10-2584

SITE REMEDIAL INVESTIGATION REPORT

SEARWAY PROPERTY
649 PACIFIC AVENUE & 1701-1713 WEBSTER STREET
ALAMEDA, CALIFORNIA

Prepared for:

BENJAMIN, ROBIN AND BRENT SEARWAY
C/O MR. STAN HAMMOND
WELLS & BENNETT REALTORS
OAKLAND, CALIFORNIA

July 2003

★ Stellar Environmental Solutions

Geoscience & Engineering Consulting

★ **Stellar Environmental Solutions**

2198 Sixth Street, Suite 201, Berkeley, CA 94710
Tel: (510) 644-3123 • Fax: (510) 644-3859
Geoscience & Engineering Consulting

July 31, 2003

Benjamin, Robin and Brent Searway
c/o Mr. Stan Hammond
Wells & Bennet Realtors
1451 Leimert Boulevard
Oakland, California 94602

Subject: Remedial Site Investigation – Searway Property
649 Pacific Avenue & 1701/713 Webster Street, Alameda, California

Ladies and Gentlemen:

This report present the remedial site investigation conducted by Stellar Environmental Solutions, Inc. (SES) at the referenced property between March and July 2003. Our work focused on an area of former dry cleaning operations (649 Pacific Avenue space) and a potential underground fuel storage tank (1711/1713 Webster Street space). Work conducted includes drilling, geologic logging and sampling of 25 exploratory boreholes, analyzing 18 soil and 25 groundwater samples, researching potential onsite and offsite sources of contamination, and evaluating the analytical results in the context of the need for remediation and/or additional characterization.

We understand that you will be submitting to Alameda County Environmental Health Department (lead agency) a copy of this report, the previous (March 2003) SES investigation report, and the SES Corrective Action Plan to address the Stoddard Solvent contamination. Please contact us at (510) 644-3123 if you have any questions.

Sincerely,

Bruce M. Rucker, R.G., R.E.A.
Project Manager

Richard S. Makdisi, R.G., R.E.A.
Principal

SITE REMEDIAL INVESTIGATION REPORT

SEARWAY PROPERTY
649 PACIFIC AVENUE & 1701-1713 WEBSTER STREET
ALAMEDA, CALIFORNIA

Prepared for:

BENJAMIN, ROBIN AND BRENT SEARWAY
C/O MR. STAN HAMMOND
WELLS & BENNETT REALTORS
1451 LEIMERT BOULEVARD
OAKLAND, CALIFORNIA 94602

Prepared by:

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET
BERKELEY, CALIFORNIA 94710

July 31, 2003

TABLE OF CONTENTS

TABLES AND FIGURES

Tables **Page**

Figures **Page**

APPENDICES

1.0 INTRODUCTION

This section presents the project background, the technical objectives of the current investigation, a summary of the site history, a site description, and a summary of previous investigation findings.

PROJECT BACKGROUND AND TECHNICAL OBJECTIVES

The subject property is owned by Benjamin, Brent, Robin and Carl Searway. Stellar Environmental Solutions, Inc. (SES) was retained by Mr. Stan Hammond of Wells & Bennett Realtors (as agent for the majority property owners, [Benjamin, Brent and Robin Searway] who are considering selling the property) to conduct environmental site characterization activities at the property. This phase of work follows a previous (March 2003) SES initial subsurface investigation phase that identified the following general site contamination issues at three subject property subsites:

- Stoddard Solvent-range hydrocarbon contamination in soil and groundwater associated with a former dry cleaning tenant space (649 Pacific Avenue subsite) in the southwest corner of the subject property;
- Diesel and MTBE contamination in groundwater at the 1711/1713 Webster Street subsite in the northeast corner of the subject property; and
- A former gasoline UFST release case (1701 Webster Street subsite) at the southeast corner of the subject property, which has been granted full regulatory closure.

Figure 1 is a site location map. Figure 2 is a site plan showing adjacent land uses. The general objectives of the work included:

- 649 Pacific Avenue Subsite: Further define the extent and magnitude of Stoddard Solvent contamination in soil and groundwater, specifically as regards the need for corrective action and/or installing permanent groundwater monitoring wells;
- 649 Pacific Avenue and 1711/1713 Webster Street subsites: Collect additional data on potential sources (onsite vs. offsite) for the diesel and MTBE contamination detected in site groundwater (by exploratory borehole drilling/sampling and by reviewing site and vicinity technical documents); and

N

SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

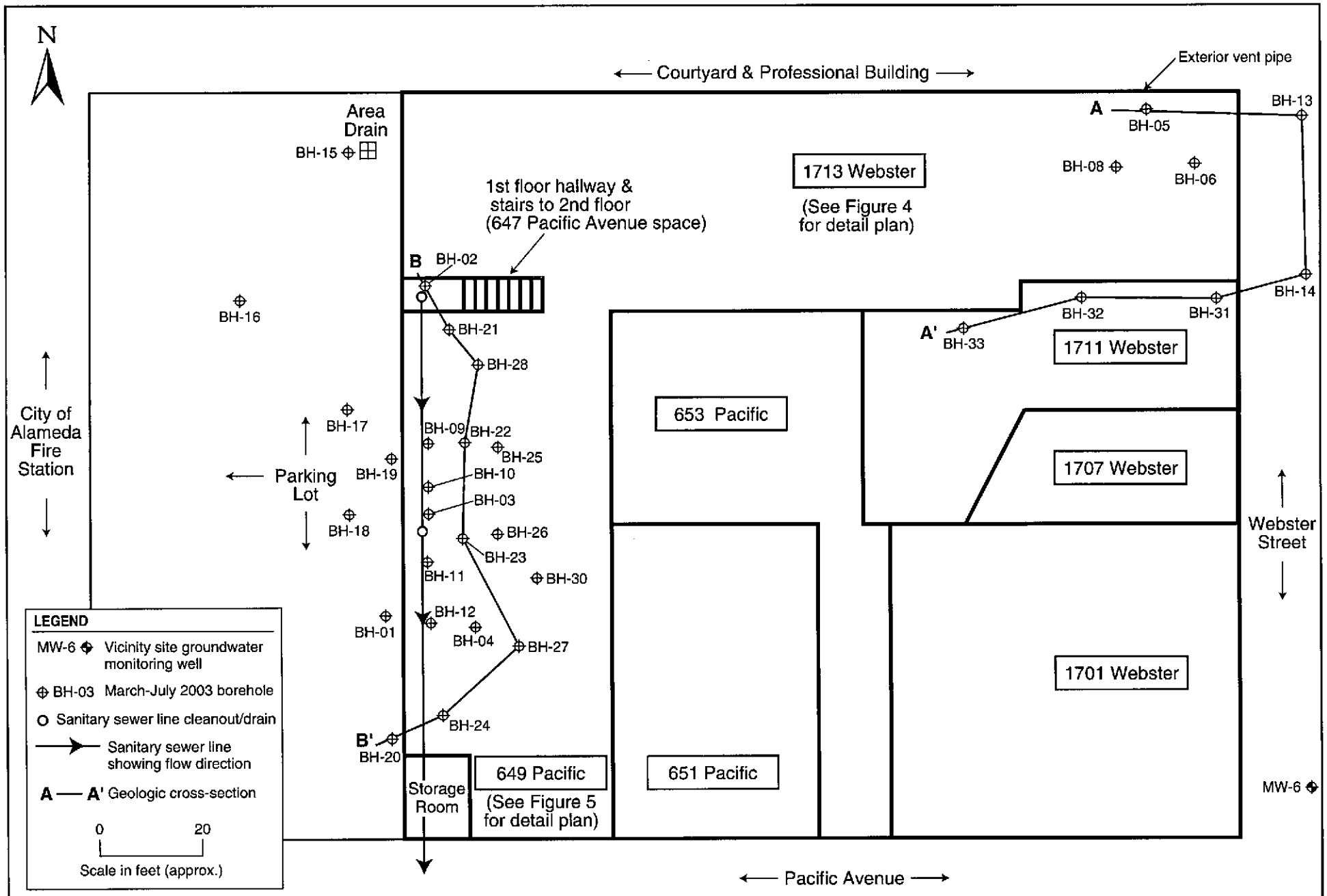
649 Pacific Ave. & 1713 Webster St.
Alameda, CA

By: MJC | MARCH 2003

Figure 1

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-13-01



Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

SITE PLAN, ADJACENT LAND USE AND BOREHOLE LOCATIONS
649 Pacific Avenue and 1711/1713 Webster Street, Alameda, CA

Figure 2

by: MJC | JULY 2003

2003-13-13

- Evaluate the potential for near-surface soil contamination near a storm drain inlet and a formerly unpaved area, resulting from historical automotive repair land use.

SITE HISTORY

The following section summarizes site history as regards potential contaminant sources. We reviewed the following information on site history and on potential vicinity contaminant sources that could be impacting the subject property:

- Sanborn Fire Insurance Zonation Maps showing the subject property (1897, 1932, 1948, 1950 and 1987)
- April 2003 subject property Phase I Environmental Site Assessment (ERAS Environmental, Inc., 2003)
- 1992 subject property subsurface investigation report for 1701 Webster Street (Blymyer Engineers, Inc., 1992)
- January 1993 report summarizing an historical site usage investigation at 1701 Webster Street (E_2C, Inc., 1993a)
- April 1993 report summarizing an underground survey at 1701 Webster Street (E_2C, Inc., 1993b)
- The ACDEH case file for the subject property
- Full library of technical reports and associated site contamination-related files provided by a previous consultant (HydroAnalysis, formerly Hageman-Aguiar, Inc.)
- California Regional Water Quality Control Board online database of petroleum releases from underground storage tanks ("GeoTracker")

Potential Vicinity Sources

We identified through the ACDEH and GeoTracker several vicinity petroleum releases (active cases) that had the potential for migration of petroleum onto the subject property. We reviewed the available regulatory agency information for those cases, as summarized below.

1716 Webster Street (BP #11104)

This active gas station is located approximately 200 feet northeast of the subject property. This facility experienced a leak of gasoline from a UFST(s) in approximately 1990, and has conducted groundwater monitoring since approximately 1995. The most recent technical report in ACDEH files (Cambria, 2002) indicates that historical groundwater flow direction has been to the north by northwest (away from the subject property) (see groundwater gradient map in Appendix A). All associated groundwater monitoring wells are cross-gradient or downgradient from the subject property. There is no indication that this site has the potential to contribute fuel contamination to the subject property.

1802 Webster Street (Chevron #9-029011104)

This active gas station is located approximately 300 feet northeast of the subject property. This facility experienced a leak of gasoline and diesel from a UFST(s) in the early 1990s, and has conducted groundwater monitoring since approximately 1991. The most recent technical report in ACDEH files (Delta Environmental Consultants, 2002) indicates that historical groundwater flow direction (since 1994) has been to the north, northeast or northwest (away from the subject property) (see groundwater gradient map in Appendix A). All associated groundwater monitoring wells are cross-gradient or downgradient from the subject property. There is no indication that this site has the potential to contribute fuel contamination to the subject property.

635 Pacific Avenue (City of Alameda Fire Station)

This facility experienced a gasoline release from a UFST. The Regional Board's "GeoTracker" database indicates that the UFST was removed along with contaminated soil, that no groundwater monitoring wells were installed, and that the case was granted full closure in 1994. Based on its down-gradient or crossgradient location and the case status (closed), this site has a very low potential to contribute petroleum contamination to the subject property.

1629 Webster Street (former TOSCO)

This former gas station is located approximately 50 feet south of the subject property, directly across Pacific Avenue. The site experienced a gasoline release from a UFST(s) in 1998. The lead regulatory agency is ACDEH and their case no. is 2067. The Regional Board LUSTIS case no. is 01-2455. According to the Regional Board's "GeoTracker" database, six groundwater monitoring wells have been installed at the site, including the two groundwater monitoring wells (Tosco well designations MW-5 and MW-6) in Webster Street immediately east of the subject property. Appendix A contains a site plan showing the location of the site and well network. Six groundwater monitoring/sampling events have been conducted between September 2001 and December 2002

(most recent data available on "GeoTracker"). The analytical data, coupled with the analytical data from this investigation, strongly suggest that this release is the source of detected MTBE in site groundwater (discussed in more detail in Section 4.0). Groundwater flow direction is due north (toward the subject property) and the hydraulic gradient is relatively flat at approximately 0.005 feet/foot. Appendix A contains salient documentation regarding this case (including a map showing the well locations, groundwater elevation data and groundwater analytical data). No indication of petroleum contamination extending toward the Property is indicated in the groundwater monitoring (recorded in the Alameda County Health Services Agency files)." (ERAS, Inc., 2003). That report also concluded "none of the identified sites are considered likely to pose a threat to subsurface environmental conditions beneath the Property." (ERAS, Inc., 2003).

Based on the available data, other reported fuel leaks in the vicinity appear to have a low potential to contribute fuel contamination to the subject property because they either have been granted regulatory closure, are located hydraulically downgradient or cross-gradient or are located too far from the subject property.

Subject Property Contaminant Sources

649 Pacific Avenue Subsite (former dry cleaner)

Dry cleaning operations were conducted in this tenant space beginning in the mid- to-late 1940's. There is documentation for Stoddard Solvent (a gasoline-range petroleum hydrocarbon) usage. There is no documentation of tetrachloroethylene (PCE) (a common dry cleaning solvent) usage, although the chemical is generally considered a potential site contaminant of concern at dry cleaning facilities until sampling/analysis demonstrates that it is not present. A previous Phase I ESA indicates that the dry cleaners operated until at least 1979. We reviewed two historical construction drawings for the tenant space (1947 and 1949) that indicated the location of dry cleaning equipment along the western wall of the tenant space, in the southern half of the space. While underground piping was not discernible on the maps, the location of the dry cleaning equipment correlates with the known location of the sanitary sewer pipe that was the focus of this and the previous investigation. We found no documentation of any fuel-related usage, storage or release associated with this address.

1711/1713 Webster Street Subsite (potential onsite UFST)

According to Sanborn Fire Insurance Zonation maps, this portion of the subject property has had the following uses: livery stable (prior to 1897); dwelling and unspecified building (1897); vacant (1932); auto repair/auto body shop (1948 and 1950); and unspecified use (1987). We were verbally informed by Mr. Carl Searway (co-property owner) that a UFST (contents, size, and exact location unspecified) may have been located in the vicinity of these tenant spaces (prior to their current

configuration) during a previous tenant occupancy. According to Mr. Searway, the UFST was installed in 1925. According to Mr. Searway, his subcontractor reported discovering a UFST during building renovations in the late 1970s and closing the UFST in place by filling it with concrete and/or rock; however, Mr. Searway never actually observed the UFST. The only currently visible evidence of a potential UFST consists of a vertical steel pipe between the building exterior wall and interior finish wall (suggestive of a UFST vent pipe); that pipe was not visible to SES, but its location was pointed out by Mr. Hammond, and its existence is referenced in a previous geophysical survey report (JR Associates, 2000). While the survey indicated a limited subsurface expression of the potential UFST vent pipe, the survey findings presented inconclusive proof of a former or closed-in-place UFST. To our knowledge there is no corroborating documentation for this UFST.

Subject Property Western Parking Lot

There is an area (storm) drain at the extreme northeast corner of this parking lot. We were unable to remove the cover grate and therefore cannot confirm if the drain base is open to underlying ground. As storm drains are commonly entry points for spills/leaks of waste oil, and subject property historical land use includes automotive repair, this was considered to be a potential source of contamination. We advanced one exploratory borehole adjacent to this drain. We also advanced one exploratory borehole in the approximate center of the parking lot (which Mr. Searway indicated to SES was at one time unpaved) to evaluate the potential for near-surface soil contamination by waste oil.

1701 Webster Street (subject property) (former gasoline UFSTs)

The southeast corner of the parcel was formerly (before that portion of the current building was constructed) a filling station, from at least 1921 to 1955 (E_2C, Inc., 1993a). The previous Phase I ESA also indicates that the following historical Alameda Fire Department permits existed for UFSTs at this location: three 840-gallon USTs (installed 1920 by Union Oil Company); and one 1,000-gallon UFST (installed 1941 by Signal Oil Company). We were provided with a copy of a 1925 City of Alameda Fire Department permit for installation of one 120-gallon gasoline UFST for the address 1705 Webster Street. A letter from Mr. Carl Searway to the consultant at the time indicated that this UFST was installed by a coal, wood, feed and ice business outside the limits of the 1701 Webster Street space. We found no additional documentation regarding this UFST and its status is unknown. We were also provided a copy of a 1926 permit for installation of two 550-gallon gasoline UFSTs (address given as 1727 Webster Street, which is inconsistent with all known historical site addresses).

In 1989 three gasoline UFSTs (two 550-gallon and one 500-gallon) were removed from the subject property sidewalk area at the corner of Webster Street and Pacific Avenue. Residual soil

contamination (following completion of UFST corrective actions) included up to 6,000 mg/kg gasoline, with no detectable BTEX. A variance to leave this soil contamination in place was approved by ACDEH. Three groundwater monitoring wells were installed in 1989 in the immediate vicinity of the former UFSTs. Ten exploratory boreholes were advanced and sampled in 1992 in the immediate vicinity of the UFST, and an underground survey and exploratory excavation were conducted in 1993 in an attempt to locate the potential 1,000-gallon UFST reportedly installed in 1941 (the investigation determined that the UFST was not located within the area of investigation). Nine groundwater monitoring events were conducted in the three site wells between 1989 and 1995 (samples were analyzed for gasoline, diesel and BTEX). Groundwater flow direction was predominantly to the west. No site contaminants were detected in the final four events, suggesting that the residual soil contamination was not contributing to groundwater contamination. The case was granted full regulatory closure in 1996 by ACDEH, and the wells were subsequently decommissioned after ACDEH approval and under appropriate permit. The available data suggests a very low potential for this former release to be associated with any of the ongoing detected site contamination.

In summary, there is inconsistent documentation regarding historical site UFSTs. The available information indicates that three gasoline UFSTs were removed, although there is an indication that one (or possibly more) historical site UFSTs may have existed at the subject property.

SITE AND VICINITY DESCRIPTION

The subject property consists of one approximately 30,800-square foot rectangular parcel located at the southwest corner of Pacific Avenue and Webster Street in Alameda, Alameda County, California. The subject property is developed with one approximately 22,400-square foot building on the east side of the property, and an approximately 8,400-square foot asphalt-paved parking lot on the western side of the property. The subject property's eastern and southern building walls are coincident with the sidewalk. Figure 1 shows the general site location on a topographic map, and Figure 2 is a site plan with investigative bore locations and adjacent land uses.

The subject property building is currently subdivided into eight tenant spaces (including one on the mezzanine level), with the following street addresses and current occupancies:

- 1713 Webster Street – Restaurant;
- 1711 Webster Street – former (currently vacant) retail video store;
- 1707 Webster Street – Clothing alterations;
- 1701 Webster Street – Former immigration services office;
- 653 Pacific Avenue – Red Cross food distribution center;

- 651 Pacific Avenue – Automotive repair (no tanks or usage of detected site contaminants);
- 649 Pacific Avenue – Equipment storage (former dry cleaners); and
- 647 Pacific Avenue – Sail repair (mezzanine level plus first floor hallway to stairs).

Figure 2 shows the general layout of the interior of the subject property building.

