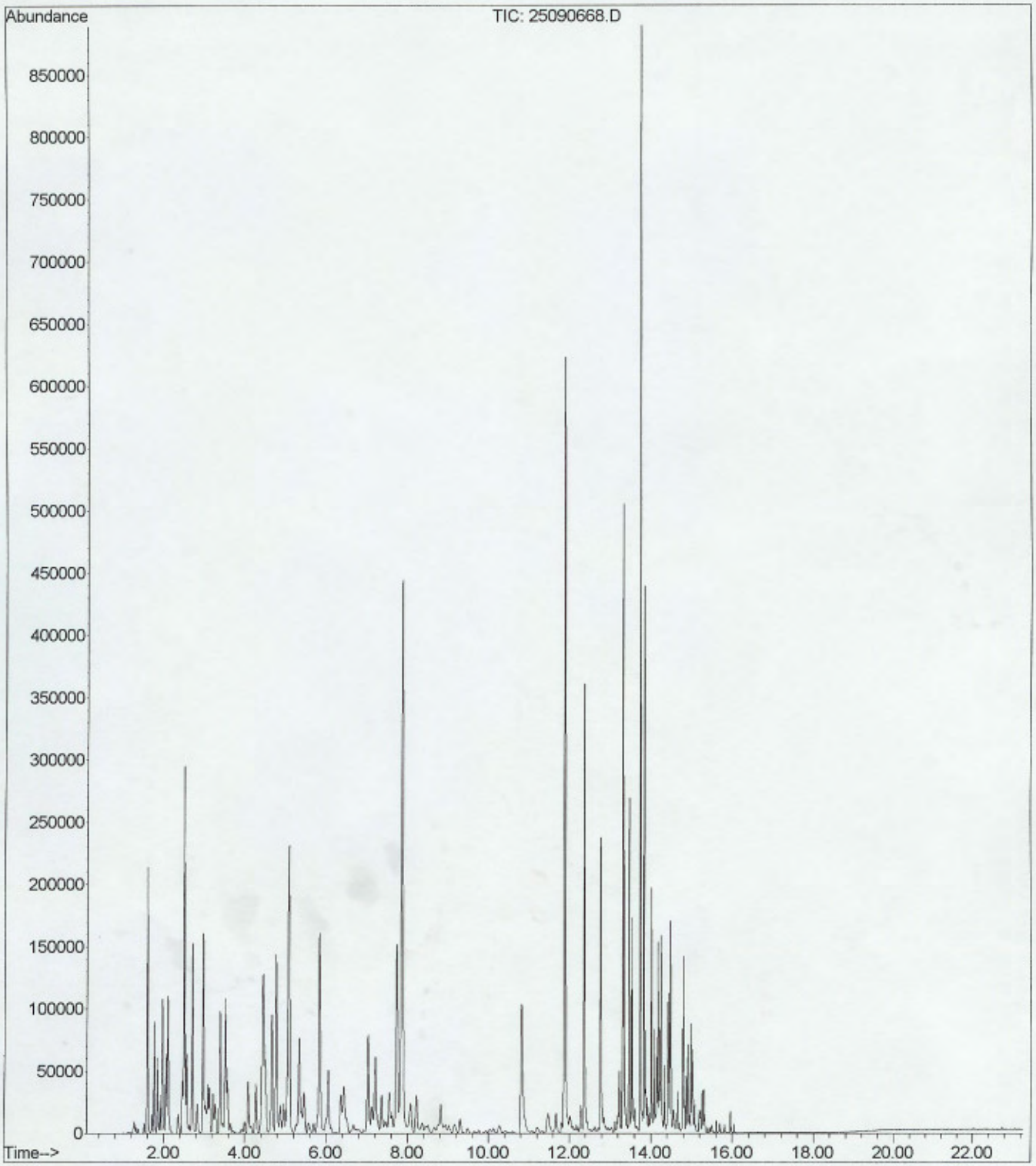
Operator :
Acquired : 27 Sep 2006 8:20 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@gas
Misc Info :
Vial Number: 68



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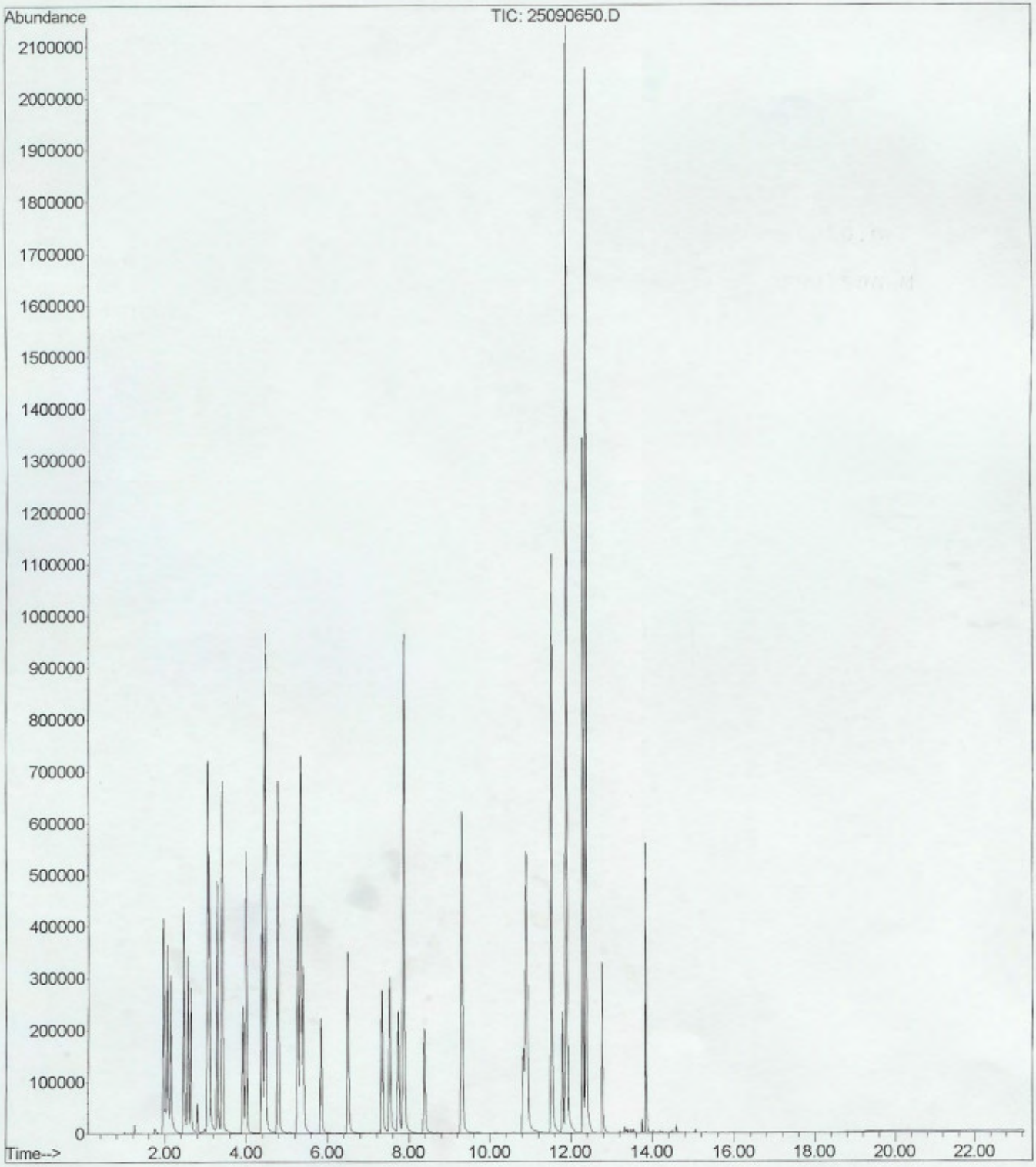
Acquired : 26 Sep 2006 9:55 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@voc
Misc Info :
Vial Number: 50



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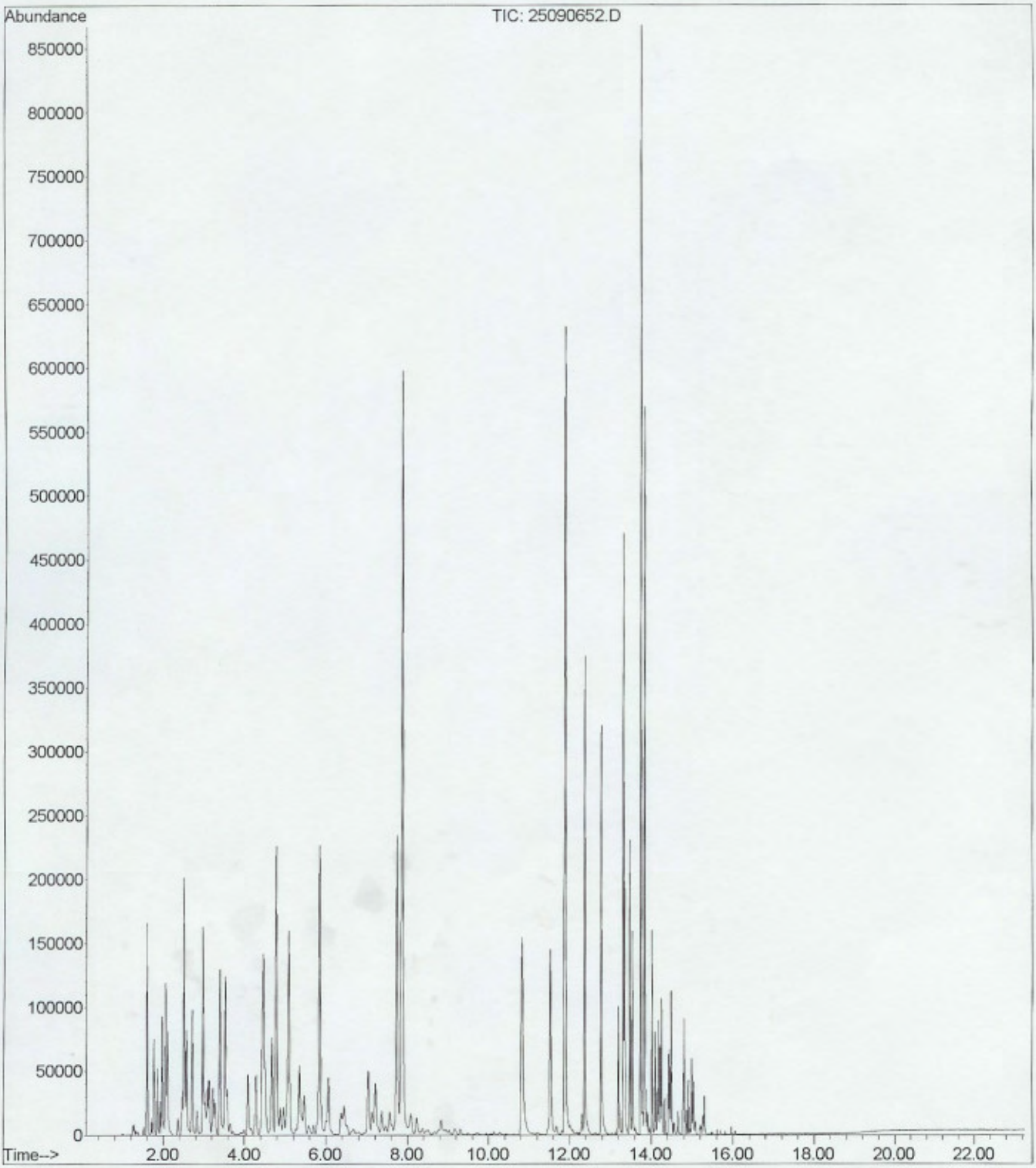
Operator :
Acquired : 26 Sep 2006 11:06 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@gas
Misc Info :
Vial Number: 52



CHAIN OF CUSTODY FORM

PAL Pacific Analytical Laboratory
851 West Midway Ave., Suite 201B
Alameda, CA 94501
510-864-0364 Telephone
510-864-0365 Fax

PAL
Login# 6090015

Project No: 2552	Sampler: M. Spielmann
Project Name: 15101 Freedom Avenue San Leandro, CA.	Report To: Joyce Bobek
Project P.O.: ---- 2552	Company: SOMA Environmental Engineering, Inc.
Turnaround Time: Standard	Tel: ~~925-244-6600~~ 925-734-6400 Fax: ~~925-244-6601~~ 925-734-6401

Lab No.	Sample ID	Sampling Date/Time: Date	Time	Matrix: Soil	Water	Waste	# of Containers	Preservatives: HCL	H_2SO_4	HNO_3	ICE	Field Notes	Analyses/Method: TPHg 8260B	BTEX 8260B	MTBE, TAME, 8260B ETBE, DIPE	TBA, ethanol 8260B EDB, EDC	TPHd 8015M			
1	DPS-6 (21-22)	9/18/06	1620	X			1				X	acetate liner	X	X	X	X	X			
2	DPW-6 (20-22)	9/18/06	1630		X		6	X			X	40 ml VOA's	X	X	X	X				
	DPW-6 (20-22)	9/18/06	1630		X		1				X	one liter amber					X			
3	DPS-6 (29-30)	9/18/06	1650	X			1				X	acetate liner	X	X	X	X	X			
4	DPS-6 (58-60)	9/18/06	1750	X			1				X	acetate liner	X	X	X	X	X			
5	DPS-1 (26-27)	9/19/06	0825	X			1				X	acetate liner	X	X	X	X	X			
6	DPS-1 (53-54)	9/19/06	0945	X			1				X	acetate liner	X	X	X	X	X			
7	DPW-1 (55-59)	9/19/06	1010		X		~~NO~~ 3	X			X	40 ml VOA's	X	X	X	X				
	DPW-1 (55-59)	9/19/06	1010		X		1				X	one 1 liter amber					X			
8	DPS-4 (27-28)	9/19/06	1105	X			1	/			X	acetate liner	X	X	X	X	X			

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Request EDD & EDF	M. Spielmann	9/19/06 - 1600	Jason Zuniga	9/19/06 1600

CHAIN OF CUSTODY FORM

PAL Pacific Analytical Laboratory
851 West Midway Ave., Suite 201B
Alameda, CA 94501
510-864-0364 Telephone
510-864-0365 Fax

PAL Login# 6090015

Project No: 2552	Sampler: M. Spielmann		
Project Name: 15101 Freedom Avenue San Leandro, CA.	Report To: Joyce Bobek		
Project P.O.: ---- 2552	Company: SOMA Environmental Engineering, Inc.		
Turnaround Time: Standard	Tel: ~~925-244-6600~~ 925-734-6400 Fax: ~~925-244-6601~~ 925-734-6401		

Lab No.	Sample ID	Sampling Date/Time: Date	Time	Matrix: Soil	Water	Waste	# of Containers	Preservatives: HCl	H_2SO_4	HNO_3	ICE	Field Notes	Analyses/Method: TPHg 8260B	BTEX 8260B	MTBE, TAME, ETBE, DIPE 8260B	TBA, ethanol EDB, EDC 8260B	TPHd 8015M			
9	DPW-4 (24-28)	9/19/06	1125		X		4	X			X	40 ml VOA's	X	X	X	X				
	DPW-4 (24-28)	9/19/06	1125		X		1				X	one liter amber					X			
10	DPS-4 (39-40)	9/19/06	1150	X			1				X	acetate liner	X	X	X	X	X			
11	DPS-3 (27-28)	9/19/06	1320	X			1				X	acetate liner	X	X	X	X	X			
12	DPS-3 (57-58)	9/19/06	1405	X			1				X	acetate liner	X	X	X	X	X			
13	DPW-3 (56-60)	9/19/06	1455		X		4	X			X	40 ml. VOA's	X	X	X	X				
	DPW-3 (56-60)	9/19/06	1455		X		1				X	one liter amber					X			

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Request EDD & EDF	Matthew Spielmann	9/19/06 - 1600	Jonna Jinings	9/19/06 1600

PAL Pacific Analytical Laboratory
851 West Midway Ave. Suite 201
Alameda, CA 94501
Phone (510) 864-0364

28 September 2006

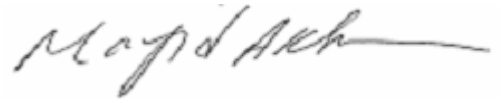
Mansour Sepehr
SOMA Environmental Engineering Inc.
6620 Owens Drive, Suite A
Pleasanton, CA 94588

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 6090015

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



Maiid Akhavan
Laboratory Director

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DPS-6 (21-22)	6090015-01	Soil	18-Sep-06 16:20	19-Sep-06 16:10
DPW-6 (20-22)	6090015-02	Water	18-Sep-06 16:30	19-Sep-06 16:10
DPS-6 (29-30)	6090015-03	Soil	18-Sep-06 16:50	19-Sep-06 16:10
DPS-6 (58-60)	6090015-04	Soil	18-Sep-06 17:50	19-Sep-06 16:10
DPS-1 (26-27)	6090015-05	Soil	19-Sep-06 08:25	19-Sep-06 16:10
DPS-1 (53-54)	6090015-06	Soil	19-Sep-06 09:45	19-Sep-06 16:10
DPW-1 (55-59)	6090015-07	Water	19-Sep-06 10:10	19-Sep-06 16:10
DPS-4 (27-28)	6090015-08	Soil	19-Sep-06 11:05	19-Sep-06 16:10
DPW-4 (24-28)	6090015-09	Water	19-Sep-06 11:25	19-Sep-06 16:10
DPS-4 (39-40)	6090015-10	Soil	19-Sep-06 11:50	19-Sep-06 16:10
DPS-3 (27-28)	6090015-11	Soil	19-Sep-06 13:20	19-Sep-06 16:10
DPS-3 (57-58)	6090015-12	Soil	19-Sep-06 14:05	19-Sep-06 16:10
DPW-3 (56-60)	6090015-13	Water	19-Sep-06 14:55	19-Sep-06 16:10

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Extractable Petroleum Hydrocarbons by 8015 DRO

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-6 (21-22) (6090015-01) Soil Sampled: 18-Sep-06 16:20 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*102 %*	*70-130*		"	"	"	"	
DPW-6 (20-22) (6090015-02) Water Sampled: 18-Sep-06 16:30 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	**5090**	100	ug/l	2	BI62701	19-Sep-06	26-Sep-06	EPA 8015M	FILT, A-01, D-06, D-30
Surrogate: Pentacosane		*72.4 %*	*70-130*		"	"	"	"	
DPS-6 (29-30) (6090015-03) Soil Sampled: 18-Sep-06 16:50 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*111 %*	*70-130*		"	"	"	"	
DPS-6 (58-60) (6090015-04) Soil Sampled: 18-Sep-06 17:50 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*94.7 %*	*70-130*		"	"	"	"	
DPS-1 (26-27) (6090015-05) Soil Sampled: 19-Sep-06 08:25 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	**114**	50.0	mg/kg	1	BI62101	19-Sep-06	21-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*107 %*	*70-130*		"	"	"	"	
DPS-1 (53-54) (6090015-06) Soil Sampled: 19-Sep-06 09:45 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	21-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*98.1 %*	*70-130*		"	"	"	"	
DPW-1 (55-59) (6090015-07) Water Sampled: 19-Sep-06 10:10 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	**209**	100	ug/l	2	BI62701	19-Sep-06	26-Sep-06	EPA 8015M	FILT, A-01, D-06, D-30
Surrogate: Pentacosane		*74.2 %*	*70-130*		"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Extractable Petroleum Hydrocarbons by 8015 DRO

