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PHASE III REMEDIAL INVESTIGATION

SEPTEMBER 1994

SEABREEZE YACHT CENTER, INC.
Oakland, California

For:

Port of Oakland
Oakland, California

S9171-00.02

respond by Oct 3

5900 Hollis Street, Suite D • Emeryville, CA 94608 • (510) 420-8686

BASELINE

ENVIRONMENTAL CONSULTING

1 September 1994
S9171-00.02

Ms. Michele Heffes
Port of Oakland
530 Water Street
Oakland, CA 94607

Subject: Phase III Remedial Investigation, Seabreeze Yacht Center, Inc., Oakland, California

Dear Ms. Heffes:

Please find enclosed the Phase III Remedial Investigation for the Seabreeze Yacht Center, Inc., Oakland, California. If you have any questions, please contact us at your convenience.

Sincerely,

Yane Nordhav
Principal
Reg. Geologist #4009

YN:cr
Enclosure

cc: Dan Schoenholz, Port of Oakland

S9171rpt.ph3-9/1/94

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PHASE III REMEDIAL INVESTIGATION
Seabreeze Yacht Center, Inc.
280 Sixth Avenue, Oakland, California

INTRODUCTION

This report documents Phase III of Remedial Investigation activities conducted for the Port of Oakland (Port) at Seabreeze Yacht Center, Inc. (Site), 280 Sixth Avenue, Oakland, California (Figure 1). The purpose of this Phase III Remedial Investigation was 1) to further characterize the lateral and vertical extent of soil contamination previously identified on this Site, 2) to further address groundwater conditions at the Site, 3) to assess the quality of soils around and beneath the concrete containment, 4) to assess the chemical quality of the concrete containment, 5) to remove soils surrounding the concrete containment in an effort to eliminate incremental discharges of contaminants to the Clinton Basin, and 6) to assess the potential presence of Bunker C petroleum hydrocarbons (Bunker C) landward of the concrete containment. This report provides documentation of all field activities; a summary of analytical results of soil, groundwater, and concrete containment sampling; and recommendations for Site remediation.

The field activities documented in this report were conducted in January, April, May, and August 1994, in accordance with work plans prepared by BASELINE (1992, 1994a, 1994b). The work plans were reviewed and conditionally approved by Alameda County Health Care Services Agency, Department of Environmental Health, Hazardous Materials Division (County) (Appendix A).

BACKGROUND

SITE DESCRIPTION

The Site consists of approximately nine acres of land, located at the southern terminus of Sixth Avenue, along the Clinton Basin (Figure 1). An abandoned dry dock occupies approximately two acres of the Site; a concrete containment structure, 52.5 feet in diameter, is located near the southeastern edge of the Site. About six and one-half acres are occupied by the Clinton Basin Canal. A parking lot, adjacent to the Embarcadero, covers the remaining one-half acre of the Site (Figure 2).

PRELIMINARY REMEDIAL INVESTIGATION ACTIVITIES (1990)

In September 1990, BASELINE conducted a preliminary soil investigation at the Seabreeze Yacht Center for the Port in response to Notices of Violation issued in 1988 and 1989 by the County (BASELINE, 1990).

In response to the Notices of Violation, the Port requested BASELINE to collect 43 soil samples from fifteen locations on the property in September 1990. The samples were analyzed for metals, and selectively analyzed for oil and grease and VOCs. Sampling activities, including analytical results, were documented in a report by BASELINE (1990). Analytical results indicated levels of lead and copper exceeding the hazardous waste levels, as defined by Title 26, Division 22 of the California

Code of Regulations (CCR), at four soil sampling locations (SB-6, SB-9, SB-12, and SB-14) (Figure 2). Table 2 includes the analytical results from the 1990 sampling event. Based on the results of soil sampling activities, BASELINE prepared a work plan to further characterize the subsurface soil and to assess groundwater conditions at the Site.

PHASE II REMEDIAL INVESTIGATION (1990/1991)

From November 1990 through December 1991, BASELINE conducted a Phase II Remedial Investigation at the Site at the request of the Port. The work was carried out in accordance with the 1990 work plan. A total of 59 soil samples were collected and selectively analyzed for lead and copper. Sixteen of the samples contained soluble concentrations of lead above the Soluble Threshold Limit Concentrations (STLC). One soil sample contained soluble copper at a level greater than the STLC. None of the soil samples contained total concentrations above the Total Threshold Limit Concentrations (TTLC) for lead or copper. Table 2 includes the analytical results from the 1991 sampling event.

Two groundwater monitoring wells were also installed on the Site and sampled in April 1991 (BASELINE, 1992). The groundwater samples did not contain lead, oil and grease, or volatile organic compounds (VOCs) above the laboratory reporting limits. Copper was identified in the groundwater samples from both wells above the laboratory reporting limits. A second groundwater sampling event in July 1991 (BASELINE, 1992) did not identify lead or copper above the laboratory reporting limits; the samples were not analyzed for oil and grease or VOCs.

In June 1991, soils within the concrete containment structure at the southeastern portion of the Site, formerly containing an aboveground fuel oil tank, were excavated (Figure 3). Soils from the concrete containment were stockpiled on-site. Soil samples from the stockpiles were collected and analyzed for total extractable hydrocarbons (TEH), metals, VOCs, and semi-volatile organic compounds. The analytical results of stockpile sampling indicated that the soils did not constitute a hazardous waste, as defined by Title 26 CCR, Division 22, but contained petroleum hydrocarbons significantly above the levels of detection. Bunker C concentrations in the stockpile ranged from 1,500 to 5,300 ppm, motor oil concentrations were less than 1,000 ppm, and diesel and gasoline concentrations were less than 100 ppm. The soils in the stockpile were not analyzed for metals. The Port subsequently retained a contractor to treat the soils on-site.

In April 1994, Decon Environmental Services, Inc. transported approximately 700 cubic yards of the treated petroleum-contaminated soils from the Site to Forward Landfill, Inc., near Stockton, California for disposal.

FIELD WORK 1994

Field work conducted in 1994 was implemented in accordance with work plans submitted to the County for approval (Appendix A). In response to the County conditions for approval, the work plans were amended; the final scope of work consisted of the following:

- Collection of 51 soil samples from 35 locations at 5-foot increments (up to 15 feet) from the April 1991 soil boring locations. Soil samples would be collected from depths ranging between

0.5 to 2.0 feet below ground surface. Of the 51 soil samples, 36 samples would be analyzed for total lead (EPA Method 7420). Two of the 36 samples would be analyzed for total copper (EPA Method 7210). Fifteen of the 51 soil samples would be held at the laboratory for additional analyses for lead and copper pending the analytical results of the 36 samples.

- Collection of quarterly groundwater samples for one year from two on-site monitoring wells, MW-SB1 and MW-SB2. Samples would be analyzed for total lead and total copper, VOCs, and total oil and grease.

- Collection of three soil samples from the soils surrounding the concrete containment located at the southeastern terminus of the Site. Samples would be analyzed for TEH, oil and grease, copper, and lead.

- Collection of a water sample from the standing water within the containment structure. The sample would be analyzed for TEH, oil and grease, copper, and lead.

- Collection of two concrete core samples from the base of the concrete containment structure. Core samples would be analyzed for TEH, oil and grease, total lead, and copper.

- Collection of two soil samples from beneath the concrete base. Soil samples would be analyzed for TEH, oil and grease, lead, and copper.

- Removal of soils immediately around the concrete containment and collection of six[1] verification samples at depths of 2.0 to 3.5 feet. The samples would be analyzed for lead, TEH, and Bunker C.

- Collection of soil samples from 19 areas north and west of the concrete containment. Soil samples would be analyzed for total petroleum hydrocarbons as Bunker C oil. A total of 19 samples were collected.

The following describes the field activities performed in 1994. Field work was performed in accordance with the work plans, approved by the County, described above and modified in accordance with field conditions. This section is divided into descriptions of:

- soil sampling associated with the four sampling locations previously identified as having lead and/or copper concentrations in excess of TTLCs and/or STLCs;

- groundwater sampling;

- concrete containment;

- soil sampling for total Bunker C landward of the concrete containment.

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[1] A total of seven samples were actually collected and analyzed based on field conditions.

Prior to commencement of Phase III field work activities, a site safety plan was prepared by BASELINE (Appendix B). Chemical hazard information for the site safety plan was based on analytical results obtained during the Preliminary Remedial Investigation (BASELINE, 1990) and the Phase II Field Investigation (BASELINE, 1992). The site safety plan was reviewed by BASELINE personnel prior to the field activities. On-site safety meetings were conducted by BASELINE and attended by the drilling personnel and contractors prior to on-site activities.

Field work was conducted under a permit from the San Francisco Bay Conservation and Development Commission (BCDC) for those on-site activities conducted within the jurisdiction of BCDC (Appendix C). Site utility clearance, at the perimeter of the property, was secured through Underground Service Alert (USA) 48 hours prior to the commencement of field activities.

SOIL SAMPLING AT FOUR LOCATIONS

Fifty-one soil samples were collected from 27[2] soil borings at or around four previous soil sampling locations SB-6, SB-9, SB-12, and SB-14 (Figure 2). Samples were collected at five-foot increments radially outward from those four former sampling locations. Sampling depths varied from 0.5 to 2.0 feet below the ground surface. Sample locations were selected based on the April 1991 soil boring locations from the Phase II Remedial Investigation, where soluble lead and/or copper were detected at levels exceeding the TTLC and/or STLC.

Methodology

The 27 soil borings were completed by West Hazmat Drilling Corporation of Fremont, California, under the supervision of a BASELINE geologist. Eight-inch bore holes were drilled using a hollow-stem auger. After each boring was completed, the hollow stem auger was steam-cleaned at a designated wash area and the rinsate was stored in labeled 55-gallon drums. Drill cuttings were stored in three labeled 55-gallon drums and stored on-site near the gate entrance to the facility. Each bore hole was backfilled to grade using a cement/bentonite grout.

Samples were collected from each boring using a California Modified sampler (2-inch diameter) fitted with 6-inch stainless steel liners. The sampler was driven into the ground by a 140-lb hammer. One liner was removed from the sampler, capped with teflon squares and plastic caps and sealed with silicon tape at both ends. The samples were labeled, and placed in a refrigerated cooler. Sampling equipment was decontaminated using trisodiumphosphate, water, and a deionized rinse prior to each sampling event. The samples were submitted the same day under chain-of-custody to Curtis and Tompkins, Ltd., a laboratory certified by the Department of Health Services. Laboratory reports and chain-of-custody forms are included in Appendix D, and soil boring logs are in Appendix E.

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[2] Due to field conditions, 51 samples were collected from 27 sample locations rather than the 35 locations proposed in the work plan.

Of the 51 soil samples, 38 samples[3] were analyzed for total lead (EPA Method 7420). Thirteen[4] samples were analyzed for total copper (EPA Method 7210). Thirty samples were analyzed for soluble lead (Waste Extraction Test (WET)), two samples were analyzed for soluble copper,[5] and four samples were analyzed for soluble lead by the TCLP method. Table 1 lists the types of analyses performed for each sample.

Drum Inventory

The sampling activities resulted in the generation of five waste drums on-site. Three drums contain the soil cuttings from the January 1994 sampling event; one drum contains rinsate water from the March 1991 sampling event; and one drum contains purged water from groundwater sampling performed in April 1991 and January 1994. Each drum on-site is labeled with a distinct identification number.

Analytical Results

Schematic diagrams (Figures 4 through 8) for soil boring locations SB-6, SB-9, SB-12, and SB-14 indicate sample locations, sample depths, and analytical results for lead and copper (SB-12 only). Idealized cross-sections are presented in Figures 9 through 13 for soluble lead (locations SB-6, SB-9, SB-12, and SB-14) and copper (location SB-12). The analytical results are presented in Table 2.

Thirty-eight samples were analyzed for total lead. One sample (SB-6K at 0.5-1.0 foot) exceeded the TTLC. That sample was also analyzed for soluble lead by both WET and TCLP. The WET results indicated exceedance of the STLC of 5 mg/L and the TCLP results indicated exceedance of the 5 mg/L criterion (Table 2).

Thirty samples were analyzed for soluble lead using the WET; sixteen of those samples exceeded the STLC of 5 mg/L (Table 2). Four samples (including SB-6K) were analyzed using the TCLP; one of the samples (SB-6K) exceeded the 5 mg/L criterion.

Of the 51 soil samples collected, 13 samples were analyzed for total copper and two samples were analyzed for soluble copper. Of the 13 samples, one sample, SB-12H (at a depth of 1.0-1.5 feet), contained total copper above the TTLC and the two samples analyzed for soluble copper contained concentrations above the STLC (Table 2).

GROUNDWATER SAMPLING

Methodology

Groundwater samples were collected from the two on-site monitoring wells, MW-SB1 and MW-SB2 (Figure 2), on 10 and 26 January 1994 by BASELINE personnel. On 10 January 1994, high tide was

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[3] Thirty-eight samples were analyzed for total lead, rather than the 36 samples proposed in the work plan in response to preliminary analytical results.

[4] Thirteen samples were analyzed for total copper rather than the two samples proposed in the work plan in response to preliminary analytical results.

[5] In response to preliminary analytical results, two samples were analyzed for soluble copper; no samples were proposed for soluble copper analysis in the work plan.

at 10:09 a.m. and low tide was at 5:01 p.m. at the Oakland Harbor Grove Street (Tide Lines, 1994). The water sample from MW-SB1 was collected at 2:48 p.m., and the sample from MW-SB2 was collected at 2:55 p.m. On 26 January 1994, high tide was at 10:34 a.m. and low tide was at 5:20 p.m. The water sample from MW-SB1 was collected at 3:00 p.m., and the water sample from MW-SB2 was collected at 3:42 p.m.

Prior to sample collection, the wells were checked for floating product using a dual-interface probe. No floating product was observed in either well. Water levels were measured and recorded to the nearest one-hundredth of an inch with the dual interface probe. Each well was then purged of four to five well volumes with a double-diaphragm pump and clean PVC hose. Field measurements of pH, electrical conductivity, and temperature were collected to ascertain when the well water had stabilized. Samples were collected after the well water had partially recovered. Purged water from each well was combined with purged water from the April 1991 groundwater sampling event. The purged water drum was labeled and secured adjacent to MW-SB1. Groundwater sampling forms, laboratory reports, and chain-of-custody records for both sampling events are included in Appendix F.

The groundwater samples were collected using a disposable, bottom-valve, plastic bailer and transferred into a one-liter plastic container with no preservatives. The container was labeled, placed into a refrigerated plastic cooler, and submitted the same day under chain-of-custody to Curtis and Tompkins, Ltd. in Berkeley. A duplicate sample was collected from monitoring well MW-SB1 and submitted to the laboratory for analyses. The samples collected on 10 January 1994 were analyzed for total lead (EPA Method 7420) and total copper (EPA Method 7210). Samples collected on 26 January 1994 were also analyzed for total lead and copper, as well as oil and grease (Method SMWW 17:5520 BF) and VOCs (EPA Method 8240).

Analytical Results of Groundwater Samples

The 10 January 1994 groundwater samples from MW-SB1 and MW-SB2 did not contain lead or copper above laboratory detection limits (Table 3). During resampling of the wells on 26 January 1994, the samples from MW-SB1 and MW-SB2 contained copper and lead above laboratory reporting limits (Table 3). Copper was detected in MW-SB1 at a level of 0.037 mg/L; the duplicate sample contained copper at a concentration of 0.026 mg/L. Copper was detected in the MW-SB2 sample at 0.014 mg/L. Lead was detected in the groundwater samples from MW-SB1, MW-SB1 (Dup), and MW-SB2 at levels of 0.012 mg/L, 0.0039 mg/L, and 0.0048 mg/L, respectively. Groundwater samples from MW-SB1 and MW-SB2 did not contain oil and grease above laboratory reporting limits.

VOCs were identified in both groundwater samples. The sample from MW-SB1 contained 0.060 mg/L of acetone, and the sample from MW-SB2 contained 0.100 mg/L of 2-butanone; all other compounds were below laboratory reporting limits. Acetone and 2-butanone are typical laboratory contaminants.

CONCRETE CONTAINMENT

Perimeter Soil Samples

Soil samples were collected adjacent to the concrete containment on 10 January 1994, at three locations (SB-CC1, SB-CC2, and SB-CC3) (Figure 2). The samples were collected at depths of 0.5 to 1.0 foot and 1.0 to 1.5 feet below the ground surface at low tide.

Methodology

The soil samples were collected from each boring using a hand-driven sampler (2-inch diameter) fitted with a 6-inch stainless steel liner. The filled liners were removed from the sampler, capped with teflon and plastic caps, and sealed with silicon tape. Each sample was labeled with a distinct identification number, placed in a zip-lock bag and stored in a refrigerated cooler. The samples were submitted the same day under chain-of-custody to Curtis and Tompkins laboratory. The sampling equipment was decontaminated prior to each sampling event by using trisodiumphosphate, water, and a deionized water rinse.

The soil samples were analyzed for petroleum hydrocarbons (EPA Method 8015M), total oil and grease (SMWW 17:5520 EF), BTXE (EPA Method 8020), total lead (EPA Method 7420), total copper (EPA Method 7210), and soluble lead (WET). In addition, the chromatograms for the samples and diesel and Bunker C standards were obtained.

Analytical Results

Oil and grease was identified in the shallow samples (0.5 to 1.0 foot) at concentrations ranging from 2,100 (SB-CC1) to 41,000 mg/kg (SB-CC2); the deeper samples (1.0 to 1.5 feet) had concentrations ranging from 150 (SB-CC2) to 3,700 mg/kg (SB-CC1) (Table 4).

Total extractable hydrocarbons (TEH) were identified as diesel and motor oil. The shallow samples (0.5 to 1.0 foot) contained total concentrations of TEH (motor oil plus diesel) ranging from 3,600 (SB-CC1) to 124,000 mg/kg (SB-CC2) and the concentration range from the deeper samples was 306 to 54,400 mg/kg (Table 4). The chromatograms from the TEH analyses were reviewed (Friedman & Bruya, 1994a) (Appendix H) to ascertain the origin of the TEH. It appears that the chromatograms from all those samples (0.5 to 1.0 and 1.0 to 1.5 feet) were indicative of Bunker C fuel oil that apparently also contained lead and copper (Friedman & Bruya, 1994b) (Appendix H).

Total lead in the shallow samples (0.5 to 1.0 foot) ranged from 68 (SB-CC1) to 1,000 mg/kg (SB-CC2); the sample containing 1,000 mg/kg of lead equaled the TTLC for lead. Each shallow sample was also analyzed for soluble lead; one sample exceeded the STLC (SB-CC1) (Table 4).

The concentrations of total lead in the deeper samples (1.0 to 1.5 feet) ranged from 21 (SB-CC1) to 9,100 mg/kg (SB-CC3); the soluble concentrations were all below the STLC of 5 mg/L (Table 4). Soluble concentrations of lead generally constitute up to 10 percent of the total concentrations. Since the soluble concentrations in two of the deeper samples were negligible (less than reporting limits), the deeper samples were reanalyzed for quality control purposes for total and soluble lead concentrations. The relationships between total and soluble concentrations remained variable. The laboratory indicated that the variability in the lead results may be related to the presence of paint chips in the soil sample.

The three shallow samples (0.5 to 1.0 foot) were analyzed for total copper (Table 4). The concentrations ranged from 28 (SB-CC2) to 170 mg/kg (SB-CC1). These concentrations are below the TTLC and ten times the STLC for copper (Figure 14).

Concrete and Soil Samples below Concrete Containment

Methodology

On 20 January 1994, West Hazmat Drilling personnel evacuated standing water that had accumulated within the concrete containment structure. The total volume of standing water within the structure was approximately 32,000 gallons. Two pumps were submerged into the standing water. A discharge line, connected to each pump, was secured to two empty Baker tanks, each with a 21,000-gallon capacity. Each tank was located approximately 110 feet north of the concrete containment structure. Upon evacuation of the standing water in the containment structure, the pumps were removed, discharge lines were disconnected, and the tanks were closed.

On 21 January 1994, two concrete core samples (SB-CC4C and SB-CC5C) were collected from the base of the concrete containment structure. In addition, two soil samples (SB-CC4S and SB-CC5S) were collected from beneath the concrete base (Figure 2). The purpose of the concrete core/soil sampling was to assess the presence or absence of petroleum hydrocarbons, oil and grease, copper, and/or lead in the concrete and/or soil.

Concrete core sampling was performed by West Hazmat Drilling Corporation under the supervision of a BASELINE geologist. A concrete core sample was collected at two locations within the concrete containment structure (Figure 2). The core samples were collected at a depth of six inches below the surface. Each core sample was collected by using a portable concrete core cutter, fitted with a 4-inch by 6-inch hollow-stem bit. The auger was used at each location to core through the concrete base. The auger penetrated the bottom of the concrete base at a depth of 3 feet at each location. Using the same bore hole, a soil sample was collected from below the concrete base at each location with a hand-driven soil auger, fitted with a 6-inch stainless steel liner. The liner was removed from the sampler and capped with teflon squares and plastic caps. Concrete core and soil samples were labeled, placed in a zip-lock bag and stored in a refrigerated cooler. Each bore hole was backfilled to grade with a cement grout. Samples were submitted the same day under chain-of-custody to Curtis & Tompkins laboratory. Laboratory reports and chain-of-custody records are included in Appendix I.

The concrete core and soil samples were analyzed for total petroleum hydrocarbons as diesel and motor oil (EPA Method 8015M), oil and grease (SMWW 17:5520 EF), copper (EPA Method 7210), and lead (EPA Method 7420).

Analytical Results

Diesel was identified at low concentrations in the concrete samples; concentrations ranged from 9 (SB-CC4C) to 17 mg/kg (SB-CC5C) (Table 5). Diesel was identified at low concentrations in the soil samples; concentrations ranged from 14 (SB-CC4S) to 16 mg/kg (SB-CC5S). Motor oil was identified in both soil samples at concentrations of 40 (SB-CC4S) and 50 mg/kg (SB-CC5S) (Table 5). One concrete sample (SB-CC5C) had 30 mg/kg of motor oil, while the second sample did not contain concentrations above the reporting limit.

Oil and grease were identified in both concrete samples at 50 (SB-CC4C) and 120 mg/kg (SB-CC5C) (Table 5). Neither of the soil samples contained oil and grease concentrations above laboratory reporting limits.

Total lead was detected above the reporting limit in one of the soil samples (SB-CC5S at 5.8 mg/kg) (Table 5). The remaining concrete and soil samples did not contain lead at concentrations above the reporting limits and thus were below the TTLC and STLC for lead and copper.

Total copper was identified in both the soil samples at concentrations ranging from 13 (SB-CC4S) to 15 mg/kg (SB-CC5S) (Table 5). Total copper was identified in both the concrete samples at concentrations ranging from 10 (SB-CC4C) to 14 mg/kg (SB-CC5C) (Table 5). All copper concentrations were below the TTLC or ten times the STLC for copper.

Excavation of Perimeter Soils at Concrete Containment

In response to the analytical results from soil sampling around the perimeter of the concrete containment indicating significant concentrations of petroleum hydrocarbons and lead, soils were removed in an effort to eliminate incremental discharges of contaminants during high tide to the Clinton Basin. A proposed work plan was submitted to the County by BASELINE, on behalf of the Port. The County conditionally approved the work plan on 21 March 1994 (Appendix A).

Soil Excavation

On 7 and 8 April 1994, KTW and Associates, under the supervision of a BASELINE geologist, excavated and backfilled a trench around the concrete containment structure. Prior to the excavation, approximately 800 gallons of water that had accumulated on the floor of the concrete containment structure was pumped into two on-site Baker tanks. After the water was removed, concrete pilings and wood debris were removed from the northeast side of the containment structure to allow access for the excavator.

Once access was obtained, the trench was excavated by positioning the excavator on the outside of the structure during low tide. The trench extended around the entire perimeter of the structure. The trench was approximately two feet wide by 2.5 to 3.0 feet deep and penetrated one to two feet into the underlying Bay mud (Figure 15). Soils from the trench were transferred from the excavator to a backhoe positioned inside the containment structure. The soils were then transported to a stockpile, where they were placed on and under plastic. Approximately 100 cubic yards of soil were excavated.

During excavation, BASELINE observed viscous, black product seeping from beneath the structure in areas shown in Figures 14 and 16 through 19. The product was immediately removed by the excavator and added to the soil stockpile. The trench was backfilled with adjacent Bay mud, to restrict any further product release. Mr. Barney M. Chan of the County was on-site to observe trench excavation activities.

After the trench was backfilled, riprap rock was placed around the perimeter of the concrete containment structure and on top of Bay Mud to prevent erosion of mud during tidal fluctuations.

Methodology

Seven verification soil samples were collected from the bottom of the perimeter trench (SB-CC1 through SB-CC7) (Figure 14). Three of the samples were collected below the locations previously sampled (SB-CC1, SB-CC2, and SB-CC3). Four additional soil samples were collected to provide greater coverage along the containment structure. Three of the additional samples were collected at the request of the County (SB-CC4, SB-CC5, and SB-CC6). The fourth sample (SB-CC7) was collected in the area where the maximum amount of product was observed to migrate from beneath the concrete containment.

The soil samples were collected from the bottom of the excavation by using the bucket of the excavator and driving a stainless steel tube into the soil in the bucket. The sample tube was capped with Teflon squares and plastic caps, sealed with silicon tape, labeled, and placed in a refrigerated cooler. The samples were submitted under chain-of-custody to Curtis and Tompkins, Ltd., a California certified laboratory. Laboratory reports and chain-of-custody forms are included in Appendix J.

All soil samples were analyzed for total lead and copper and total extractable hydrocarbons, (EPA Method 7420, EPA Method 7210, and EPA Method 8015M, respectively). The types of analyses performed on the samples are listed in Table 1.

The product sample (CC-Product) was also subjected to a fingerprint analysis by the laboratory to attempt a determination of the type of petroleum hydrocarbon, as well as an analysis of polynuclear aromatic compounds (PNAs) (EPA Method 8270). An additional product sample (CC-Product-A) was collected in May 1994 from below the concrete containment; that sample was analyzed for VOCs (EPA Method 8240) and Title 26 metals (Figure 14).[6]

Field Observations

During soil excavation around the containment, the foundation of the containment was exposed along the Bayward side of the containment. It appeared that the containment was underlain by about three inches of coarse gravel/cobbles and supported by wooden posts. A wooden "lattice" around the entire perimeter of the containment may be indicative of an old dock (Figure 15).

During excavation, a black, viscous liquid emanated from the locations under the containment foundation (Figure 14). The source of the material is unknown but appears to be related to the concrete containment operations. The containment previously housed a tank providing fuel, as Bunker C, for an on-site power-generating plant, formerly owned and operated by Pacific Gas and Electric Company (PG&E).

Analytical Results

The verification soil samples collected from the bottom of the trench around the containment were analyzed for diesel, kerosene, motor oil, and total lead at depths of 2.0 to 3.5 feet below the ground surface. The results from analysis of the seven soil samples (Table 4) indicated that the total concentrations of diesel and motor oil (kerosene was generally not identified due to interference from

[6] The metals analysis was performed by two laboratories for quality control purposes.

the other hydrocarbons) along the Bayward side of the containment ranged from nondetectable to 390 mg/kg (SB-CC2); the higher concentration was identified near the high tide line at SB-CC2 (Figure 14) near a location of black liquid seepage.

The two samples from the landward side of the concrete containment near a black liquid seepage area (SB-CC1 and SB-CC7) contained total petroleum hydrocarbon concentrations in excess of 5,000 mg/kg (Table 4).

All soil samples and the black liquid (CC-Product) were analyzed for total lead. Results indicated concentrations below the total threshold level concentration (TTLC) and less than ten times the soluble threshold level concentration (STLC) (Table 6). The soil samples (2.0 to 3.5 feet bgs) contained total lead ranging from less than reporting levels to 18 mg/kg (SB-CC1), and the product samples contained up to 7.8 mg/kg (CC-Product) of total lead (Tables 4 and 6).

The verification soil samples were also analyzed for copper. The concentrations ranged from 12 (SB-CC5) to 30 mg/kg (SB-CC1). These concentrations were below the TTLC and ten times the STLC.

The black liquid was fingerprinted (Appendix J includes a chromatogram of the liquid) and compared to a Bunker C standard. The laboratory has indicated that the chromatogram of the black liquid suggests that it may be an aged Bunker C in conjunction with heavier (C20-C50) hydrocarbons. The samples from location SB-CC7 (Figure 14) have also been identified as likely being Bunker C (Appendix H). The black liquid was also analyzed for PNAs. The laboratory reporting limits for the analysis were 300 mg/kg due to the presence of product. No compounds were detected above that reporting limit. The second product sample collected from below the structure did not contain organics at concentrations above the reporting limits; the metals results from the second product sample (CC-Product A) are summarized in Table 6 and the laboratory reports are included in Appendix J.

Concrete Containment Water Sampling and Disposal

As part of soil and concrete sample collection in and around the concrete containment, water was removed from the containment and placed in Baker Tanks. Prior to placement in the Baker tanks, a water sample was collected. The water sample was collected by placing a clean plastic container into the standing water. The sample bottle was labeled and placed into a refrigerated cooler. The sample was submitted the same day under chain-of-custody to Curtis and Tompkins laboratory. Laboratory reports and chain-of-custody records are included in Appendix I. The water sample was analyzed for total extractable petroleum hydrocarbons (EPA Method 8015M), total oil and grease (SMWW 17:5520 BF), Title 26 Metals, and turbidity (EPA 180.1). The analytical results are summarized in Table 7 and the laboratory reports are included in Appendix K. At the request of the Regional Water Quality Control Board (RWQCB),[7] a fish bioassay was also collected from the stored liquid in the Baker tanks.

[7] A verbal request was made by the Port to the RWQCB for discharging the liquids into the Clinton Basin.

Analytical Results

The concrete containment water sample did not contain levels of petroleum hydrocarbons, or oil and grease above the laboratory reporting limit (Table 7). The turbidity of the sample measured 1.2 NTU. The water contained three metals above laboratory reporting limits (Table 7). The detected concentrations were below the CCR Title 26 Maximum Contaminant Level (MCL). The results of the bioassay indicated 100 percent survival rate of three-spine stickleback.

Liquids Disposal

On 19 and 20 April 1994 approximately 30,000 gallons of water from two on-site Baker tanks were discharged to Clinton Basin in accordance with the verbal agreement between the Port and the RWQCB. A three-inch hose was connected to the discharge valve on each tank. The hose was extended to the edge of the water of the Clinton Basin Canal. The discharge valve was opened and the water was allowed to flow into the Basin at the water's edge, where plastic sheeting had been placed to minimize mobilization of sediments.

On 22 April 1994 the interiors of both Baker tanks were cleaned. The interior walls of each tank were sprayed down with a pressure water rinse. Sediments that had collected on the bottom of each tank were swept down to the tank outlet valve. Both the sediments and water rinsate were collected by a vacuum truck. Approximately 600 gallons of sediment/wash rinsate were collected by the vacuum truck and transported to Erickson Environmental Services for disposal as nonhazardous liquid.

SOIL SAMPLING LANDWARD OF THE CONCRETE CONTAINMENT

Using a systematic random sampling methodology consistent with EPA SW-846, sample locations and depths were determined by dividing the Site into cells. Fourteen cells of approximately equal area were established in the area landward of the concrete containment (Figure 20). Using systematic random sampling, five additional cells but smaller were chosen along the approximate alignment of the former aboveground pipeline extending northeastward from the aboveground tank in the concrete containment toward the former power generating plant located adjacent to the Site. A random sampling location and depth were chosen within each cell using a random number generator on a HP-11 C calculator. A total of 19 samples were collected on 15 August 1994, one from each sample location.[8] Sampling depths varied from 0.5 to 4.0 feet below ground surface. The location of these sites (BC1-BC19) relative to sites SB-6, SB-9, SB-12, and SB-74 is presented in Figure 21.

Methodology

Sampling locations were located by a BASELINE geologist using a measuring tape, compass, and a fixed reference point. Prior to sampling, the Underground Service Alert was contacted to obtain information on underground utility services at the sampling locations. Nineteen borings were installed by Precision Sampling, Inc. using a hydraulically-driven sample collection system. After each boring was completed, any portion of the hydraulic drilling sampling system which came into contact with soil was steam-cleaned at a designated wash area and the rinsate was stored in a 55-gallon drum. Soil samples not submitted for analysis were disposed of under plastic on the stockpile created during

[8] Proposed sampling locations identified in the 12 July 1994 work plan were numbered during sample collection activities. The sampling locations are labeled BC-1 through BC-19 (Figure 15).

excavation of perimeter soils from the concrete containment. Each borehole was backfilled to grade using a cement/bentonite grout.

One sample was collected from each boring using a California Modified sampler (1½- or 2-inch diameter) fitted with three six-inch stainless steel liners. The sampler was hydraulically-driven into the ground. One liner was removed from the sampler, capped with teflon squares and plastic caps and sealed with silicone tape at both ends. The samples were then labeled, placed in a plastic bag, and stored in a refrigerated container. Sampling equipment was decontaminated using trisodiumphosphate, water, and deionized rinse prior to each sampling event. The samples were submitted the same day under chain-of-custody to Curtis and Tompkins, Ltd, a State-certified laboratory. Laboratory reports and chain-of-custody forms are included in Appendix L. Soil boring logs are presented in Appendix E.

The nineteen samples were then analyzed for total petroleum hydrocarbons (TPH) using Bunker C as a standard (EPA Method 8015 M). A sample of Bunker C, previously collected at the Site below the concrete containment and stored in a freezer, was submitted to Curtis and Tompkins, Ltd. for use as the standard for Bunker C for the laboratory analyses; the concentrations of Bunker C were also calculated using a laboratory Bunker C standard. The calculations to determine concentrations of Bunker C in each sample from either standard were generally similar; three samples were dissimilar with a variance of 300, 200, and 80 mg/kg (samples BC-13, BC-14, and BC-15).

Drum Inventory

The sampling activities resulted in the generation of one drum containing rinsate from decontamination procedures. The drum is labeled and secured with a distinct identification number.

Analytical Results

Fourteen soil samples collected on 15 August contained Bunker C concentrations greater than detection limits. The concentration of Bunker C in these samples ranged from 130 (BC-14) to 3,000 mg/kg (BC-4) (Table 8). Five samples (BC-9, BC-10, BC-12, BC-17, and BC-18) did not contain Bunker C above laboratory detection limits. Sites BC-2 through BC-6 are located along the alignment of the former aboveground tank pipeline extending from the concrete containment toward the former power generating plant; Bunker C concentrations in samples from those locations were all greater than or equal to 1,100 mg/kg.

FINDINGS AND RECOMMENDATIONS

The following findings and recommendation are made based on the data collected over the past four years on the Site. The findings and recommendations are presented for 1) shallow soils in four locations on the Site, 2) shallow groundwater, 3) concrete containment, 4) excavated soils from the concrete containment perimeter, 5) shallow soils in the areas landward of the concrete containment, and 6) drummed rinsate and soil cuttings.

SHALLOW SOILS IN FOUR LOCATIONS

The approximate extent of soils containing hazardous concentrations of lead and copper have been identified around locations SB-6, SB-9, SB-12, and SB-14 (Figure 2); in addition, Bunker C oil was identified in the vicinity of these locations during the August 1994 sampling event. The soluble concentrations of these metals appear to be generally restricted to the shallow soil column within 2.0 to 3.0 feet below the existing ground surface. The source of the soluble metals in the shallow soils is unknown but may be related to past land uses on the Site which have included boat repair and activities associated with the generation of steam at an adjacent PG&E steam generating facility. The following actions are recommended:

- Excavate about 100 cubic yards of soil around locations SB-6, SB-9, SB-12, and SB-14 where samples exceeded the TTLC and/or the STLC for lead and/or copper. Soils would be excavated to a depth of 2.0 to 2.5 feet; the lateral dimensions of each excavation would be three feet beyond those sampling location depths where the results indicated exceedance of the TTLC or STLC for copper and/or lead. Four verification samples would be collected from each excavation. The samples would be analyzed for total and soluble lead and copper (Location SB-12 only).

- The excavated soil should be disposed of at a disposal facility, permitted to receive waste with lead, copper, and petroleum hydrocarbons in the concentrations identified on the Site. The excavated materials would require sampling prior to disposal; these sampling activities should include analyses for lead, copper, and Bunker C oil.

SHALLOW GROUNDWATER

Four groundwater samples have been collected from the two wells since April 1991. Lead was detected above reporting limits in January 1994 in MW-SB1. The groundwater sample from MW-SB1 contained 0.012 mg/L of lead and a duplicate sample contained 0.0039 mg/L; previous laboratory reporting limits ranged from 0.06 to 0.1 mg/L. The samples from MW-SB2 were below reporting limits (ranging from 0.06 to 0.1 mg/L) in April and July 1991 and on 10 January 1994. On 26 January 1994, the concentration was 0.0048 mg/L. The Maximum Contaminant Level (MCL) for lead in drinking water is 0.05 mg/L. The results from the two on-site wells indicate that lead has not exceeded the MCL during the times of sampling. Copper was identified in the two wells in 1991 and 1994 at concentrations ranging from 0.0198 to 0.037 mg/L. The MCL for copper is 1.0 mg/L. To ensure that the data collected to date are representative of groundwater quality throughout the year, the following recommendations are made:

- Collect quarterly groundwater samples for two years. After each year, evaluate the data to determine whether additional sampling should occur.

- The groundwater samples should be analyzed for lead, copper, oil and grease, and extractable petroleum hydrocarbons as Bunker C.

CONCRETE CONTAINMENT

Observations during collection of soil samples around the perimeter of the concrete containment indicate that product is present below the foundation of the containment. The product may constitute

a continuous source of contamination to the Clinton Basin. The product under the containment has been identified as Bunker C oil, which also contained lead and copper. Bunker C was stored in the tank that was once located within the concrete containment. Bunker C was used as fuel for a steam plant formerly operated by PG&E on an adjacent Site. The following recommendation is made to eliminate a potential source of contamination to Clinton Basin:

elaborate splng

- Remove the concrete containment structure and excavate the underlying Bunker C-containing soil. The concrete and excavated soil should be disposed of at an appropriate disposal/recycling facility. Verification samples should be collected following soils removal to ensure that the area would not act as a source of Bunker C, lead, and copper to the Clinton Basin. The verification samples should be analyzed for Bunker C and total and soluble lead. + TPH as mo

will excavate to GW? —

EXCAVATED SOILS FROM CONCRETE CONTAINMENT

About 100 cubic yards of soils remain on-site on and under plastic from excavation of the perimeter soils around the concrete containment. The excavation activities effectively removed high concentrations of petroleum-containing soils on the Bayward side of the containment. The petroleum hydrocarbons identified in some of the samples were identified as Bunker C, previously stored in the former aboveground tank within the concrete containment. The following recommendation is made:

- Remove the 100 cubic yards from the Site to an off-site disposal facility. The stockpiled soils should be sampled prior to disposal to determine an appropriate disposal facility.

ok

SOIL SAMPLING LANDWARD OF THE CONCRETE CONTAINMENT

The objective for the collection of 19 soil samples landward of the concrete containment was to assess whether former land uses associated with the use of Bunker C could have affected the subsurface at the Site. Five of the 19 samples did not contain detectable levels of Bunker C. The highest concentrations of Bunker C were generally identified near the former location of the aboveground product line extending from the former aboveground tank in the concrete containment toward the former power generating plant and wharf.

It appears that former land uses using Bunker C have affected the subsurface in those portions of the Site evaluated during this investigation. It is possible that the remaining portions of the Site would exhibit similar contamination, since the samples were collected in a systematic random manner.

It does not appear that the shallow groundwater underlying the Site has been affected by the releases of Bunker C; groundwater samples collected from the two on-site wells did not have detectable levels of oil and grease at the time of sample collection in April 1991 and January 1994.

The following recommendation is made to mitigate the effects of Bunker C in the subsurface soils:

- To protect the health of future users, it is recommended that a health risk assessment be completed to assess health-based remediation goals for the Site, assuming nonresidential uses.

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DRUMMED RINSATE AND SOIL CUTTINGS

The field activities generated six drums of soil cuttings and rinsate. The quality of the rinsate in the full drums is unknown. The soil cuttings may contain soluble lead and copper in excess of the STLCs. The following recommendation is made:

- The drummed materials should be characterized and disposed of at an appropriate off-site facility when full.

LIMITATIONS

The conclusions presented in this report are professional opinions based on the indicated data described in this report. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study. Changes in the conditions of the subject property can occur with time, because of natural processes or the works of man, on the subject sites or on adjacent properties. Changes in applicable standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

REFERENCES

BASELINE, 1990, *Preliminary Remedial Investigation, Seabreeze Yacht Center, Oakland, CA*, November.

BASELINE, 1992, *Phase II Remedial Investigation, Seabreeze Yacht Center, Oakland, CA*, March.

Friedman and Bruya, 1994a letter to Lydia Huang, BASELINE, 18 May.

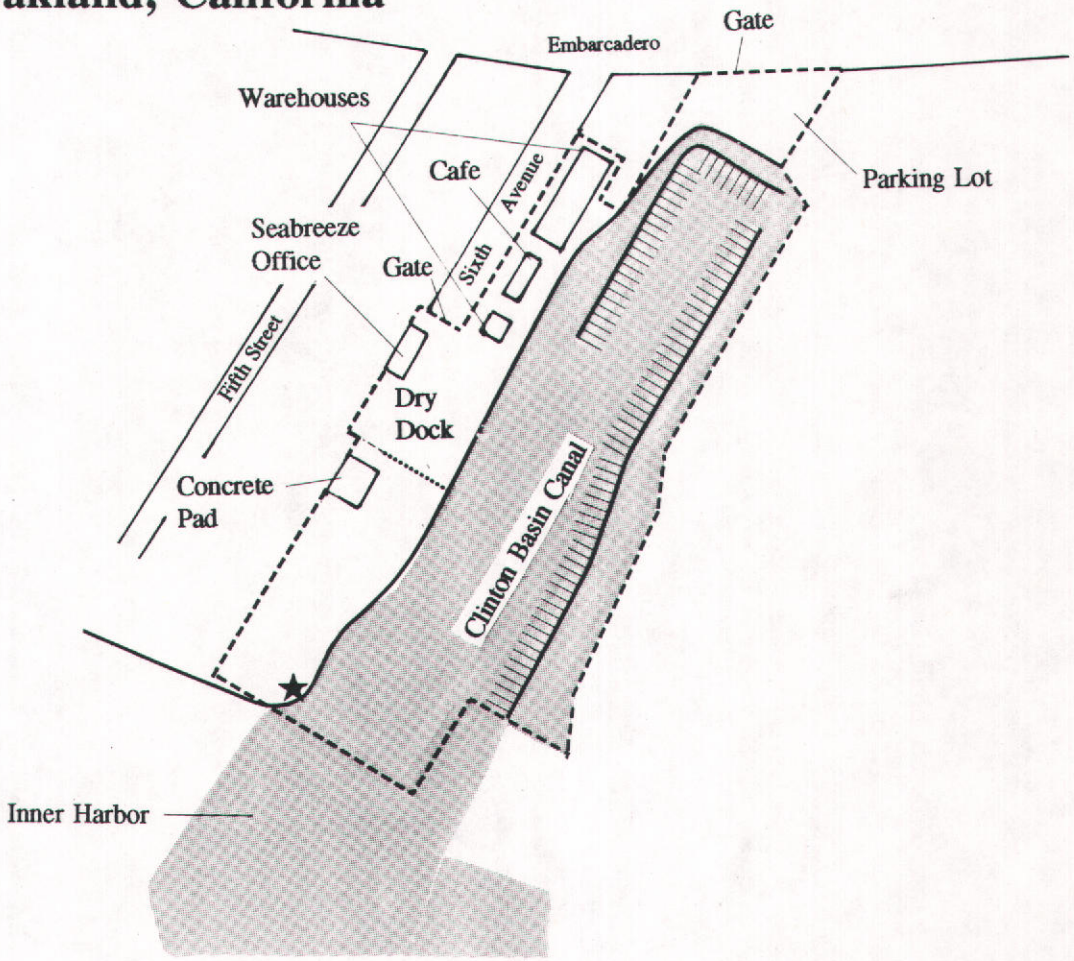
Friedman and Bruya, 1994b, letter to Yane Nordhav, BASELINE, 31 August.

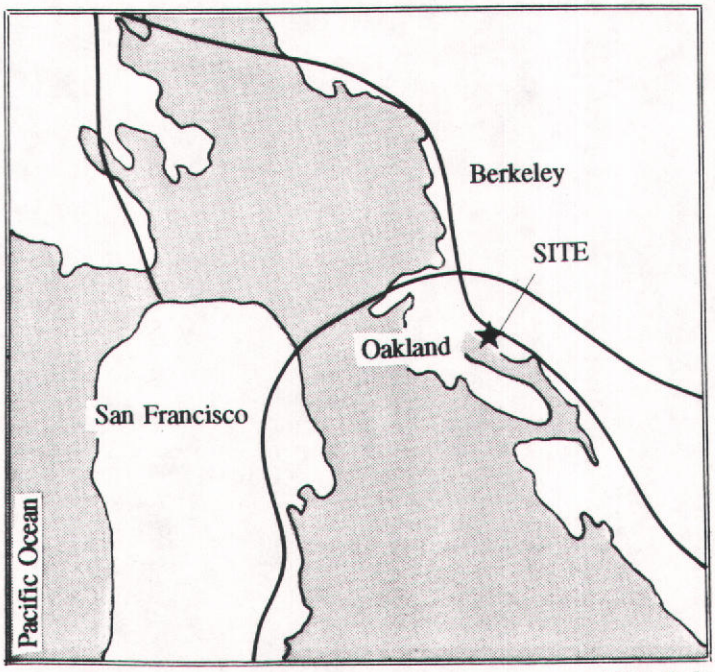
Tide Lines, 1994, *Bay Area Tide Calendar.*

SITE PLAN AND REGIONAL LOCATION

Figure 1

Seabreeze Yacht Center
Oakland, California





Not to Scale

Legend

- Site Boundary
- Location of Former Aboveground Tank and Existing Concrete Containment
- Drainage Swale
- Buried Drain Pipe

0 300 Feet

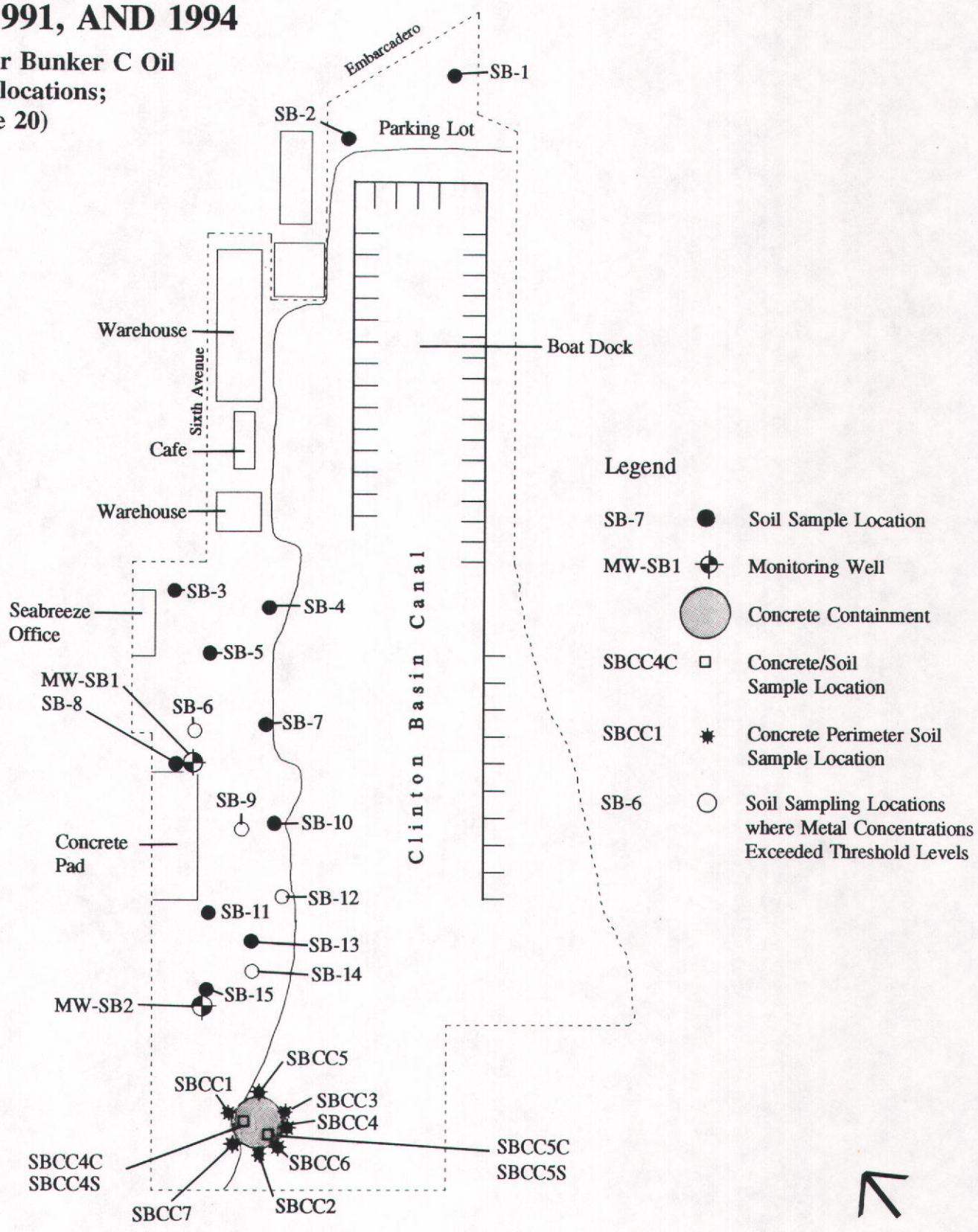
BASELINE

S9171-00 1/18/94

SAMPLING LOCATIONS 1990, 1991, AND 1994

Figure 2

(except for Bunker C Oil sampling locations; see Figure 20)



Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

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S9171-00 2/23/94

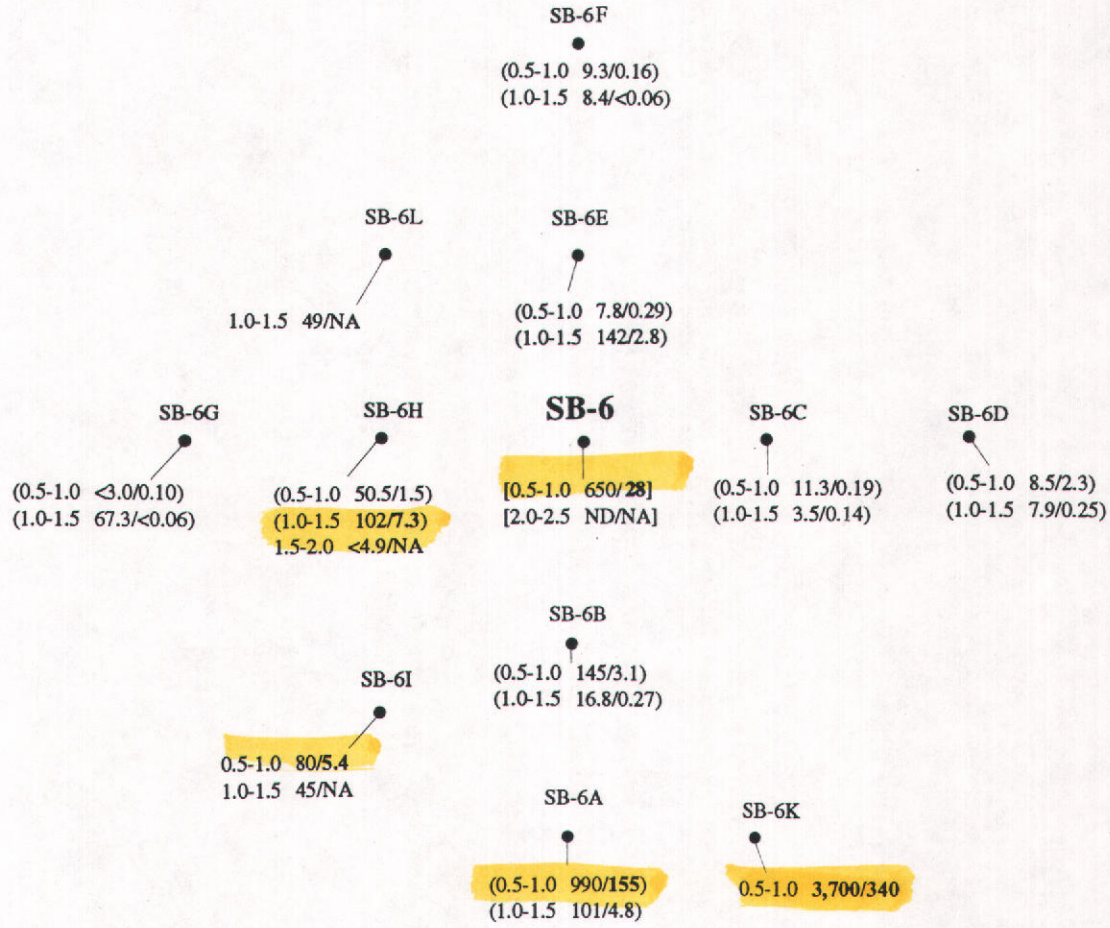
SEABREEZE CONCRETE CONTAINMENT EXCAVATION 1991

Figure 3

BASELINE

SB-6 SAMPLING LOCATIONS AND ANALYTICAL RESULTS FOR LEAD

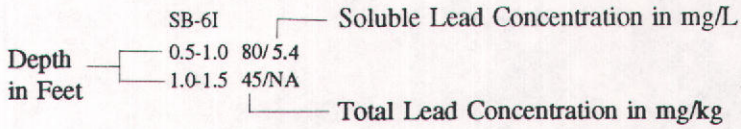
Figure 4



Legend

1.0-1.5 xx/yy	Indicates results from the 1994 sampling event
(1.0-1.5 xx/yy)	Indicates results from the 1991 sampling event
[1.0-1.5 xx/yy]	Indicates results from the 1990 sampling event
NA	Not Analyzed
ND	Not Detected

Bolded numbers indicate exceedance of STLC or TTLC

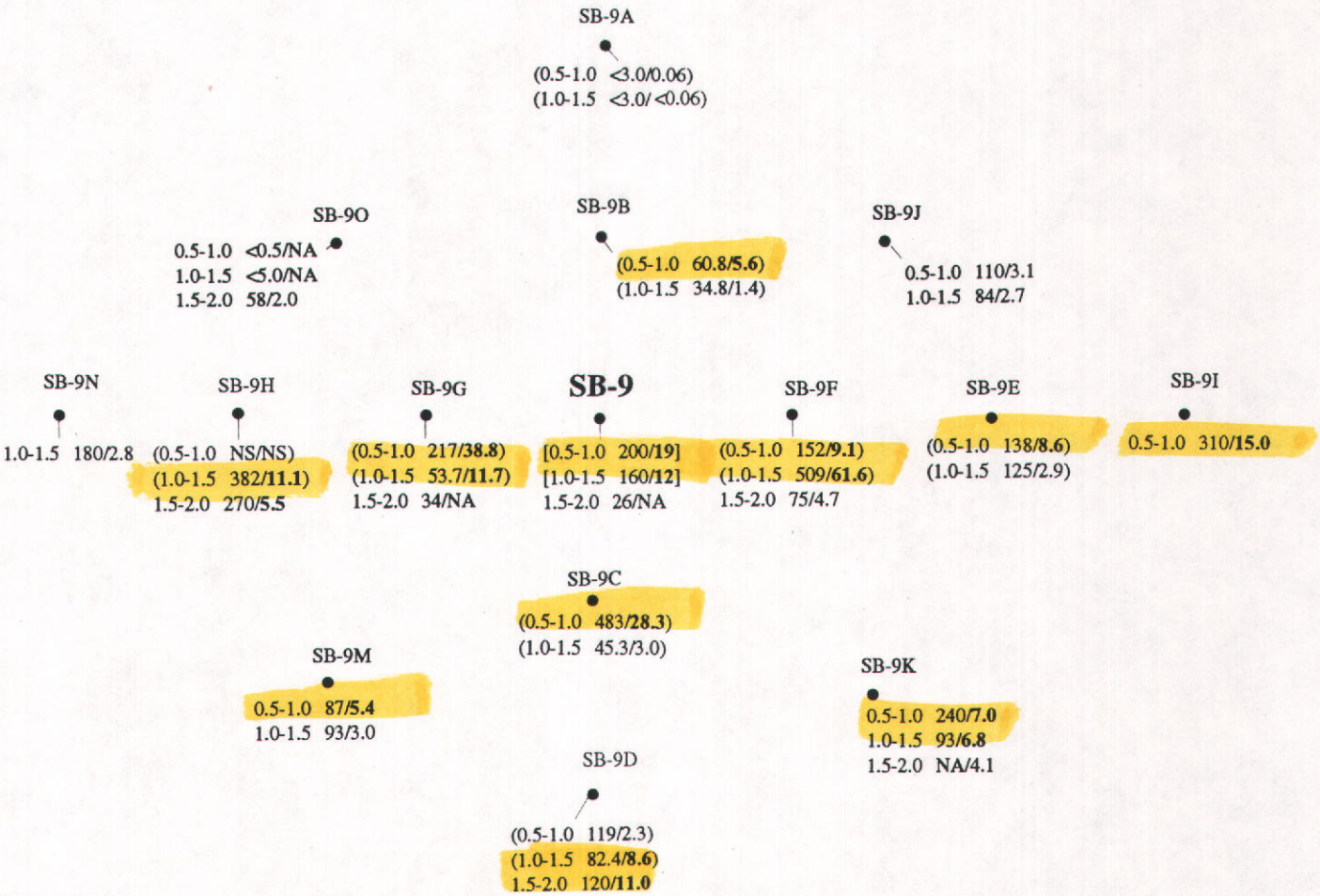


Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

BASELINE

SB-9 SAMPLING LOCATIONS AND ANALYTICAL RESULTS FOR LEAD

Figure 5



Legend

1.0-1.5 xx/yy	Indicates results from the 1994 sampling event
(1.0-1.5 xx/yy)	Indicates results from the 1991 sampling event
[1.0-1.5 xx/yy]	Indicates results from the 1990 sampling event
NA	Not Analyzed
NS	Not Sampled

SB-9O — Soluble Lead Concentration in mg/L

Depth in Feet
- 0.5-1.0 <5.0/NA
- 1.0-1.5 <5.0/NA
- 1.5-2.0 58/2.0 — Total Lead Concentration in mg/kg

Bolded numbers indicate exceedance of STLC or TTLC

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Oakland, California

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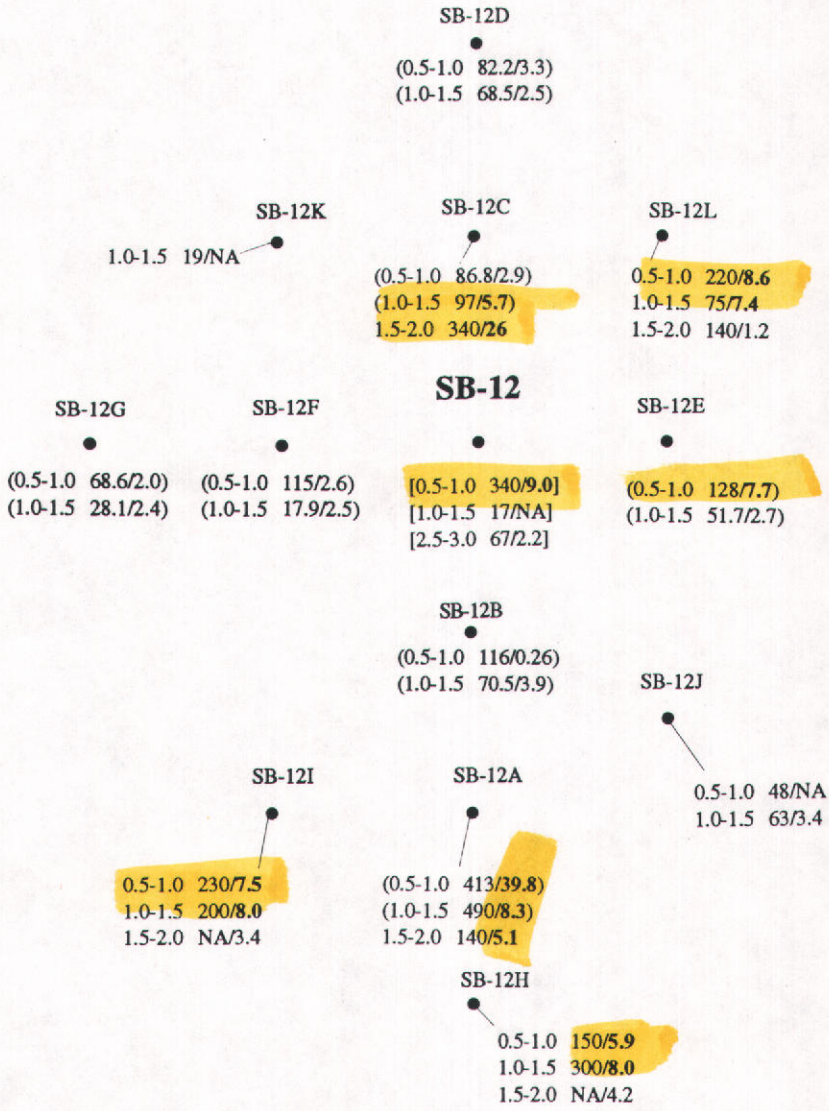
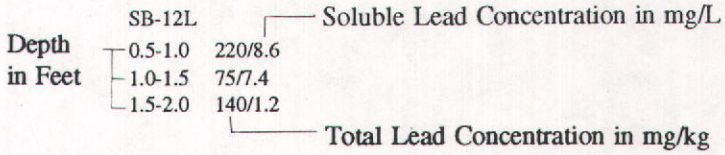
SB-12 SAMPLING LOCATIONS AND ANALYTICAL RESULTS FOR LEAD

Figure 6



Legend

1.0-1.5 xx/yy	Indicates results from the 1994 sampling event
(1.0-1.5 xx/yy)	Indicates results from the 1991 sampling event
[1.0-1.5 xx/yy]	Indicates results from the 1990 sampling event
NA	Not Analyzed



Bolded numbers indicate exceedance of STLC or TTLC

Seabreeze Yacht Center, Inc.
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Oakland, California

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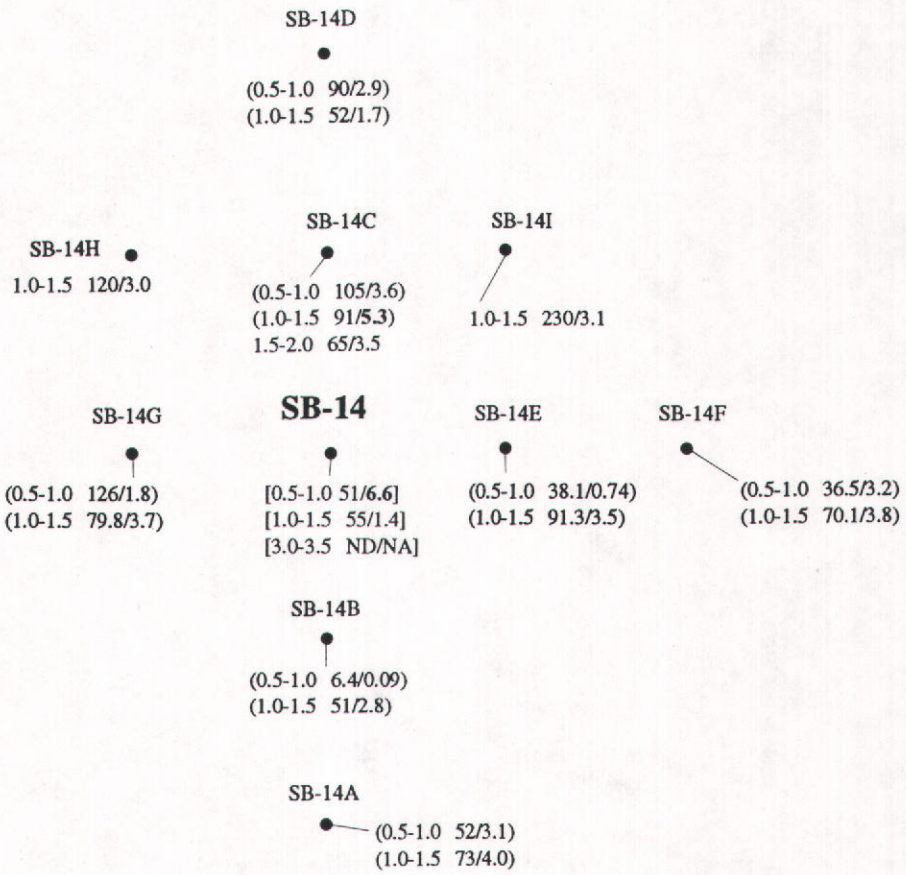
S9171-00.01 2/1/94