Adjacent land uses include:

- An assisted living residential complex (*to the north*);
- City of Alameda Fire Station (*to the west*);
- Pacific Avenue, then a former Tosco service station (*to the south*); and
- Webster Street, then commercial buildings (*to the east*).

Several active and former service stations with UFSTs are located in the immediate vicinity. There are two groundwater monitoring wells installed in Webster Street directly adjacent to the subject property that are associated with one of those sites located upgradient of the subject property. This is discussed in more detail later in this report.

PREVIOUS (MARCH 2003) INVESTIGATION FINDINGS

Previous site investigations relevant to the ongoing investigation include:

- March 3, 2003 exploratory borehole sampling and analysis program in the 649 Pacific Avenue and 17/111713 Webster Street subsites (results reported in a previous SES report [SES, 2003a])

- March 24, 2003 additional borehole and shallow soil sampling in the 649 Pacific Avenue subsite following removal of the sanitary sewer line (SES, 2003b) (the certified analytical laboratory report and chain-of-custody record for this sampling event is included in Appendix E, as this was not included in previous reports)

A detailed discussion of the extent and magnitude of subject property contamination is presented in Section 4.0 of this report. The following is a synopsis of the findings of the March 2003 investigation, which was the basis for the technical approach of the current investigation.

649 Pacific Avenue Subsite (former dry cleaner)

Stoddard Solvent-range hydrocarbons were detected in boreholes proximal to a sanitary sewer line and its two cleanouts/drains. Maximum concentrations were detected in the borehole adjacent to the sanitary sewer cleanout/drain in the immediate vicinity of the former dry cleaning equipment. Soil

contamination appeared to be limited to depths of approximately 7 to 9 feet below grade. The concentrations were high enough that removal/remediation of the contaminated soil may be required by regulatory agencies, and/or may be the most cost-effective means of obtaining site closure.

Laboratory reports for previous investigation samples from this subsite, and our subsequent documentation report (SES, 2003a) quantified total volatile hydrocarbons (TVH) as both Stoddard Solvent-range and gasoline-range. We also analyzed selected samples for extractable-range hydrocarbons (as we were evaluating onsite diesel UFSTs at other subsites). Our evaluation of site history, site analytical results, and laboratory analytical methods support the following conclusions regarding the nature of detected hydrocarbon contamination:

- Both gasoline and Stoddard Solvent are analyzed as Total Volatile Hydrocarbons – Stoddard Solvent range (TVH-SS). As shown on the chromatograms for Stoddard Solvent and gasoline standards (Appendix E), both elute on a chromatogram in the same carbon chain range: C6 to C12 (i.e. there are significant peaks before or after this range). Assuming that a sample has only Stoddard Solvent and no gasoline contamination, quantification of that sample by gasoline will result in a reportable concentration (and will generally be approximately 30% greater than when quantified as TVH-SS). The different concentrations are a function of the gas chromatograph detector response to the contamination, relative to Stoddard Solvent and gasoline standards, and the two reported hydrocarbon ranges are not additive. There is no site history to suggest that gasoline-range hydrocarbons are a site contaminant of concern, and neither BTEX nor MTBE (commonly associated with gasoline) were detected above trace levels in any of the soil samples that contained TVH. Therefore we have eliminated gasoline as a potential site contaminant in the 649 Pacific Avenue subsite, and the appropriate volatile-range hydrocarbon quantification for all subsequent samples is for Stoddard Solvent.

- Extractable-range hydrocarbons were also detected in groundwater samples at this subsite. As shown on the chromatograms for the Stoddard Solvent and diesel standards (Appendix E), extractable-range hydrocarbons elute in the C10 to C24 range (note the C10 to C12 overlap with TVH-SS), and are commonly quantified as relative to diesel and motor oil laboratory standards. As with the TVH-SS and TVH-gas scenario, a sample quantified as diesel that contains only Stoddard Solvent and no diesel will result in a reportable concentration (generally an order of magnitude higher) than when quantified as TVH-SS. Laboratories offer the option of quantifying the TE.H range beginning at various carbon chain ranges (usually C10 to C14) to minimize the amount of "double counting" resulting from overlap with late-range elution of volatile hydrocarbons (i.e. C10 to C12 as is common for Stoddard Solvent). Based on examination of the sample analysis chromatograms (e.g. BH-04-GW in Appendix E), the majority or all of the contamination in samples with both

TVH-SS and TE.H-diesel contamination is within the late-elution range of Stoddard Solvent (i.e. C10 to C12). The analytical laboratory has confirmed that the appropriate quantification for Stoddard Solvent is TVH-SS, and that quantification as TE.H is not appropriate if Stoddard Solvent is the sole hydrocarbon present.

While trace levels of volatile organic compounds indicative of dry cleaning chemicals were detected in groundwater samples in this area, the concentrations are below regulatory agency screening levels.

1711/1713 Webster Street Subsite (potential onsite UFST)

Both MTBE and extractable-range hydrocarbons were detected in groundwater in exploratory boreholes advanced in the area of a reported closed-in-place gasoline UFST in this space. No evidence of backfill material (indicative of a UFST excavation) was noted in the soil samples, nor was there any field-screening evidence of contamination. The exact location of this UFST (or even its presence) had not been confirmed. As discussed in Section 2.0, the source of the MTBE contamination is most likely attributable to an upgradient fuel leak site. The source of the extractable-range hydrocarbon contamination has not been determined (it does not appear to originate from either the 1701 Webster street subsite or the upgradient TOSCO release site.

2.0 PHYSICAL SETTING

TOPOGRAPHY AND DRAINAGE

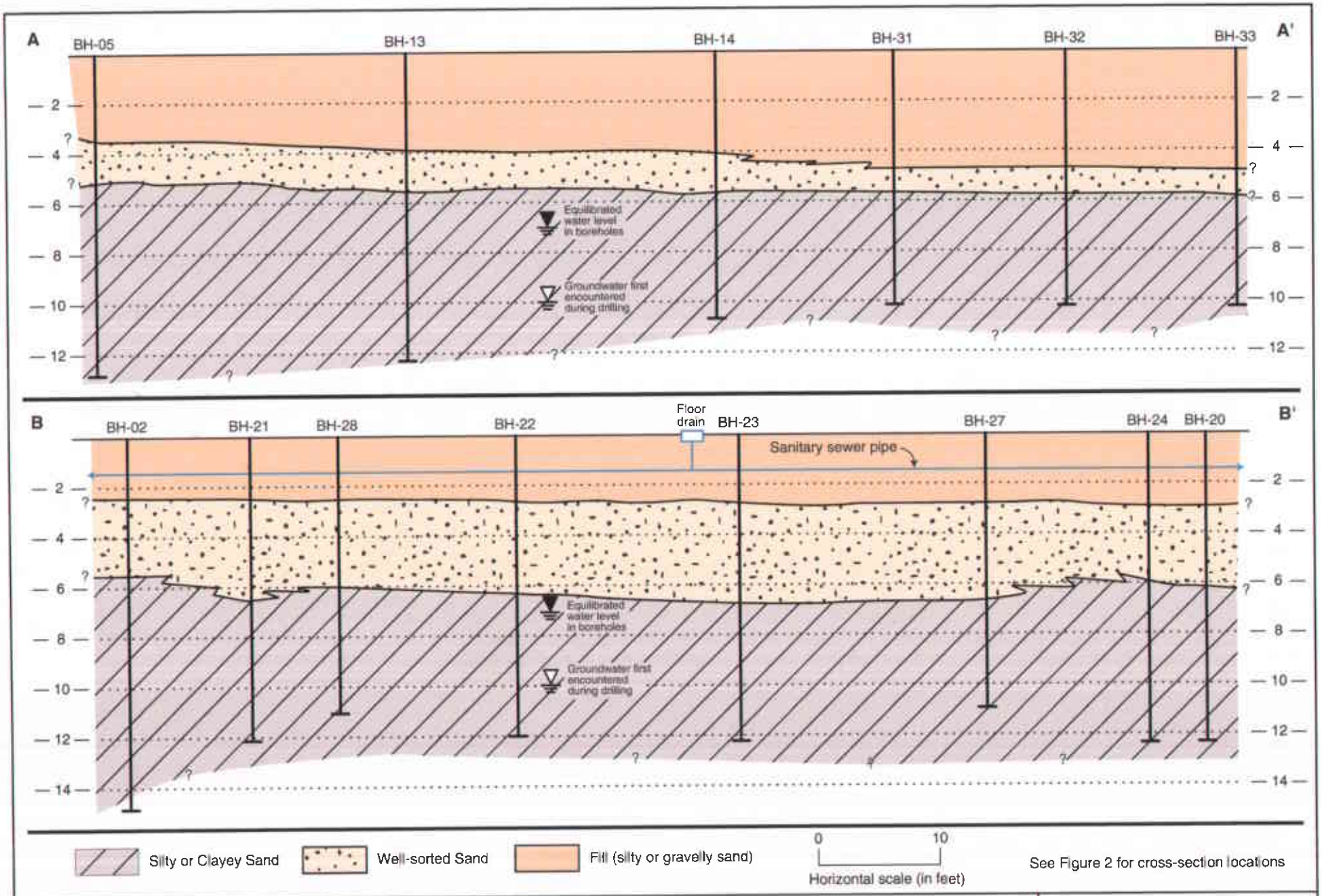
The elevation of the property is less than 10 feet above mean sea level (amsl), and there is no discernible topographic gradient in the site vicinity. The site itself has no discernible slope. The nearest surface water body is San Francisco Bay, located approximately 3,000 feet to the northeast and 3,000 feet to the south of the subject property. There is only one storm drain inlet on the property: an area drain in the extreme northeast corner of the western parking lot. We could not confirm if this drain is connected to the municipal storm sewer system or if the drain is open to underlying ground. Site stormwater runoff (including roof-sourced runoff) would be expected to drain onto adjacent properties and/or the street, then enter the storm drain system and drain ultimately to San Francisco Bay.

GEOLOGY AND HYDROGEOLOGY

SES has geologically logged a total of 33 onsite exploratory boreholes (to a maximum depth of 15 feet below grade). Figure 3 shows geologic cross sections of the 1711/1713 Webster Street subsite (Cross-Section A-A') and the 649 Pacific Avenue subsite (Cross-Section B-B'). Figure 2 shows the location of the cross-sections. Appendix B contains selected borehole geologic logs.

Shallow lithology is relatively uniform at both subsites. Fill material (silty or gravelly sand) was encountered from ground surface to depths between 2.5' and 4'. The fill material is underlain by a well-sorted (fine- to medium-grained) sand (approximately 4' to 6' in the 1711/1713 Webster Street boreholes and approximately 2.5' to 6' deep in the 649 Pacific Avenue space). In both areas, this unit is underlain by a stiff silty or clayey sand to the total depth of site boreholes.

In the 2003 investigations, shallow groundwater was encountered at depths ranging from approximately 10 to 13 feet below grade, as indicated by saturated soil cuttings. Moist to wet soil soils were observed in all site boreholes at depths as shallow as 5 feet below grade; however, no measurable water was present in the boreholes after drilling to that depth. Measurable water in boreholes was not encountered until boreholes were advanced to at least 9 feet below grade, suggesting that the water table has been historically (likely within the past year) as high as 5 feet below grade. Water levels rose several feet in boreholes relative to observed saturated soils in drill



Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

GEOLOGIC CROSS SECTIONS A-A' AND B-B'

649 Pacific Avenue and 1711/1713 Webster Street, Alameda, CA

Figure 3

by: MJC | JULY 2003

2003-13-14

core samples, indicating that shallow groundwater is under confining or semi-confining conditions. The absence of observeable free water in soil cores below approximately 11 feet suggests that this depth represents the bottom of the upper-water bearing zone. As part of proposed corrective action, additional data will be collected on the vertical extent of the upper-water bearing zone.

Groundwater flow in the immediate area of the subject property, based on 1993 through 1995 groundwater monitoring data collected from the three wells installed at the corner of Webster Street and Pacific Avenue, was generally westward with both a southwesterly and northwesterly component noted. Groundwater depths (in completed wells) were approximately 6 feet below grade. As discussed previously, groundwater flow direction at a site directly south of (within 50 feet) and north of (within 300 feet) the subject property has been measured as generally to the north. The groundwater gradient is relatively flat, at approximately 0.005 feet/foot.

3.0 SITE INVESTIGATION ACTIVITIES

This section summarizes site investigation activities conducted by SES at the subject property between March 24, 2003 and July 11, 2003. A previous SES investigation in early March 2003 was discussed in a previous SES report (SES, 2003a). Figure 2 (Section 1.0) shows exploratory borehole locations. Figures 4 through 6 (Section 4.0) are detail layouts of the two areas of investigation. Appendix C contains photodocumentation of our work activities.

MARCH 24, 2003 INVESTIGATION

Four exploratory boreholes were advanced and sampled in early March 2003, and identified elevated levels of Stoddard Solvent in soil and groundwater in the vicinity of an underground sanitary sewer line in the 649 Pacific Avenue subsite (SES, 2003a). On March 24, 2003, nine additional soil samples were collected along the sanitary sewer line (which had been exposed for its replacement) to provide additional data on the extent of soil contamination in this area. A sample was also collected from the excavated, stockpiled soil for disposal options evaluation (no site contaminants were detected and the soil was reused in the trench excavation backfilling).

Boreholes BH-9 through BH-12 were advanced with a hand auger. Two soil samples were collected from each borehole at depths of approximately 2'-3' and 7.5' – 8'. The boreholes were geologically logged and soil cuttings were field-screened with a MiniRae photoionization detector (PID) for a qualitative assessment of potential contamination during drilling (calibration range may not include extractable-range hydrocarbons). Appendix B contains a tabular summary of PID readings. One soil sample ("Floor Drain Base") was also collected from the fill material directly beneath the sanitary sewer line floor drain "p-trap" by hand excavating with a clean trowel. There was neither PID, visual nor odiferous evidence of contamination in that sample.

JULY 2003 INVESTIGATION

Exploratory borehole drilling and sampling was conducted between July 9 and 11, 2003 by Vironex, Inc. (C-57 License No. 705927) under direct supervision of a SES California Registered Geologist. Prior to drilling, Underground Service Alert (USA) was contacted with regard to potential underground utilities, and a drilling permit was obtained from Alameda County Public Works

Agency (copy of permit included in Appendix D). Boreholes were drilled at both the 649 Pacific Avenue subsite and the 1711/1713 Webster Street subsite.

The boreholes were drilled with either a portable "Badger" rig (interior holes) or a truck-mounted GeoProbe™ rig (exterior boreholes) that advance approximately 2-inch-diameter steel outer drive casing and interior steel sample casing lined with acetate sampling sleeves. Continuous soil cores were collected for geologic logging and for field analytical screening. Borehole geologic logging was conducted using the visual method of the Unified Soils Classification System (USCS) and soil samples were field-screened with a PID. A summary of PID readings is shown in Table 1.

Soil samples retained for laboratory analysis included one to two per borehole at the 649 Pacific Avenue subsite, and one soil sample from one of the boreholes at the 1711/1713 Webster Street subsite. Soil samples retained for laboratory analysis were cut into approximately 6-inch lengths (contained within the acetate sleeve), sealed at the ends with Teflon tape and non-reactive plastic caps, labeled, and chilled for transport to the analytical laboratory. When soil contamination was evidenced in core samples by PID readings, the soil sample displaying the maximum PID reading was selected for laboratory analysis. When no contamination was

evident, the soil sample submitted for laboratory analysis was from the zone just above first occurrence of groundwater (as evidenced by moisture in the soil samples) which was identified in previous investigations as the depth with the highest likelihood of contamination.

Upon reaching groundwater, one grab-groundwater sample was collected from each borehole by installing temporary PVC slotted casing and withdrawing water with a new disposable plastic bailer. Those samples were collected in containers appropriate to the individual analyses, and were managed in the same manner described above for the soil samples. Following completion of drilling and sampling activities, the boreholes were tremie-grouted to surface with a slurry of neat Portland cement and potable water.

Exploratory borehole soil cuttings have been containerized in a labeled, steel 55-gallon drum stored inside the 649 Pacific Avenue space. Approximately 40 gallons of drilling equipment decontamination rinseate has also been containerized in a separate drum. This waste will continue to be stored onsite until it is known that no further investigation-derived waste will be generated, at which time they will be disposed of at appropriately permitted facilities.

BOREHOLE LOCATION AND SAMPLING RATIONALE

The following discusses borehole locations and the technical rationale for their location and sampling depths.

1711/1713 Webster Street Subsite

We previously advanced and sampled four boreholes in the northwest portion of the space, near what appears to be a UFST vent pipe (the same area in which the previous geophysical survey was conducted). The investigation results neither identified a potential UFST nor provided sufficient information as to potential onsite or offsite sources. The current investigation boreholes (located to the south and to the east) were designed to provide more lateral coverage in an effort to identify a contaminant source. A secondary objective was the evaluation of soil samples for the presence of fill indicative of excavation backfill material. The boreholes were advanced to first occurrence of groundwater (10 to 13 feet below grade).

649 Pacific Avenue Subsite

Previous investigations identified the sanitary sewer line and associated former dry cleaning equipment along the space's southwestern wall as the probable source area, and partially defined the lateral extent of contamination. Two floor drains are associated with this line—one in the entrance hallway of the 647 Pacific Avenue space, and one in the area of the former dry cleaning equipment. Figure 5 shows the layout of the tenant space, including the sanitary sewer line and floor drain locations, and the exploratory borehole locations. The current investigation boreholes were designed to further evaluate the lateral extent of soil and groundwater contamination, as well as the vertical extent of unsaturated zone soil contamination. The boreholes were advanced to first occurrence of groundwater (10 to 13 feet below grade).

Other Boreholes

One borehole (BH-15) was advanced adjacent to a storm sewer inlet at the northwestern corner of the building exterior, to evaluate if this was an entry point for contamination (i.e. dumping or spillage).

One borehole (BH-16) was advanced in the approximate center of the subject property's western parking lot to evaluate if near-surface soil contamination had resulted from spillage/dumping of waste oil when the lot was unpaved.

LABORATORY ANALYSES

The following discusses the technical rationale for soil and groundwater sample laboratory analyses. Appendix E contains certified analytical laboratory reports and chain-of-custody records (for both the July 2003 investigation and the March 24, 2003 supplemental sampling event for which lab reports were not previously included in a formal documentation report). All current investigation soil and groundwater samples were analyzed by Curtis & Tompkins, Ltd. (Berkeley, California) that maintains current ELAP certifications for all the analytical methods utilized in this investigation.

1711/1713 Webster Street Subsite

Soil and groundwater samples collected at this subsite were analyzed for the following constituents associated with the potential gasoline UFST reported to be at this location, as well as the previously-detected extractable hydrocarbon contamination, including:

- Total volatile hydrocarbons – gasoline range (TVHg), by modified EPA Method 8015;
- The fuel components benzene, toluene, ethylbenzene and total xylenes (BTEX), by EPA Method 8020;
- The fuel additive methyl *tertiary*-butyl ether (MTBE), by EPA Method 8020; and
- Total extractable hydrocarbons – diesel and motor oil ranges (TEHd and TEHmo), by modified EPA method 8015.