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-4 (27-28) (6090015-08) Soil Sampled: 19-Sep-06 11:05 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*97.5 %*	*70-130*		"	"	"	"	
DPW-4 (24-28) (6090015-09) Water Sampled: 19-Sep-06 11:25 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	**3600**	100	ug/l	2	BI62701	19-Sep-06	26-Sep-06	EPA 8015M	FILT, A-01, D-06, D-30
Surrogate: Pentacosane		*69.6 %*	*70-130*		"	"	"	"	*S-04*
DPS-4 (39-40) (6090015-10) Soil Sampled: 19-Sep-06 11:50 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*101 %*	*70-130*		"	"	"	"	
DPS-3 (27-28) (6090015-11) Soil Sampled: 19-Sep-06 13:20 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*104 %*	*70-130*		"	"	"	"	
DPS-3 (57-58) (6090015-12) Soil Sampled: 19-Sep-06 14:05 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	19-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*91.6 %*	*70-130*		"	"	"	"	
DPW-3 (56-60) (6090015-13) Water Sampled: 19-Sep-06 14:55 Received: 19-Sep-06 16:10									
Diesel (C10-C24)	**202**	100	ug/l	2	BI62701	19-Sep-06	26-Sep-06	EPA 8015M	FILT, A-01, D-06, D-30
Surrogate: Pentacosane		*79.4 %*	*70-130*		"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-6 (21-22) (6090015-01) Soil Sampled: 18-Sep-06 16:20 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	**259700**	2150	ug/kg	43	BI62703	19-Sep-06	26-Sep-06	EPA 8260B	
Benzene	ND	21.50	"	"	"	"	"	"	
Ethylbenzene	**4327**	21.50	"	"	"	"	"	"	
m&p-Xylene	**2471**	43.00	"	"	"	"	"	"	
o-xylene	**3960**	21.50	"	"	"	"	"	"	
Toluene	**1039**	86.00	"	"	"	"	"	"	
MTBE	ND	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*84.0 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*104 %*		*70-130*	"	"	"	"	
DPW-6 (20-22) (6090015-02RE1) Water Sampled: 18-Sep-06 16:30 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	**16800**	100	ug/l	2	BI62702	19-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**12.9**	1.00	"	"	"	"	"	"	
Ethylbenzene	**602**	1.00	"	"	"	"	"	"	
m&p-Xylene	**293**	2.00	"	"	"	"	"	"	
o-xylene	**346**	1.00	"	"	"	"	"	"	
Toluene	**4.11**	4.00	"	"	"	"	"	"	
MTBE	**1.94**	1.00	"	"	"	"	"	"	
DIPE	ND	1.00	"	"	"	"	"	"	
ETBE	ND	1.00	"	"	"	"	"	"	
TAME	ND	4.00	"	"	"	"	"	"	
TBA	ND	20.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Ethanol	ND	2000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*89.2 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*98.8 %*		*70-130*	"	"	"	"	

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-6 (29-30) (6090015-03) Soil	**Sampled: 18-Sep-06 16:50**	**Received: 19-Sep-06 16:10**							
Gasoline (C6-C12)	**69.36**	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.520**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	**0.5100**	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.4 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*90.0 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*91.4 %*		*70-130*		"	"	"	
DPS-6 (58-60) (6090015-04) Soil	**Sampled: 18-Sep-06 17:50**	**Received: 19-Sep-06 16:10**							
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.040**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**2.390**	1.000	"	"	"	"	"	"	
o-xylene	**2.440**	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.6 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*92.8 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*91.0 %*		*70-130*		"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-1 (26-27) (6090015-05) Soil	**Sampled: 19-Sep-06 08:25**	**Received: 19-Sep-06 16:10**							
Gasoline (C6-C12)	**157000**	2150	ug/kg	43	BI62703	19-Sep-06	26-Sep-06	EPA 8260B	
Benzene	ND	21.50	"	"	"	"	"	"	
Ethylbenzene	**713.0**	21.50	"	"	"	"	"	"	
m&p-Xylene	**556.1**	43.00	"	"	"	"	"	"	
o-xylene	**207.5**	21.50	"	"	"	"	"	"	
Toluene	**1034**	86.00	"	"	"	"	"	"	
MTBE	ND	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane		*84.6 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Perdeuterotoluene		*101 %*		*70-130*		*"*	*"*	*"*	*"*
DPS-1 (53-54) (6090015-06) Soil	**Sampled: 19-Sep-06 09:45**	**Received: 19-Sep-06 16:10**							
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.100**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*77.4 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane		*98.0 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Perdeuterotoluene		*90.0 %*		*70-130*		*"*	*"*	*"*	*"*

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPW-1 (55-59) (6090015-07) Water Sampled: 19-Sep-06 10:10 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	**374**	50.0	ug/l	1	BI62702	19-Sep-06	25-Sep-06	EPA 8260B	
Benzene	**1.95**	0.500	"	"	"	"	"	"	
Ethylbenzene	**9.62**	0.500	"	"	"	"	"	"	
m&p-Xylene	**8.06**	1.00	"	"	"	"	"	"	
o-xylene	**3.42**	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	**2.28**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.6 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.8 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*93.4 %*		*70-130*	"	"	"	"	
DPS-4 (27-28) (6090015-08) Soil Sampled: 19-Sep-06 11:05 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.450**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82.4 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*98.2 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*91.4 %*		*70-130*	"	"	"	"	

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPW-4 (24-28) (6090015-09RE1) Water Sampled: 19-Sep-06 11:25 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	**4450**	215	ug/l	4.3	BI62702	19-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**84.2**	2.15	"	"	"	"	"	"	
Ethylbenzene	**244**	2.15	"	"	"	"	"	"	
m&p-Xylene	**216**	4.30	"	"	"	"	"	"	
o-xylene	**6.49**	2.15	"	"	"	"	"	"	
Toluene	ND	8.60	"	"	"	"	"	"	
MTBE	ND	2.15	"	"	"	"	"	"	
DIPE	ND	2.15	"	"	"	"	"	"	
ETBE	ND	2.15	"	"	"	"	"	"	
TAME	ND	8.60	"	"	"	"	"	"	
TBA	ND	43.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	2.15	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.15	"	"	"	"	"	"	
Ethanol	ND	4300	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane		*89.6 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Perdeuterotoluene		*97.8 %*		*70-130*		*"*	*"*	*"*	*"*
DPS-4 (39-40) (6090015-10) Soil Sampled: 19-Sep-06 11:50 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	ND	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.6 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane		*109 %*		*70-130*		*"*	*"*	*"*	*"*
Surrogate: Perdeuterotoluene		*103 %*		*70-130*		*"*	*"*	*"*	*"*

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-3 (27-28) (6090015-11) Soil Sampled: 19-Sep-06 13:20 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**0.8800**	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.560**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**1.080**	1.000	"	"	"	"	"	"	
o-xylene	**0.7700**	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	**18.3**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	**2.19**	2.00	"	"	"	"	"	"	
TBA	**13.7**	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*79.6 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*90.8 %*		*70-130*	"	"	"	"	
DPS-3 (57-58) (6090015-12) Soil Sampled: 19-Sep-06 14:05 Received: 19-Sep-06 16:10									
Gasoline (C6-C12)	ND	50.00	ug/kg	1	BI62703	19-Sep-06	27-Sep-06	EPA 8260B	
Benzene	ND	0.5000	"	"	"	"	"	"	
Ethylbenzene	**2.060**	0.5000	"	"	"	"	"	"	
m&p-Xylene	ND	1.000	"	"	"	"	"	"	
o-xylene	ND	0.5000	"	"	"	"	"	"	
Toluene	ND	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*74.6 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*91.2 %*		*70-130*	"	"	"	"	

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPW-3 (56-60) (6090015-13RE1) Water	**Sampled: 19-Sep-06 14:55**		**Received: 19-Sep-06 16:10**						
Gasoline (C6-C12)	**1760**	550	ug/l	11	BI62702	19-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**22.6**	5.50	"	"	"	"	"	"	
Ethylbenzene	**35.7**	5.50	"	"	"	"	"	"	
m&p-Xylene	**46.5**	11.0	"	"	"	"	"	"	
o-xylene	**39.6**	5.50	"	"	"	"	"	"	
Toluene	ND	22.0	"	"	"	"	"	"	
MTBE	**3330**	5.50	"	"	"	"	"	"	
DIPE	ND	5.50	"	"	"	"	"	"	
ETBE	ND	5.50	"	"	"	"	"	"	
TAME	**944**	22.0	"	"	"	"	"	"	
TBA	**537**	110	"	"	"	"	"	"	
1,2-dichloroethane	ND	5.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.50	"	"	"	"	"	"	
Ethanol	ND	11000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*90.0 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*94.4 %*		*70-130*	"	"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62101 - EPA 3550A										
Blank (BI62101-BLK1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62101-BS1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200		122	50-140			
LCS Dup (BI62101-BSD1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.87*		*mg/kg*	*10.0*		*98.7*	*70-130*			
Diesel (C10-C24)	232	50.0	"	200		116	50-140	4.63	40	QR-02
Matrix Spike (BI62101-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.70*		*mg/kg*	*10.0*		*97.0*	*70-130*			
Diesel (C10-C24)	256	50.0	"	200	42.0	107	0-200			
Matrix Spike Dup (BI62101-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.82*		*mg/kg*	*10.0*		*98.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200	42.0	100	0-200	5.21	200	
Batch BI62701 - EPA 3510B										
Blank (BI62701-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*43.4*		*ug/l*	*50.0*		*86.8*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62701-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*42.4*		*ug/l*	*50.0*		*84.8*	*70-130*			
Diesel (C10-C24)	833	50.0	"	1000		83.3	50-130			

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62701 - EPA 3510B										
LCS Dup (BI62701-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*44.7*		*ug/l*	*50.0*		*89.4*	*70-130*			
Diesel (C10-C24)	997	50.0	"	1000		99.7	50-130	17.9	40	

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
Blank (BI62702-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*45.5*		*ug/l*	*50.0*		*91.0*	*70-130*			
Surrogate: Dibromofluoromethane	*52.5*		*"*	*50.0*		*105*	*70-130*			
Surrogate: Perdeuterotoluene	*46.5*		*"*	*50.0*		*93.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.0	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	1.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
LCS (BI62702-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*44.8*		*ug/l*	*50.0*		*89.6*	*70-130*			
Surrogate: Dibromofluoromethane	*45.4*		*"*	*50.0*		*90.8*	*70-130*			
Surrogate: Perdeuterotoluene	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
MTBE	89.3	0.500	"	100		89.3	70-130			
ETBE	83.8	0.500	"	100		83.8	70-130			
TAME	92.7	2.00	"	100		92.7	70-130			
Gasoline (C6-C12)	1850	50.0	"	2000		92.5	70-130			
TBA	473	10.0	"	500		94.6	70-130			
Benzene	94.6	0.500	"	100		94.6	70-130			
Toluene	104	2.00	"	100		104	70-130			

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
LCS Dup (BI62702-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*41.6*		*ug/l*	*50.0*		*83.2*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.5*		*"*	*50.0*		*95.0*	*70-130*			
MTBE	77.2	0.500	"	100		77.2	70-130	14.5	20	
ETBE	82.6	0.500	"	100		82.6	70-130	1.44	20	
TAME	92.2	2.00	"	100		92.2	70-130	0.541	20	
TBA	449	10.0	"	500		89.8	70-130	5.21	20	
Gasoline (C6-C12)	2030	50.0	"	2000		102	70-130	9.28	20	
Benzene	101	0.500	"	100		101	70-130	6.54	20	
Toluene	104	2.00	"	100		104	70-130	0.00	20	
Batch BI62703 - EPA 5030 Soil MS										
Blank (BI62703-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.1*		*ug/kg*	*50.0*		*74.2*	*70-130*			
Surrogate: Dibromofluoromethane	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
Surrogate: Perdeuterotoluene	*46.0*		*"*	*50.0*		*92.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.00	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.5000	"							
Ethylbenzene	ND	0.5000	"							
m&p-Xylene	ND	1.000	"							
o-xylene	ND	0.5000	"							
Toluene	ND	2.000	"							

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
LCS (BI62703-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*40.9*		*ug/kg*	*50.0*		*81.8*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.8*		*"*	*50.0*		*95.6*	*70-130*			
MTBE	75.7	0.500	"	100		75.7	70-130			
ETBE	78.8	0.500	"	100		78.8	70-130			
TAME	79.4	2.00	"	100		79.4	70-130			
Gasoline (C6-C12)	2230	50.00	"	2000		112	70-130			
TBA	627	10.0	"	500		125	70-130			
Benzene	106	0.5000	"	100		106	70-130			
Toluene	106	2.000	"	100		106	70-130			
LCS Dup (BI62703-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*53.8*		*ug/kg*	*50.0*		*108*	*70-130*			
Surrogate: Dibromofluoromethane	*41.2*		*"*	*50.0*		*82.4*	*70-130*			
Surrogate: Perdeuterotoluene	*48.3*		*"*	*50.0*		*96.6*	*70-130*			
MTBE	104	0.500	"	100		104	70-130	31.5	20	QR-02
ETBE	87.8	0.500	"	100		87.8	70-130	10.8	20	
TAME	91.4	2.00	"	100		91.4	70-130	14.1	20	
TBA	468	10.0	"	500		93.6	70-130	29.0	20	QR-02
Gasoline (C6-C12)	1990	50.00	"	2000		99.5	70-130	11.4	20	
Benzene	90.2	0.5000	"	100		90.2	70-130	16.1	20	
Toluene	97.9	2.000	"	100		97.9	70-130	7.95	20	
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.2*		*ug/kg*	*50.0*		*74.4*	*70-130*			
Surrogate: Dibromofluoromethane	*40.3*		*"*	*50.0*		*80.6*	*70-130*			
Surrogate: Perdeuterotoluene	*46.3*		*"*	*50.0*		*92.6*	*70-130*			
MTBE	82.5	0.500	"	100	6.92	75.6	70-130			
DIPE	127	0.500	"	100	ND	127	70-130			
ETBE	114	0.500	"	100	ND	114	70-130			
TAME	101	2.00	"	100	0.990	100	70-130			
Gasoline (C6-C12)	1350	50.00	"	2000	ND	67.5	70-130			QM-05
TBA	621	10.0	"	500	3.10	124	70-130			
Benzene	145	0.5000	"	100	ND	145	70-130			QM-05
Ethylbenzene	165	0.5000	"	100	2.600	162	70-130			QM-05
m&p-Xylene	153	1.000	"	100	1.030	152	70-130			QM-05

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Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
o-xylene	144	0.5000	ug/kg	100	0.7100	143	70-130			QM-05
Toluene	145	2.000	"	100	0.6300	144	70-130			QM-05
Matrix Spike Dup (BI62703-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.9*		*ug/kg*	*50.0*		*75.8*	*70-130*			
Surrogate: Dibromofluoromethane	*37.0*		*"*	*50.0*		*74.0*	*70-130*			
Surrogate: Perdeuterotoluene	*46.2*		*"*	*50.0*		*92.4*	*70-130*			
MTBE	64.1	0.500	"	100	6.92	57.2	70-130	25.1	20	QR-03, QM-05
DIPE	88.0	0.500	"	100	ND	88.0	70-130	36.3	20	QR-03
ETBE	78.2	0.500	"	100	ND	78.2	70-130	37.3	20	QR-03
TAME	70.4	2.00	"	100	0.990	69.4	70-130	35.7	20	QR-03, QM-05
TBA	370	10.0	"	500	3.10	73.4	70-130	50.7	20	QR-03
Gasoline (C6-C12)	2500	50.00	"	2000	ND	125	70-130	59.7	20	QR-03
Benzene	95.3	0.5000	"	100	ND	95.3	70-130	41.4	20	QR-03
Ethylbenzene	120	0.5000	"	100	2.600	117	70-130	31.6	20	QR-03
m&p-Xylene	114	1.000	"	100	1.030	113	70-130	29.2	20	QR-03
o-xylene	109	0.5000	"	100	0.7100	108	70-130	27.7	20	QR-03
Toluene	96.7	2.000	"	100	0.6300	96.1	70-130	40.0	20	QR-03

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:12

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
FILT	The sample was filtered prior to analysis.
D-30	Unidentified hydrocarbons C9-C16.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
A-01	Only 500 mL available for analysis after filtration.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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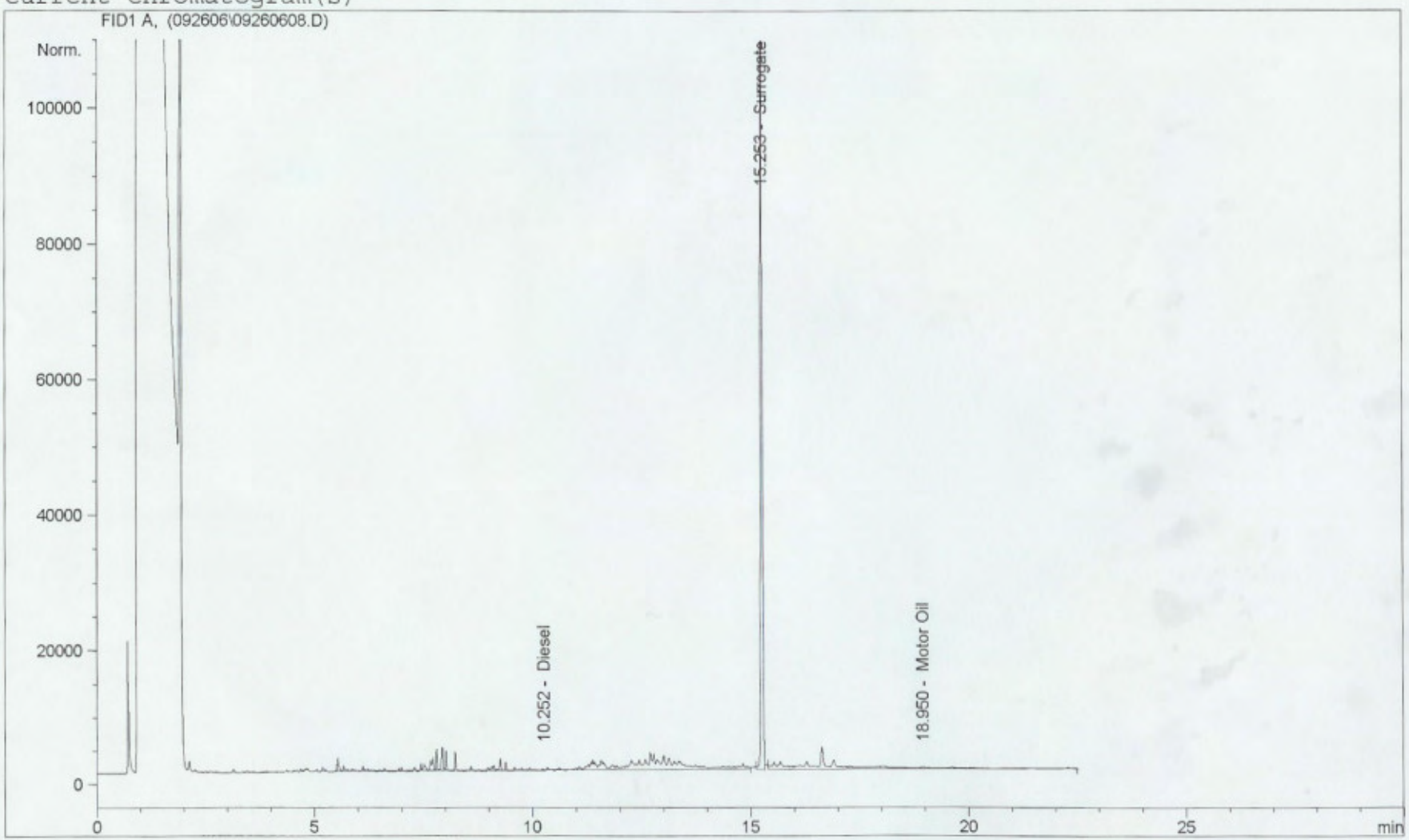
Print of Window 38: Current Chromatogram(s)