SB-14 SAMPLING LOCATIONS AND ANALYTICAL RESULTS FOR LEAD

Figure 7



Legend

1.0-1.5 xx/yy	Indicates results from the 1994 sampling event
(1.0-1.5 xx/yy)	Indicates results from the 1991 sampling event
[1.0-1.5 xx/yy]	Indicates results from the 1990 sampling event
NA	Not Analyzed
ND	Not Detected

Depth in Feet — SB-14H 1.0-1.5 120/3.0 — 120/3.0: Soluble Lead Concentration in mg/L; 3.0: Total Lead Concentration in mg/kg

Bolded numbers indicate exceedance of STLC or TTLC

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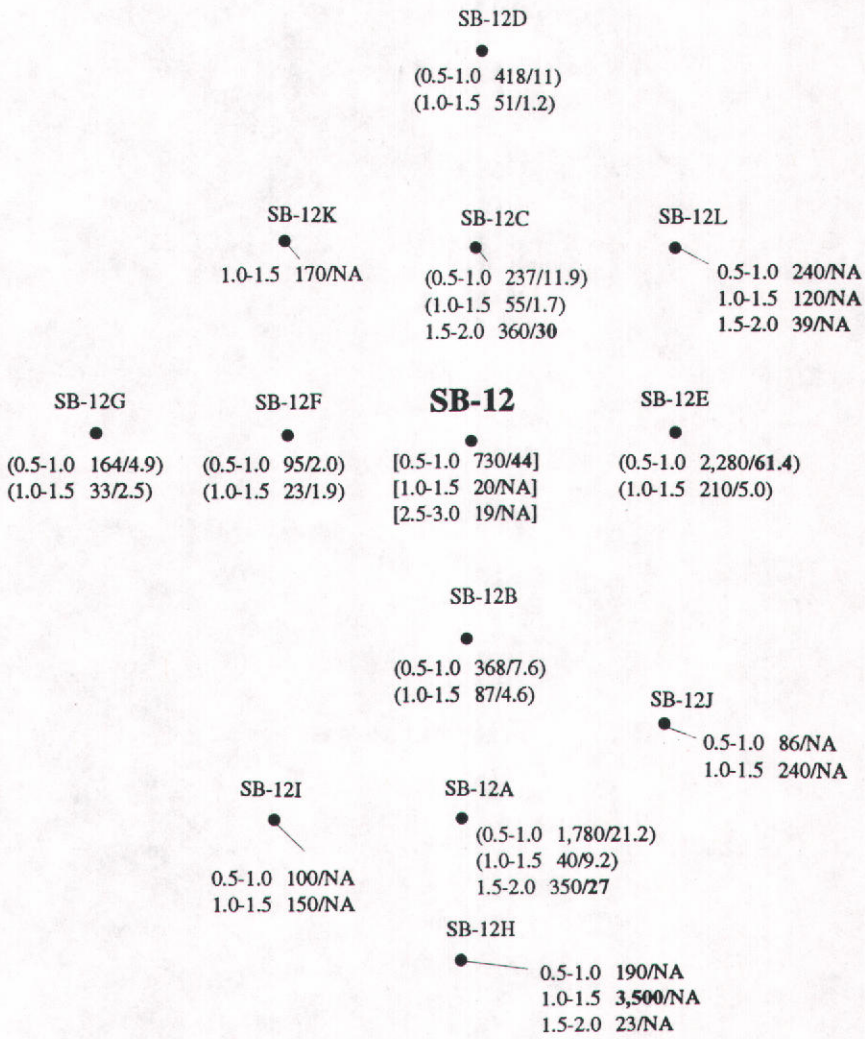
Oakland, California

BASELINE

S9171-00.01 2/1/94

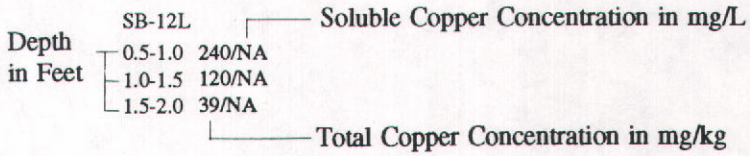
SB-12 SAMPLING LOCATIONS AND ANALYTICAL RESULTS FOR COPPER

Figure 8



Legend

1.0-1.5 xx/yy	Indicates results from the 1994 sampling event
(1.0-1.5 xx/yy)	Indicates results from the 1991 sampling event
[1.0-1.5 xx/yy]	Indicates results from the 1990 sampling event
NA	Not Analyzed



Bolded numbers indicate exceedance of STLC or TTLC

Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

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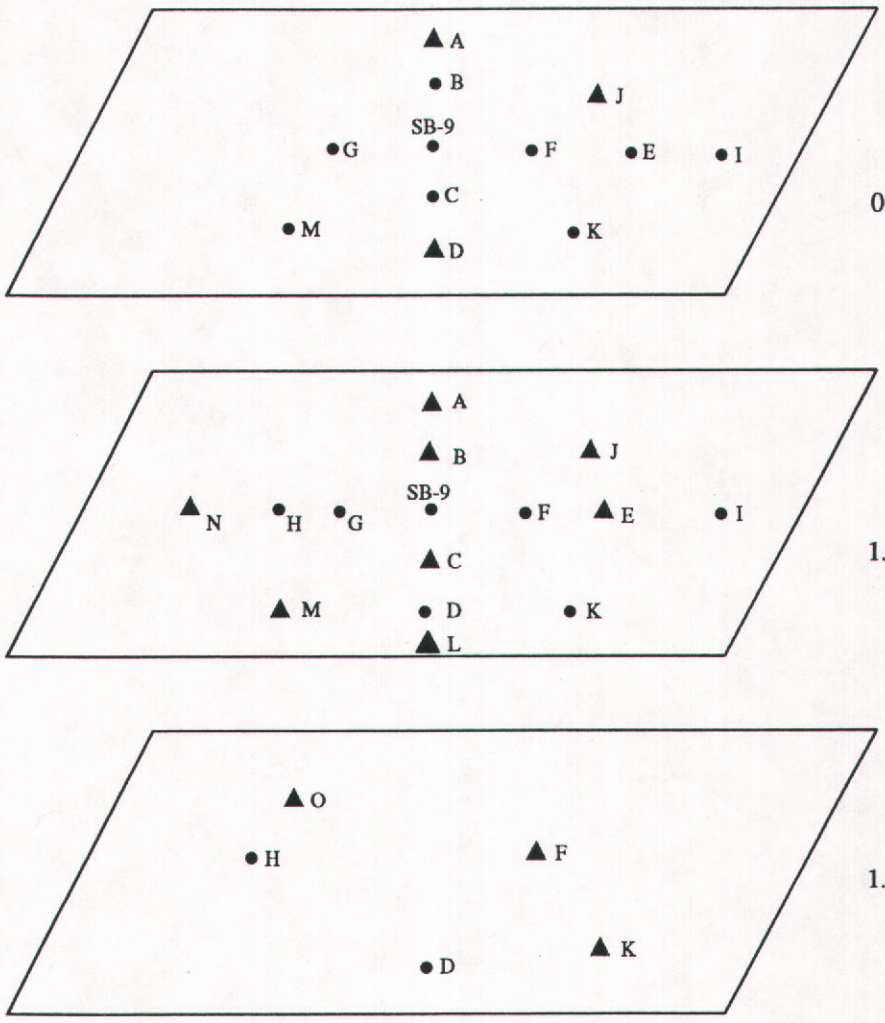
S9171-00.01 2/1/94

SOLUBLE LEAD, SB-9

Figure 10



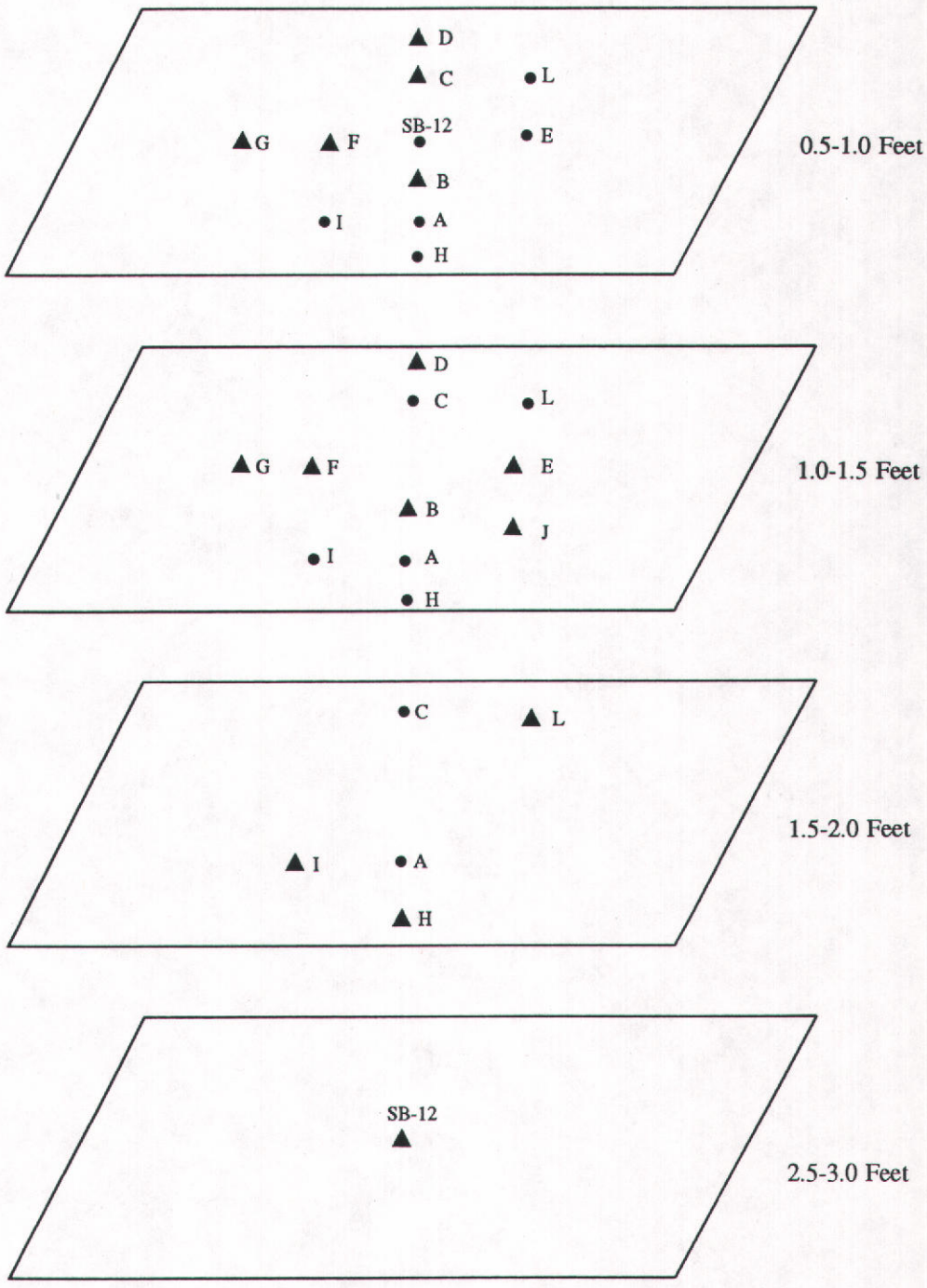
Legend

- ● > STLC Pb
- ▲ < STLC Pb

A	=	SB-9A	F	=	SB-9F
B	=	SB-9B	G	=	SB-9G
C	=	SB-9C	H	=	SB-9H
D	=	SB-9D	I	=	SB-9I
E	=	SB-9E	J	=	SB-9J
			K	=	SB-9K
			L	=	SB-9L
			M	=	SB-9M
			N	=	SB-9N

SOLUBLE LEAD, SB-12

Figure 11



Legend

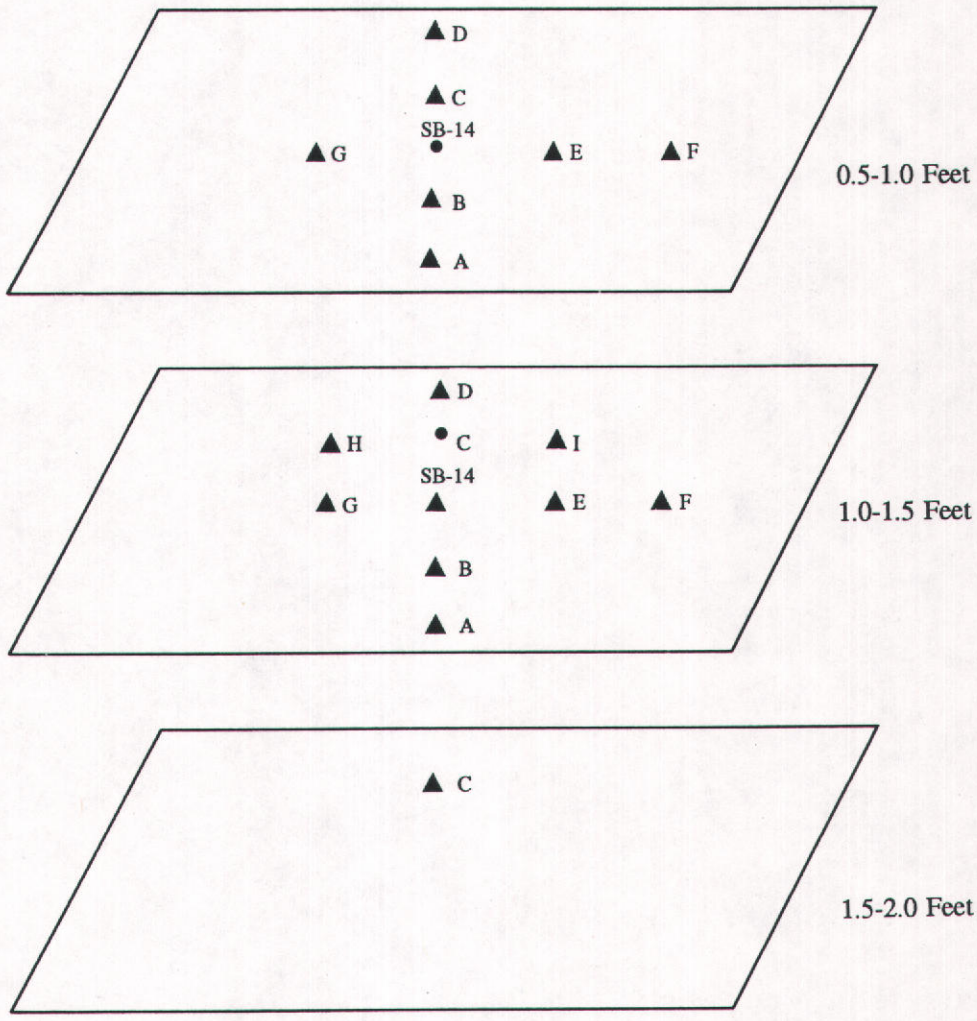
- • > STLC Pb
- ▲ < STLC Pb

A	=	SB-12A	F	=	SB-12F
B	=	SB-B6	G	=	SB-12G
C	=	SB-12C	H	=	SB-12H
D	=	SB-12D	I	=	SB-12I
E	=	SB-12E	J	=	SB-12J
			K	=	SB-12K
			L	=	SB-12L

BASELINE

SOLUBLE LEAD, SB-14

Figure 12



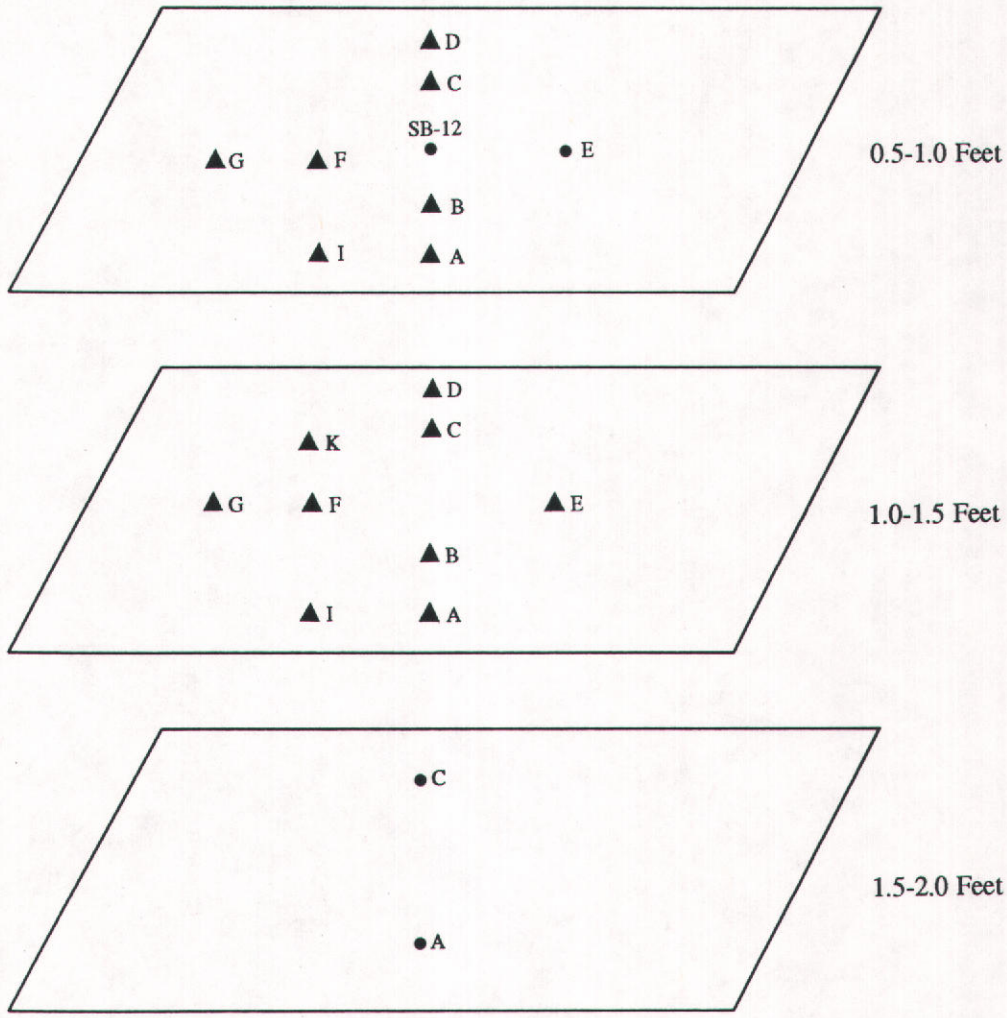
Legend

- ● > STLC Pb
- ▲ < STLC Pb

A	=	SB-14A	F	=	SB-14F
B	=	SB-14B	G	=	SB-14G
C	=	SB-14C	H	=	SB-14H
D	=	SB-14D	I	=	SB-14I
E	=	SB-14E			

SOLUBLE COPPER, SB-12

Figure 13



Legend

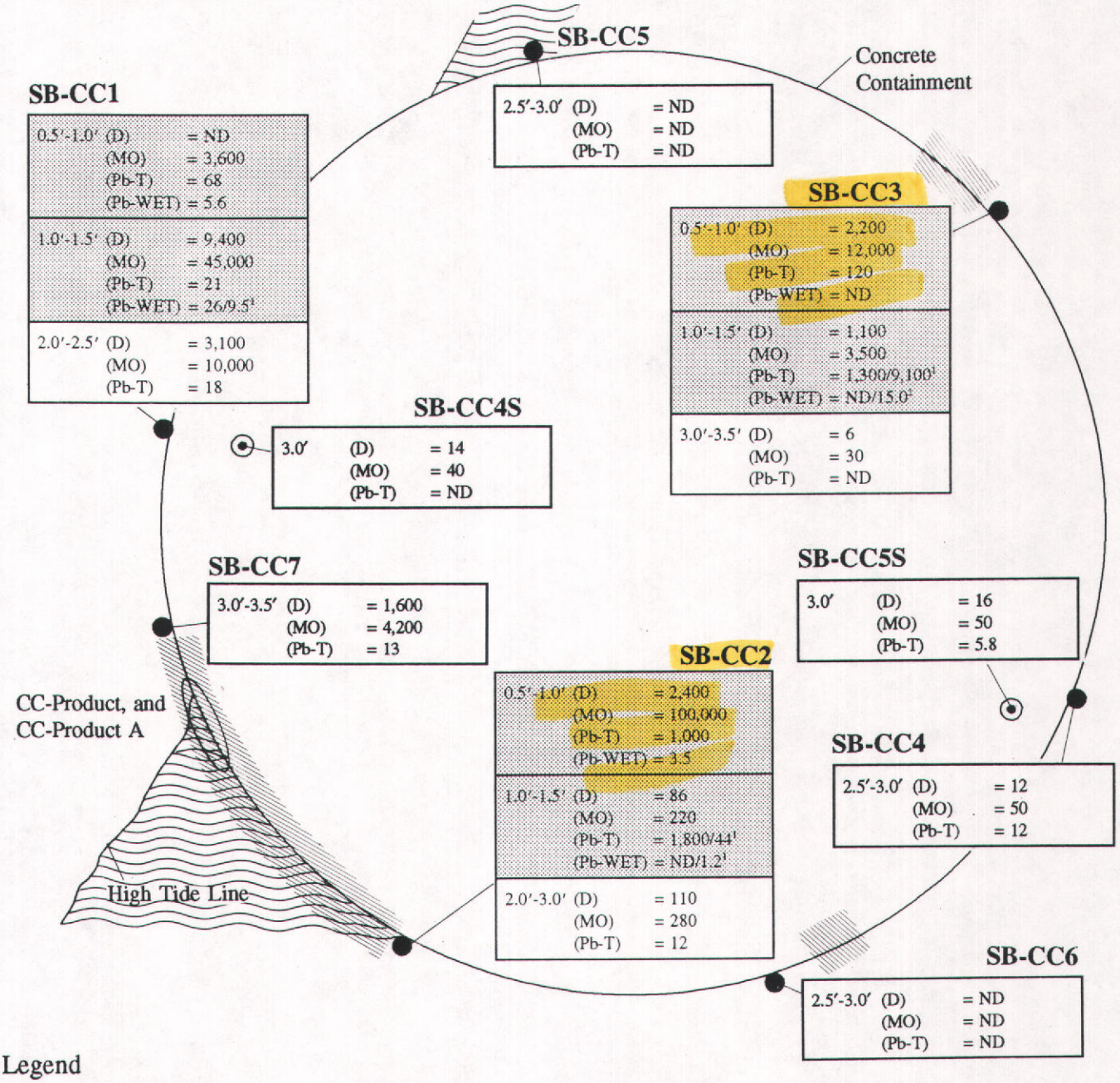
● > STLC Cu

▲ < STLC Cu

A	=	SB-12A	F	=	SB-12F
B	=	SB-12B	G	=	SB-12G
C	=	SB-12C	I	=	SB-12I
D	=	SB-12D	K	=	SB-12K
E	=	SB-12E			

SAMPLING LOCATIONS, CONCRETE CONTAINMENT

Figure 14



Legend

SB-CC2 ● Soil Sample Location (January and April 1994)

SB-CC4 ⊙ Soil Sample from Beneath Concrete Containment (January 1994)

2.5'-3.0' (D) = 12
(MO) = 50
(Pb-T) = 12

Concentration (mg/kg) of Diesel (D), Motor Oil (MO), and Total Lead (PB-T) at specified depth. Soluble lead (Pb-WET) in mg/L is also reported for a soil sample where total Pb exceed ten times the STLC. ND = not detected. Shading indicates areas that have been excavated.

Area of Black Liquid Emanating from below Containment Foundation

[1]Sample reanalyzed on 2/10/94

0 9 Feet

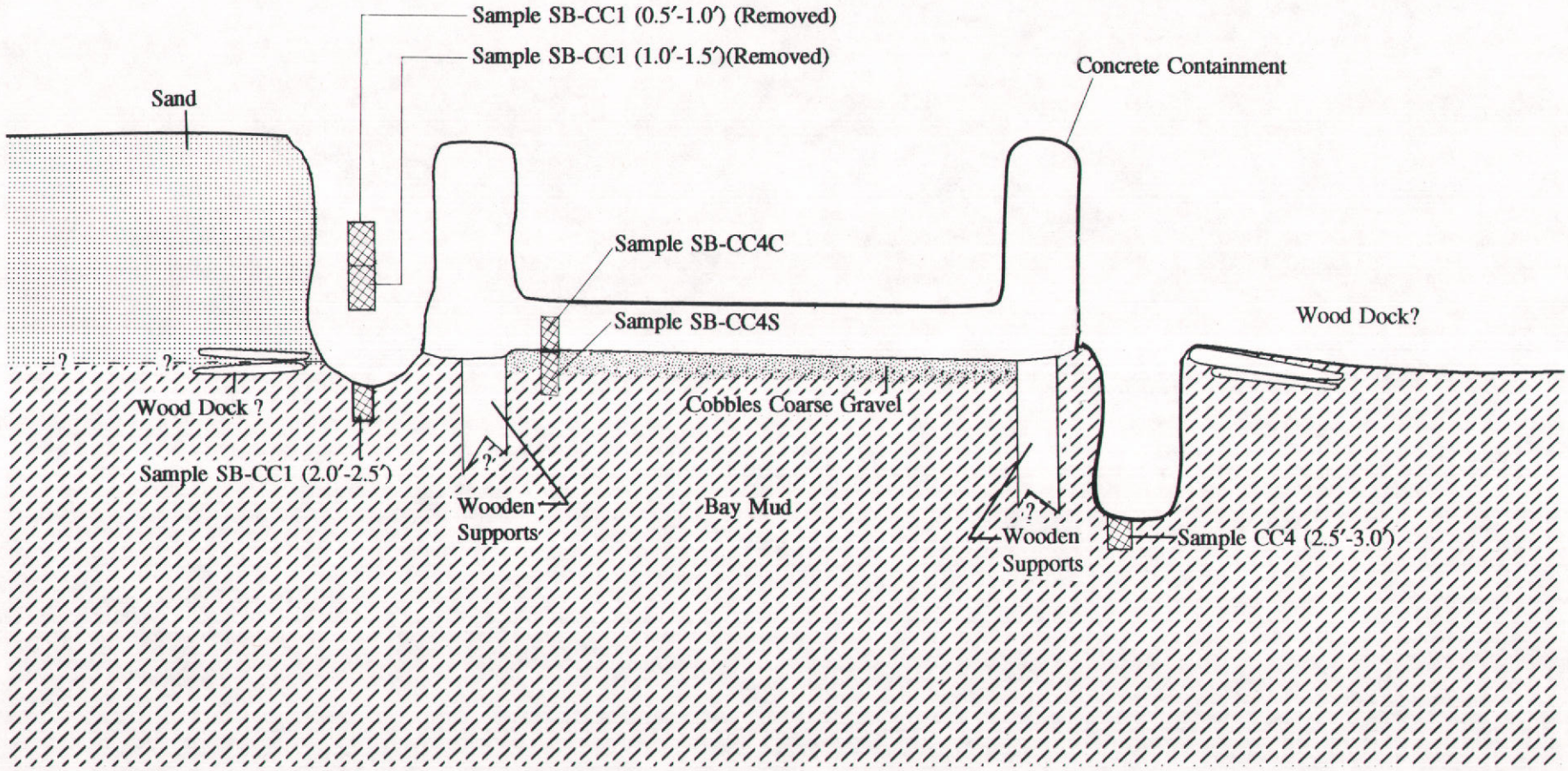
Seabreeze Yacht Center

BASELINE

S9171-DO.02 8/15/94 CADD-S9171B

CONCRETE CONTAINMENT STRUCTURE
(Southeast-Northwest Cross-Section)

Figure 15



BASELINE

SEABREEZE CONCRETE CONTAINMENT EXCAVATION
April 1994

Figure 16

SEABREEZE CONCRETE CONTAINMENT EXCAVATION
April 1994

Figure 17

SEABREEZE CONCRETE CONTAINMENT EXCAVATION
April 1994

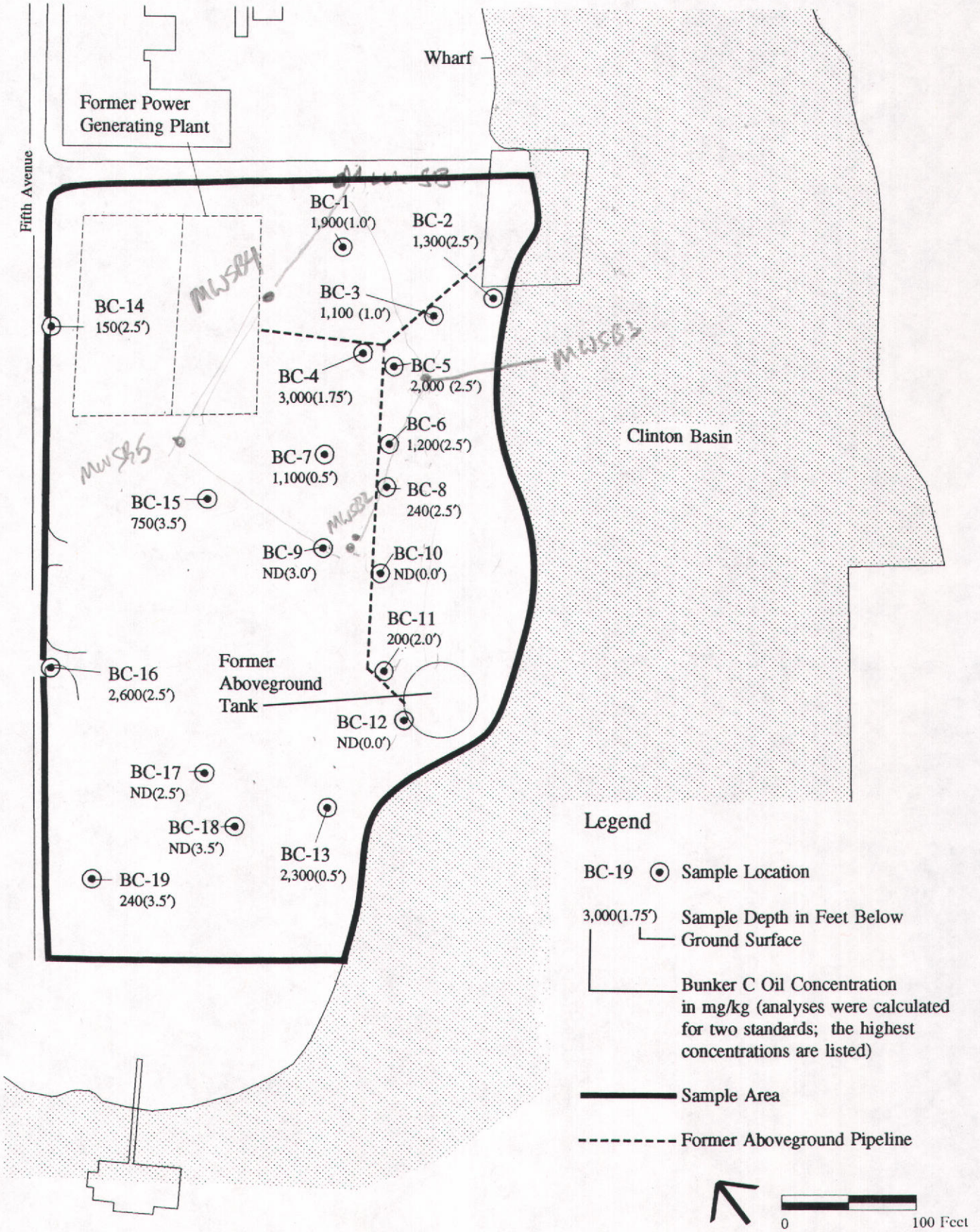
Figure 18

SEABREEZE CONCRETE CONTAINMENT EXCAVATION
April 1994

Figure 19

SAMPLING LOCATIONS
AUGUST 1994

Figure 20



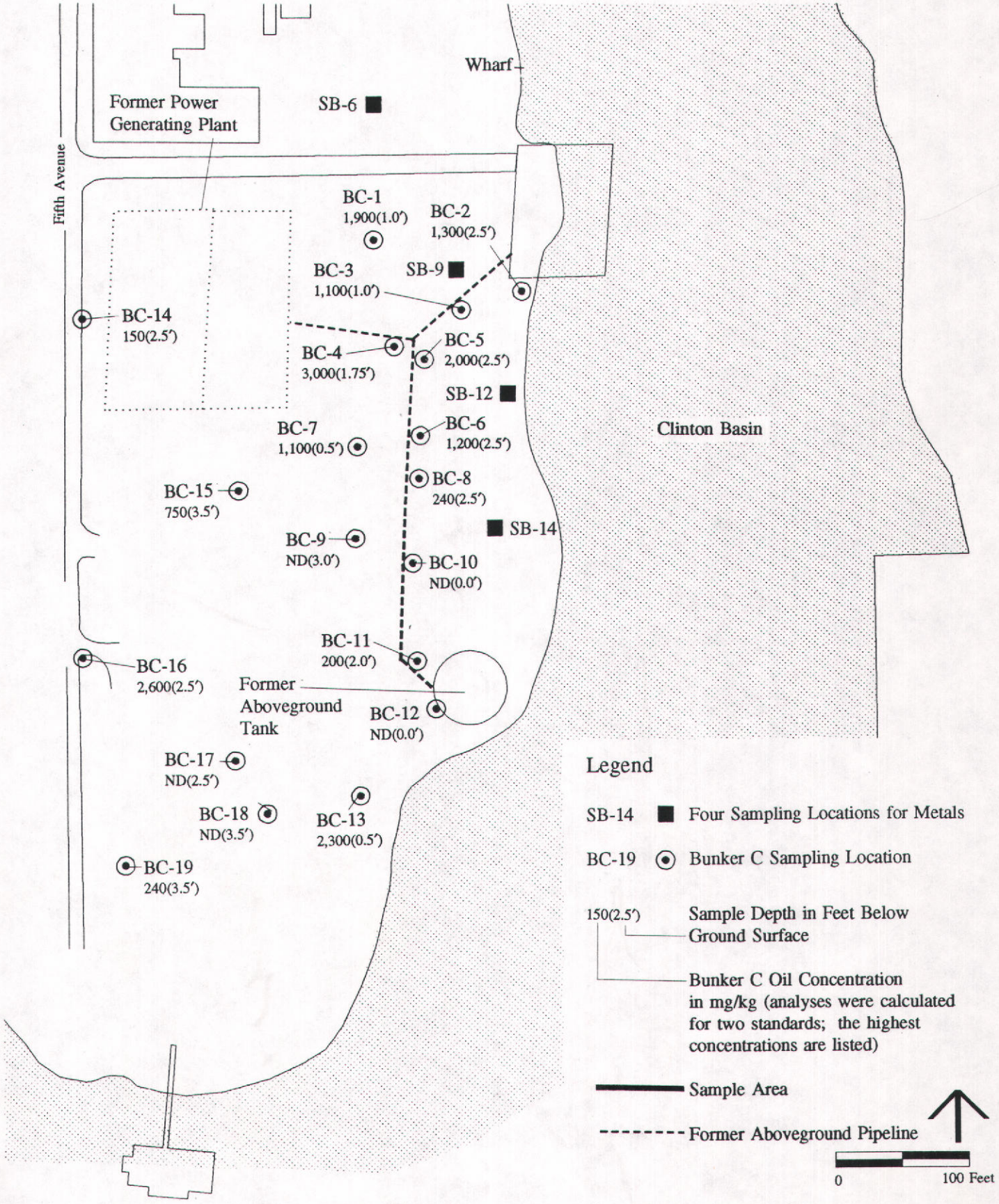
Seabreeze Yacht Center, Inc.

BASELINE

S9171-00.02 8/22/94

SAMPLING LOCATIONS FOR METALS AND BUNKER C

Figure 21



BASELINE

TABLE 1

ANALYSES PERFORMED
Seabreeze Yacht Center, Oakland, California

Location	Depth (feet)	TEH	TVH	Oil and Grease	Lead			Copper		Volatile Organic Compounds	Title 26 Metals	Turbidity
					Total	WET	TCLP	Total	WET			
SOIL SAMPLING IN FOUR LOCATIONS												
SB-6H	1.5-2.0				✓							
SB-6I	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ NA	✓ NA						
SB-6J	0.5-1.0				✓							
SB-6K	0.5-1.0				✓	✓	✓					
SB-6L	1.0-1.5 1.5-2.0				✓ NA	 NA						
SB-9	1.5-2.0				✓							
SB-9D	1.5-2.0				✓	✓	✓					
SB-9F	1.5-2.0				✓	✓						
SB-9G	1.5-2.0				✓							
SB-9H	1.5-2.0				✓	✓						
SB-9I	0.5-1.0				✓	✓	✓					
SB-9J	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ NA	✓ ✓ NA						
SB-9K	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓	✓ ✓ ✓						

Table 1 Analyses Performed - *continued*

Location	Depth (feet)	TEH	TVH	Oil and Grease	Lead			Copper		Volatile Organic Compounds	Title 26 Metals	Turbidity
					Total	WET	TCLP	Total	WET			
SB-9L	1.0-1.5 1.5-2.0				✓ NA	 NA						
SB-9M	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ NA	✓ ✓ NA						
SB-9N	1.0-1.5 1.5-2.0				✓ NA	✓ NA						
SB-9O	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ ✓	 ✓						
SB-12A	1.5-2.0				✓	✓		✓	✓			
SB-12C	1.5-2.0				✓	✓	✓	✓	✓			
SB-12H	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓	✓ ✓ ✓		✓ ✓ ✓				
SB-12I	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓	✓ ✓ ✓		✓ ✓				
SB-12J	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ NA	 ✓ NA		✓ ✓				
SB-12K	1.0-1.5 1.5-2.0				✓ NA	 NA		✓				
SB-12L	0.5-1.0 1.0-1.5 1.5-2.0				✓ ✓ ✓	✓ ✓ ✓		✓ ✓ ✓				

Table 1 Analyses Performed - *continued*

Location	Depth (feet)	TEH	TVH	Oil and Grease	Lead			Copper		Volatile Organic Compounds	Title 26 Metals	Turbidity
					Total	WET	TCLP	Total	WET			
SB-14C	1.5-2.0				✓	✓						
SB-14H	1.0-1.5 1.5-2.0				✓ NA	✓ NA						
SB-14I	1.0-1.5 1.5-2.0				✓ NA	✓ NA						
SOIL SAMPLING LANDWARD OF THE CONCRETE CONTAINMENT[1]												
BC-1	1.0-1.5	✓										
BC-2	2.5-3.0	✓										
BC-3	1.0-1.5	✓										
BC-4	1.75-2.25	✓										
BC-5	2.5-3.0	✓										
BC-6	2.5-3.0	✓										
BC-7	0.5-1.0	✓										
BC-8	2.5-3.0	✓										
BC-9	3.0-3.5	✓										
BC-10	0-0.5	✓										
BC-11	2.0-2.5	✓										
BC-12	0-0.5	✓										
BC-13	0.5-1.0	✓										
BC-14	2.5-3.0	✓										

Table 1 Analyses Performed - *continued*

Location	Depth (feet)	TEH	TVH	Oil and Grease	Lead			Copper		Volatile Organic Compounds	Title 26 Metals	Turbidity
					Total	WET	TCLP	Total	WET			
BC-15	3.5-4.0	✓										
BC-16	2.5-3.0	✓										
BC-17	2.5-3.0	✓										
BC-18	3.5-4.0	✓										
BC-19	3.5-4.0	✓										
CONCRETE CORE AND SOIL												
SB-CC4C	0-0.5	✓		✓	✓			✓				
SB-CC4S	~3.0	✓		✓	✓			✓				
SB-CC5C	0-0.5	✓		✓	✓			✓				
SB-CC5S	~3.0	✓		✓	✓			✓				
PERIMETER VERIFICATION SAMPLES												
SB-CC1	2.0-2.5	✓			✓			✓				
SB-CC2	2.0-3.0	✓			✓			✓				
SB-CC3	3.0-3.5	✓			✓			✓				
SB-CC4	2.5-3.0	✓			✓			✓				
SB-CC5	2.5-3.0	✓			✓			✓				
SB-CC6	2.5-3.0	✓			✓			✓				
SB-CC7	2.5-3.0	✓			✓			✓				
GROUNDWATER												
MW-SB1	--			✓	✓			✓		✓		
MW-SB1[2]	--			✓	✓			✓		✓		

Table 1 Analyses Performed - *continued*

Location	Depth (feet)	TEH	TVH	Oil and Grease	Lead			Copper		Volatile Organic Compounds	Title 26 Metals	Turbidity
					Total	WET	TCLP	Total	WET			
MW-SB2	--			✓	✓			✓		✓		
PRODUCT												
CC-Product	NA	✓[3]										
CC-Product A	NA									✓	✓[4]	

Note: NA = Sample collected, but not analyzed
-- = Not applicable
WET = Waste Extraction Test
TCLP = Toxicity Characteristic Leaching Procedure

[1] Samples were analyzed for TEH as Bunker C.
[2] Duplicate sample.
[3] The sample was fingerprinted to identify the type of petroleum hydrocarbons
[4] Sample also analyzed for semi-volatile organics, EPA Method 8270.

TABLE 2

SUMMARY OF ANALYTICAL RESULTS, SOIL SAMPLING
Seabreeze Yacht Center, Oakland, California

Sample ID	Sample Date	Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/L)	Total Copper (mg/kg)	Soluble Copper (mg/L)	Total Oil and Grease (mg/kg)
SB-1	9/6/90	0.5-1.0	40.0	--	31.0	--	--
		1.0-1.5	36.0	--	20.0	--	--
		3.5-4.0	14.0	--	12.0	--	--
SB-2	9/6/90	0.5-1.0	<2.5	--	17.0	--	--
		1.0-1.5	<2.5	--	19.0	--	--
		3.0-3.5	36.0	--	19.0	--	--
		5.0-5.5	87.0	1.1	11.0	--	--
SB-3	9/6/90	0.5-1.0	<2.5	--	10.0	--	--
		1.0-1.5	3.0	--	12.0	--	--
		3.5-4.0	2.5	--	9.0	--	--
SB-4	9/6/90	0.5-1.0	69.0	2.7	100.0	--	--
		1.0-1.5	<2.5	--	21.0	--	--
		3.5-4.0	14.0	--	16.0	--	--
SB-5	9/6/90	0.5-1.0	6.5	--	34.0	--	--
		1.0-1.5	<2.5	--	26.0	--	--
		3.5-4.0	11.0	--	19.0	--	--
SB-6	9/6/90	0.5-1.0	650.0	28.0	140.0	--	--
		2.0-2.5	<2.5	--	11.0	--	--
SB-6A	4/9/91	0.5-1.0	990	155	--	--	--
		1.0-1.5	101	4.8	--	--	--
SB-6B	4/9/91	0.5-1.0	145	3.1	--	--	--
		1.0-1.5	16.8	0.27	--	--	--
SB-6C	4/9/91	0.5-1.0	11.3	0.19	--	--	--
		1.0-1.5	3.5	0.14	--	--	--
SB-6D	4/9/91	0.5-1.0	8.5	2.3	--	--	--
		1.0-1.5	7.9	0.25	--	--	--
SB-6E	4/9/91	0.5-1.0	7.8	0.29	--	--	--
		1.0-1.5	142	2.8	--	--	--
SB-6F	4/9/91	0.5-1.0	9.3	0.16	--	--	--
		1.0-1.5	8.4	<0.06	--	--	--
SB-6G	4/9/91	0.5-1.0	<3.0	0.10	--	--	--
		1.0-1.5	67.3	<0.06	--	--	--
SB-6H	4/9/91	0.5-1.0	50.5	1.5	--	--	--
		1.0-1.5	102	7.3	--	--	--
SB-6H	1/7/94	1.5-2.0	<4.9	--	--	--	--

Table 2 Summary of Analytical Results, Soil Investigation - *continued*

Sample ID	Sample Date	Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/L)	Total Copper (mg/kg)	Soluble Copper (mg/L)	Total Oil and Grease (mg/kg)
SB-6I	1/7/94	0.5-1.0	80	5.4	--	--	--
		1.0-1.5	45	--	--	--	--
SB-6J	1/7/94	0.5-1.0	24	--	--	--	--
SB-6K[1]	1/7/94	0.5-1.0	3,700	340	--	--	--
SB-6L	1/7/94	1.0-1.5	49	--	--	--	--
SB-7	9/6/90	1.0-1.5	67.0	0.34	37.0	--	--
SB-8	9/6/90	0.5-1.0	51.0	1.6	79.0	--	230.0
		1.0-1.5	2.9	--	7.3	--	--
		2.5-3.0	5.9	--	16.0	--	1,200.0
SB-9	9/6/90	0.5-1.0	200.0	19.0	18.0	--	--
		1.0-1.5	160.0	12.0	12.0	--	--
		3.5-4.0	2.5	--	9.5	--	--
SB-9	1/7/94	1.5-2.0	26	--	--	--	--
SB-9A	4/9/91	0.5-1.0	<3.0	0.06	--	--	--
		1.0-1.5	<3.0	<0.06	--	--	--
SB-9B	4/9/91	0.5-1.0	60.8	5.6	--	--	--
		1.0-1.5	34.8	1.4	--	--	--
SB-9C	4/9/91	0.5-1.0	483	28.3	--	--	--
		1.0-1.5	45.3	3.0	--	--	--
SB-9D	4/9/91	0.5-1.0	119	2.3	--	--	--
		1.0-1.5	82.4	8.6	--	--	--
SB-9D[1]	1/7/94	1.5-2.0	120	11.0	--	--	--
SB-9E	4/9/91	0.5-1.0	138	8.6	--	--	--
		1.0-1.5	125	2.9	--	--	--
SB-9F	4/9/91	0.5-1.0	152	9.1	--	--	--
		1.0-1.5	509	61.6	--	--	--
SB-9F	1/7/94	1.5-2.0	75	4.7		--	--
SB-9G	4/9/91	0.5-1.0	217	38.8	--	--	--
		1.0-1.5	53.7	11.7	--	--	--
SB-9G	1/7/94	1.5-2.0	34	--	--	--	--
SB-9H	4/9/91	0.5-1.0	--	--	--	--	--
		1.0-1.5	382	11.1	--	--	--
SB-9H	1/7/94	1.5-2.0	270	5.5	--	--	--
SB-9I[1]	1/7/94	0.5-1.0	310	15.0	--	--	--

Table 2 Summary of Analytical Results, Soil Investigation - *continued*

Sample ID	Sample Date	Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/L)	Total Copper (mg/kg)	Soluble Copper (mg/L)	Total Oil and Grease (mg/kg)
SB-9J	1/7/94	0.5-1.0	110	3.1	--	--	--
		1.0-1.5	84	2.7	--	--	--
SB-9K	1/7/94	0.5-1.0	240	7.0	--	--	--
		1.0-1.5	93	6.8	--	--	--
		1.5-2.0	--	4.1	--	--	--
SB-9L	1/7/94	1.0-1.5	<4.9	--	--	--	--
SB-9M	1/7/94	0.5-1.0	87	5.4	--	--	--
		1.0-1.5	93	3.0	--	--	--
SB-9N	1/7/94	1.0-1.5	180	2.8	--	--	--
SB-9O	1/7/94	0.5-1.0	<5.0	--	--	--	--
		1.0-1.5	<5.0	--	--	--	--
		1.5-2.0	58	2.0	--	--	--
SB-10	9/6/90	0.5-1.0	12.0	--	130.0	--	--
		1.0-1.5	<2.5	--	79.0	--	--
		3.0-3.5	25.0	--	18.0	--	--
SB-11	9/7/90	0.5-1.0	72.0	3.7	33.0	--	--
		1.0-1.5	22.0	--	18.0	--	--
		3.0-3.5	5.5	--	29.0	--	--
SB-12	9/7/90	0.5-1.0	340.0	9.0	730.0	44.0	--
		1.0-1.5	17.0	--	20.0	--	--
		2.5-3.0	67.0	2.2	19.0	--	--
SB-12A	4/9/91	0.5-1.0	413	39.8	1,780	21.2	--
		1.0-1.5	490	8.3	40	9.2	--
SB-12A	1/7/94	1.5-2.0	140	5.1	350	27	--
SB-12B	4/9/91	0.5-1.0	116	0.26	368	7.6	--
		1.0-1.5	70.5	3.9	87	4.6	--
SB-12C	4/9/91	0.5-1.0	86.8	2.9	237	11.9	--
		1.0-1.5	97	5.7	55	1.7	--
SB-12C[1]	1/7/94	1.5-2.0	340	26.0	360	30	--
SB-12D	4/9/91	0.5-1.0	82.2	3.3	418	11.0	--
		1.0-1.5	68.5	2.5	51	1.2	--
SB-12E	4/9/91	0.5-1.0	128	7.7	2,280	61.4	--
		1.0-1.5	51.7	2.7	210	5.0	--
SB-12F	4/9/91	0.5-1.0	115	2.6	95	2.0	--
		1.0-1.5	17.9	2.5	23	1.9	--
SB-12G	4/9/91	0.5-1.0	68.6	2.0	164	4.9	--
		1.0-1.5	28.1	2.4	33	2.5	--

Table 2 Summary of Analytical Results, Soil Investigation - *continued*

Sample ID	Sample Date	Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/L)	Total Copper (mg/kg)	Soluble Copper (mg/L)	Total Oil and Grease (mg/kg)
SB-12H	1/7/94	0.5-1.0	150	5.9	190	--	--
		1.0-1.5	300	8.0	3,500	--	--
		1.5-2.0	--	4.2	23	--	--
SB-12I	1/7/94	0.5-1.0	230	7.5	100	--	--
		1.0-1.5	200	8.0	150	--	--
		1.5-2.0	--	3.4	--	--	--
SB-12J	1/7/94	0.5-1.0	48	--	86	--	--
		1.0-1.5	63	3.4	240	--	--
SB-12K	1/7/94	1.0-1.5	19	--	170	--	--
SB-12L	1/10/94	0.5-1.0	220	8.6	240	--	--
		1.0-1.5	75	7.4	120	--	--
		1.5-2.0	140	1.2	39	--	--
SB-13	9/7/90	0.5-1.0	31.0	--	10.0	--	--
		1.0-1.5	19.0	--	9.9	--	--
		2.5-3.0	33.0	--	76.0	--	--
SB-14	9/7/90	0.5-1.0	61.0	6.6	47.0	--	--
		1.0-1.5	55.0	1.4	81.0	--	--
		3.0-3.5	<2.5	--	18.0	--	--
SB-14A	4/8/91	0.5-1.0	52	3.1	--	--	--
		1.0-1.5	73	4.0	--	--	--
SB-14B	4/8/91	0.5-1.0	6.4	0.09	--	--	--
		1.0-1.5	51	2.8	--	--	--
SB-14C	4/8/91	0.5-1.0	105	3.6	--	--	--
		1.0-1.5	91	5.3	--	--	--
SB-14C	1/7/94	1.5-2.0	65	3.5	--	--	--
SB-14D	4/8/91	0.5-1.0	90	2.9	--	--	--
		1.0-1.5	52	1.7	--	--	--
SB-14E	4/8/91	0.5-1.0	38.1	0.74	--	--	--
		1.0-1.5	91.3	3.5	--	--	--
SB-14F	4/8/91	0.5-1.0	36.5	3.2	--	--	--
		1.0-1.5	70.1	3.8	--	--	--
SB-14G	4/8/91	0.5-1.0	126	1.8	--	--	--
		1.0-1.5	79.8	3.7	--	--	--
SB-14H	1/7/94	1.0-1.5	120	3.0	--	--	--
SB-14I	1/7/94	1.0-1.5	230	3.1	--	--	--

Table 2 Summary of Analytical Results, Soil Investigation - *continued*

Sample ID	Sample Date	Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/L)	Total Copper (mg/kg)	Soluble Copper (mg/L)	Total Oil and Grease (mg/kg)
SB-15	9/7/90	0.5-1.0	12.0	--	8.4	--	18,000
		1.0-1.5	39.0	--	9.8	--	7,900
		3.5-4.0	14.0	--	11.0	--	1,700

Notes: WET = Waste Extraction Test
TCLP = Toxicity Characteristic Leaching Procedure
<x.x = Compound not identified above detection limit.
Sample locations are shown on Figure 2 through 7.
The 1990 samples were analyzed for cadmium, total chromium, copper, lead, nickel, and tin. Selected samples were also analyzed for oil and grease, volatile organic compounds, and soluble lead and copper.
Laboratory reports for the 1994 sampling event are included in Appendix D.

Lead TTLC = 1,000 mg/kg.
Lead STLC = 5 mg/L.
Copper TTLC = 2,500 mg/kg.
Copper STLC = 25 mg/L.

[1] These samples were also analyzed for soluble lead using the TCLP method; the results were:
SB-6K: 10 mg/L
SB-9D: 0.22 mg/L
SB-9I: 0.48 mg/L
SB-12C: 0.5 mg/L

TABLE 3

SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
Seabreeze Yacht Center, Oakland, California
(mg/L)

Sample ID	Date	Lead	Copper	Oil & Grease[1]	Volatile Organic Compounds[2]
MW-SB1	4/17/91	<0.07[3]/<0.07[3]	0.0198[3]/0.0144[3]	<5/<5	<0.01/<0.01
	7/9/91	<0.06[4]/<0.06[4]	<0.02[5]/<0.02[5]	NA/NA	NA/NA
	1/10/94	<0.1/<0.1[4]	<0.02[5]/<0.02[5]	NA	NA
	1/26/94	0.012/0.0039	0.037[5]/0.026[5]	<5/<5	0.06/ND [6]
MW-SB2	4/19/91	<0.07[3]	0.0481[3]	<5	<0.01
	7/9/91	<0.06[4]	<0.02[5]	NA	NA
	1/10/94	<0.10[4]	<0.02[5]	NA	NA
	1/26/94	0.0048[5]	0.014[5]	<5	0.1[7]
Marine acute[8]-lead		0.14	--	--	--
Marine acute[8]-copper		--	0.0029	--	--
Marine chronic[8]-lead		0.56	--	--	--
Marine chronic[8]-copper		--	0.0029	--	--

Notes: xx/xx = Duplicate sample
Well locations are shown on Figure 2.
Laboratory reports are included in Appendix F.
NA = not analyzed.
ND = not detected.

1 Method SMWW 17:5520BF.
2 EPA Method 624, except where noted.
3 EPA Method 6010.
4 EPA Method 7420.
5 EPA Method 7210.
6 EPA Method 8240; 0.06 mg/L of acetone was detected; duplicate sample was below reporting limits. All other compounds were below reporting limits.
7 EPA Method 8240; 0.1 mg/L of 2-butanone was detected; all other compounds were below reporting limits.
8 Marine acute and chronic water quality criteria from U.S. EPA, 1987, Quality Criteria for Water, 1986, Update 2, U.S. Environmental Protection Agency, Office of Water Regulations Standards.

TABLE 4

SUMMARY OF ANALYTICAL RESULTS, CONCRETE CONTAINMENT PERIMETER SOILS

Seabreeze Yacht Center, Oakland, California

(mg/kg except where noted)

Sample Location	Sample Date	Depth (feet)	Oil and Grease	TPH				Benzene[3]	Toluene[3]	Ethyl-benzene[3]	Xylenes[3]	Lead		Total Copper[6]
				Gasoline[1]	Diesel[2]	Kerosene	Motor Oil					Total[4]	Soluble[5] (mg/L)	
SB-CC1	1/10/94	0.5-1.0[7]	**2,100**	<1.0	**<50[8]**	<50	**3,600[8]**	<0.005	<0.005	<0.005	<0.005	**68**	**5.6**	**170**
		1.0-1.5[7]	**3,700**	--	**9,400[8]**	--[10]	**45,000[8]**	--	--	--	--	**21[11]**	**2.6/9.5[12]**	--
	4/8/94	2.0-2.5	--	--	**3,100[9]**	--[10]	**10,000[9]**	--	--	--	--	**18**	--	**30**
SB-CC2	1/10/94	0.5-1.0[7]	**41,000**	<1.0	**24,000[8]**	--[10]	**100,000[8]**	<0.005	<0.005	<0.005	<0.005	**1,000**	**3.5**	**28**
		1.0-1.5[7]	**150**	--	**86[8]**	--[10]	**220[8]**	--	--	--	--	**1,800/44[12]**	**<0.5/1.2[12]**	--
	4/7/94	2.0-3.0	--	--	**110**	--[10]	**280**	--	--	--	--	**12**	--	**18**
SB-CC3	1/10/94	0.5-1.0[6]	**3,300**	<1.0	**2,200[8]**	--[10]	**12,000[8]**	<0.005	<0.005	<0.005	<0.005	**120**	**<0.5**	**82**
		1.0-1.5[6]	**680**	--	**1,100[8]**	--[10]	**3,500[8]**	--	--	--	--	**1,300/9,100[12]**	**<0.5/15.0[12]**	--
	4/7/94	3.0-3.5	--	--	**6**	<1	**30**	--	--	--	--	<4.9	--	**21**
SB-CC4	4/7/94	2.5-3.0	--	--	**12**	--[10]	**50**	--	--	--	--	**12**	--	**21**
SB-CC5	4/7/94	2.5-3.0	--	--	<1	<1	<30	--	--	--	--	<4.8	--	**12**
SB-CC6	4/7/94	2.5-3.0	--	--	<1	<1	<30	--	--	--	--	<4.9	--	**20**
SB-CC7	4/7/94	3.0-3.5	--	--	**1,600**	--[10]	**4,200**	--	--	--	--	**13**	--	**20**

Notes:

x.x = Bold numbers indicate compounds identified above detection limits.
<x.x = Compound not identified above detection limit.
-- = Not analyzed.
TPH = Total Petroleum Hydrocarbons.
Sample locations are shown on Figure 2.
Laboratory reports are included in Appendix G.
Lead TTLC = 1,000 mg/kg.
Lead STLC = 5 mg/L.
Copper TTLC = 2,500 mg/kg.
Copper STLC = 25 mg/L.

1 EPA Method 5030/8015M.
2 EPA Method 3550/8015M.
3 EPA Method 8020.
4 EPA Method 7420.
5 EPA Method WET.
6 EPA Method 7210.
7 Soil removed during excavation on 7 and 8 April 1994.
8 Chromatograms are included in Appendix G.
9 Chromatograms are included in Appendix J.
10 Kerosene range not reported by laboratory due to overlap of hydrocarbon ranges.
11 Sample reanalyzed, but sample lost during digestion.
12 Sample was reanalyzed on 2/10/94.

TABLE 5

SUMMARY OF ANALYTICAL RESULTS, CONCRETE CORE/SOIL SAMPLES
Concrete Containment
Seabreeze Yacht Center, Oakland, California
(mg/kg, except where noted)

Sample Location	Matrix	Sample Date	Depth (feet)	Diesel[1]	Motor Oil[2]	Oil & Grease[3]	Total Lead[4]	Total Copper[5]
SB-CC4C	Concrete	1/21/94	0-0.5	9	<30	50	<5.0	10
SB-CC4S	Soil	1/21/94	~3.0	14	40	<50	<5.0	13
SB-CC5C	Concrete	1/21/94	0-0.5	17	30	120	<4.8	14
SB-CC5S	Soil	1/21/94	~3.0	16	50	<50	5.8	15

Notes: <x.x = Compound not identified above detection limit.
Lead TTLC = 1,000 mg/kg.
Lead STLC = 5 mg/L.
Copper TTLC = 2,500 mg/kg.
Copper STLC = 25 mg/L.
TPH = Total Petroleum Hydrocarbons.
Sample locations are shown on Figure 2.
Laboratory reports are included in Appendix I.

1 EPA Method 3550/8015M.
2 EPA Method 3550/8015M.
3 EPA Method SMWW 17:5520 EF.
4 EPA Method 7420.
5 EPA Method 7210.

TABLE 6

SUMMARY OF ANALYTICAL RESULTS
PRODUCT FROM BELOW CONCRETE CONTAINMENT
Seabreeze Yacht Center, Oakland, California
(mg/kg)

Compound	CC-Product[1]	CC-Product A[2]
Antimony	--	<1.0[3]/<2.7[4]
Arsenic	--	<0.25[3]/<2.4[5]
Barium	--	4.9[3]/7.1[4]
Beryllium	--	<0.05[3]/<0.091[4]
Cadmium	--	<0.05[3]/<0.23[4]
Chromium (total)	--	<0.5[3]/0.65[4]
Cobalt	--	<0.5[3]/<0.91[4]
Copper	--	1.7[3]/3.9[4]
Lead	7.8[6]	1.3[3]/<4.5[6]
Mercury	--	<0.05[3]/<0.077[3]
Molybdenum	--	<0.25[3]/<0.91[4]
Nickel	--	23[3]/47[4]
Selenium	--	8.5[3]/<2.4[7]
Silver	--	<0.25[3]/<0.45[4]
Thallium	--	<2.0[3]<2.4[8]
Vanadium	--	23[3]/51[4]
Zinc	--	6.2[3]/5.3[4]
Iron	--	190[4]/280[4]
Volatile Organics	--	--/ND
PNAs	ND	--/--

Notes: ND = Not detected above reporting limits. For volatile organics, the reporting limit was 50 µg/kg except for methylene chloride which was 250 µg/mg. The PNAs reporting limits were 300 mg/kg.
-- = Not analyzed.
PNA = Polynuclear aromatics.
xx/xx = Duplicate sample.
Laboratory reports are included in Appendix J.

1 Collected on 7 April 1994.
2 Collected on 23 May 1994.
3 EPA Method 7471.
4 EPA Method 6010.
5 EPA Method 7060.
6 EPA Method 7420.
7 EPA Method 7740.
8 EPA Method 7841.

TABLE 7

SUMMARY OF ANALYTICAL RESULTS
CONCRETE CONTAINMENT STANDING WATER
Seabreeze Yacht Center, Oakland, California
(mg/L, except where noted)

Sample Location	Sample Date	Title 26 Metals		Diesel[1]	Kerosene	Oil and Grease[2]	Turbidity[3] (NTU)
Concrete Containment	1/7/94	Antimony	<0.06	<0.05	<0.05	<5	1.2
		Arsenic	<0.005				
		Barium	0.034				
		Beryllium	<0.002				
		Cadmium	<0.005				
		Chromium	<0.01				
		Cobalt	<0.02				
		Copper	0.02				
		Lead	<0.1				
		Mercury	<0.0002				
		Molybdenum	<0.02				
		Nickel	<0.02				
		Selenium	<0.005				
		Silver	<0.01				
		Thallium	<0.005				
		Vanadium	<0.01				
		Zinc	0.084				

Notes: <x.x = Compound not identified above detection limit.
Laboratory reports are included in Appendix K.

[1] Test Method = 3550/8015M.
[2] Test Method = SMWW 17:5520BF.
[3] Test Method = 180.1.