649 Pacific Avenue Subsite

Soil and groundwater samples collected at this subsite were analyzed for the following constituents associated with the former dry cleaning operation, as well as the previously-detected fuel contamination, including:

- Total volatile hydrocarbons – Stoddard Solvent range (TVHss);
- BTEX and MTBE; and
- Total extractable hydrocarbons (including diesel and motor oil ranges) (TEH)

Chlorinated hydrocarbons (including PCE) were determined in the previous investigation to not be site contaminants of concern and were therefore not analyzed in the current investigation.

SECTION 4.0 ANALYTICAL RESULTS AND DISCUSSION OF FINDINGS

Tables 1 through 5 summarize the analytical results of the soil and groundwater samples collected by SES since March 2003. The following discusses the magnitude and extent of soil and groundwater contamination in the two subsite.

1711/1713 Webster Street Subsite

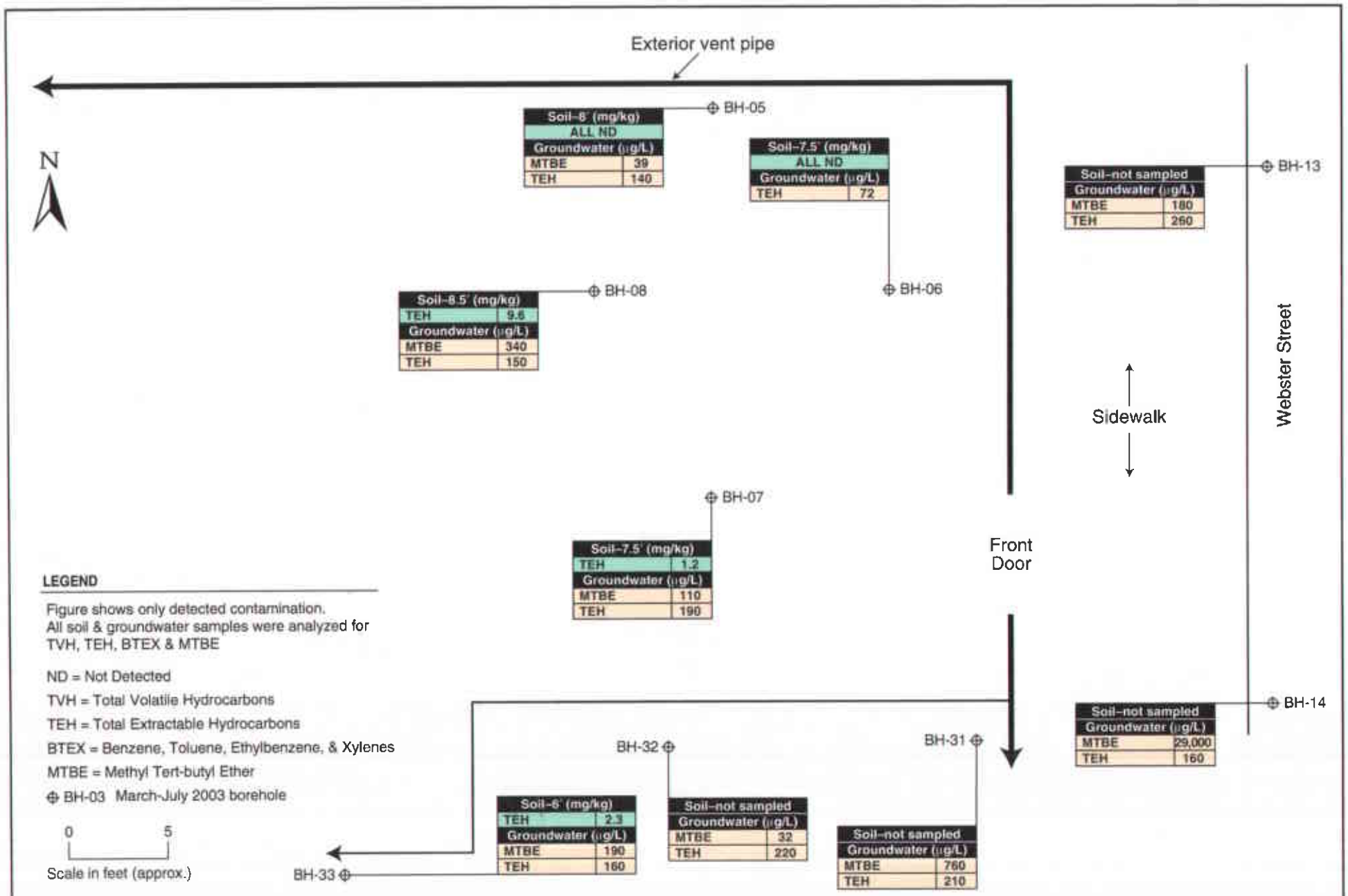
Soil

As shown on Figure 4 and in Table 1, neither TVH nor the related aromatic hydrocarbons BTEX/MTBE were detected in any of the borehole soil samples. The only compound detected in soil was extractable-range hydrocarbons (diesel- and motor oil-ranges) at concentrations well below the RBSL. There was no evidence of fill indicative of excavation backfill material that would be expected around a UFST, nor were there any detectable (by PID field screening) ionizable vapors (indicative of petroleum contamination) in any of the borehole soil samples.

Groundwater

Neither TVH nor BTEX compounds were detected in any of the groundwater samples. MTBE was detected in all but one of the nine boreholes. All MTBE concentrations were between 32 and 760 µg/L, with one exception. The MTBE concentration in borehole BH-14 (in Webster Street) was 29,000 µg/L.

As discussed in Section 2.0, it is our opinion that the source of the detected MTBE is an upgradient, offsite petroleum release (former Tosco site). The site is located directly upgradient of the subject property, and two of the associated groundwater monitoring wells (MW-5 and MW-6) are located adjacent to the subject property. Appendix A contains a map indicating that groundwater flow direction from the upgradient former Tosco site is directly towards the subject site. Note that exploratory borehole "grab" groundwater data are not directly comparable to those of groundwater monitoring well samples because the former generally display higher concentrations due to sorbed-phase contamination that would be reduced by a well's filtering effect. However, the combined Tosco well data and SES borehole data support the following conclusions.



Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

DETAIL OF 1711/1713 WEBSTER STREET SPACE SHOWING BOREHOLE LOCATIONS AND ANALYTICAL RESULTS
Searway Property, Alameda, CA

Figure 4

by: MJC | JULY 2003

2003-13-12

Table 1
March - July 2003 Soil and Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons
1711/1713 Webster Street Subsite, Alameda, California

Sample I.D.	Date Sampled	Sample Depth (feet)	TVHg	TEH	TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Soil Analytical Results (mg/kg)										
BH-05-8'	3/8/03	8'	*< 1.0*	*< 5.0*	*< 5.0*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-06-7.5'	3/8/03	7.5'	*< 1.1*	*< 5.0*	*< 5.0*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.021*
BH-07-7.5'	3/8/03	7.5'	*< 1.1*	**1.2**	**1.2**	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.022*
BH-08-7.5'	3/8/03	7.5'	*< 1.0*	**9.6**	**9.6**	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-33-6'	7/11/03	6.0'	*NA*	**2.3**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Soil RBSLs (a)			400 / 100	400 / 100	400 / 100	0.39 / 0.0045	8.4 / 2.6	24 / 2.5	1.0 / 1.0	1.0 / 0.028
Groundwater Analytical Results (µg/L)										
BH-05-GW	3/8/03	10' - 13'	*< 50*	**140**	**140**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**39**
BH-06-GW	3/8/03	10' - 13'	*< 50*	**72**	**72**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 2.0*
BH-07-GW	3/8/03	10' - 13'	*< 50*	**190**	**190**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**110**
BH-08-GW	3/8/03	10' - 13'	*< 50*	**150**	**150**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**340**
BH-13-GW	7/9/03	~ 11'	*< 50*	**260**	**260**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**180**
BH-14-GW	7/9/03	10' - 12'	*< 50*	**160**	**160**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**29,000**
BH-31-GW	7/11/03	~ 10'	*< 50*	**210**	**210**	*< 0.50*	*< 0.50*	*< 0.50*	*< 0.50*	**760**
BH-32-GW	7/11/03	~ 10'	*< 50*	**220**	**220**	*< 0.50*	*< 0.50*	*< 0.50*	*< 0.50*	**32**
BH-33-GW	7/11/03	~ 10'	*< 50*	**160**	**160**	*< 0.50*	*< 0.50*	*< 0.50*	*< 0.50*	**190**
Groundwater RBSLs (b)			500 / 100	500 / 100	500 / 100	46 / 1.0	130 / 40	290 / 30	13 / 13	1,800 / 5.0

Notes:

(a) First value is for sites where groundwater is not a current or potential drinking water source; 2nd value is for sites where groundwater is a current or potential drinking water source.
(b) First value is for sites where a drinking water resource is not threatened; 2nd value is for sites where a drinking water resource is threatened.
NA = Sample not analyzed for this contaminant. ND = Not detected (multiple method reporting limits, see Appendix E).
RBSLs = Regional Water Quality Control Board Risk Based Screening Levels (see "Regulatory Considerations" text for applicable criteria)
TEH = Total extractable hydrocarbons (diesel through motor oil ranges). TVHg = Total volatile hydrocarbons - gasoline range. TPH = Total Petroleum Hydrocarbons = TVHg + TEH

- The western lateral edge of the MTBE plume appears to be represented relatively low borehole concentrations (less than 11 µg/L).
- The eastern lateral edge is constrained by Tosco well MW-5 (historically no detectable MTBE).
- The center of MTBE contaminant mass in groundwater appears to be near Tosco well MW-6 (December 2002 maximum MTBE concentration in that site's wells was 5,300 µg/L) and SES' July 2003 borehole BH-14 (29,000 µg/L MTBE in a "grab" groundwater sample).
- Until December 2002, Tosco well MW-6 showed elevated MTBE concentrations in the absence of gasoline, and the immediately downgradient July 2003 boreholes showed the same relationship, suggesting that the MTBE concentration represents the leading edge of the fuel plume in groundwater.
- There is a trend of increasing MTBE concentrations in well MW-6, and a seasonal effect of increasing concentrations in the rainy season (December events), with historical maxima of 3,200 µg/L (December 2001) and 6,200 µg/L (December 2002).
- The available data show a plume configuration and history inconsistent with an onsite source of MTBE.

Extractable-range hydrocarbons (diesel) were detected in all 10 of the borehole groundwater samples at relatively uniform concentrations (72 µg/L to 260 µg/L). However, MTBE concentrations in the same boreholes ranged from < 2 µg/L to 29,000 µg/L. This lack of correlation suggests that the MTBE and diesel contamination are from temporally and/or spatially unrelated sources. Unlike the 649 Pacific Avenue subsite, there are no associated volatile-range hydrocarbons as would be expected with Stoddard Solvent contamination (overlapping chromatogram elution with early-range diesel). As discussed in Section 2.0, the source of the extractable-range hydrocarbon contamination is unknown (it does not appear to result from either the 1701 Webster Street subsite or any vicinity petroleum releases).

649 Pacific Avenue Subsite

Soil

The sole contaminant detected in soil above RBSLs at this subsite was Stoddard Solvent. As shown in Table 2, no VOCs were detected in soil samples at this subsite.

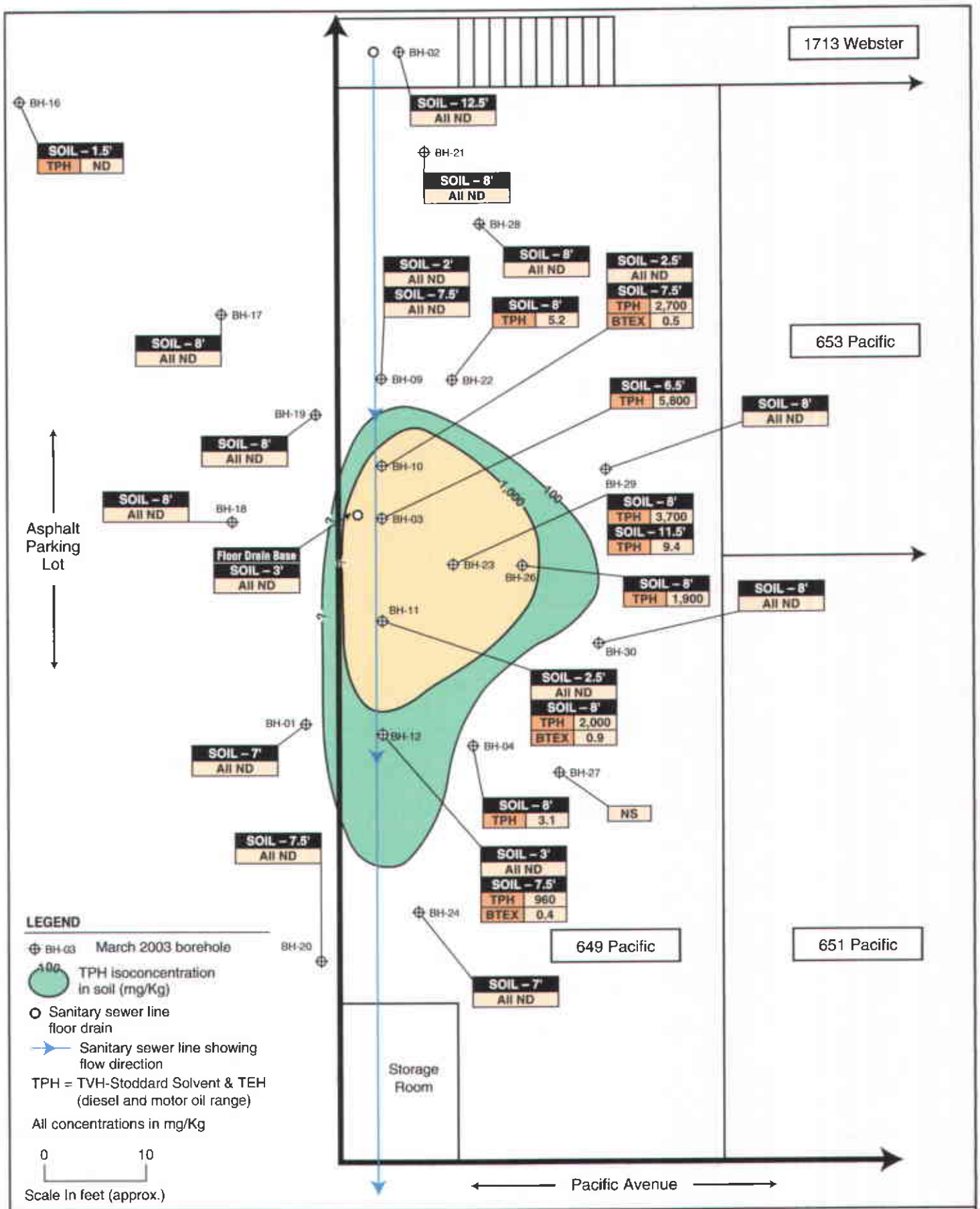
Table 2
March 2003 Soil and Groundwater Analytical Results
Volatile Organic Compounds
649 Pacific Avenue Subsite, Alameda, California

Sample I.D.	Sample Depth (feet)	Chloroform	TCE	PCE	Trans-1,2-DCE	Cis-1,2-DCE
Soil Analytical Results (µg/kg)						
BH-01-7'	7'	*< 4.6*	*< 4.6*	*< 4.6*	*< 4.6*	*< 4.6*
BH-02-12.5'	12.5'	*< 5.2*	*< 5.2*	*< 5.2*	*< 5.2*	*< 5.2*
BH-03-6.5'	6.5'	*< 130*	*< 130*	*< 130*	*< 130*	*< 130*
BH-04-8'	8'	*< 4.8*	*< 4.8*	*< 4.8*	*< 4.8*	*< 4.8*
Soil RBSLs (b)		*260 / 580 (a)*	*1,500*	*530*	*15,000*	*7,700*
Soil RBSLs (c		*260 / 580 (a)*	*400*	*150 / 530 (a)*	*650*	*190*
Groundwater Analytical Results (µg/L)						
BH-01-GW	10'-12'	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
BH-02-GW	10'-13'	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
BH-03-GW	10'-13'	**1.0**	**1.3**	**1.9**	*< 0.5*	*< 0.5*
BH-04-GW	10'-13'	<0.5	**1.9**	**2.6**	**0.5**	**0.7**
Groundwater RBSLs (d)		*28*	*360*	*120*	*590*	*590*
Groundwater RBSLs (e)		*28*	*5.0*	*5.0*	*10*	*6.0*

Notes:

DCE = Dichloroethene.
PCE = Tetrachloroethylene.
RBSLs = Regional Water Quality Control Board Risk Based Screening Levels (see "Regulatory Considerations" text for applicable criteria)
TCE = Trichloroethylene.
VOCs = Volatile organic compounds.
(a) 1st value is for surface soils (less than 10 feet deep); 2nd value is for subsurface soils (greater than 10 feet deep).
(b) For commercial/industrial sites where groundwater is not a current or potential drinking water source.
(c.) For commercial/industrial sites where groundwater is a current or potential drinking water source.
(d) For commercial/industrial sites where a drinking water resource is not threatened.
(e) For commercial/industrial sites where a drinking water resource is threatened.
Table includes only detected compounds. See Appendix E for full list of analytes.