==========

Injection Date : 9/26/06 5:54:17 PM Seq. Line : 7
Sample Name : ~~MB092606A~~ BI62701-BLK1 Vial : 8
Acq. Operator : jz Inj : 1
Inj Volume : 2 ul

Acq. Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz
Analysis Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/28/06 1:39:22 PM by jz
(modified after loading)

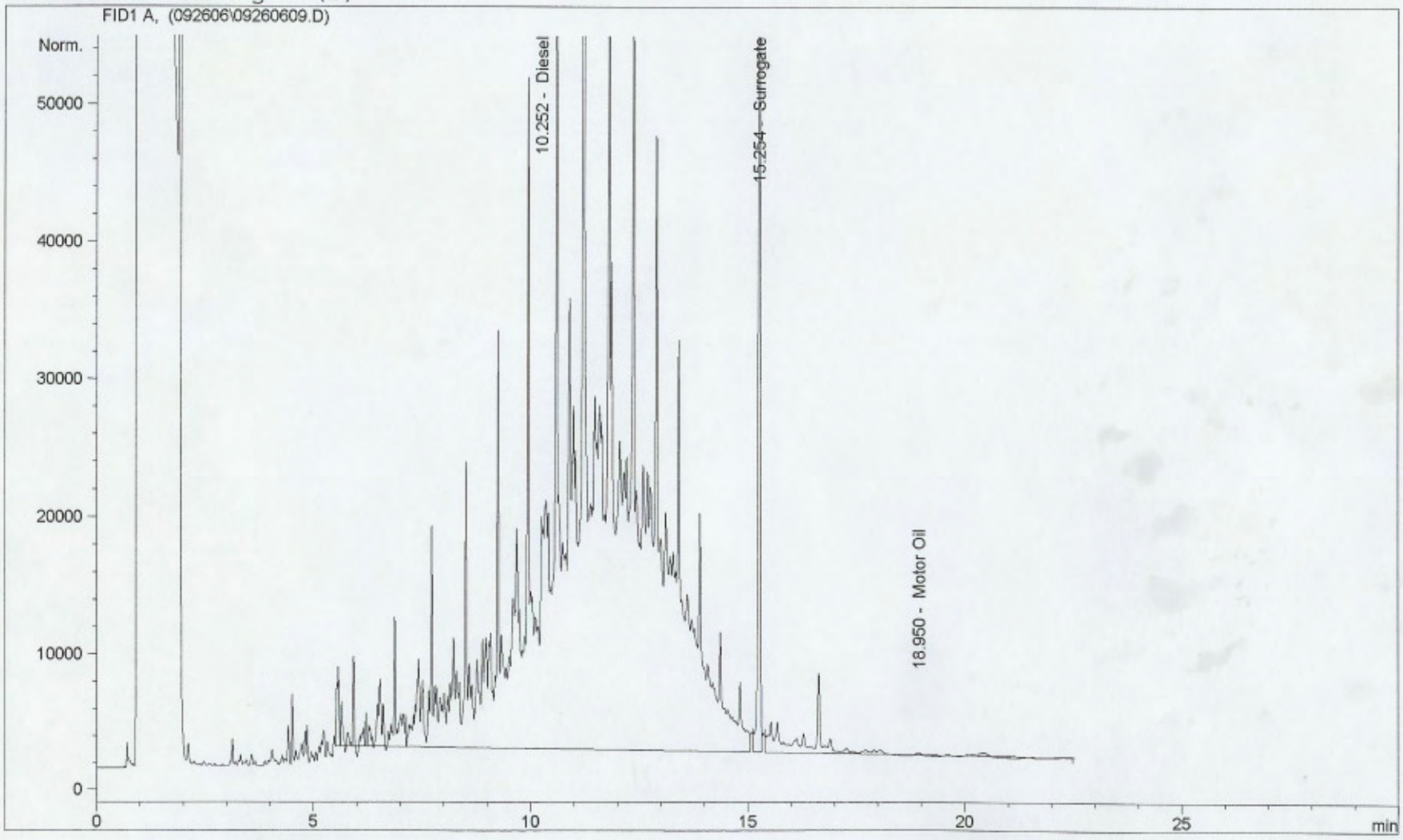
Current Chromatogram(s)



Print of window 38: Current Chromatogram(s)

Injection Date	: 9/26/06 6:27:15 PM	Seq. Line	: 8
Sample Name	: ~~MB092606B~~ BI62701-BS1	Vial	: 9
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Acq. Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		
Analysis Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/28/06 1:39:45 PM by jz (modified after loading)		

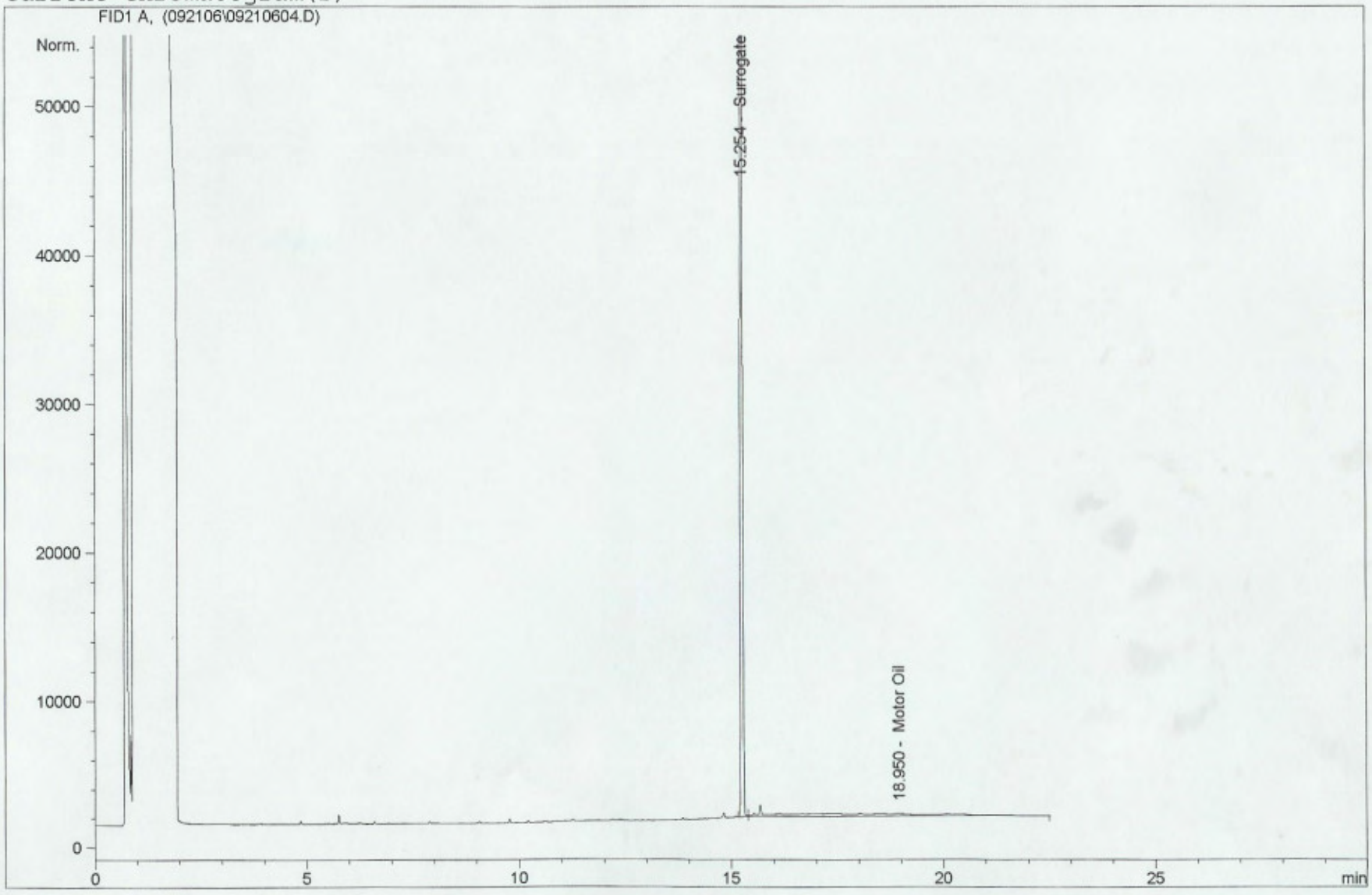
Current Chromatogram(s)



Print of window 38: Current Chromatogram(s)

Injection Date	: 9/21/06 3:54:50 PM	Seq. Line	: 4
Sample Name	: BI62101-BLK1	Vial	: 5
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		

Current Chromatogram(s)



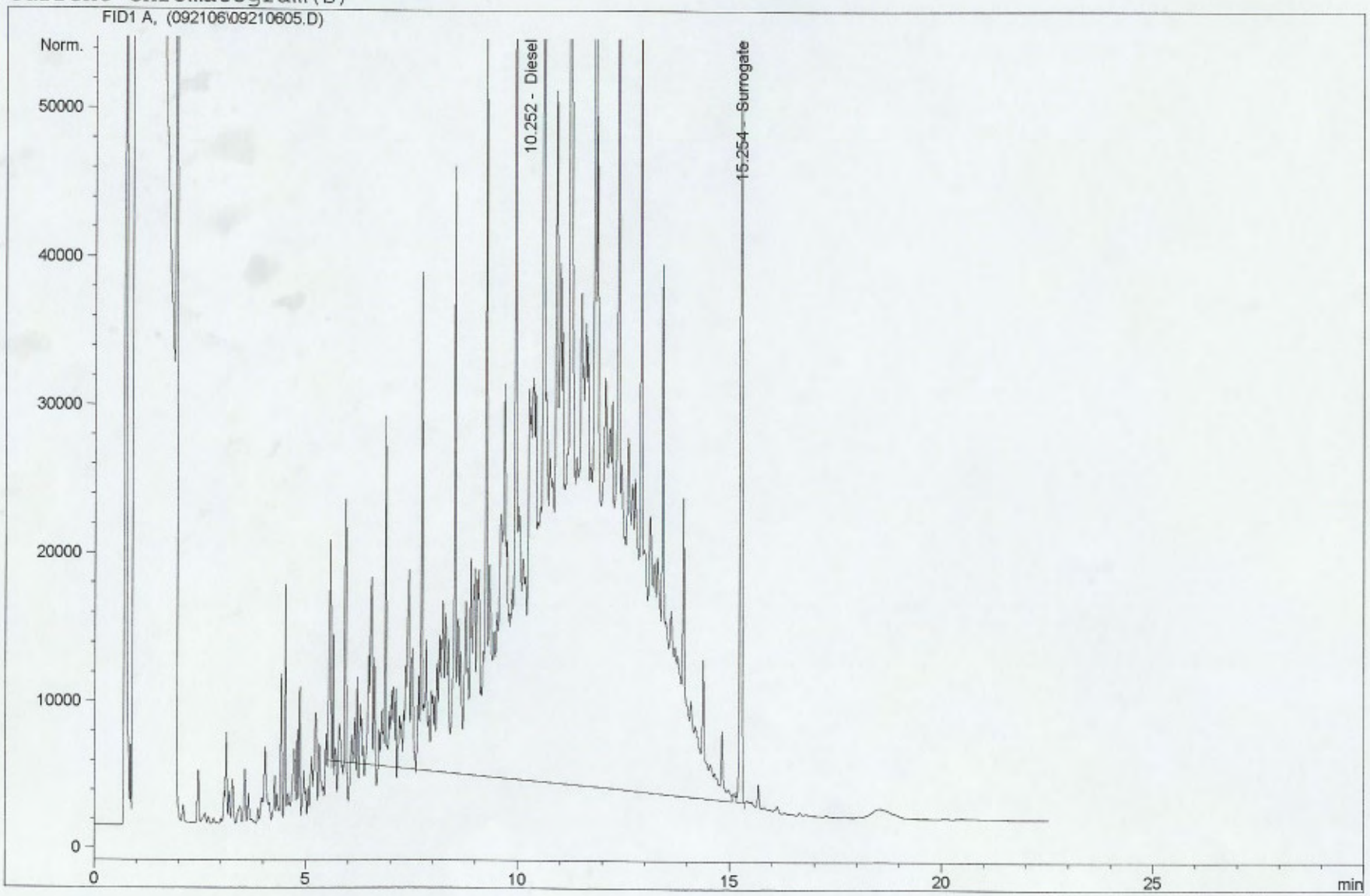
Print of window 38: Current Chromatogram(s)

Injection Date : 9/21/06 4:27:48 PM
Sample Name : BI62101-BS1
Acq. Operator : jz

Seq. Line : 5
Vial : 6
Inj : 1
Inj Volume : 2 ul

Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)



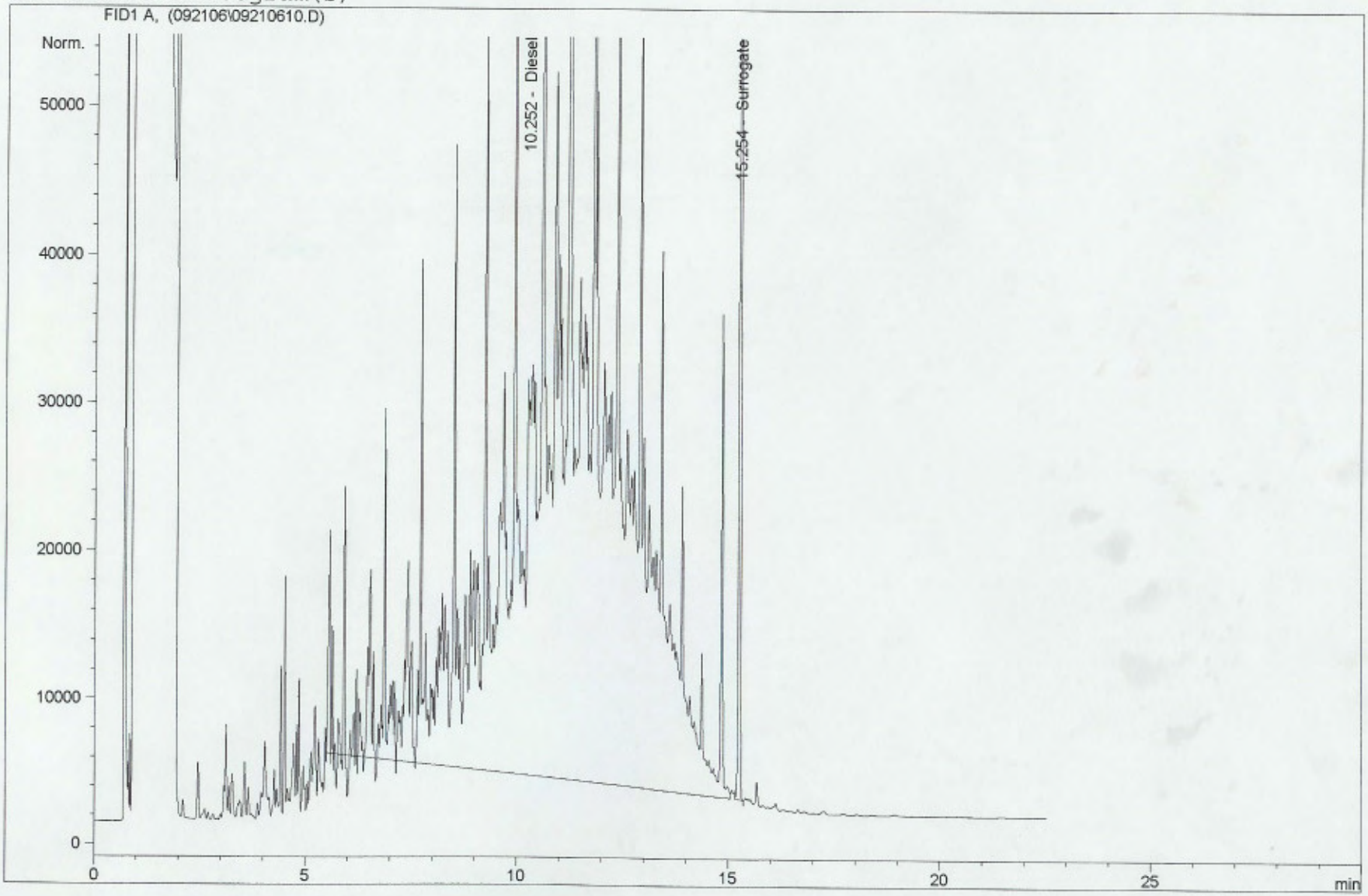
Print of Window 38: Current Chromatogram(s)