TABLE 8

ANALYTICAL RESULTS, SOILS LANDWARD OF CONCRETE CONTAINMENT
Seabreeze Yacht Center, Oakland, California

(mg/kg)

Sample Location	Sample Date	Depth (feet)	Bunker C
BC-1	8/15/94	1.0-1.5	**1,900/1,900**
BC-2	8/15/94	2.5-3.0	**1,300/1,300**
BC-3	8/15/94	1.0-1.5	**1,100/1,100**
BC-4	8/15/94	1.75-2.25	**3,000/3,000**
BC-5	8/15/94	2.5-3.0	**2,000/2,000**
BC-6	8/15/94	2.5-3.0	**1,200/1,200**
BC-7	8/15/94	0.5-1.0	**1,100/1,000**
BC-8	8/15/94	2.5-3.0	**240/240**
BC-9	8/15/94	3.0-3.5	<25/<25
BC-10	8/15/94	0-0.5	<25/<25
BC-11	8/15/94	2.0-2.5	**200/200**
BC-12	8/15/94	0-0.5	<25/<25
BC-13	8/15/94	0.5-1.0	**2,300/2,000**
BC-14	8/15/94	2.5-3.0	**150/130**
BC-15	8/15/94	3.5-4.0	**670/750**
BC-16	8/15/94	2.5-3.0	**2,600/2,600**
BC-17	8/15/94	2.5-3.0	<25/<25
BC-18	8/15/94	3.5-4.0	<25/<25
BC-19	8/15/94	3.5-4.0	**240/240**

Notes: **x.x** = Bold numbers indicate compounds identified above detection limits.
<x.x = Compounds not identified above detection limits.
-- = Not analyzed.
Sample locations are shown on Figure 15.
Laboratory reports and chromatograms are included in Appendix L.
yy/xx = "yy" concentrations calculated based on a Bunker C standard obtained from the liquids below the concrete containment. Concentrations "xx" were calculated based on a laboratory Bunker C standard.
Samples analyzed by EPA Method 8015M.

APPENDIX A

WORK PLAN APPROVALS

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

October 21, 1993

Mr. Dan Schoenholz
Port of Oakland
530 Water Street, Fifth Floor
Oakland, CA 94607

Re: Conditional Work Plan Approval for Seabreeze Yacht Center located at 280 Sixth Avenue, Oakland, CA 94606

Dear Mr. Shoenholz:

Alameda County has reviewed the Phase II Remedial Investigation report, dated March 1992, for the subject site. During previous subsurface investigations contamination from lead and copper exceeded allowable soluble limit threshold concentrations (STLC) levels specified in the California Code of Regulations Title 22 (T 22). Soil analyses also indicated that total threshold limit concentration (TTLC) values were exceeded for lead in several locations. Soil data, collected in September 1990, indicated minor amounts of acetone, carbon disulfide, xylenes, 2-butanone and 1,2-dichloropropane.

As discussed in our meeting yesterday, it is possible that laboratory interference may have been responsible for the presence of these organic contaminants. As you pointed out, the locations of the two monitoring wells were chosen so that the above organic compounds, if present, could be detected. In two monitoring events, no organic compounds have thus far been detected. You are required to continue to monitor groundwater for these materials.

Additionally, total oil and grease (TOG) as high as 18,000 ppm was detected in boring SB-15. A monitoring well was subsequently placed in this area. Groundwater samples were analyzed for TOG. Because the source of this contamination has not yet been identified, you are requested to monitor groundwater for TOG in subsequent events. Since TOG levels were also detected in sample SB-8, you are requested to address the contamination issue in this area.

The work plan recommends additional investigation in several areas where previously STLC or TTLC values were exceeded. Also include in this investigation, the area boring SB-9B which indicated an STLC value of 5.6 ppm which exceeds the T 22 allowable value for lead of 5.0 ppm.

The work plan is approved with the inclusions stated in this

letter. Finally, the work plan specifies that the concrete pad which formerly contained an above ground bunker oil tank will be demolished and transported off site. Since contaminated soil was encountered in soil which was previously above the cement pad, you are required to collect an appropriate number of samples beneath this area during the removal of the pad. Samples should be analyzed for Petroleum Hydrocarbons, Total Oil and Grease, copper and lead.

Please feel free to contact me if you have any questions on the above.

Sincerely,

Paul M. Smith
Hazardous Materials Specialist

c:
Rich Hiett, SFRWQCB, 2101 Webster St., Fifth Floor, Oakland, CA 94612
Yane Nordav, Baseline, 5900 Hollis St, Suite D, Emeryville, CA 94608

BASELINE

ENVIRONMENTAL CONSULTING

1 December 1993
S9171-00

Mr. Dan Schoenholz
Port of Oakland
530 Water Street
Oakland, CA. 94607

Subject: Proposed Supplemental Work Plan For Phase III Remedial Investigation at Seabreeze Yacht Center, Inc., Oakland, CA.

Dear Dan:

This letter serves as a supplemental Work Plan for groundwater monitoring and soil and concrete sampling at Seabreeze Yacht Center, 280 Sixth Avenue in Oakland, CA. The work presented herein supplements work previously proposed in the Report on Phase II Remedial Investigation (Phase I Report) dated 5 March 1992 and conditionally approved by the Alameda County Health Services Agency (County) in a letter dated 21 October 1993. The proposed additional sampling activities are in response to conditions specified by the County. Except as described in this supplemental work plan, no other additions or revisions to the original scope of work would occur.

BACKGROUND

The project site is located on approximately nine acres of land at the southern terminus of Sixth Avenue, along the Oakland Inner Harbor (Figure 1). Remedial investigative activities began in November 1990 and were completed with a Phase II investigation in March 1992, which included: the collection and analyses of soil samples from designated locations; the installation of two on-site groundwater monitoring wells; the removal and disposal of hazardous waste materials generated during field activities; groundwater monitoring well installation and sampling; and the excavation of the contents of an on-site concrete containment structure.

Based on results of the Phase II investigation, a work plan for Phase III activities was provided in the Phase II Report prepared by BASELINE and submitted to the County for review and approval. The proposed scope-of-work for Phase III remedial activities included the following tasks:

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Emeryville *Petaluma*

- To further define the lateral and vertical extent of subsurface soils containing copper and lead in excess of Title 26 CCR concentrations.

- To conduct quarterly groundwater sampling for one year to identify the potential presence of copper and lead in the groundwater.

- To demolish, remove, and dispose of the concrete containment structure (approximately 52 feet in diameter and 5 feet in height).

CONDITIONS OF APPROVAL BY ALAMEDA COUNTY

By letter dated 21 October 1993, the County approved the work plan contained in the Phase II Report, with the following inclusions:

- All groundwater samples collected on a quarterly basis for a period of one year should also be analyzed for volatile organic compounds and total oil and grease.

- Additional subsurface soil samples should be collected at boring location SB-9 and analyzed for lead.

- An appropriate number of soil samples should be collected from beneath the concrete containment during its removal. These samples should be analyzed for petroleum hydrocarbons, total oil and grease, copper, and lead.

PROPOSED SUPPLEMENTAL WORK PLAN

Permits

All field activities will be performed under those permits described in the Phase II Report. No other permits will be required to conduct the proposed supplemental phase of this work plan.

Collection of Subsurface Samples

The work plan contained in the Phase II Report identified additional subsurface soil samples to be collected to further delineate the lateral and vertical extent of the soluble concentrations of lead and/or copper which exceed STLC values and where the lateral and/or vertical extent of the lead and copper were not defined. Soil samples were also proposed to be analyzed for total lead from previous soil boring locations which indicated total lead concentrations above

the TTLC. The County requested additional investigations near soil boring location SB-9 where lead levels exceeded the STLC. However, according to a letter to the County from the Port of Oakland, dated 1 November 1993, the County indicated that the original scope of work addressed further characterization at this location and that additional soil samples would not be necessary.

Groundwater Monitoring

Groundwater samples will be collected on a quarterly basis for one year as proposed in the Phase III work plan contained in the Phase II Report. These samples will also be analyzed for volatile organic compounds (EPA Method 8240), and total oil and grease (SMWW 17:5520BF), as requested by the County. The samples will be collected similarly to the methods described in the Phase III Work Plan; samples to be analyzed for volatile organics will be collected in glass VOAs using a VOC attachment to reduce volatilization, and oil and grease samples will be collected in one-liter amber glass bottles.

Concrete Containment

Inspections of the concrete base did not indicate that significant cracking has occurred. The soil underlying the structure is expected to be relatively uniform, considering the depositional environment at the margin of the Oakland Inner Harbor. Two concrete core samples will be collected, one within the dry dockside portion of the concrete containment base and one on the portion of the concrete base closest to the Clinton Basin Canal (Figure 2). Soil samples will collected directly under the bottom of the concrete base at each of these locations. The condition of the concrete base and expected uniformity of soils under the base indicate that two samples would be sufficient to preliminarily assess the presence or absence of petroleum hydrocarbons in the concrete and/or soil.

Three soil samples from the soils surrounding the containment perimeter will also be collected (Figure 2). The soil samples will be collected by hand auger and/or a drill rig, depending on site conditions. In accordance with the County's request, samples will be analyzed for petroleum hydrocarbons (EPA Method 8015M), total oil and grease (SMWW 17:5520BF), copper (EPA Method 7210) and lead (EPA Method 7420). In addition, water, if any, present within the containment from past rainfall will be pumped into a 55-gallon drum and sampled. The sample will be analyzed for the above analyses to determine disposal options. Following sampling activities, the soil and concrete core holes will be sealed with grout.

Reporting

Following Phase III activities, a report containing the summary of methodologies for field activities, sampling protocols, soil boring logs, laboratory reports and recommendations for additional work, if necessary, will be submitted to the Port for review and approval and thereafter to the County for review and approval.

Schedule

BASELINE would commence Phase III remedial investigation (including supplemental) activities following receipt of County approval of this supplemental Work Plan and authorization to proceed from the Port of Oakland. A draft report on Phase III activities would be submitted to the Port within six weeks of commencing work.

Should you have any questions about this work plan, please contact us at your convenience.

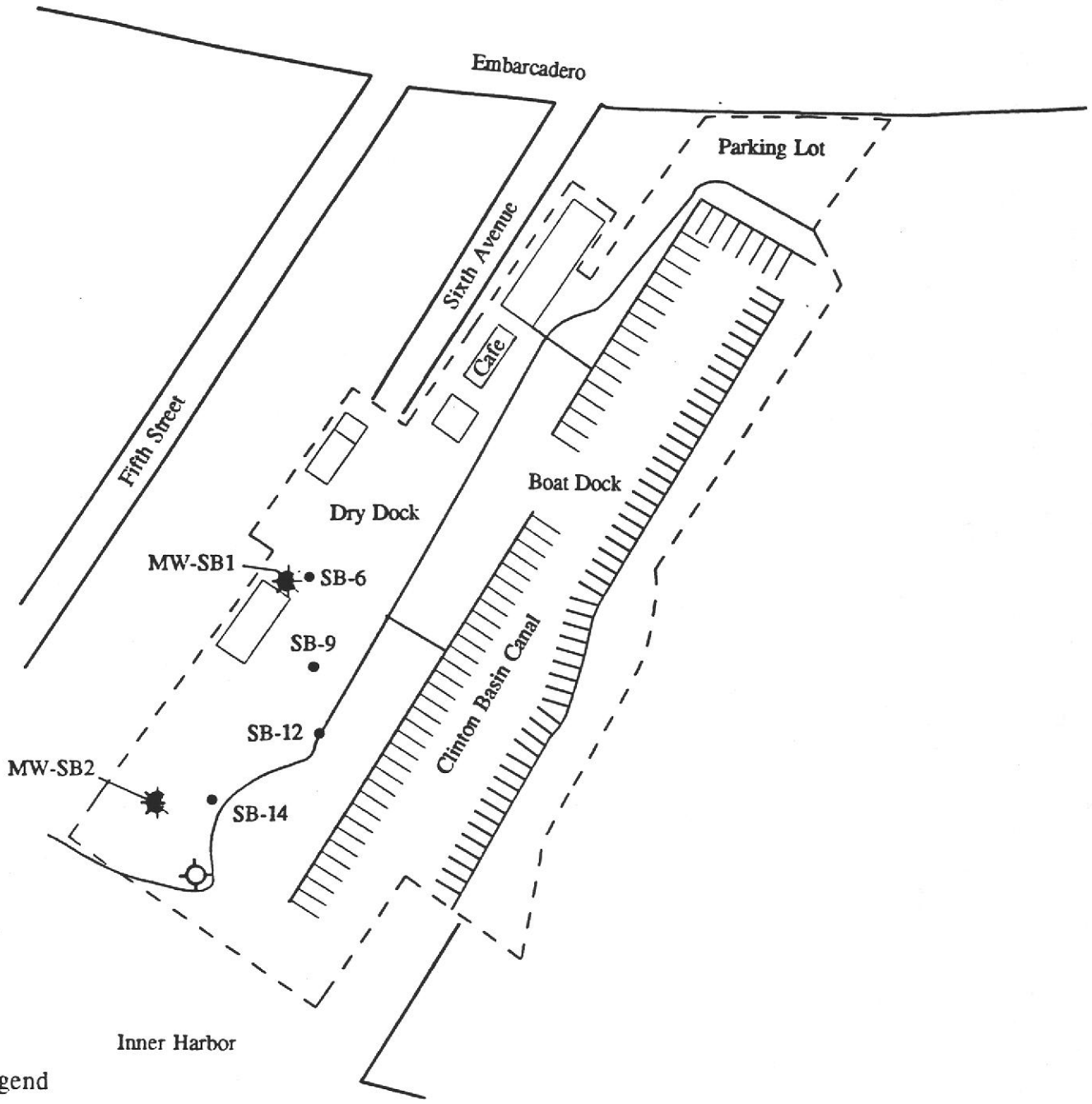
Sincerely,

Teresa Anaya
Associate

Yane Nordhav
Principal

SAMPLING LOCATIONS

Figure 1



Legend

SB-6 • Soil Sample Location

MW-SB1 ✸ Monitoring Well Location

⊕ Concrete Containment (Refer to Figure 2 for proposed sampling locations at concrete containment)

0 200 Feet

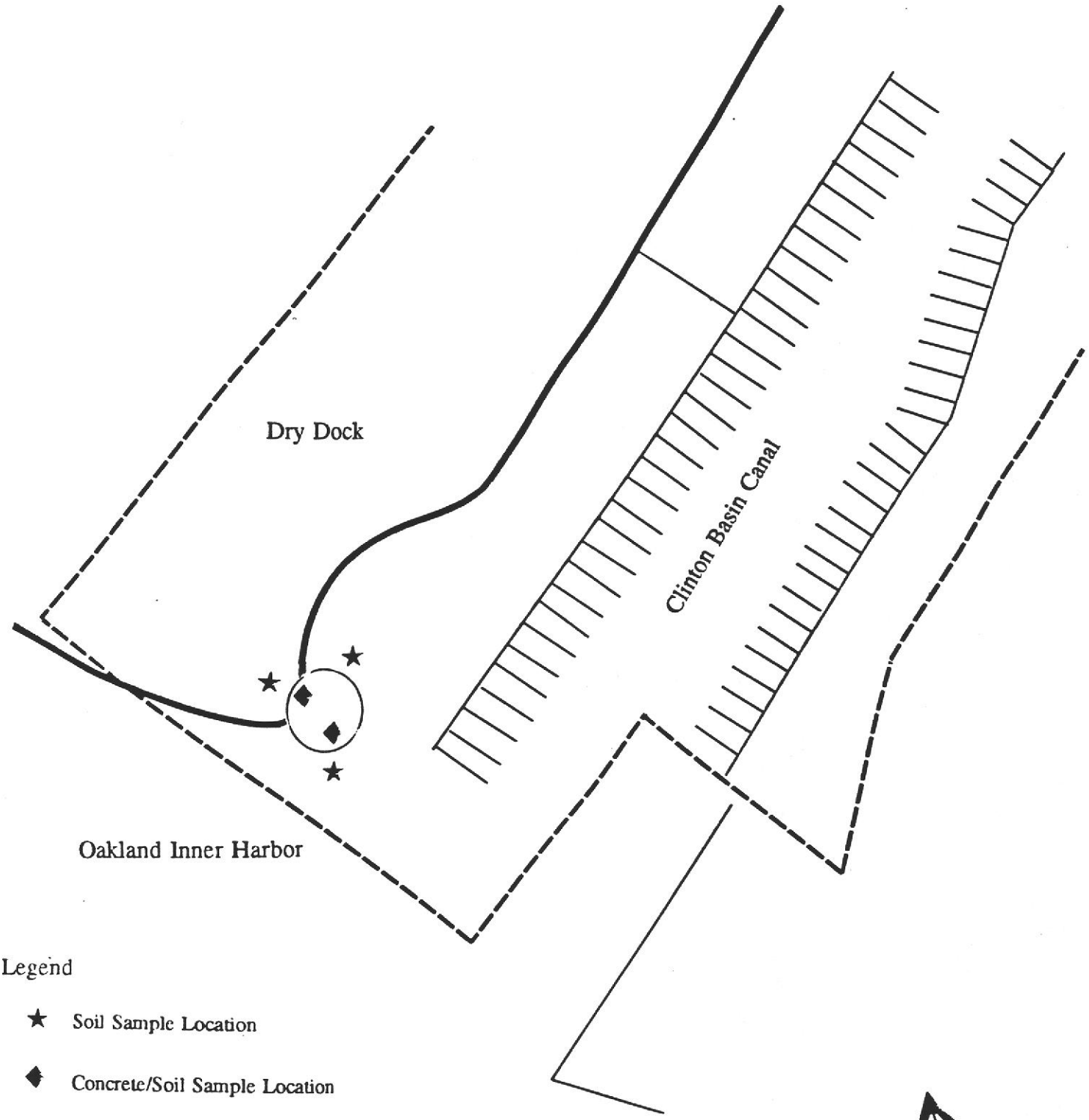
Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

BASELINE

S9171-00.02 11/9/93

PROPOSED SAMPLING LOCATIONS AT CONCRETE CONTAINMENT

Figure 2



Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

BASELINE

S9171-00.02 11/24/93

BASELINE

ENVIRONMENTAL CONSULTING

24 February 1994
S9171-D0

Mr. Dan Schoenholz
PORT OF OAKLAND
530 Water Street, 5th Floor
Oakland, CA 94607

Subject: **Proposed Work Plan For Soil Excavation Activities Around Concrete Containment Structure at Seabreeze Yacht Center, Inc., Oakland, CA**

Dear Dan:

This letter serves as a Work Plan for proposed soil excavation/sampling activities around the concrete containment structure at the Seabreeze Yacht Center, 280 Sixth Avenue in Oakland, CA. The proposed excavation and sampling activities would be undertaken in response to a request by the Port to immediately remove soils containing significant concentrations of petroleum hydrocarbons, oil and grease, and lead.

BACKGROUND

The concrete containment is located at the southern portion of a parcel located at the southern terminus of Sixth Avenue, along the Oakland Inner Harbor (Figure 1). Sampling activities in January 1994 by BASELINE identified oil and grease, lead, and petroleum hydrocarbons in shallow soils around the containment.

Soil samples were collected adjacent to the concrete containment on 10 January 1994 at three locations (Figure 2). The samples were collected with a hand auger collected at depths of 0.5-1.0 feet and 1.0-1.5 feet and within six inches of the concrete walls. The soil samples were analyzed for petroleum hydrocarbons, oil and grease, lead, and copper (Table 1). Analytical results indicated elevated concentrations of extractable hydrocarbons, total lead, and soluble lead at each sample location. Based on the analytical results from this investigation, the Port has requested that a work plan be prepared to immediately remove soils containing significant concentrations of petroleum hydrocarbons, oil and grease, and lead from the perimeter soils outside the wall of the concrete containment structure.

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Emeryville *Petaluma*

PROPOSED SCOPE OF WORK

The following activities are proposed to immediately remove known concentrations of petroleum hydrocarbons, oil and grease, and lead in the shallow soils surrounding the concrete containment.

Permits/Site Safety

All field activities would be performed in accordance with the requirements of an amended permit, dated January 1994, from the San Francisco Bay Conservation and Development Commission (BCDC). Site utility clearance would be secured through Underground Service Alert (USA) 48 hours prior to the commencement of field activities. A site safety plan would be prepared and reviewed by field personnel prior to field work.

Collection of Soils Around Concrete Containment

Based on analytical results obtained in January 1994, soil surrounding the concrete containment would be excavated and stockpiled on-site (Figure 2) on and under plastic. A backhoe, positioned within the concrete structure, would be used to excavate the perimeter soils. Soil would be excavated to a depth of 2.0 to 2.5 (pending soil saturation) feet to a width of about two feet from along the entire outer wall of the structure. The soil excavation would be conducted during low tide. The excavated trench would be backfilled with 6-inch or less clasts to the level of the surrounding surface.

Verification Sampling

Following completion of the excavation of the perimeter soils, three verification samples would be collected from the original sample locations selected in January 1994 (Figure 2). The samples would be collected by hand auger to a depth of 2.5 - 3.0 feet below the original ground surface. The sample tubes would be capped with teflon tape, a plastic cap, and silicon tape. They would be brought to a certified laboratory in a cooled container under chain-of-custody. These samples would be analyzed for total extractable hydrocarbons (EPA Method 8015M), total lead (EPA Method 7420), and Bunker C oil (EPA Method 8015M). Soluble lead analyses would be performed if the total lead concentration were greater than 10 times the STLC limit for lead.

Stockpile Sampling

Soil samples from the stockpiled material would be collected and analyzed for compounds required by the specific disposal facility. Potential disposal facilities would be identified

following receipt of verification sample results. Soil samples would be collected at the specific depth by using a hand-driven soil sampler (2-inch diameter) fitted with a six inch stainless steel liner. The sample tubes would be capped with teflon tape, a plastic cap, and silicon tape. They would be brought to a certified laboratory in a cooled container under chain-of-custody.

Reporting

Following the completion of all field activities, a report containing the summary of methodologies for field activities, sampling protocols, and laboratory reports would be submitted to the Port.

Schedule

BASELINE would commence excavation activities for the concrete containment following authorization to proceed from the Port of Oakland. A report on all field activities would be submitted to the Port within two weeks of receipt of analytical results.

Should you have any questions about this Work Plan, please contact us at your convenience. We are submitting, under separate cover, a cost estimate to perform the services described in this Work Plan.

Sincerely,

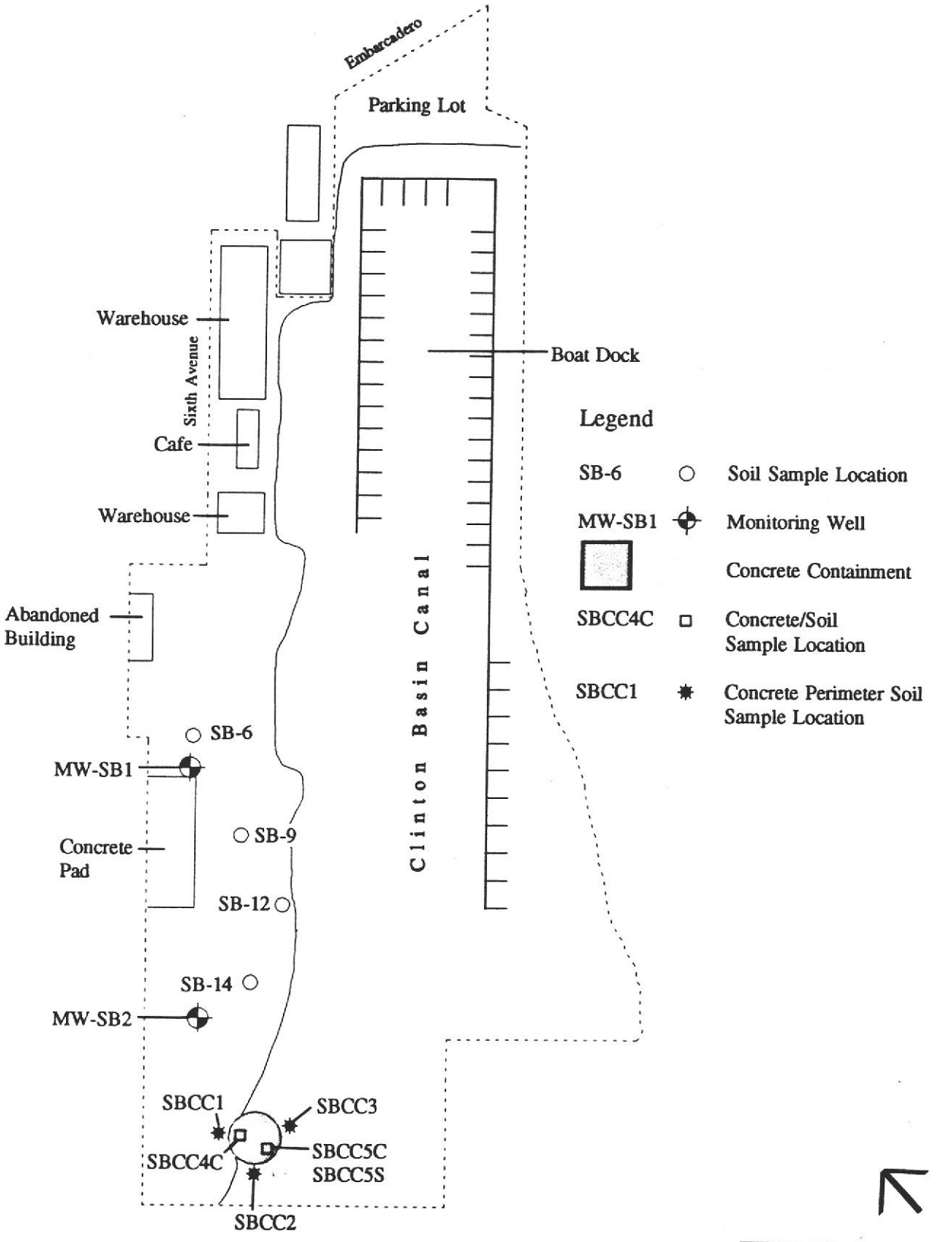
Chris Stromberg
Environmental Scientist

Yane Nordhav
Principal

Enclosure

SAMPLING LOCATIONS

Figure 1



Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

BASELINE

S9171-00 2/23/94

TABLE 1

SUMMARY OF ANALYTICAL RESULTS, CONCRETE CONTAINMENT PERIMETER SOILS

Seabreeze Yacht Center, Oakland, California, January 1994

(mg/kg except where noted)

Sample Location	Sample Date	Depth (feet)	Oil and Grease	TPH				Benzene[4]	Toluene[4]	Ethyl-benzene[4]	Xylenes[4]	Lead		Total Copper[6]
				Gasoline[1]	Diesel[2]	Kerosene	Motor Oil[3]					Total[5]	Soluble (mg/L)	
SB-CC1	1/10/94	0.5-1.0	**2,100**	<1.0	<50	<50[7]	**3,600**	<0.005	<0.005	<0.005	<0.005	**68**	5.6	**170**
		1.0-1.5	**3,700**		**9,400**		**45,000**					**21[8]**	**2.6/9.5[9]**	
SB-CC2	1/10/94	0.5-1.0	**41,000**	<1.0	**24,000**	[7]	**100,000**	<0.005	<0.005	<0.005	<0.005	**1,000**	**3.5**	**28**
		1.0-1.5	**150**		**86**		**220**					**1,800/44[9]**	**<0.5/1.2[9]**	
SB-CC3	1/10/94	0.5-1.0	**3,300**	<1.0	**2,200**	[7]	**12,000**	<0.005	<0.005	<0.005	<0.005	**120**	**<0.5**	**82**
		1.0-1.5	**680**		**1,100**		**3,500**					**1,300/9,100[9]**	**<0.5/15.0[9]**	

Notes: **x.x** = Bold numbers indicate compounds identified above detection limits.
<x.x = Compound not identified above detection limit.
TPH = Total Petroleum Hydrocarbons.
Sample locations are shown on Figure 1.
Lead TTLC = 1,000 mg/kg.
Lead STLC = 5 mg/L.
Copper TTLC = 2,500 mg/kg.
Copper STLC = 25 mg/L.

1 Test Method = 5030/M8015.
2 Test Method = 3550/M8015.
3 Results reported as motor oil although the hydrocarbon patterns do not exactly match the motor oil range; see Appendix ___.
4 Test Method = 8020.
5 Test Method = 7420.
6 Test Method = 7210.
7 Kerosene range not reported by laboratory due to overlap of hydrocarbon ranges.
8 Sample reanalyzed, but sample lost during digestion.
9 Sample was reanalyzed on 2/10/94.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

March 21, 1994

Mr. Dan Schoenholz
Port of Oakland
530 Water St., 5th Floor
Oakland CA 94607

Re: Comment on February 24, 1994 Work Plan for Soil Excavation at Seabreeze Yacht Center, 280 6th Ave., Oakland 94606

Dear Mr. Schoenholz:

Our office has received and reviewed the above work plan as prepared by Baseline Environmental Consulting. We have also spoke with Ms. Yane Nordhav, their consultant. We understand that this work is being done as an aggressive attempt to remediate previously identified petroleum hydrocarbon and heavy metal contamination.

The work plan calls for a doughnut shaped excavation, approximately two feet wide, around the former containment structure and then confirmatory soil sampling. This work plan is acceptable and may be implemented with following condition:

Three additional confirmatory samples, for a total of six soil samples should be taken after the excavation. These samples should be analyzed for Total Petroleum Hydrocarbons as diesel, as motor oil, BTEX and Total Lead and Total Copper. The soluble metal analysis (STLC) should be run if any total metal concentration exceeds ten time the STLC. We also acknowledge that this is addressing only one area of concern at this site. We understand that a report will soon be issued with your consultant's recommendations for this site.

Please contact me **48 working hours** prior to your field activities so I may arrrange to be present to witness this work if possible.

You may contact me at (510) 271-4530 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: Y. Nordhav, Baseline Environmental Consulting, 5900 Hollis St., Suite D, Emeryville, Ca 94608
R. Hiett, RWQCB
1-Seabreeze

BASELINE

ENVIRONMENTAL CONSULTING

12 July 1994
S9171-00

Mr. Dan Schoenholz
Port of Oakland
Environmental Department
530 Water Street
Oakland, CA 94607

Subject: **Work Plan for Additional Soil Investigation, Seabreeze Yacht Center, Inc., Oakland, California.**

Dear Dan:

At your request we have prepared a work plan to further characterize the near surface soils at the subject site. The purpose of the proposed investigation would be to determine the spatial distribution of petroleum hydrocarbon, as "Bunker C", in the near surface soils within the study area (Figure 1). Previous subsurface investigations at the site have identified oil and grease (non-speciated) at two locations at the site and petroleum hydrocarbons as diesel, motor oil, and Bunker C around the concrete containment in the southern portion of the site. It is unknown whether the oil and grease identified on the site could be a petroleum hydrocarbon. Petroleum hydrocarbons (Bunker C) were previously stored in a tank within the concrete containment and conveyed to a PG&E steam plant (Figure 1) along an aboveground pipeline.

Sampling Plan

A systematic random sampling scheme, consistent with EPA SW-846 methodology has been developed for the near surface soils at the site. Since groundwater is encountered at approximately five feet below the ground surface at the site, all soil samples would be collected at depths shallower than five feet. Systematic random sampling was selected for the following reasons:

- Allows better coverage of the site than simple random sampling;
- Incorporates random selection of points within cells to reduce sampling bias;
- Allows for determination of mean, standard deviation, and sample parameters.

The sample locations were determined by dividing the site into cells. Fourteen cells of approximately equal area were established. A random sampling location and depth were chosen within each cell using a random number generator on an HP-11C calculator.

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Emeryville *Petaluma*

It should be noted that the recommended number of samples to be collected is based on professional judgement. The subsequent statistical analysis would indicate whether the number of samples were adequate to characterize the site for the constituent of concern.

Sample Collection

Each sampling location shown on Figure 1 would be located by a BASELINE geologist using a measuring tape and fixed reference point. Borings would be installed by Precision Sampling, Inc. using a hydraulically-driven sample collection system. Each sample would be retrieved, sealed with teflon film, a plastic cap, and silicone tape, labeled, placed in a plastic bag, stored in a cooled container, and transported to Curtis and Tompkins, Ltd., under chain-of-custody for the analysis of total petroleum hydrocarbons (TPH) as Bunker C using EPA Method 8015M with Bunker C as a standard.

Data Analysis

Upon receipt of analytical results, we would determine whether the samples collected were statistically representative (accurate and precise) by applying methodologies described in EPA SW-846. If the SW-846 analysis indicated that the samples collected were not representative, recommendations for additional sample collection would be provided.

The collected data would be used in conjunction with previously collected data to determine the overall remediation of the site. Should you have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

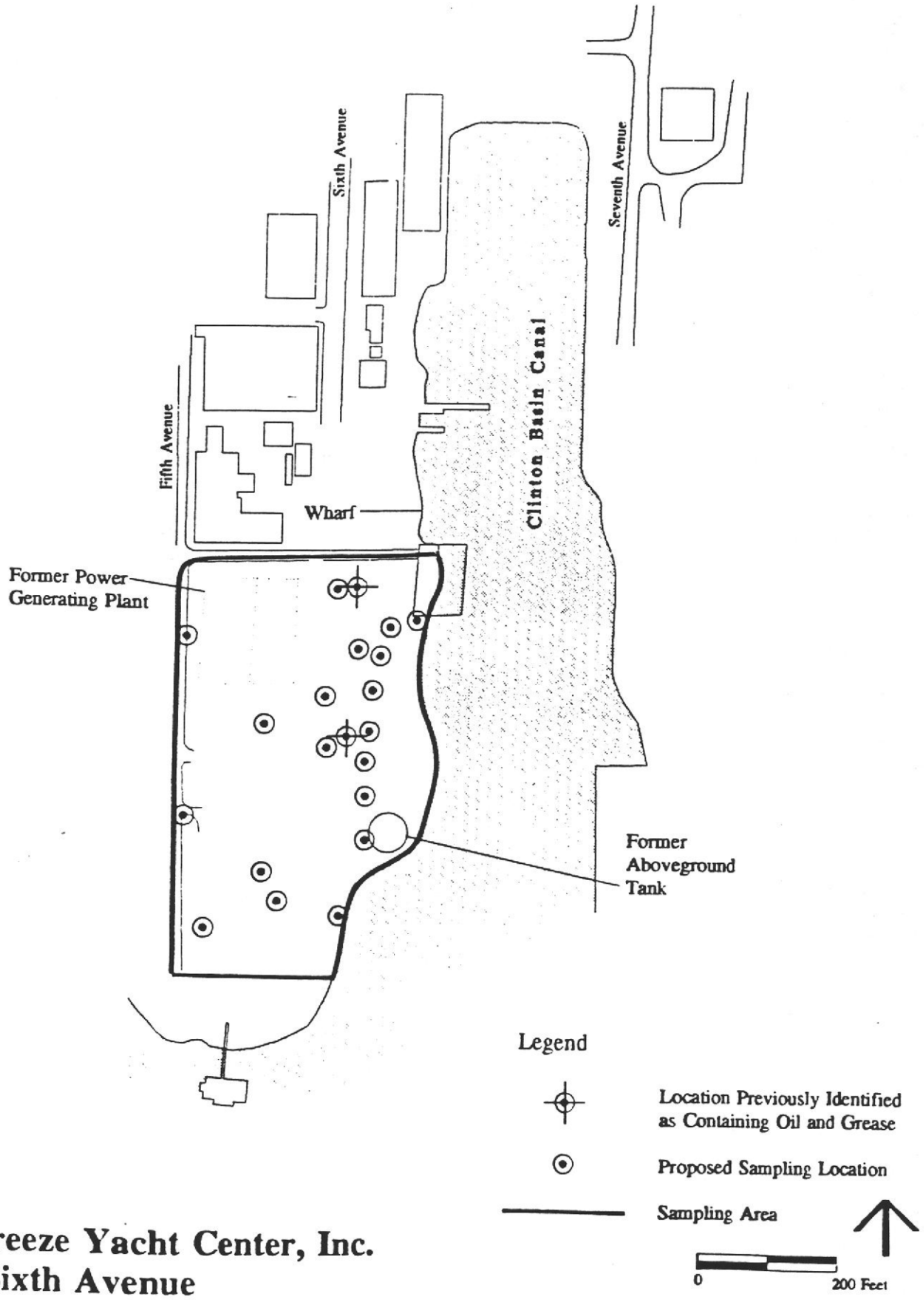
Yane Nordhav
Principal

Bruce Amen
Hydrogeologist

YN/BA
Attachments

SAMPLING LOCATIONS

Figure 1



Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

S9171-00 6/21/94

BASELINE

59171

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

August 5, 1994
StID # 236

RECEIVED
AUG 10 1994
BASELINE

Mr. Dan Schoenholz
Port of Oakland
530 Water St., 5th Floor
Oakland CA 94607

Re: Comment on July 12, 1994 Work Plan for Additional Soil Investigation at Seabreeze Yacht Center, 280 6th Ave., Oakland CA 94606

Dear Mr. Schoenholz:

I understand that the above work plan has been proposed to determine whether there could have been a "Bunker C" oil release from the above ground tank and associated above ground piping which one time fed a PG&E power plant. Although, not shown on the Figure 1 map, I was informed by your consultant, Ms. Yane Nordhav, that the aerial photos show two product lines coming from the above ground tank making a "V" towards the plant.

The sampling plan uses systematic random sampling to generate the location of samples to characterize the potentially impacted areas. Assuming your analysis verifies that the samples were statistically representative, our office approves your sampling plan. I further understand that this characterization may also be used to determine liability for the diesel contamination in this area.

Please inform our office prior to your field work. Please be aware that our new office address is:

1131 Harbor Bay Parkway, Room 250, Alameda CA 94502.

You may contact me at (510) 567-6700 should you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

cc: Ms. Y. Nordhav, Baseline Env. Consulting, 5900 Hollis St., Suite D, Emeryville, CA 94608
E. Howell, file
2-Seabreeze

APPENDIX B

SITE SAFETY PLAN

SITE SAFETY PLAN

PROJECT INFORMATION

Project No:	Project Manager:	Site Health & Safety Supervisor:	Field Activities Date:
S9-171	Teresa Anaya	Bill Scott	7 January 1994

Client:
Port of Oakland

Contact Person: Dan Schoenholz
Phone: (415) 272-1220

Address:
530 Water Street
Oakland, CA

Job Location:

Seabreeze Yacht Center, 280 6th Avenue, Oakland, CA (Figure 1).

Project Description:

Collection of 51 soil samples from 35 borings to a depth of two feet (Figure 2 shows a schematic of the proposed sampling plan). In addition, three soil samples will be collected from the concrete containment cell.

Site History:

Site has been a boat yard since the early 1900s. Numerous containers of waste had been stored on the site. The wastes were profiled and the majority disposed of as hazardous waste. Boat owners continue to generate waste oils and used paints and thinners that are abandoned (and possibly spilled) on the site. Site characterization activities by BASELINE in September 1990 indicated the presence of metals, organics, and oil and grease in the subsurface at depths ranging from 0.5 to 4 feet.

BASELINE Personnel Assigned to Project:
Chris Stromberg / Bill Scott

Subcontractors:
West Hazmat

CHEMICAL HAZARDS

Chemical	Description/PPE*	Health and Safety Standards	Persons Exposed and Potential Routes of Exposure**	Symptoms of Acute Exposure
Lead	Inorganic metal, suspected carcinogen	PEL=0.05 mg/m^3; use high efficiency filter with respirator	Low risk of exposure through ingestion or inhalation	Malaise, eye irritation, and palpitations
Copper	Metal	TLV=1mg/m^3	Low risk of exposure through ingestion, inhalation, and dermal	Skin, respiratory, and eye irritation
Oil and grease	Generic	None	Dermal	Skin irritation

* PPE = Personal Protective Equipment
** Contractor and samplers.

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

PHYSICAL HAZARDS

Heavy equipment, scrap metal and debris, noise.

PERSONAL PROTECTION EQUIPMENT REQUIRED

Tyvek coveralls, nitrile gloves, rubber boots, first aid kit, air-purifying respirator with organic vapor cartridge, hard hat, noise protection.

AIR MONITORING STRATEGY (including action levels)

Monitor borings with combustible gas meter and HNu. At greater than 20% LEL in boring, stop work and identify source of combustible vapors. Continue drilling when LEL meter records <0%. If HNu reading ≥100 ppm (in boring), don respirator with organic vapor cartridge; if ≥200 ppm (in boring), stop work and let boring air out.

SITE CONTROL MEASURES

Store soil cuttings, decontamination rinse water, and contaminated personal protective gear (e.g., Tyveks) in labeled drums. Arrange for disposal of same upon receipt of lab analyses for corresponding samples. Underground Service Alert will be contacted to get clearance before sampling. Site is fenced and gate will be locked during nonworking hours. Public will be restricted from sampling areas. All soil borings will be grouted after samples are collected. Drinking water located at Seabreeze warehouse and cafe. Clean area and contaminated area will be designated. Copy of Site Safety Plan will be supplied to West Hazmat. No smoking within 50 feet of borings during drilling. Wash hands before eating or smoking to avoid ingestion of contaminated soils.

DECONTAMINATION PROCEDURES (personal and equipment)

Steam clean drilling augers between each boring: decontaminate soil sampling equipment with TsP; rinse equipment with deionized water. Contain rinse waters in temporary basin; store in labeled drums pending disposal. Store disposable sample equipment in separate labeled drum. Place disposable personal protective gear in plastic bag in drum at end of each day. Wash boots, respirators, safety glasses with TSP and rinse. Store rinse water in same drum as equipment rinse water. Wash hands before leaving site.

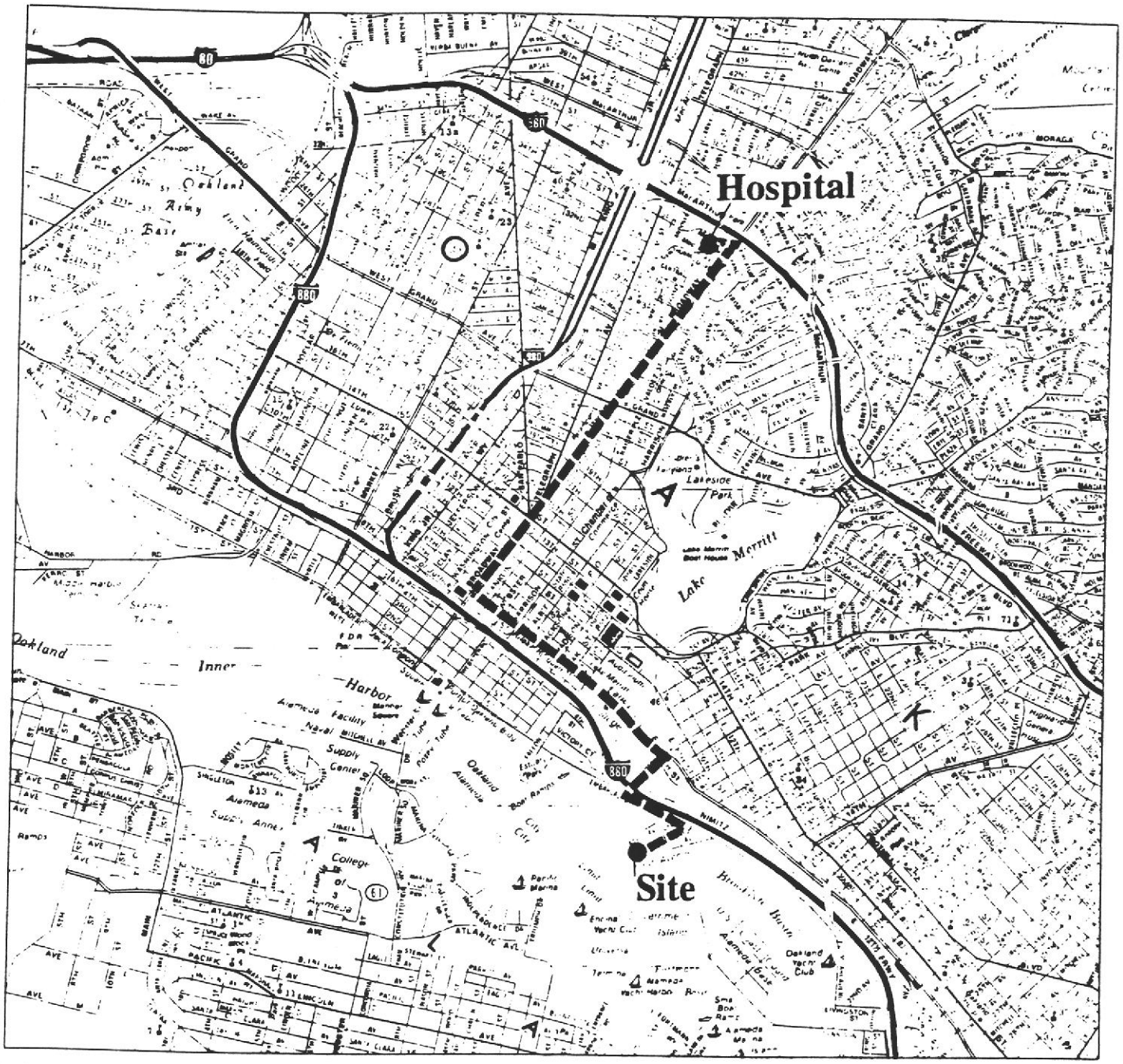
EMERGENCY PROCEDURES

Procedures:

Notify Yane Nordhav or Teresa Anaya **(415) 420-8686**

Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic/Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland *(see attached Figure 1)*	**(415) 420-6080**	**911**

Site Safety Plan - continued



Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic/Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland	(415) 420-6080	**911**

Directions:

Go east on Embarcadero Road; go right on 5th Avenue and left to 7th Street; up Broadway to 30th Street; left on 30th Street to Peralta Hospital.

Site Safety Plan - continued

Prepared by:	Date:	Reviewed/Approved by:	Date:
Chris Stromberg	1/5/94	[illegible]	1/5/94

Read by/Date: Mike K Sam 1-7-94 / Baseline

Read by/Date: THOMAS WRIGHT 1-7-94 / WEST HAZMAT DRILLING

Read by/Date: RUBEN A. REYES 1-7-94 / WEST HAZMAT Drilling

Read by/Date: Randy A Calvad 1-7-94 / West Hazmat Drilling.

Read by/Date: Chris Stromberg 1-7-94 / Baseline

Read by/Date: /

Read by/Date: /

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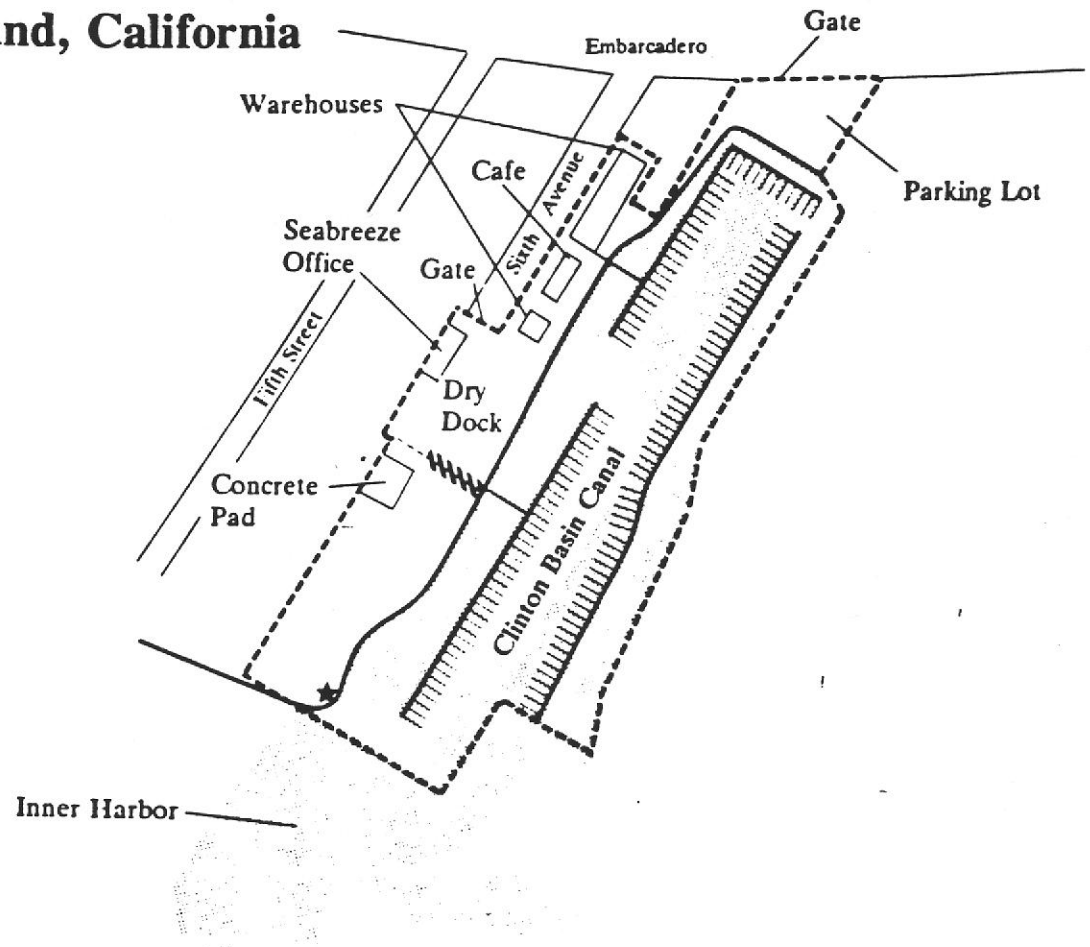
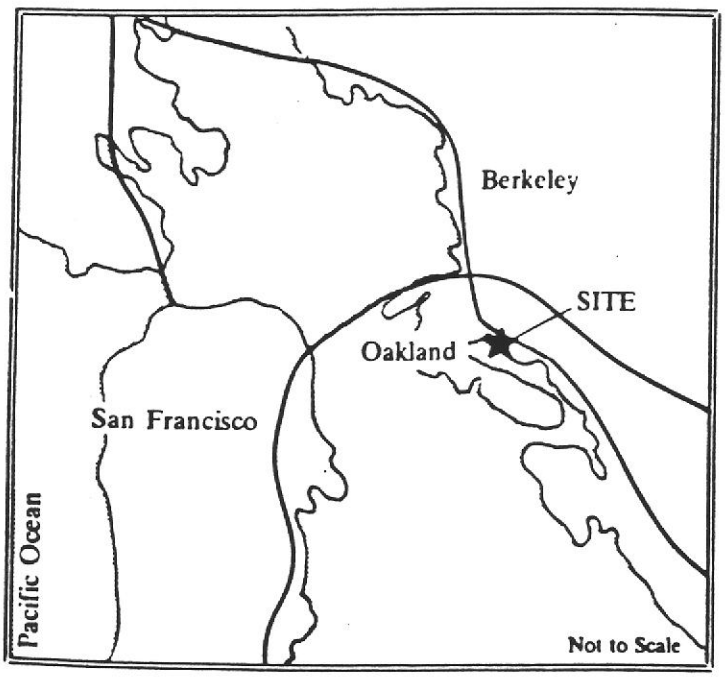
SITE PLAN AND REGIONAL LOCATION

Seabreeze Yacht Center
Oakland, California

Figure 1





Legend

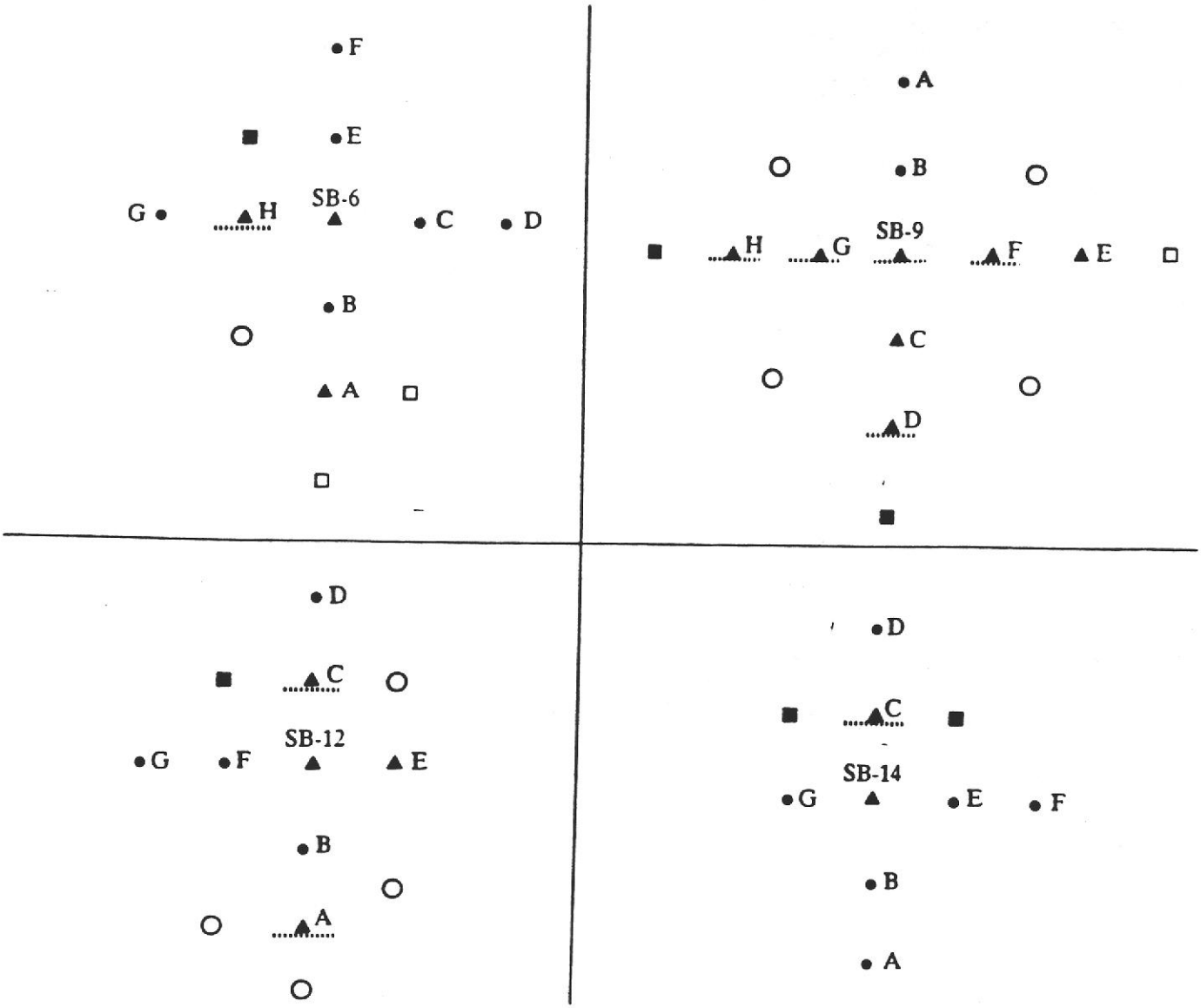
- Site Boundary
- ★ Location of Former Aboveground Tank
- Drainage Swale
- Buried Line

0 300 Feet

BASELINE

SCHEMATIC OF PROPOSED SOIL SAMPLING

Figure 2



Legend

April 1991 Sample Locations:

- • Hazardous Levels of Metals not Present
- ▲ Hazardous Levels of Metals, Present; Further Characterization Required

Proposed Sample Locations and Depths:

- □ 0.5 - 1.0 Feet
- ■ 1.0 - 1.5 Feet (1.5 -2.0 Feet, Hold)
- ..... 1.5 - 2.0 Feet
- ○ 0.5 - 1.0 Feet, 1.0 - 1.5 Feet (1.5 - 2.0 Feet, Hold)

Seabreeze Yacht Center, Inc.
280 Sixth Avenue
Oakland, California

BASELINE

S9171-00 1/4/93

SITE SAFETY PLAN

PROJECT INFORMATION

Project No:	Project Manager:	Site Health & Safety Supervisor:	Field Activities Date:
S9-171	Teresa Anaya	Bill Scott	20 and 21 January 1994

Client:
Port of Oakland

Contact Person: Dan Schoenholz
Phone: (415) 272-1220

Address:
530 Water Street
Oakland, CA

Job Location:

Seabreeze Yacht Center, 280 6th Avenue, Oakland, CA (Figure 1).

Project Description:

Pump standing water from within the concrete containment structure to two Baker tanks (Figure 4). Collect 2 concrete core samples to a depth of 6 inches with continuous drilling to a depth of approximately 2-3 feet. Following sampling activities, the concrete holes will be sealed with grout.

Site History:

Site has been a boat yard since the early 1900s. Numerous containers of waste had been stored on the site. The wastes were profiled and the majority disposed of as hazardous waste. Boat owners continue to generate waste oils and used paints and thinners that are abandoned (and possibly spilled) on the site. Site characterization activities by BASELINE in September 1990 indicated the presence of metals, organics, and oil and grease in the subsurface at depths ranging from 0.5 to 4 feet. The concrete containment structure contained a former aboveground fuel/oil tank. The tank was removed in 1947.

BASELINE Personnel Assigned to Project:

Subcontractors:
West Hazmat

CHEMICAL HAZARDS

Chemical	Description/PPE*	Health and Safety Standards	Persons Exposed and Potential Routes of Exposure**	Symptoms of Acute Exposure
Lead	Inorganic metal, suspected carcinogen	PEL=0.05 mg/m^3; use high efficiency filter with respirator	Low risk of exposure through ingestion or inhalation	Malaise, eye irritation, and palpitations
Copper	Metal	TLV=1 mg/m^3	Low risk of exposure through ingestion, inhalation, and dermal	Skin, respiratory, and eye irritation
Oil and grease	Generic	None	Dermal	Skin irritation

* PPE = Personal Protective Equipment
** Contractor and samplers.

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

PHYSICAL HAZARDS

Heavy equipment, scrap metal and debris, noise.

PERSONAL PROTECTION EQUIPMENT REQUIRED

Tyvek coveralls, nitrile gloves, rubber boots, first aid kit, air-purifying respirator with organic vapor cartridge, hard hat, noise protection.

AIR MONITORING STRATEGY (including action levels)

Monitor concrete borings with combustible gas meter and HNu. At greater than 20% LEL in boring, stop work and identify source of combustible vapors. Continue drilling when LEL meter records <0%. If HNu reading ≥100 ppm (in boring), don respirator with organic vapor cartridge; if ≥200 ppm (in boring), stop work and let boring air out.

SITE CONTROL MEASURES

Store concrete cuttings, decontamination rinse water, and contaminated personal protective gear (e.g., Tyveks) in labeled drums. Arrange for disposal of same upon receipt of lab analyses for corresponding samples. Underground Service Alert will be contacted to get clearance before sampling. Site is fenced and gate will be locked during nonworking hours. Public will be restricted from sampling areas. All concrete borings will be grouted after samples are collected. Drinking water located at Seabreeze warehouse and cafe. Clean area and contaminated area will be designated. Copy of Site Safety Plan will be supplied to West Hazmat. No smoking within 50 feet of borings during drilling. Wash hands before eating or smoking to avoid ingestion of contaminated soils.

DECONTAMINATION PROCEDURES (personal and equipment)

Steam clean drilling augers between each concrete boring: decontaminate sampling equipment with TSP; rinse equipment with deionized water. Contain rinse waters in temporary basin; store in labeled drums pending disposal. Store disposable sample equipment in separate labeled drum. Place disposable personal protective gear in plastic bag in drum at end of each day. Wash boots, respirators, safety glasses with TSP and rinse. Store rinse water in same drum as equipment rinse water. Wash hands before leaving site.

EMERGENCY PROCEDURES

Procedures:

Notify Yane Nordhav or Teresa Anaya **(415) 420-8686**

Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic/Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland *(see attached Figure 1)*	(415) 420-6080	**911**

Prepared by:	Date:	Reviewed/Approved by:	Date:
Chris Stromberg	1/19/94	[signature]	1/19/94

Read by/Date: _____ / _____

Read by/Date: _____ / _____

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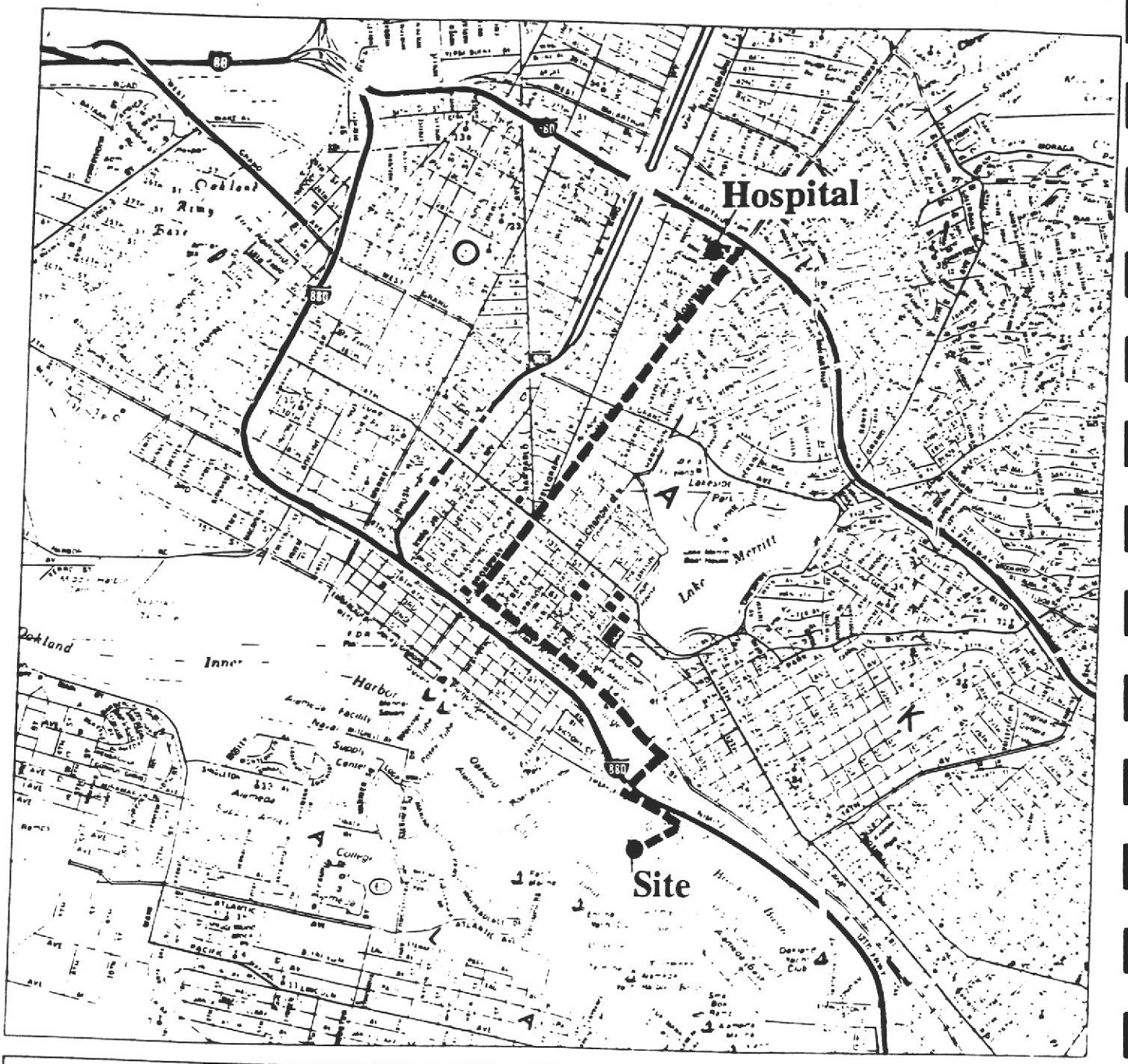
Site Safety Plan - continued



Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland	(415) 420-6080	**911**

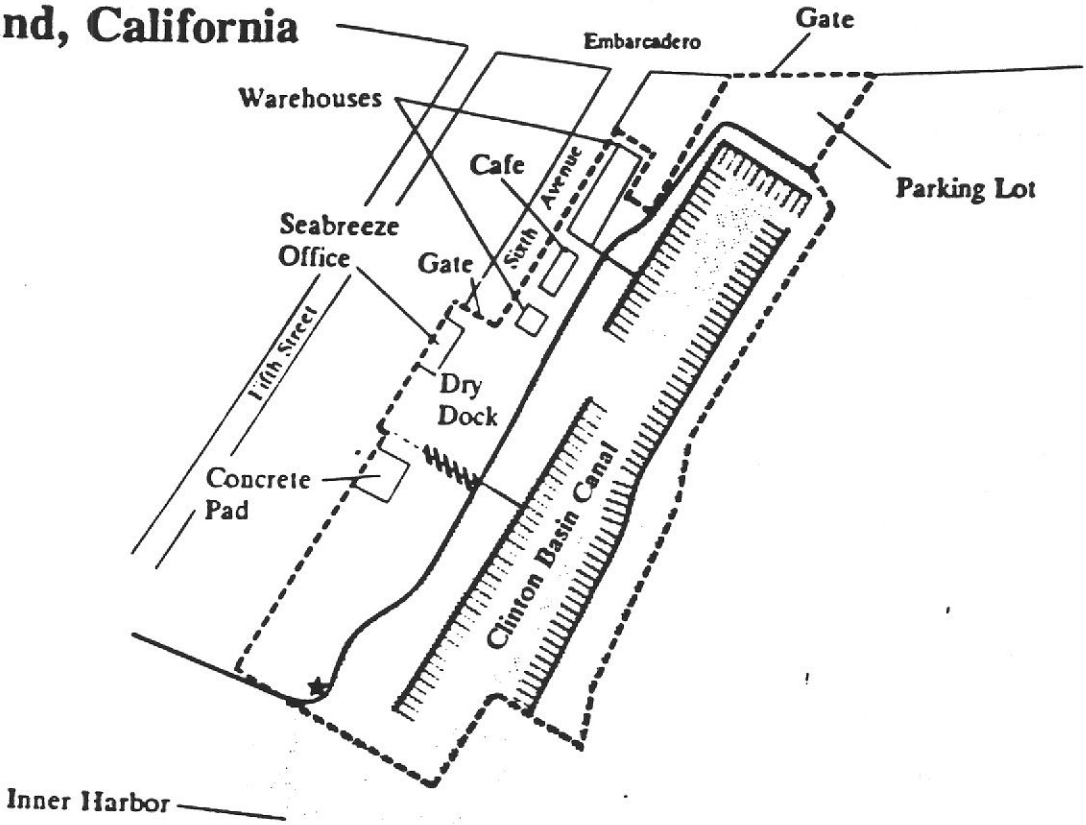
Directions:

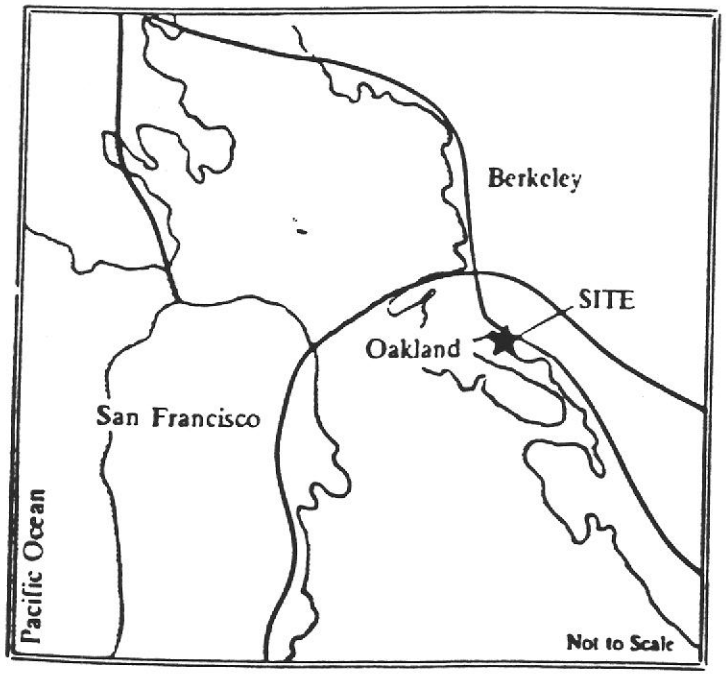
Go east on Embarcadero Road; go right on 5th Avenue and left to 7th Street; up Broadway to 30th Street; left on 30th Street to Peralta Hospital.