As shown on Figure 5 and summarized in Table 3, the available borehole data fully constrain the lateral and vertical extent of Stoddard Solvent soil contamination. Soil contamination by Stoddard Solvent above the most stringent RBSL (100 mg/kg) is limited to an approximately 40 feet long by 30 feet wide area, and appears to be wholly within the building. Soil contamination extends laterally (north-south) along the sanitary sewer line, and appears to extend eastward from the area of maximum detected soil contamination. Maximum detected Stoddard Solvent concentration is 5,800 mg/kg. Based on field observations (discolored and odiferous samples) and PID field-screening measurements, the Stoddard Solvent contamination in the unsaturated zone appears to occur between



BOREHOLE LOCATIONS & SOIL ANALYTICAL RESULTS

649 Pacific Avenue
Alameda, CA

By: MJC

JULY 2003

Figure 5

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-13-16

Table 3
March - July 2003 Soil Analytical Results
Petroleum and Aromatic Hydrocarbons
649 Pacific Avenue Subsite, Alameda, California

(All soil analytical results reported as mg/kg)

Sample I.D.	Date Sampled	Sample Depth (feet)	TVHss	TEH	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH-01-7'	3/8/03	7'	*< 1.1*	*NA*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-02-12.5'	3/8/03	12.5'	*< 1.1*	*< 5.0*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.021*
BH-03-6.5'	3/8/03	6.5'	**5,800**	*NA*	*< 1.3*	*< 1.3*	*< 1.3*	*< 1.3*	*< 5.0*
BH-04-8'	3/8/03	8'	**3.1**	*NA*	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.022*
Floor Drain Base	3/25/03	3'	*< 1.0*	*NA*	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.020*
BH-9-2'	3/25/03	2'	*< 1.0*	*NA*	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.021*
BH-9-7.5'	3/25/03	7.5'	*< 0.98*	*NA*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.020*
BH-10-2.5'	3/25/03	2.5'	*< 1.0*	*NA*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-10-7.5'	3/25/03	7.5'	**2,700 (a)**	*NA*	*< 0.0051*	<0.0051	**0.26**	**0.22**	*< 0.020*
BH-11-2.5'	3/25/03	2.5'	*< 1.0*	*NA*	*< 0.0048*	*< 0.0048*	*< 0.0048*	*< 0.0048*	*< 0.019*
BH-11-8'	3/25/03	8'	**2,000 (a)**	*NA*	*< 0.0054*	*< 0.0054*	**0.88**	*< 0.0054*	*< 0.022*
BH-12-3'	3/25/03	3'	*< 0.98*	*NA*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.020*
BH-12-7.5'	3/25/03	7.5'	**960 (a)**	*NA*	*< 0.0052*	*< 0.0052*	**0.084**	**0.31**	*< 0.021*
BH-17-8'	7/9/03	8'	*< 1.1*	*NA*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.021*
BH-18-8'	7/9/03	8'	*< 0.95*	*NA*	*< 0.0048*	*< 0.0048*	*< 0.0048*	*< 0.0048*	*< 0.019*
BH-19-8'	7/9/03	8'	*< 1.0*	*NA*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-20-7.5'	7/9/03	7.5'	*< 1.1*	*NA*	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.0054*	*< 0.022*

BH-21-8'	7/10/03	8'	*< 0.97*	*NA*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.019*
BH-22-8'	7/10/03	8'	*< 0.98*	**5.2**	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.020*
BH-23-8'	7/10/03	8'	**17**	**3,700 (c.)**	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.0051*	*< 0.020*
BH-23-11.5'	7/10/03	11.5'	*< 1.0*	**9.4**	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.021*
BH-24-7'	7/10/03	7'	*< 1.0*	*NA*	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.0050*	*< 0.020*
BH-25-9'	7/10/03	9'	*< 1.0*	*NA*	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.0052*	*< 0.021*
BH-26-8'	7/10/03	8'	**1,900**	*NA*	*< 0.50*	*< 0.50*	*< 0.50*	*< 0.50*	*< 2.0*
BH-28-8'	7/10/03	8'	*< 0.97*	*NA*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.019*
BH-29-8'	7/10/03	8'	*< 1.1*	*< 1.0*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.0053*	*< 0.021*
BH-30-8'	7/10/03	8'	*< 0.97*	*NA*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.0049*	*< 0.019*
Soil RBSLs (a)			400	400	0.39	8.4	24	1.0	1.0
Soil RBSLs (b)			100	100	0.045	2.6	2.5	1.0	0.028

Notes:

NA = Sample not analyzed for this contaminant

ND = Not detected (multiple method reporting limits, see Appendix E).

RBSLs = Regional Water Quality Control Board Risk-Based Screening Levels (see "Regulatory Considerations" text for applicable criteria)

TEH = Total extractable hydrocarbons (diesel through motor oil ranges).

TVHss = Total volatile hydrocarbons Stoddard Solvent range.

(a) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is not a current or potential drinking water source.

(b) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is a current or potential drinking water source.

(c) Chromatogram indicates that all the detected TEH contamination is in the late elution range of Stoddard Solvent, and no diesel/motor oil present.

elution

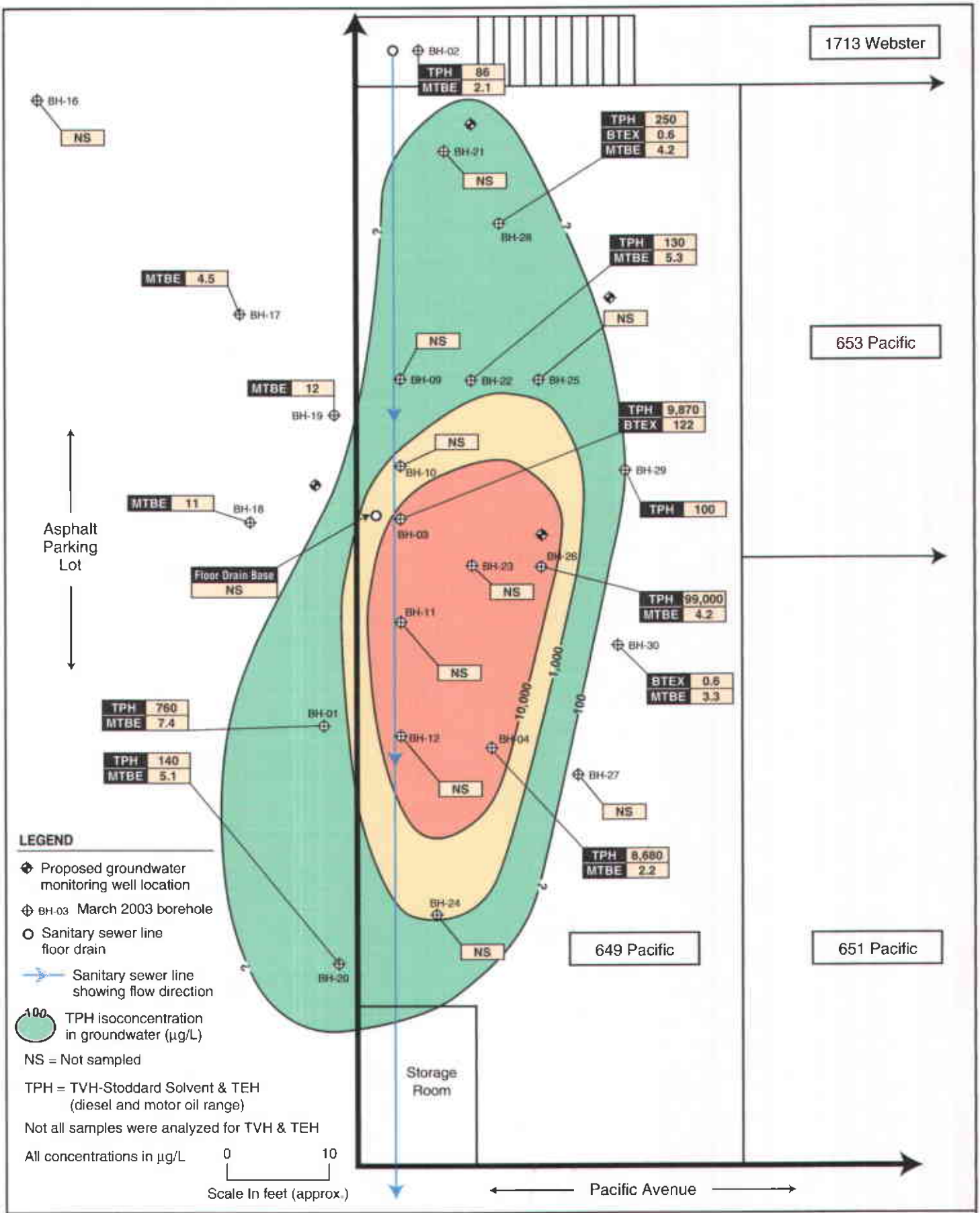
Groundwater

As shown on Figure 6 and summarized in Table 4, Stoddard Solvent contamination in groundwater is wholly defined by the available borehole data. The groundwater contamination is wholly confined onsite, and appears to be predominantly within the subsite tenant space, with some contamination extending beneath the site's western parking lot. Note that the Figure 6 isoconcentration contours conservatively represent "TPH" expressed as the total of TVH-SS and TE.H-diesel ranges. As discussed in Section 1.0, it is our opinion that there is only minor contribution of diesel-range hydrocarbons to the contamination (source as-yet-undentified), that adding the sums of the volatile and extractable hydrocarbon ranges is "double counting" due to co-elution, and that the actual magnitude and footprint of the hydrocarbon plume is therefore considerably smaller than shown on Figure 6.

Relatively low levels of BTEX and MTBE were also detected in groundwater at this subsite. As discussed in Section 2.0, it is our opinion that this gasoline-related contamination is likely related to an immediately upgradient, offsite source. The majority of the TE.H contamination is attributable to the late-range portion of the Stoddard Solvent contamination, with minor additional diesel-range contamination from an unidentified source. Trace levels of dry cleaner-related VOCs (all below their RBSL values) were also detected in groundwater at this subsite. There is no site history to suggest usage of VOCs at the subject property, and the source of this contamination is not known.

Other Areas Investigated

As summarized in Table 5, only trace (2.8 mg/kg) extractable-range hydrocarbons were detected in the soil sample (BH-15) adjacent to the base of the area storm drain in the western parking lot. This indicates that this storm drain inlet is not the source of appreciable soil contamination that might have occurred by dumping/spillage of waste oil from historical site use as auto repair. No extractable-range hydrocarbons were detected in the soil sample (BH-16) in the approximate center of the western parking lot, indicating that soil contamination is not present at this location that might have occurred by dumping/spillage of waste oil from historical site use as auto repair. The groundwater sample collected from BH-16 contained low levels of extractable-range hydrocarbons (below the 100 µg/L RBSL). An analysis of the sample chromatogram (Appendix E) indicates that over 90% of the extractable-range hydrocarbon elutes beyond C12 (the terminal range of Stoddard Solvent), therefore this contamination is not Stoddard Solvent. MTBE was also detected (below the 5 mg/L RBSL), which is inferred to be part of the offsite-sourced MTBE plume discussed previously.



BOREHOLE LOCATIONS, GROUNDWATER ANALYTICAL RESULTS AND PROPOSED WELL LOCATIONS

649 Pacific Avenue Alameda, CA	By: MJC	JULY 2003
	Figure 6	

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-13-11

Table 4
March - July 2003 Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons
649 Pacific Avenue Subsite, Alameda, California

(All groundwater analytical results reported as µg/L.)

Sample I.D.	Date Sampled	Sample Depth (feet)	TVHss	TEH	TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH-01-GW	3/8/03	10'-12'	*< 50*	**760**	**760**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**7.4**
BH-02-GW	3/8/03	10'-13'	*< 50*	**86**	**86**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**2.1**
BH-03-GW	3/8/03	10'-13'	**270**	**9,600**	**9,870**	**0.68**	**110**	**1.6**	**9.4**	*< 2.0*
BH-04-GW	3/8/03	10'-13'	**280**	**8,400**	**8,680**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**2.2**
BH-17-GW	7/9/03	10'-11'	*< 50*	*NA*	--	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**4.5**
BH-18-GW	7/9/03	10'-11'	*< 50*	*NA*	--	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**11**
BH-19-GW	7/9/03	10'-11'	*< 50*	*NA*	--	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**12**
BH-20-GW	7/9/03	10'-11'	*< 50*	**140**	**140**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**5.1**
BH-22-GW	7/10/03	10'-11'	*< 50*	**130**	**130**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**5.3**
BH-26-GW	7/10/03	10'-11'	**99,000**	*NA*	--	*< 0.5*	*< 0.5*	*< 0.5*	**4.2**	*< 2.0*
BH-28-GW	7/10/03	10'-11'	*< 50*	**250**	**250**	*< 0.5*	**0.58**	*< 0.5*	*< 0.5*	**4.2**
BH-29-GW	7/10/03	*~ 10.5'*	*< 50*	**100**	**100**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 2.0*
BH-30-GW	7/10/03	*~ 10'*	*< 50*	*NA*	--	*< 0.5*	**0.63**	*< 0.5*	*< 0.5*	**3.3**
Groundwater RBSLs (a)			500 / 100	500 / 100	500 / 100	46 / 1.0	130 / 40	290 / 30	13 / 13	1,800 / 5.0

Notes:

NA = Sample not analyzed for this contaminant.ND = Not detected (multiple method reporting limits, see Appendix E).
RBSLs = Regional Water Quality Control Board Risk-Based Screening Levels (see "Regulatory Considerations" text for applicable criteria)
TEH = Total extractable hydrocarbons (diesel through motor oil ranges).
TVHss = Total volatile hydrocarbons Stoddard Solvent range. See laboratory case narrative regarding quantification of TVH.
TPH = Total Petroleum Hydrocarbons = TVHss + TEH
(a) First value is for sites where a drinking water resource is not threatened. 2nd value is for sites where a drinking water resource is threatened.

Table 5
March - July 2003 Miscellaneous Soil and Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons
649 Pacific Avenue Subsite – Western Parking Lot, Alameda, California

Sample I.D.	Sample Date	Sample Depth (feet)	TVHss	TEH	TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Soil Analytical Results (mg/kg)										
BH-15-2.5'	7/9/03	2.5'	*NA*	**2.8**	--	*NA*	*NA*	*NA*	*NA*	*NA*
BH-16-1.5'	7/9/03	1.5'	*NA*	*< 1.0*	--	*NA*	*NA*	*NA*	*NA*	*NA*
Soil RBSLs (a)			400	400	400	0.39	8.4	24	1.0	1.0
Soil RBSLs (b)			100	100	100	0.045	2.6	2.5	1.0	0.028
Groundwater Analytical Results (µg/L)										
BH-16-GW	7/9/03	~11'	*< 50*	**67**	**67**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**6.0**
Groundwater RBSLs (c.)			500	500	500	46	130	290	13	1,800
Groundwater RBSLs (d)			100	100	100	1.0	40	30	13	5.0

Notes:

NA = Sample not analyzed for this contaminant.
ND = Not detected (multiple method reporting limits, see Appendix E).
RBSLs = Regional Water Quality Control Board Risk Based Screening Levels (see "Regulatory Considerations" text for applicable criteria)
TEH = Total extractable hydrocarbons (diesel through motor oil ranges).
TVHss = Total volatile hydrocarbons Stoddard Solvent range. See laboratory case narrative regarding quantification of TVH.
TPH = Total Petroleum Hydrocarbons = TVHss + THE
(a) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is not a current or potential drinking water source.
(b) For surface soil (< 10 feet deep) at commercial/industrial sites where groundwater is a current or potential drinking water source.
(c.) For commercial/industrial sites where a drinking water resource is not threatened.
(d) For commercial/industrial sites where a drinking water resource is threatened.

5.0 REGULATORY CONSIDERATIONS

REGULATORY STATUS

The lead regulatory agency for UFST-sourced petroleum contamination cases within the City of Alameda is the Alameda County Health Care Services Agency – Environmental Health Services – Environmental Protection – Local Oversight Program (ACHCSA). The ACHCSA is a Local Oversight Program (LOP) agent for the California Regional Water Quality Control Board (RWQCB) that has ultimate decision-making authority regarding closure of UFST-sourced contamination sites. In general, the RWQCB acts as the lead regulatory agency for sites with non-petroleum contamination (i.e., Stoddard Solvent or PCE). However, the ACHCSA may also be involved.

On behalf of the majority property owners, SES submitted to ACDEH a June 6, 2003 letter notifying ACDEH of the discovery of soil and groundwater contamination in the 649 Pacific Avenue space and of the potential for onsite-sourced contamination in the 1713 Webster Street space (SES, 2003c). That letter proposed submitting this technical report to ACDEH upon its completion. To date the ACDEH has not responded to the SES notification letter. Upon receipt of this report, ACDEH will make a determination as to which agency will assume lead agency status. Should ACDEH assume lead agency status and they determine that remediation and/or additional investigation is warranted, they will formally request such action in a letter to the property owners.

The 1701 Webster Street UFST case was granted full regulatory closure by the ACDEH and we know of no regulatory agency requirement to conduct any additional investigation associated with this case.

RESIDUAL CONTAMINATION REGULATORY CONSIDERATIONS

The most applicable published numerical criteria governing residual soil and groundwater contamination are the RWQCB's Risk-Based Screening Levels (RBSLs) (California Regional Water Quality Control Board, 2001). These are screening-level criteria used to evaluate if additional investigation and/or remediation is warranted. Criteria to be considered in selecting the appropriate soil RBSLs include: contamination is limited to surface soil (<10 feet deep) or to subsurface soil; residential or commercial/industrial land use; and whether groundwater is or is not a known or potential drinking water source.

The most appropriate soil RBSLs for this site would be: surface and subsurface soil (depending on the depth of the sample); commercial/industrial land use; and groundwater is a potential drinking water source (as no site-specific variance has been granted). The RWQCB completed an East Bay Plain Beneficial Use Study (RWQCB, 1999) that covers the Richmond to Hayward East Bay Plain Basin Area and, based on multiple technical criteria, divided the Basin into Zone A (Significant Drinking Water Resource Potential), Zone B (Groundwater Unlikely to be used as Drinking Water Source) and Zone C (Shallow Groundwater Unusable). The subject site falls within Zone A. The most appropriate groundwater RBSLs for this site would be Zone A: commercial/industrial land use; and a drinking water resource is potentially threatened (as no site-specific variance has been granted).

Tables 1, 2, and 3 (Section 3.0) list the soil and groundwater RBSLs applicable to the detected site contaminants. Contaminants detected in excess of soil and/or groundwater RBSLs include:

- Stoddard Solvent (soil and groundwater, in the 649 Pacific Avenue subsite) (there is no published RBSL for this contaminant, and would likely be the same as for gasoline);
- Extractable-range hydrocarbons (soil and groundwater, in both the 649 Pacific Avenue and 1711/1713 subsites);
- Toluene (groundwater only, in the 649 Pacific Avenue subsite); and
- MTBE (groundwater only, in both the 649 Pacific Avenue and 1711/1713 subsites).

Note that RBSLs are not clean-up goals, which should be determined based on potential risks to groundwater and human and ecological receptors (commonly via a risk-based assessment model). Reducing residual contamination to levels below RBSLs will almost certainly allow for regulatory closure. However, regulatory agencies commonly grant closure on sites with residual contamination above RBSL values. Note that if closure is granted based on industrial/commercial land use and there is residual contamination above the residential RBSLs, then regulatory agencies may require an institutional control (i.e. deed notification or deed restriction) as a condition of closure.

6.0 SUMMARY, CONCLUSIONS AND PROPOSED ACTIONS

The available data support the following conclusions.

SUMMARY AND CONCLUSIONS

- Shallow soils beneath the subject property consist predominantly of well-sorted (fine- and medium-grained) sand and clayey sand. Shallow groundwater was encountered at depths ranging from approximately 10 to 13 feet below grade, and occurs under confining or semi-confining conditions. Groundwater flow direction in the immediate area of the subject property has been variously reported as westerly (subject property, 1993-1995) and northerly (sites within several hundred feet to the north and south, 1993 to present).

1701 Webster Street Subsite (Former Filling Station)

- In 1989 three gasoline UFSTs were removed from the subject property sidewalk area at the corner of Webster Street and Pacific Avenue, related to a former filling station. Residual soil contamination (following completion of UFST corrective actions) included up to 6,000 mg/kg gasoline, with no detectable BTEX. A variance to leave this soil contamination in place was approved by ACDEH. Three groundwater monitoring wells were installed in 1989 and sampled nine times between 1989 and 1995. No groundwater contamination was detected in the final four events, suggesting that the residual soil contamination was not contributing to groundwater contamination. The case was granted full regulatory closure in 1996, and the wells were decommissioned under regulatory agency permit. The available data suggest a very low potential for this former release to be associated with any of the ongoing detected site contamination, and we know of no regulatory agency requirement to conduct any additional work associated with this case.

1711/1713 Webster Street subsite (Potential Onsite UFST)

- Both MTBE and extractable-range hydrocarbons were detected in groundwater in exploratory boreholes advanced in the area of a reported closed-in-place gasoline UFST at this subsite. No evidence of backfill material (indicative of a UFST excavation) was noted in the soil samples, nor was there any significant contamination detected in borehole soil samples. An

offsite, upgradient gasoline release is inferred to be the source of the MTBE contamination. The source of the extractable-range hydrocarbon is not known.