Injection Date : 9/21/06 7:12:52 PM
Sample Name : BI62101-MS1
Acq. Operator : jz

Seq. Line : 10
Vial : 11
Inj : 1
Inj Volume : 2 ul

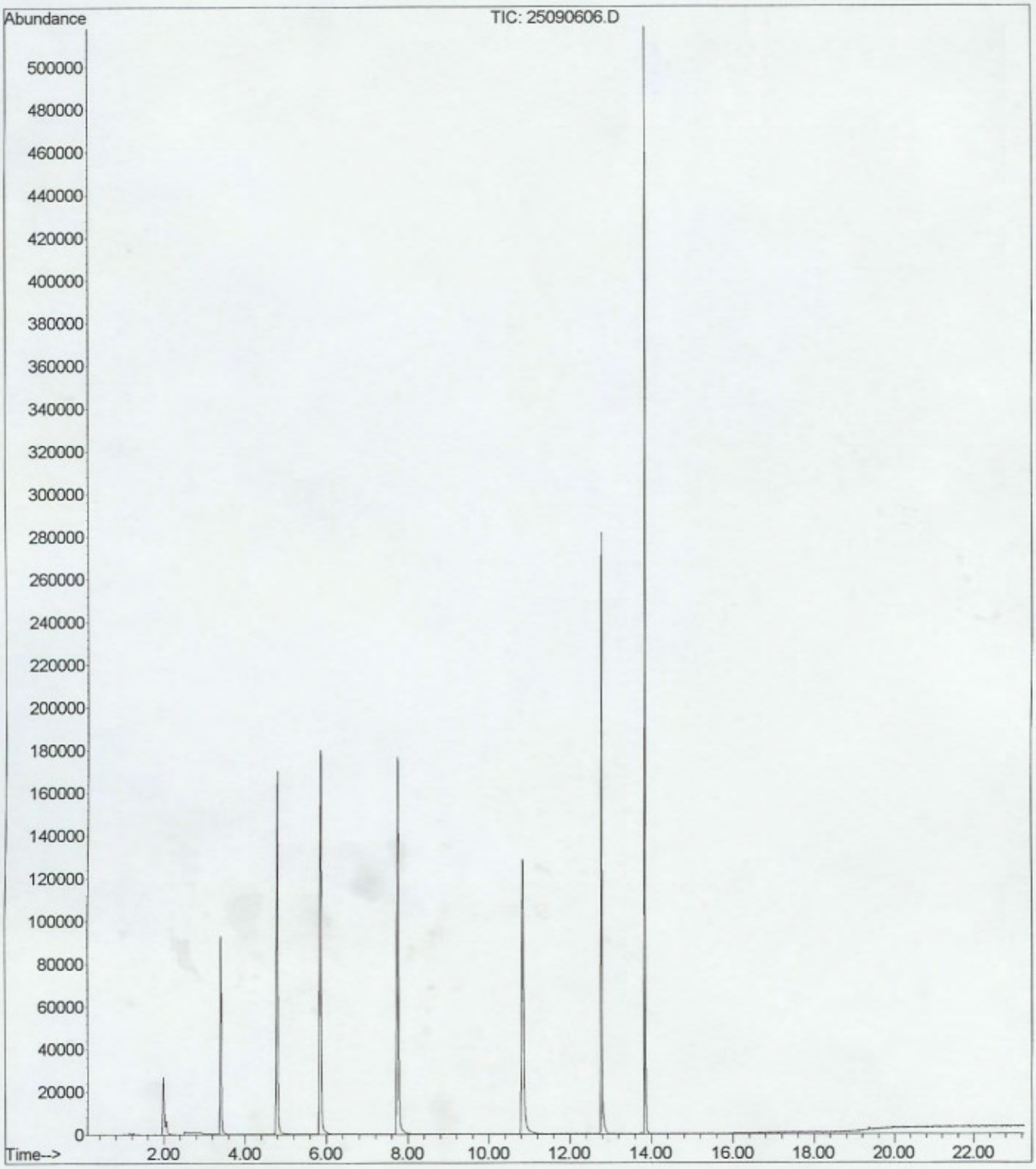
Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)

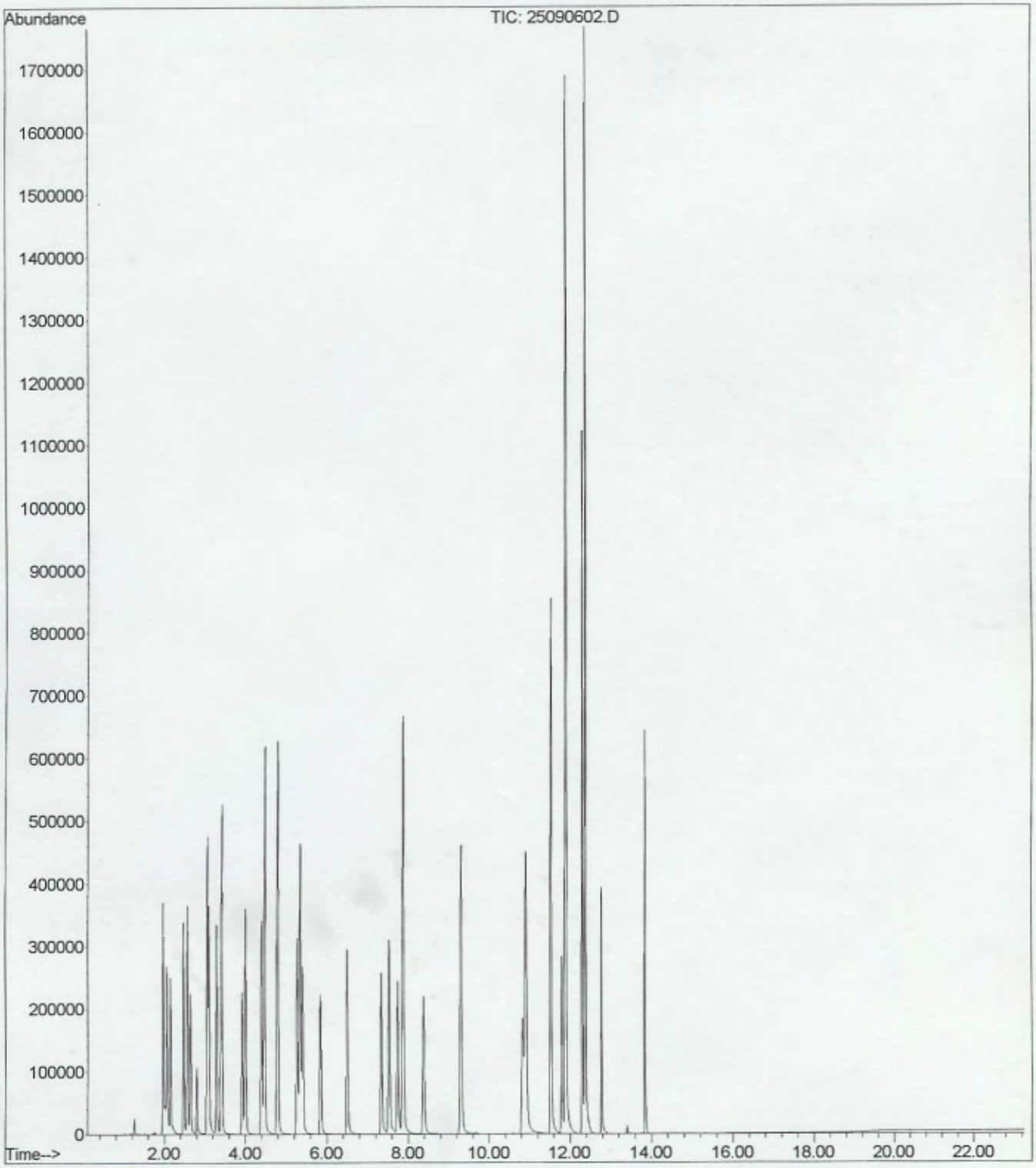


Instrument 1 9/28/06 1:38:13 PM jz

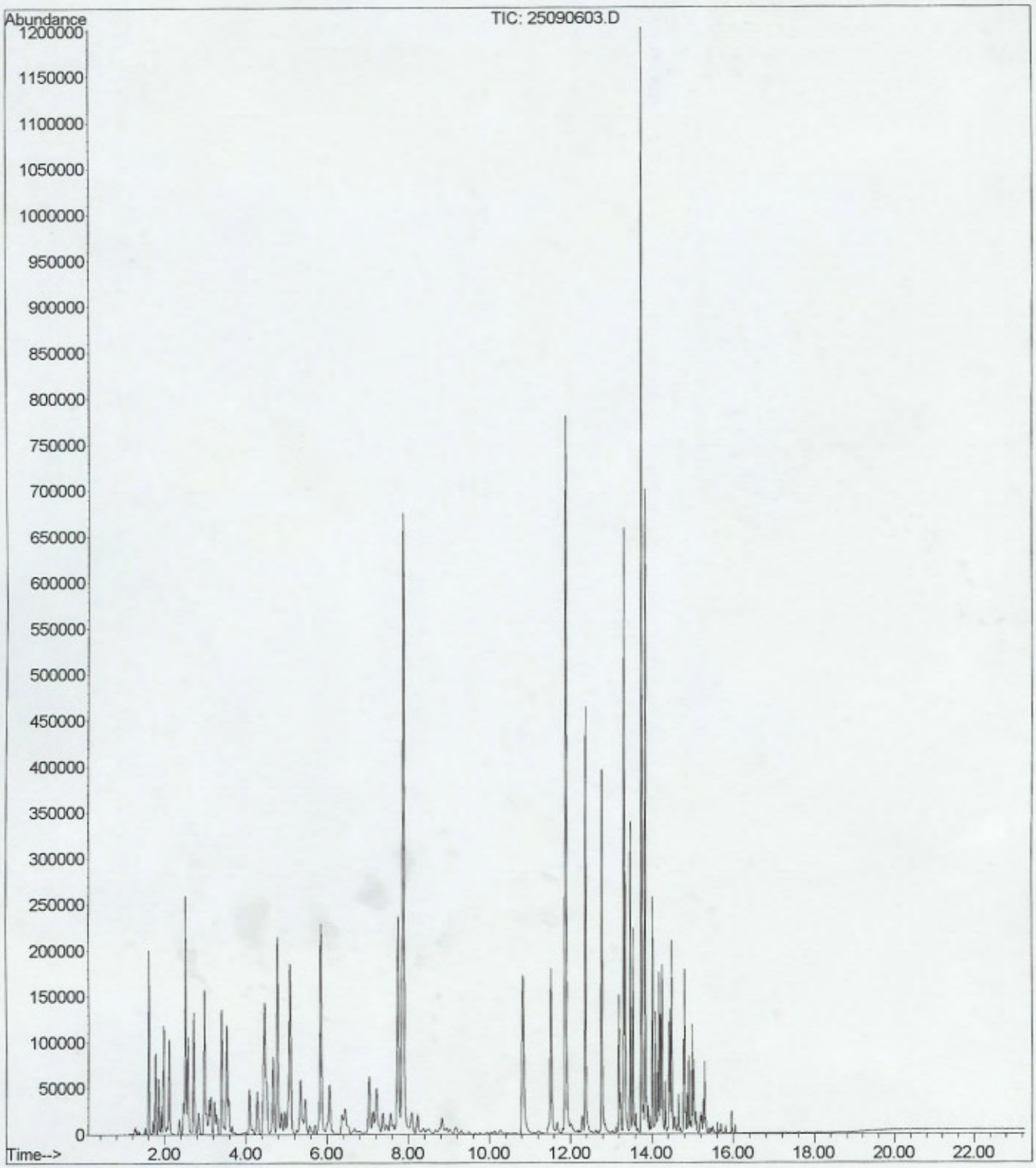
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090606.D
Operator :
Acquired : 25 Sep 2006 12:48 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BLK1
Misc Info :
Vial Number: 6



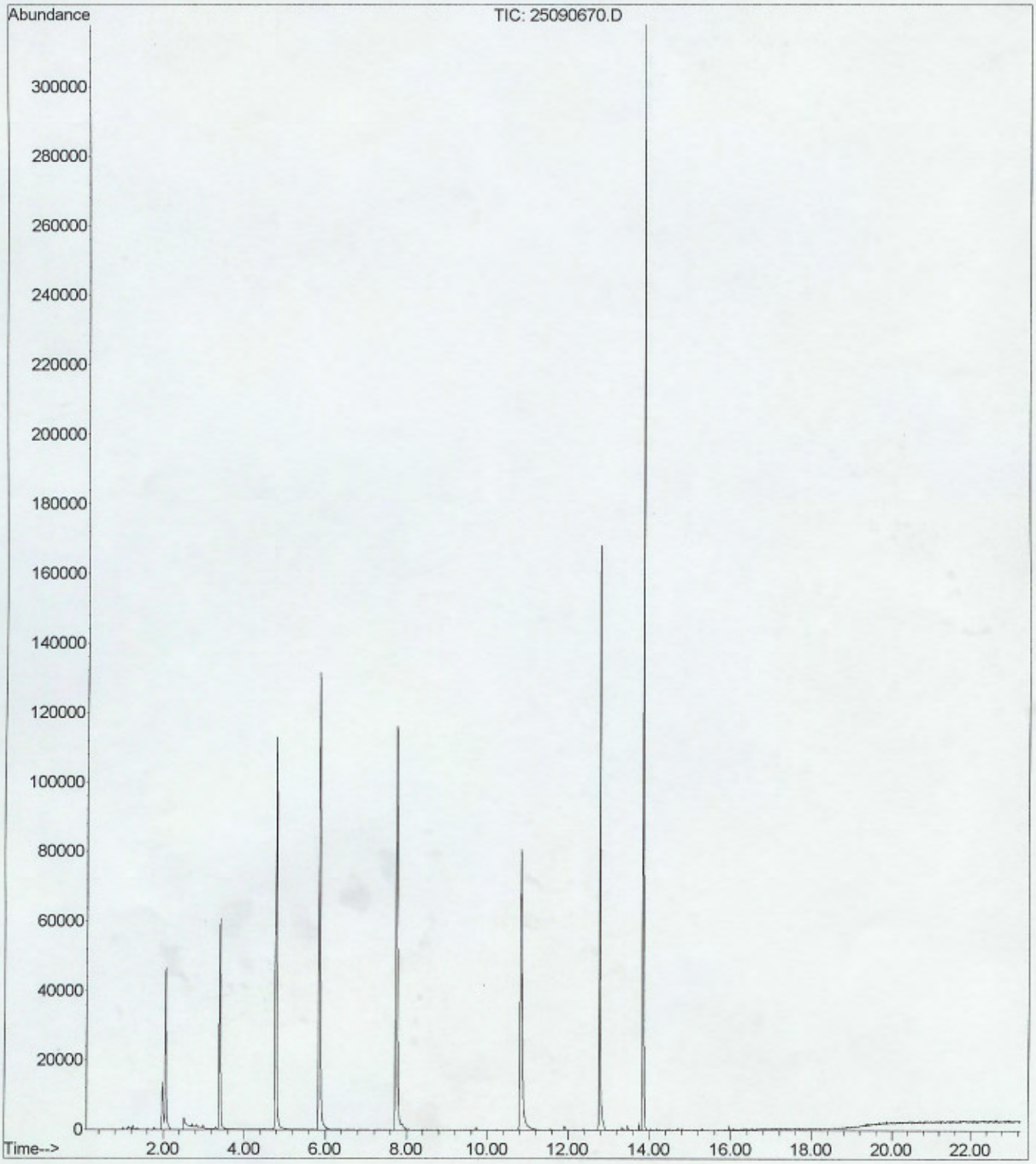
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090602.D
Operator :
Acquired : 25 Sep 2006 10:27 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@voc
Misc Info :
Vial Number: 2



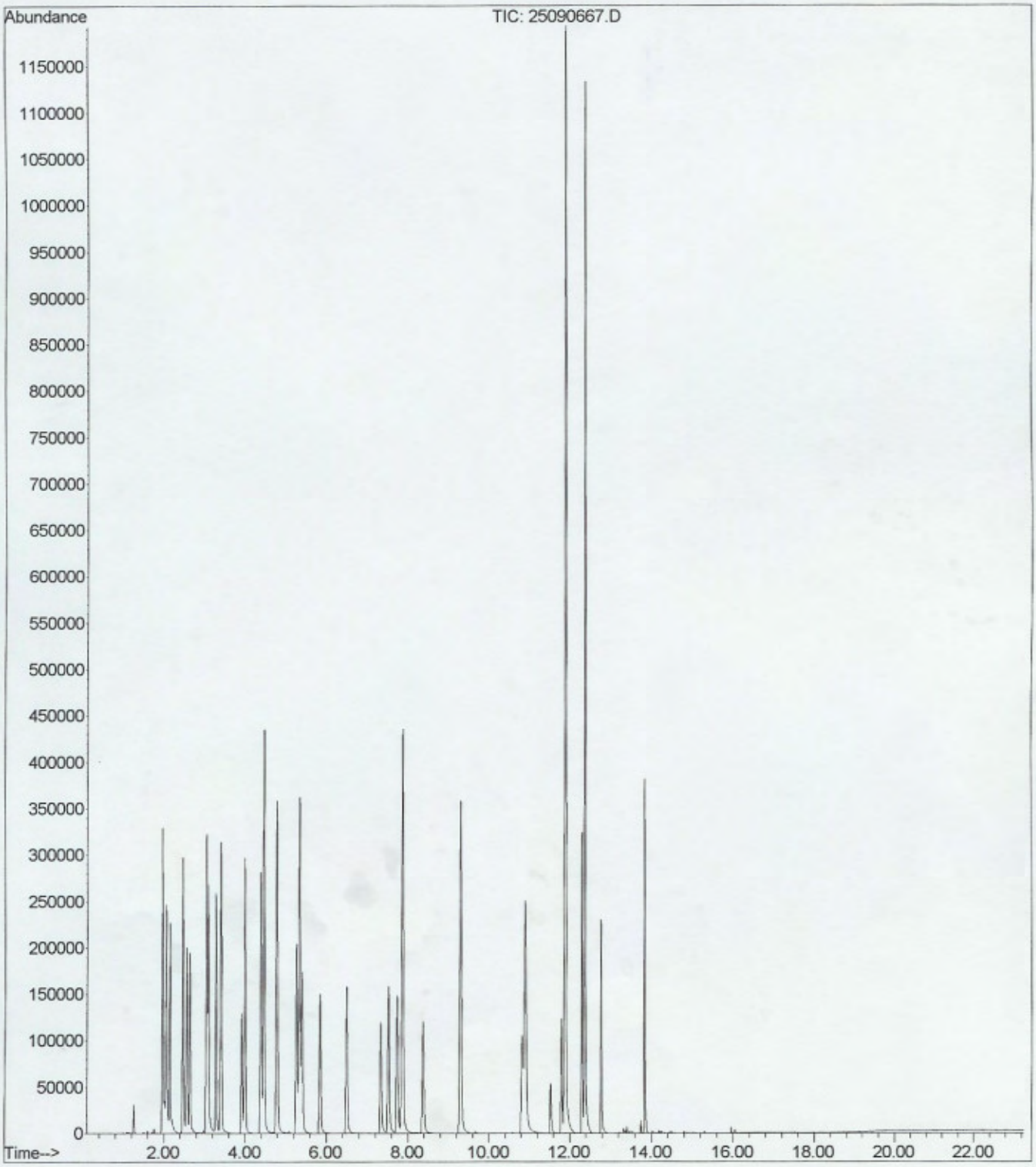
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090603.D
Operator :
Acquired : 25 Sep 2006 11:02 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@gas
Misc Info :
Vial Number: 3