SITE PLAN AND REGIONAL LOCATION

Seabreeze Yacht Center
Oakland, California

Figure 1





Legend

----- Site Boundary

★ Location of Former Aboveground Tank

-------- Drainage Swale

\\\\\\\\ Buried Line

0 300 Feet

BASELINE

SITE SAFETY PLAN

PROJECT INFORMATION

Project No:	Project Manager:	Site Health & Safety Supervisor:	Field Activities Date:
S9-171	Yane Nordhav	Bill Scott	7-8 April 1994

Client:
Port of Oakland

Contact Person: Dan Schoenholz
Phone: (510) 272-1220

Address:
530 Water Street
Oakland, CA

Job Location:

Seabreeze Yacht Center, 280 6th Avenue, Oakland, CA (Figure 1).

Project Description:

Excavate soils surrounding the concrete containment structure (Figure 1). Soils to be stockpiled on-site on and under plastic. Soil to be excavated to a depth of 2.0 to 2.5 feet from along the outer wall of the structure.

Six verification samples will be collected from the original sample locations selected in January 1994 and three new locations. Samples will be collected to a depth of 2.5-3.0 feet below the original ground surface.

Site History:

Site has been a boat yard since the early 1900s. Numerous containers of waste had been stored on the site. The wastes were profiled and the majority disposed of as hazardous waste. Site characterization activities by BASELINE in September 1990 indicated the presence of metals, organics, and oil and grease in the subsurface at depths ranging from 0.5 to 4 feet. In January 1994, three soil samples were collected adjacent to the concrete containment structure. Analytical results indicated elevated concentrations of extractable hydrocarbons, total lead, and soluble lead at each location.

BASELINE Personnel Assigned to Project:
Bill Scott

Subcontractors:
KTW

CHEMICAL HAZARDS

Chemical	Description/PPE*	Health and Safety Standards	Persons Exposed and Potential Routes of Exposure**	Symptoms of Acute Exposure
Lead	Inorganic metal, suspected carcinogen	PEL=0.05 mg/m³; use high efficiency filter with respirator	Low risk of exposure through ingestion or inhalation	Malaise, eye irritation, and palpitations
Copper	Metal	TLV=1mg/m³	Low risk of exposure through ingestion, inhalation, and dermal	Skin, respiratory, and eye irritation
Diesel and Motor Oil	Extractable Hydrocarbon	No TLV	Dermal	Minor eye/skin irritation
Oil and grease	Generic	None	Dermal	Skin irritation

* PPE = Personal Protective Equipment
** Contractor and samplers.

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

PHYSICAL HAZARDS

Heavy equipment, scrap metal and debris, noise.

PERSONAL PROTECTION EQUIPMENT REQUIRED

Tyvek coveralls, nitrile gloves, rubber boots, first aid kit, air-purifying respirator with organic vapor cartridge, hard hat, noise protection.

AIR MONITORING STRATEGY (including action levels)

Monitor borings with combustible gas meter and HNu. At greater than 20% LEL in boring, stop work and identify source of combustible vapors. Continue excavation when LEL meter records <0%. If HNu reading ≥100 ppm (in excavation), don respirator with organic vapor cartridge; if ≥200 ppm (in boring), stop work and let boring air out.

SITE CONTROL MEASURES

Store soil cuttings, decontamination rinse water, and contaminated personal protective gear (e.g., Tyveks) in labeled drums. Arrange for disposal of same upon receipt of lab analyses for corresponding samples. Underground Service Alert will be contacted to get clearance before sampling. Site is fenced and gate will be locked during nonworking hours. Public will be restricted from sampling areas. Excavation trench will be filled after sample collection. Drinking water located at Seabreeze warehouse and cafe. Clean area and contaminated area will be designated. Copy of Site Safety Plan will be supplied to KTW. No smoking within 50 feet of borings during drilling. Wash hands before eating or smoking to avoid ingestion of contaminated soils.

DECONTAMINATION PROCEDURES (personal and equipment)

Decontaminate soil sampling equipment with TsP; rinse equipment with deionized water. Contain rinse waters in temporary basin; store in labeled drums pending disposal. Store disposable sample equipment in separate labeled drum. Place disposable personal protective gear in plastic bag in drum at end of each day. Wash boots, respirators, safety glasses with TSP and rinse. Store rinse water in same drum as equipment rinse water. Wash hands before leaving site.

EMERGENCY PROCEDURES

Procedures:

Notify Yane Nordhav **(510) 420-8686**

Hospital/Clinic Name and Address:	**Hospital Phone:**	**Paramedic/Fire & Police Dept. Phone:**
Peralta Hospital 450 30th Street Oakland *(see attached Figure 1)*	**(510) 420-6080**	**911**

Prepared by:	Date:	Reviewed/Approved by:	Date:
Chris Stromberg	4/5/94	Chris Stromberg	4/5/94

Read by/Date: _____ / _____

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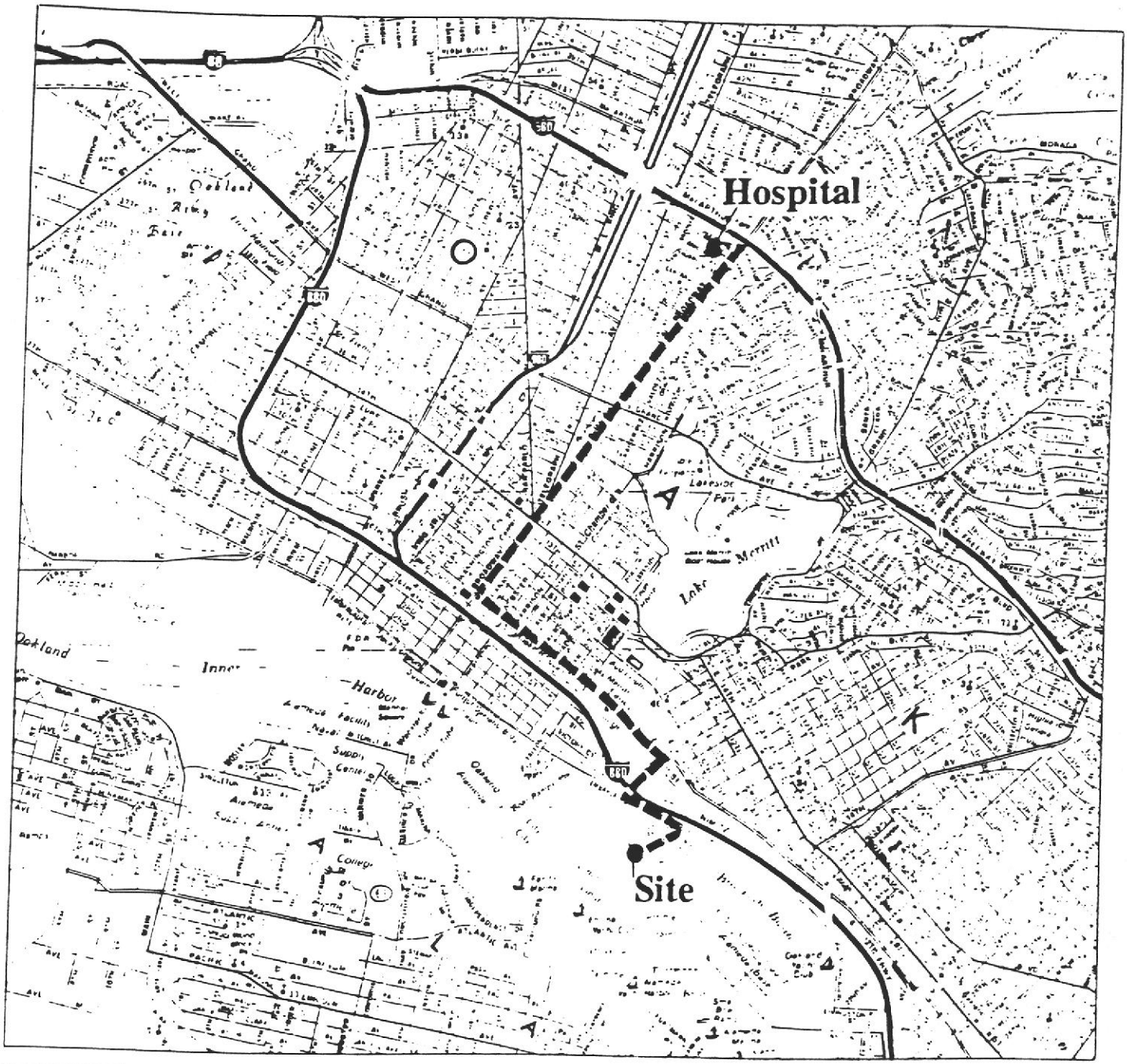
Site Safety Plan - continued



Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland	(415) 420-6080	**911**

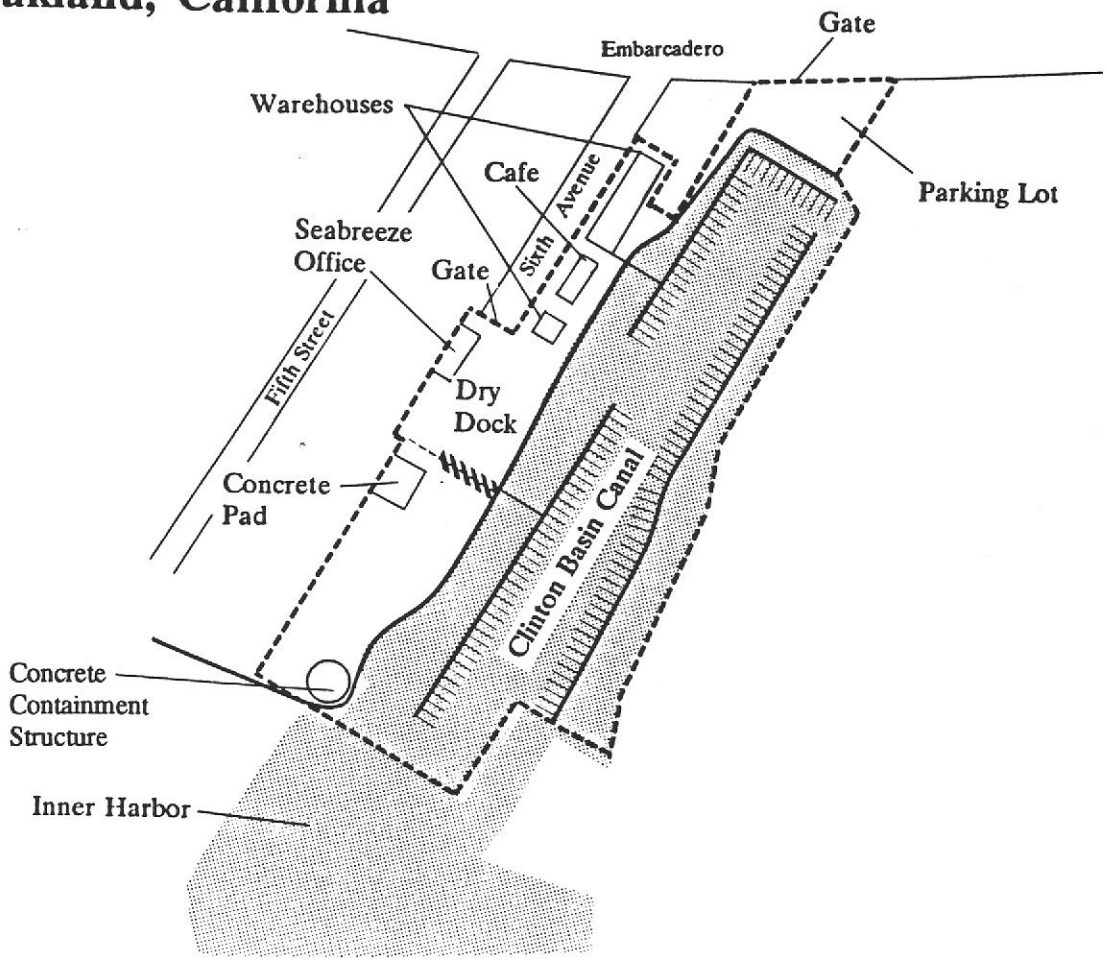
Directions:

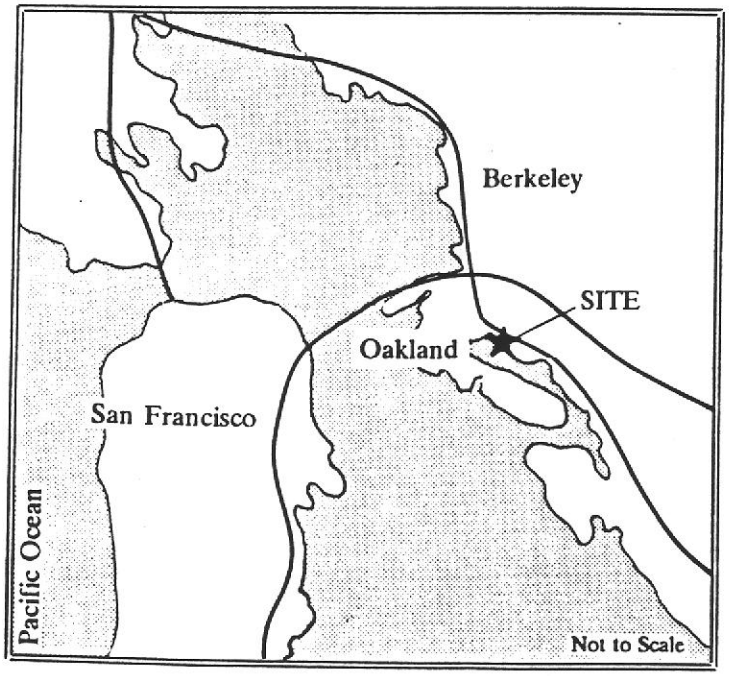
Go east on Embarcadero Road; go right on 5th Avenue and left to 7th Street; up Broadway to 30th Street; left on 30th Street to Peralta Hospital.

BASELINE Environmental Consulting • 5900 Hollis Street, Suite D • Emeryville, CA 94608 • (415) 420-8686 • FAX (415) 420 1707

SITE PLAN AND REGIONAL LOCATION
Seabreeze Yacht Center
Oakland, California

Figure 1





Legend

- Site Boundary
- Location of Former Aboveground Tank/ Concrete Containment Structure
- Drainage Swale
- Buried Line

0 300 Feet

BASELINE

SITE SAFETY PLAN

PROJECT INFORMATION

Project No:	Project Manager:	Site Health & Safety Supervisor:	Field Activities Date:
S9-171	Yane Nordhav	Bill Scott	15 and 18 August 1994

Client:
Port of Oakland

Contact Person: Dan Schoenholz
Phone: (510) 272-1220

Address:
530 Water Street
Oakland, CA

Job Location:

Seabreeze Yacht Center, 280 6th Avenue, Oakland, CA (Figure 1).

Project Description:

Collect soil samples at 19 different locations (Figure 1). The samples will be collected by Precision Sampling, Inc. using hydraulically-driven sample system.

Site History:

Site has been a boat yard since the early 1900s. Numerous containers of waste had been stored on the site. The wastes were profiled and the majority disposed of as hazardous waste. Site characterization activities by BASELINE in September 1990 indicated the presence of metals, organics, and oil and grease in the subsurface at depths ranging from 0.5 to 4 feet. In January 1994, three soil samples were collected adjacent to the concrete containment structure. Analytical results indicated elevated concentrations of extractable hydrocarbons, total lead, and soluble lead at each location.

BASELINE Personnel Assigned to Project:
Bill Scott

Subcontractors:
Precision Sampling, Inc.

CHEMICAL HAZARDS

Chemical	Description/PPE*	Health and Safety Standards	Persons Exposed and Potential Routes of Exposure**	Symptoms of Acute Exposure
Lead	Inorganic metal, suspected carcinogen	PEL=0.05 mg/m^3; use high efficiency filter with respirator	Low risk of exposure through ingestion or inhalation	Malaise, eye irritation, and palpitations
Copper	Metal	TLV=1mg/m^3	Low risk of exposure through ingestion, inhalation, and dermal	Skin, respiratory, and eye irritation
Diesel and Motor Oil	Extractable Hydrocarbon	No TLV	Dermal	Minor eye/skin irritation
Oil and grease	Generic	None	Dermal	Skin irritation

* PPE = Personal Protective Equipment
** Contractor and samplers.

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

PHYSICAL HAZARDS

Heavy equipment, scrap metal and debris, noise.

PERSONAL PROTECTION EQUIPMENT REQUIRED

Tyvek coveralls, nitrile gloves, rubber boots, first aid kit, air-purifying respirator with organic vapor cartridge, hard hat, noise protection.

AIR MONITORING STRATEGY (including action levels)

Monitor borings with combustible gas meter and HNu. At greater than 20% LEL in boring, stop work and identify source of combustible vapors. Continue excavation when LEL meter records $<0\%$. If HNu reading ≥ 100 ppm (in excavation), don respirator with organic vapor cartridge; if ≥ 200 ppm (in boring), stop work and let boring air out.

SITE CONTROL MEASURES

Store decontamination rinse water and contaminated personal protective gear (e.g., Tyveks) in labeled drums. Underground Service Alert will be contacted to get clearance before sampling. Site is fenced and gate will be locked during nonworking hours. Public will be restricted from sampling areas. Drinking water located at Seabreeze warehouse and cafe. Clean area and contaminated area will be designated. Copy of Site Safety Plan will be supplied to Precision Sampling, Inc. No smoking within 50 feet of borings during drilling. Wash hands before eating or smoking to avoid ingestion of contaminated soils.

DECONTAMINATION PROCEDURES (personal and equipment)

Decontaminate soil sampling equipment with TsP; rinse equipment with deionized water. Contain rinse waters in temporary basin; store in labeled drums pending disposal. Store disposable sample equipment in separate labeled drum. Place disposable personal protective gear in plastic bag in drum at end of each day. Wash boots, respirators, safety glasses with TSP and rinse. Store rinse water in same drum as equipment rinse water. Wash hands before leaving site.

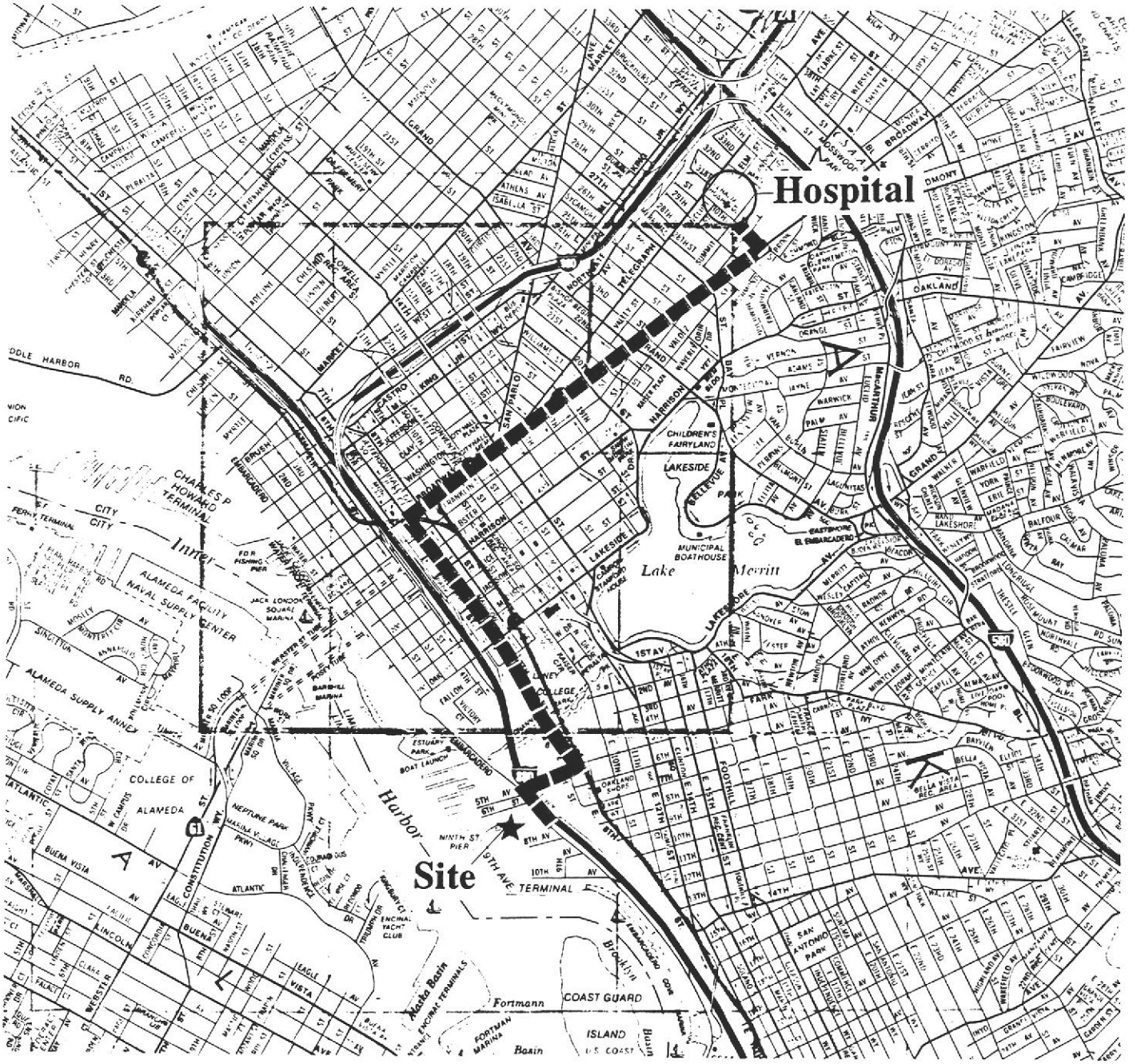
EMERGENCY PROCEDURES

Procedures:

Notify Yane Nordhav **(510) 420-8686**

Hospital/Clinic Name and Address:	**Hospital Phone:**	**Paramedic/Fire & Police Dept. Phone:**
Peralta Hospital 450 30th Street Oakland *(see attached Figure 1)*	**(510) 420-6080**	**911**

Site Safety Plan - continued



Hospital/Clinic Name and Address:	Hospital Phone:	Paramedic/Fire & Police Dept. Phone:
Peralta Hospital 450 30th Street Oakland	(510) 420-6080	**911**

Directions:

Go east on Embarcadero Road; go right on 5th Avenue and left to 7th Street; up Broadway to 30th Street; left on 30th Street to Peralta Hospital.

Prepared by:	Date:	Reviewed/Approved by:	Date:
William K. Scott	8/9/94	[signature]	8/9/94

Read by/Date: [signature] , 8-15-94

Read by/Date: Francisco Rangel , 8-15-94

Read by/Date: [signature] , 8-15-94

Read by/Date: _____ /

Read by/Date: _____ /

Read by/Date: _____ /

Read by/Date: _____ /

— END OF FORM —

STATE OF CALIFORNIA

PETE WILSON Governor

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION
30 VAN NESS AVENUE, SUITE 2011
SAN FRANCISCO, CA 94102-6080
PHONE: (415) 557-3686

BCDC Original

RECEIVED
JAN 07 1993
BASELINE

PERMIT NO. M90-6
(Issued on March 21, 1990, As Amended Through November 10, 1992)
AMENDMENT NO. TWO

Port of Oakland
P.O. Box 2064
Oakland, California 94604

Gentlemen:

I. Authorization

A. Subject to the conditions stated below, the permittee, the Port of Oakland, is hereby authorized to do the following:

Location: In the Bay and within the 100-foot shoreline band, on the norther shore of Alameda Estuary, at Clinton Basin within the former Seabreeze Yacht Center, at 286 Sixth Avenue in the City of Oakland, Alameda County.

Description: Conduct a remedial investigation for soil contamination at the former yacht harbor by: (1) removing a 160-square-foot floating gangway and installing portions of a temporary chain link fence around the site to protect the public from possible exposure to contaminants during the investigation; (2) installing a 150-square-foot temporary floating walkway to provide alternative access to docks previously accessed via the gangway to be removed; (3) taking soil samples to test for hazardous wastes, and (4) excavating and removing out of the Commission's jurisdiction contaminated soils at an above ground storage tank and backfill with clean earth material; and (5) install seven (7) 48-foot-high light poles at the edge of the shoreline for security reasons.

B. This amended authority is generally pursuant to and limited by your application dated January 29, 1990, and your letters dated July 9, 1991

and September 1, 1992, requesting Amendment Nos. One, and Two, respectively, including ~~it~~ all accompanying exhibits, and all conditions of this amended permit.

C. Work authorized herein must commence prior to September 1, 1990, or this amended permit will lapse and become null and void. Such work must also be diligently pursued to completion and must be completed by December 1, 1992, whichever is earlier, unless an extension of time is granted by a further amendment of this amended permit. Work authorized by Amendment No. Two must commence prior to November 1, 1993, and must be completed by November 1, 1996, unless an extension of time is granted by a further amendment of this amended permit.

II. Special Conditions

The amended authorization made herein shall be subject to the following special condition, in addition to the standard conditions in Part IV:

A. Debris Removal. All construction debris shall be removed to a location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.

B. Contaminated Soils. All soils determined to be contaminated shall be removed off site outside the Commission's 100-foot shoreline band jurisdiction.

III. Findings and Declarations

On behalf of the Commission, I find and declare that:

A. The project authorized by this amended permit involves the installation of a 150-square-foot floating walkway which is no larger than the construction of a new single boat dock of 1,000 square feet as defined in Regulation Section 10601(a)(4); (2) the taking of soil samples to test for hazardous wastes which involves the extraction of small amounts of material in a manner that does not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project as defined in Regulation Section 10601(b)(1); and (3) the installation of a temporary chain link fence, and the installation of light poles at the

edge of the shoreline, which involves the placement of small amounts of inert inorganic fill in a manner that does not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project, or on present or possible future use for a designated priority water-related use, or on the environment, as defined in Regulation Section 10601(b)(1).

B. The temporary placement of a chain link fence around the site will not affect public access along the shoreline as no public access pathways exist at this location. The soil analysis is being conducted in response to an order issued by the Alameda County Department of Environmental Health to investigate heavy metal soil contamination detected on the site. Future remediation of any contamination would reduce the possible threat to public health of anyone walking along the shoreline at this location, thereby benefitting possible future public access.

C. The project authorized by this amended permit is consistent with the McAteer-Petris Act and with the San Francisco Bay Plan in that it will not adversely affect the Bay nor public access to and enjoyment of the Bay.

D. The Commission further finds, declares, and certifies that the activity or activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

E. Pursuant to Regulation Section 11501, the project authorized by this amended permit is categorically exempt from the requirement to prepare an environmental impact report.

F. Pursuant to Regulation Section 10620, the original project was listed with the Commission on March 15, 1990.

IV. Standard Conditions

A. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.

B. The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. Work must be performed in the precise manner and at the precise locations indicated in your application and amendment requests, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

D. Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittee will be subject to the regulations of the Regional Water Quality Control Board in that region.

E. The rights derived from this amended permit are assignable as provided herein. An assignment shall not be effective until the assignee shall have executed and the Commission shall have received an acknowledgment that the assignee has read and understood the application and amendment requests for this amended permit and the amended permit itself and agrees to be bound by the terms and conditions of the amended permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms of the amended permit.

F. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

G. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

H. Unless otherwise provided in this amended permit, any work authorized herein shall be completed within the time limits specified in this amended permit, or, if no time limits are specified in the amended permit, within three years. If the work is not completed by the date specified in the amended permit, or if no date is specified, within three years from the date of the amended permit, the amended permit shall become null and void. If this amended permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this amended permit shall be removed by the permittee or its assignee upon receiving written notification by or on behalf of the Commission to remove the fill.

I. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee or its assignee if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee or its assignee if the amended permit has been assigned.

J. This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

K. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit.

L. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction up to the line of highest tidal action.

M. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee or its assignee if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

Alan R. Pendleton

ALAN R. PENDLETON
Executive Director

Enc. 0470r--11/10/92
ARP/CS/rr
cc: U. S. Army Corps of Engineers, Attn: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn: Certification Section
Environmental Protection Agency, Attn: Clyde Morris, W-7-2
Baykeeper, Attn: Mike Herz
Alameda County Department of Environmental Health

* * * * * * * * * * *

Receipt acknowledged, contents understood and agreed to:

Executed at Oakland, CA

Port of Oakland
Applicant

On November 17 1992 By: H L Lambert

Director of Engineering
Title

APPENDIX D

SOIL SAMPLING LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 14-JAN-94
Lab Job Number: 113921
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: Teresa K Morrison

Reviewed by: Mary Pleasant

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/14/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-12K(1.0-1.5)	113921-006	01/07/94	01/07/94	170	1.0	12283	EPA 7210	01/12/94
SB-12C(1.5-2.0)	113921-008	01/07/94	01/07/94	360	4.8	12283	EPA 7210	01/12/94
SB-12J(0.5-1.0)	113921-009	01/07/94	01/07/94	86	1.0	12283	EPA 7210	01/12/94
SB-12J(1.0-1.5)	113921-010	01/07/94	01/07/94	240	0.97	12283	EPA 7210	01/12/94
SB-12A(1.5-2.0)	113921-012	01/07/94	01/07/94	350	9.6	12283	EPA 7210	01/12/94
SB-12I(0.5-1.0)	113921-013	01/07/94	01/07/94	100	0.97	12283	EPA 7210	01/12/94
SB-12I(1.0-1.5)	113921-014	01/07/94	01/07/94	150	0.99	12283	EPA 7210	01/12/94
SB-12H(0.5-1.0)	113921-016	01/07/94	01/07/94	190	1.0	12283	EPA 7210	01/12/94
SB-12H(1.0-1.5)	113921-017	01/07/94	01/07/94	3500	50	12283	EPA 7210	01/12/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/14/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-14I(1-1.5)	113921-001	01/07/94	01/07/94	230	4.9	12283	EPA 7420	01/12/94
SB-14C(1.5-2.0)	113921-003	01/07/94	01/07/94	65	4.9	12283	EPA 7420	01/12/94
SB-14H(1.0-1.5)	113921-004	01/07/94	01/07/94	120	4.8	12283	EPA 7420	01/12/94
SB-12K(1.0-1.5)	113921-006	01/07/94	01/07/94	19	5.0	12283	EPA 7420	01/12/94
SB-12C(1.5-2.0)	113921-008	01/07/94	01/07/94	340	4.8	12283	EPA 7420	01/12/94
SB-12J(0.5-1.0)	113921-009	01/07/94	01/07/94	48	5.0	12283	EPA 7420	01/12/94
SB-12J(1.0-1.5)	113921-010	01/07/94	01/07/94	63	4.9	12283	EPA 7420	01/12/94
SB-12A(1.5-2.0)	113921-012	01/07/94	01/07/94	140	4.8	12283	EPA 7420	01/12/94
SB-12I(0.5-1.0)	113921-013	01/07/94	01/07/94	230	4.9	12283	EPA 7420	01/12/94
SB-12I(1.0-1.5)	113921-014	01/07/94	01/07/94	200	5.0	12283	EPA 7420	01/12/94
SB-12H(0.5-1.0)	113921-016	01/07/94	01/07/94	150	5.0	12283	EPA 7420	01/12/94
SB-12H(1.0-1.5)	113921-017	01/07/94	01/07/94	300	5.0	12283	EPA 7420	01/12/94
SB-6I(0.5-1.0)	113921-019	01/07/94	01/07/94	80	4.8	12283	EPA 7420	01/12/94
SB-6I(1.0-1.5)	113921-020	01/07/94	01/07/94	45	4.9	12283	EPA 7420	01/12/94
SB-6J(0.5-1.0)	113921-022	01/07/94	01/07/94	24	4.7	12283	EPA 7420	01/12/94
SB-6K(0.5-1.0)	113921-023	01/07/94	01/07/94	180	4.9	12283	EPA 7420	01/12/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/14/94

METALS ANALYTICAL REPORT

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-6H(1.5-2.0)	113921-024	01/07/94	01/07/94	ND	4.9	12283	EPA 7420	01/12/94
SB-6L(1.0-1.5)	113921-025	01/07/94	01/07/94	49	5.0	12283	EPA 7420	01/12/94
SB-9I(0.5-1.0)	113921-027	01/07/94	01/07/94	310	5.0	12283	EPA 7420	01/12/94
SB-9J(0.5-1.0)	113921-028	01/07/94	01/07/94	110	5.0	12283	EPA 7420	01/12/94
SB-9J(1.0-1.5)	113921-029	01/07/94	01/07/94	84	5.0	12321	EPA 7420	01/14/94
SB-9K(0.5-1.0)	113921-031	01/07/94	01/07/94	240	4.9	12321	EPA 7420	01/14/94
SB-9K(1.0-1.5)	113921-032	01/07/94	01/07/94	93	4.9	12321	EPA 7420	01/14/94
SB-9F(1.5-2.0)	113921-034	01/07/94	01/07/94	75	4.8	12321	EPA 7420	01/14/94
SB-9(1.5-2.0)	113921-035	01/07/94	01/07/94	26	4.9	12321	EPA 7420	01/14/94
SB-9G(1.5-2.0)	113921-036	01/07/94	01/07/94	34	5.0	12321	EPA 7420	01/14/94
SB-9O(0.5-1.0)	113921-037	01/07/94	01/07/94	ND	5.0	12321	EPA 7420	01/14/94
SB-9O(1.0-1.5)	113921-038	01/07/94	01/07/94	ND	5.0	12321	EPA 7420	01/14/94
SB-9O(1.5-2.0)	113921-039	01/07/94	01/07/94	58	5.0	12321	EPA 7420	01/14/94
SB-9H(1.5-2.0)	113921-040	01/07/94	01/07/94	270	4.8	12321	EPA 7420	01/14/94
SB-9N(1.0-1.5)	113921-041	01/07/94	01/07/94	180	4.8	12321	EPA 7420	01/14/94
SB-9M(0.5-1.0)	113921-043	01/07/94	01/07/94	87	5.0	12321	EPA 7420	01/14/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/14/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-9M(1.0-1.5)	113921-044	01/07/94	01/07/94	74	5.0	12321	EPA 7420	01/14/94
SB-9D(1.5-2.0)	113921-046	01/07/94	01/07/94	120	4.8	12321	EPA 7420	01/14/94
SB-9L(1.0-1.5)	113921-047	01/07/94	01/07/94	ND	4.9	12321	EPA 7420	01/14/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113921

DATE REPORTED: 01/14/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	1	1	mg/Kg	12283	EPA 7210	01/12/94
Lead	ND	5	mg/Kg	12283	EPA 7420	01/12/94
Lead	ND	5	mg/Kg	12321	EPA 7420	01/14/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113921

DATE REPORTED: 01/14/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	250	250	ug/L	100	100	100	0	12283	EPA 7210	01/12/94
Lead	500	430	440	ug/L	86	88	87	2	12283	EPA 7420	01/12/94
Lead	2000	2060	2200	ug/L	103	100	102	3	12321	EPA 7420	01/14/94

113921

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

1/4

Turn-around Time: Standard
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Anaya

Project No.	Project Name and Location
59171	Sabreeze Yacht 280 Sixth Avenue Oakland, California

Samplers: (Signature) William K Scott.

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead 7420	CU 7210						Remarks/ Composite	Detection Limits
SB-14 I (1-1.5)	1/7/94	8:40	S	1.0-1.5	1 liner						X									
SB-14 I (1.5-2.0)		848		1.5-2.0							X								[HOLD]	
SB-14 C (1.5-2.0)		855		1.5-2.0							X									
SB-14 H (1.0-1.5)		906		1.0-1.5							X									
SB-14 H (1.5-2.0)		908		1.5-2.0							X								[HOLD]	
SB-12 K (1.0-1.5)		936		1.0-1.5							X	X								
SB-12 K (1.5-2.0)		938		1.5-2.0							X	X							[HOLD]	
SB-12 C (1.5-2.0)		950		1.5-2.0							X	X								
SB-12 J (0.5-1.0)		1006		0.5-1.0							X	X								
SB-12 J (1.0-1.5)		1008		1.0-1.5							X	X								
SB-12 J (1.5-2.0)		1010		1.5-2.0							X	X							[HOLD]	
SB-12 A (1.5-2.0)		1018		1.5-2.0							X	X								
SB-12 I (0.5-1.0)		1032		0.5-1.0							X	X								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Add Cu to all samples with SB-12 in 10 per Teresa Anaya 1/10/94.
Relinquished by: (Signature) William K Scott	Date / Time 1-7-94/16:45	Received by: (Signature)	Date / Time 1/7/94 1645	

COSTRCDE.FM2

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Standard
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Anaya

Project No.	Project Name and Location
59171	~~Sabrage~~ 280 6th Ave. Oakland, CA.

Samplers: (Signature) [signature]

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead 7420	Cu 7210	Remarks/ Composite	Detection Limits
SB-12 I (1.0-1.5)	1/7/94	1034	S	1.0-1.5	1 liner							X	X		
SB-12 I (1.5-2.0)		1036		1.5-2.0									X	[HOLD]	
SB-12 H (0.5-1.0)		1040		0.5-1.0									X		
SB-12 H (1.0-1.5)		1042		1.0-1.5									X		
SB-12 H (1.5-2.0)		1044		1.5-2.0									X	[HOLD]	
SB-6 I (0.5-1.0)		1135		0.5-1.0											
SB-6 I (1.0-1.5)		1140		1.0-1.5											
SB-6 I (1.5-2.0)		1144		1.5-2.0										[HOLD]	
SB-6 J (0.5-1.0)		1115		0.5-1.0											
SB-6 K (0.5-1.0)		1125		0.5-1.0											
SB-6 H (1.5-2.0)		1130		1.5-2.0											
SB-6 L (1.0-1.5)	↓	1150	↓	1.0-~~2.5~~1.5											
SB-6 L (1.5-2.0)		1152		1.5-2.0	↓							↓		[HOLD]	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Add Cu to SB-12 samples. 1/10/94
Relinquished by: (Signature) [signature]	Date / Time 1-7-94 16:45	Received by: (Signature) [signature]	Date / Time 1/7/94 1645	

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD 3/4

Turn-around Time: Standard C
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Amaya

Project No.	Project Name and Location
5917/	Seabreeze 280 Sixth Ave. Oakland, CA.

Samplers: (Signature) [signature]

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	Remarks/ Composite	Detection Limits
27	SB-9 I(0.5-1.0)	1/7/94	1255	S	0.5-1.0	1 liner							X		
28	SB-9 J(0.5-1.0)	"	1302	"	0.5-1.0	"							"		
29	SB-9 J(1.0-1.5)	"	1304	"	1.0-1.5	"							"		
30	SB-9 J(1.5-2.0)	"	1306	"	1.5-2.0	"							"	[HOLD]	
31	SB-9 K(0.5-1.0)	"	1405	"	0.5-1.0	"							"		
32	SB-9 K(1.0-1.5)	"	1407	"	1.0-1.5	"							"		
33	SB-9 K(1.5-2.0)	"	1409	"	1.5-2.0	"							"	[HOLD]	
34	SB-9 F(1.5-2.0)	"	1357	"	1.5-20	"							"		
35	SB-9(1.5-2.0)	"	1418	"	1.5-2.0	"							"		
36	SB-9 G(1.5-2.0)	"	1426	"	(1.5-2.0)	"							"		
37	SB-9 O(0.5-1.0)	"	1436	"	0.5-1.0	"							"		
38	SB-9 O(1.0-1.5)	"	1438	"	1.0-1.5	"							"		
39	SB-9 O(1.5-2.0)	"	1440	"	1.5-2.0	"							"		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature) [signature]	Date / Time 1-7-94 16:45	Received by: (Signature) [signature]	Date / Time 1/7/94 1645	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

[redacted] BASELINE [redacted]
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD 4/4

Turn-around Time: Standard
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Amaya

Project No.	Project Name and Location
59171	Seabreeze 280 Sixth Ave Oakland, CA

Samplers: (Signature) William K. Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	Remarks/ Composite	Detection Limits
10	SB-9H (1.5-2.0)	1/7/94	1448	S	1.5-2.0	1 liner							X		
11	SB-9N (1.0-1.5)		1455		1.0-1.5										
12	SB-9N (1.5-2.0)		1457		1.5-2.0									[HOLD]	
13	SB-9M (0.5-1.0)		1503		0.5-1.0										
14	SB-9M (1.0-1.5)		1505		1.0-1.5										
15	SB-9M (1.5-2.0)		1507		1.5-2.0									[HOLD]	
16	SB-9D (1.5-2.0)		1512		1.5-2.0										
17	SB-9L (1.0-1.5)		1521		1.0-1.5										
18	SB-9L (1.5-2.0)		1523		1.5-2.0									[HOLD]	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature) William K. Scott	Date / Time 1-7-94 16:45	Received by: (Signature)	Date / Time 1/7/94 1645	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

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

RECEIVED
FEB 7 1994
BASELINE

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 31-JAN-94
Lab Job Number: 114046
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

SAMPLE ID: SB-12H(1.5-2.0)
LAB ID: 114046-011
CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE SAMPLED: 01/07/94
DATE RECEIVED: 01/07/94
DATE REPORTED: 01/31/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Copper	23	0.97	12449	EPA 7210	01/25/94

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 02/03/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-14I(1-1.5)	114046-001	01/07/94	01/07/94	3100	500	12538	EPA 7420	01/29/94
SB-14C(1.5-2.0)	114046-002	01/07/94	01/07/94	3500	500	12538	EPA 7420	01/29/94
SB-14H(1.0-1.5)	114046-003	01/07/94	01/07/94	3000	500	12538	EPA 7420	01/29/94
SB-12C(1.5-2.0)	114046-004	01/07/94	01/07/94	26000	500	12513	EPA 7420	01/28/94
SB-12J(1.0-1.5)	114046-005	01/07/94	01/07/94	3400	500	12538	EPA 7420	01/29/94
SB-12A(1.5-2.0)	114046-006	01/07/94	01/07/94	5100	500	12513	EPA 7420	01/28/94
SB-12I(0.5-1.0)	114046-007	01/07/94	01/07/94	7500	500	12538	EPA 7420	01/29/94
SB-12I(1.0-1.5)	114046-008	01/07/94	01/07/94	8000	500	12538	EPA 7420	01/29/94
SB-12H(0.5-1.0)	114046-009	01/07/94	01/07/94	5900	500	12538	EPA 7420	01/29/94
SB-12H(1.0-1.5)	114046-010	01/07/94	01/07/94	8000	500	12538	EPA 7420	01/29/94
SB-6I(0.5-1.0)	114046-012	01/07/94	01/07/94	5400	500	12538	EPA 7420	01/29/94
SB-9I(0.5-1.0)	114046-014	01/07/94	01/07/94	15000	500	12538	EPA 7420	01/29/94
SB-9J(0.5-1.0)	114046-015	01/07/94	01/07/94	3100	500	12538	EPA 7420	01/29/94
SB-9J(1.0-1.5)	114046-016	01/07/94	01/07/94	2700	500	12538	EPA 7420	01/29/94
SB-9K(0.5-1.0)	114046-017	01/07/94	01/07/94	7000	500	12538	EPA 7420	01/29/94
SB-9K(1.0-1.5)	114046-018	01/07/94	01/07/94	6800	500	12538	EPA 7420	01/29/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 02/03/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-9F(1.5-2.0)	114046-019	01/07/94	01/07/94	4700	500	12538	EPA 7420	01/29/94
SB-9O(1.5-2.0)	114046-020	01/07/94	01/07/94	2000	500	12538	EPA 7420	01/29/94
SB-9H(1.5-2.0)	114046-021	01/07/94	01/07/94	5500	500	12538	EPA 7420	01/29/94
SB-9N(1.0-1.5)	114046-022	01/07/94	01/07/94	2800	500	12538	EPA 7420	01/29/94
SB-9M(0.5-1.0)	114046-023	01/07/94	01/07/94	5400	500	12538	EPA 7420	01/29/94
SB-9D(1.5-2.0)	114046-025	01/07/94	01/07/94	11000	500	12513	EPA 7420	01/28/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 01/31/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-12C(1.5-2.0)	114046-004	01/07/94	01/07/94	30000	100	12513	EPA 7210	01/28/94
SB-12A(1.5-2.0)	114046-006	01/07/94	01/07/94	27000	100	12513	EPA 7210	01/28/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114046

DATE REPORTED: 01/31/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	240	240	ug/L	96	96	96	0	12449	EPA 7210	01/25/94
Copper	250	230	240	ug/L	92	96	94	4	12513	EPA 7210	01/28/94
Lead	500	420	420	ug/L	84	84	84	0	12513	EPA 7420	01/28/94
Lead	2000	2030	2050	ug/L	102	103	103	1	12538	EPA 7420	01/29/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114046

DATE REPORTED: 01/31/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	1	mg/Kg	12449	EPA 7210	01/25/94
Copper	ND	100	ug/L	12513	EPA 7210	01/28/94
Lead	ND	500	ug/L	12513	EPA 7420	01/28/94
Lead	ND	100	ug/L	12538	EPA 7420	01/29/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

BASELINE

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 03-FEB-94
Lab Job Number: 114160
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 02/03/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-6K(0.5-1.0)	114160-001	01/07/94	01/07/94	340000	5000	12595	EPA 7420	02/03/94
SB-9M(1.0-1.5)	114160-002	01/07/94	01/07/94	3000	500	12595	EPA 7420	02/03/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 02/02/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-6K(0.5-1.0)	114160-001	01/07/94	01/07/94	3700	49	12570	EPA 7420	02/02/94
SB-9M(1.0-1.5)	114160-002	01/07/94	01/07/94	93	4.9	12570	EPA 7420	02/02/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114160

DATE REPORTED: 02/03/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Lead	500	430	420	ug/L	86	84	85	2	12570	EPA 7420	02/02/94
Lead	2000	1870	1910	ug/L	94	96	95	2	12595	EPA 7420	02/03/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114160

DATE REPORTED: 02/03/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Lead	ND	5	mg/Kg	12570	EPA 7420	02/02/94
Lead	ND	500	ug/L	12595	EPA 7420	02/03/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

RECEIVED
FEB 16 1993
BASELINE

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 04-FEB-94
Lab Job Number: 114193
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 02/04/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-9K(1.5-2.0)	114193-001	01/07/94	01/07/94	4100	500	12618	EPA 7420	02/04/94
SB-12I(1.5-2.0)	114193-002	01/07/94	01/07/94	3400	500	12618	EPA 7420	02/04/94
SB-12H(1.5-2.0)	114193-003	01/07/94	01/07/94	4200	500	12618	EPA 7420	02/04/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114193

DATE REPORTED: 02/04/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Lead	2000	1830	1850	ug/L	92	185	139	1	12618	EPA 7420	02/04/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114193

DATE REPORTED: 02/04/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Lead	ND	500	ug/L	12618	EPA 7420	02/04/94

ND = Not detected at or above reporting limit

S9171 Rush.

Curtis & Tompkins, Ltd.

VERBAL ADDITIONS / CANCELLATIONS TO ANALYSIS REQUEST SHEET 29856

CLIENT: Baseline Env. DATE: 2/1/94 PO

REQUESTED BY: Chris Stromberg TIME: ____ am 14:55 pm

RECORDED BY: JB

Current Lab ID (Previous Lab ID)	Client ID	Circle matrix	Specify add or cancel	Analysis	Due date
114193-1 (113921.33)	SB9K 1.5-2	(soil) water other	+	STLC Pb	2/4/94
114193-2 (113921.15)	SB12I 1.5-2	(soil) water other	+	STLC Pb	
114193-3 (113921.18)	SB	(soil) water other	+	STLC Pb	
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			
(-)		soil water other			

Original in job jacket. Copies to analytical departments.

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

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 10-FEB-94
Lab Job Number: 114249
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: TCLP Leachate

DATE REPORTED: 02/10/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-12C(1.5-2.0)	114249-001	01/07/94	01/07/94	500	100	12679	EPA 7420	02/09/94
SB-6K(0.5-1.0)	114249-002	01/07/94	01/07/94	10000	100	12679	EPA 7420	02/09/94
SB-9I(0.5-1.0)	114249-003	01/07/94	01/07/94	480	100	12679	EPA 7420	02/09/94
SB-9D(1.5-2.0)	114249-004	01/07/94	01/07/94	220	100	12679	EPA 7420	02/09/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114249

DATE REPORTED: 02/10/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Lead	500	480	490	ug/L	96	98	97	2	12679	EPA 7420	02/09/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114249

DATE REPORTED: 02/10/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Lead	ND	100	ug/L	12679	EPA 7420	02/09/94

ND = Not detected at or above reporting limit

BASELINE

MEMORANDUM TO FILE

TO : John Goyette
FROM: YANE

Job No. 59171
Date _____ Time _____

FAX 4816-0532.

Phone Call from _____ Phone No. _____
Title(s)/Affiliation(s) _____
Phone Call to _____ Phone No. _____
Title(s)/Affiliation(s) _____

Conference with _____
Title(s)/Affiliation(s) _____
Place _____

Subject Seabreeze soil samples for Port of Oakland

John :

(1) Please analyze for TCLP Normal turnaround

SB12C (1.5-2.0)	113921-008	Pb only
SB 6K (0.5-1.0)	113921-023	
SB 9I (0.5-1.0)	113921-027	114249
SB 9D (1.5-2.0)	113921-046	

(2) Please check calculations/results of Pb Total + soluble for

~~SB-CC1~~ SB-CC2	
SB-CC1 (1-1.5)	113962-007
SB-CC2 (1.0-1.5)	113962-008
SB-CC3 (1.0-1.5)	113962-009

(3) Chromatograms for :

SB-CC1 (1.0-1.5)	113962-007	Also: standards for diesel, motor oil and bunker oil
(0.5-1.0)	113919-004	
SB-CC2 (1.0-1.5)	113962-008	
(0.5-1.0)	113919-006	
SB-CC3 (1.0-1.5)	113962 009	
(0.5-1.0)	113919-008	

Signed _____

ad1-6/88

APPENDIX E

DRILLING LOGS
JANUARY AND AUGUST 1994

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS — MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS — MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS — LIQUID LIMIT IS LESS THAN 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS — LIQUID LIMIT IS GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

DEFINITION OF TERMS

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENINGS			
200	40	10	4	3/4"	3"	12"	
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

GRAIN SIZES

SANDS AND GRAVELS	BLOWS/FOOT†
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

SILTS AND CLAYS	STRENGTH‡	BLOWS/FOOT†
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

CONSISTENCY

†Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

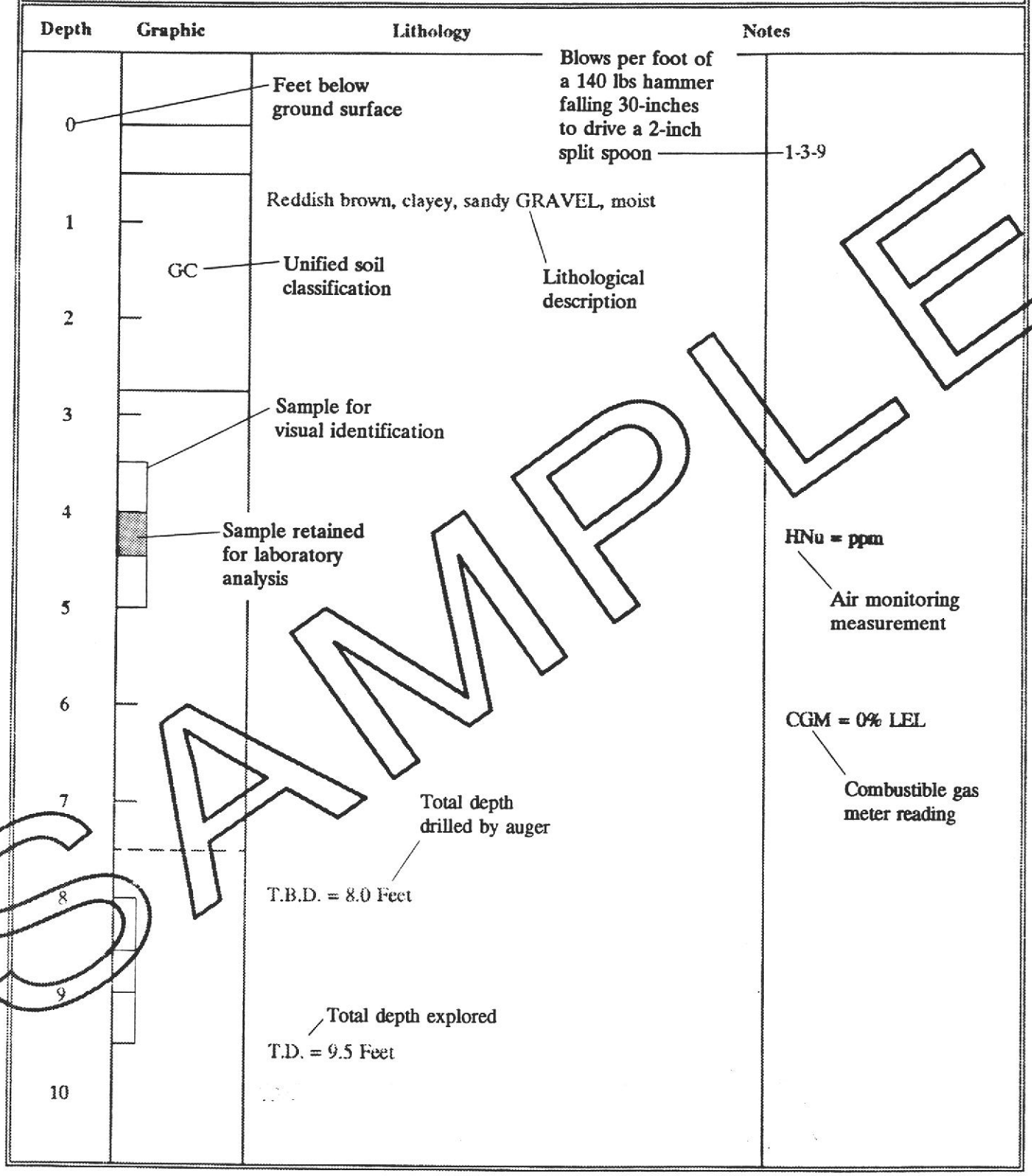
‡Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

SAMPLE DRILLING LOG

DRILLING LOG

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

Location _____ Boring No. _____
Driller _____ Project No. _____
Method _____ Date _____
Logger _____ Datum _____ Bore size _____ Casing size _____



Scale: 1 inch = 1.5 feet

Signature _____

DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-CC1
Driller	West Hazmat	Project no.	S9171-00.02
Method	Post hole digger	Date	1/7/94
Logger	WKS Datum ____ Bore size --	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0	SM	Yellowish-brown, silty SAND, fine-grained, medium dense, moist (Fill).	Used hand sampler Excavated with post hole digger
1	GC	Brown, gravelly CLAY, with sand, low plasticity, firm to stiff, moist (Fill).	
2		Total depth = 1.5 feet. Total boring depth = 1.5 feet.	
3			
4			
5			
6			
7			
8			
9			
10			

(S9171D1.XLW-6/8/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-CC2
Driller	West Hazmat	Project no.	S9171-00.02
Method	Post hole digger	Date	1/7/94
Logger	WKS Datum ____ Bore size --	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0		Greenish-gray to black, silty CLAY, very soft, wet (Bay mud) matrix in brick and concrete rubble (Fill).	Used hand sampler Excavated with post hole digger below high tide level
1	CH	Greenish-gray/black, silty CLAY, very soft, wet (Bay mud). Total depth = 1.5 feet. Total boring depth = 1.0 feet.	
2			
3			
4			
5			
6			
7			
8			
9			
10			

(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-CC3
Driller	West Hazmat	Project no.	S9171-00.02
Method	Post hole digger	Date	1/7/94
Logger	WKS Datum ____ Bore size --	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0	CL	Greenish-gray to black, silty CLAY, very soft, wet (Bay mud) matrix in brick and concrete rubble (Fill). Pieces of brick and concrete, ceramic electrical pieces.	Used hand sampler Excavated with post hole digger below high tide mark
1	CH	Greenish-gray/black, silty CLAY, very soft, wet (Bay mud). Total depth = 1.5 feet. Total boring depth = 1.0 feet.	
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-CC4C
Driller	West Hazmat	Project no.	S9171-00.02
Method	Hollow-stem, continuous flight auger	Date	1/21/93
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0		Concrete slab - no cracks.	Used 4" core for concrete sample. 1.5 hours to drill through slab using 10" bit.
1			
2			
3	CH	Bluish-gray to greenish gray, silty CLAY, highly plastic, very soft, wet (Bay mud). Interbedding of silty sand, fine-grained, 3 inches thick, shell fragments.	Strong sulfur dioxide smell.
4		Total depth = 3.5 feet.	
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-CC5C
Driller	West Hazmat	Project no.	S9171-00.02
Method	Hollow-stem, continuous flight auger	Date	1/21/93
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0		Concrete slab.	Used 4" core for concrete sample. 1.5 hours to drill through slab using 10" bit.
1			
2		Rebar at 2.5 feet (1" x 1").	
3	CH	Greenish-gray, silty CLAY, high plasticity, very soft, wet (Bay mud). Some shell fragments	
4		Total depth = 3.5 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB-6H
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
1			
2	GC	Reddish-brown, clayey GRAVEL, with sand, 1/3 to 1-1/4 inch diameter subangular clasts, medium dense, very moist (Fill).	20
		Total depth = 2.0 feet.	
		Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB6-I
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
1	GC	Reddish-brown, clayey GRAVEL, gravelly CLAY, with sand, medium dense, very moist (Fill).	36-39-47
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB6-J
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
1	CL	Very dark brown/pale brown, silty CLAY with gravel and sand, low plasticity, very moist (Fill).	9-10-15
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB6-K
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum ____ Bore size 8¾"	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0			
1	SC	Dark gray/brown, clayey SAND, with gravel, fine-grained, medium dense, very moist (Fill).	33-45-28
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB6-L
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
1	GC	Reddish-brown, clayey GRAVEL, with sand, 1/2-1-1/2 inch diameter subangular clasts, dense, very moist (Fill).	49-50
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D1.XLW-6/8/94)

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Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114118

DATE REPORTED: 01/27/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	5	ug/L	12494	EPA 6010	01/27/94
Lead	ND	3	ug/L	12500	EPA 7421	01/27/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114118

DATE REPORTED: 01/27/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	257.2	253.7	ug/L	103	102	103	1	12494	EPA 6010	01/27/94
Lead	30	31.57	30.98	ug/L	105	103	104	2	12500	EPA 7421	01/27/94

DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	GC	Brown, clayey GRAVEL with sand, 1/3 to 1-1/4 inch diameter subangular clasts, medium dense, moist (Fill).	
1			28-29-49
	SM	Light brown, silty SAND, very fine- to fine-grained, medium dense, very moist (Fill).	
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-D
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, gravelly SAND, very fine-grained to fine-grained, medium dense to dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grained, dense, moist (Fill).	
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	28
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-F
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, gravelly SAND, fine-grained, medium dense, moist (Fill).	
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2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	28
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-G
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Brown, sandy GRAVEL with clay, 1/3 to 1-1/4 inch diameter subangular clasts, medium dense to dense, moist (Fill).	
1	SM	Pale brown, silty SAND, trace gravel, fine-grained, medium dense, very moist (Fill).	
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	19
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(S9171D1.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-H
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Brown, sandy GRAVEL, 1/3 to 1-1/4 inch diameter subangular clasts, medium dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grained, medium dense, moist (Fill).	32-39-44
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-I
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Olive, gravelly SAND, with clay, fine-grained, medium dense, moist (Fill).	30
1		Total depth = 1.0 foot. Total boring depth = 1.0 foot.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-J
Driller	West Hazmat	Project no.	S9171-00.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, gravelly SAND, fine-grained, medium dense, moist (Fill).	45-20-28
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2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-K
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
1	GC	Brown, clayey GRAVEL, 1/3 to 1-1/2 inch diameter subangular clasts, medium dense, moist (Fill).	50-12-21
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D2.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-L
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Brown, gravelly SAND, fine-grained, medium dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grained, dense, moist to very moist (Fill).	30-53
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-M
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, gravelly SAND, very fine- to fine-grained, medium dense to dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grained, dense, moist (Fill).	12-15-20
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-N
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Brown, gravelly SAND, very fine- to fine-grained, medium dense to dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grained, dense, moist (Fill).	27-48
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB9-O
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Brown, sandy GRAVEL, 1/3 to 1-1/4 inch diameter subangular clasts, medium dense, moist (Fill).	
1	SM	Olive, silty SAND, fine-grined, medium dense, moist (Fill).	29-35-33
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-A
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND, very fine- to fine-grained, medium dense to dense, moist to damp (Fill).	
1			18-29
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-C
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND with gravel, very fine- to fine-grained, medium dense, concrete pieces, moist (Fill).	
1			
2			50 (6")
		Total depth = 2.0 feet.	
		Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-H
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SC	Brown, clayey SAND, with silt and gravel, very fine- to fine-grained, loose to medium dense, moist (Fill).	7-8-12
1			
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D2.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-I
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND, with gravel and clay, fine- to very fine-grained, medium dense to dense, damp, concrete pieces (Fill).	29-35-42
1			
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-J
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND, very fine- to fine-grained, medium dense to dense, moist to damp (Fill).	Could not drive sample - concrete. Bore out and collected sample from side walls.
1			
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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(S9171D2.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-K
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Pale brown, silty SAND, with gravel, medium dense to dense, damp (Fill).	
1			35-75 6" Recovery
			Re-sampled
2		Total depth = 2.0 feet.	
		Total boring depth = 2.0 feet.	
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(S9171D2.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB12-L
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND with gravel, very fine- to fine-grained, medium dense, concrete pieces, moist (Fill)	
1			Used hand sampler
	CL	Brown, sandy CLAY with gravel, low plasticity, firm, very moist, pieces of glass, ceramic, concrete (Fill).	
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
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DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB14-C
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND with gravel, very fine- to fine-grained, medium dense, moist to very moist (Fill).	
1			45-50
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
3			
4			
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(S9171D2.XLW-6/8/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB14-H
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND, with gravel, very fine- to fine-grained, medium dense, moist (Fill).	
1			18-35
2		Total depth = 2.0 feet. Total boring depth = 2.0 feet.	
3			
4			
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7			
8			
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(S9171D2.XLW-6/8/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center, 280 6th Avenue, Oakland, California	Boring no.	SB14-I
Driller	West Hazmat	Project no.	S9171-0.01
Method	Hollow-stem, continuous flight auger	Date	1/7/94
Logger	WKS Datum	Bore size 8¾"	Casing size

Depth (ft.)	Graphic	Lithology	Notes
0			
	SM	Brown, silty SAND, with gravel, very fine-grained, medium dense, moist (Fill).	
1			18-50-35-50 10" Recovery Pushed gravel clast
2		Total depth = 2.5 feet. Total boring depth = 2.0 feet.	6" Recovery
3			
4			
5			
6			
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8			
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(S9171D2.XLW-6/8/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	1
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light gray, SAND with gravel, fine- to medium-grained, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	CL	Very dark gray, gravelly CLAY with sand, low plasticity, moist (Fill).	
2		Total depth = 1.5 feet.	
3			
4			
5			
6			
7			
8			
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10			

S9171-B1.XLW(8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	2
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Light brown, SAND, fine- to medium-grained, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2		Light brown/gray, increase in clay, very moist (Fill).	
3		Total depth = 3.0 feet.	
4			
5			
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7			
8			
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S9171-B1.XLW(8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	3
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Light brown, GRAVEL with sand, fine-grained, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	GC/GW	Brown, gravelly CLAY-clayey GRAVEL, low plasticity, moist (Fill).	
2		Total depth = 1.5 feet.	
3			
4			
5			
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S9171-B1.XLW(8/23/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	4
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GC	Brown, clayey GRAVEL with sand, large clasts, 1/2- to 3/4-inch diameter, subangular clasts, damp to moist (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2			Very hard at 2.5 feet
		Total depth = 2.5 feet.	
3			
4			
5			
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7			
8			
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S9171-B1.XLW(8/23/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	5
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Light brown, SAND with gravel, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
	GC	Brown, clayey GRAVEL with sand, subangular clasts, 1/2- to 1-1/2-inch diameter, moist, (Fill).	Hard at 1.5 feet Used 1.5-inch diameter sampler
2			
3		Total depth = 3.0 feet.	
4			
5			
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7			
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S9171-B1.XLW(8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	6
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Light brown SAND with gravel, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
	GC	Brown, clayey GRAVEL with sand, subangular clasts, 1/2- to 1-1/2-inch diameter, moist (Fill).	
2			
	SW	Brown to light brown, SAND, fine- to medium-grained, moist, wood pieces, charcoal pieces (Fill).	
3		Total depth = 3.0 feet.	
4			
5			
6			
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S9171-B1.XLW(8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	7
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light brown, SAND, some gravel, fine- to medium-grained, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	GC	Brown and very dark gray, clayey GRAVEL with sand, 3/4-inch diameter clasts, low plasticity, damp, brick and concrete pieces (Fill). Total depth = 1.0 foot.	
2			
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4			
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S9171-B1.XLW(8/23/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	8
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light brown SAND with gravel, fine- to medium-grained, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	GC	Brown, clayey GRAVEL, subangular clasts, up to 2-inch diameter, moist (Fill).	
2			
3		Total depth = 3.0 feet.	
4			
5			
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S9171-B1.XLW(8/23/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	9
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light brown, SAND with gravel, fine- to medium-grained, damp-dry (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	SW	Brown, SAND, fine- to medium-grained, shell fragments, moist to very moist (Fill).	
2			
3			
4		Total depth = 3.5 feet.	
5			
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S9171-B1.XLW(8/23/94)

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	10
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light brown, SAND with gravel, fine- to medium-grained, damp-dry (Fill).	HNu=0 ppm in breathing zone
1		Total depth = 0.5 foot.	HNu=0 ppm in borehole
2			LEL=0% in borehole
3			
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S9171-B1.XLW(8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	11
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum ____ Bore size NA	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	SW	Light brown, SAND, fine- to medium-grained, damp to moist, shell fragments (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2		Increase in clay content.	
		Total depth = 2.5 feet.	
3			
4			
5			
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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	12
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Light brown, SAND, fine- to medium-grained, damp, shell fragments (Fill).	HNu=0 ppm in breathing zone
1		Total depth = 0.5 feet.	HNu=0 ppm in borehole
2			LEL=0% in borehole
3			
4			
5			
6			
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S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	13
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Light brown, GRAVEL with sand, baserock, damp (Fill).	HNu=0 ppm in breathing zone LEL=0% in borehole HNu=0 ppm in borehole
1			
2		Total depth = 1.5 feet.	
3			
4			
5			
6			
7			
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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	14
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	CL	Gray, sandy CLAY with gravel, moist (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2	SC	Brown, clayey SAND with gravel, moist, concrete pieces (Fill). Increase in gravel at 2 feet, very moist.	
3	CH	Gray, silty CLAY, high plasticity, very moist to wet (Bay Mud). Total depth = 3.0 feet.	
4			
5			
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S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	15
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum ____ Bore size NA	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Light brown, GRAVEL with sand, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1	SC	Light gray, silty SAND with clay, moist, concrete and sandstone clasts (Fill).	
2	SW	Gray, SAND, fine- to medium-grained, moist (Fill).	
3			
4		Very moist to wet. Total depth = 4.0 feet.	
5			
6			
7			
8			
9			
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S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	16
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS	Datum	Bore size NA	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0	SW	Dark gray, SAND with gravel, trace of clay, fine- to medium-grained, moist (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2			
3	CH	Greenish gray, silty CLAY, high plasticity, very moist to wet (Bay Mud?). Total depth = 3.0 feet.	
4			
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S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	17
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Light brown, GRAVEL with sand, very fine-grained, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2	SW	Brown, SAND, fine- to medium-grained, dampt to moist (Fill).	
3		Total depth = 3.0 feet.	
4			
5			
6			
7			
8			
9			
10			

S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	18
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum ____ Bore size NA	Casing size	NA

Depth (ft.)	Graphic	Lithology	Notes
0			
	GW	Light brown, sandy GRAVEL, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
	SW	Brown, SAND, fine- to medium-grained, damp to moist (Fill).	
2			
	SW	Gray, SAND, fine- to medium-grained, very moist to wet.	
3			
			Water at 3.75 feet.
4		Total depth = 4.0 feet.	
5			
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S9171-B2.XLW (8/23/94)

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DRILLING LOG

Location	Seabreeze Yacht Center	Boring no.	19
Driller	Precision	Project no.	S9171-00.02
Method	Hydraulically-driven sample system	Date	8/15/94
Logger	WKS Datum	Bore size NA	Casing size NA

Depth (ft.)	Graphic	Lithology	Notes
0	GW	Light gray, GRAVEL with sand, baserock, damp (Fill).	HNu=0 ppm in breathing zone HNu=0 ppm in borehole LEL=0% in borehole
1			
2	SW	Light gray, SAND, fine- to medium-grained, moist (Fill).	
3			
4		Total depth = 4.0 feet.	
5			
6			
7			
8			
9			
10			

S9171-B2.XLW (8/23/94)

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APPENDIX F

GROUNDWATER LABORATORY REPORTS AND GROUNDWATER SAMPLING FORMS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 17-JAN-94
Lab Job Number: 113919
Project ID: 59171
Location: Seabreeze

Reviewed by:

Reviewed by:

CLIENT: Baseline Environmental
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Water

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	113919-010	01/10/94	01/10/94	ND	20	12274	EPA 7210	01/12/94
MW-SB1 (DUP)	113919-011	01/10/94	01/10/94	ND	20	12274	EPA 7210	01/12/94
MW-SB2	113919-012	01/10/94	01/10/94	20	20	12274	EPA 7210	01/12/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: [redacted]
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Water

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

Sample ID	Lab ID	Sample Date	Receive Date	Lead Result (ug/L)	Lead Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	113919-010	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94
MW-SB1 (DUP)	113919-011	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94
MW-SB2	113919-012	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113919

DATE REPORTED: 01/12/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	5	ug/L	12274	EPA 6010	01/11/94
Lead	ND	100	ug/L	12274	EPA 7420	01/12/94
Copper	1	1	mg/Kg	12275	EPA 7210	01/12/94
Lead	ND	5	mg/Kg	12275	EPA 7420	01/12/94

ND = Not detected at or above reporting limit

BASELINE
5900 Hollis Street, [redacted]D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Standard
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Angus

Project No.	Project Name and Location	Analysis
59171	Safeway 280 65th Ave Oakland, CA.	

Samplers: (Signature)

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E) EPA 8015/M	Oil & Grease	Motor Oil	PNAs	Title 22 Metals (CAM) Total Lead	Total Lead	EPA 7420	EPA 7210					Remarks/ Composite	Detection Limits
1 SB-12 L (0.5-1.0)	1/10/94	1325	S	0.5-1.0	1 liner						X									
2 SB-12 L (1.0-1.5)	"	1327	S	1.0-1.5	"						X									
3 SB-12 L (1.5-2.0)	"	1329	S	1.5-2.0	"						X									
4 SB-CC1 (0.5-1.0)	"	1337	S	0.5-1.0	"						X									
5 SB-CC1 (1.0-1.5)	"	1343	S	1.0-1.5	"		X	X			X	X							[HOLD]	
6 SB-CC2 (0.5-1.0)	"	1400	S	0.5-1.0	"		X	X			X	X							24 hr.	
7 SB-CC2 (1.0-1.5)	"	1407	S	1.0-1.5	"		X	X			X	X							[HOLD]	
8 SB-CC3 (0.5-1.0)	"	1418	S	0.5-1.0	"		X	X			X	X							24 hr.	
9 SB-CC3 (1.0-1.5)	"	1428	S	1.0-1.5	"		X	X			X	X							[HOLD]	
10 MW-SB1	"	1448	W	~10.0'	1 liter		X	X			X	X							24 hr.	
11 MW-SB1 (DUP)	"	1450	W	~10.0'	1 liter							X	X						[HOLD]	
12 MW-SB2	"	1455	W	~11.0'	1 liter							X	X							
												X	X							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
	1/10/94 1530			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: All Pb - 7420 All Cr - 7210
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	
		Kathy Ob	1/10/94 1530	

CSTRCDE.FM2

ADMIN(AD4)-5/27/92

JUN 09 '94 11:51 C&T P.13

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

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 27-JAN-94
Lab Job Number: 114118
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: Mary Plessas

Reviewed by:

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114118-1
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEA BREEZE
SAMPLE ID: MW-SB1

DATE SAMPLED: 01/26/94
DATE RECEIVED: 01/26/94
DATE ANALYZED: 01/27/94
DATE REPORTED: 01/27/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	60	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	104 %
Toluene-d8	104 %
Bromofluorobenzene	103 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114118-2
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEA BREEZE
SAMPLE ID: MW-SB1D

DATE SAMPLED: 01/26/94
DATE RECEIVED: 01/26/94
DATE ANALYZED: 01/26/94
DATE REPORTED: 01/27/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	105 %
Toluene-d8	106 %
Bromofluorobenzene	101 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114118-3
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEA BREEZE
SAMPLE ID: MW-SB2

DATE SAMPLED: 01/26/94
DATE RECEIVED: 01/26/94
DATE ANALYZED: 01/26/94
DATE REPORTED: 01/27/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	100	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	112 %
Toluene-d8	107 %
Bromofluorobenzene	110 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114118-METHOD BLANK
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEA BREEZE

DATE ANALYZED: 01/26/94
DATE REPORTED: 01/27/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	111 %
Toluene-d8	110 %
Bromofluorobenzene	100 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114118-METHOD BLANK
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEA BREEZE

DATE ANALYZED: 01/27/94
DATE REPORTED: 01/27/94

EPA METHOD 8240: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Reporting Limit (ug/L)
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Acetone	ND	20
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
trans-1,2-Dichloroethene	ND	5
cis-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	50
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

ND = Not detected at or above reporting limit

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	107 %
Toluene-d8	102 %
Bromofluorobenzene	103 %

Curtis & Tompkins, Ltd.

LCS SUMMARY SHEET FOR EPA 8240

Laboratory Number: 114118
Client: Baseline Environmental
Analysis date: 01/26/94 LCS file: baq04
Sample type: Water

LCS DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	39.31	79 %	OK	61 - 145
Trichloroethene	48.84	98 %	OK	71 - 120
Benzene	46.26	93 %	OK	76 - 127
Toluene	44.93	90 %	OK	76 - 125
Chlorobenzene	52.23	104 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	54.93	110 %	OK	76 - 114
Toluene-d8	53.62	107 %	OK	88 - 110
Bromofluorobenzene	47.5	95 %	OK	86 - 115

Curtis & Tompkins, Ltd.

QC SUMMARY SHEET FOR EPA 8240

Laboratory Number:	114118		
Client:	Baseline Environmental	Spike file:	baq14
Analysis date:	01/26/94	Spike dup file:	baq15
Sample type:	Water		
Sample spiked:	114092-001		

SPIKE DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	36.89	74 %	OK	61 - 145
Trichloroethene	44.24	88 %	OK	71 - 120
Benzene	44.14	88 %	OK	76 - 127
Toluene	42.09	84 %	OK	76 - 125
Chlorobenzene	48.13	96 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	57.21	114 %	OK	76 - 114
Toluene-d8	56.24	112 %	NOT OK	88 - 110
Bromofluorobenzene	48.58	97 %	OK	86 - 115

SPIKE DUP DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	33.80	68 %	OK	61 - 145
Trichloroethene	43.05	86 %	OK	71 - 120
Benzene	42.28	85 %	OK	76 - 127
Toluene	39.06	78 %	OK	76 - 125
Chlorobenzene	46.93	94 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	54.45	109 %	OK	76 - 114
Toluene-d8	51.83	104 %	OK	88 - 110
Bromofluorobenzene	50.03	100 %	OK	86 - 115

MATRIX RESULTS	
1,1-Dichloroethene	0
Trichloroethene	0
Benzene	0
Toluene	0
Chlorobenzene	0

RPD DATA

SPIKE COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	36.89	33.80	9 %	OK	< 14
Trichloroethene	44.24	43.05	3 %	OK	< 14
Benzene	44.14	42.28	4 %	OK	< 11
Toluene	42.09	39.06	7 %	OK	< 13
Chlorobenzene	48.13	46.93	3 %	OK	< 13

Curtis & Tompkins, Ltd.

QC SUMMARY SHEET FOR EPA 8240

Laboratory Number:	114118		
Client:	Baseline Environmental	Spike file:	bar16
Analysis date:	01/27/94	Spike dup file:	bar17
Sample type:	Water		
Sample spiked:	114117-007		

SPIKE DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	47.29	80 %	OK	61 - 145
Trichloroethene	47.80	93 %	OK	71 - 120
Benzene	47.67	95 %	OK	76 - 127
Toluene	43.87	88 %	OK	76 - 125
Chlorobenzene	50.90	102 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	48.55	97 %	OK	76 - 114
Toluene-d8	52.70	105 %	OK	88 - 110
Bromofluorobenzene	47.31	95 %	OK	86 - 115

SPIKE DUP DATA (spiked at 50 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	47.24	80 %	OK	61 - 145
Trichloroethene	51.59	100 %	OK	71 - 120
Benzene	50.84	102 %	OK	76 - 127
Toluene	46.43	93 %	OK	76 - 125
Chlorobenzene	54.73	109 %	OK	75 - 130
SURROGATES				
1,2-Dichloroethane-d4	45.85	92 %	OK	76 - 114
Toluene-d8	52.65	105 %	OK	88 - 110
Bromofluorobenzene	47.28	95 %	OK	86 - 115
MATRIX RESULTS				
1,1-Dichloroethene	7.21			
Trichloroethene	1.43			
Benzene	0			
Toluene	0			
Chlorobenzene	0			

RPD DATA

SPIKE COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	47.29	47.24	0 %	OK	< 14
Trichloroethene	47.80	51.59	8 %	OK	< 14
Benzene	47.67	50.84	6 %	OK	< 11
Toluene	43.87	46.43	6 %	OK	< 13
Chlorobenzene	50.90	54.73	7 %	OK	< 13

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Water

DATE REPORTED: 01/27/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	114118-001	01/26/94	01/26/94	37	5.0	12494	EPA 6010	01/27/94
MW-SB1D	114118-002	01/26/94	01/26/94	26	5.0	12494	EPA 6010	01/27/94
MW-SB2	114118-003	01/26/94	01/26/94	14	5.0	12494	EPA 6010	01/27/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Water

DATE REPORTED: 01/27/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	114118-001	01/26/94	01/26/94	12	3.0	12500	EPA 7421	01/27/94
MW-SB1D	114118-002	01/26/94	01/26/94	3.9	3.0	12500	EPA 7421	01/27/94
MW-SB2	114118-003	01/26/94	01/26/94	4.8	3.0	12500	EPA 7421	01/27/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 114118

Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Report Date: 27 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
114118-001	MW-SB1	Water	26-JAN-94	26-JAN-94	26-JUN-94	ND	mg/L	5	TR	12497
114118-002	MW-SB1D	Water	26-JAN-94	26-JAN-94	26-JUN-94	ND	mg/L	5	TR	12497
114118-003	MW-SB2	Water	26-JAN-94	26-JAN-94	26-JUN-94	ND	mg/L	5	TR	12497

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Baseline Environmental
Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Laboratory Login Number: 114118
Report Date: 27 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 12497**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	26-JUN-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:5520BF	26-JUN-94
BSD	83%	SMWW 17:5520BF	26-JUN-94

		Control Limits
Average Spike Recovery	84%	80% - 120%
Relative Percent Difference	1.7%	< 20%

L1 4118

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: 24 hrs
Lab: Curtis & Tompkins
BASELINE Contact Person: Bill Scott

Project No.	Project Name and Location
59171	Sea Breeze

Samplers: (Signature) Miller K Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E) 2040	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead Pb	Copper Cu	8240					Remarks/ Composite	Detection Limits
1	MW-SB1	1-26-94		water	15:00	5		X	X				X	X	X						0.02 Cu ppm
2	MW-SB1d	1-26-94		water	15:15	5		X	X				X	X	X						0.06 Pb ppm
3	MW-SB2	1-26-94		water	15:42	5		X	X				X	X	X						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature) Miller K Scott	Date / Time 1-26-94 15:53	Received by: (Signature) [illegible]	Date / Time 1/26/94 15:53 pm	

GROUNDWATER SAMPLING

Project no.	S9171	Well no.	MW-SB1	Date	1/10/94
Project name	Seabreeze	Depth of well from TOC (feet)	9.00		
Location	280 6th Avenue	Well diameter (inch)	2		
	Oakland, CA	Screened interval (feet)	2.8-9.0		
Recorded by	CS/WKS	TOC elevation (feet)	N/A		
Weather	Sunny, cool	Water level from TOC (feet)	5.00	Time	11:45
Precip in past		Product level from TOC (feet)	N/A	Time	--
5 days (inch)	0.1	Water level measurement	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(9.0 ft) - (5.00 ft)] × (0.083 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

0.6 gallons in one well volume
3.2 gallons in 5 well volumes
4.0 total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	12:00	21.0	7.00-10.01	10,000
Before Purging:	12:05	21.0	7.00-10.01	7,000
After Purging:	13:10	19.7	7.02-10.01	7,000

FIELD MEASUREMENTS

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
12:05	16.1	7.57	7,000	0.5	Clear w/ black particles, sulfur dioxide smell
12:10	15.5	7.59	6,000	1.0	Clear w/ black particles, sulfur dioxide smell
12:15	16.0	7.52	6,500	2.0	Clear w/ black particles, sulfur dioxide smell
12:20	16.0	7.45	7,000	3.0	Clear w/ black particles, sulfur dioxide smell
12:25	16.0	7.31	8,000	4.0	Clear w/ black particles, sulfur dioxide smell

Water level after purging prior to sampling (feet)	7.38			Time	14:46
Appearance of sample	Clear, light black			Time	14:48
Duplicate/blank number	MW-SB-1 (duplicate)/none			Time	14:50
Purge method	Double-diaphragm pump				
Sampling equipment	Disposable PVC bailer	VOC attachment	Yes		
Sample containers	2 liter plastic with NP				
Sample analyses	EPA 7420/7210	Laboratory	Curtis & Tompkins		
Decontamination method	TSP and water, DI water rinse	Rinsate disposal	Purge water drum MW-SB1&2		

S9171-gw.xlw-6/8/94

GROUNDWATER SAMPLING

Project no.	S9171	Well no.	MW-SB2	Date	1/10/94
Project name	Seabreeze	Depth of well from TOC (feet)	10.00		
Location	280 6th Avenue	Well diameter (inch)	2		
	Oakland, CA	Screened interval (feet)	2.0-10.0		
Recorded by	CS/WKS	TOC elevation (feet)	N/A		
Weather	Sunny, cool	Water level from TOC (feet)	3.08	Time	12:31
Precip in past		Product level from TOC (feet)	N/A	Time	12:31
5 days (inch)	0.1	Water level measurement	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(10.0 ft) - (3.08 ft)] × (0.083 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

1.1 gallons in one well volume
5.6 gallons in 5 well volumes
5.0 total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	12:00	21.0	7.00-10.01	10,000
Before Purging:	12:05	21.0	7.00-10.01	7,000
After Purging:	13:10	19.7	7.02-10.01	7,000

FIELD MEASUREMENTS

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
12:40	16.0	6.64	9,000	1.0	Clear, sulfur dioxide smell
12:46	14.1	6.87	6,000	2.0	Clear, sulfur dioxide smell
12:53	14.8	6.85	7,000	3.0	Clear, sulfur dioxide smell
13:00	14.9	6.82	9,000	4.0	Clear, sulfur dioxide smell, slightly turbid
13:08	15.9	6.81	11,000	5.0	Clear, sulfur dioxide smell, slightly turbid

Water level after purging prior to sampling (feet)	8.75			Time	14:52
Appearance of sample	Clear, light black			Time	14:55
Duplicate/blank number	None			Time	--
Purge method	Double-diaphragm pump				
Sampling equipment	Disposable PVC bailer	VOC attachment	Yes		
Sample containers	1 liter plastic with NP				
Sample analyses	EPA 7420/7210	Laboratory	Curtis & Tompkins		
Decontamination method	TSP and water, DI water rinse	Rinsate disposal	Purge water drum MW-SB1&2		

S9171-gw.xlw-6/8/94

GROUNDWATER SAMPLING

Project no.: S9171-00.02
Project name: Seabreeze Yacht Center
Location: 280 6th Avenue, Oakland, CA
Recorded by: WKS
Weather: Partly cloudy, showers
Precip in past 5 days (inch): 1.25

Well no.: MW-SB1 Date: 1/26/94
Depth of well from TOC (feet): 9.0
Well diameter (inch): 2
Screened interval (feet): 2.8-9.0
TOC elevation (feet): NA
Water level from TOC (feet): 5.03 Time: 13:10
Product level from TOC (feet): NA Time: --
Water level measurement: Dual interface probe

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(9.0 ft) - (5.03 ft)] × (0.083 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

0.6 gallons in one well volume
3.2 gallons in 5 well volumes
3.5 total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	13:10	24.5	7.00-10.01	10,000
Before Purging:	13:11	24.5	7.00-10.01	9,000
After Purging:	14:20	24.5	7.06-9.95	9,000

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
13:20	14.0	7.37	4,800	1	Clear with black particles, HS2 smell
13:24	13.8	7.27	5,900	2	Clear with black particles, HS2 smell
13:30	13.9	7.31	6,000	2.5	Clear with black particles, HS2 smell
13:35	13.9	7.37	6,000	3.5	

Water level after purging prior to sampling (feet): 7.62 Time: 15:00
Appearance of sample: Clear with black particles Time: 15:00
Duplicate/blank number: MW-SB1d Time: 15:15
Purge method: Disposable PVC bailer
Sampling equipment: Disposable PVC bailer VOC attachment: Used for VOA
Sample containers: 1 1-liter amber glass, 2 40-ml VOAs, 2 500-ml plastic
Sample analyses: BTXE, Oil & Grease, Copper, Lead Laboratory: Curtis & Tompkins
Decontamination method: TSP and water, DI water rinse Rinsate disposal: MW-SBW1

S9171-gw.xlw-6/8/94

GROUNDWATER SAMPLING

Project no.:	S9171-00.02	Well no.:	MW-SB2	Date:	1/26/94
Project name	Seabreeze Yacht Center	Depth of well from TOC (feet):	10.0		
Location:	280 6th Avenue	Well diameter (inch):	2		
	Oakland, CA	Screened interval (feet):	2.0-10.0		
Recorded by:	WKS	TOC elevation (feet):			
Weather:	Partly cloudy, showers	Water level from TOC (feet):	1.63	Time	13:40
Precip in past		Product level from TOC (feet):	none	Time	13:40
5 days (inch)	1.25	Water level measurement:	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(10.0 ft) - (1.63 ft)] × (0.083 ft)² × 3.14 × 7.48 =

Well depth Water level Well radius

1.4 gallons in one well volume
6.8 gallons in 5 well volumes
5.5 total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	13:10	24.5	7.00-10.01	10,000
Before Purging:	13:11	24.5	7.00-10.01	9,000
After Purging:	14:20	24.5	7.06-9.95	9,000

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
13:45	12.9	6.86	6,000	1	Clear
13:55	13.8	6.82	7,000	2	Clear
14:00	13.9	6.81	8,500	3	Clear
14:05	13.8	6.83	10,000	3.5	Clear
14:10	13.8	6.83	11,000	4.5	Clear
14:15	14.1	6.81	11,000	5.5	Clear

Water level after purging prior to sampling (feet):	8.79	Time	15:40
Appearance of sample:	Clear	Time	15:42
Duplicate/blank number:	None	Time	--
Purge method:	Disposable PVC bailer		
Sampling equipment:	Disposable PVC bailer	VOC attachment:	Used for VOA
Sample containers:	1 1-liter amber glass, 2 40-ml VOAs, 2 500-ml plastic		
Sample analyses:	BTXE, Oil & Grease, Copper, Lead	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	MW-SBW1

BASELINE · 5900 Hollis Street, Suite D · Emeryville, CA 94608 · (510) 420-8686 · Fax (510) 420-1707

APPENDIX G

CONCRETE CONTAINMENT PERIMETER LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 17-JAN-94
Lab Job Number: 113919
Project ID: 59171
Location: Seabreeze

Reviewed by: Mary Pleasant

Reviewed by:

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 113919

Project Name: Seabreeze
Project Number: 59171

Report Date: 12 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520EF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
113919-004	SB-CC1 (0.5-1.0)	Soil	10-JAN-94	10-JAN-94	12-JAN-94	2100	mg/Kg	50	TR	12294
113919-006	SB-CC2 (0.5-1.0)	Soil	10-JAN-94	10-JAN-94	12-JAN-94	41000	mg/Kg	500	TR	12294
113919-008	SB-CC3 (0.5-1.0)	Soil	10-JAN-94	10-JAN-94	12-JAN-94	3300	mg/Kg	50	TR	12294

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Baseline Environmental
Project Name: Seabreeze
Project Number: 59171

Laboratory Login Number: 113919
Report Date: 12 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 12294**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	12-JAN-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:5520EF	12-JAN-94
BSD	88%	SMWW 17:5520EF	12-JAN-94

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	3.1%	< 20%

CLIENT: Baseline Environmental
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Soil

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-CC1 (0.5-1.0)	113919-004	01/10/94	01/10/94	170	1.0	12275	EPA 7210	01/12/94
SB-CC2 (0.5-1.0)	113919-006	01/10/94	01/10/94	28	0.97	12275	EPA 7210	01/12/94
SB-CC3 (0.5-1.0)	113919-008	01/10/94	01/10/94	82	0.98	12275	EPA 7210	01/12/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Soil

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-12 L(0.5-1.0)	113919-001	01/10/94	01/10/94	220	4.8	12275	EPA 7420	01/12/94
SB-12L (1.0-1.5)	113919-002	01/10/94	01/10/94	75	4.9	12275	EPA 7420	01/12/94
SB-CC1 (0.5-1.0)	113919-004	01/10/94	01/10/94	68	5.0	12275	EPA 7420	01/12/94
SB-CC2 (0.5-1.0)	113919-006	01/10/94	01/10/94	1000	24	12275	EPA 7420	01/12/94
SB-CC3 (0.5-1.0)	113919-008	01/10/94	01/10/94	120	4.9	12275	EPA 7420	01/12/94

CLIENT: Baseline Environmental
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Water

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

Copper								
Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	113919-010	01/10/94	01/10/94	ND	20	12274	EPA 7210	01/12/94
MW-SB1 (DUP)	113919-011	01/10/94	01/10/94	ND	20	12274	EPA 7210	01/12/94
MW-SB2	113919-012	01/10/94	01/10/94	20	20	12274	EPA 7210	01/12/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: 59171
LOCATION: Seabreeze
MATRIX: Water

DATE REPORTED: 01/12/94

METALS ANALYTICAL REPORT

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
MW-SB1	113919-010	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94
MW-SB1 (DUP)	113919-011	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94
MW-SB2	113919-012	01/10/94	01/10/94	ND	100	12274	EPA 7420	01/12/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113919

DATE REPORTED: 01/12/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	5	ug/L	12274	EPA 6010	01/11/94
Lead	ND	100	ug/L	12274	EPA 7420	01/12/94
Copper	1	1	mg/Kg	12275	EPA 7210	01/12/94
Lead	ND	5	mg/Kg	12275	EPA 7420	01/12/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113919

DATE REPORTED: 01/12/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	270.9	244.4	ug/L	108	98	103	10	12274	EPA 6010	01/11/94
Lead	500	430	440	ug/L	86	88	87	2	12274	EPA 7420	01/12/94
Copper	0.25	0.26	0.26	mg/Kg	104	104	104	0	12275	EPA 7210	01/12/94
Lead	0.5	0.47	0.48	mg/Kg	94	96	95	2	12275	EPA 7420	01/12/94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113919
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 59171
LOCATION: SEABREEZE

DATE SAMPLED: 01/10/94
DATE RECEIVED: 01/10/94
DATE ANALYZED: 01/11/94
DATE REPORTED: 01/12/94

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
113919-004	SB-CC1 (0.5-1.0)	ND(1)	ND(5)	ND(5)	ND(5)	ND(5)
113919-008	SB-CC3 (0.5-1.0)	ND(1)	ND(5)	ND(5)	ND(5)	ND(5)
METHOD BLANK		ND(1)	ND(5)	ND(5)	ND(5)	ND(5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	6
RECOVERY, %	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113919
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 59171
LOCATION: SEABREEZE

DATE SAMPLED: 01/10/94
DATE RECEIVED: 01/10/94
DATE ANALYZED: 01/12/94
DATE REPORTED: 01/12/94

Total Volatile Hydrocarbons with BTXE in Soils & Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
113919-006	SB-CC2 (0.5-1.0)	ND(1)	ND(5)	ND(5)	ND(5)	ND(5)
METHOD BLANK		ND(1)	ND(5)	ND(5)	ND(5)	ND(5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	91

11 5 14

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Standard
Lab: Curtis & Tompkins
BASELINE Contact Person: Teresa Angus

Project No.	Project Name and Location
59171	Seabreeze 280 65th Ave. Oakland, CA.

Samplers: (Signature)

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E) EPA 8015M	Oil & Grease	Motor Oil	PNAs	Title 22 Metals Copper Total/Soluble	Total Lead	EPA 7420	EPA 7210					Remarks/ Composite	Detection Limits
SB-12 L (0.5-1.0)	1/10/94	1325	S	0.5-1.0	1 liner							X								
SB-12 L (1.0-1.5)	"	1327	S	1.0-1.5	"							X								
SB-12 L (1.5-2.0)	"	1329	S	1.5-2.0	"							X								
SB-CC1 (0.5-1.0)	"	1337	S	0.5-1.0	"		X	X			X	X							[HOLD] 24 hr.	
SB-CC1 (1.0-1.5)	"	1343	S	1.0-1.5	"		X	X			X	X							[HOLD] 24 hr.	
SB-CC2 (0.5-1.0)	"	1400	S	0.5-1.0	"		X	X			X	X							[HOLD] 24 hr.	
SB-CC2 (1.0-1.5)	"	1407	S	1.0-1.5	"		X	X			X	X							[HOLD]	
SB-CC3 (0.5-1.0)	"	1418	S	0.5-1.0	"		X	X			X	X							[HOLD]	
SB-CC3 (1.0-1.5)	"	1428	S	1.0-1.5	"		X	X			X	X								
MW-SB1	"	1448	W	-10.0'	1 liter								X	X						
MW-SB1 (DUP)	"	1450	W	-10.0'	1 liter								X	X						
MW-SB2	"	1455	W	-11.0'	1 liter								X	X						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
	1/10/94 1530			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: All Pb - 7420 All Cu - 7210
Relinquished by: (Signature)	Date / Time	Received by: (Signature) Kathy OR	Date / Time 1/10/94 1530	

CCSTRCDE.FM2

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 21-JAN-94
Lab Job Number: 113962
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113962
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEABREEZE

DATE SAMPLED: 01/10/94
DATE RECEIVED: 01/10/94
DATE REQUESTED: 01/12/94
DATE EXTRACTED: 01/13/94
DATE ANALYZED: 01/16/94
DATE REPORTED: 01/21/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	MOTOR OIL RANGE (mg/Kg)
113962-3	SB-CC1 (0.5-1.0)	ND(50)	ND(50)	3,600
113962-4	SB-CC2 (0.5-1.0)	**	24,000	100,000
113962-5	SB-CC3 (0.5-1.0)	**	2,200	12,000
113962-7	SB-CC1 (1.0-1.5)	**	9,400	45,000
113962-8	SB-CC2 (1.0-1.5)	**	86	220
113962-9	SB-CC3 (1.0-1.5)	**	1,100	3,500

ND = Not detected at or above reporting limit. Reporting limit indicated in parentheses.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY

LCS RECOVERY, %	94

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 113962

Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Report Date: 21 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520EF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
113962-007	SB-CC1 (1.0-1.5)	Soil	10-JAN-94	10-JAN-94	19-JAN-94	3700	mg/Kg	50	TR	12402
113962-008	SB-CC2 (1.0-1.5)	Soil	10-JAN-94	10-JAN-94	19-JAN-94	150	mg/Kg	50	TR	12402
113962-009	SB-CC3 (1.0-1.5)	Soil	10-JAN-94	10-JAN-94	19-JAN-94	680	mg/Kg	50	TR	12402

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Baseline Environmental
Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Laboratory Login Number: 113962
Report Date: 21 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 12402**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	19-JAN-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:5520EF	19-JAN-94
BSD	90%	SMWW 17:5520EF	19-JAN-94

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	8.5%	< 20%

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/21/94

METALS ANALYTICAL REPORT

				Lead				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-12L (1.5-2.0)	113962-006	01/10/94	01/10/94	140	5.0	12322	EPA 7420	01/17/94
SB-CC1 (1.0-1.5)	113962-007	01/10/94	01/10/94	21	4.9	12321	EPA 7420	01/14/94
SB-CC2 (1.0-1.5)	113962-008	01/10/94	01/10/94	1800	24	12321	EPA 7420	01/14/94
SB-CC3 (1.0-1.5)	113962-009	01/10/94	01/10/94	1300	25	12321	EPA 7420	01/14/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: WET Leachate

DATE REPORTED: 01/21/94

METALS ANALYTICAL REPORT

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (ug/L)	Reporting Limit (ug/L)	QC Batch	Method	Analysis Date
SB-12 L(0.5-1.0)	113962-001	01/10/94	01/10/94	8600	500	12431	EPA 7420	01/21/94
SB-12L (1.0-1.5)	113962-002	01/10/94	01/10/94	7400	500	12431	EPA 7420	01/21/94
SB-CC1 (0.5-1.0)	113962-003	01/10/94	01/10/94	5600	500	12431	EPA 7420	01/21/94
SB-CC2 (0.5-1.0)	113962-004	01/10/94	01/10/94	3500	500	12431	EPA 7420	01/21/94
SB-CC3 (0.5-1.0)	113962-005	01/10/94	01/10/94	ND	500	12431	EPA 7420	01/21/94
SB-12L (1.5-2.0)	113962-006	01/10/94	01/10/94	1200	500	12431	EPA 7420	01/21/94
SB-CC1 (1.0-1.5)	113962-007	01/10/94	01/10/94	2600	500	12431	EPA 7420	01/21/94
SB-CC2 (1.0-1.5)	113962-008	01/10/94	01/10/94	ND	500	12431	EPA 7420	01/21/94
SB-CC3 (1.0-1.5)	113962-009	01/10/94	01/10/94	ND	500	12431	EPA 7420	01/21/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE REPORTED: 01/21/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-12 L(0.5-1.0)	113962-001	01/10/94	01/10/94	240	0.97	12322	EPA 7210	01/17/94
SB-12L (1.0-1.5)	113962-002	01/10/94	01/10/94	120	0.98	12322	EPA 7210	01/17/94
SB-12L (1.5-2.0)	113962-006	01/10/94	01/10/94	39	1.0	12322	EPA 7210	01/17/94

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113962

DATE REPORTED: 01/21/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	241	242.5	ug/L	96	97	97	1	12322	EPA 6010	01/14/94
Lead	2000	1840	1890	ug/L	92	95	94	3	12431	EPA 7420	01/21/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113962

DATE REPORTED: 01/21/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	0.25	mg/Kg	12322	EPA 6010	01/14/94
Lead	ND	500	ug/L	12431	EPA 7420	01/21/94

ND = Not detected at or above reporting limit

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

ANALYTICAL REPORT

RECEIVED
FEB 16 1993
BASELINE

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 14-FEB-94
Lab Job Number: 114251
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114251
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEABREEZE YACHT OAKLAND

DATE SAMPLED: 01/10/94
DATE RECEIVED: 01/10/94
DATE REQUESTED: 02/07/94
DATE ANALYZED: 02/10/94
DATE REPORTED: 02/11/94

ANALYSIS: LEAD
ANALYSIS METHOD: EPA 7420

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
114251-2	SB-CC2 (1.0-1.5)	44	mg/Kg	9.5
114251-3	SB-CC3 (1.0-1.5)	9100	mg/Kg	100

QA/QC SUMMARY:

RPD, %	3
RECOVERY, %	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114251
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171
LOCATION: SEABREEZE YACHT OAKLAND

DATE SAMPLED: 01/10/94
DATE RECEIVED: 01/10/94
DATE REQUESTED: 02/07/94
DATE ANALYZED: 02/10/94
DATE REPORTED: 02/11/94

ANALYSIS: STLC LEAD
EXTRACTION METHOD: WASTE EXTRACTION TEST
ANALYSIS METHOD: EPA 7420

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
114251-1	SB-CC1 (1.0-1.5)	9,500	ug/L	500
114251-2	SB-CC2 (1.0-1.5)	1,200	ug/L	500
114251-3	SB-CC3 (1.0-1.5)	15,000	ug/L	500

QA/QC SUMMARY:

RPD, %	3
RECOVERY, %	101

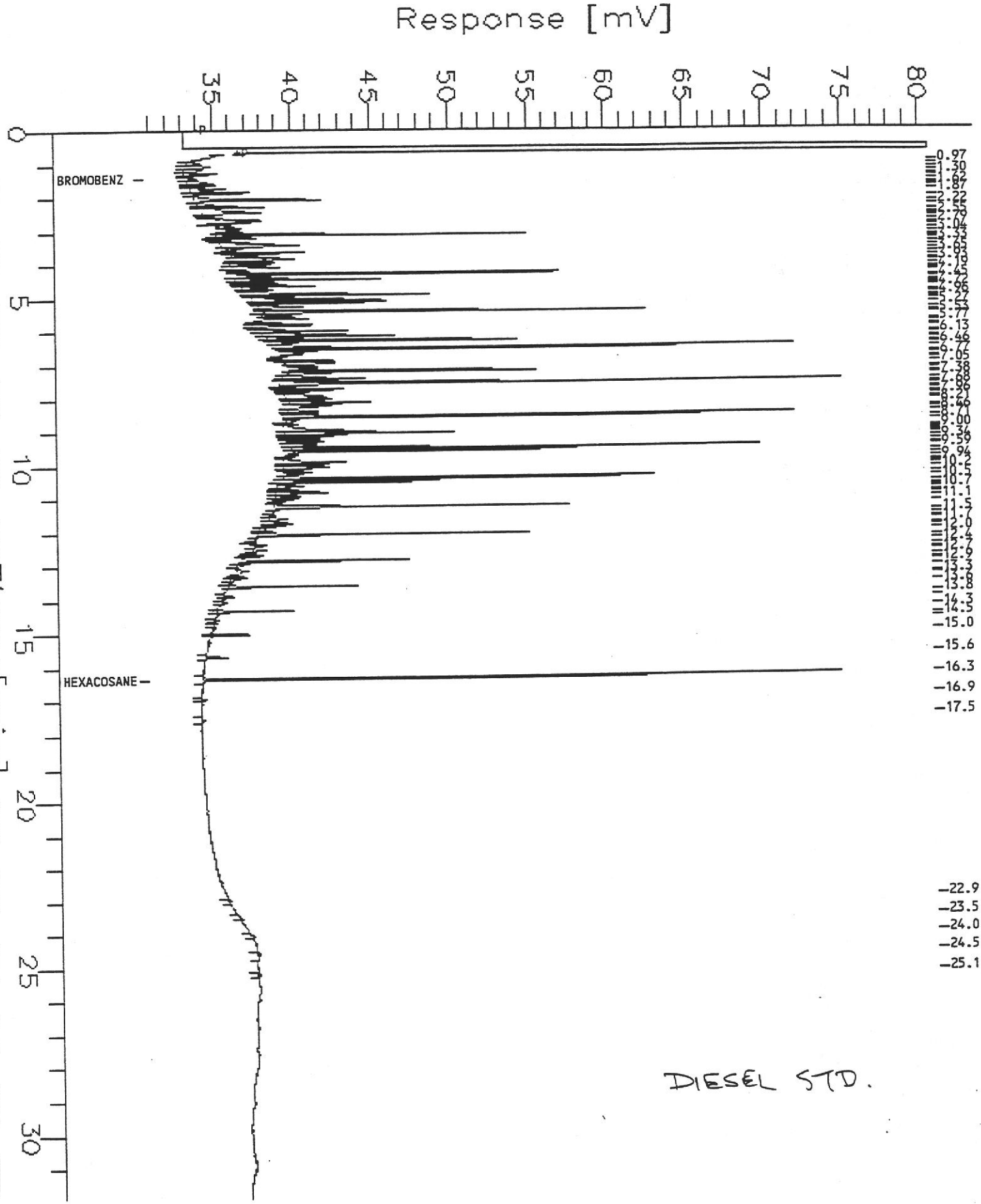
TEH Chromatogram GC11 CH A

Sample Name : Diesel 513mg/l
FileName : g:\gc11\cha\015a003.raw
Method : GC11DUAL.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 31 mV

Sample #: 93ws6487
Date : 1/15/94 05:05 PM
Time of Injection: 1/15/94 04:31 PM
Low Point : 30.67 mV
Plot Scale: 50 mV

High Point : 80.67 mV

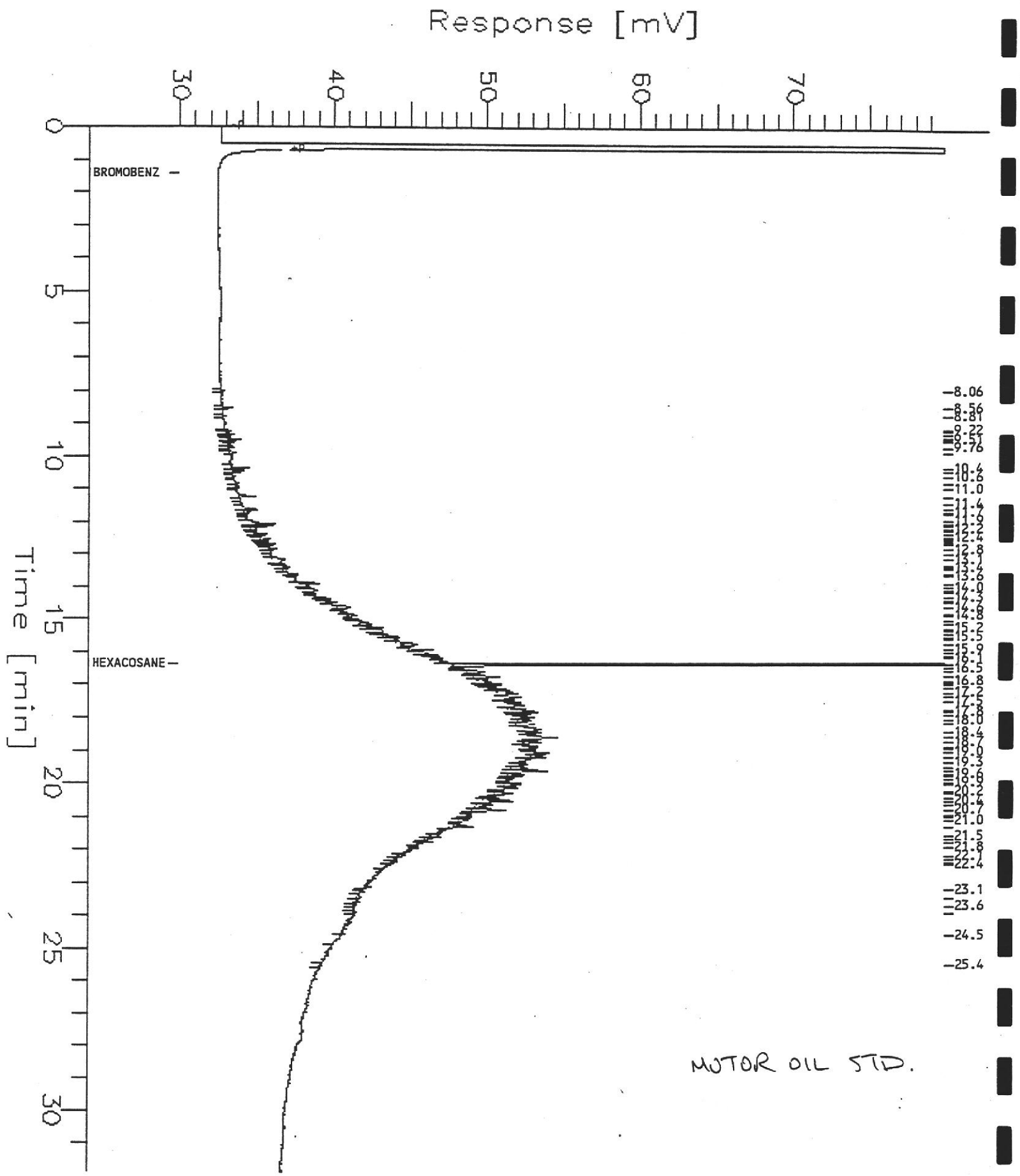


DIESEL STD.

TEH Chromatogram GC11 CH A

Sample Name : Motor oil 1140 mg/L
FileName : g:\gc11\cha\015a004.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 30 mV

Sample #: 94ws6545 Page 1 of 1
Date : 1/15/94 05:49 PM
Time of Injection: 1/15/94 05:16 PM
Low Point : 29.90 mV High Point : 79.90 mV
Plot Scale: 50 mV

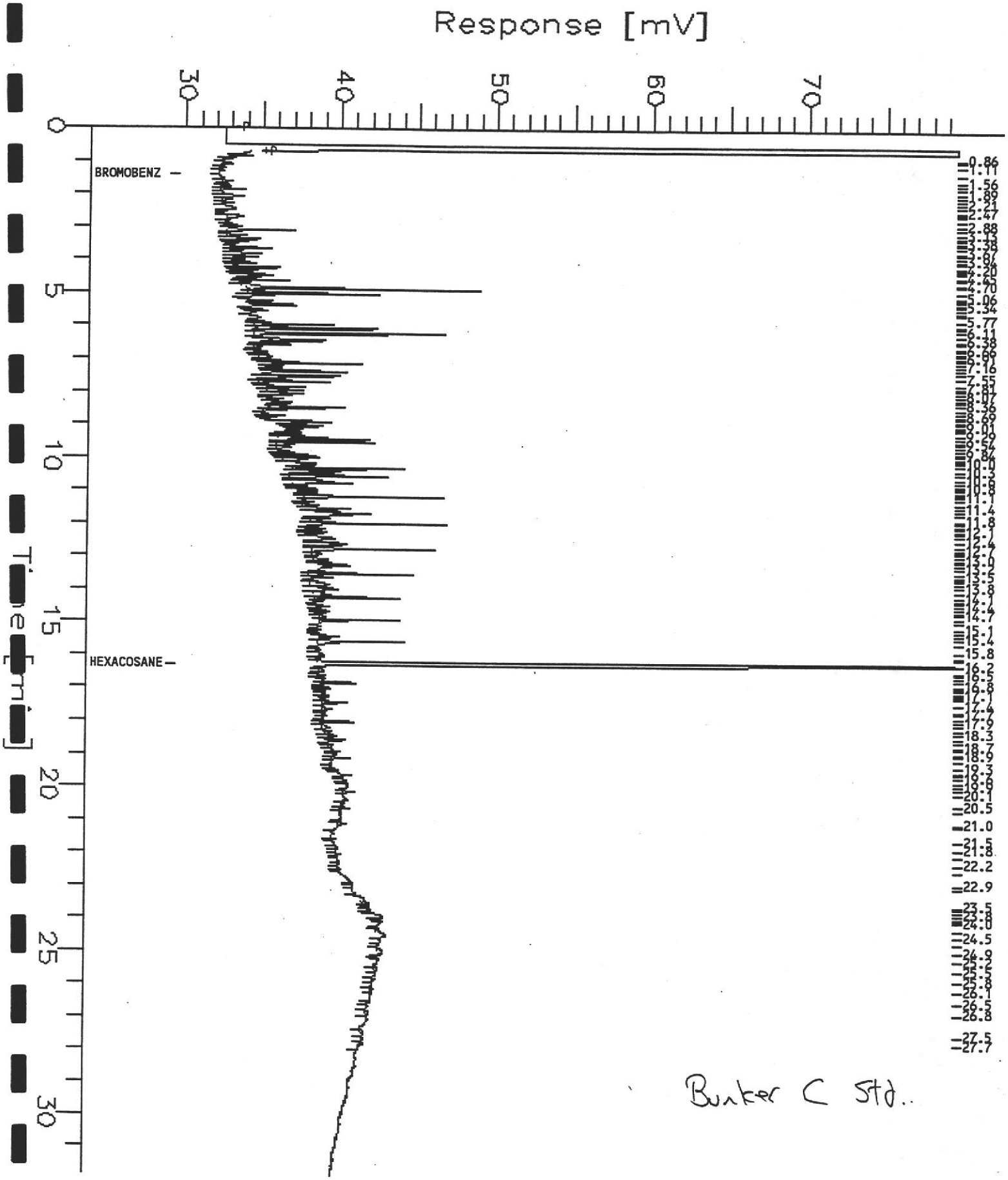


MOTOR OIL STD.

TEH Chromatogram GC11 CH B

Sample Name : Bunker C 1080mg/L
FileName : g:\gc11\chb\038b017.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 30 mV

Sample #: 94ws6744 Page 1 of 1
Date : 2/8/94 05:51 PM
Time of Injection: 2/8/94 05:16 PM
Low Point : 29.56 mV High Point : 79.56 mV
Plot Scale: 50 mV

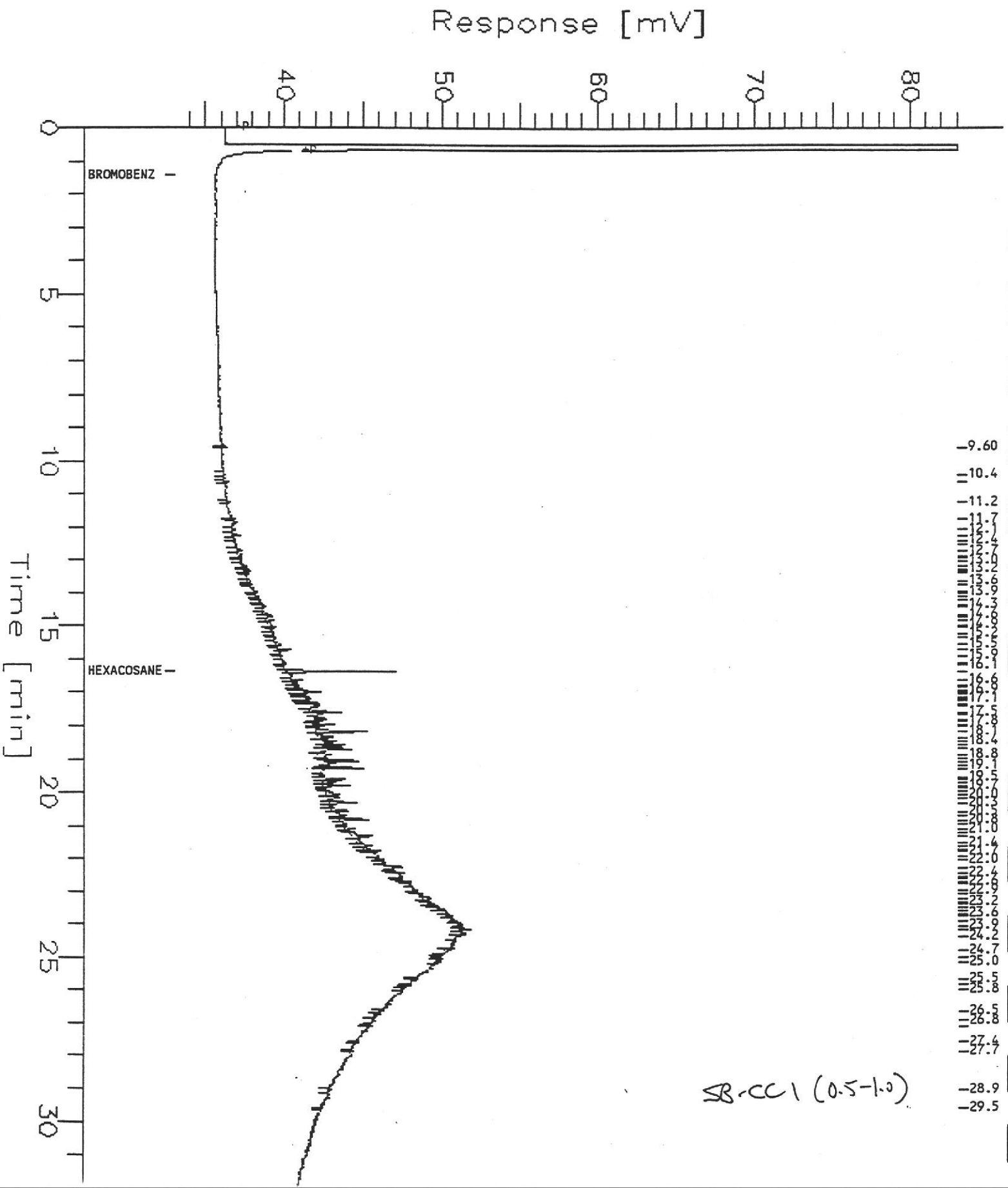


Bunker C Std..