- Available data suggests that an upgradient fuel release site (Tosco) is the source of MTBE groundwater contamination detected at the 1711/1713 Webster Street subsite. Two active groundwater monitoring wells associated with that case are located immediately adjacent to (east of) the subject property, and would be instrumental data points (for hydrochemical data and/or groundwater flow direction) in the subject property investigation. Access to those wells could likely be obtained by contacting the responsible party.

- As no onsite source for the detected MTBE and extractable-range hydrocarbons has been identified, it is our opinion that no further evaluation of this subsite is warranted.

649 Pacific Avenue Subsite (Former Dry Cleaners)

- Stoddard Solvent-range hydrocarbons have been detected in soil and groundwater at this subsite. Trace levels of dry cleaning-related VOCs have also been detected in groundwater, but at concentrations below regulatory agency screening level criteria. Extractable-range hydrocarbons have also been detected, which appears to be related to the Stoddard Solvent contamination. Detected MTBE in groundwater appears to be related to an immediately upgradient, offsite gasoline release. Therefore, future soil and water samples should be analyzed for TVH-Stoddard Solvent, BTEX and MTBE.

- The exact source (point of release) of the Stoddard Solvent contamination has not been identified, although maximum soil and groundwater concentrations are in the vicinity of a sanitary sewer line floor drain. Soil and groundwater contamination above regulatory agency screening level criteria are wholly defined by available borehole analytical data, and have an approximately coincident footprint. The total tonnage of unsaturated zone Stoddard Solvent soil contamination is estimated to be 220 tons, of which approximately 70% is reasonably accessible by interior excavation.

- The lateral footprint of the Stoddard Solvent contaminant plume in groundwater is fully constrained by the available data, and appears to be predominantly within the 649 Pacific Avenue tenant space, with some contamination likely present in the adjacent western parking lot.

- Mitigating the accessible portion of Stoddard Solvent soil contamination (i.e. by excavation and offsite disposal) will substantially decrease the timeline to achieve regulatory closure, and is a common regulatory criterion for granting regulatory closure.

Other Areas of Potential Concern

- An exterior stormwater drain inlet in the facilities western parking lot is a potential entry point for dumped/spilled waste oil contamination that might have occurred during former site automotive repair activities. A soil sample adjacent to the drain and at a depth coincident with the drain base contained no extractable-range hydrocarbon contamination above the most stringent RBSL.

- A near-surface soil sample was collected in the approximate center of the western parking lot (which was reportedly historically unpaved) contained no detectable extractable-range hydrocarbon contamination. A groundwater sample from that borehole contained diesel-range hydrocarbons and MTBE, both below RBSLs. The source of the diesel is unknown; the MTBE appears to be associated with an identified offsite source.

- This report and a workplan for site remediation and additional site characterization at the 649 Pacific Avenue subsite have been submitted to ACDEH.

This report of findings has been submitted to ACDEH along with a Corrective Action Plan (CAP) to address residual soil and groundwater contamination (see below).

PROPOSED ACTIONS

As discussed in detail in the attached CAP, the majority property owners propose to conduct the following:

- Obtain concurrence from ACDEH on the attached CAP.

- Excavate for off-site disposal soils contaminated with Stoddard Solvent in the 649 Pacific Avenue subsite, and collect excavation confirmation soil samples to document levels of residual soil contamination. Based on the potential for excavation flooding by infiltrating groundwater, excavation will be conducted in the October-November 2003 timeframe (corresponding to the time of lowest groundwater table depth).

- Install four groundwater monitoring wells at the 649 Pacific Avenue subsite (following the corrective action), conduct quarterly groundwater monitoring and sampling to evaluate whether the Stoddard Solvent groundwater plume is stable or reducing, and submit quarterly groundwater monitoring reports to the appropriate regulatory agency(ies).

- Petition the appropriate regulatory agency(ies) for site closure of the 649 Pacific Avenue subsite at such time as site conditions meet regulatory agency closure criteria..

7.0 REFERENCES AND BIBLIOGRAPHY

1701 Webster Street UFST Case (only)

Aguiar, Gary, 2003. Principal of HydroAnalysis (formerly Hageman-Aguiar, Inc.), personal communication to Bruce Rucker of SES. July 1.

Alameda County Health Care Services Agency – Department of Environmental Health, 1996. Remedial Action Completion Certification, StID 3804 – 1701 Webster Street, Alameda, California. March 9.

Blymyer Engineers, Inc., 1989. Tank Removal Project – 1701 Webster Street, Alameda, California (letter to ACDEH). May 31.

Blymyer Engineers, Inc., 1992. Subsurface Investigation– Bernita Leskowski Property, Alameda, California. August 6.

E2C, Inc., 1993a. Historical Site Usage Investigation – 1701 Webster Street, Alameda, California. January 19

E2C, Inc., 1993b. Underground Survey Report– 1701 Webster Street, Alameda, California. April 7

Hageman-Aguiar, Inc., 1993a. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. June 25.

Hageman-Aguiar, Inc., 1993b. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. October 19.

Hageman-Aguiar, Inc., 1994a. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. January 5.

Hageman-Aguiar, Inc., 1994b. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. April 26.

Hageman-Aguiar, Inc., 1994c. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. August 25.

Hageman-Aguiar, Inc., 1994d. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. November 28.

Hageman-Aguiar, Inc., 1995a. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. March 21.

Hageman-Aguiar, Inc., 1995b. Quarterly Groundwater Sampling Report, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. July 6.

Hageman-Aguiar, Inc., 1995c. Recommendation for Case Closure, Bernita Leskowski Property, 1701 Webster Street, Alameda, California. July 20.

Hageman-Aguiar, Inc., 1996. Letter to ACDEH regarding closure of groundwater monitoring wells at 1701 Webster Street, Alameda, California. February 29.

Other Subject Property Investigation Reports

ERAS Environmental, Inc., 2003. Phase I Environmental Site Assessment, 1701-1713 Webster Street, Alameda, California. April 4.

JR Associates, 2000. Letter of findings regarding geophysical survey at 1713 Webster Street, Alameda, California. September 20.

Stellar Environmental Solutions, Inc., 2003a. Subsurface Site Investigation Report – Searway Property – 649 Pacific Avenue and 1713 Webster Street, Alameda, California. March 18.

Stellar Environmental Solutions, Inc., 2003b. Reporting of Soil Analytical Results – Sanitary Sewer Line Trench at 649 Pacific Avenue, Alameda, California. April 2.

Stellar Environmental Solutions, Inc., 2003c. Notification of Contamination Discovery, 649 Pacific Avenue and 1713 Webster Street, Alameda, California (letter to ACDEH). June 6.

Various References

California Regional Water Quality Control Board, San Francisco Bay Region, 2001. Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater – Interim Final. December.

California State Water Resources Control Board – GeoTracker database. Electronic data for 1629 Webster Street, Alameda (former Tosco) gasoline release site.

Cambria, 2002. First Quarter 2002 Groundwater Monitoring Report – BP Oil Site #11104 – 1716 Webster Street, Alameda, California. April 30

Delta Environmental Consultants, 2002. Site Conceptual Model for Chevron Service Station #9-0290, 1802 Webster Street, Alameda, California. October 24

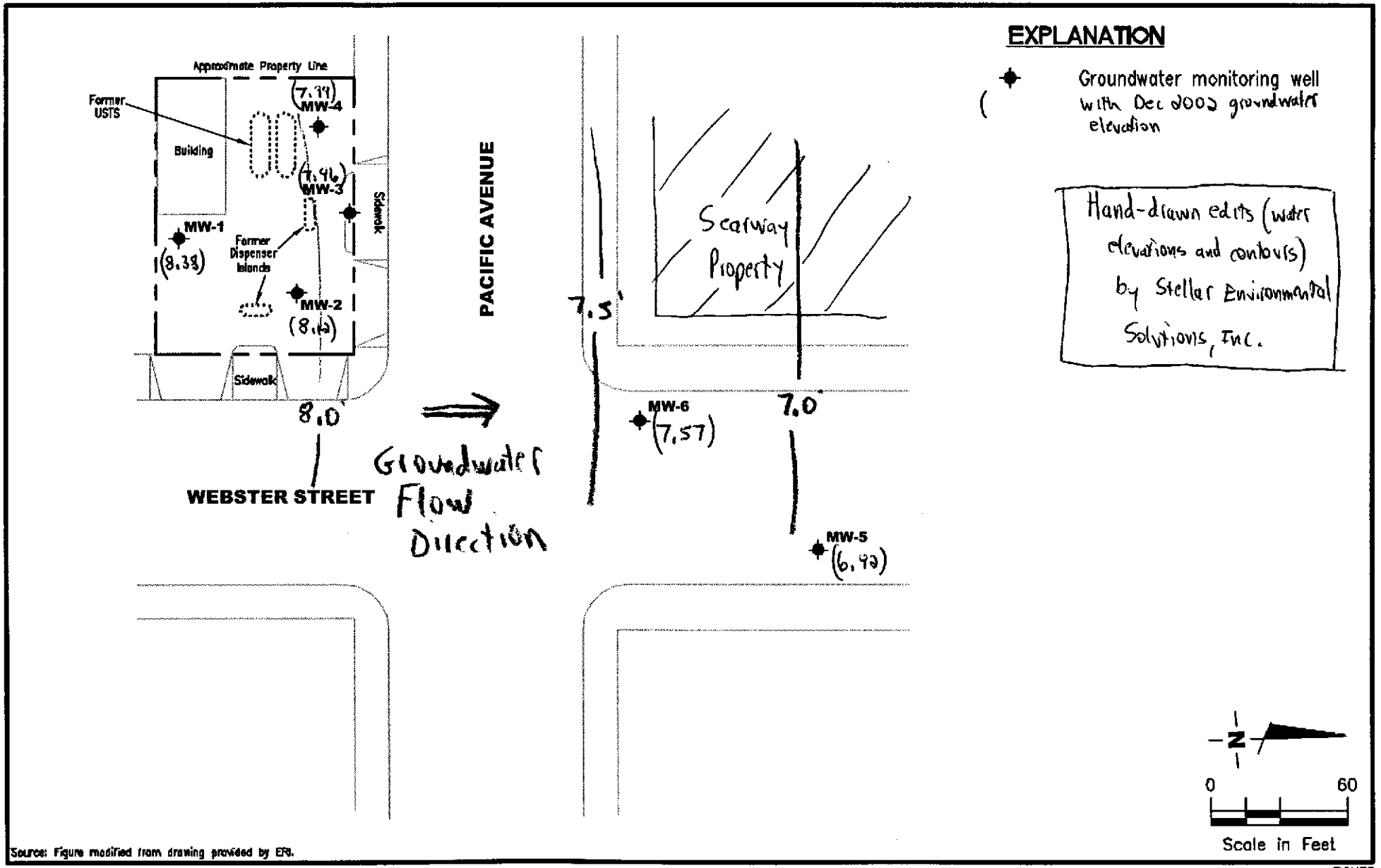
8.0 LIMITATIONS

This report has been prepared for the exclusive use of the majority property owners (Benjamin, Brent and Robin Searway), Mr. Stan Hammond of Wells & Bennett Realtors, their authorized representatives, and the regulatory agencies. No reliance on this report shall be made by anyone other than those for whom it was prepared.

The findings and conclusions presented in this report are based on the review of previous investigators' findings at the site as well as the findings of the SES investigations discussed herein. This report provides neither a certification nor guarantee that the property is free of hazardous substance contamination. This report has been prepared in accordance with generally accepted methodologies and standards of practice. The SES personnel who performed this limited remedial investigation are qualified to perform such investigations and have accurately reported the information available, but cannot attest to the validity of that information. No warranty, expressed or implied, is made as to the findings, conclusions, and recommendations included in the report.

The findings of this report are valid as of the present. Site conditions may change with the passage of time, natural processes, or human intervention, which can invalidate the findings and conclusions presented in this report. As such, this report should be considered a reflection of the current site conditions as based on the activities completed.

1629 Webster Street (former TOSCO)



Source: Figure modified from drawing provided by ERI.

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

SITE PLAN
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
180203		10/00	

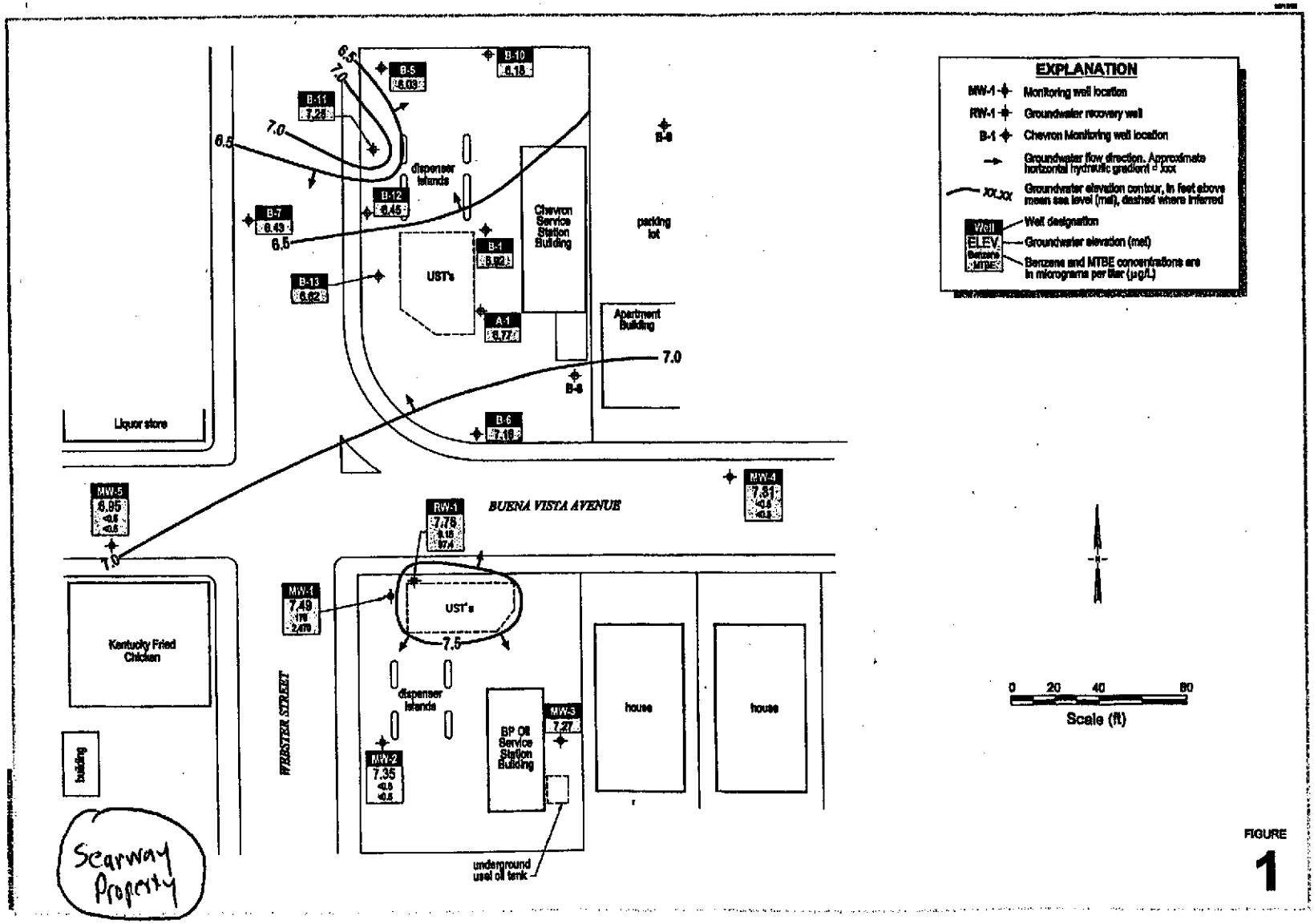
FILE NAME: P:\ENVIRO\TOSCO\0843\002-0843.DWG | Layout: Tosc Site Plan

MTBE AND GASOLINE GROUNDWATER ANALYTICAL RESULTS
FORMER TOSCO SITE
1629 WEBSTER STREET, ALAMEDA, CALIFORNIA
(all concentrations in µg/L)

Well ID	Gasoline	MTBE
September 2001 Sampling Event		
MW-1	*< 50*	*< 5.0*
MW-2	**76,000**	**480**
MW-3	*< 50*	*< 5.0*
MW-4	*< 50*	*< 5.0*
MW-5	*< 50*	*< 5.0*
MW-6	*< 50*	**160**
December 2001 Sampling Event		
MW-1	*< 50*	*< 5.0*
MW-2	**82,000**	**270**
MW-3	*< 50*	*< 5.0*
MW-4	*< 50*	**1,700**
MW-5	*< 50*	*< 5.0*
MW-6	*< 50*	**3,200**
March 2002 Sampling Event		
MW-1	*< 50*	*< 5.0*
MW-2	**14,000**	**150**
MW-3	*< 50*	*< 5.0*
MW-4	*< 50*	*< 5.0*
MW-5	*< 50*	*< 5.0*
MW-6	*< 50*	**120**
June 2002 Sampling Event		
MW-1	*< 50*	*< 2.5*
MW-2	**14,000**	**540**
MW-3	*< 50*	*< 2.5*
MW-4	*< 50*	*< 2.5*
MW-5	*NS*	*NS*
MW-6	*NS*	*NS*
September 2002 Sampling Event		
MW-1	*NS*	*NS*
MW-2	**10,000**	**510**
MW-3	*NS*	*NS*
MW-4	*< 50*	*< 2.5*
MW-5	*NS*	*NS*
MW-6	*NS*	*NS*
December 2002 Sampling Event		
MW-1	*NS*	*NS*
MW-2	**3,400**	**400**
MW-3	*NS*	*NS*
MW-4	*< 50*	**3.3**
MW-5	*< 50*	*< 2.0*
MW-6	**590**	**6,200**

Note: Data obtained from Regional Board online "GeoTracker" database.
NS = Well not sampled in this event.