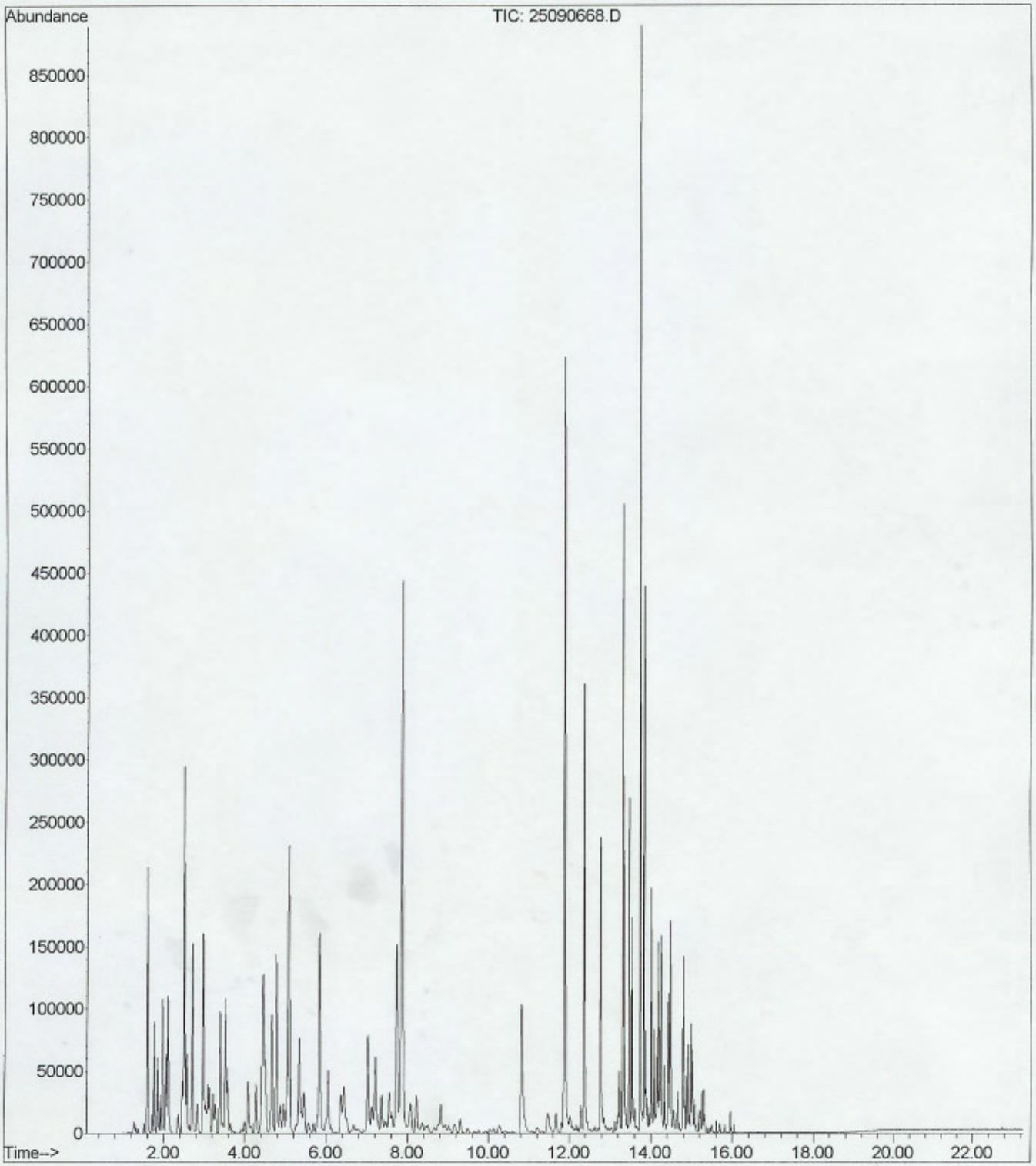
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090670.D
Operator :
Acquired : 27 Sep 2006 12:25 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BLK1
Misc Info :
Vial Number: 70



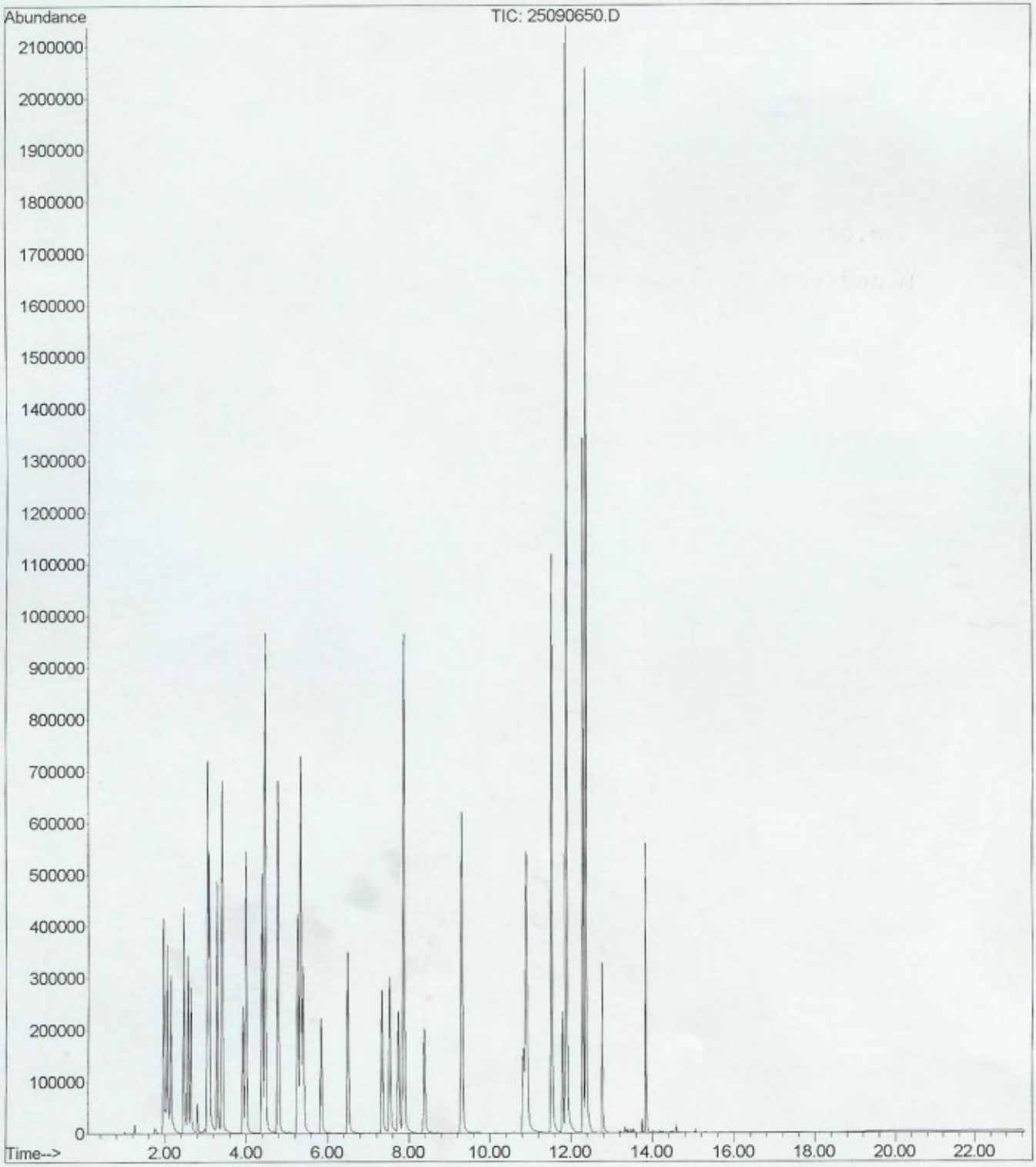
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090667.D
Operator :
Acquired : 27 Sep 2006 7:45 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@voc
Misc Info :
Vial Number: 67



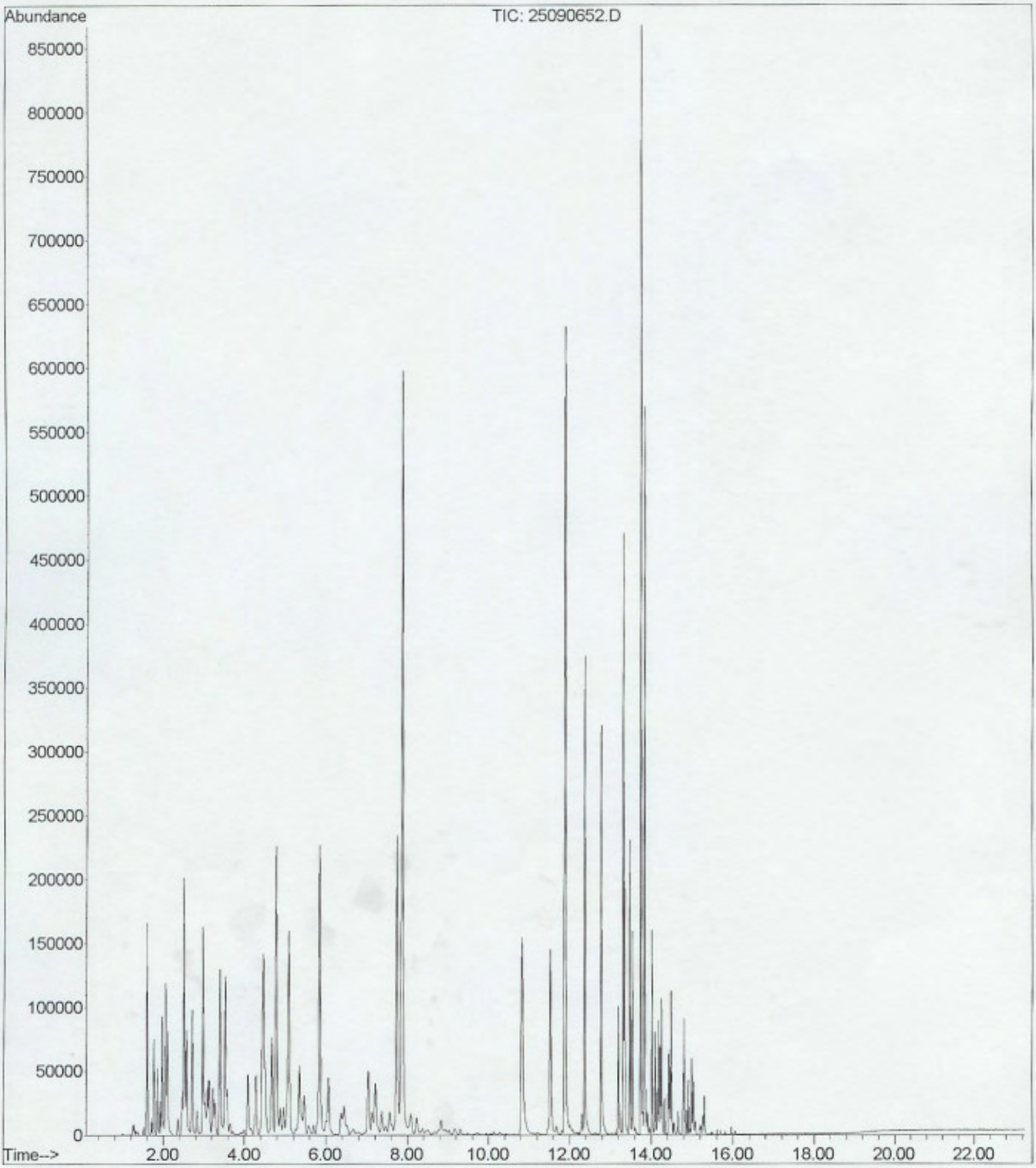
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090668.D
Operator :
Acquired : 27 Sep 2006 8:20 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@gas
Misc Info :
Vial Number: 68



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090650.D
Operator :
Acquired : 26 Sep 2006 9:55 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@voc
Misc Info :
Vial Number: 50



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090652.D
Operator :
Acquired : 26 Sep 2006 11:06 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@gas
Misc Info :
Vial Number: 52



CHAIN OF CUSTODY FORM

PAL Pacific Analytical Laboratory
851 West Midway Ave., Suite 201B
Alameda, CA 94501
510-864-0364 Telephone
510-864-0365 Fax

PAL
Login# 6090016

Project No: 2552	Sampler: M. Spielmann
Project Name: 15101 Freedom Avenue San Leandro, CA.	Report To: Joyce Bobek
Project P.O.: ---- 2552	Company: SOMA Environmental Engineering, Inc.
Turnaround Time: Standard	Tel: ~~925-244-6600~~ 925-734-6400 Fax: ~~925-244-6601~~ 925-734-6401

Analyses/Method

Lab No.	Sample ID	Date	Time	Soil	Water	Waste	# of Containers	HCL	H_2SO_4	HNO_3	ICE	Field Notes	TPHg 8260B	BTEX 8260B	MTBE, TAME, ETBE, DIPE, 8260B	TBA, ethanol, EDB, EDC 8260B	TPHd 8015M			
1	DPS-5(22-23)	9/20/06	0810	X			1				X	acetate liner	X	X	X	X	X			
2	DPW-5(18-22)	9/20/06	0830		X		4	X			X	40 ml VOA	X	X	X	X				
2	DPW-5 (18-22)	9/20/06	0830		X		1				X	one 1 liter amber					X			
3	DPS-5 (31-32)	9/20/06	0845	X			1				X	acetate liner	X	X	X	X	X			
4	DPS-5 (41-42)	9/20/06	0920	X			1				X	acetate liner	X	X	X	X	X			
5	DPS-2 (26-27)	9/20/06	1030	X			1				X	acetate liner	X	X	X	X	X			
6	DPS-2 (42-43)	9/20/06	1115	X			1				X	acetate liner	X	X	X	X	X			

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Request EDD & EDF	[signature]	9/20/06-1345	[signature]	9/20/06 1345

PAL Pacific Analytical Laboratory
851 West Midway Ave. Suite 201
Alameda, CA 94501
Phone (510) 864-0364

28 September 2006

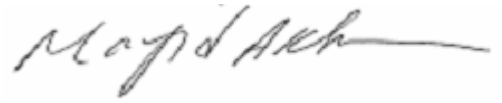
Mansour Sepehr
SOMA Environmental Engineering Inc.
6620 Owens Drive, Suite A
Pleasanton, CA 94588

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 6090016

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



Maiid Akhavan
Laboratory Director

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DPS-5 (22-23)	6090016-01	Soil	20-Sep-06 08:10	20-Sep-06 14:15
DPW-5 (18-22)	6090016-02	Water	20-Sep-06 08:30	20-Sep-06 14:15
DPS-5 (31-32)	6090016-03	Soil	20-Sep-06 08:45	20-Sep-06 14:15
DPS-5 (41-42)	6090016-04	Soil	20-Sep-06 09:20	20-Sep-06 14:15
DPS-2 (26-27)	6090016-05	Soil	20-Sep-06 10:30	20-Sep-06 14:15
DPS-2 (42-43)	6090016-06	Soil	20-Sep-06 11:15	20-Sep-06 14:15

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Extractable Petroleum Hydrocarbons by 8015 DRO

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-5 (22-23) (6090016-01) Soil	**Sampled: 20-Sep-06 08:10**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	**292**	50.0	mg/kg	1	BI62101	20-Sep-06	22-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*83.8 %*	*70-130*		"	"	"	"	
DPW-5 (18-22) (6090016-02RE1) Water	**Sampled: 20-Sep-06 08:30**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	**22000**	250	ug/l	5	BI62701	20-Sep-06	27-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*76.0 %*	*70-130*		"	"	"	"	
DPS-5 (31-32) (6090016-03) Soil	**Sampled: 20-Sep-06 08:45**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	20-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*82.1 %*	*70-130*		"	"	"	"	
DPS-5 (41-42) (6090016-04) Soil	**Sampled: 20-Sep-06 09:20**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	20-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*78.0 %*	*70-130*		"	"	"	"	
DPS-2 (26-27) (6090016-05) Soil	**Sampled: 20-Sep-06 10:30**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	**56.5**	50.0	mg/kg	1	BI62101	20-Sep-06	22-Sep-06	EPA 8015M	D-06, D-30
Surrogate: Pentacosane		*80.4 %*	*70-130*		"	"	"	"	
DPS-2 (42-43) (6090016-06) Soil	**Sampled: 20-Sep-06 11:15**	**Received: 20-Sep-06 14:15**							
Diesel (C10-C24)	ND	50.0	mg/kg	1	BI62101	20-Sep-06	22-Sep-06	EPA 8015M	
Surrogate: Pentacosane		*87.4 %*	*70-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-5 (22-23) (6090016-01) Soil Sampled: 20-Sep-06 08:10 Received: 20-Sep-06 14:15									
Gasoline (C6-C12)	**241100**	2150	ug/kg	43	BI62703	20-Sep-06	26-Sep-06	EPA 8260B	
Benzene	**34.63**	21.50	"	"	"	"	"	"	
Ethylbenzene	**973.1**	21.50	"	"	"	"	"	"	
m&p-Xylene	**1185**	43.00	"	"	"	"	"	"	
o-xylene	**1076**	21.50	"	"	"	"	"	"	
Toluene	**1195**	86.00	"	"	"	"	"	"	
MTBE	ND	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*86.0 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*102 %*		*70-130*		"	"	"	
DPW-5 (18-22) (6090016-02RE2) Water Sampled: 20-Sep-06 08:30 Received: 20-Sep-06 14:15									
Gasoline (C6-C12)	**119000**	2150	ug/l	43	BI62702	20-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**3930**	21.5	"	"	"	"	"	"	
Ethylbenzene	**6030**	21.5	"	"	"	"	"	"	
m&p-Xylene	**7260**	43.0	"	"	"	"	"	"	
o-xylene	**7000**	21.5	"	"	"	"	"	"	
Toluene	**6910**	86.0	"	"	"	"	"	"	
MTBE	**338**	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	**109**	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*83.4 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*88.0 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*93.6 %*		*70-130*		"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-5 (31-32) (6090016-03) Soil	**Sampled: 20-Sep-06 08:45**	**Received: 20-Sep-06 14:15**							
Gasoline (C6-C12)	**490.1**	50.00	ug/kg	1	BI62703	20-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**2.750**	0.5000	"	"	"	"	"	"	
Ethylbenzene	**11.58**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**20.91**	1.000	"	"	"	"	"	"	
o-xylene	**21.70**	0.5000	"	"	"	"	"	"	
Toluene	**9.260**	2.000	"	"	"	"	"	"	
MTBE	**7.10**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.2 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.2 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*94.8 %*		*70-130*	"	"	"	"	
DPS-5 (41-42) (6090016-04) Soil	**Sampled: 20-Sep-06 09:20**	**Received: 20-Sep-06 14:15**							
Gasoline (C6-C12)	**257.3**	50.00	ug/kg	1	BI62703	20-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**0.5200**	0.5000	"	"	"	"	"	"	
Ethylbenzene	**6.190**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**10.05**	1.000	"	"	"	"	"	"	
o-xylene	**9.330**	0.5000	"	"	"	"	"	"	
Toluene	**3.180**	2.000	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*98.8 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*93.4 %*		*70-130*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPS-2 (26-27) (6090016-05RE1) Soil Sampled: 20-Sep-06 10:30 Received: 20-Sep-06 14:15									
Gasoline (C6-C12)	**14080**	2150	ug/kg	43	BI62703	20-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**46.41**	21.50	"	"	"	"	"	"	
Ethylbenzene	**120.2**	21.50	"	"	"	"	"	"	
m&p-Xylene	**184.6**	43.00	"	"	"	"	"	"	
o-xylene	**83.10**	21.50	"	"	"	"	"	"	
Toluene	**929.6**	86.00	"	"	"	"	"	"	
MTBE	ND	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	ND	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	21.5	"	"	"	"	"	"	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*99.2 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*97.8 %*		*70-130*		"	"	"	
DPS-2 (42-43) (6090016-06) Soil Sampled: 20-Sep-06 11:15 Received: 20-Sep-06 14:15									
Gasoline (C6-C12)	**372.1**	50.00	ug/kg	1	BI62703	20-Sep-06	27-Sep-06	EPA 8260B	
Benzene	**2.830**	0.5000	"	"	"	"	"	"	
Ethylbenzene	**3.620**	0.5000	"	"	"	"	"	"	
m&p-Xylene	**14.71**	1.000	"	"	"	"	"	"	
o-xylene	**8.810**	0.5000	"	"	"	"	"	"	
Toluene	**4.150**	2.000	"	"	"	"	"	"	
MTBE	**84.8**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	**107**	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.4 %*		*70-130*		"	"	"	
Surrogate: Dibromofluoromethane		*92.4 %*		*70-130*		"	"	"	
Surrogate: Perdeuterotoluene		*97.0 %*		*70-130*		"	"	"	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62101 - EPA 3550A										
Blank (BI62101-BLK1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62101-BS1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.52*		*mg/kg*	*10.0*		*95.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200		122	50-140			
LCS Dup (BI62101-BSD1)				Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.87*		*mg/kg*	*10.0*		*98.7*	*70-130*			
Diesel (C10-C24)	232	50.0	"	200		116	50-140	4.63	40	QR-02
Matrix Spike (BI62101-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.70*		*mg/kg*	*10.0*		*97.0*	*70-130*			
Diesel (C10-C24)	256	50.0	"	200	42.0	107	0-200			
Matrix Spike Dup (BI62101-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 21-Sep-06						
Surrogate: Pentacosane	*9.82*		*mg/kg*	*10.0*		*98.2*	*70-130*			
Diesel (C10-C24)	243	50.0	"	200	42.0	100	0-200	5.21	200	
Batch BI62701 - EPA 3510B										
Blank (BI62701-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*43.4*		*ug/l*	*50.0*		*86.8*	*70-130*			
Diesel (C10-C24)	ND	50.0	"							
LCS (BI62701-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*42.4*		*ug/l*	*50.0*		*84.8*	*70-130*			
Diesel (C10-C24)	833	50.0	"	1000		83.3	50-130			