TEH Chromatogram GC11 CH A

Name : 113962-003 50:250
FileName : g:\gc11\cha\015a031.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 33 mV

Sample #: 113962-4? Page 1 of 1
Date : 1/16/94 01:48 PM
Time of Injection: 1/16/94 01:14 PM
Low Point : 33.07 mV High Point : 83.07 mV
Plot Scale: 50 mV

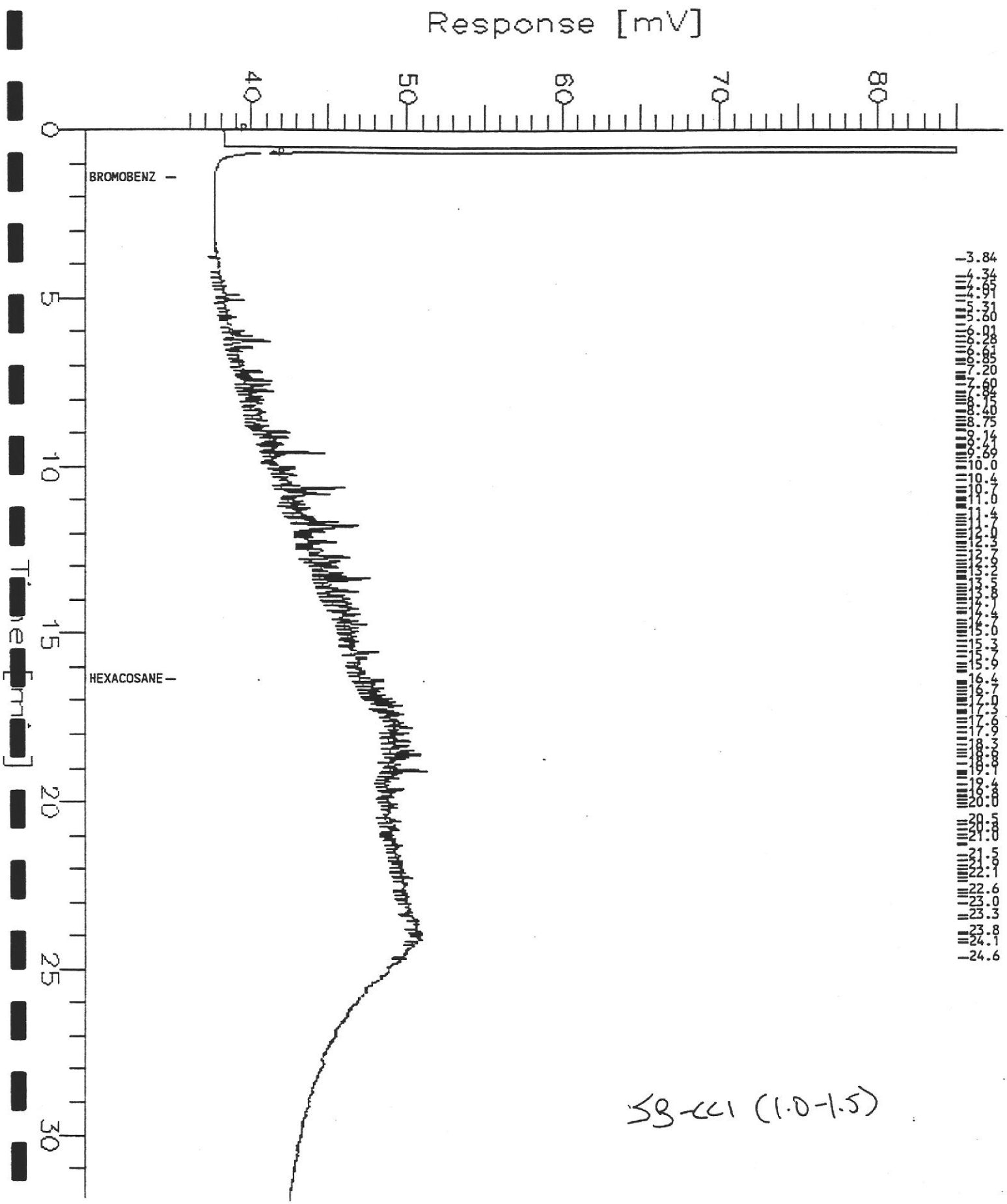


SB-CC1 (0.5-1.0)

TEH Chromatogram GC11 CH A

Sample Name : 113962-007 50:2500
FileName : g:\gc11\cha\015a030.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 35 mV

Sample #: 12315 Page 1 of 1
Date : 1/16/94 01:04 PM
Time of Injection: 1/16/94 12:30 PM
Low Point : 35.08 mV High Point : 85.08 mV
Plot Scale: 50 mV

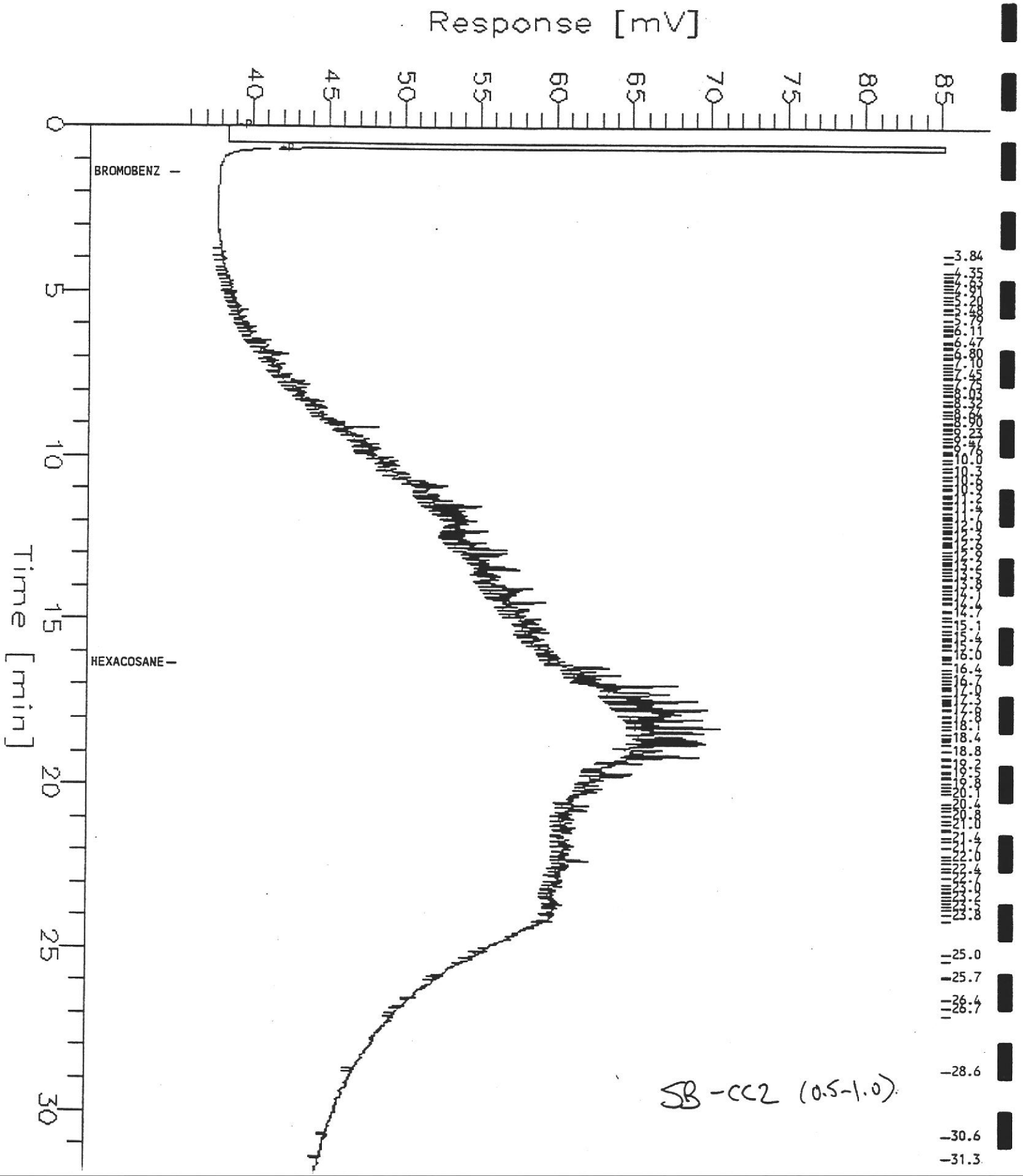


SB-CC1 (1.0-1.5)

TEH Chromatogram GC11 CH A

Sample Name : 113962-004 50:2500
FileName : g:\gc11\cha\015a029.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 35 mV

Sample #: 12315 Page 1 of 1
Date : 1/16/94 12:20 PM
Time of Injection: 1/16/94 11:45 AM
Low Point : 35.24 mV High Point : 85.24 mV
Plot Scale: 50 mV

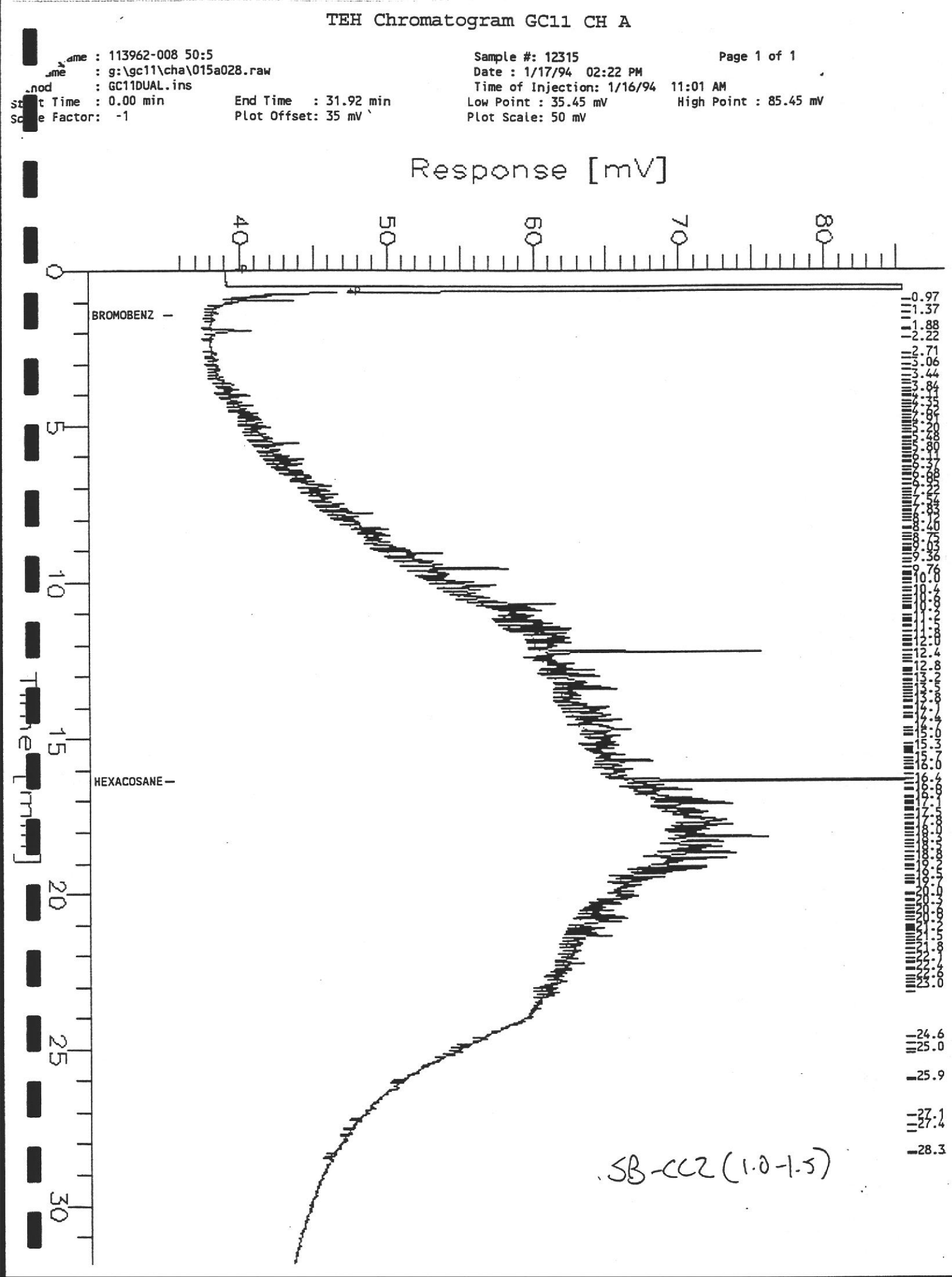


SB-CC2 (0.5-1.0)

TEH Chromatogram GC11 CH A

ame : 113962-008 50:5
me : g:\gc11\cha\015a028.raw
nod : GC11DUAL.ins
t Time : 0.00 min End Time : 31.92 min
e Factor: -1 Plot Offset: 35 mV

Sample #: 12315 Page 1 of 1
Date : 1/17/94 02:22 PM
Time of Injection: 1/16/94 11:01 AM
Low Point : 35.45 mV High Point : 85.45 mV
Plot Scale: 50 mV

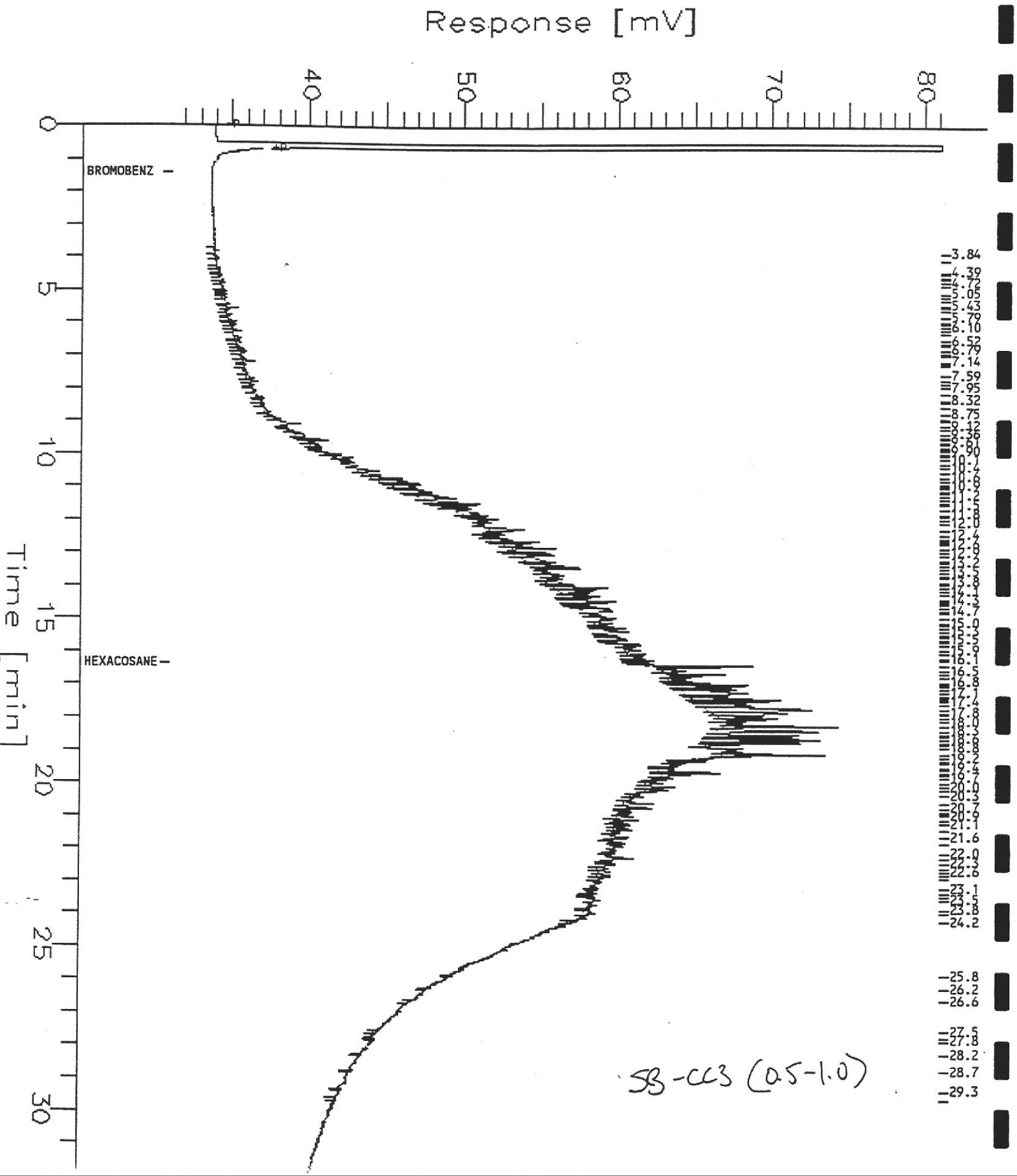


SB-CC2 (1.0-1.5)

TEH Chromatogram GC11 CH A

Name : 113962-005 50:250
FileName : g:\gc11\cha\015a032.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 31 mV

Sample #: 12315 Page 1 of 1
Date : 1/16/94 02:33 PM
Time of Injection: 1/16/94 01:58 PM
Low Point : 31.14 mV High Point : 81.14 mV
Plot Scale: 50 mV



SB-CC3 (0.5-1.0)

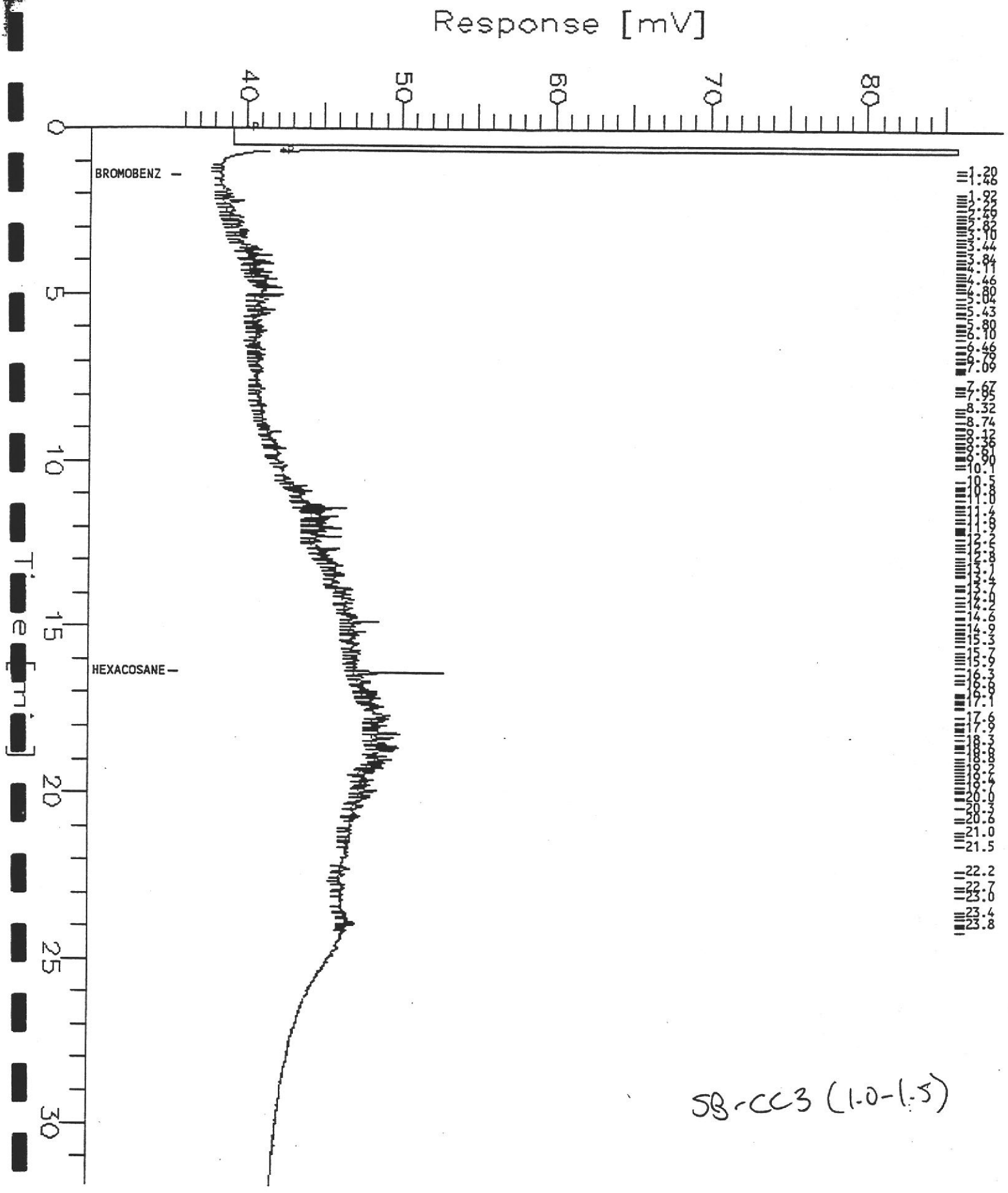
TEH Chromatogram GC11 CH A

113962-009 50:250
g:\gc11\cha\015a027.raw
GC11DUAL.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 36 mV

Sample #: 12315
Date : 1/16/94 10:51 AM
Time of Injection: 1/16/94 10:17 AM
Low Point : 35.74 mV
Plot Scale: 50 mV

High Point : 85.74 mV



SB-CC3 (1.0-1.5)

APPENDIX H

LETTERS FROM FRIEDMAN AND BRUYA, 18 MAY AND 31 AUGUST 1994

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3012 16th Avenue West
Seattle, WA 98119-2029
FAX: (206) 283-5044

May 18, 1994

Lydia Huang, Project Manager
Baseline Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608

Dear Ms. Huang:

RE: S9171

I received a series of chromatograms from your Seabreeze Yacht Center project. The chromatograms were identified as Bunker C Std., Motor Oil Std., CC-Product, SB-CC1 (0.5 - 1), SB-CC-1 (1 - 1.5), SB-CC1 (2 - 2.5'), SB-CC2 (0.5 - 1), SB-CC2 (1-1.5), SB-CC2 (2 - 2.5), SB-CC3 (0.5 - 1), SB-CC3 (1 - 1.5), SB-CC-3 (3 - 3.5'), SB-CC4 (2.5 - 3.0'), SB-CC5 (2.5 - 3'), SB-CC6 (2.5 - 3), SB-CC7 (2.5 - 3') and Black Oily Sludge. These chromatograms appear to have been generated using a flame ionization detector.

Review of the Bunker C standard shows is to be typical of material that can be sold as a Bunker C. One can see what appears to be tall *n*-alkane peaks on top of a broad hump or unresolved mass of material. At the front of the chromatogram around the 5 minute mark, one sees peaks that do not appear to be *n*-alkanes. These may be aromatic compounds that are often a characteristic of refinery intermediates that can be blended into petroleum residuum to eventually become Bunker C. There are also some low boiling compounds present at low levels. The presence of these compounds is due to the nature of the refining process which does not generally remove all of the low boiling compounds from products used as fuels.

It should be noted that a petroleum residuum also contains material that will not be detected using a gas chromatograph due to the very high boiling points or low vapor pressures that are associated with these compounds. Also, because these are petroleum residuums, they are like leftovers from a refinery. It is not necessary that all Bunker C products match the standard used by the analytical laboratory.

The GC trace of the motor oil standard is as one would expect. The GC trace appears as a large hump of unresolved material. Unlike the fuel, Bunker C, there is an absence of the low boiling compounds in motor oil.

The GC trace identified as Black Oily Sludge shows the presence of a large unresolved mass of material present from the range of low boiling material commonly associated with gasoline to material that boils beyond the range commonly associated with motor oil. The pattern displayed is common to what one sees for a highly degraded crude oil. Since crude oil has been sold as Bunker C, the trace seen is also be representative of Bunker C. The absence of prominent *n*-alkane peaks could indicate this material has degraded to an extent that these compounds are no longer present in this product. Their absence could also mean that prominent *n*-alkane peaks were absent from the crude oil or from the refinery intermediates used to make this product.

All of the GC traces with the SB designation except those identified as SB-CC-3 (3 - 3.5'), SB-CC4 (2.5 - 3.0'), SB-CC5 (2.5 - 3') and SB -CC6 (2.5 - 3) showed the presence of an unresolved mass of material characteristic of a Bunker C or degraded Bunker C. There may be some motor oil or other product also present in these samples, however it is impossible to determine the contribution by these other sources using the information provided.

Of the remaining samples, SB-CC-3 (3 - 3.5'), SB-CC4 (2.5 - 3.0') and SB-CC5 (2.5 - 3') showed a GC trace that is not indicative of Bunker C. The pattern seen could be due to biogenic compounds or to pyrogenic compounds such as found in the residue from a combustion process. We are unable to determine the source of the material seen in these three samples from the data provided.

The final sample, SB-CC6 (2.5 - 3) appeared to be relatively free of contamination as seen using the GC trace. The short broad peaks could be indicative of contamination, however I am unable to determine if their presence is of any significance.

If you should have any questions regarding this evaluation, please feel free to call.

Sincerely,

James E. Bruya, Ph.D.

JEB/dp

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3012 16th Avenue West
Seattle, WA 98119-2029
FAX: (206) 283-5044

August 31, 1994

Yane Nordhav
Baseline Environmental
5900 Hollis Street, Suite D
Emeryville, CA 94608

Dear Ms. Nordhav:

I have received a table summarizing the analytical results from the concrete containment perimeter soils from the Seabreeze Yacht Center. Analysis of this data shows that soils impacted with Bunker C are, in some cases, also impacted with high levels of lead. The source of this lead could be tank bottoms, as well as paint chips or sand blast material from the outside of the tank.

If you should have any questions, please feel free to call.

Sincerely,

James E. Bruya, Ph.D.

JEB/dp

FAX: (510) 420-1707

APPENDIX I

CONCRETE CONTAINMENT CONCRETE/SOIL LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 25-JAN-94
Lab Job Number: 114061
Project ID: S9171
Location: Seabreeze Yacht Oakland

Reviewed by: Teresa K Morris

Reviewed by: Kathy O'B

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 114061

Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Report Date: 25 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520EF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
114061-001	SB-CC4C	Miscell.	21-JAN-94	21-JAN-94	25-JAN-94	50.	mg/Kg	50	TR	12475
114061-002	SB-CC4S	Soil	21-JAN-94	21-JAN-94	25-JAN-94	ND	mg/Kg	50	TR	12475
114061-003	SB-CC5C	Miscell.	21-JAN-94	21-JAN-94	25-JAN-94	120	mg/Kg	50	TR	12475
114061-004	SB-CC5S	Soil	21-JAN-94	21-JAN-94	25-JAN-94	ND	mg/Kg	50	TR	12475

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Baseline Environmental
Project Name: Seabreeze Yacht Oakland
Project Number: S9171

Laboratory Login Number: 114061
Report Date: 25 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 12475

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	25-JAN-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520EF	25-JAN-94
BSD	88%	SMWW 17:5520EF	25-JAN-94

		Control Limits
Average Spike Recovery	87%	80% - 120%
Relative Percent Difference	1.7%	< 20%

Curtis & Tompkins, Ltd.

SAMPLE ID: SB-CC4C
LAB ID: 114061-001
CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Miscell.

DATE SAMPLED: 01/21/94
DATE RECEIVED: 01/21/94
DATE REPORTED: 01/25/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Copper	10	1.0	12449	EPA 7210	01/25/94
Lead	ND	5.0	12449	EPA 7420	01/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SB-CC4S
LAB ID: 114061-002
CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE SAMPLED: 01/21/94
DATE RECEIVED: 01/21/94
DATE REPORTED: 01/25/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Copper	13	0.99	12449	EPA 7210	01/25/94
Lead	ND	5.0	12449	EPA 7420	01/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SB-CC5C
LAB ID: 114061-003
CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Miscell.

DATE SAMPLED: 01/21/94
DATE RECEIVED: 01/21/94
DATE REPORTED: 01/25/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Copper	14	0.97	12449	EPA 7210	01/25/94
Lead	ND	4.8	12449	EPA 7420	01/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: SB-CC5S
LAB ID: 114061-004
CLIENT: Baseline Environmental
PROJECT ID: S9171
LOCATION: Seabreeze Yacht Oakland
MATRIX: Soil

DATE SAMPLED: 01/21/94
DATE RECEIVED: 01/21/94
DATE REPORTED: 01/25/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Copper	15	0.97	12449	EPA 7210	01/25/94
Lead	5.8	4.9	12449	EPA 7420	01/25/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114061

DATE REPORTED: 01/25/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	1	mg/Kg	12449	EPA 7210	01/25/94
Lead	ND	5	mg/Kg	12449	EPA 7420	01/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 114061

DATE REPORTED: 01/25/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	240	240	ug/L	96	96	96	0	12449	EPA 7210	01/25/94
Lead	500	470	480	ug/L	94	96	95	2	12449	EPA 7420	01/25/94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114061
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 59-171
LOCATION: SEA BREEZE, 280 6TH AVE.

DATE SAMPLED: 01/21/94
DATE RECEIVED: 01/21/94
DATE EXTRACTED: 01/24/94
DATE ANALYZED: 01/24/94
DATE REPORTED: 01/25/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	MOTOR OIL RANGE (mg/Kg)
114061-001	SB-CC4C	**	9	ND(30)
114061-002	SB-CC4S	**	14	40
114061-003	SB-CC5C	**	17	30
114061-004	SB-CC5S	**	16	50

ND = Not detected at or above reporting limit. Reporting limit indicated in parenthesis.

** Quantitated as diesel due to overlap of hydrocarbon ranges.

QA/QC SUMMARY: MS/MSD

RPD,%	1
RECOVERY, %	85

Spiked sample: 114061-001

[redacted]LINE[redacted]
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: 24 hr. Rush
Lab: Curtis & Tompkins
BASELINE Contact Person: C. Stromberg

Project No.	Project Name and Location
59-171	Seabreeze

Samplers: (Signature) Chris Stromberg

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEHgas Diesel / Motor oil	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead (EPA 7420)	Total Copper (EPA 7210)						Remarks/ Composite	Detection Limits
1 SB-CC4C	1/21/94	1010	Concrete	½ ft.	1 4"x6" Core	X		X				X	X							
2 SB-CC4S		1150	Soil	3 feet	1 Liner	X		X				X	X							
3 SB-CC5C		1322	Concrete	½ ft.	1 4"x6" Core	X		X				X	X							
4 SB-CC5S		1310	Soil	3 feet	1 Liner	X		X				X	X							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Chris Stromberg	1/21/94 - 1555			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	
			1/21/94 1555	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

APPENDIX J

CONCRETE CONTAINMENT PERIMETER VERIFICATION SAMPLES AND PRODUCT LABORATORY REPORTS

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

19 April 1994

RECEIVED
APR 20 1994
BASELINE

Ms Yane Nordhav
Baseline
5900 Hollis Street
Suite D
Emeryville, CA 94608

RE: Case Narrative
Baseline Project No. S9171-D0
Laboratory No. 115123

Dear Yane:

Enclosed please find the analytical report for seven soil samples received 4/8/94 and analyzed in support of the above-referenced project. Copies of the Total Extractable Hydrocarbon (TEH) chromatograms for all samples and standards are also provided.

A fuel fingerprint analysis by a modified TEH method was performed on the sample identified by Baseline as CC-Product and C&T as 115123-8. Based on the comparison of chromatograms, it appears that this sample may consist of aged Bunker C Oil along with a good deal of heavier (C20-C50) hydrocarbons. This characterization should not, however, be interpreted as an absolute identification. Copies of all relevant chromatograms are enclosed.

If you have any questions regarding this data, please feel free to call me at 486-0900.

Sincerely,

CURTIS & TOMPKINS, LTD.

John Goyette
Operations Mananger

enclosure

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

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 19-APR-94
Lab Job Number: 115123
Project ID: S9171-DO
Location: SEA BREEZE, Concrete

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 115123
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-DO
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 04/07,08/94
DATE RECEIVED: 04/08/94
DATE EXTRACTED: 04/13/94
DATE ANALYZED: 04/16/94
DATE REPORTED: 04/18/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	MOTOR OIL RANGE (mg/Kg)
115123-001	SB-CC1-2.0-2.5	**	3,100	10,000
115123-002	SB-CC2-2.5-3.0	**	110	280
115123-003	SB-CC3-3.0-3.5	ND(1)	6	30
115123-004	SB-CC4-2.5-3.0	**	12	50
115123-005	SB-CC5-2.5-3.0	ND(1)	ND(1)	ND(30)
115123-006	SB-CC6-2.5-3.0	ND(1)	ND(1)	ND(30)
115123-007	SB-CC7-2.5-3.0	**	1,600	4,200

ND = Not detected at or above reporting limit; reporting limit indicated in parentheses.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY

RPD,%	12
RECOVERY, %	75
LCS RECOVERY, %	110

CLIENT: Baseline Environmental
PROJECT ID: S9171-DO
LOCATION: SEA BREEZE, Concrete
MATRIX: Soil

DATE REPORTED: 04/18/94

METALS ANALYTICAL REPORT

				Copper				
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-CC1-2.0-2.5	115123-001	04/08/94	04/08/94	30	0.25	13691	EPA 6010	04/14/94
SB-CC2-2.5-3.0	115123-002	04/07/94	04/08/94	18	0.25	13691	EPA 6010	04/14/94
SB-CC3-3.0-3.5	115123-003	04/07/94	04/08/94	21	0.25	13691	EPA 6010	04/14/94
SB-CC4-2.5-3.0	115123-004	04/07/94	04/08/94	21	0.25	13691	EPA 6010	04/14/94
SB-CC5-2.5-3.0	115123-005	04/07/94	04/08/94	12	0.24	13678	EPA 6010	04/18/94
SB-CC6-2.5-3.0	115123-006	04/07/94	04/08/94	20	0.24	13678	EPA 6010	04/18/94
SB-CC7-2.5-3.0	115123-007	04/08/94	04/08/94	20	0.25	13678	EPA 6010	04/18/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
PROJECT ID: S9171-DO
LOCATION: SEA BREEZE, Concrete
MATRIX: Soil

DATE REPORTED: 04/18/94

METALS ANALYTICAL REPORT

Lead								
Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
SB-CC1-2.0-2.5	115123-001	04/08/94	04/08/94	18	5.0	13691	EPA 7420	04/14/94
SB-CC2-2.5-3.0	115123-002	04/07/94	04/08/94	12	4.9	13691	EPA 7420	04/14/94
SB-CC3-3.0-3.5	115123-003	04/07/94	04/08/94	ND	4.9	13691	EPA 7420	04/14/94
SB-CC4-2.5-3.0	115123-004	04/07/94	04/08/94	12	4.9	13691	EPA 7420	04/14/94
SB-CC5-2.5-3.0	115123-005	04/07/94	04/08/94	ND	4.8	13678	EPA 7420	04/14/94
SB-CC6-2.5-3.0	115123-006	04/07/94	04/08/94	ND	4.9	13678	EPA 7420	04/14/94
SB-CC7-2.5-3.0	115123-007	04/08/94	04/08/94	13	5.0	13678	EPA 7420	04/14/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

SAMPLE ID: CC-PRODUCT
LAB ID: 115123-008
CLIENT: Baseline Environmental
PROJECT ID: S9171-DO
LOCATION: SEA BREEZE, Concrete
MATRIX: Miscell.

DATE SAMPLED: 04/07/94
DATE RECEIVED: 04/08/94
DATE REPORTED: 04/18/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Lead	7.8	4.9	13678	EPA 7420	04/14/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 115123

DATE REPORTED: 04/18/94

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Copper	250	256.4	258.8	ug/L	103	104	104	1	13678	EPA 6010	04/18/94
Copper	250	250.3	253.1	ug/L	100	101	101	1	13691	EPA 6010	04/14/94
Lead	500	410	420	ug/L	82	84	83	2	13678	EPA 7420	04/14/94
Lead	500	420	450	ug/L	84	90	87	7	13691	EPA 7420	04/14/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 115123

DATE REPORTED: 04/18/94

BATCH QC REPORT
PREP BLANK

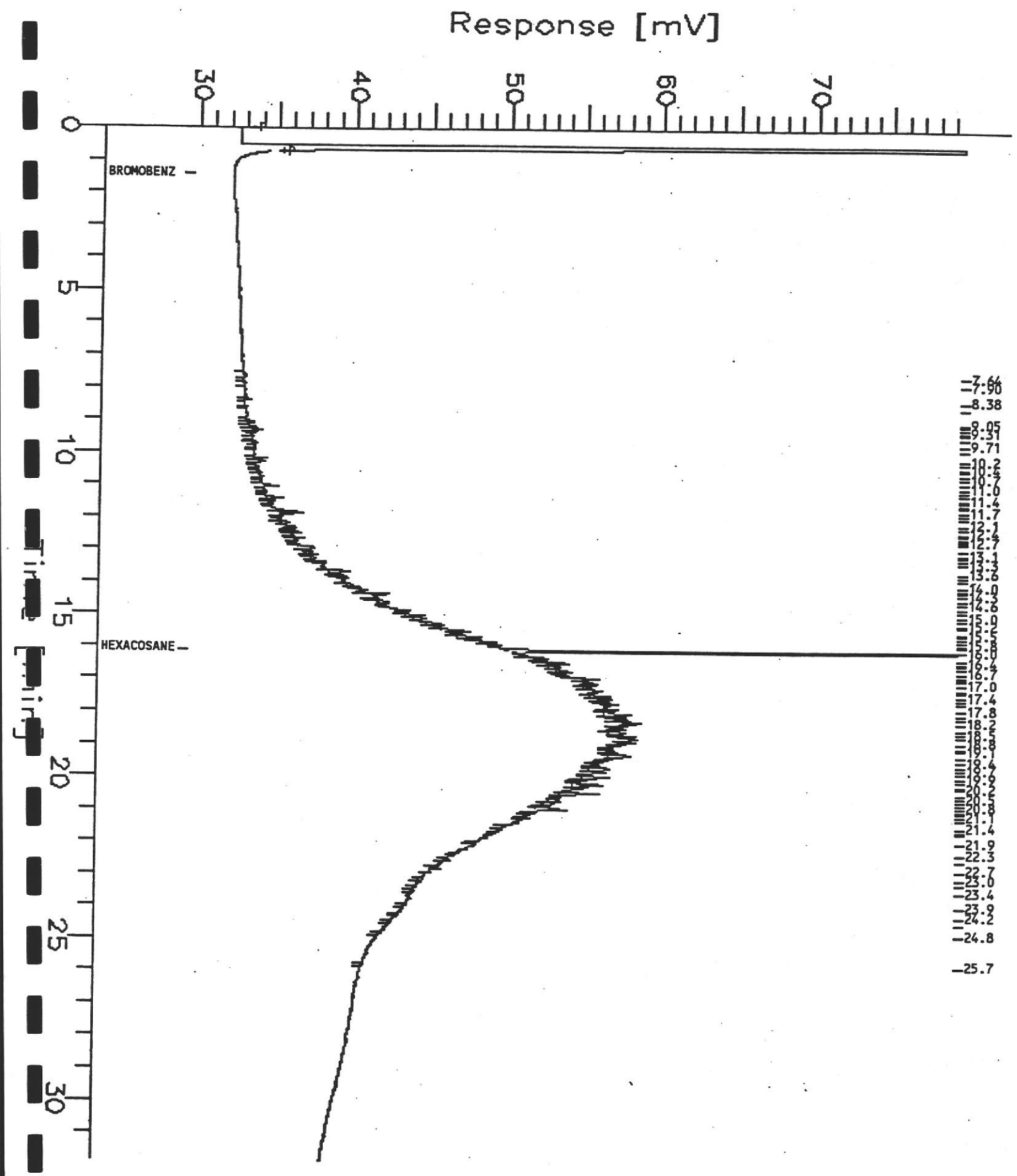
Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Copper	ND	0.25	mg/Kg	13678	EPA 6010	04/18/94
Copper	ND	0.25	mg/Kg	13691	EPA 6010	04/14/94
Lead	ND	5	mg/Kg	13678	EPA 7420	04/14/94
Lead	ND	5	mg/Kg	13691	EPA 7420	04/14/94

ND = Not detected at or above reporting limit

TEH Chromatogram GC11 CH B

ample Name : motor oil 1285mg/l
ileName : g:\gc11\chb\105b005.raw
Method : GC11CHB.ins
Start Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 30 mV

Sample #: 94ws7166 Page 1 of 1
Date : 4/15/94 09:31 PM
Time of Injection: 4/15/94 08:58 PM
Low Point : 29.57 mV High Point : 79.57 mV
Plot Scale: 50 mV



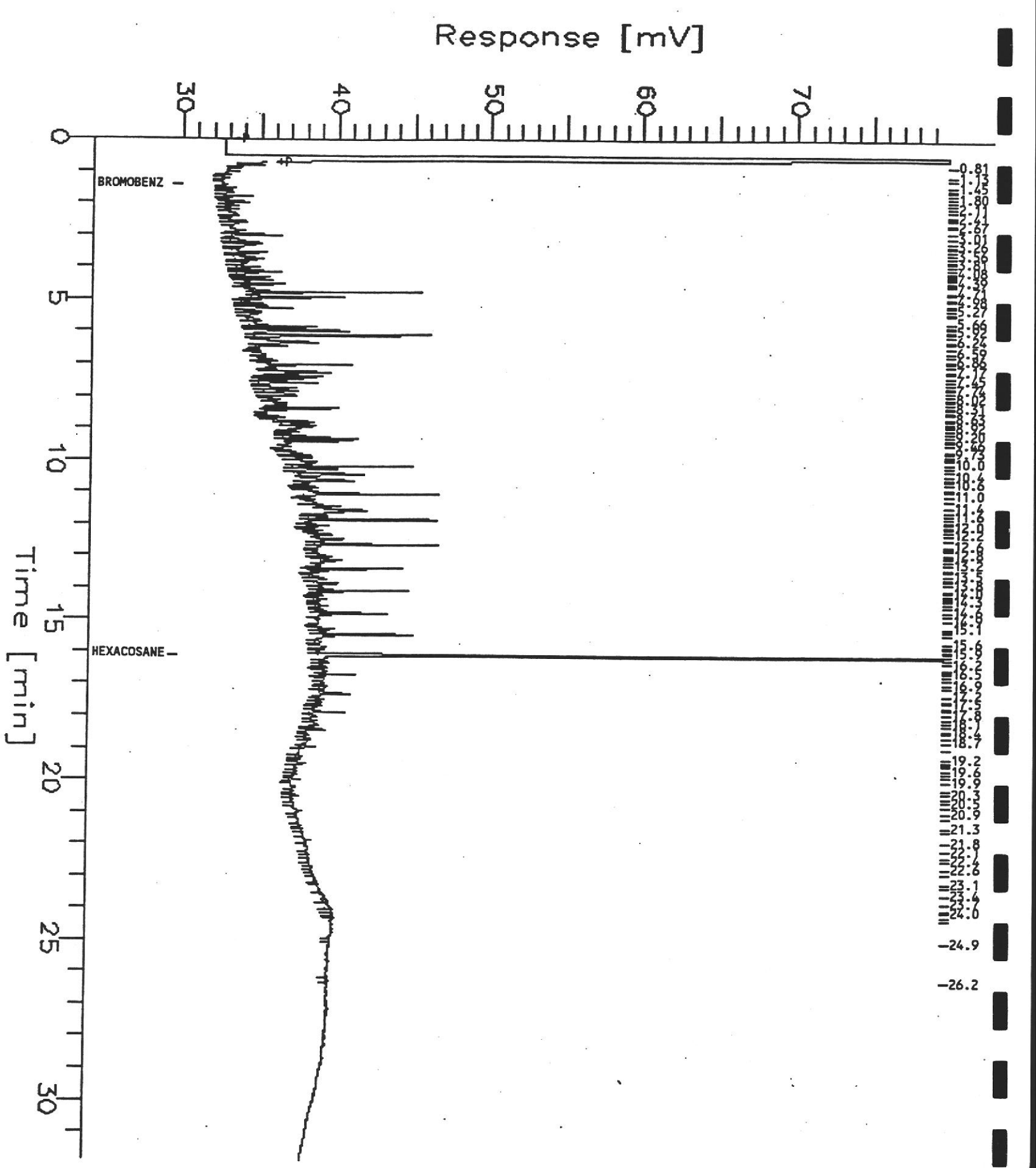
TEH Chromatogram GC11 CH B

Sample Name : bunker C 1080mg/l
FileName : g:\gc11\chb\105b006.raw
Method : GC11CHB.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 30 mV

Sample #: 94ws6744
Date : 4/15/94 10:16 PM
Time of Injection: 4/15/94 09:42 PM
Low Point : 29.93 mV
Plot Scale: 50 mV

High Point : 79.93 mV



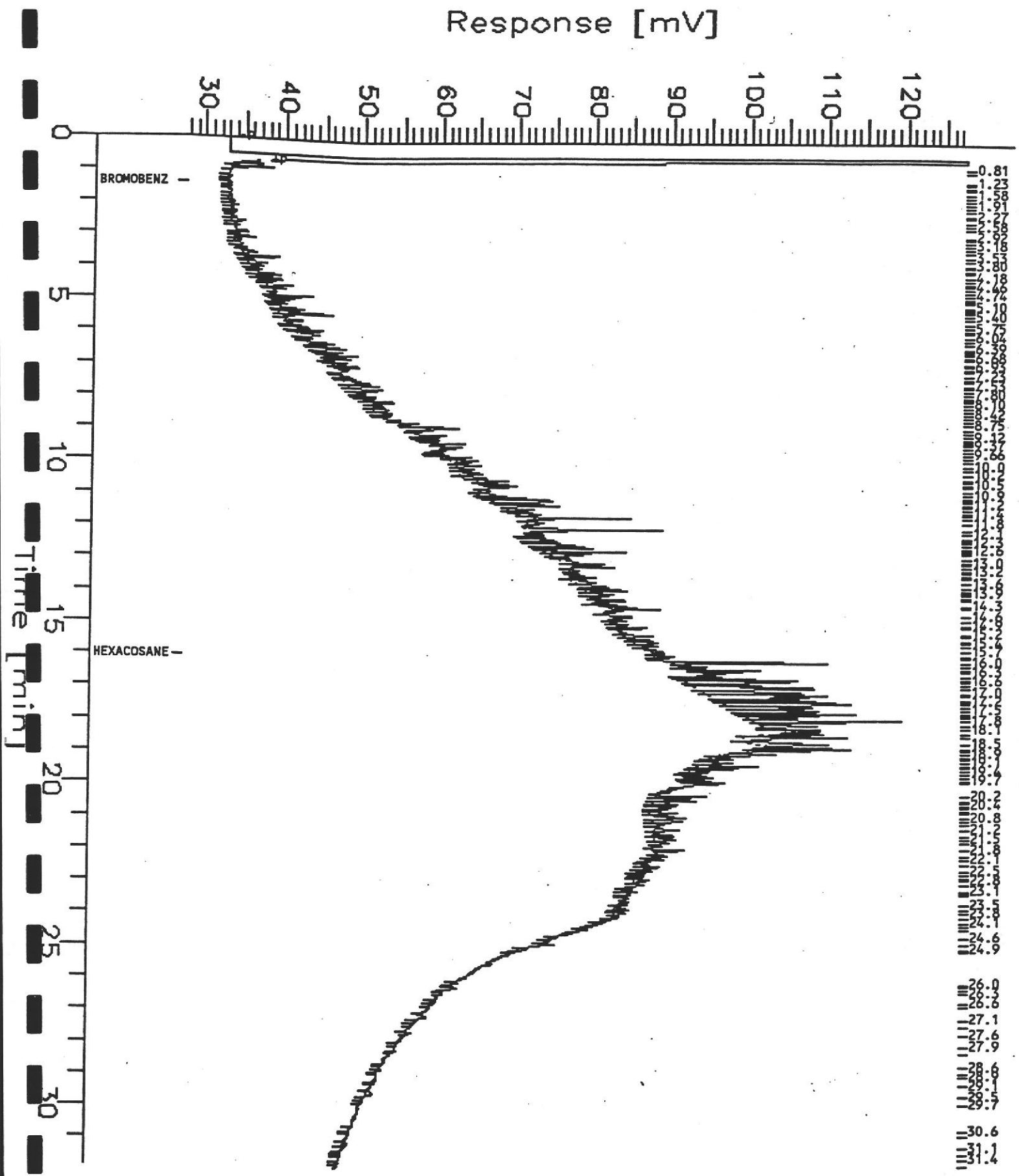
TEH Chromatogram GC11 CH B

Sample Name : 115123-001 50:100
FileName : G:\GC11\CHB\105B042.RAW
Method : GC11CHB.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 28 mV

Sample #: 13661
Date : 4/19/94 04:23 PM
Time of Injection: 4/16/94 11:36 PM
Low Point : 27.63 mV
Plot Scale: 100 mV

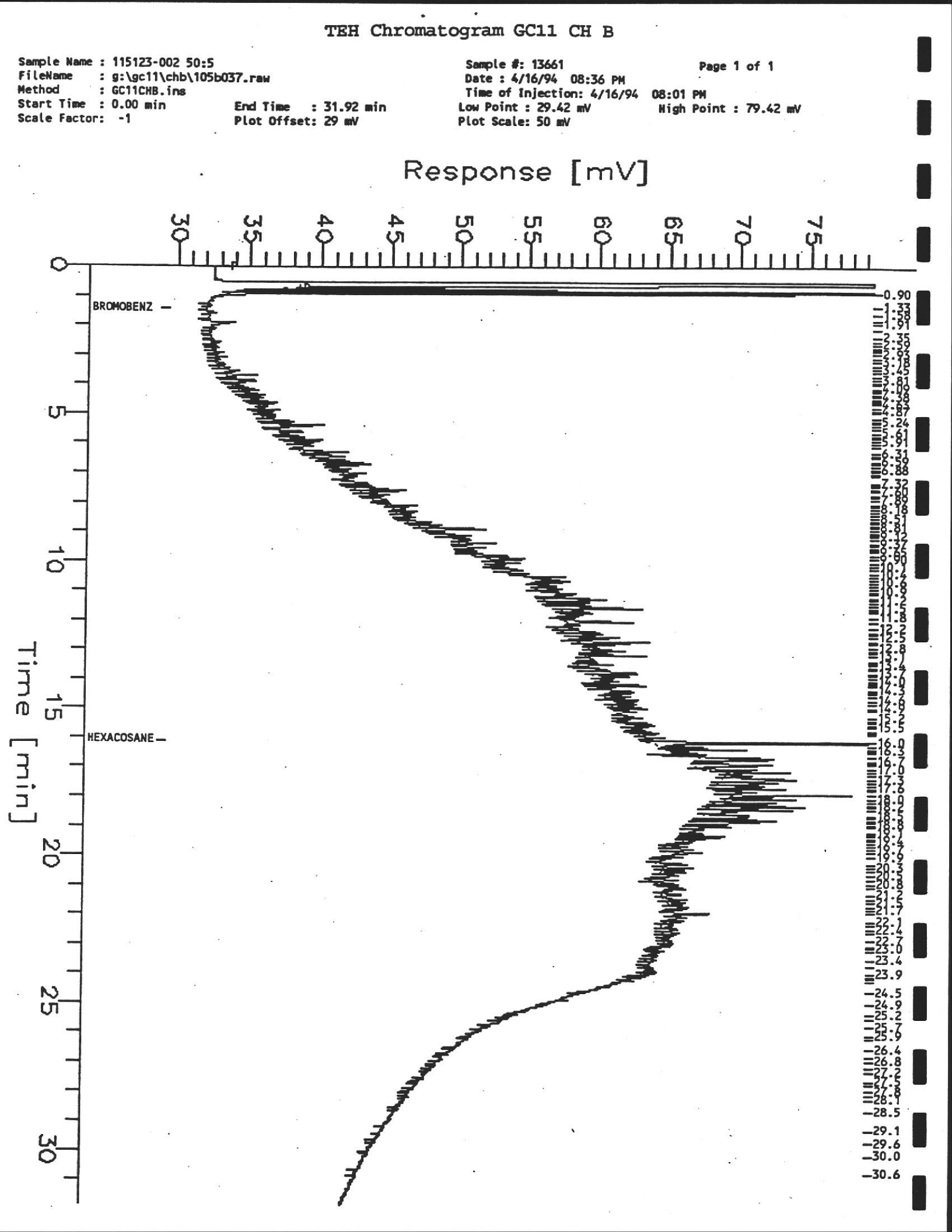
High Point : 127.63 mV



TEH Chromatogram GC11 CH B

Sample Name : 115123-002 50:5
FileName : g:\gc11\chb\105b037.raw
Method : GC11CHB.ins
Start Time : 0.00 min
End Time : 31.92 min
Scale Factor: -1
Plot Offset: 29 mV

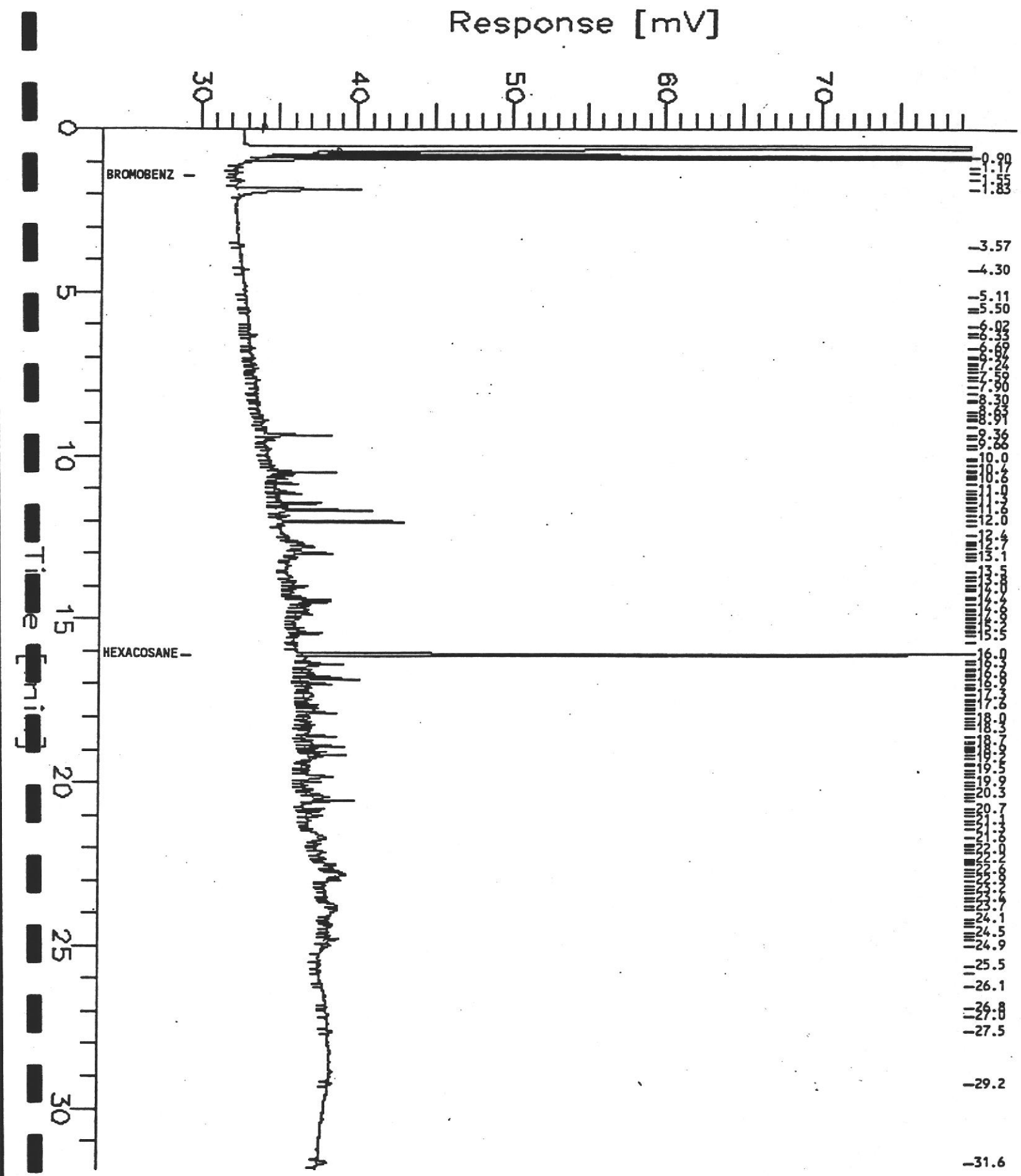
Sample #: 13661
Date : 4/16/94 08:36 PM
Time of Injection: 4/16/94 08:01 PM
Low Point : 29.42 mV
High Point : 79.42 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH B

[redacted]mple Name : 115123-003 50:5
FileName : g:\gc11\chb\105b034.raw
Method : GC11CHB.ins
[redacted]art Time : 0.00 min End Time : 31.92 min
[redacted]ale Factor: -1 Plot Offset: 30 mV

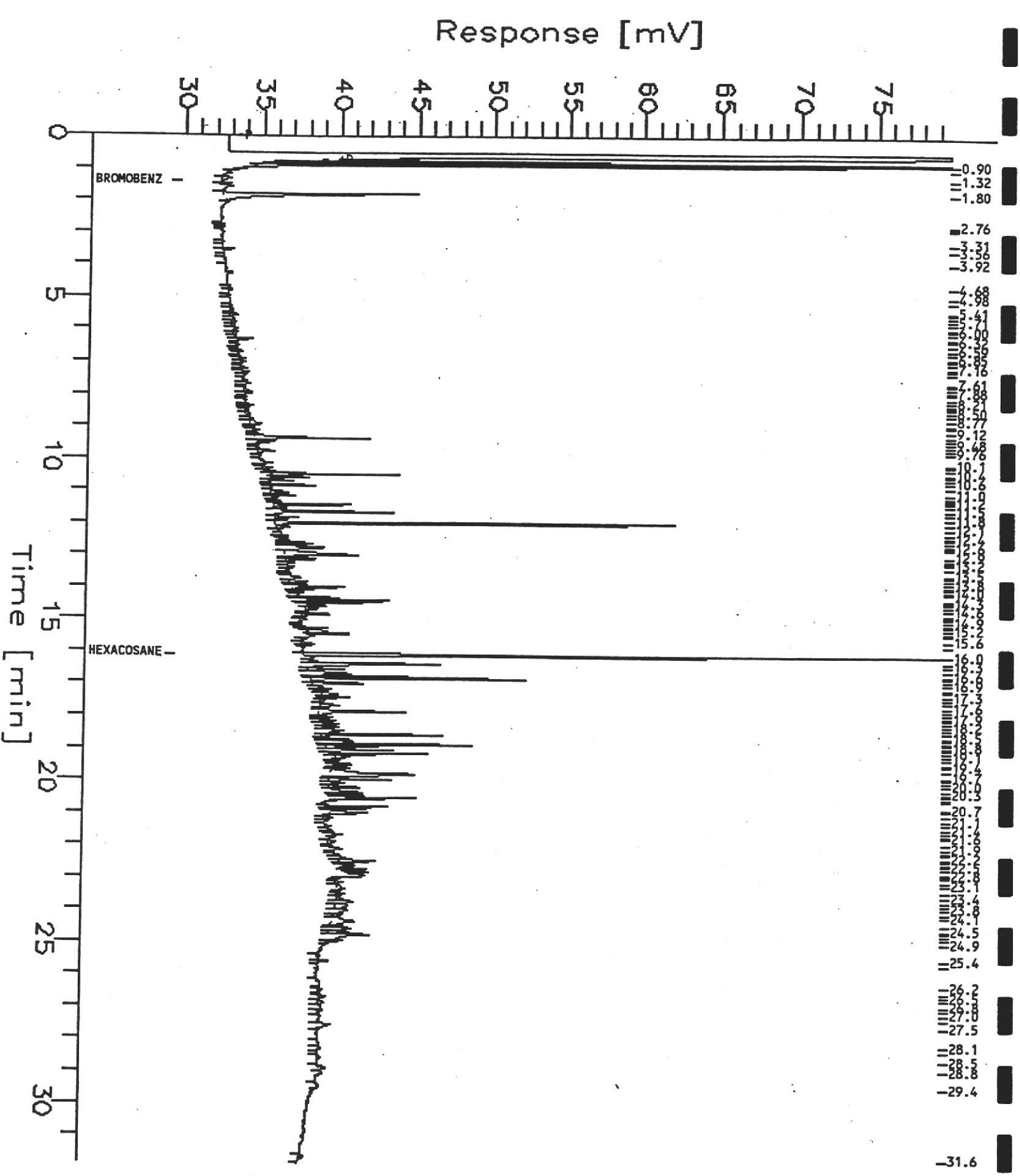
Sample #: 13661 Page 1 of 1
Date : 4/16/94 06:25 PM
Time of Injection: 4/16/94 05:51 PM
Low Point : 29.53 mV High Point : 79.53 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH B

Sample Name : 115123-004 50:5
FileName : g:\gc11\chb\105b035.raw
Method : GC11CHB.ins
Start Time : 0.00 min
End Time : 31.92 min
Scale Factor: -1
Plot Offset: 30 mV

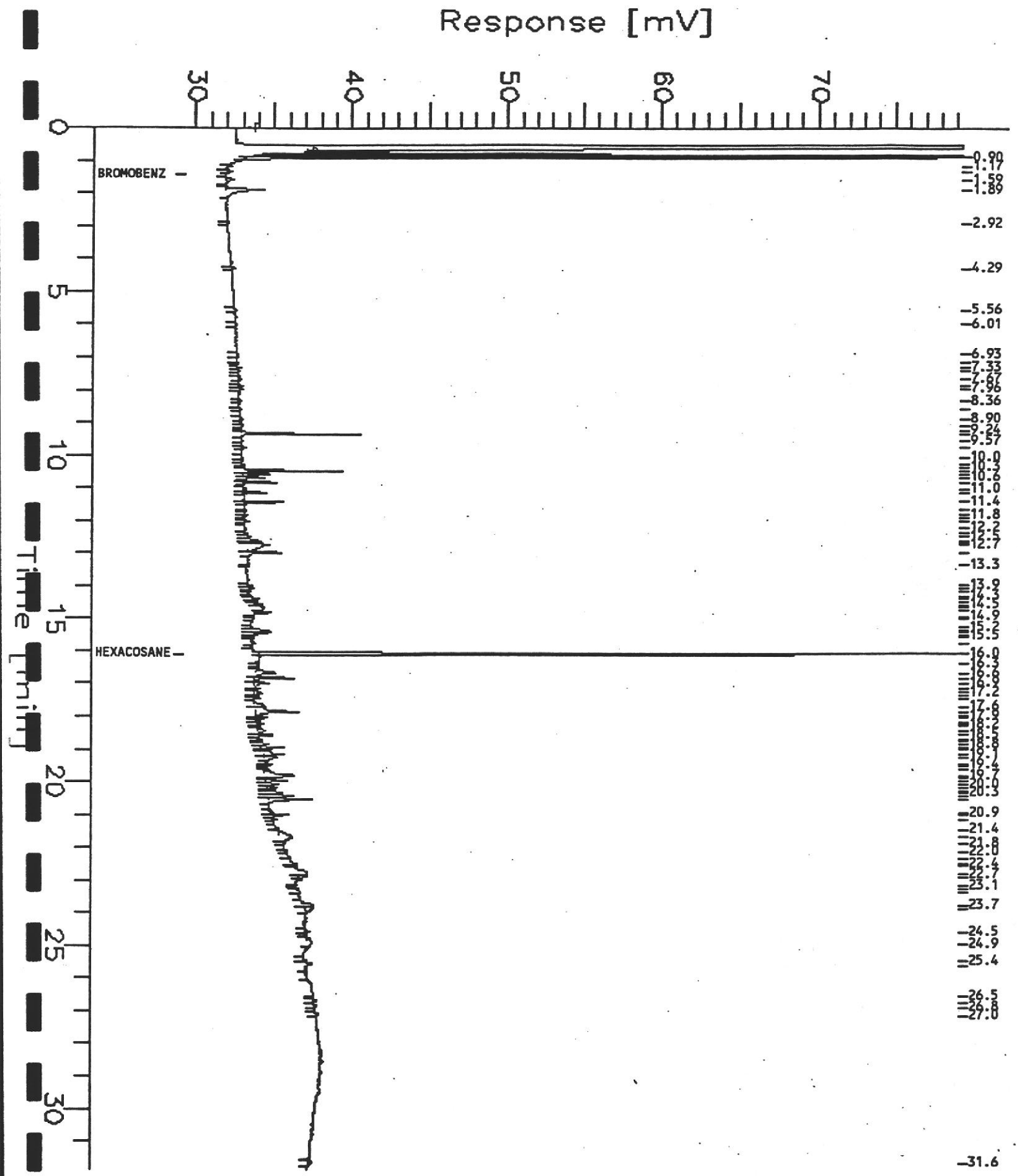
Sample #: 13661
Date : 4/16/94 07:09 PM
Time of Injection: 4/16/94 06:34 PM
Low Point : 29.72 mV
High Point : 79.72 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH B

Sample Name : 115123-005 50:5
FileName : g:\gc11\chb\105b036.raw
Method : GC11CHB.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 29 mV

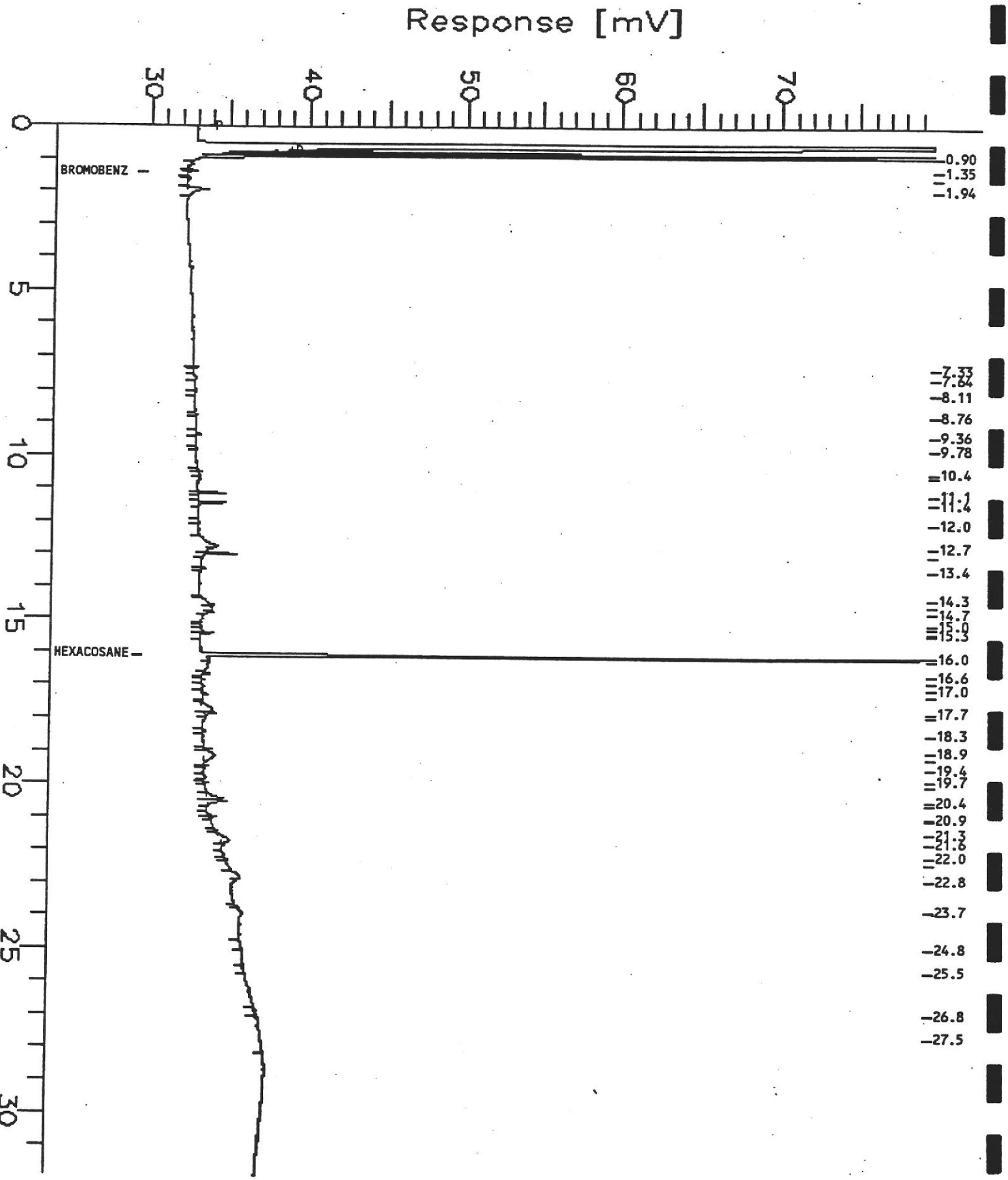
Sample #: 13661 Page 1 of 1
Date : 4/16/94 07:51 PM
Time of Injection: 4/16/94 07:17 PM
Low Point : 29.32 mV High Point : 79.32 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH B

Sample Name : 115123-006 50:5
FileName : g:\gc11\chb\105b032.raw
Method : GC11CHB.ins
Start Time : 0.00 min
End Time : 31.92 min
Scale Factor: -1
Plot Offset: 30 mV

Sample #: 13661
Date : 4/16/94 04:57 PM
Time of Injection: 4/16/94 04:24 PM
Low Point : 29.71 mV
High Point : 79.71 mV
Plot Scale: 50 mV