1716 and 1802 Webster Street



Groundwater Elevation Contour Map
February 4, 2002

CAMBRIA

BP Oil Site No. 11104
1716 Webster Street
Alameda, CA

FIGURE
1

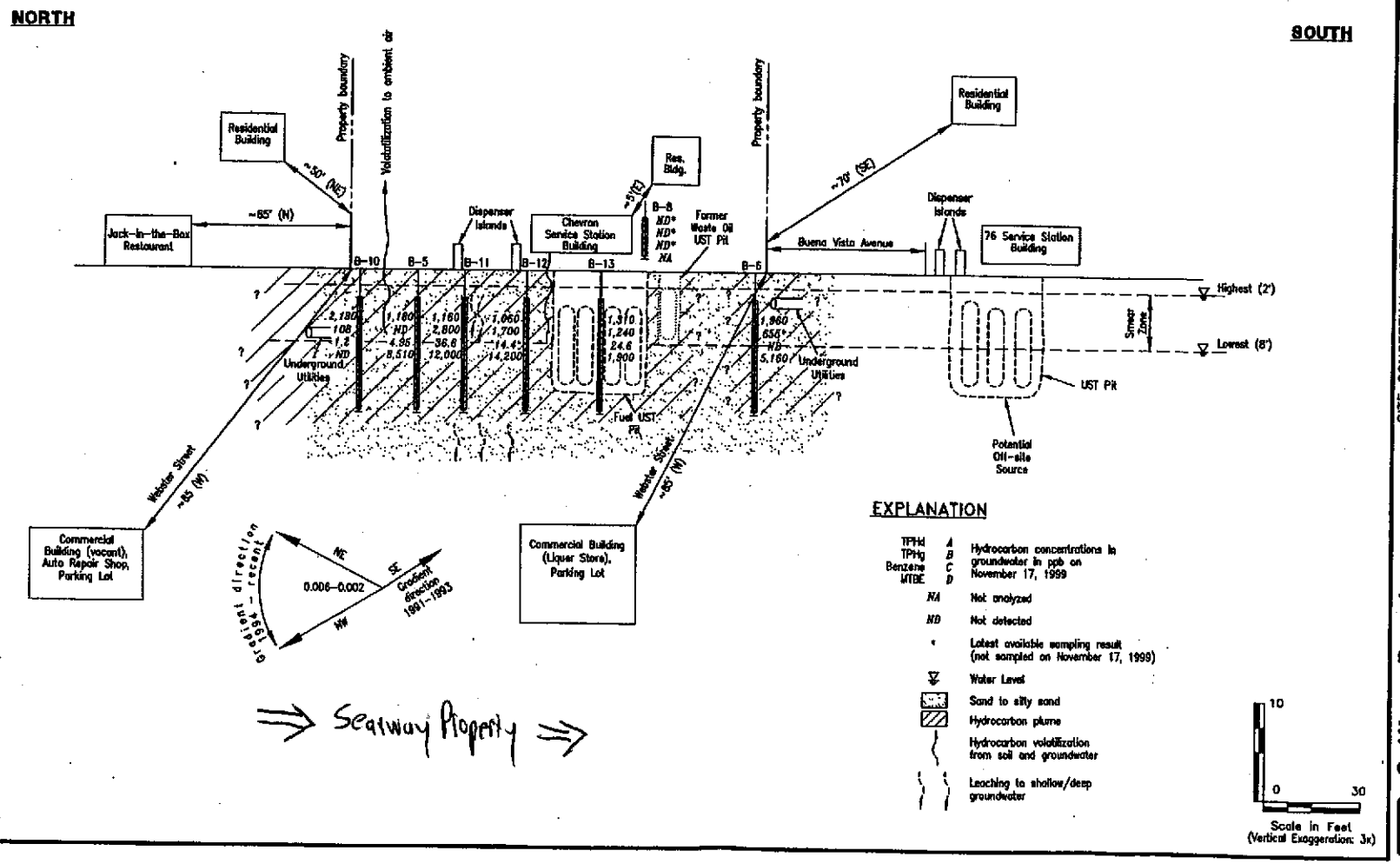


FIGURE 3

SITE CONCEPTUAL MODEL
Chevron Service Station No. 9-0290
1802 Webster Street
Alameda, California

DATE 03/00

REVISED DATE

PROJECTED BY

JOB NUMBER 345280.02

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-01 Page 1 of 1

PROJECT Searway Property
OWNER Searway Family
LOCATION 649 Pacific Ave., Alameda, CA
PROJECT NUMBER 2003-13
TOTAL DEPTH 12 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED 10'–12'
DRILLING COMPANY Precision Sampling
DRILLING METHOD Direct-Push
DRILLER Eugene
GEOLOGIST Bruce Rucker
DATE DRILLED 3/4/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				(ppmv)	asphalt	Borehole continuous core sampling.
					0–1' Not sampled	
2				2'=0	1–2.5' Aggregate base (fill)	
				3'=0	Dark brown sand (SP), dry, v. friable, not cohesive, sand is fine-grained	
4				4'=0		Collected soil sample BH-01-7' for lab analysis
				5'=0	4' Becomes medium-grained 5' Sample moist	
6				6'=0	Red-brown clayey sand (SC), dry, v. friable, not cohesive	
				7'=22	7-7.5' Blue grey discoloration & solvent odor	
8				8'=5	8' Becomes mod. cohesive & moist	
				9'=1.3	9' Becomes mod. stiff, sl. moist, sand is fine-grained	
10				10'=0	Brown sand (SP), wet, dense, not cohesive, sand is med.-grained	10-12' very slow penetration. Sample 3/4' full
				11'=0		
12				12'=0	Total depth = 12'	Collected groundwater sample BH-01-GW
14						
						Water level equilibrated to 6.7' below grade after 1 hour
16						
18						
20						

2003-13-04

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-02 Page 1 of 1

PROJECT Searway Property
OWNER Searway Family
LOCATION 647 Pacific Ave., Alameda, CA
PROJECT NUMBER 2003-13
TOTAL DEPTH 15 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED 10′–13′
DRILLING COMPANY Precision Sampling
DRILLING METHOD Direct-Push
DRILLER Eugene
GEOLOGIST Bruce Rucker
DATE DRILLED 3/4/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				(ppmv)	4″ concrete	Borehole continuous core sampling.
					0–1′ Not sampled	
2				2′=0	1–2.5′ Aggregate base (fill)	
				3′=0	Dark brown sand (SP), dry, v. friable, not cohesive, sand is fine-grained	
4				4′=0		Collected soil sample BH-02-12.5′ for lab analysis
				5′=0	4′ Becomes medium-grained	
					5.5′ Sample moist	
6				6′=0	Red-brown clayey sand (SC), wet, v. friable, not cohesive	
				7′=0		
8				8′=0	8′ Becomes mod. cohesive & moist	
				9′=0	9′ Becomes mod. stiff, sl. moist, sand is fine-grained	
10				10′=0		
				11′=0	10′ Becomes med.-grained, dense, moist-wet	13-15′ No sample recovery
12				12′=0	12.5′ Becomes fine-grained, sl. moist-moist	
				13′=0		Collected groundwater sample BH-02-GW
14					13′ Becomes moist-wet	
					Total depth = 15′	Water level equilibrated to 7.1′ below grade.
16						
18						
20						

2003-13-05

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-03 Page 1 of 1

PROJECT Searway Property
OWNER Searway Family
LOCATION 649 Pacific Ave., Alameda, CA
PROJECT NUMBER 2003-13
TOTAL DEPTH 13 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED 10′–13′
DRILLING COMPANY Precision Sampling
DRILLING METHOD Direct-Push
DRILLER Eugene
GEOLOGIST Bruce Rucker
DATE DRILLED 3/4/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				(ppmv)	6″ concrete floor	
2					0–4′ Only 1′ sample recovery Dark brown-black sandy clayey fill, dry	
4				4′=0	4-6.5′ No sample recovery	Collected soil sample BH-03-6.5′
6						
	?—?—?—			7′=386	?—?—?—?—?—?—?	
8				8′=102	Blue grey clayey sand (SC), v. friable, sand is fine-grained moist-wet	
				9′=123		
10				10′=8	8.5′ Color change to light brown, sl.-moist	Strong solvent odor from 7-9′
				11′=0	9.5′ Color change to red-brown, v. friable, moist-wet, sand is med.-grained	
12				12′=0		
				13′=0	Total depth = 13′	Collected groundwater sample BH-03-GW
14						
16						
18						
20						

2003-13-06

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-04 Page 1 of 1

PROJECT Searway Property
OWNER Searway Family
LOCATION 649 Pacific Ave., Alameda, CA
PROJECT NUMBER 2003-13
TOTAL DEPTH 13 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED 10′–13′
DRILLING COMPANY Precision Sampling
DRILLING METHOD Direct-Push
DRILLER Eugene
GEOLOGIST Bruce Rucker
DATE DRILLED 3/4/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				(ppmv)	Borehole soil samples not explicitly logged. Lithology was similar to that in BH-01	
2						
4						Collected soil sample BH-04-8′
				5′=0		
6				6′=0	6.5–8.5′ Solvent odor & blue-grey discoloration	
				7′=140		
8				8′=199		
				9′=6		
10				10′=0		
						Collected groundwater sample BH-04-GW
12						
14					Total depth = 13′	
16						
18						
20						

2003-13-07

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-05 Page 1 of 1

PROJECT Searway Property
OWNER Searway Family
LOCATION 1713 Webster St., Alameda, CA
PROJECT NUMBER 2003-13
TOTAL DEPTH 13 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED 10′–13′
DRILLING COMPANY Precision Sampling
DRILLING METHOD Direct-Push
DRILLER Eugene
GEOLOGIST Bruce Rucker
DATE DRILLED 3/4/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				(ppmv)	Ceramic tile & concrete floor	
					0–2′ No sample recovery	
2	? ? ?				? ? ? ? ? ?	
				3′=0	Dark brown silty sand (SM), v. friable, not cohesive, dry	
4				4′=0	Light brown sand (SP), v. friable, not cohesive, dense, dry, sand is fine-grained	Collected soil sample BH-05-8′
				5′=0		
6				6′=0	Light brown clayey sand (SC), v. friable, not cohesive, dry, sand is fine-grained	
				7′=0		
8				8′=0	Sample wet at 5.5′	
				9′=0	6.5′ Becomes dry, dense, sl. stiff	Collected groundwater sample BH-05-GW
10				10′=0	8′ Becomes sl. moist, mod. stiff	
				11′=0	10.5′ Becomes moist to wet	Water level =6.4′ after 15 minutes
12				12′=0		
14					Total depth = 13′	No evidence of backfill material
16						
18						
20						

2003-13-08

March - July 2003 Borehole Soil PID Readings
649 Pacific Avenue and 1711/1713 Webster Street Subsites, Alameda, California

	Sample depth (in feet below grade) and PID readings (in ppmv)											
Borehole	**2'**	**3'**	**4'**	**5'**	**6'**	**7'**	**8'**	**9'**	**10'**	**11'**	**12'**	**13'**
1711 and 1713 Webster Street												
BH-05		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
BH-13				< 1	< 1	< 1	< 1		< 1		< 1	
BH-14				< 1	< 1	< 1	< 1		< 1		< 1	
BH-31		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
BH-32		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
BH-33		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
649 Pacific Avenue												
BH-01	< 1	< 1	< 1	< 1	< 1	22	5	1.3	< 1	< 1	< 1	
BH-02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
BH-03			< 1			386	102	123	8	< 1	< 1	< 1
BH-04				< 1	< 1	140	199	6	< 1			
BH-09		< 1	< 1	< 1	< 1	< 1	< 1					
BH-10		< 1	< 1	< 1	< 1	< 1	< 1	150				
BH-11			< 1	< 1	< 1	38	417	401	406			
BH-12		< 1	< 1	< 1	< 1	170	245	320	205			
Floor Drain Base			< 1									
BH-16	< 1		< 1		< 1	< 1	< 1		< 1		< 1	
BH-17	< 1		< 1		< 1	< 1	< 1		< 1			
BH-18	< 1		< 1		< 1	< 1	< 1		< 1	< 1		

BH-19	< 1		< 1		< 1	< 1	16	< 1	< 1	< 1		
BH-20	< 1		< 1		< 1	< 1	< 1	< 1	< 1	< 1		
BH-21		22	70	55	15	14	80	65	6	< 1		
BH-22		6	3	< 1	27	9	38	9	6	< 1		
BH-23		55	6	5	5	280	430	330	390	30	28	
BH-24		35	20	< 1	11	15	< 1	3	2	< 1		
BH-25		< 1	< 1	< 1	< 1	< 1	14	417	9	< 1		
BH-26		< 1	< 1	< 1	< 1	650	960	470	32	6		
BH-27		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
BH-28		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
BH-29		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
BH-30		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			

Notes: PID = Photoionization detector (calibrated for volatile range hydrocarbons); ppmv = parts per million by volume air

Subject: GeoProbe rig at Borehole BH-14 (location BH-13 in foreground, under orange cones).	
Site: Searway Property – 1711/1713 Webster Street Subsite, Alameda, California	
Date Taken: July 9, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 01

Subject: GeoProbe rig at Borehole BH-15, adjacent to area storm drain inlet.	
Site: Searway Property – 649 Pacific Avenue Subsite – Western Parking Lot, Alameda, California	
Date Taken: July 9, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 02

Subject: GeoProbe rig at Borehole BH-16	
Site: Searway Property – 649 Pacific Avenue Subsite – Western Parking Lot, Alameda, California	
Date Taken: July 9, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 03

Subject: GeoProbe rig at Borehole BH-20	
Site: Searway Property – 649 Pacific Avenue Subsite – Western Parking Lot, Alameda, California	
Date Taken: July 9, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 04

Subject: "Badger" (GeoProbe) rig at Borehole BH-24	
Site: Searway Property – 649 Pacific Avenue Subsite, Alameda, California	
Date Taken: July 10, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 05

Subject: Coring concrete floor rig at Borehole BH-31	
Site: Searway Property – 1711 Webster Street tenant space, Alameda, California	
Date Taken: July 11, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 06

Subject: Hand auger sampling beneath sanitary sewer line floor drain

Site: Searway Property – 649 Pacific Avenue subsite, Alameda, California	
Date Taken: March 24, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 07

Subject: Sanitary sewer line trench, looking to the north, showing hand auger sampling locations (steel tubes with red caps)

Site: Searway Property – 649 Pacific Avenue Subsite, Alameda, California	
Date Taken: March 24, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 08

Subject: Sanitary sewer line trench, looking to the south

Site: Searway Property – 649 Pacific Avenue Subsite, Alameda, California	
Date Taken: March 24, 2003	Project No.: SES 2003-13
Photographer: Bruce Rucker	Photo No.: 09

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510) 782-1939
APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 844 Pacific Avenue &
1707 Webster Street
Alameda CA

CLIENT
Name Wells & Bennett Realtors - Mr. Stan Hammond
Address 851 Lambert Blvd Phone 510-531-7000
City Oakland CA Zip 94603

APPLICANT
Name Stellar Environmental Solutions - BRUCE RUCKER
Fax 510-644-3859
Address 419 Sixth St #201 Phone " " -3123
City Berkeley Zip 94710

TYPE OF PROJECT

Well Construction	•	Geotechnical Investigation	•
Cathodic Protection	•	General	•
Water Supply	•	Contamination	•
Monitoring	•	Well Destruction	•

PROPOSED WATER SUPPLY WELL USE

New Domestic	•	Replacement Domestic	•
Municipal	•	Irrigation	•
Industrial	•	Other	•

DRILLING METHOD:

Mud Rotary	•	Air Rotary	• Auger •
Cable	•	Other	• Direct-Push

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. C-57 # 705907

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in. Depth ____ ft.
Surface Seal Depth ____ ft. Owner's Well Number ____

GEOTECHNICAL PROJECTS
Number of Borings 17 Maximum
Hole Diameter 2 in. Depth 15 ft.

STARTING DATE June 30, 2003
COMPLETION DATE July 2, 2003

FOR OFFICE USE
PERMIT NUMBER W03-0565
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D.) GEOTECHNICAL / ENVIRONMENTAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind, ~~or with compacted cuttings~~.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

(G.) SPECIAL CONDITIONS GPI ATTACHED

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

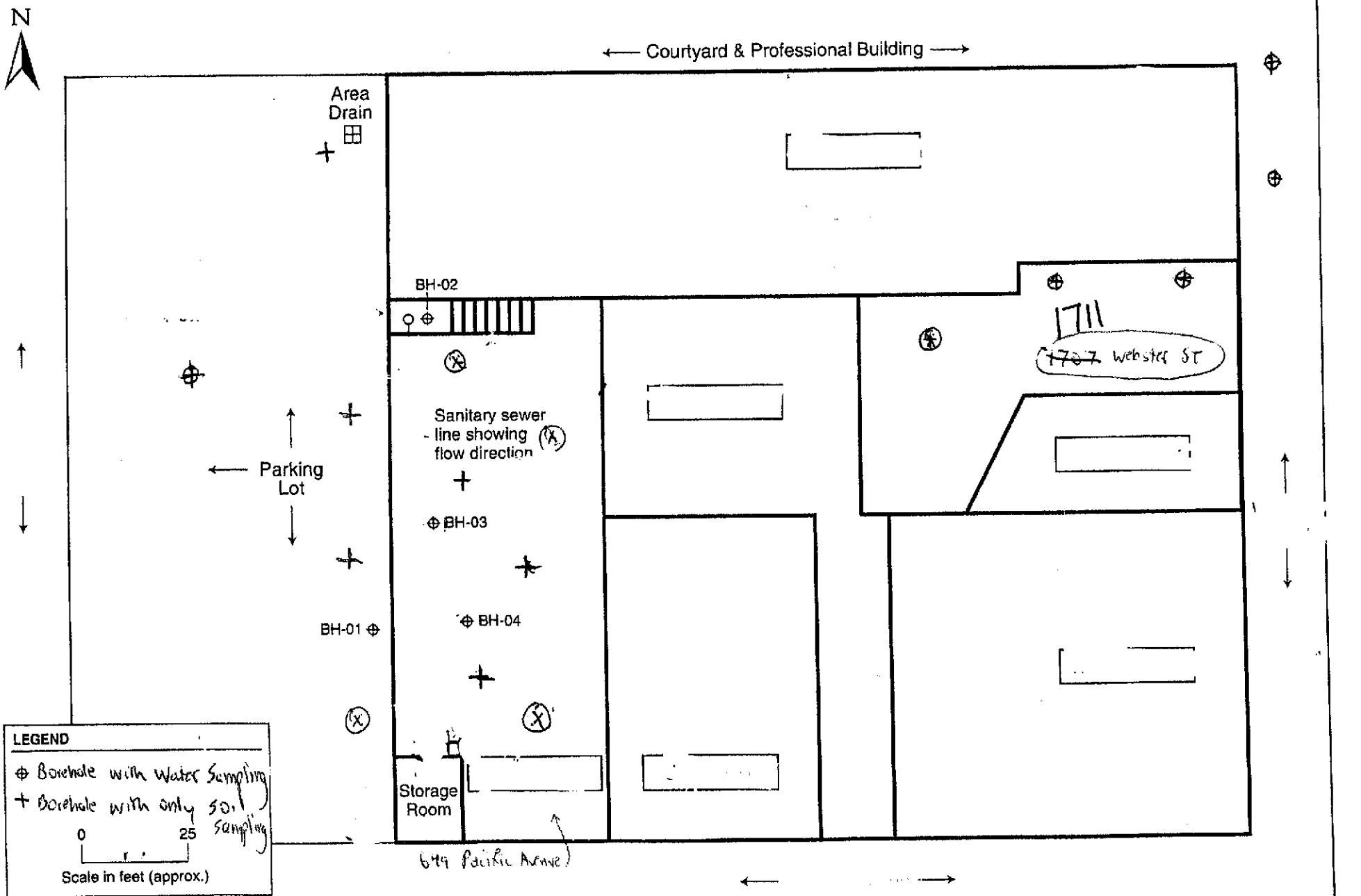
APPROVED _____ DATE 6-17-03

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Bruce M. Rucker DATE 5/21/03

PLEASE PRINT NAME Bruce M. Rucker

Rev.9-18-02



Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

PROPOSED BOREHOLE LOCATIONS
649 Pacific Avenue & 1707 Webster Street, Alameda, CA

by: MJC

MARCH 2003

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 Sixth Street, Suite 201
Berkeley, CA 94710
Tel: (510) 644-3123
Fax: (510) 644-3859

fax

to:	***James Yoo – Alameda County Public Works Agency***
fax #:	***510-782-1939***
from:	***Bruce Rucker*** (BMR)
date:	***6/26/03***
subject:	***Drilling Permit W03-0565*** ***649 Pacific Avenue & 1707 Webster Street, Alameda***
pages:	***1 (including this cover page)***
NOTES:	***James –*** ***The drilling schedule for this project has been revised from June 30 through July 2 to July 9 through July 11. Please call if you have any questions.*** ***Best Regards,***

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:

Stellar Environmental Solutions
2198 6th Street
Suite 201
Berkely, CA 94710

Date: 24-MAR-03
Lab Job Number: 164329
Project ID: 2003-13
Location: Pacific/Webster Investig.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

CHAIN OF CUSTODY FORM

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

C&T LOGIN # 104329

Analyses

Sampler: Bruce Rucker
Report To: Bruce Rucker
Company: Stetler Environmental Solutions
Telephone: 510/644-3123
Fax: 510/644-3859

Project No: 2003-13
Project Name: Seaway Property, Alameda CA
Project P.O.:
Turnaround Time: 24 Hour

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO	Preservative: HNO_3	Preservative: ICE	Field Notes	TVH (gas + Stoddard Solvent ranges)	BTEX + MTBE
001	Trench Stockpile	3/21/03 1300	X			1					4 pt composite of ~3-5 cubic yards of stockpiled soil from a sanitary sewer drain line excavation	X	X

For Laboratory Use

Notes:
Rec'd Over The Counter from Coder, Cold.