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62701 - EPA 3510B										
LCS Dup (BI62701-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: Pentacosane	*44.7*		*ug/l*	*50.0*		*89.4*	*70-130*			
Diesel (C10-C24)	997	50.0	"	1000		99.7	50-130	17.9	40	

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
Blank (BI62702-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*45.5*		*ug/l*	*50.0*		*91.0*	*70-130*			
Surrogate: Dibromofluoromethane	*52.5*		*"*	*50.0*		*105*	*70-130*			
Surrogate: Perdeuterotoluene	*46.5*		*"*	*50.0*		*93.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.0	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	1.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
LCS (BI62702-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*44.8*		*ug/l*	*50.0*		*89.6*	*70-130*			
Surrogate: Dibromofluoromethane	*45.4*		*"*	*50.0*		*90.8*	*70-130*			
Surrogate: Perdeuterotoluene	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
MTBE	89.3	0.500	"	100		89.3	70-130			
ETBE	83.8	0.500	"	100		83.8	70-130			
TAME	92.7	2.00	"	100		92.7	70-130			
Gasoline (C6-C12)	1850	50.0	"	2000		92.5	70-130			
TBA	473	10.0	"	500		94.6	70-130			
Benzene	94.6	0.500	"	100		94.6	70-130			
Toluene	104	2.00	"	100		104	70-130			

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62702 - EPA 5030 Water MS										
LCS Dup (BI62702-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*41.6*		*ug/l*	*50.0*		*83.2*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.5*		*"*	*50.0*		*95.0*	*70-130*			
MTBE	77.2	0.500	"	100		77.2	70-130	14.5	20	
ETBE	82.6	0.500	"	100		82.6	70-130	1.44	20	
TAME	92.2	2.00	"	100		92.2	70-130	0.541	20	
TBA	449	10.0	"	500		89.8	70-130	5.21	20	
Gasoline (C6-C12)	2030	50.0	"	2000		102	70-130	9.28	20	
Benzene	101	0.500	"	100		101	70-130	6.54	20	
Toluene	104	2.00	"	100		104	70-130	0.00	20	
Batch BI62703 - EPA 5030 Soil MS										
Blank (BI62703-BLK1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.1*		*ug/kg*	*50.0*		*74.2*	*70-130*			
Surrogate: Dibromofluoromethane	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
Surrogate: Perdeuterotoluene	*46.0*		*"*	*50.0*		*92.0*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.00	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.5000	"							
Ethylbenzene	ND	0.5000	"							
m&p-Xylene	ND	1.000	"							
o-xylene	ND	0.5000	"							
Toluene	ND	2.000	"							

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
LCS (BI62703-BS1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*40.9*		*ug/kg*	*50.0*		*81.8*	*70-130*			
Surrogate: Dibromofluoromethane	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
Surrogate: Perdeuterotoluene	*47.8*		*"*	*50.0*		*95.6*	*70-130*			
MTBE	75.7	0.500	"	100		75.7	70-130			
ETBE	78.8	0.500	"	100		78.8	70-130			
TAME	79.4	2.00	"	100		79.4	70-130			
Gasoline (C6-C12)	2230	50.00	"	2000		112	70-130			
TBA	627	10.0	"	500		125	70-130			
Benzene	106	0.5000	"	100		106	70-130			
Toluene	106	2.000	"	100		106	70-130			
LCS Dup (BI62703-BSD1)				Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*53.8*		*ug/kg*	*50.0*		*108*	*70-130*			
Surrogate: Dibromofluoromethane	*41.2*		*"*	*50.0*		*82.4*	*70-130*			
Surrogate: Perdeuterotoluene	*48.3*		*"*	*50.0*		*96.6*	*70-130*			
MTBE	104	0.500	"	100		104	70-130	31.5	20	QR-02
ETBE	87.8	0.500	"	100		87.8	70-130	10.8	20	
TAME	91.4	2.00	"	100		91.4	70-130	14.1	20	
TBA	468	10.0	"	500		93.6	70-130	29.0	20	QR-02
Gasoline (C6-C12)	1990	50.00	"	2000		99.5	70-130	11.4	20	
Benzene	90.2	0.5000	"	100		90.2	70-130	16.1	20	
Toluene	97.9	2.000	"	100		97.9	70-130	7.95	20	
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.2*		*ug/kg*	*50.0*		*74.4*	*70-130*			
Surrogate: Dibromofluoromethane	*40.3*		*"*	*50.0*		*80.6*	*70-130*			
Surrogate: Perdeuterotoluene	*46.3*		*"*	*50.0*		*92.6*	*70-130*			
MTBE	82.5	0.500	"	100	6.92	75.6	70-130			
DIPE	127	0.500	"	100	ND	127	70-130			
ETBE	114	0.500	"	100	ND	114	70-130			
TAME	101	2.00	"	100	0.990	100	70-130			
Gasoline (C6-C12)	1350	50.00	"	2000	ND	67.5	70-130			QM-05
TBA	621	10.0	"	500	3.10	124	70-130			
Benzene	145	0.5000	"	100	ND	145	70-130			QM-05
Ethylbenzene	165	0.5000	"	100	2.600	162	70-130			QM-05
m&p-Xylene	153	1.000	"	100	1.030	152	70-130			QM-05

Pacific Analytical Laboratory

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SOMA Environmental Engineering Inc.	Project: 15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BI62703 - EPA 5030 Soil MS										
Matrix Spike (BI62703-MS1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
o-xylene	144	0.5000	ug/kg	100	0.7100	143	70-130			QM-05
Toluene	145	2.000	"	100	0.6300	144	70-130			QM-05
Matrix Spike Dup (BI62703-MSD1)	**Source: 6090014-03**			Prepared & Analyzed: 27-Sep-06						
Surrogate: 4-Bromofluorobenzene	*37.9*		*ug/kg*	*50.0*		*75.8*	*70-130*			
Surrogate: Dibromofluoromethane	*37.0*		*"*	*50.0*		*74.0*	*70-130*			
Surrogate: Perdeuterotoluene	*46.2*		*"*	*50.0*		*92.4*	*70-130*			
MTBE	64.1	0.500	"	100	6.92	57.2	70-130	25.1	20	QR-03, QM-05
DIPE	88.0	0.500	"	100	ND	88.0	70-130	36.3	20	QR-03
ETBE	78.2	0.500	"	100	ND	78.2	70-130	37.3	20	QR-03
TAME	70.4	2.00	"	100	0.990	69.4	70-130	35.7	20	QR-03, QM-05
TBA	370	10.0	"	500	3.10	73.4	70-130	50.7	20	QR-03
Gasoline (C6-C12)	2500	50.00	"	2000	ND	125	70-130	59.7	20	QR-03
Benzene	95.3	0.5000	"	100	ND	95.3	70-130	41.4	20	QR-03
Ethylbenzene	120	0.5000	"	100	2.600	117	70-130	31.6	20	QR-03
m&p-Xylene	114	1.000	"	100	1.030	113	70-130	29.2	20	QR-03
o-xylene	109	0.5000	"	100	0.7100	108	70-130	27.7	20	QR-03
Toluene	96.7	2.000	"	100	0.6300	96.1	70-130	40.0	20	QR-03

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6620 Owens Drive, Suite A	Project Number: 2552	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	28-Sep-06 15:32

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
D-30	Unidentified hydrocarbons C9-C16.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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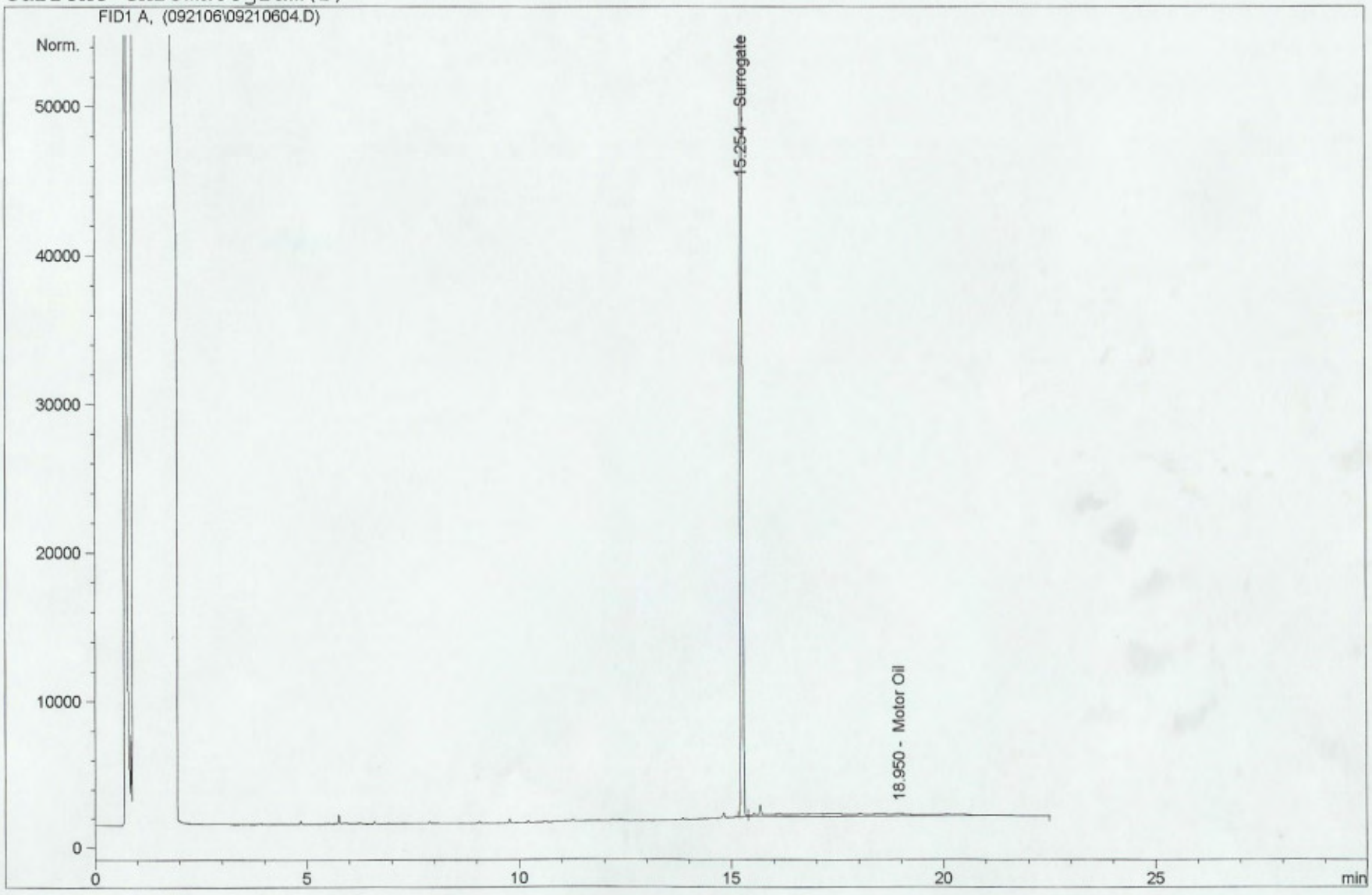
Print of window 38: Current Chromatogram(s)

Injection Date	: 9/21/06 3:54:50 PM	Seq. Line	: 4
Sample Name	: BI62101-BLK1	Vial	: 5
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		

Current Chromatogram(s)



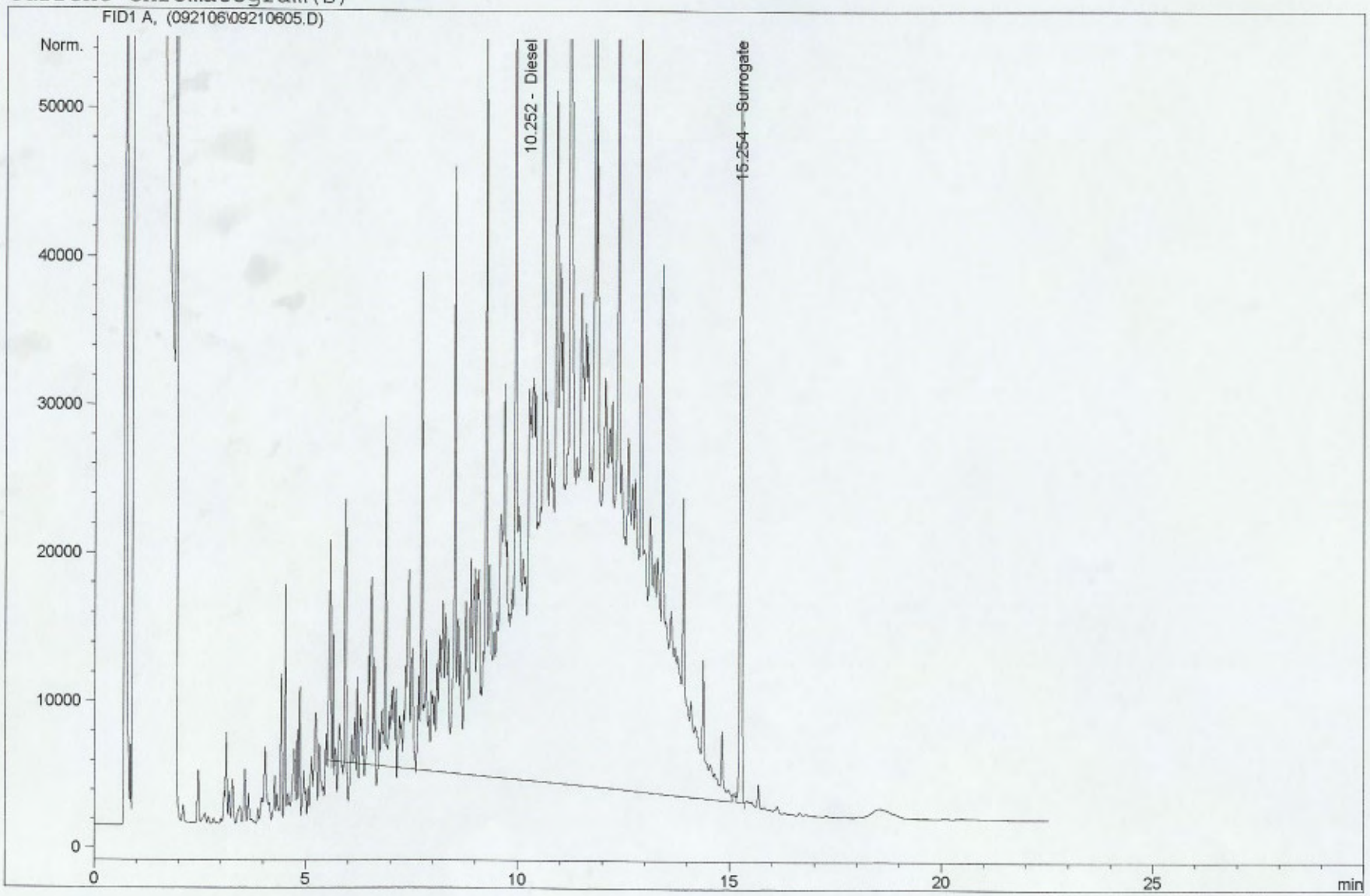
Print of window 38: Current Chromatogram(s)

Injection Date : 9/21/06 4:27:48 PM
Sample Name : BI62101-BS1
Acq. Operator : jz

Seq. Line : 5
Vial : 6
Inj : 1
Inj Volume : 2 ul

Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)



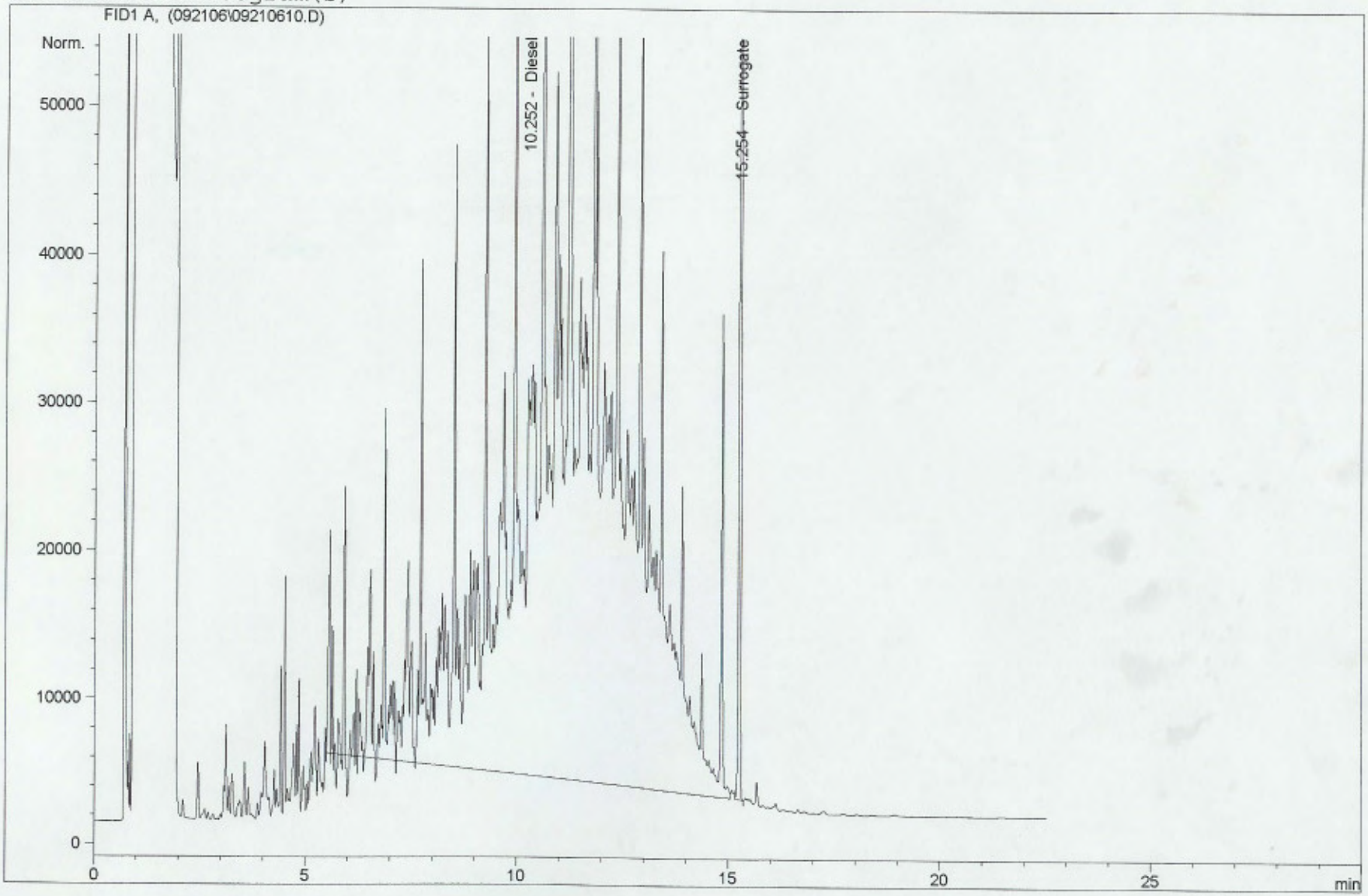
Print of Window 38: Current Chromatogram(s)