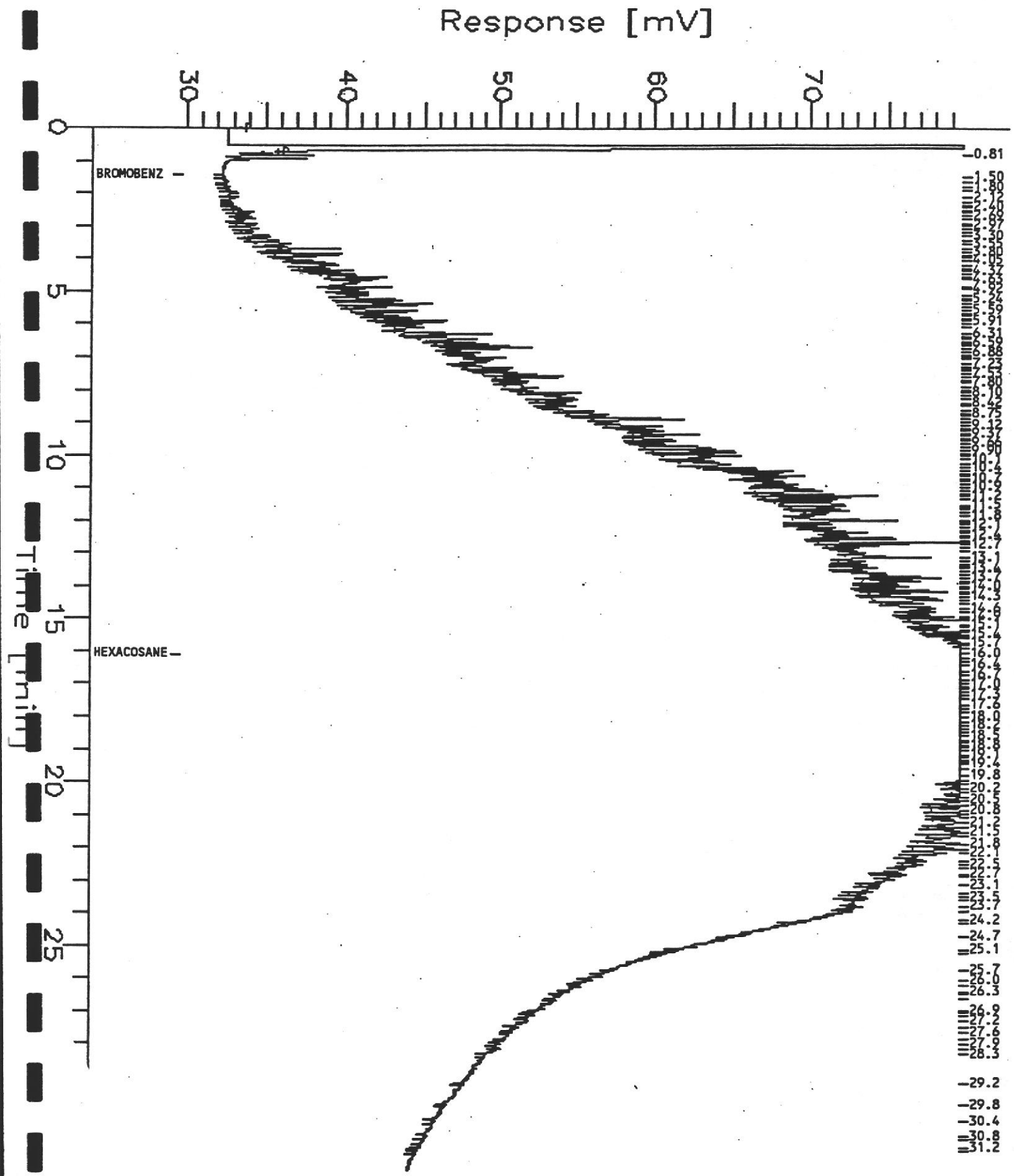


TEH Chromatogram GC11 CH B

Sample Name : 115123-007 50:50
FileName : g:\gc11\chb\105b040.raw
Method : GC11CHB.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 30 mV

Sample #: 13661
Date : 4/16/94 10:46 PM
Time of Injection: 4/16/94 10:10 PM
Low Point : 29.72 mV
Plot Scale: 50 mV

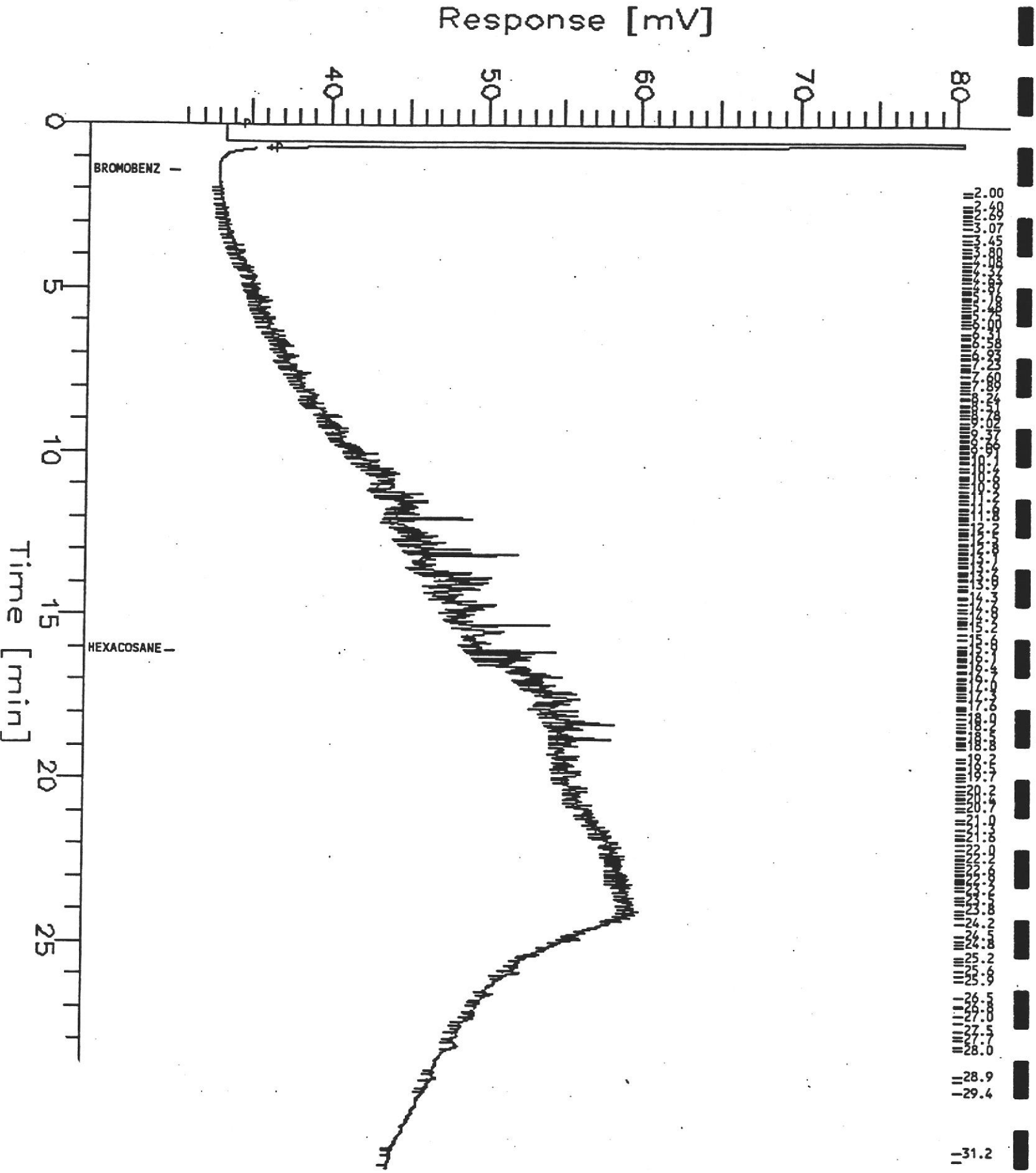


TEH Chromatogram GC11 CH B

Sample Name : 115123-008 50:7500
FileName : g:\gc11\chb\105b044.raw
Method : GC11CHB.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 31 mV

Sample #: 13667
Date : 4/17/94 01:39 AM
Time of Injection: 4/17/94 01:03 AM
Low Point : 30.46 mV
Plot Scale: 50 mV



BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

15123

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal
Lab: Curtis & Tompkins
BASELINE Contact Person: Bill Scott

Project No.	Project Name and Location
59171-00	Sea Breeze, Concrete Containment

Samplers: (Signature) William K Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH diesel	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	Lead total	Copper total	* IF TTLC exceeds 10x STLC run WET of pb + Cu	TEH	Bunker C Oil	Remarks/ Composite	Detection Limits
1	SB-CC1 2.5-3.0	4-8-94	08:07	Soil	2.0-2.5	1	X			X				X	X					
2	SB-CC2 2.5-3.0	4-7-94	16:00	Soil	2.5-3.0	1	X			X				X	X					
3	SB-CC3 3.0-3.5	4-7-94	15:00	Soil	3.0-3.5	1	X			X				X	X					
4	SB-CC4-2.5-3.0	4-7-94	14:44	Soil	2.5-3.0	1	X			X				X	X					
5	SB-CC5-2.5-3.0	4-7-94	15:17	Soil	2.5-3.0	1	X			X				X	X					
6	SB-CC6-2.5-3.0	4-7-94	15:30	Soil	2.5-3.0	1	X			X				X	X					
7	SB-CC7-2.5-3.0	4-8-94	7:44	Soil	2.5-3.0	1	X			X				X	X					
8	CC-Product	4-7-94	17:00	Product	—	1						X					X	X	HOLD	
																			HOLD	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	4-8-94 / 10:40		4-8-94 1040	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
	4/8/94 - 1400		4-8-94 1400	P/S, provide us w/ a copy of the Chromatographs w/ the lab reports.
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

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

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 20-APR-94
Lab Job Number: 115141
Project ID: S9171-DO
Location: SEA BREEZE, Concrete

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 115141-001
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-DO
LOCATION: SEA BREEZE, CONCRETE
SAMPLE ID: CC-PRODUCT

DATE SAMPLED: 04/07/94
DATE RECEIVED: 04/08/94
DATE REQUESTED: 04/12/94
DATE EXTRACTED: 04/18/94
DATE ANALYZED: 04/19/94
DATE REPORTED: 04/20/94

Polynuclear Aromatic Hydrocarbons in Soils & Wastes by EPA 8270
Extraction Method: EPA 3550

COMPOUND	RESULT mg/Kg	REPORTING LIMIT mg/Kg
Naphthalene	ND	300
Acenaphthylene	ND	300
Acenaphthene	ND	300
Fluorene	ND	300
Phenanthrene	ND	300
Anthracene	ND	300
Fluoranthene	ND	300
Pyrene	ND	300
Benzo(a)anthracene	ND	300
Chrysene	ND	300
Benzo(b)fluoranthene	ND	300
Benzo(k)fluoranthene	ND	300
Benzo(a)pyrene	ND	300
Indeno(1,2,3-cd)pyrene	ND	300
Dibenzo(a,h)anthracene	ND	300
Benzo(g,h,i)perylene	ND	300

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SURROGATE RECOVERIES

Nitrobenzene-d5	All surrogates were diluted out.
2-Fluorobiphenyl	
Terphenyl-d14	

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

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 31-MAY-94
Lab Job Number: 115727
Project ID: S9171-00.02
Location: Sea Breeze, Concrete

Reviewed by: Teresa K Morris

Reviewed by: Kathy O'Brien

Curtis & Tompkins, Ltd.

SAMPLE ID: CC-PRODUCT A
LAB ID: 115727-001
CLIENT: Baseline Environmental
PROJECT ID: S9171-00.02
LOCATION: Sea Breeze, Concrete
MATRIX: Miscell.

DATE SAMPLED: 05/23/94
DATE RECEIVED: 05/23/94
DATE REPORTED: 05/31/94

CALIFORNIA TITLE 26 METALS

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	Batch Number	Method	Analysis Date
Antimony	ND	2.7	14329	EPA 6010	05/25/94
Arsenic	ND	2.4	14379	EPA 7060	05/27/94
Barium	7.1	0.45	14329	EPA 6010	05/25/94
Beryllium	ND	0.091	14329	EPA 6010	05/25/94
Cadmium	ND	0.23	14329	EPA 6010	05/25/94
Chromium (total)	0.65	0.45	14329	EPA 6010	05/25/94
Cobalt	ND	0.91	14329	EPA 6010	05/25/94
Copper	3.9	0.45	14329	EPA 6010	05/25/94
Lead	ND	4.5	14329	EPA 7420	05/25/94
Mercury	ND	0.077	14343	EPA 7471	05/25/94
Molybdenum	ND	0.91	14329	EPA 6010	05/25/94
Nickel	47	0.91	14329	EPA 6010	05/25/94
Selenium	ND	2.4	14379	EPA 7740	05/27/94
Silver	ND	0.45	14329	EPA 6010	05/25/94
Thallium	ND	2.4	14379	EPA 7841	05/27/94
Vanadium	51	0.45	14329	EPA 6010	05/25/94
Zinc	5.3	0.91	14329	EPA 6010	05/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

SAMPLE ID: CC-PRODUCT A
LAB ID: 115727-001
CLIENT: Baseline Environmental
PROJECT ID: S9171-00.02
LOCATION: Sea Breeze, Concrete
MATRIX: Miscell.

DATE SAMPLED: 05/23/94
DATE RECEIVED: 05/23/94
DATE REPORTED: 05/31/94

METALS ANALYTICAL REPORT

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	QC Batch	Method	Analysis Date
Iron	280	4.5	14329	EPA 6010	05/25/94

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 115727

DATE REPORTED: 05/31/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Antimony	ND	3	mg/Kg	14329	EPA 6010	05/25/94
Arsenic	ND	2.5	mg/Kg	14379	EPA 7060	05/27/94
Barium	ND	0.5	mg/Kg	14329	EPA 6010	05/25/94
Beryllium	ND	0.1	mg/Kg	14329	EPA 6010	05/25/94
Cadmium	ND	0.25	mg/Kg	14329	EPA 6010	05/25/94
Chromium (total)	ND	0.5	mg/Kg	14329	EPA 6010	05/25/94
Cobalt	ND	1	mg/Kg	14329	EPA 6010	05/25/94
Copper	ND	0.5	mg/Kg	14329	EPA 6010	05/25/94
Iron	ND	5	mg/Kg	14329	EPA 6010	05/25/94
Lead	ND	5	mg/Kg	14329	EPA 7420	05/25/94
Mercury	ND	0	mg/Kg	14343	EPA 7471	05/25/94
Molybdenum	ND	1	mg/Kg	14329	EPA 6010	05/25/94
Nickel	ND	1	mg/Kg	14329	EPA 6010	05/25/94
Selenium	ND	2.5	mg/Kg	14379	EPA 7740	05/27/94
Silver	ND	0.5	mg/Kg	14329	EPA 6010	05/25/94
Thallium	ND	2.5	mg/Kg	14379	EPA 7841	05/27/94
Vanadium	ND	0.5	mg/Kg	14329	EPA 6010	05/25/94
Zinc	ND	1	mg/Kg	14329	EPA 6010	05/25/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 115727

DATE REPORTED: 05/31/94

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Antimony	500	523.6	517.5	ug/L	105	104	105	1	14329	EPA 6010	05/25/94
Arsenic	40	453.5	409.4	ug/L	113	102	108	10	14379	EPA 7060	05/27/94
Barium	2000	2116	2093	ug/L	106	105	106	1	14329	EPA 6010	05/25/94
Beryllium	50	51.5	51.3	ug/L	103	103	103	0	14329	EPA 6010	05/25/94
Cadmium	50	58.1	58.1	ug/L	116	116	116	0	14329	EPA 6010	05/25/94
Chromium (total)	200	204.3	198.6	ug/L	102	99	101	3	14329	EPA 6010	05/25/94
Cobalt	500	526.8	529.1	ug/L	105	106	106	0	14329	EPA 6010	05/25/94
Copper	250	266.4	262.3	ug/L	107	105	106	2	14329	EPA 6010	05/25/94
Iron	1000	1138	1143	ug/L	114	114	114	0	14329	EPA 6010	05/25/94
Lead	500	450	440	ug/L	90	88	89	2	14329	EPA 7420	05/25/94
Mercury	0.004	0.004	0.004	mg/Kg	97	96	97	1	14343	EPA 7471	05/25/94
Molybdenum	400	425.1	409.3	ug/L	106	102	104	4	14329	EPA 6010	05/25/94
Nickel	500	523.7	534.7	ug/L	105	107	106	2	14329	EPA 6010	05/25/94
Selenium	30	314.2	292.1	ug/L	105	97	101	7	14379	EPA 7740	05/27/94
Silver	50	54.7	49.3	ug/L	109	99	104	10	14329	EPA 6010	05/25/94
Thallium	40	395.5	435	ug/L	99	109	104	10	14379	EPA 7841	05/27/94
Vanadium	500	529.8	523.7	ug/L	106	105	106	1	14329	EPA 6010	05/25/94
Zinc	500	525.7	519	ug/L	105	104	105	1	14329	EPA 6010	05/25/94

CHROMALAB, INC.

Environmental Services (SDB)

June 16, 1994 *Submission #:* 9406146

BASELINE ENVIRONMENTAL/EMRYVL

Atten: William Scott

Project: SEA BREEZE, CONCRETE CONT. *Project#:* S9171-00.02
Received: May 24, 1994

re: One sample for CAM 17 Metals analysis.

Sample: **CC-PRODUCT A** *Matrix:* SOLID *Extracted:* June 15, 1994
Sampled: May 23, 1994 *Lab#:* 54503 *Run:* 3120 *Analyzed:* June 15, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	93
BARIUM	4.9	0.25	N.D.	99
BERYLLIUM	N.D.	0.05	N.D.	92
CADMIUM	N.D.	0.05	N.D.	108
CHROMIUM	N.D.	0.5	N.D.	104
COBALT	N.D.	0.5	N.D.	99
COPPER	1.7	0.25	N.D.	85
LEAD	1.3	0.5	N.D.	98
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	23	0.5	N.D.	103
SELENIUM	8.5	0.5	N.D.	96
SILVER	N.D.	0.25	N.D.	85
THALLIUM	N.D.	2.0	N.D.	85
VANADIUM	23	0.5	N.D.	96
ZINC	6.2	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	87

ChromaLab, Inc.

Charles Woolley
Chemist

Eric Tam
Laboratory Director

CHARLES 12:14:40

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

June 17, 1994 *Submission #:* 9406146

BASELINE ENVIRONMENTAL/EMRYVL

Atten: William Scott

Project: SEA BREEZE, CONCRETE CONT. *Project#:* S9171-00.02
Received: May 24, 1994

re: One sample for Metals analysis.

Sample: **CC-PRODUCT A** *Matrix:* SOLID *Extracted:* June 15, 1994
Sampled: May 23, 1994 *Lab#:* 54503 *Run:* 3120 *Analyzed:* June 15, 1994
Method: EPA 3050/6010

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
IRON	190	1.0	N.D.	105

ChromaLab, Inc.

Charles Woolley
Chemist

Eric Tam
Laboratory Director

CHARLES 14:29:12

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

ADD ON

Submission No.: 1461545A2

O SUBM #: 9406146
CLIENT: BASELINE
DUE: 06/17/94
REF: 16831 ADD 9405309
Ti

Name of Caller: yana

Call date: 5-24-94

ADD ON DUE DATE: _____ Date Sampled: 5-23

Comments: run for title 26 metals, total Iron per fax by _____

ORIGINAL COC INFO Baseline

Project Mgr.: William Scott

Project Name: Sea Breeze, Concrete containment

Project No.: 59171-00.02

Date Received: 5-23

Submission No.: 9405309

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)		METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL ~~TCLP~~ Iron	EXTRACTION (TCLP, STLC)	Title 26 metals			NUMBER OF CONTAINERS
CC Product A	5/23	9:30	solid																	X		X			3

ASELINE
00 Hollis Street, Suite D
neryville, CA 94608
10) 420-8686

11572

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal
Lab: Curtis & Tompkins
BASELINE Contact Person: Bill Scott

9410614 to 9404309

Project No.	Project Name and Location
5917(-00.02	Sea Breeze, Concrete Containment.

Samplers: (Signature) William E Scott

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	8240 (Method detection Limit	Metals, Title 26 Fe total			Remarks/ Composite	Detection Limits
CC-Product A	5-23-94	9:30	Product	—	3							X	X	X			2 VOAs	Method
																	1 steel tube	D.L.

Proceed with metals, total 8240 for further instruction per Yana.
KW 5/24/94

Returned 1 VOA to Bill Scott 5/24/94 2:30pm. J. Morrison
both TCm

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory: cold
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Please include Chromatographs with Report. Release one VOA to Yana 5/24/94 Jason Williams
Relinquished by: (Signature) William E Scott	Date / Time 5-23-94/11:55	Received by: (Signature) Mary Pleasant	Date / Time 5/23/94 11:55	

STRCDE.FM2

ADMIN(AD4)-5/27/92

CHROMALAB, INC.

Environmental Services (SDB)

June 2, 1994 *ChromaLab File#:* 9405309

BASELINE ENVIRONMENTAL/EMRYVL

Atten: William Scott

Project: SEA BREEZE, CONCRETE CONTAINMT *Project#:* S9171-00.02
Received: May 24, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample: **CC-PRODUCT A** *Matrix:* SOLID
Sampled: May 23, 1994 *Lab#:* 52224 *Run:* 3001 *Analyzed:* June 1, 1994
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	50	N.D.	--
VINYL CHLORIDE	N.D.	50	N.D.	--
BROMOMETHANE	N.D.	50	N.D.	--
CHLOROETHANE	N.D.	50	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	50	N.D.	--
1,1-DICHLOROETHENE	N.D.	50	N.D.	--
METHYLENE CHLORIDE	N.D.	250	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	50	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	50	N.D.	--
1,1-DICHLOROETHANE	N.D.	50	N.D.	102
CHLOROFORM	N.D.	50	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	50	N.D.	--
CARBON TETRACHLORIDE	N.D.	50	N.D.	--
1,2-DICHLOROETHANE	N.D.	50	N.D.	--
TRICHLOROETHENE	N.D.	50	N.D.	102
1,2-DICHLOROPROPANE	N.D.	50	N.D.	--
BROMODICHLOROMETHANE	N.D.	50	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	50	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	50	N.D.	--
TETRACHLOROETHENE	N.D.	50	N.D.	99
DIBROMOCHLOROMETHANE	N.D.	50	N.D.	--
CHLOROBENZENE	N.D.	50	N.D.	--
BROMOFORM	N.D.	50	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	50	N.D.	99
1,3-DICHLOROBENZENE	N.D.	50	N.D.	--
1,4-DICHLOROBENZENE	N.D.	50	N.D.	--
1,2-DICHLOROBENZENE	N.D.	50	N.D.	--
FREON 113	N.D.	50	N.D.	--

ChromaLab, Inc.

Michael Mitchell
Chemist

Eric Tam
Laboratory Director

WINDOWSMIKE 1

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

SUBM #: 9405309
CLIENT: BASELINE
DUE: 06/01/94
REF: 16565

Order No. 16565 309/52224

Turn-around Time: Normal
Lab: Chromalabs
BASELINE Contact Person: Bill Scott

Project No.	Project Name and Location
5917.00.02	Sea Breeze, Concrete Containment

Samplers: (Signature) [signature]

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	Method Detection limit EPA 5010						Remarks/ Composite	Detection Limits
CC-Product A	5-23-94	9:30	Product		2 VOAs							X								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
				Cold
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Please include chromatograms with Report
Relinquished by: (Signature) [signature]	Date / Time 5/24/94/16:50	Received by: (Signature) [signature]	Date / Time 5/24/94 16:50	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

APPENDIX K

CONCRETE CONTAINMENT STANDING WATER LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 12-JAN-94
Lab Job Number: 113913
Project ID: 29856
Location: Sea Breeze, Concrete

Reviewed by: Teresa K Morrow

Reviewed by: Mary Pleasant

Curtis & Tompkins, Ltd.

SAMPLE ID: CONCRETE CONTAINMENT
LAB ID: 113913-001
CLIENT: Baseline Environmental
PROJECT ID: 29856
LOCATION: Sea Breeze, Concrete
MATRIX: Water

DATE SAMPLED: 01/07/94
DATE RECEIVED: 01/07/94
DATE REPORTED: 01/12/94

CALIFORNIA TITLE 26 METALS

Compound	Result (ug/L)	Reporting Limit (ug/L)	Batch Number	Method	Analysis Date
Antimony	ND	60	12256	EPA 6010	01/11/94
Arsenic	ND	5.0	12257	EPA 7060	01/11/94
Barium	34	10	12256	EPA 6010	01/11/94
Beryllium	ND	2.0	12256	EPA 6010	01/11/94
Cadmium	ND	5.0	12256	EPA 6010	01/11/94
Chromium (total)	ND	10	12256	EPA 6010	01/11/94
Cobalt	ND	20	12256	EPA 6010	01/11/94
Copper	20	20	12256	EPA 7210	01/11/94
Lead	ND	100	12256	EPA 7420	01/11/94
Mercury	ND	0.20	12263	EPA 7470	01/11/94
Molybdenum	ND	20	12256	EPA 6010	01/11/94
Nickel	ND	20	12256	EPA 6010	01/11/94
Selenium	ND	5.0	12257	EPA 7740	01/11/94
Silver	ND	10	12256	EPA 6010	01/11/94
Thallium	ND	5.0	12257	EPA 7841	01/11/94
Vanadium	ND	10	12256	EPA 6010	01/11/94
Zinc	84	20	12256	EPA 6010	01/11/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113913

DATE REPORTED: 01/12/94

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	12256	EPA 6010	01/11/94
Barium	ND	10	ug/L	12256	EPA 6010	01/11/94
Beryllium	ND	2	ug/L	12256	EPA 6010	01/11/94
Cadmium	ND	5	ug/L	12256	EPA 6010	01/11/94
Chromium (total)	ND	10	ug/L	12256	EPA 6010	01/11/94
Cobalt	ND	20	ug/L	12256	EPA 6010	01/11/94
Copper	ND	20	ug/L	12256	EPA 7210	01/11/94
Molybdenum	ND	20	ug/L	12256	EPA 6010	01/11/94
Nickel	ND	20	ug/L	12256	EPA 6010	01/11/94
Silver	ND	10	ug/L	12256	EPA 6010	01/11/94
Vanadium	ND	10	ug/L	12256	EPA 6010	01/11/94
Zinc	ND	20	ug/L	12256	EPA 6010	01/11/94
Arsenic	ND	5	ug/L	12257	EPA 7060	01/11/94
Lead	ND	3	ug/L	12257	EPA 7421	01/11/94
Selenium	ND	5	ug/L	12257	EPA 7740	01/11/94
Thallium	ND	5	ug/L	12257	EPA 7841	01/11/94
Mercury	ND	0.2	ug/L	12263	EPA 7470	01/11/94

ND = Not detected at or above reporting limit

Curtis & Tompkins, Ltd.

CLIENT: Baseline Environmental
JOB NUMBER: 113913

DATE REPORTED: 01/12/94

BATCH QC REPORT
BLANK SPIKE/BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS % Recovery	BSD % Recovery	Average Recovery	RPD	QC Batch	Method	Analysis Date
Antimony	500	504.8	504.9	ug/L	101	101	101	0	12256	EPA 6010	01/11/94
Barium	2000	2182	2075	ug/L	109	104	107	5	12256	EPA 6010	01/11/94
Beryllium	50	53.1	50.2	ug/L	106	100	103	6	12256	EPA 6010	01/11/94
Cadmium	50	56.1	54.3	ug/L	112	109	111	3	12256	EPA 6010	01/11/94
Chromium (total)	200	218.6	214.9	ug/L	109	108	109	2	12256	EPA 6010	01/11/94
Cobalt	500	545.5	521.7	ug/L	109	104	107	5	12256	EPA 6010	01/11/94
Copper	250	270	240	ug/L	108	96	102	12	12256	EPA 7210	01/11/94
Molybdenum	400	433.9	418.8	ug/L	109	105	107	4	12256	EPA 6010	01/11/94
Nickel	500	557.9	559.1	ug/L	112	112	112	0	12256	EPA 6010	01/11/94
Silver	50	34.8	39.3	ug/L	70	79	75	12	12256	EPA 6010	01/11/94
Vanadium	500	534.9	515.5	ug/L	107	103	105	4	12256	EPA 6010	01/11/94
Zinc	500	536.2	517.5	ug/L	107	104	106	4	12256	EPA 6010	01/11/94
Arsenic	40	43.74	44.54	ug/L	109	111	110	2	12257	EPA 7060	01/11/94
Lead	30	29.32	27.56	ug/L	98	92	95	6	12257	EPA 7421	01/11/94
Selenium	30	28.04	27.45	ug/L	94	92	93	2	12257	EPA 7740	01/11/94
Thallium	40	39.48	39.05	ug/L	99	98	99	1	12257	EPA 7841	01/11/94
Mercury	4	4.217	4.127	ug/L	105	103	104	2	12263	EPA 7470	01/11/94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113913
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 29856
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 01/07/94
DATE RECEIVED: 01/07/94
DATE ANALYZED: 01/10/94
DATE REPORTED: 01/12/94

ANALYSIS: TURBIDITY
ANALYSIS METHOD: EPA 180.1

LAB ID	SAMPLE ID	RESULT	UNITS
113913-001	CONCRETE CONTAINMENT	1.2	NTU

ND = Not detected at or above reporting limit.

QA/QC SUMMARY:

RPD, %	8

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 113913
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: 29856
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 01//07/94
DATE RECEIVED: 01/07/94
DATE EXTRACTED: 01/11/94
DATE ANALYZED: 01/11/94
DATE REPORTED: 01/12/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
113913-001	CONCRETE CONTAINMENT	ND	ND	50
METHOD BLANK		ND	ND	50

ND = Not detected at or above reporting limit.

* Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	112

Curtis & Tompkins, Ltd.

Client: Baseline Environmental

Laboratory Login Number: 113913

Project Name: Sea Breeze, Concrete
Project Number: 29856

Report Date: 12 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
113913-001	CONCRETE CONTAINMENT	Water	07-JAN-94	07-JAN-94	11-JAN-94	ND	mg/L	5	TR	12278

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Baseline Environmental
Project Name: Sea Breeze, Concrete
Project Number: 29856

Laboratory Login Number: 113913
Report Date: 12 January 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 12278**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	11-JAN-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	91%	SMWW 17:5520BF	11-JAN-94
BSD	93%	SMWW 17:5520BF	11-JAN-94

		Control Limits
Average Spike Recovery	92%	80% - 120%
Relative Percent Difference	2.5%	< 20%

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: 24 HRS
Lab: Curtis & Tompkins
BASELINE Contact Person: Bill Scott

Project No.	Project Name and Location
29856	Sea Breeze, Concrete Containment

Samplers: (Signature) Miller & Scott

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH & Volatiles	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	26 Title 22 Metals	Total Lead	Turbidity	TDS (Hold)					Remarks/ Composite	Detection Limits
Concrete Containment	1-7-94	16:00	Water		#1	X		X			X		X							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature) Miller & Scott	Date / Time 1-7-94 16:45	Received by: (Signature)	Date / Time 1/7/94 1645	

CCSTRCDEFM2

ADMIN(AD4)-5/27/92

WESTERN BIOASSAY LABORATORIES

Date: April 13, 1994

To: Mr. Chris Stromberg
Baseline
5900 Hollis Street
Suite D
Emeryville, CA 94608

From: Linda S. Mortensen
Hazardous Waste and Acute Effluent
Testing Specialist

Julianne C. Fegley
Laboratory Coordinator

Subject: Aquatic Toxicity Testing Results for Static Percent Survival Test
P.O.#59171.AO

SAMPLE MATRIX AND I.D.: One water sample #12520 (Concrete Cont. H_2O); Project No. 59171.AO.

TREATMENT DILUTIONS (%): 100 and Control run in duplicate using carbon filtered tap water with 10 fish/5 L tank and 20 fish/treatment.

TESTING PERIOD: Received 3/31/94; Tested 4/1/94 - 4/5/94.

BIOASSAY TEST(S): Threespine stickleback (*Gasterosteus aculeatus*) 96-hour Static Percent Survival Test.

METHODS: Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, third and fourth editions (EPA/600/4-85/013, EPA/600/4-90/027).

Threespine sticklebacks were salinity acclimated to 10 ppt for 3 hours, 15 ppt for 14 hours and 20 ppt for 3 hours prior to test initiation.

SB%SUR.STC

2455 Estand Way • Pleasant Hill, CA 94523
Phone: (510) 686-3215 FAX: (510) 686-3215

SUMMARY:

Threespine stickleback 96-hour percent survival in the Control was 100%.
Threespine stickleback 96-hour percent survival in the 100% test concentration was 100% for samples #12520.

The transcribed data sheets and chain-of-custody for this test are enclosed. If you have any questions concerning this report please contact Linda Mortensen, Hazardous Waste and Acute Effluent Testing Specialist, at the lab (510) 686-3215.

Western Bioassay Laboratory
2455 Estand Way
Pleasant Hill, CA 94523
(510) 686-3215

STATIC ACUTE BIOASSAY
Percent Survival Test
Threespine Stickleback

CLIENT: Baseline ATTENTION: Chris Stromberg

SAMPLE ID#: 12520 SAMPLE DESCRIPTION: water TESTING DATES: 4/1/94 to 4/5/94

CLIENT ID#: Concrete Cont. H_2O

	4/1/94 INITIAL				4/2/94 24-HOUR				4/3/94 48-HOUR				4/4/94 72-HOUR				4/5/94 96-HOUR,FINAL			
TEST CONCENTRATION %	Live	pH	DO mg/L	Temp °C	Live	pH	DO mg/L	Temp °C	Live	pH	DO mg/L	Temp °C	Live	pH	DO mg/L	Temp °C	Live	pH	DO mg/L	Temp °C
Control-A	10	8.6	7.8	18.8	10	8.4	7.5	20.5	10	8.0	5.2	20.4	10	7.9	7.9	20.0	10	7.8	4.9	20.6
Control-B	10	8.6	7.8	18.8	10	8.5	6.8	20.5	10	8.0	5.1	20.5	10	7.9	7.3	20.5	10	7.7	4.9	20.6
100-A	10	7.2	7.1	20.1	10	7.8	6.4	20.5	10	7.1	5.2	20.6	10	7.2	6.6	20.5	10	7.2	5.2	20.6
100-B	10	7.1	7.0	20.2	10	7.5	6.2	20.6	10	7.2	5.0	20.6	10	7.2	6.1	20.6	10	7.2	5.1	20.6

Ammonia: Control = 0 mg/L; 100% = 4.32 mg/L: **Total Chlorine:** Control = 0 mg/L; 100% = 0 mg/L: **Salinity:** Control = 27 ppt; 100% = 27 ppt

Alkalinity: Control = 32 mg/L; 100% = 26 mg/L: **Hardness:** Control = >1000 mg/L; 100% = >1000 mg/L

96-hr. Final Percent Survival: Control = 100%; 100% test concentration = 100%

Remarks:

Test Supervisor: Richard Nerksen Verification: Julianne Fegley

STATIC

WBL

WBL

WESTERN BIOASSAY LABORATORY
FISH BIOASSAY MEASUREMENTS

Threespine Stickleback

For: Baseline

Sample ID#: 12520 Stock Date: 3/23/94

Client ID#: Concrete Cont. H_2O

Average Length:	34.3	mm SL	Average Weight:	0.58	g
Standard D. (S):	1.83	mm SL	Standard D. (S):	0.08	g
Maximum Length:	38.0	mm SL	Maximum Weight:	0.73	g
Minimum Length:	31.0	mm SL	Minimum Weight:	0.49	g

	Fish Length (mm SL)	Fish Weight (g)
1.	38.0	0.73
2.	35.0	0.55
3.	34.0	0.67
4.	35.0	0.54
5.	33.0	0.52
6.	34.0	0.52
7.	35.0	0.65
8.	31.0	0.49
9.	35.0	0.58
10.	33.0	0.56

Remarks:

Measured: 4/1/94

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Standard
Lab: Western
BASELINE Contact Person: Chris Stransky

Project No.	Project Name and Location
59171.00 CS	Seabreeze

Samplers: (Signature)

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	96 hr. Acute Tox. Test						Remarks/ Composite	Detection Limits
Concrete Cont. H2O	3/31/94	11.10	W	—	1x5gal.								X						12520	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
	3/31/94 — 1220		3/31/94 1220	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
				WBL # 12520
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

APPENDIX L

SOIL SAMPLES COLLECTED LANDWARD OF CONCRETE CONTAINMENT LABORATORY REPORTS

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

29 August 1994

Ms. Yane Nordhav
Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

SUBJECT: Case Narrative Laboratory Number 116876
Baseline Project#: S9171-00.02

Dear Yane:

Enclosed please find sample results for the above-referenced project which consisted of 19 soils and one standard received under chain-of-custody 8/15/94.

These samples where analyzed for bunker C oil using the California LUFT Manual method for extractable hydrocarbons. Quantitation was based on the total peak area between nC12 and nC50. Results are reported based on both our bunker C standard and an aged bunker C collected in the field and supplied with the samples. Response factors for both are based on a single point standard. Chromatograms for all samples and standards are enclosed.

If you have any questions regading this project, please feel free to call me at (510) 486-0900.

Sincerely,

CURTIS & TOMPKINS, LTD.

John Goyette
Operations Mananger

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

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

Prepared for:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 29-AUG-94
Lab Job Number: 116876
Project ID: S9171-00.02
Location: Sea Breeze, Concrete

Reviewed by: Mary Plessas

Reviewed by:

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 116876
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-00.02
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 08/15/94
DATE RECEIVED: 08/15/94
DATE EXTRACTED: 08/19/94
DATE ANALYZED: 08/24/94
DATE REPORTED: 08/29/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	BUNKER C RANGE * (mg/Kg)	REPORTING LIMIT (mg/Kg)
116876-002	BC16-2.5-3.0	2,600	250
116876-003	BC15-3.5-4.0	670	25
116876-004	BC18-3.5-4.0	ND	25
116876-005	BC17-2.5-3.0	ND	25
116876-007	BC19-3.5-4.0	240	25
116876-008	BC1-1.0-1.5	1,900	250
116876-009	BC2-2.5-3.0	1,300	25
116876-010	BC3-1.0-1.5	1,100	250
116876-011	BC4-1.75-2.25	3,000	250
116876-012	BC5-2.5-3.0	2,000	250
116876-013	BC6-2.5-3.0	1,200	250
116876-015	BC8-2.5-3.0	240	25
116876-016	BC9-3.0-3.5	ND	25
116876-017	BC10-0.0-0.5	ND	25
116876-018	BC11-2.0-2.5	200	25
116876-019	BC12-0.0-0.5	ND	25
116876-METHOD BLANK		ND	25

* Quantitation based on Bunker C standard supplied by Baseline 8/15/94.

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD,%	7
RECOVERY, %	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 116876
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-00.02
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 08/15/94
DATE RECEIVED: 08/15/94
DATE EXTRACTED: 08/25/94
DATE ANALYZED: 08/28/94
DATE REPORTED: 08/29/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	BUNKER C RANGE * (mg/Kg)	REPORTING LIMIT (mg/Kg)
116876-001	BC14-2.5-3.0	150	25
116876-006	BC13-0.5-1.0	2,300	25
116876-014	BC7-0.5-1.0	1,100	25
116876-METHOD BLANK		ND	25

* Quantitation based on Bunker C standard supplied by Baseline 8/15/94.

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

LCS RECOVERY, %	75

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 116876
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-00.02
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 08/15/94
DATE RECEIVED: 08/15/94
DATE EXTRACTED: 08/19/94
DATE ANALYZED: 08/24/94
DATE REPORTED: 08/29/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	BUNKER C RANGE * (mg/Kg)	REPORTING LIMIT (mg/Kg)
116876-002	BC16-2.5-3.0	2,600	250
116876-003	BC15-3.5-4.0	750	25
116876-004	BC18-3.5-4.0	ND	25
116876-005	BC17-2.5-3.0	ND	25
116876-007	BC19-3.5-4.0	240	25
116876-008	BC1-1.0-1.5	1,900	250
116876-009	BC2-2.5-3.0	1,300	25
116876-010	BC3-1.0-1.5	1,100	250
116876-011	BC4-1.75-2.25	3,000	250
116876-012	BC5-2.5-3.0	2,000	250
116876-013	BC6-2.5-3.0	1,200	250
116876-015	BC8-2.5-3.0	240	25
116876-016	BC9-3.0-3.5	ND	25
116876-017	BC10-0.0-0.5	ND	25
116876-018	BC11-2.0-2.5	200	25
116876-019	BC12-0.0-0.5	ND	25
116876-METHOD BLANK		ND	25

* Quantitation based on Curtis & Tompkins Bunker C standard.

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD,%	7
RECOVERY, %	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 116876
CLIENT: BASELINE ENVIRONMENTAL
PROJECT ID: S9171-00.02
LOCATION: SEA BREEZE, CONCRETE

DATE SAMPLED: 08/15/94
DATE RECEIVED: 08/15/94
DATE EXTRACTED: 08/25/94
DATE ANALYZED: 08/28/94
DATE REPORTED: 08/29/94

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	BUNKER C RANGE * (mg/Kg)	REPORTING LIMIT (mg/Kg)
116876-001	BC14-2.5-3.0	130	25
116876-006	BC13-0.5-1.0	2,000	25
116876-014	BC7-0.5-1.0	1,000	25
116876-METHOD BLANK		ND	25

* Quantitation based on Curtis & Tompkins Bunker C standard.

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

LCS RECOVERY, %	75

11076

CHAIN OF CUSTODY RECORD

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

Turn-around Time: One of Two 5-Day
Lab: Curtis & Tompkins
BASELINE Contact Person: Bruce Anawa

Project No.	Project Name and Location
59171-00.02	Seabreeze

Samplers: (Signature) Miller & Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	8015 M Bunker C						Remarks/ Composite	Detection Limits
-1	BC14-2.5-3.0	7-15-94	8:46	Soil	2.5-3.0	1								X							
-2	BC16-2.5-3.0		9:10		2.5-3.0	1								X							
-3	BC15; 3.5-4.0		9:43		3.5-4.0	1								X							
-4	BC18; 3.5-4.0		10:10		3.5-4.0	1								X							
-5	BC17; 2.5-3.0		10:20		2.5-3.0	1								X							
-6	BC13; 0.5-1.0		10:35		0.5-1.0	1								X							
-7	BC19; 3.5-4.0		11:08		3.5-4.0	1								X							
8	BC2; 1.0-1.5		11:30		1.0-1.5	1								X							
-9	BC2; 2.5-3.0		11:40		2.5-3.0	1								X							
-10	BC3; 1.0-1.5		11:49		1.0-1.5	1								X							
-11	BC4; 1.75-2.25	↓	12:00	↓	1.75-2.25	1								X							
-12	BC5; 2.5-3.0		12:59		2.5-3.0	1								X							
-13	BC6; 2.5-3.0		13:10		2.5-3.0	1								X							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Please include chromatographs with Report
Relinquished by: (Signature) Miller & Scott	Date / Time 8-15-94/16:15	Received by: (Signature) Mary Messer	Date / Time 8/15/94 1615	

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

116876

CHAIN OF CUSTODY RECORD

Turn-around Time: 5-Day (TWO OF TWO)
Lab: Curtis & Tompkins
BASELINE Contact Person: Bruce Anderson

Project No.	Project Name and Location
5917-00.02	Seabreeze

Samplers: (Signature) William C Deaton

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH	(TPH with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	8015M Bunker C						Remarks/ Composite	Detection Limits
14	BC7; 0.5-1.0	8-15-94	13:25	Soil	0.5-1.0	1								X							
15	BC8; 2.5-3.0		13:40		2.5-3.0	1								X							
16	BC9; 3.0-3.5		14:20		3.0-3.5	1								X							
17	BC10; 0.0-0.5		13:48		0.0-0.5	1								X							
18	BC11; 2.0-2.5		14:30		2.0-2.5	1								X							
19	BC12; 0.0-0.5		14:45		0.0-0.5	1								X							
20	Bunker C Standard													X							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks: Please include Chromatographs in Report. Please return Bunker C Sample to Baseline
Relinquished by: (Signature) William C Deaton	Date / Time 8-15-94/16:15	Received by: (Signature) Mary Pleasant	Date / Time 8/15/94 1615	

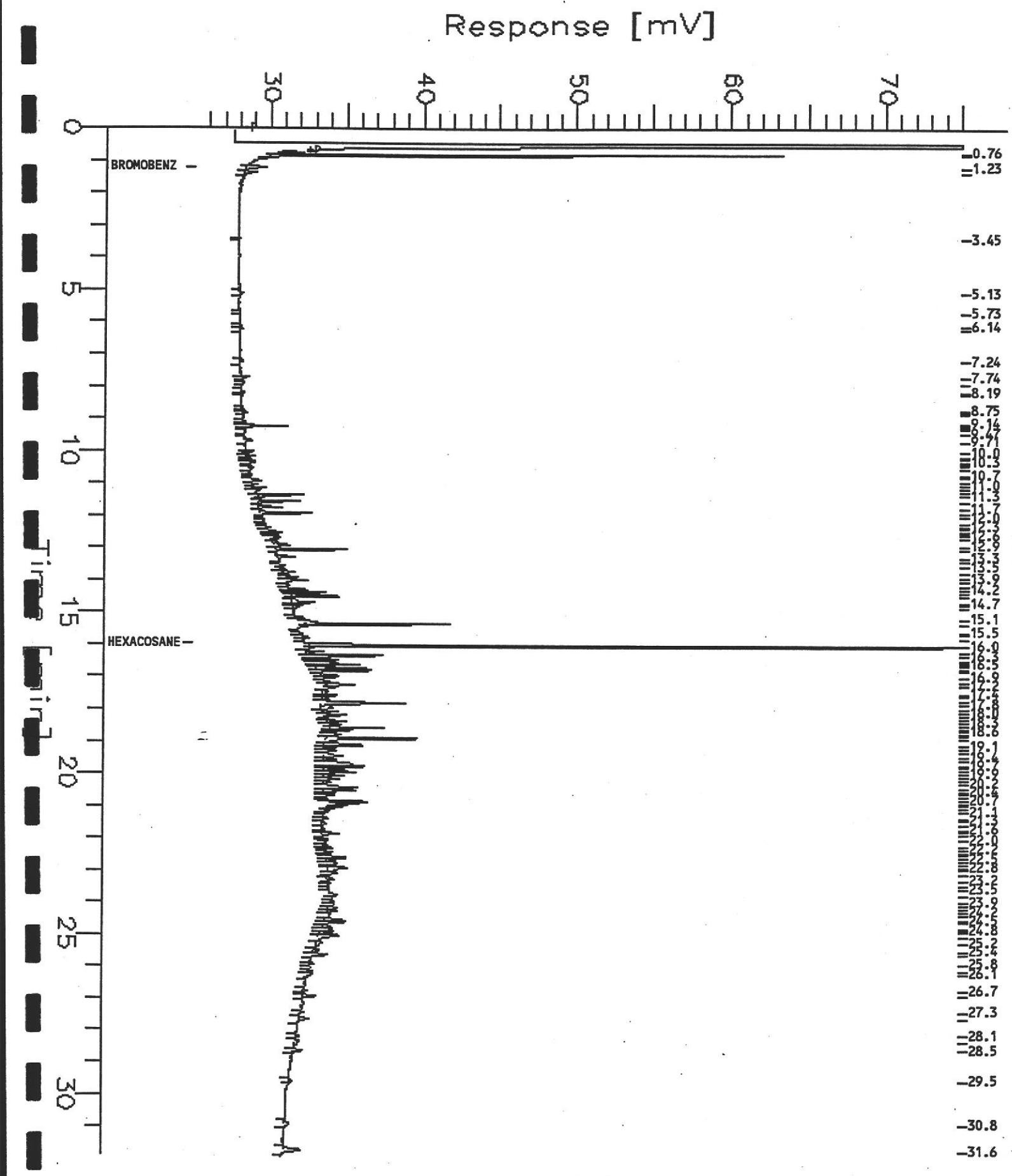
CCSTRCDE.FM2

ADMIN(AD4)-5/27/92

TEH Chromatogram GC11 CH A

ample Name : 116876-001 50:5
ileName - : g:\gc11\cha\241A013.raw
Method : GC11_A.ins
Start Time :0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 25 mV

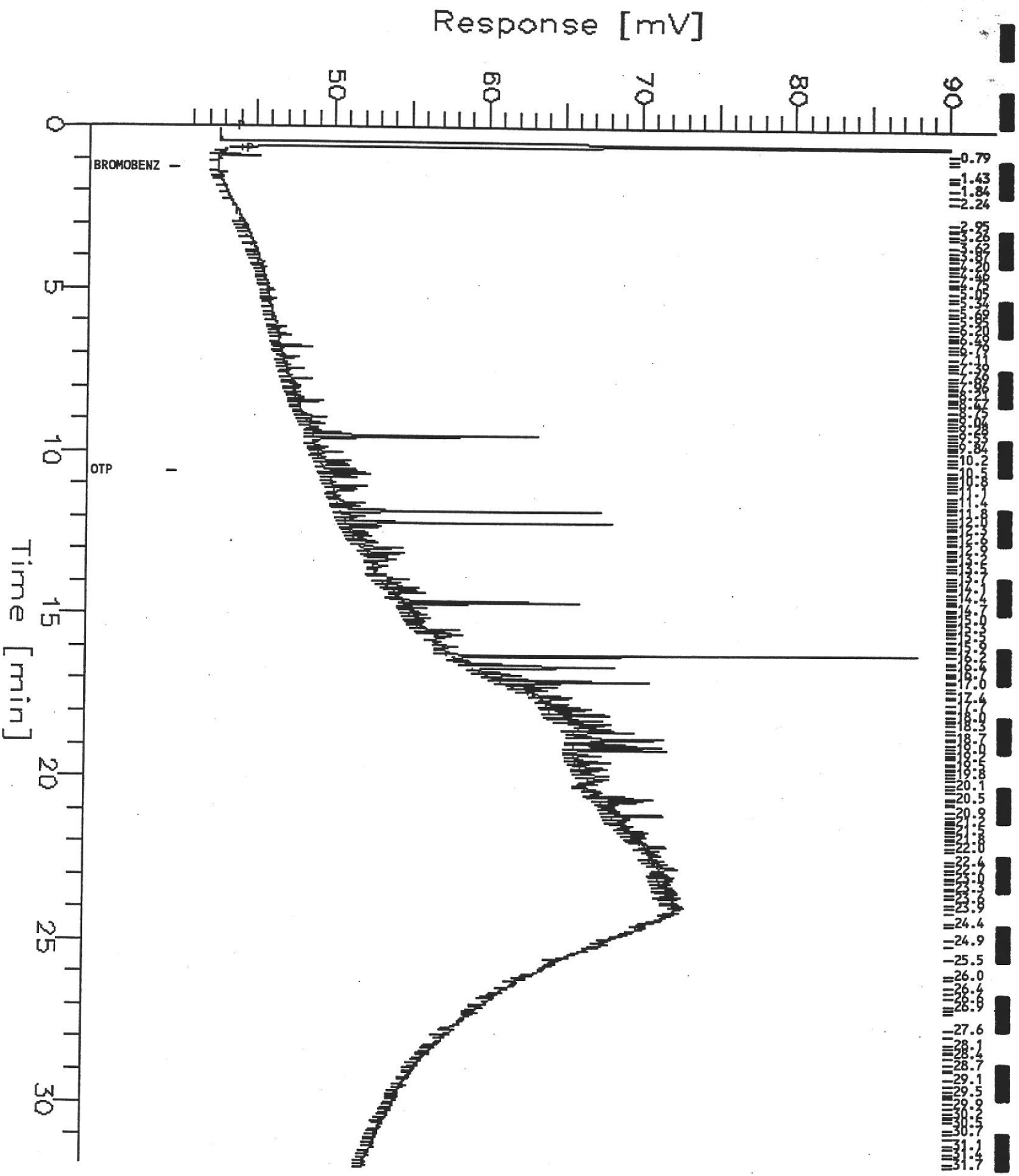
Sample #: 15901 Page 1 of 1
Date : 8/28/94 09:54 PM
Time of Injection: 8/28/94 09:21 PM
Low Point : 25.04 mV High Point : 75.04 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

e Name : 116876-002 50:50
leName : g:\gc13\cha\235A018.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 40 mV

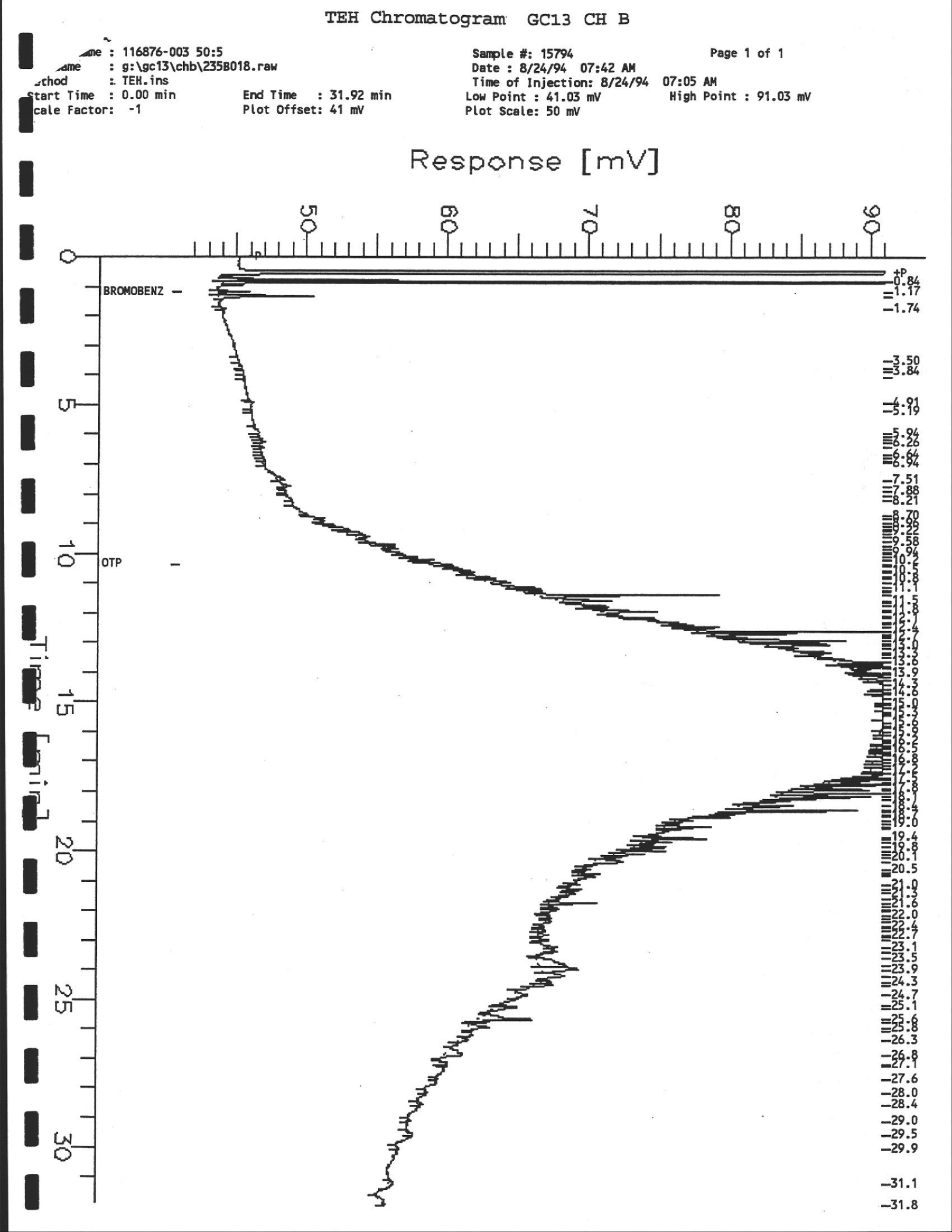
Sample #: 15794
Date : 8/24/94 07:40 AM
Time of Injection: 8/24/94 07:05 AM
Low Point : 40.01 mV High Point : 90.01 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

ame : 116876-003 50:5
ame : g:\gc13\chb\235B018.raw
thod : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 41 mV

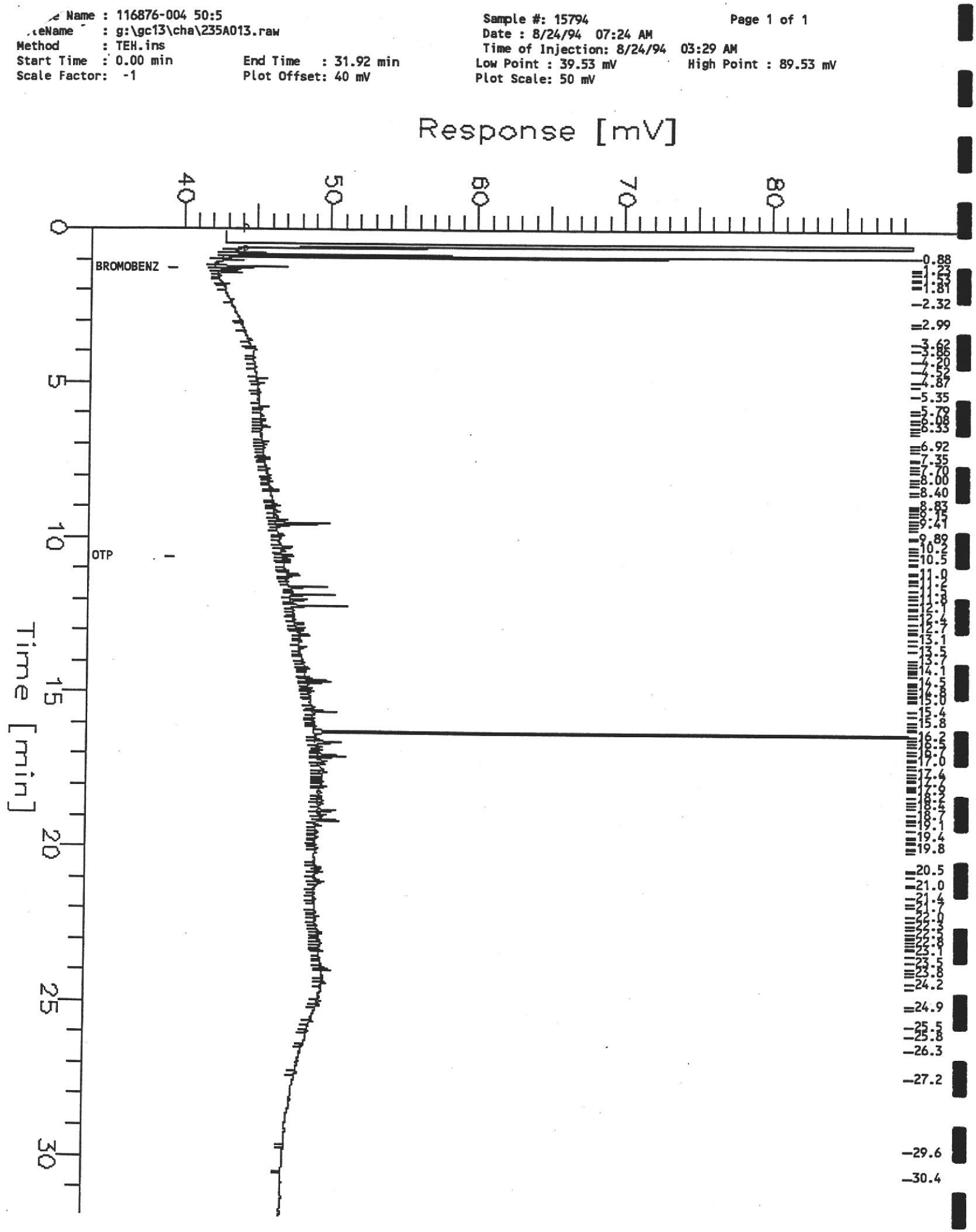
Sample #: 15794
Date : 8/24/94 07:42 AM
Time of Injection: 8/24/94 07:05 AM
Low Point : 41.03 mV High Point : 91.03 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

Name : 116876-004 50:5
FileName : g:\gc13\cha\235A013.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 40 mV

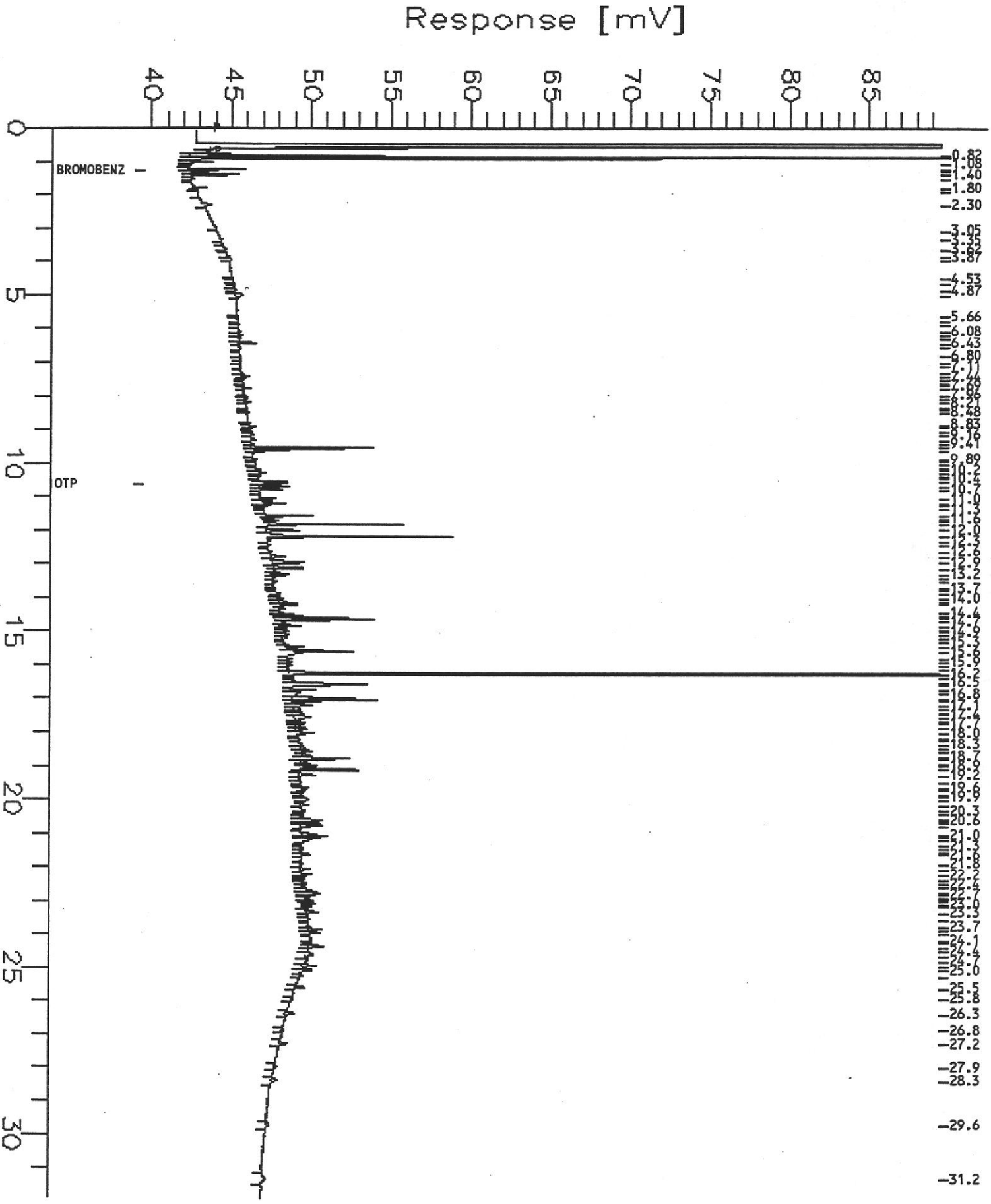
Sample #: 15794 Page 1 of 1
Date : 8/24/94 07:24 AM
Time of Injection: 8/24/94 03:29 AM
Low Point : 39.53 mV High Point : 89.53 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

ple Name : 116876-005 50:5
FileName : g:\gc13\cha\235A014.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 40 mV