RELINQUISHED BY:
Bruce Rucker 3/21/03 1430 DATE/TIME
DATE/TIME
DATE/TIME

RECEIVED BY:
Anne Pajarillo 3/21/03 1420 DATE/TIME
DATE/TIME
DATE/TIME

Signature

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164329	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Field ID:	TRENCH STOCKPILE	Batch#:	80184
Matrix:	Soil	Sampled:	03/21/03
Basis:	as received	Received:	03/21/03
Diln Fac:	1.000	Analyzed:	03/22/03

Type: SAMPLE Lab ID: 164329-001

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.2	ug/Kg	EPA 8021B
Toluene	ND	5.2	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.2	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.2	ug/Kg	EPA 8021B
o-Xylene	ND	5.2	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	100	58-144	8015B
Bromofluorobenzene (FID)	98	60-146	8015B
Trifluorotoluene (PID)	97	67-146	EPA 8021B
Bromofluorobenzene (PID)	98	60-137	EPA 8021B

Type: BLANK Lab ID: QC208672

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	58-144	8015B
Bromofluorobenzene (FID)	97	60-146	8015B
Trifluorotoluene (PID)	92	67-146	EPA 8021B
Bromofluorobenzene (PID)	93	60-137	EPA 8021B

ND= Not Detected
RL= Reporting Limit

1.0

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164329	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Basis:	as received
Lab ID:	QC208673	Diln Fac:	1.000
Matrix:	Soil	Batch#:	80184
Units:	mg/Kg	Analyzed:	03/22/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	5.000	4.770	95	78-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		116	58-144
Bromofluorobenzene (FID)		101	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

2.0

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164329	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Type:	LCS	Basis:	as received
Lab ID:	QC208674	Diln Fac:	1.000
Matrix:	Soil	Batch#:	80184
Units:	ug/Kg	Analyzed:	03/22/03

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12		NA			
MTBE	100.0	101.9	102	72-126	EPA 8021B
Benzene	100.0	98.30	98	65-120	EPA 8021B
Toluene	100.0	92.48	92	69-120	EPA 8021B
Ethylbenzene	100.0	94.18	94	68-121	EPA 8021B
m,p-Xylenes	200.0	191.6	96	70-124	EPA 8021B
o-Xylene	100.0	99.04	99	73-121	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	58-144	8015B
Bromofluorobenzene (FID)	101	60-146	8015B
Trifluorotoluene (PID)	97	67-146	EPA 8021B
Bromofluorobenzene (PID)	101	60-137	EPA 8021B

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164329	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	164332-001	Batch#:	80184
Matrix:	Soil	Sampled:	03/21/03
Units:	mg/Kg	Received:	03/21/03
Basis:	as received	Analyzed:	03/22/03

Type: MS Lab ID: QC208675

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.06300	10.10	9.593	95	44-133
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		116	58-144
Bromofluorobenzene (FID)		103	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC208676

Analyte	Spiked	Result	%REC	Limits	RPD	Li
Gasoline C7-C12	10.20	9.179	90	44-133	5	31
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		116	58-144
Bromofluorobenzene (FID)		105	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

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

ANALYTICAL REPORT

Prepared for:

Stellar Environmental Solutions
2198 6th Street
Suite 201
Berkely, CA 94710

Date: 03-APR-03
Lab Job Number: 164377
Project ID: 2003-13
Location: Pacific/Webster Investig.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

Curtis & Tompkins, Ltd.

Laboratory Number: 164377 **Receipt Date:** 03/25/03
Client: Stellar Environmental
Location: Pacific/Webster Investigation
Project#: 2003-13

CASE NARRATIVE

This hardcopy data package contains sample and QC results for nine soil samples that were received on March 25, 2003. The samples were received cold and intact.

TPH-Purgeable Hydrocarbons by EPA 8015B(M) and BTXE by EPA 8021B: High surrogate recoveries were observed for bromofluorobenzene in samples BH-10-7.5' (CT#164377-005), BH-11-8' (CT# 164377-0074) and BH-12-7.5' (CT# 164377-009) due to coelution with heavy hydrocarbons.

After the results were reported, the client requested quantification as Stoddard Solvent. These calculations are based on the latest Stoddard Solvent calibration, but no calibration verification standard was run with these samples. The most recent standard ran on 3/22 and passed. The sample chromatographic patterns resemble that of Stoddard Solvent, but the following concentrations should be considered estimates.

164377-005 2,700 mg/Kg
164377-007 2,000 mg/Kg
164377-009 960 mg/Kg

No other analytical problems were encountered.

Chain of Custody Record

Job no. [redacted]

Date _____

Page _____ of _____

Laboratory: Curtis & Tompkins Ltd.
Address: 2323 Fifth St, Berkeley CA, 510-486-0900

Method of Shipment: hand delivery
Shipment No.: —
Airbill No.: —
Cooler No.: —

Project Owner: Seaway Family
Site Address: 649 Pacific Avenue, Alameda CA
Project Name: Seaway Property
Project Number: 2003-13

Project Manager: Bruce Rucker
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature) B.M. Rucker

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH + BTEX + MTBE	Analysis Required: EPA 8010B	Remarks
-1 Floor Drain Base	3'	3/25/03	940	Soil	6" 4oz JAR ~~6" metal Sleeve~~ OR	✓			1	✓	✓	
-2 BH-09-~~3~~ 2'	2'		945		6" metal Sleeve					✓	✓	
-3 BH-09-7.5'	7.5'		1050							✓	✓	
-4 BH-10-2.5'	2.5'		1030							✓	✓	
-5 BH-10-7.5'	7.5'		1055							✓	✓	
-6 BH-11-2.5'	2.5'		1115							✓	✓	
-7 BH-11-8'	8'		1130							✓	✓	
-8 BH-12-3'	3'		1145							✓	✓	
-9 BH-12-7.5'	7.5'		1200		4oz jar					✓	✓	

Relinquished by:	Date	Received by:	Date
Signature: B.M. Rucker	3/26/03	Signature: [signature]	3/26/03
Printed: Bruce Rucker	Time	Printed: Steven Stanley	Time
Company: Stellar Env Solns	1250	Company: Curtis & Tompkins	1250

Relinquished by:	Date	Received by:	Date
Signature:		Signature:	
Printed:	Time	Printed:	Time
Company:		Company:	

Relinquished by:	Date	Received by:	Date
Signature:		Signature:	
Printed:	Time	Printed:	Time
Company:		Company:	

Turnaround Time: 5 Day

Comments:

Received ☑ On Ice ☑ Cold ☐ Ambient ☑ Intact

Preservation Correct? ☐ Yes ☐ No ☐ N/A

2000-UU-U1

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

CURTIS & TOMPKINS, LTD. BERKELEY

LOGIN CHANGE FORM

REVISED

Reason for change: ✓ Client Request: By: Bruce Rucker Date/Time: 3/26/03 8:34AM Initials: PMF

_____ Login Review _____ Data Review

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Duedate
164377 - 001			Soil	Cancel	8010 MS	
002						
003						
004						
005						
006						
007						
008						
009						

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/25/03
Basis:	as received	Received:	03/25/03
Batch#:	80260		

Field ID:	FLOOR DRAIN BASE	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/25/03
Lab ID:	164377-001		

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	58-144	8015B
Bromofluorobenzene (FID)	102	60-146	8015B
Trifluorotoluene (PID)	96	67-146	EPA 8021B
Bromofluorobenzene (PID)	100	60-137	EPA 8021B

Field ID:	BH-09-2'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/25/03
Lab ID:	164377-002		

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.2	ug/Kg	EPA 8021B
Toluene	ND	5.2	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.2	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.2	ug/Kg	EPA 8021B
o-Xylene	ND	5.2	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	58-144	8015B
Bromofluorobenzene (FID)	102	60-146	8015B
Trifluorotoluene (PID)	98	67-146	EPA 8021B
Bromofluorobenzene (PID)	101	60-137	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/25/03
Basis:	as received	Received:	03/25/03
Batch#:	80260		

Field ID:	BH-09-7.5'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/25/03
Lab ID:	164377-003		

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	0.98	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	100	58-144	8015B
Bromofluorobenzene (FID)	111	60-146	8015B
Trifluorotoluene (PID)	99	67-146	EPA 8021B
Bromofluorobenzene (PID)	104	60-137	EPA 8021B

Field ID:	BH-10-2.5'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/25/03
Lab ID:	164377-004		

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.1	ug/Kg	EPA 8021B
Toluene	ND	5.1	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.1	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	EPA 8021B
o-Xylene	ND	5.1	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	58-144	8015B
Bromofluorobenzene (FID)	112	60-146	8015B
Trifluorotoluene (PID)	97	67-146	EPA 8021B
Bromofluorobenzene (PID)	100	60-137	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/25/03
Basis:	as received	Received:	03/25/03
Batch#:	80260		

Field ID: BH-10-7.5' Lab ID: 164377-005
Type: SAMPLE

Analyte	Result	RL	Units	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	4,000 H Y	100	mg/Kg	100.0	03/26/03	8015B
MTBE	ND	20	ug/Kg	1.000	03/25/03	EPA 8021B
Benzene	ND	5.1	ug/Kg	1.000	03/25/03	EPA 8021B
Toluene	ND	5.1	ug/Kg	1.000	03/25/03	EPA 8021B
Ethylbenzene	260 C	5.1	ug/Kg	1.000	03/25/03	EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	1.000	03/25/03	EPA 8021B
o-Xylene	220 C	5.1	ug/Kg	1.000	03/25/03	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (FID)	94	58-144	100.0	03/26/03	8015B
Bromofluorobenzene (FID)	111	60-146	100.0	03/26/03	8015B
Trifluorotoluene (PID)	94	67-146	1.000	03/25/03	EPA 8021B
Bromofluorobenzene (PID)	207 *	60-137	1.000	03/25/03	EPA 8021B

Field ID: BH-11-2.5' Lab ID: 164377-006
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Units	Analyzed	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	03/26/03	8015B
MTBE	ND	19	ug/Kg	03/25/03	EPA 8021B
Benzene	ND	4.8	ug/Kg	03/25/03	EPA 8021B
Toluene	ND	4.8	ug/Kg	03/25/03	EPA 8021B
Ethylbenzene	ND	4.8	ug/Kg	03/25/03	EPA 8021B
m,p-Xylenes	ND	4.8	ug/Kg	03/25/03	EPA 8021B
o-Xylene	ND	4.8	ug/Kg	03/25/03	EPA 8021B

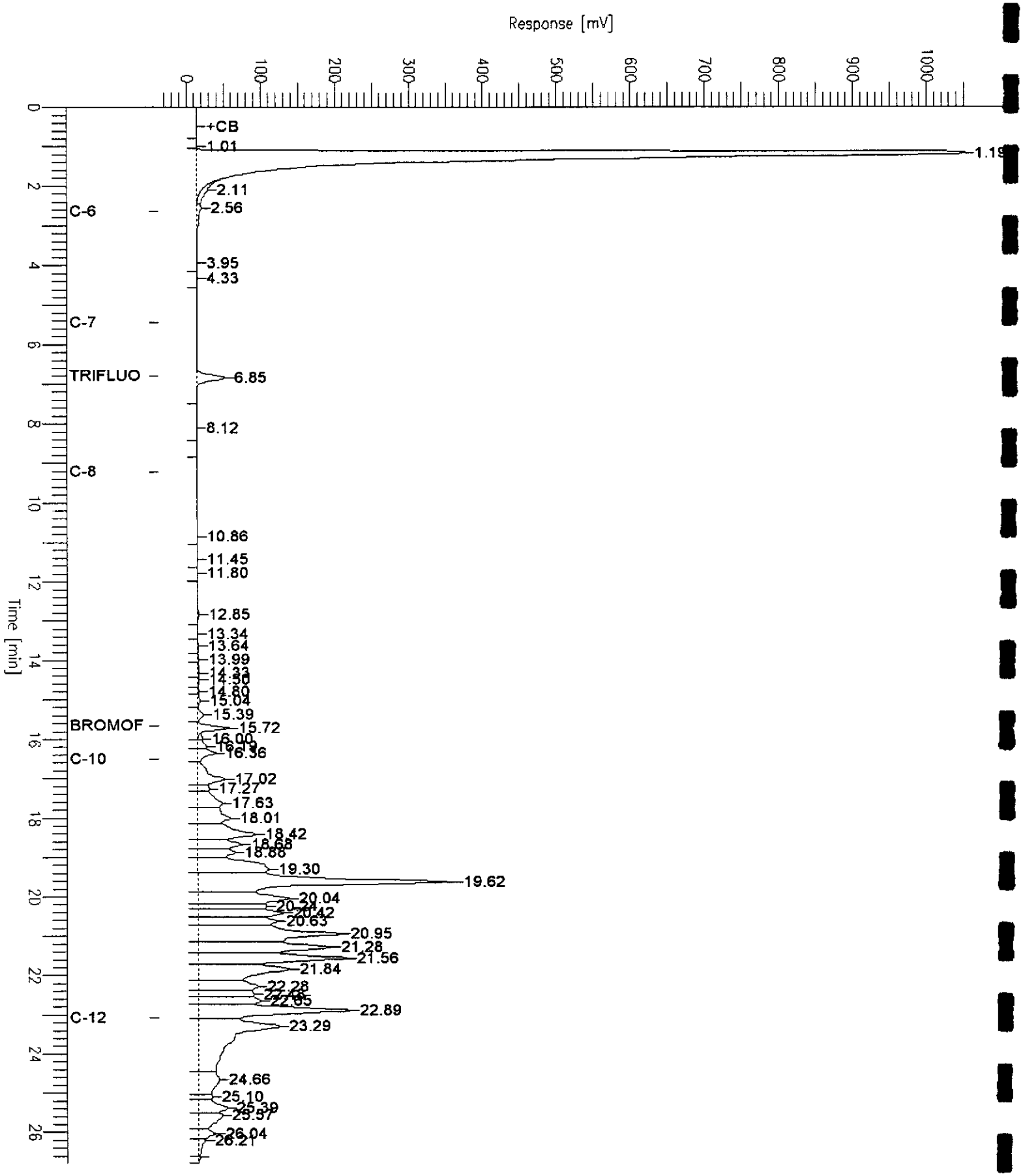
Surrogate	%REC	Limits	Analyzed	Analysis
Trifluorotoluene (FID)	101	58-144	03/26/03	8015B
Bromofluorobenzene (FID)	106	60-146	03/26/03	8015B
Trifluorotoluene (PID)	97	67-146	03/25/03	EPA 8021B
Bromofluorobenzene (PID)	102	60-137	03/25/03	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

GC19 TVH 'X' Data File (FID)

Sample Name : 164377-005,80260,TVH ONLY
FileName : G:\GC19\DATA\084X044.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: 1.0 Plot Offset: -38 mV

Sample #: A Page 1 of 1
Date : 3/26/03 03:00 PM
Time of Injection: 3/26/03 02:33 PM
Low Point : -38.14 mV High Point : 1051.84 mV
Plot Scale: 1090.0 mV



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/25/03
Basis:	as received	Received:	03/25/03
Batch#:	80260		

Field ID: BH-11-8' Lab ID: 164377-007
Type: SAMPLE

Analyte	Result	RL	Units	Dil'n Fac	Analyzed	Analysis
Gasoline C7-C12	3,000 H Y	200	mg/Kg	200.0	03/26/03	8015B
MTBE	ND	22	ug/Kg	1.000	03/25/03	EPA 8021B
Benzene	ND	5.4	ug/Kg	1.000	03/25/03	EPA 8021B
Toluene	ND	5.4	ug/Kg	1.000	03/25/03	EPA 8021B
Ethylbenzene	880 C	5.4	ug/Kg	1.000	03/25/03	EPA 8021B
m,p-Xylenes	ND	5.4	ug/Kg	1.000	03/25/03	EPA 8021B
o-Xylene	ND	5.4	ug/Kg	1.000	03/25/03	EPA 8021B

Surrogate	%REC	Limits	Dil'n Fac	Analyzed	Analysis
Trifluorotoluene (FID)	93	58-144	200.0	03/26/03	8015B
Bromofluorobenzene (FID)	104	60-146	200.0	03/26/03	8015B
Trifluorotoluene (PID)	95	67-146	1.000	03/25/03	EPA 8021B
Bromofluorobenzene (PID)	326 *	>LR b 60-137	1.000	03/25/03	EPA 8021B

Field ID: BH-12-3' Dil'n Fac: 1.000
Type: SAMPLE Analyzed: 03/26/03
Lab ID: 164377-008

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	0.98	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	58-144	8015B
Bromofluorobenzene (FID)	100	60-146	8015B
Trifluorotoluene (PID)	95	67-146	EPA 8021B
Bromofluorobenzene (PID)	99	60-137	EPA 8021B