Injection Date : 9/21/06 7:12:52 PM
Sample Name : BI62101-MS1
Acq. Operator : jz

Seq. Line : 10
Vial : 11
Inj : 1
Inj Volume : 2 ul

Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz

Current Chromatogram(s)



Instrument 1 9/28/06 1:38:13 PM jz

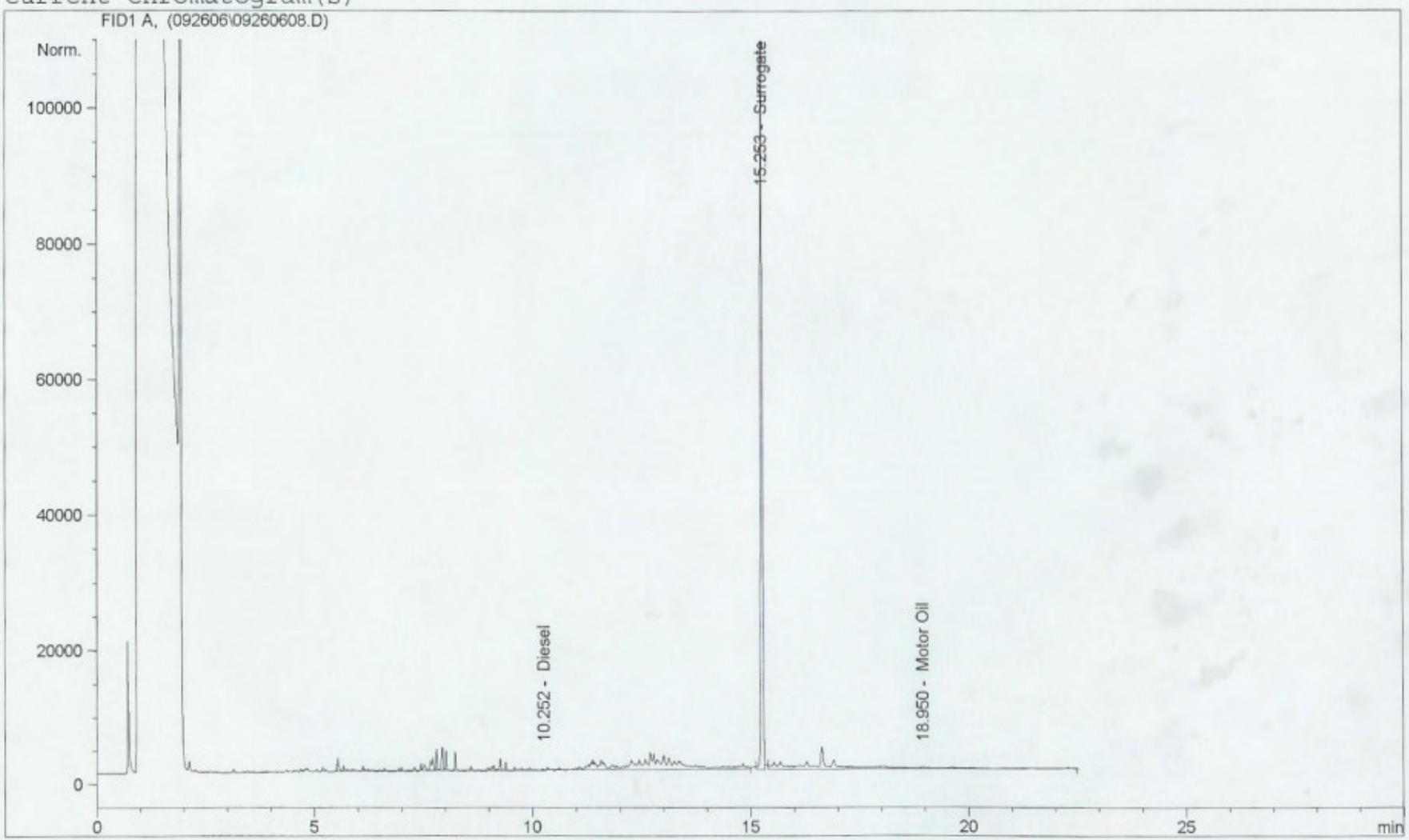
Print of Window 38: Current Chromatogram(s)

==========

Injection Date : 9/26/06 5:54:17 PM Seq. Line : 7
Sample Name : ~~MB092606A~~ BI62701-BLK1 Vial : 8
Acq. Operator : jz Inj : 1
Inj Volume : 2 ul

Acq. Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/20/06 12:13:01 PM by jz
Analysis Method : C:\HPCHEM\1\METHODS\GC052306.M
Last changed : 9/28/06 1:39:22 PM by jz
(modified after loading)

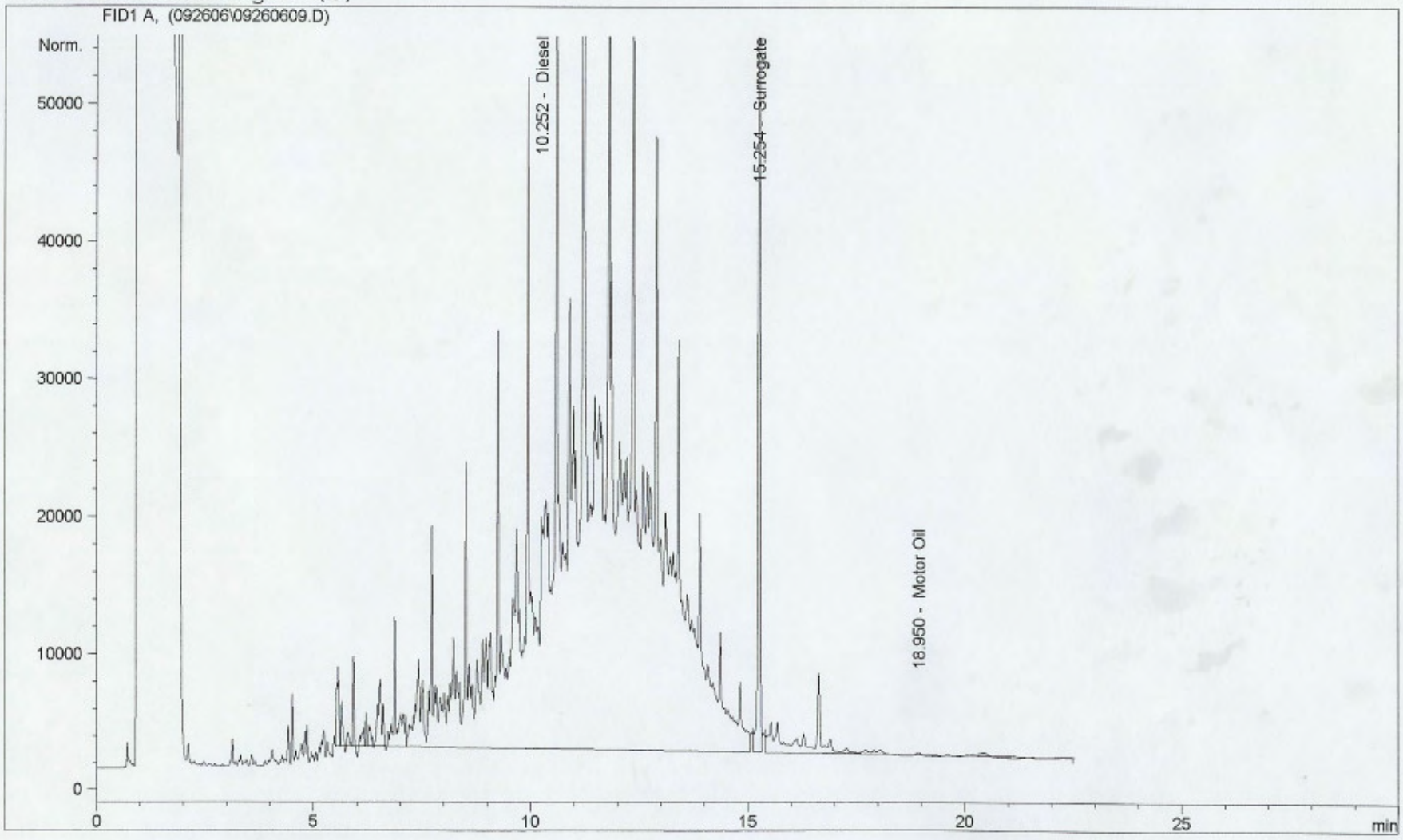
Current Chromatogram(s)



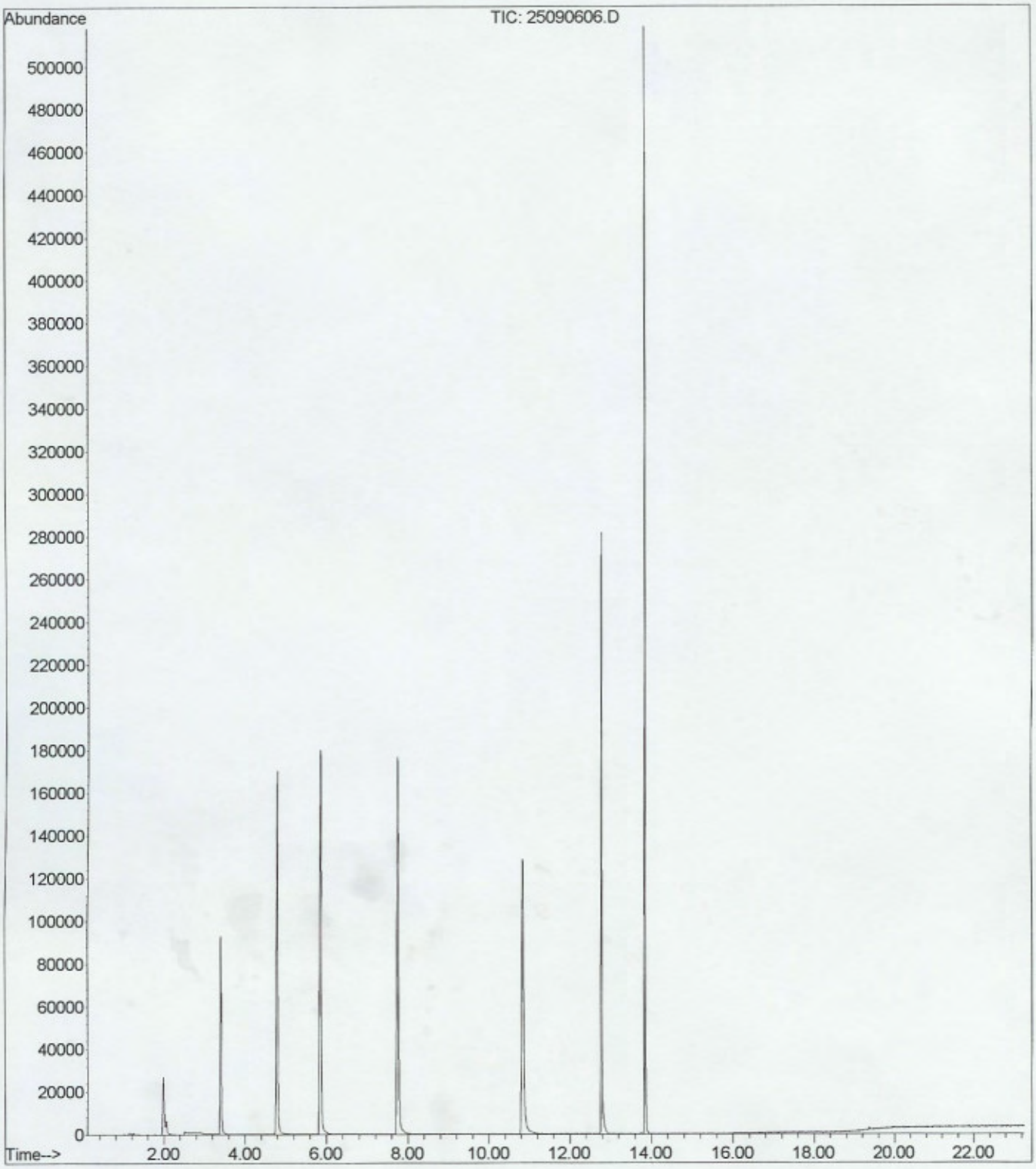
Print of window 38: Current Chromatogram(s)

Injection Date	: 9/26/06 6:27:15 PM	Seq. Line	: 8
Sample Name	: ~~MB092606B~~ BI62701-BS1	Vial	: 9
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Acq. Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/20/06 12:13:01 PM by jz		
Analysis Method	: C:\HPCHEM\1\METHODS\GC052306.M		
Last changed	: 9/28/06 1:39:45 PM by jz (modified after loading)		

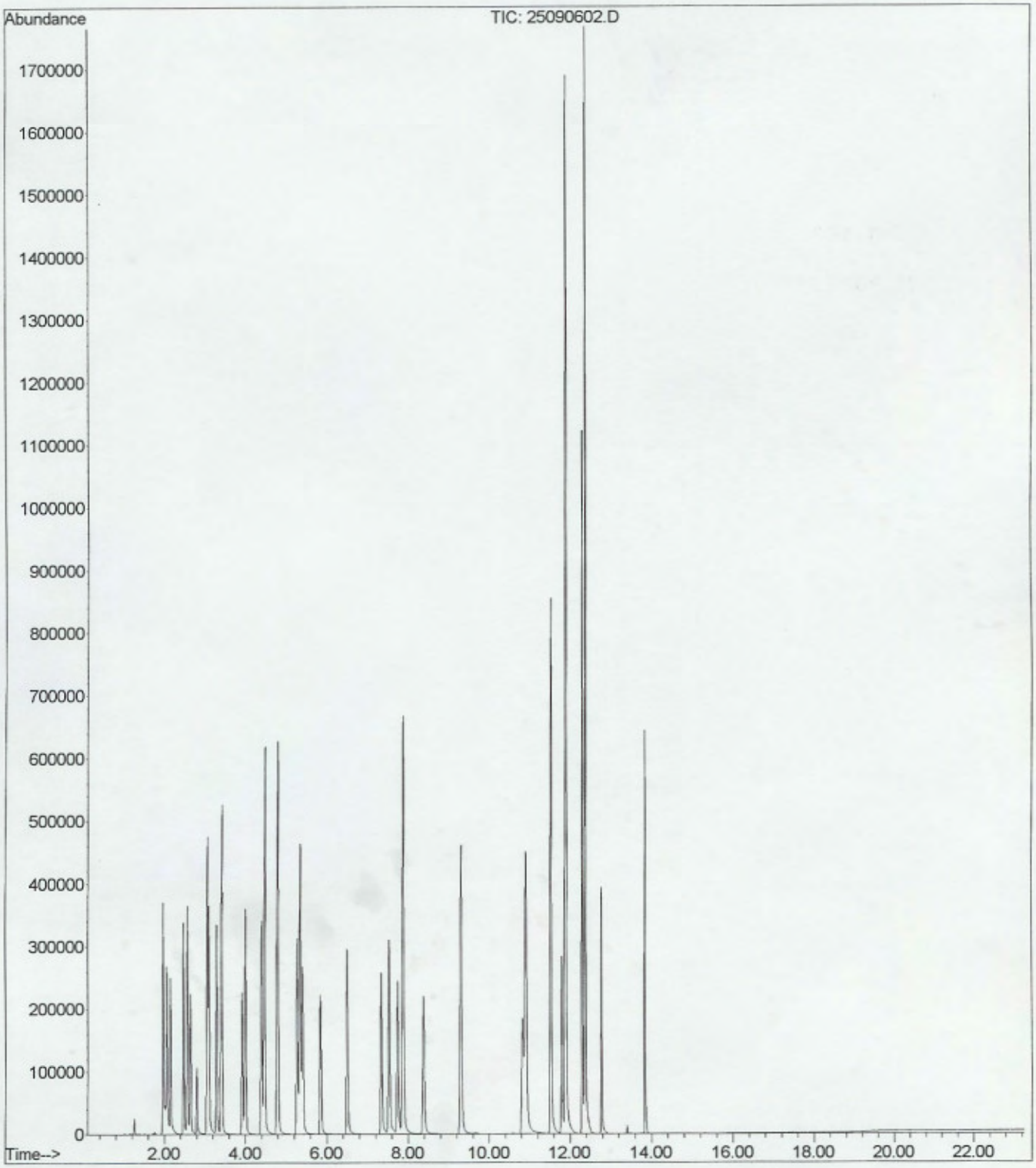
Current Chromatogram(s)