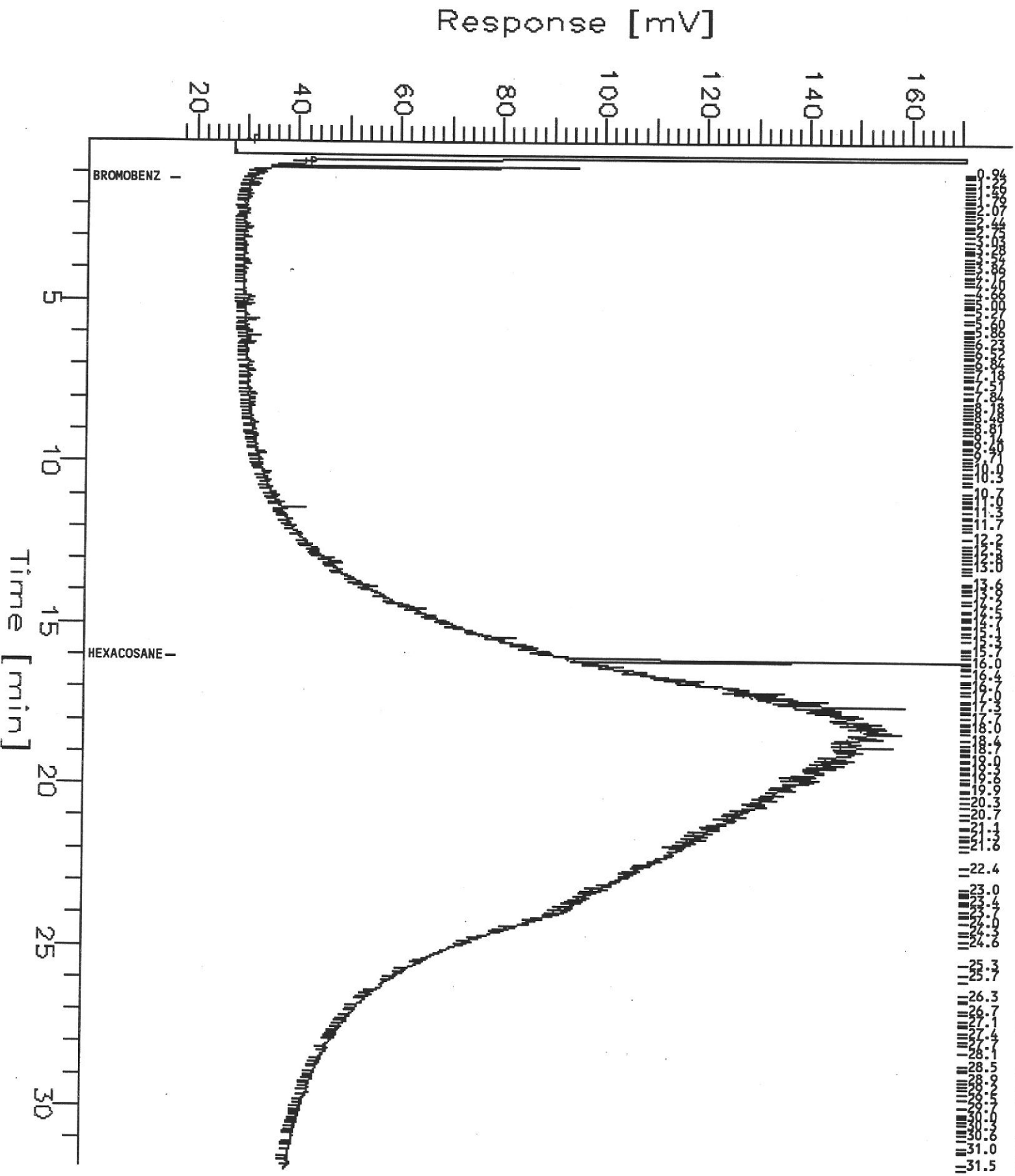
Sample #: 15794 Page 1 of 1
Date : 8/24/94 07:27 AM
Time of Injection: 8/24/94 04:13 AM
Low Point : 39.57 mV High Point : 89.57 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH A

Sample Name : 116876-006 50:5
FileName : G:\GC11\CHA\241A014.raw
Method : GC11_A.ins
Start Time : 0.01 min End Time : 31.92 min
Scale Factor: 0 Plot Offset: 17 mV

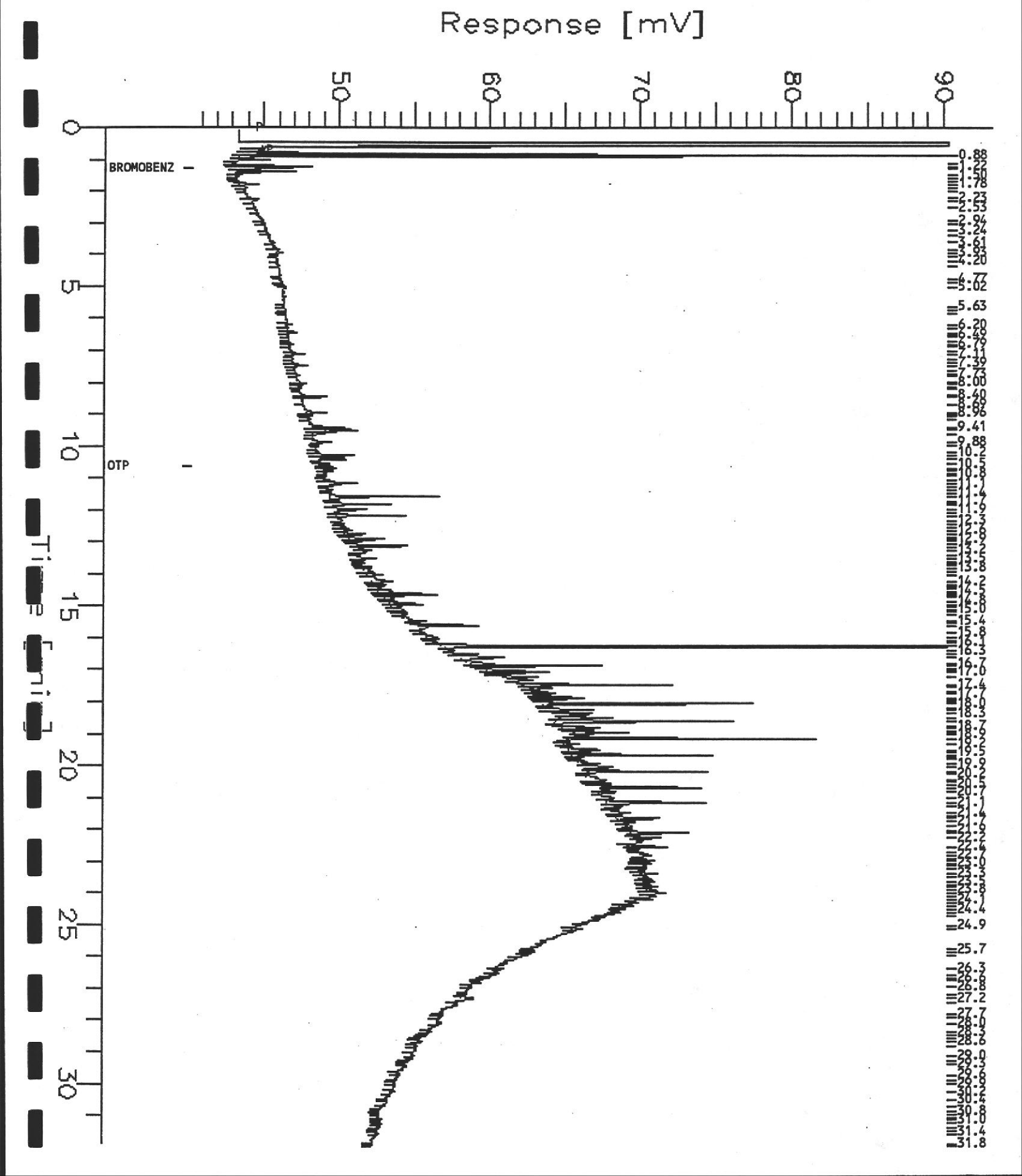
Sample #: 15901 Page 1 of 1
Date : 8/29/94 11:34 AM
Time of Injection: 8/28/94 10:04 PM
Low Point : 16.57 mV High Point : 170.64 mV
Plot Scale: 154 mV



TEH Chromatogram GC13 CH A

[redacted]e Name : 116876-007 50:5
[redacted]leName : g:\gc13\cha\235A019.raw
Method : TEH.ins
[redacted]tart Time : 0.00 min End Time : 31.92 min
[redacted]cale Factor: -1 Plot Offset: 40 mV

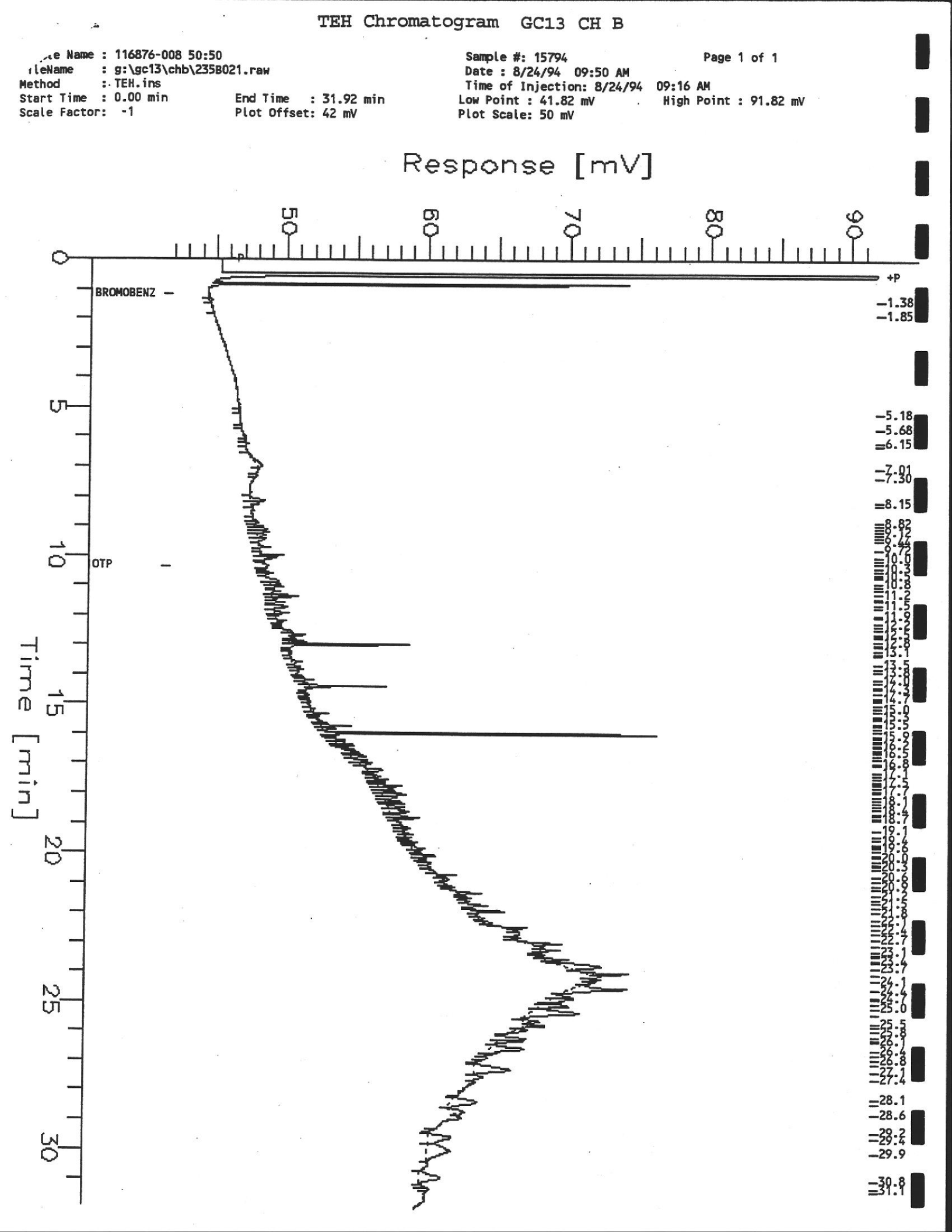
Sample #: 15794
Date : 8/24/94 08:23 AM
Time of Injection: 8/24/94 07:49 AM
Low Point : 40.40 mV High Point : 90.40 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

Sample Name : 116876-008 50:50
FileName : g:\gc13\chb\235B021.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 42 mV

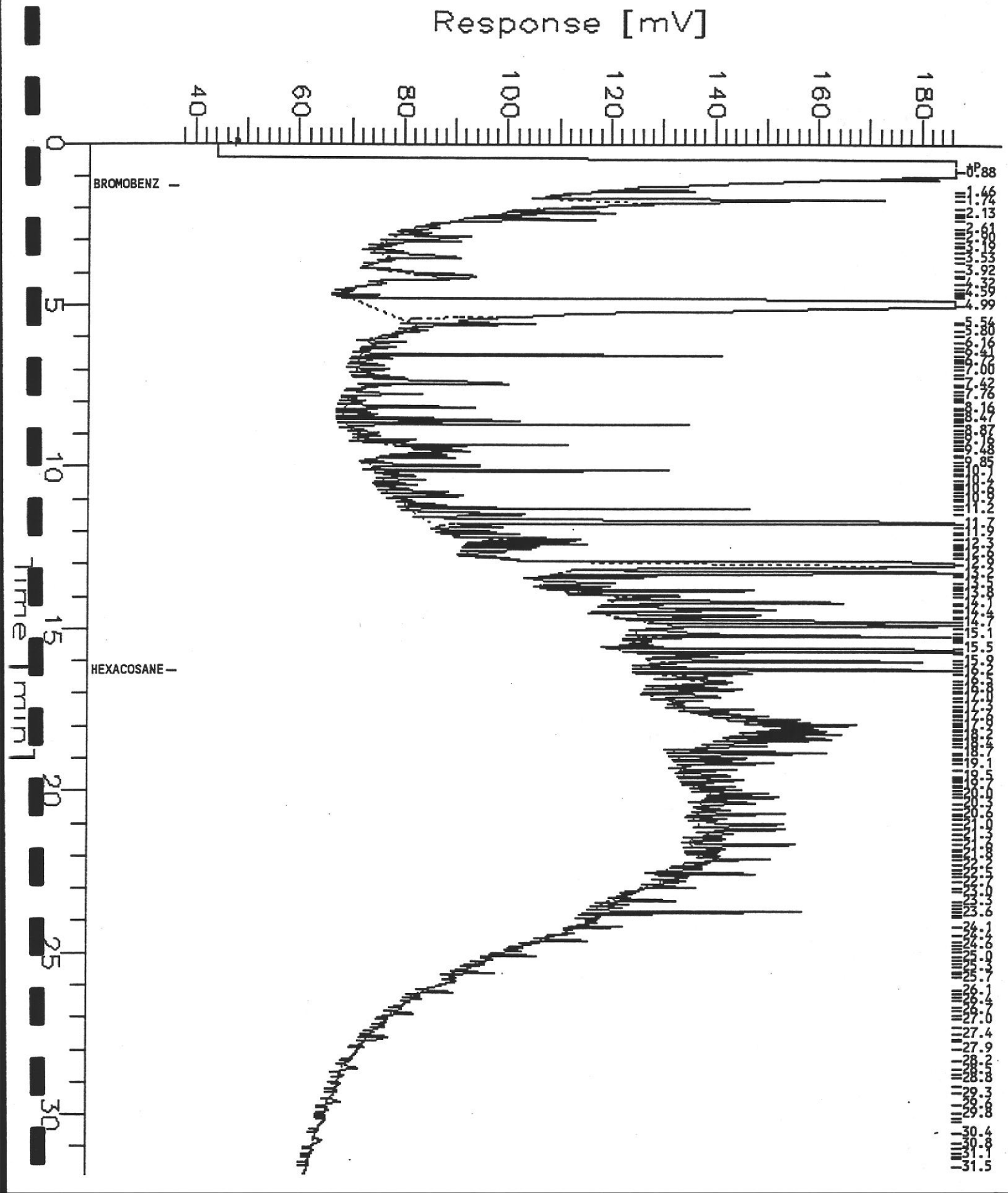
Sample #: 15794 Page 1 of 1
Date : 8/24/94 09:50 AM
Time of Injection: 8/24/94 09:16 AM
Low Point : 41.82 mV High Point : 91.82 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

Sample Name : 116876-009 50:5
FileName : G:\GC13\CHA\235A024.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 37 mV

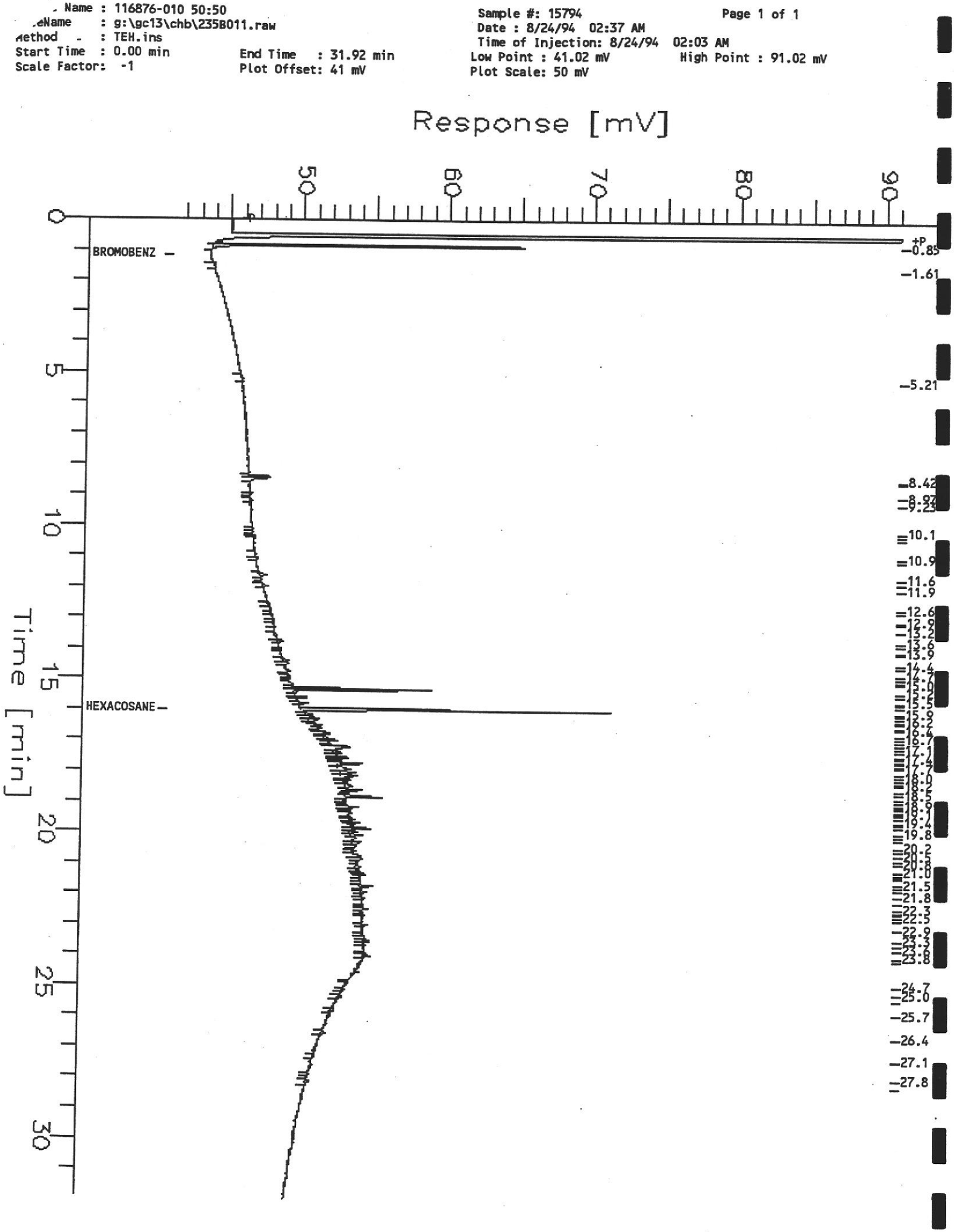
Sample #: 15794 Page 1 of 1
Date : 8/25/94 11:42 AM
Time of Injection: 8/24/94 11:26 AM
Low Point : 36.60 mV High Point : 186.60 mV
Plot Scale: 150 mV



Name : 116876-010 50:50
eName : g:\gc13\chb\2358011.raw
ethod : TEH.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 41 mV

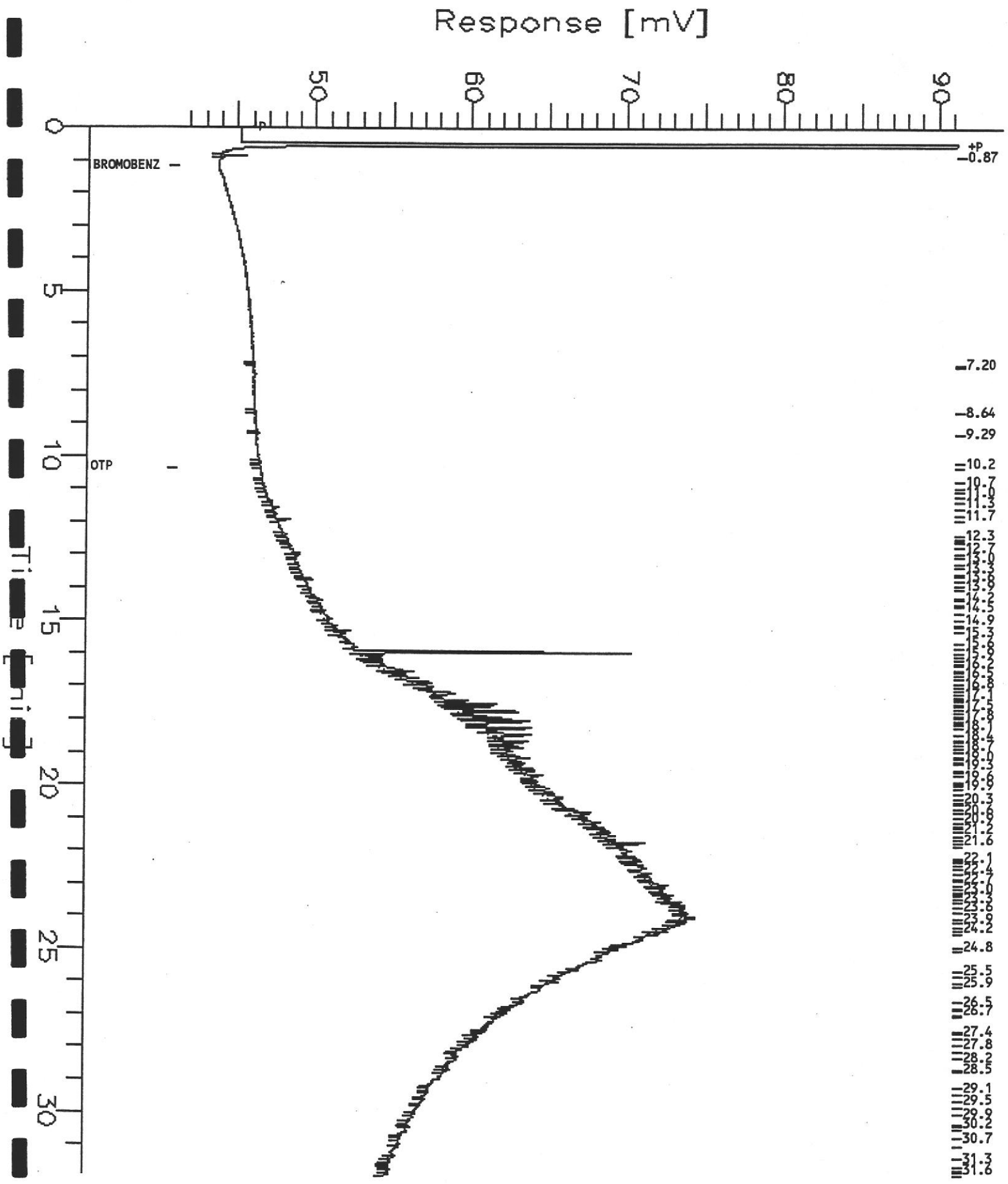
Sample #: 15794
Date : 8/24/94 02:37 AM
Time of Injection: 8/24/94 02:03 AM
Low Point : 41.02 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

ple Name : 116876-011 50:50
FileName : g:\gc13\chb\235B014.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 41 mV

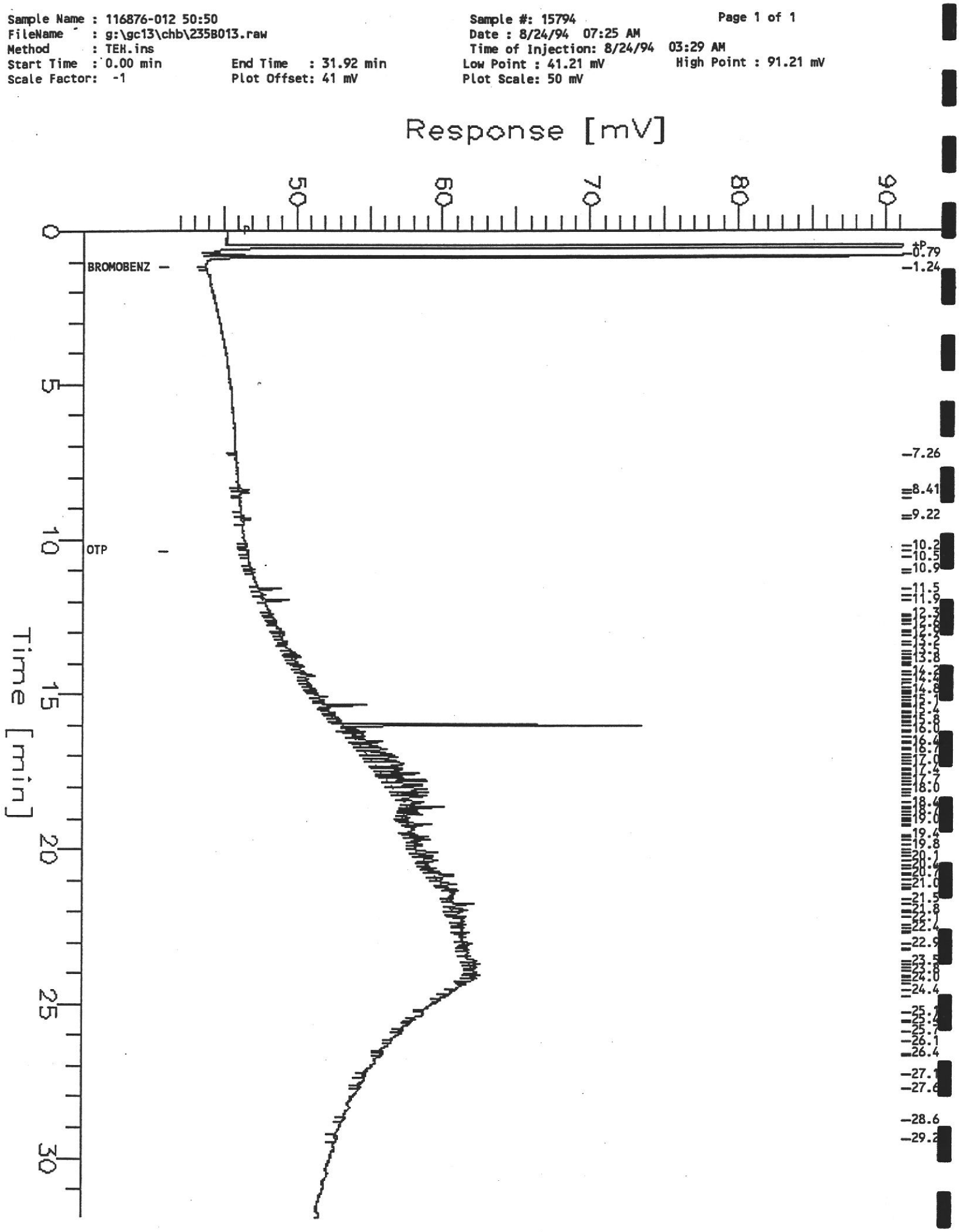
Sample #: 15794 Page 1 of 1
Date : 8/24/94 07:28 AM
Time of Injection: 8/24/94 04:13 AM
Low Point : 41.23 mV High Point : 91.23 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

Sample Name : 116876-012 50:50
FileName : g:\gc13\chb\235B013.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 41 mV

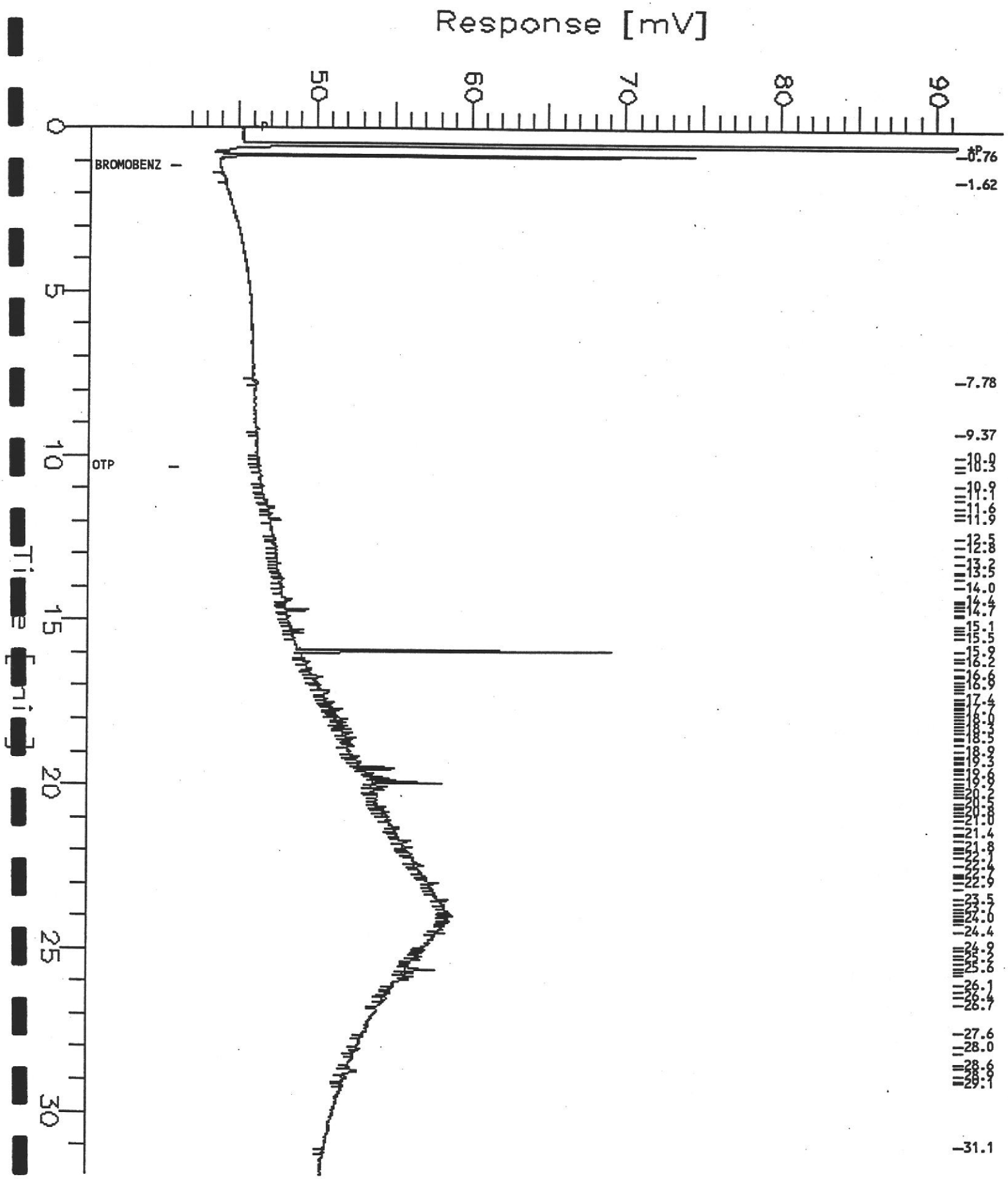
Sample #: 15794
Date : 8/24/94 07:25 AM
Time of Injection: 8/24/94 03:29 AM
Low Point : 41.21 mV High Point : 91.21 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

Sample Name : 116876-013 50:50
FileName : g:\gc13\chb\235B012.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 41 mV

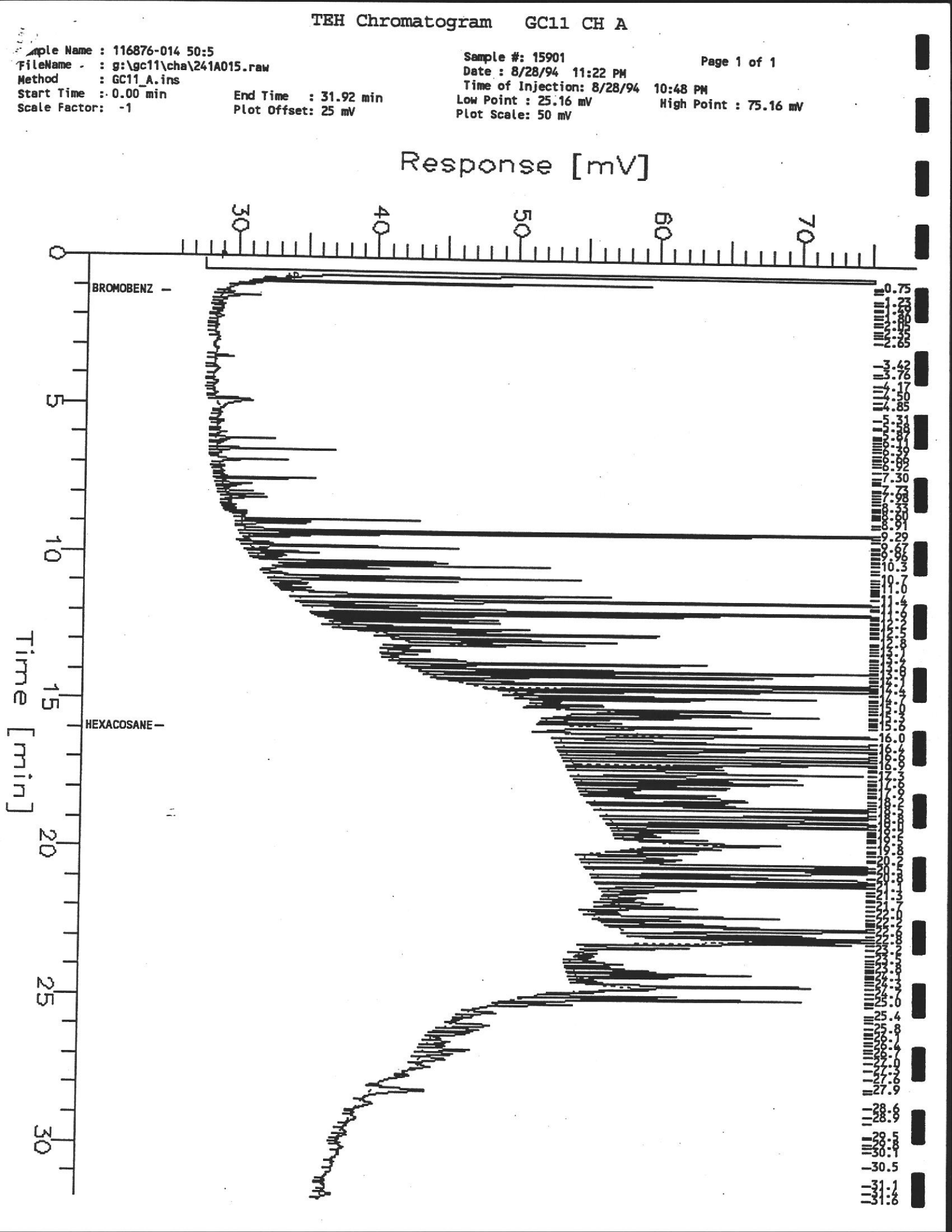
Sample #: 15794
Date : 8/24/94 07:22 AM
Time of Injection: 8/24/94 02:46 AM
Low Point : 41.31 mV High Point : 91.31 mV
Plot Scale: 50 mV



TEH Chromatogram GC11 CH A

ple Name : 116876-014 50:5
FileName : g:\gc11\cha\241A015.raw
Method : GC11_A.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 25 mV

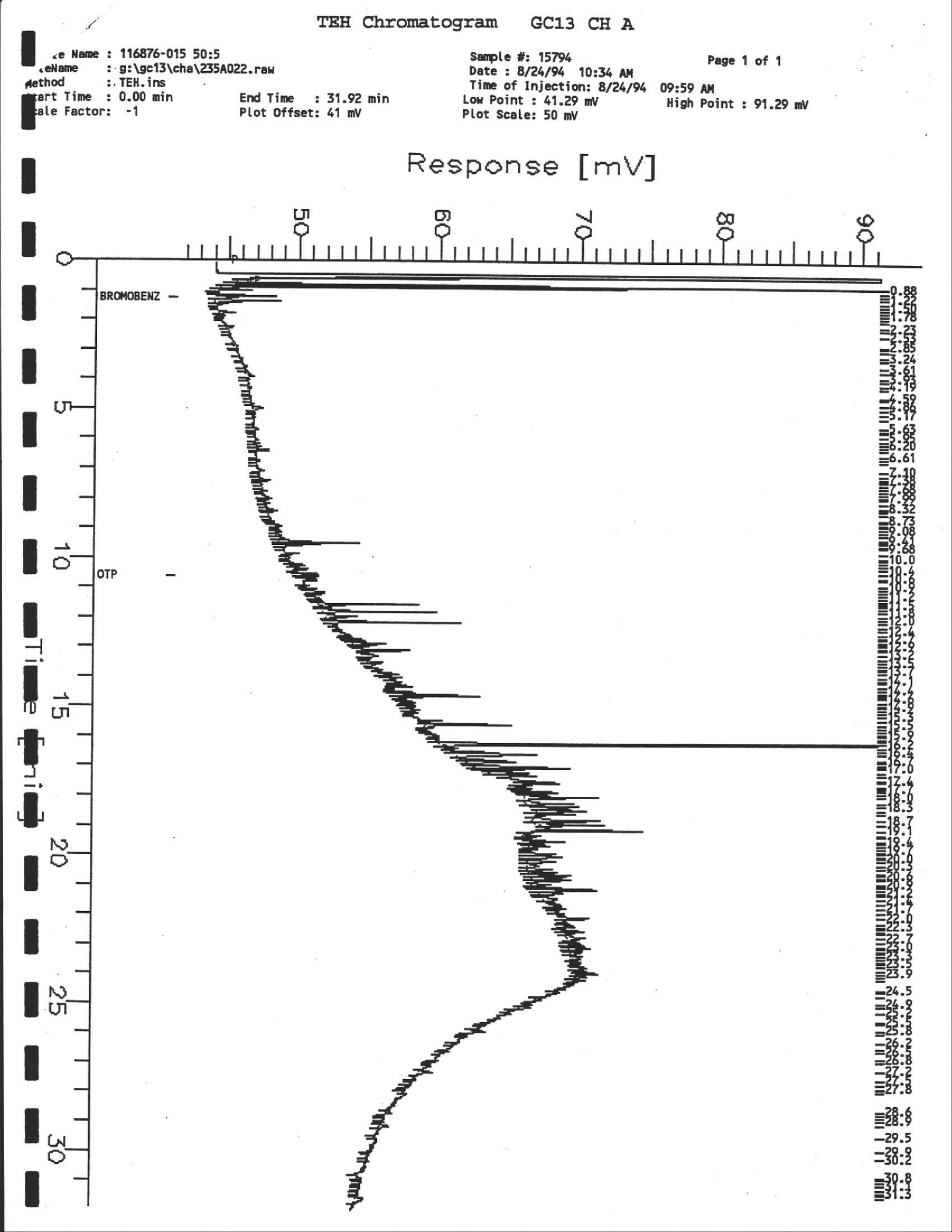
Sample #: 15901
Date : 8/28/94 11:22 PM
Time of Injection: 8/28/94 10:48 PM
Low Point : 25.16 mV High Point : 75.16 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

e Name : 116876-015 50:5
eName : g:\gc13\cha\235A022.raw
ethod : TEH.ins
art Time : 0.00 min End Time : 31.92 min
ale Factor: -1 Plot Offset: 41 mV

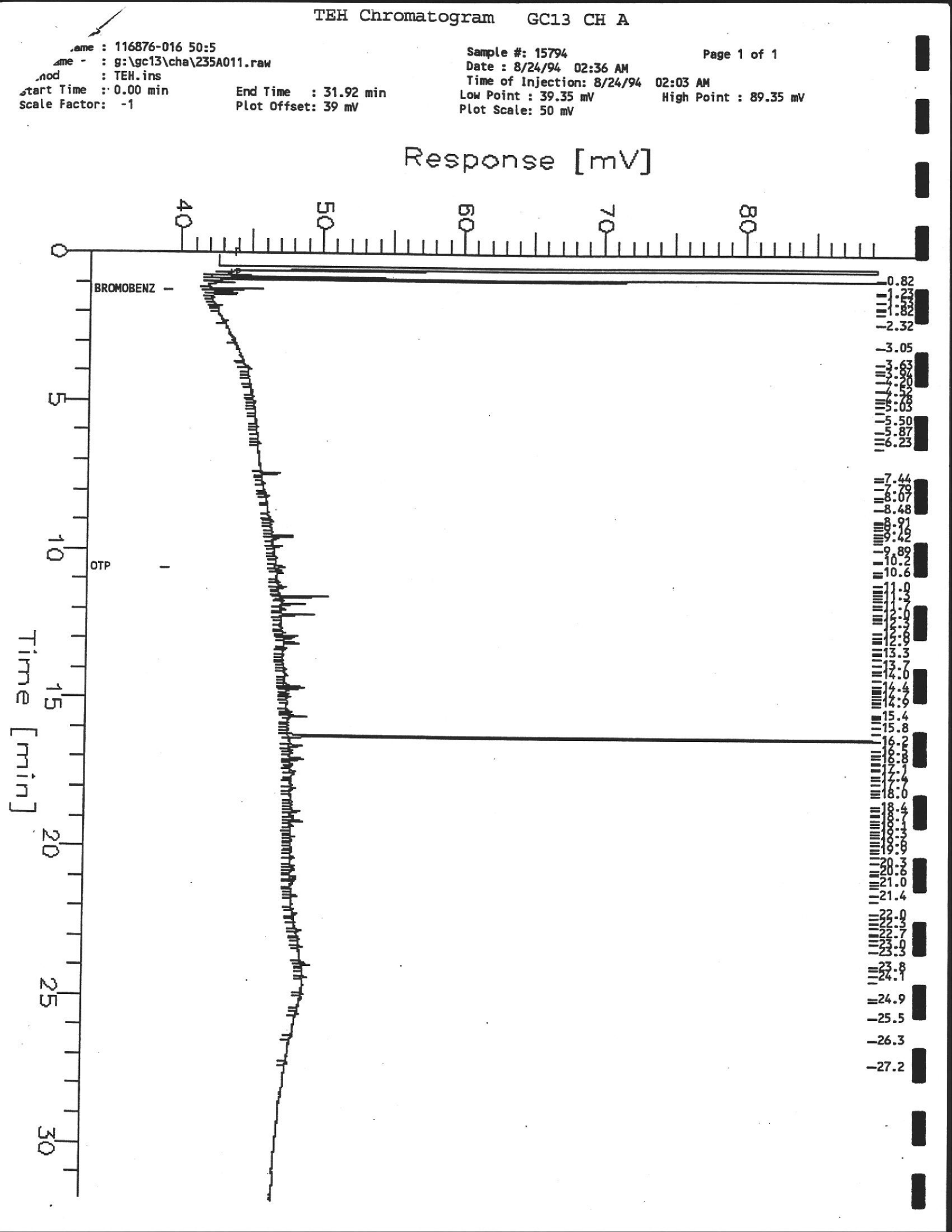
Sample #: 15794
Date : 8/24/94 10:34 AM
Time of Injection: 8/24/94 09:59 AM
Low Point : 41.29 mV High Point : 91.29 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

ame : 116876-016 50:5
me - : g:\gc13\cha\235A011.raw
nod : TEH.ins
tart Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 39 mV

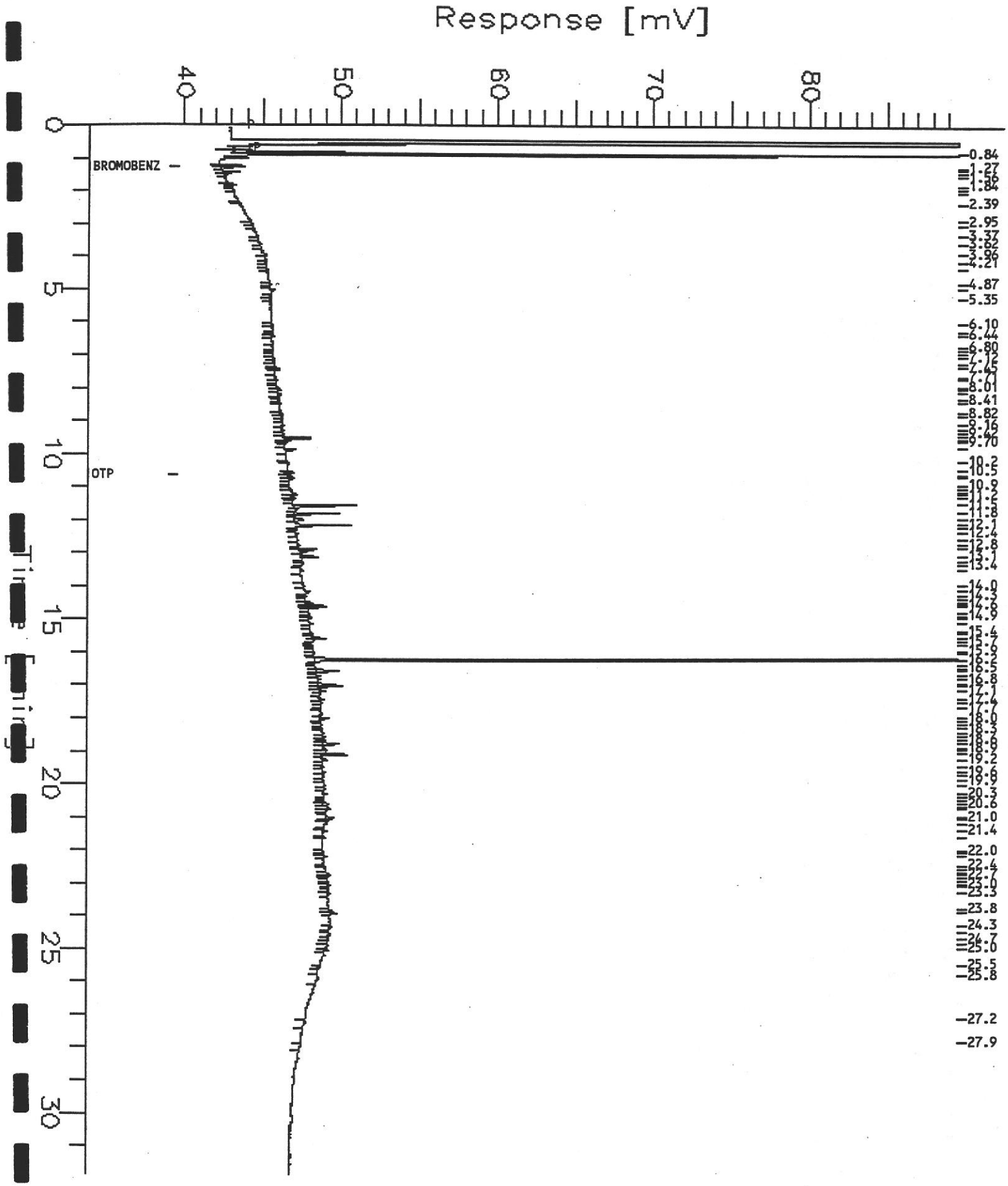
Sample #: 15794 Page 1 of 1
Date : 8/24/94 02:36 AM
Time of Injection: 8/24/94 02:03 AM
Low Point : 39.35 mV High Point : 89.35 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

ple Name : 116876-017 50:5
leName : g:\gc13\cha\235A012.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 40 mV

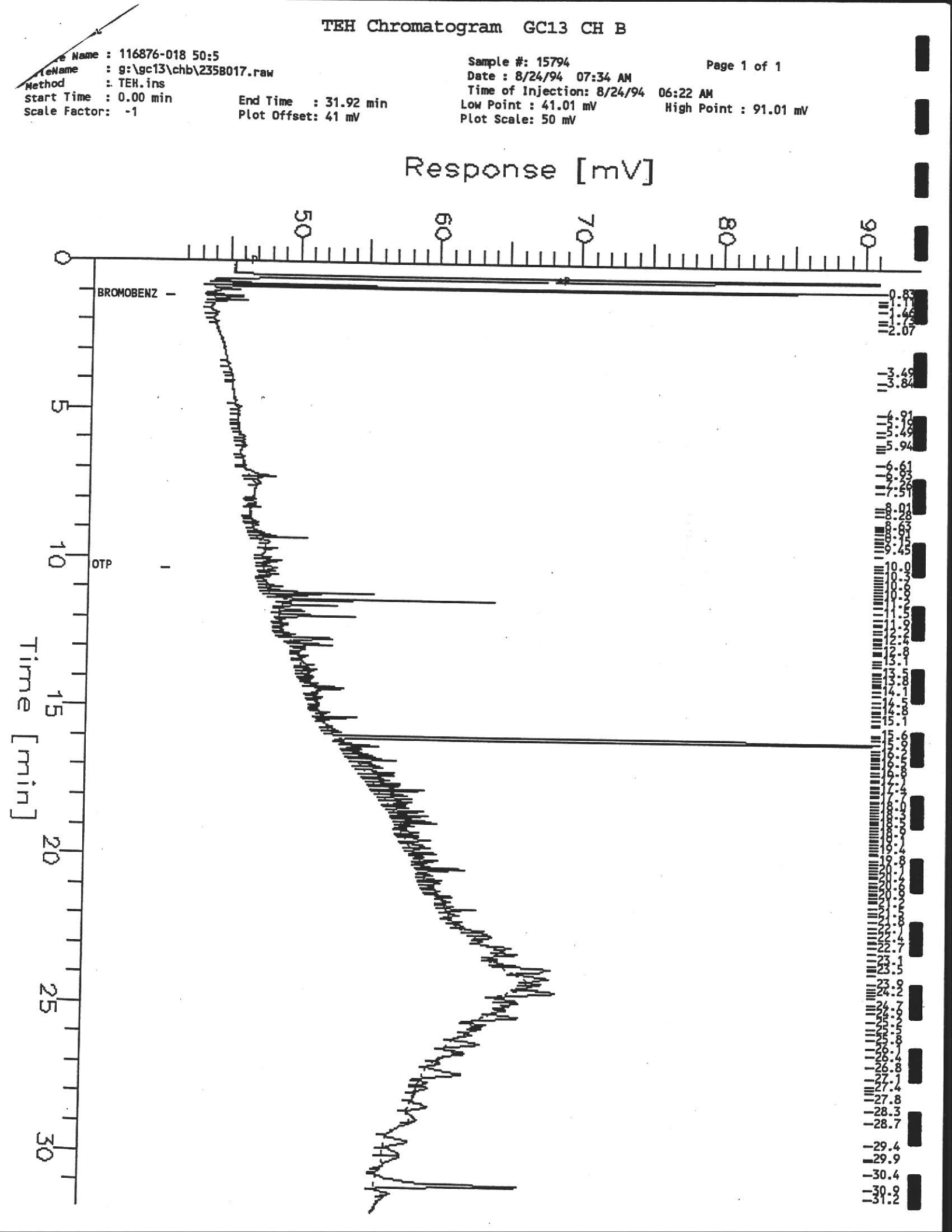
Sample #: 15794 Page 1 of 1
Date : 8/24/94 07:21 AM
Time of Injection: 8/24/94 02:46 AM
Low Point : 39.66 mV High Point : 89.66 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH B

Name : 116876-018 50:5
FileName : g:\gc13\chb\2358017.raw
Method : TEH.ins
Start Time : 0.00 min
End Time : 31.92 min
Scale Factor: -1
Plot Offset: 41 mV

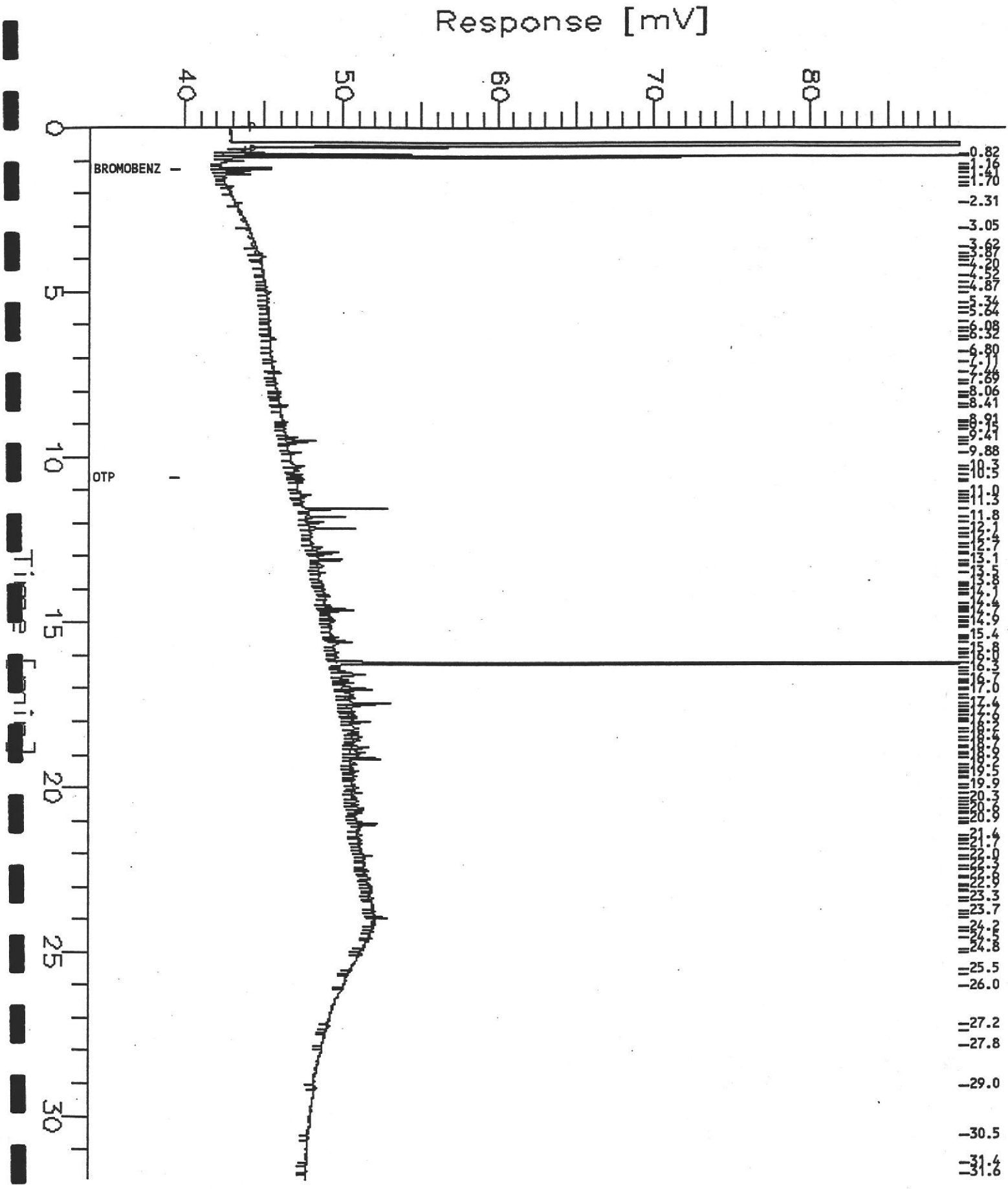
Sample #: 15794
Date : 8/24/94 07:34 AM
Time of Injection: 8/24/94 06:22 AM
Low Point : 41.01 mV
High Point : 91.01 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

e Name : 116876-019 50:5
leName : g:\gc13\cha\235A015.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 40 mV

Sample #: 15794 Page 1 of 1
Date : 8/24/94 07:29 AM
Time of Injection: 8/24/94 04:56 AM
Low Point : 39.65 mV High Point : 89.65 mV
Plot Scale: 50 mV



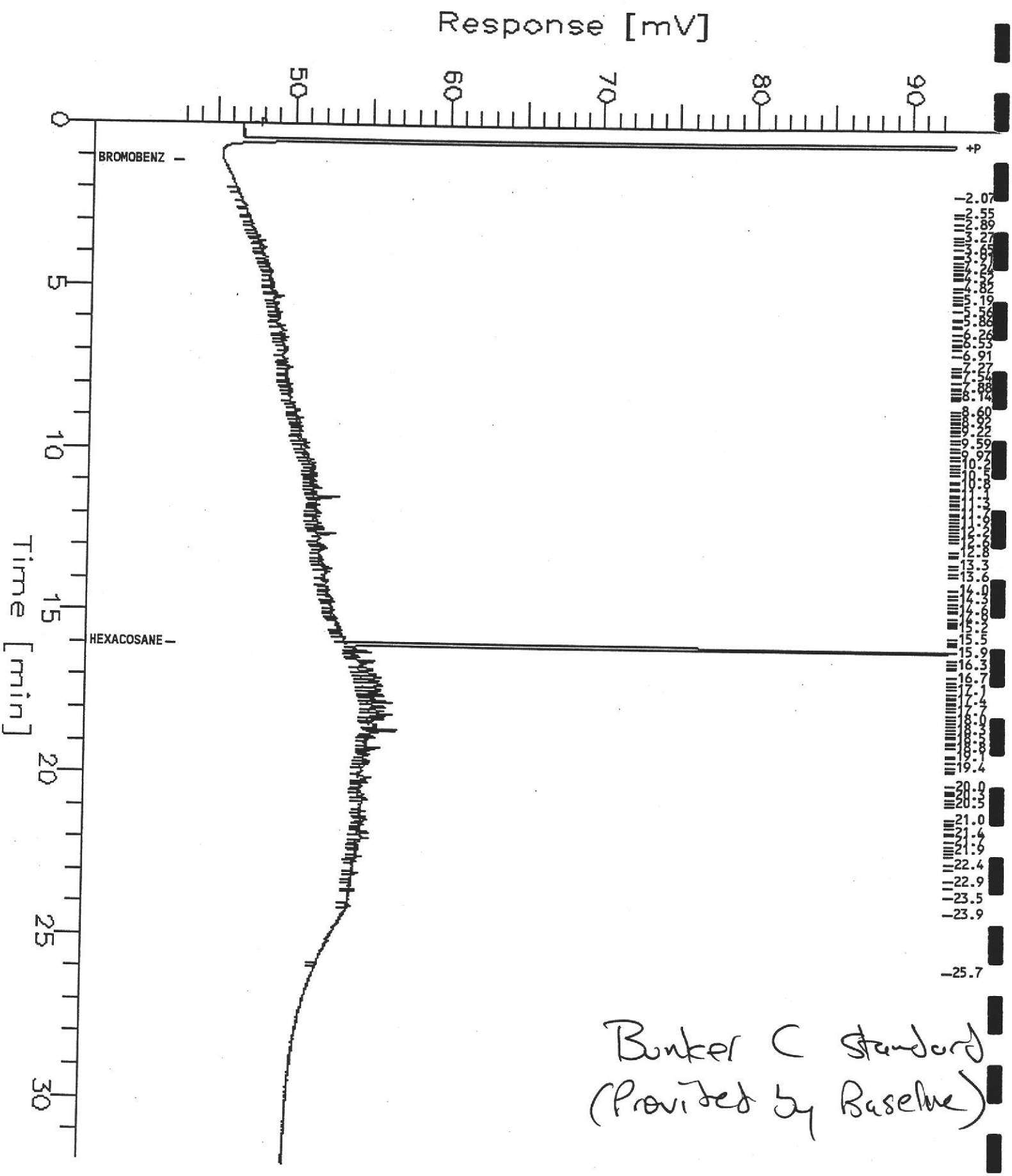
TEH Chromatogram GC13 CH B

Name : BAS BUNK C 1185MG/L
FileName : g:\gc13\chb\235B004.raw
Method : TEH.ins
Start Time : 0.00 min
Scale Factor: -1

End Time : 31.92 min
Plot Offset: 43 mV

Sample #: 94WS8100
Date : 8/23/94 09:36 PM
Time of Injection: 8/23/94 09:01 PM
Low Point : 42.80 mV
Plot Scale: 50 mV

Page 1 of 1
High Point : 92.80 mV

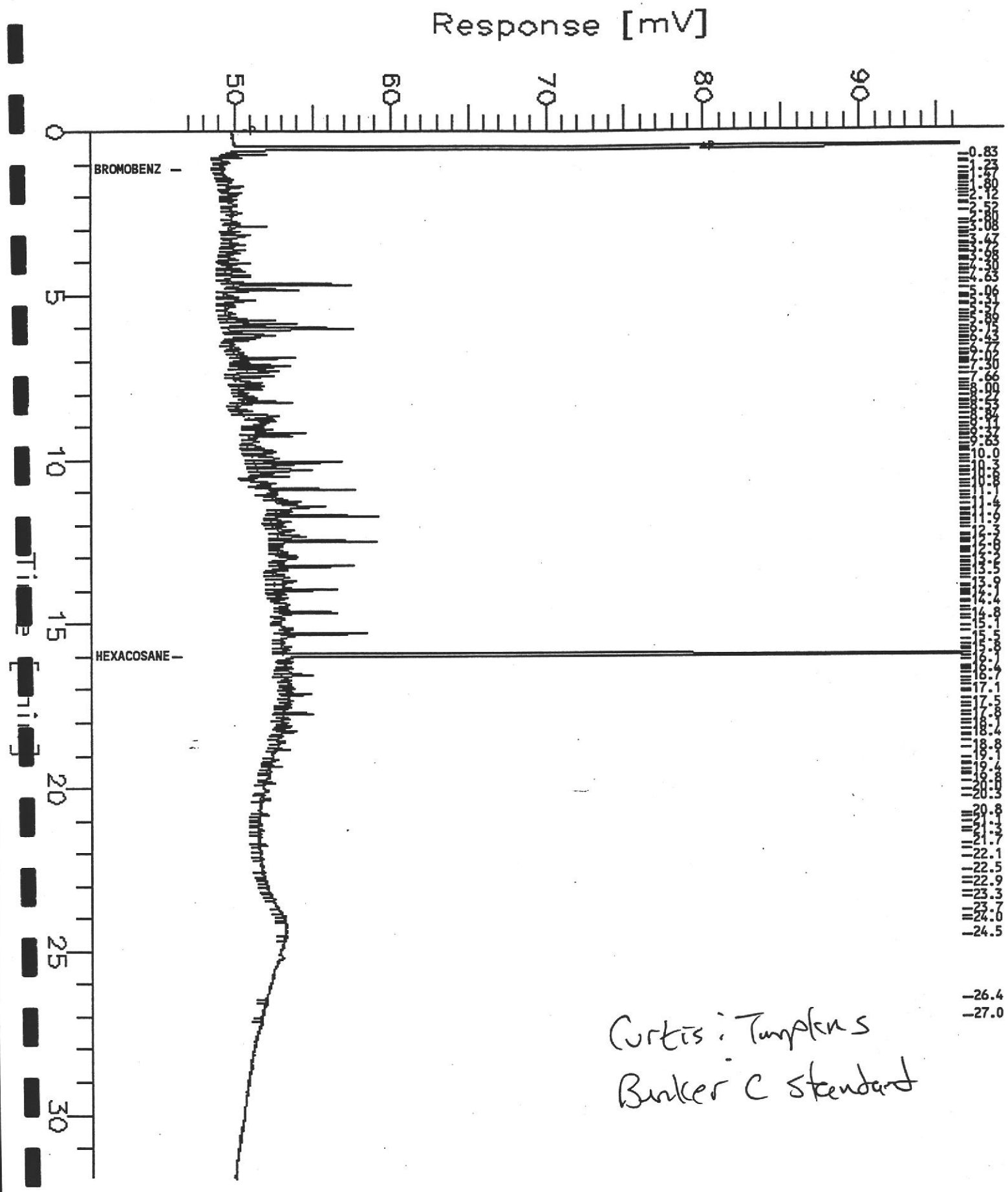


Bunker C standard
(Provided by Baseline)

TEH Chromatogram GC13 CH B

mple Name : BUNKER C 1080MG/L
leName : g:\gc13\chb\2368026.raw
Method : TEH.ins
tart Time : 0.00 min End Time : 31.92 min
ale Factor: -1 Plot Offset: 47 mV

Sample #: 94WS6744
Date : 8/25/94 01:33 PM
Time of Injection: 8/25/94 12:58 PM
Low Point : 46.51 mV High Point : 96.51 mV
Plot Scale: 50 mV



Curtis : Tumpkins
Bunker C standard