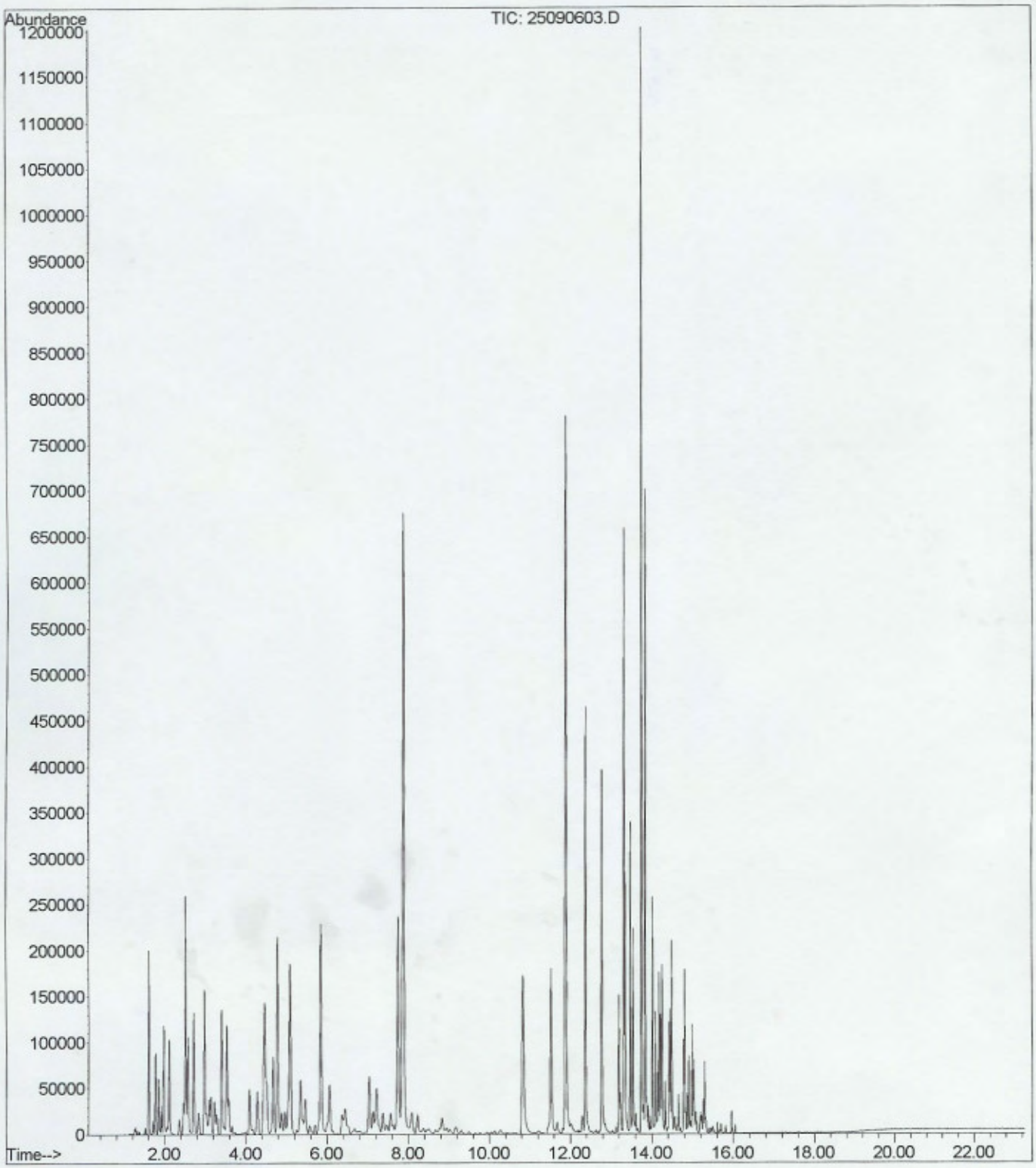
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090606.D
Operator :
Acquired : 25 Sep 2006 12:48 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BLK1
Misc Info :
Vial Number: 6



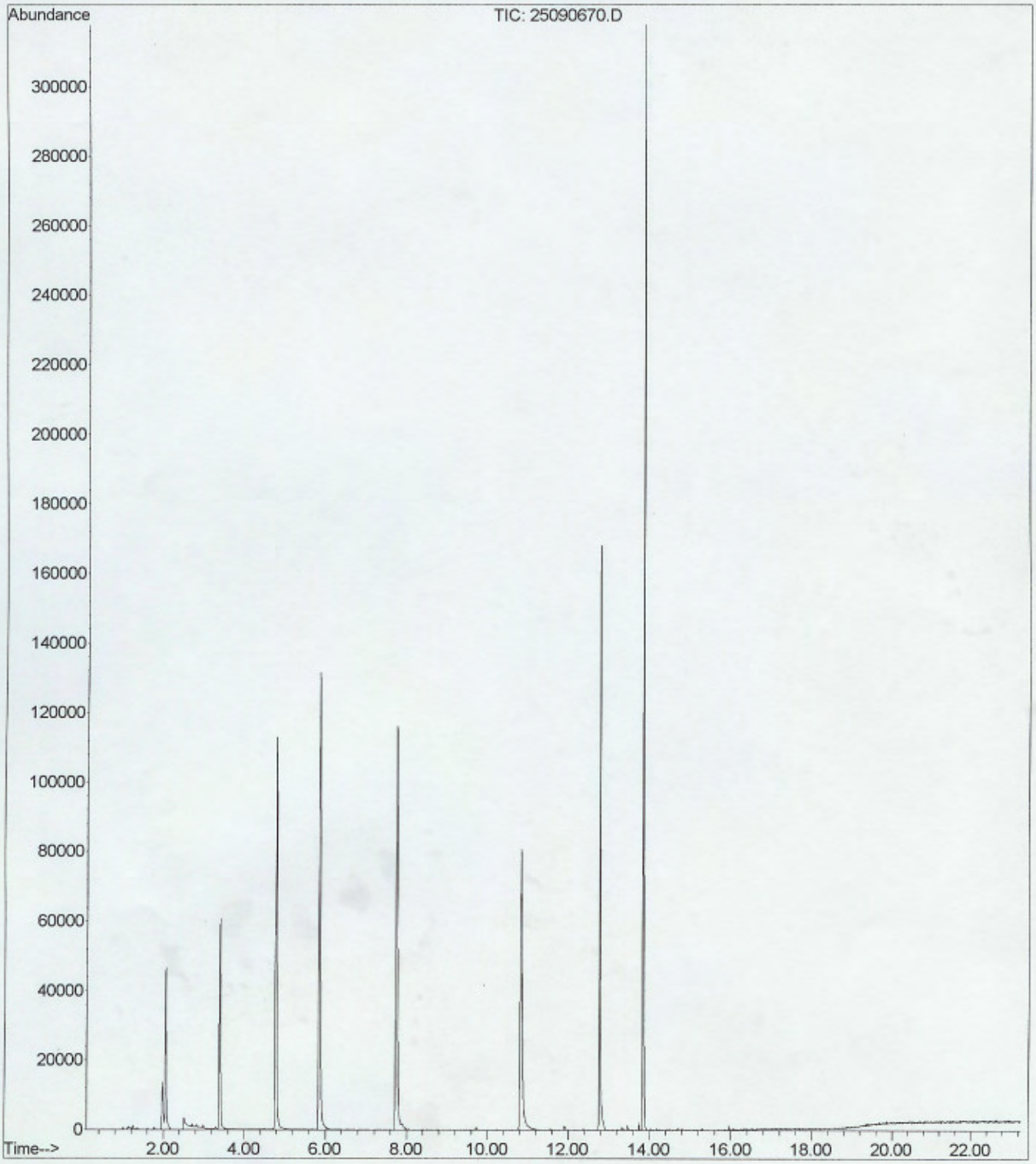
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090602.D
Operator :
Acquired : 25 Sep 2006 10:27 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@voc
Misc Info :
Vial Number: 2



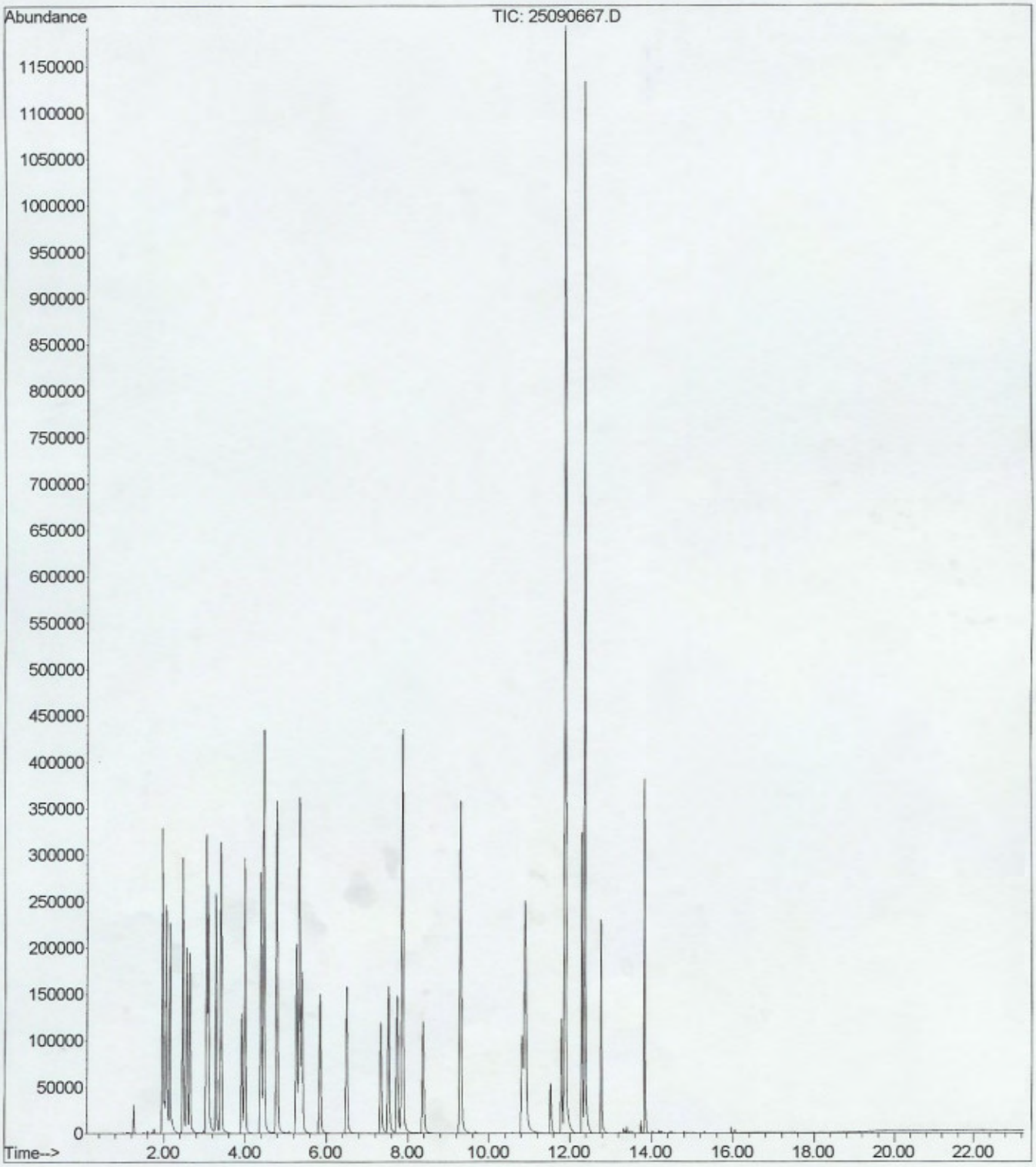
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090603.D
Operator :
Acquired : 25 Sep 2006 11:02 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62702-BS1@gas
Misc Info :
Vial Number: 3



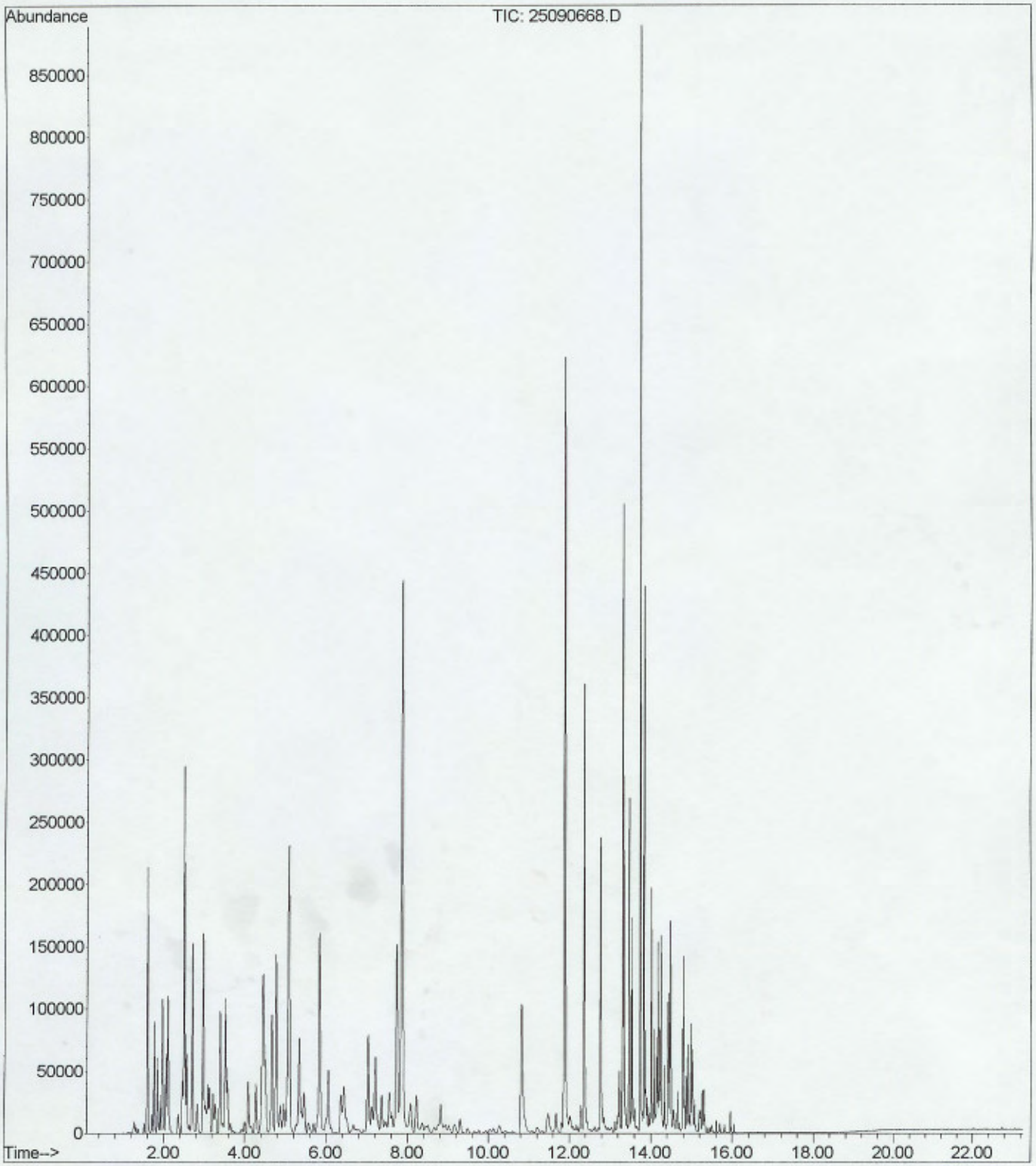
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090670.D
Operator :
Acquired : 27 Sep 2006 12:25 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BLK1
Misc Info :
Vial Number: 70



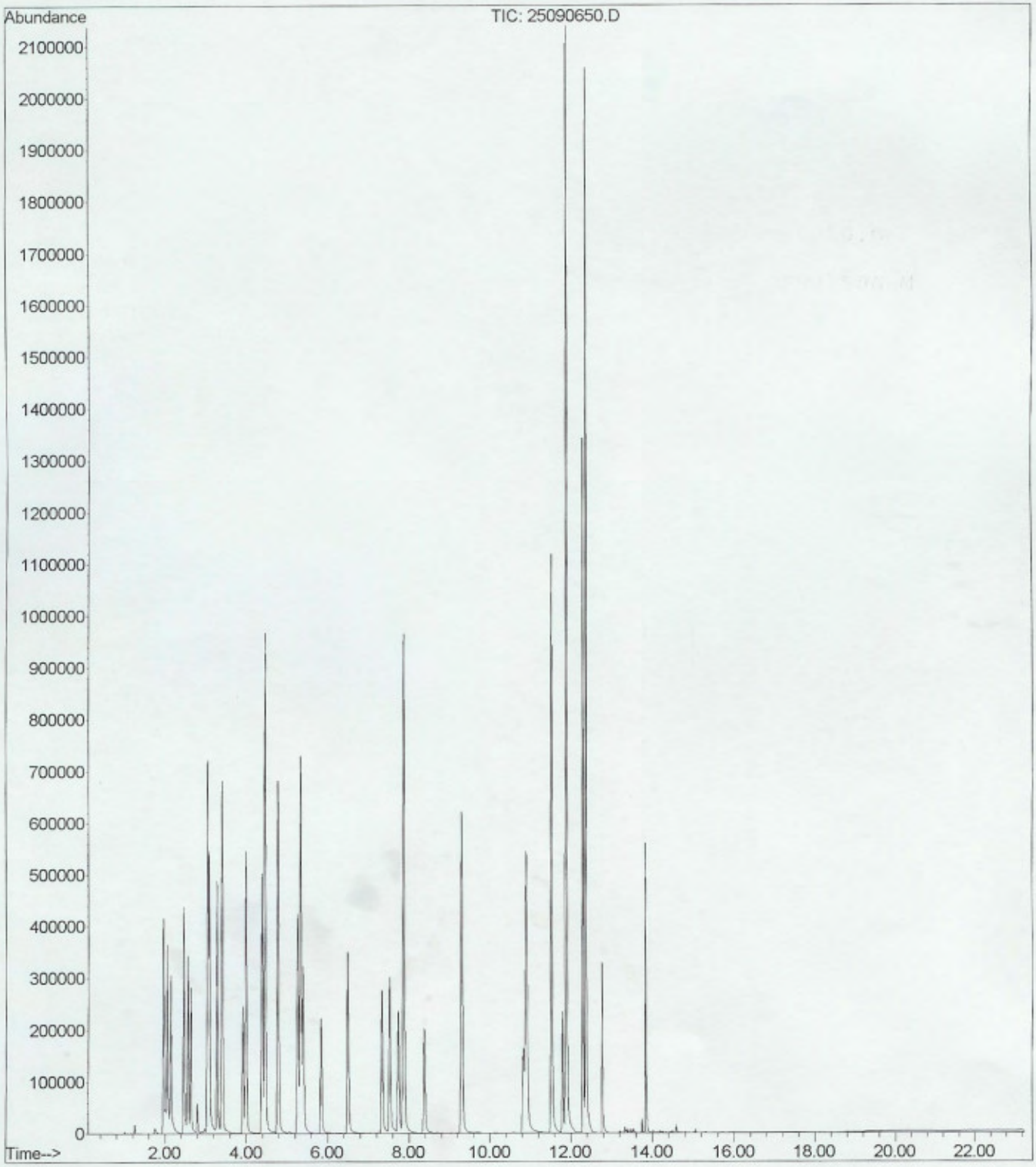
File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090667.D
Operator :
Acquired : 27 Sep 2006 7:45 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@voc
Misc Info :
Vial Number: 67



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090668.D
Operator :
Acquired : 27 Sep 2006 8:20 am using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-BS1@gas
Misc Info :
Vial Number: 68



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090650.D
Operator :
Acquired : 26 Sep 2006 9:55 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@voc
Misc Info :
Vial Number: 50



File :C:\MSDChem\1\DATA\2006-Sep-25-0934.b\25090652.D
Operator :
Acquired : 26 Sep 2006 11:06 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BI62703-MS1@gas
Misc Info :
Vial Number: 52