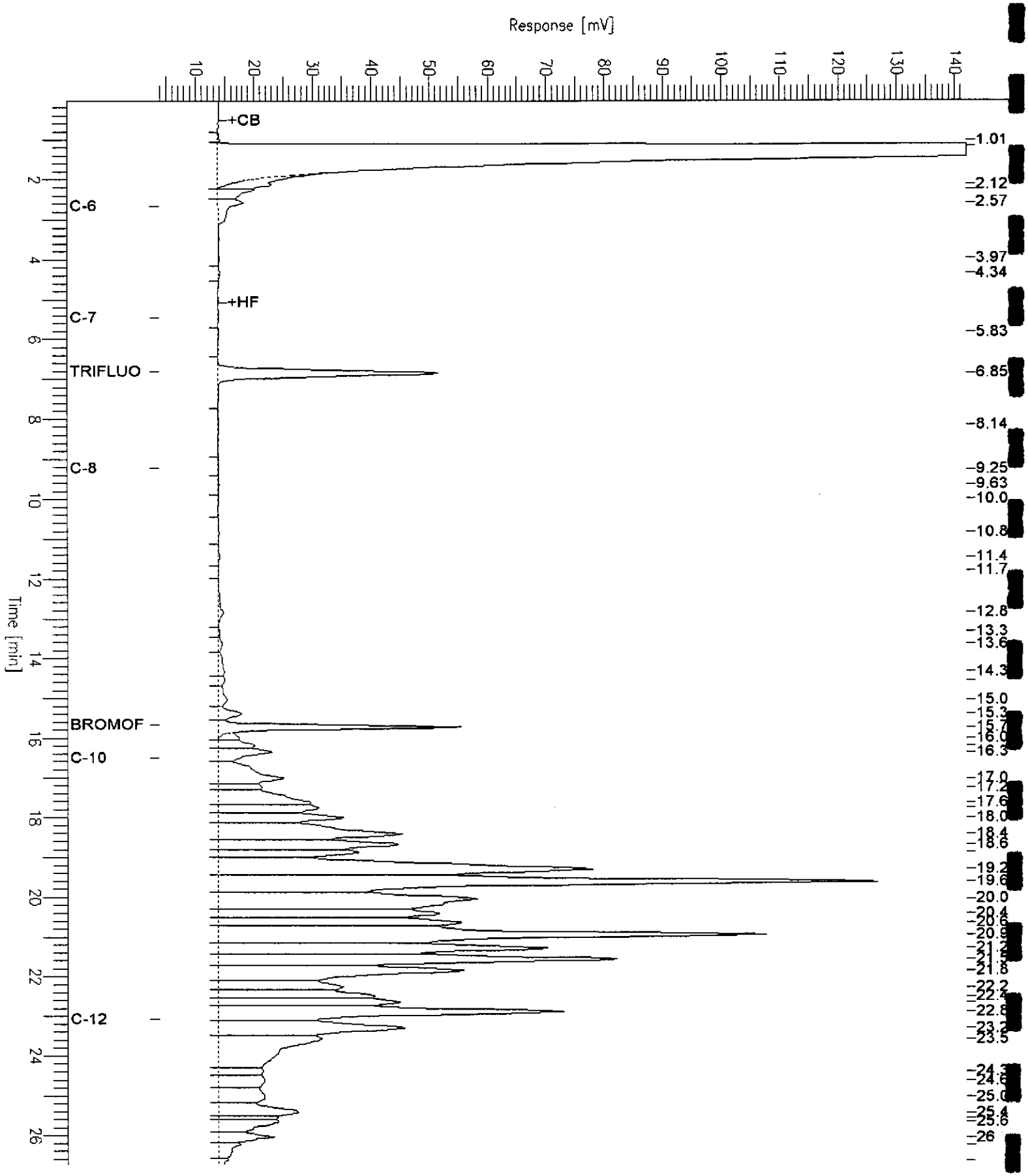
*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

1.0

GC19 TVH 'X' Data File (FID)

Sample Name : 164377-007,80260,TVH ONLY
FileName : G:\GC19\DATA\084X042.RAW
Method :
Start Time : 0.02 min End Time : 26.75 min
Scale Factor: 0.0 Plot Offset: 4 mV

Sample #: A
Date : 3/26/03 01:56 PM
Time of Injection: 3/26/03 01:25 PM
Low Point : 3.68 mV High Point : 141.92 mV
Plot Scale: 138.2 mV



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/25/03
Basis:	as received	Received:	03/25/03
Batch#:	80260		

Field ID:	BH-12-7.5'	Lab ID:	164377-009
Type:	SAMPLE	Analyzed:	03/26/03

Analyte	Result	RL	Units	Dil'n Fac	Analysis
Gasoline C7-C12	1,400 H Y	100	mg/Kg	100.0	8015B
MTBE	ND	21	ug/Kg	1.000	EPA 8021B
Benzene	ND	5.2	ug/Kg	1.000	EPA 8021B
Toluene	ND	5.2	ug/Kg	1.000	EPA 8021B
Ethylbenzene	84 C	5.2	ug/Kg	1.000	EPA 8021B
m,p-Xylenes	ND	5.2	ug/Kg	1.000	EPA 8021B
o-Xylene	310 C	5.2	ug/Kg	1.000	EPA 8021B

Surrogate	%REC	Limits	Dil'n Fac	Analysis
Trifluorotoluene (FID)	94	58-144	100.0	8015B
Bromofluorobenzene (FID)	102	60-146	100.0	8015B
Trifluorotoluene (PID)	94	67-146	1.000	EPA 8021B
Bromofluorobenzene (PID)	154 *	60-137	1.000	EPA 8021B

Type:	BLANK	Dil'n Fac:	1.000
Lab ID:	QC208957	Analyzed:	03/25/03

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

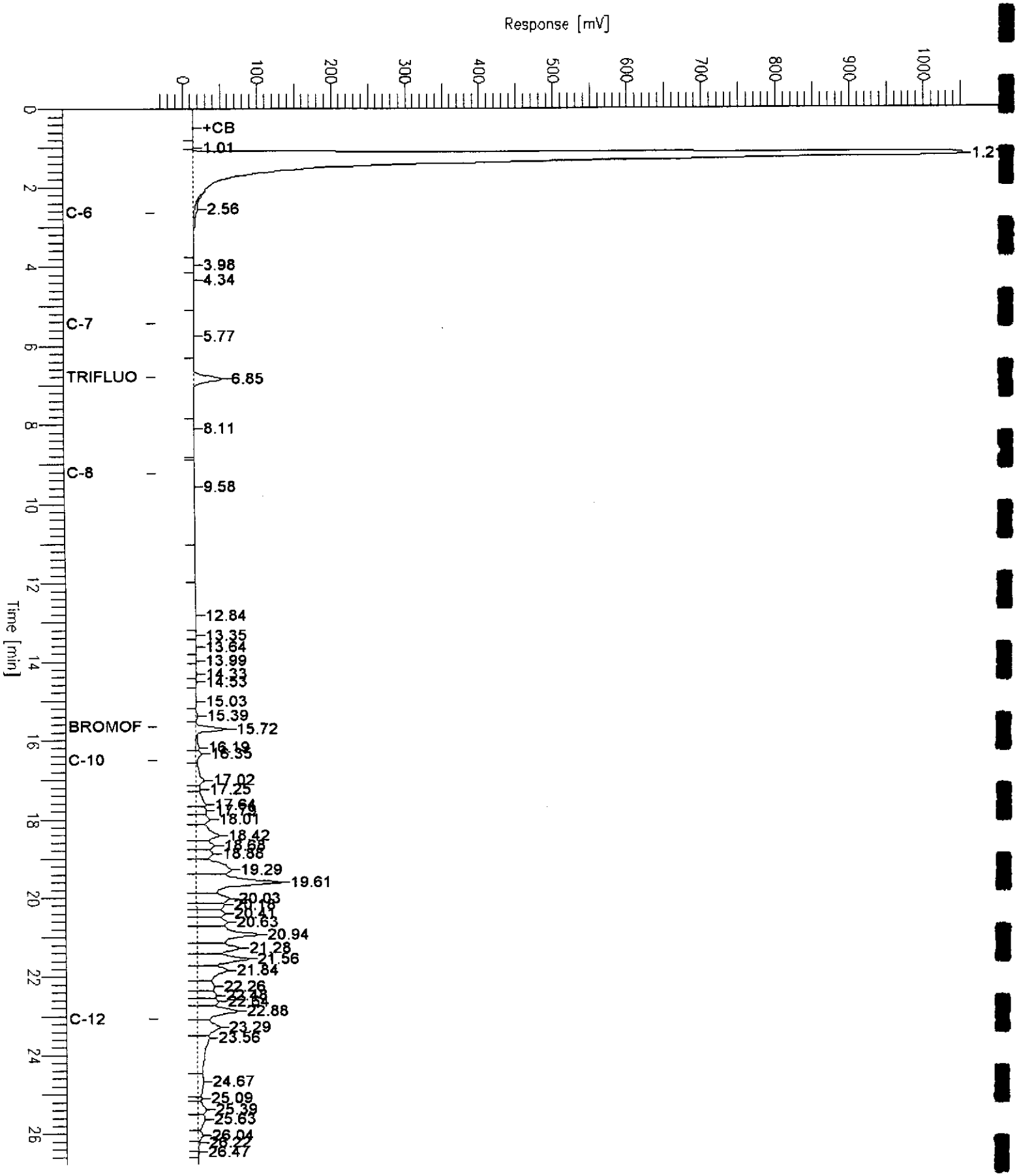
Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	58-144	8015B
Bromofluorobenzene (FID)	104	60-146	8015B
Trifluorotoluene (PID)	100	67-146	EPA 8021B
Bromofluorobenzene (PID)	105	60-137	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

GC19 TVH 'X' Data File (FID)

Sample Name : 164377-009,80260,TVH ONLY
FileName : G:\GC19\DATA\084X043.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: 1.0 Plot Offset: -38 mV

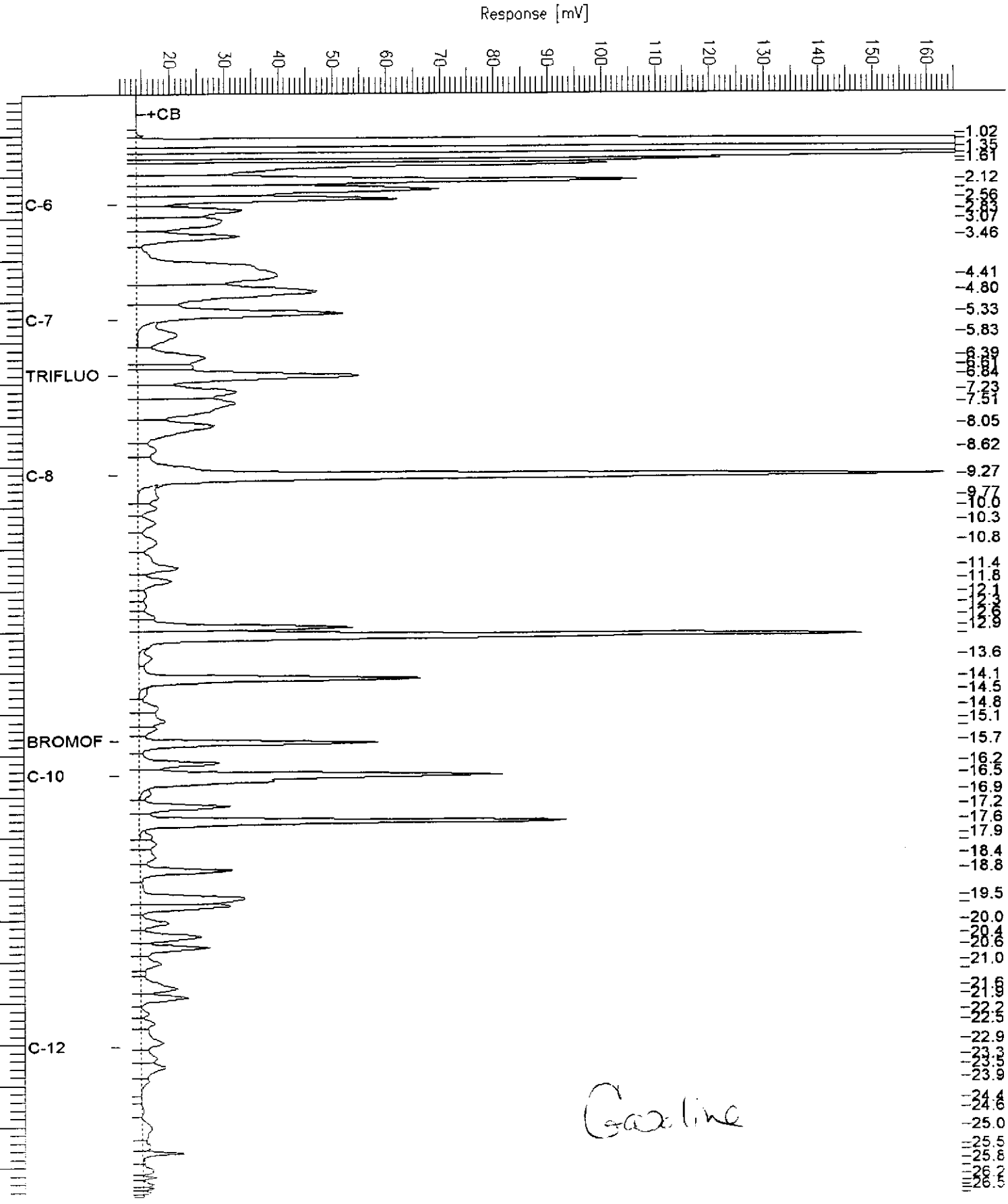
Sample #: A
Date : 3/26/03 02:26 PM
Time of Injection: 3/26/03 01:59 PM
Low Point : -38.17 mV High Point : 1051.90 mV
Plot Scale: 1090.1 mV



GC19 TVH 'X' Data File (FID)

Sample Name : ccv/lcs,qc208959,80260,03ws0417,5/5000
FileName : G:\GC19\DATA\084X001.RAW
Method :
Start Time : 0.02 min End Time : 26.75 min
Scale Factor: 0.0 Plot Offset: 10 mV

Sample #: Page 1 of 1
Date : 3/26/03 04:12 PM
Time of Injection: 3/25/03 01:39 PM
Low Point : 10.43 mV High Point : 165.29 mV
Plot Scale: 154.9 mV



Gasoline

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Type:	LCS	Basis:	as received
Lab ID:	QC208958	Diln Fac:	1.000
Matrix:	Soil	Batch#:	80260
Units:	ug/Kg	Analyzed:	03/25/03

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12		NA			
MTBE	100.0	102.2	102	65-135	EPA 8021B
Benzene	100.0	101.8	102	65-120	EPA 8021B
Toluene	100.0	95.80	96	69-120	EPA 8021B
Ethylbenzene	100.0	97.34	97	68-121	EPA 8021B
m,p-Xylenes	200.0	198.3	99	70-124	EPA 8021B
o-Xylene	100.0	103.1	103	73-121	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	58-144	8015B
Bromofluorobenzene (FID)	105	60-146	8015B
Trifluorotoluene (PID)	100	67-146	EPA 8021B
Bromofluorobenzene (PID)	105	60-137	EPA 8021B

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Basis:	as received
Lab ID:	QC208959	Diln Fac:	1.000
Matrix:	Soil	Batch#:	80260
Units:	mg/Kg	Analyzed:	03/25/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	10.03	100	78-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		115	58-144
Bromofluorobenzene (FID)		108	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	164377	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	164376-005	Batch#:	80260
Matrix:	Soil	Sampled:	03/20/03
Units:	mg/Kg	Received:	03/25/03
Basis:	as received	Analyzed:	03/26/03

Type: MS Lab ID: QC208995

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.06600	10.31	6.292	61	44-133
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		125	58-144
Bromofluorobenzene (FID)		103	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC208996

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.20	6.771	66	44-133	8	31
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		131	58-144
Bromofluorobenzene (FID)		105	60-146
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

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

ANALYTICAL REPORT

Prepared for:

Stellar Environmental Solutions
2198 6th Street
Suite 201
Berkeley, CA 94710

Date: 16-JUL-03
Lab Job Number: 166258
Project ID: 2003-13
Location: Pacific/Webster Investig.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

Chain of Custody Record

Date 7/9/03

Page 1 of 2

Laboratory Curtis & Tompkins, Ltd.
Address 2323 Fifth Street
Berkeley, CA 94710
510/486-0900

Method of Shipment hand delivery
Shipment No. —
Airbill No. —
Cooler No. —

Project Owner Seaway Family Trust
Site Address NW corner Webster St & Pacific Avenue
Alameda CA

Project Name Seaway Property
Project Number 2003-13

Project Manager Bruce Rucker
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) B.M. Rucker

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH (Stoddard Solvent)	+ BTEX + MTBE	TEH - diesel	Remarks
1	BH-13-GW	~11'	7/9/03	800	H_2O	40 ml VOAs	✓	HCl		2	X	X		
	" "	"		"		1-L amber		—		1			X	
2	BH-14-GW	"		915		40 ml VOAs		HCl		2	X	X		
	" "	"		"	↓	1-L amber		—		1			X	
-3	BH-15-2.5'	2.5'		945	Soil	acetate sleeve		—		1			X	
-4	BH-16-8'-1.5' (DR)	8'-1.5'		1015	"	acetate sleeve		—		1			X	
-5	BH-16-GW	~11'		1025	H_2O	40 ml VOAs		HCl		2	X	X		
	" "	"		"	"	1-L amber		—		1			X	
-6	BH-17-8'	8'		1045	Soil	acetate sleeve		—		1	X	X		
-7	BH-17-GW		↓	1100	H_2O	40 ml VOAs	↓	HCl		2	X	X		
	~~" "~~					~~1-L amber~~		—		1			BR	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature B.M. Rucker	7/9/03	Signature	7/9/03	Signature		Signature	
Printed Bruce M. Rucker	Time 1740	Printed	Time 1740	Printed	Time	Printed	Time
Company Stellar Env. Solns		Company Curtis & Tompkins Ltd.		Company		Company	

Relinquished by:	Date	Received by:	Date
Signature		Signature	
Printed	Time	Printed	Time
Company		Company	

Turnaround Time: 1 week

Comments:

Received ☐ On Ice ☒ Cold ☐ Ambient ☒ Intact

Chain of Custody Record 166238

Date 7/

Page 2 of 2

Laboratory: Curtis & Tompkins Ltd.
Address: 2323 Fifth Street
Berkeley, CA 94710
510/486-0900

Method of Shipment: hand delivery
Shipment No. —
Airbill No. —
Cooler No. —

Project Owner: Seaway Family Trust
Site Address: NW corner Webster St & Pacific Avenue
Alameda CA
Project Name: Seaway Property
Project Number: 2003-13

Project Manager: Bruce Rucker
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature) B M. Rucker

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH (Shaded Solvent) + BTEX + MTBE	Analysis Required: TEH-diesel	Remarks
8	BH-18-8'	8'	7/1/03	1130	Soil	acetate sleeve	✓	—		1	X	X	
9	BH-18-GW	~11'		1140	H_2O	40 ml VOAs		HCl		2	X	X	
10	BH-19-8'	8'		1210	Soil	acetate sleeve		—		1	X	X	
11	BH-19-GW	~11'		1225	H_2O	40 ml VOAs		HCl		2	X	X	
12	BH-20-7.5'	7.5'		1300	Soil	acetate sleeve		—		1	X	X	
13	BH-20-GW	~11'		1315	H_2O	40 ml VOAs		HCl		2	X	X	
	" "	"		"	"	1-L amber		—		1			X

Relinquished by:	Date	Received by:	Date
Signature: Bruce M. Rucker	7/1/03	Signature: Anna Pyzalska	7/1/03
Printed: Bruce M. Rucker	Time: 1740	Printed: Anna Pyzalska	Time: 1740
Company: Stellar Env. Solns		Company: Curtis & Tompkins, Ltd.	

Relinquished by:	Date	Received by:	Date
Signature:		Signature:	
Printed:	Time:	Printed:	Time:
Company:		Company:	

Relinquished by:	Date	Received by:	Date
Signature:		Signature: Anna Pyzalska	
Printed:	Time:	Printed:	Time:
Company:		Company:	

Turnaround Time: 1 week

Comments:

Received ☐ On Ice ☐ Cold ☐ Ambient ☒ Intact

2000-0001

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	07/09/03
Units:	ug/L	Received:	07/09/03
Batch#:	82841		

Field ID: BH-13-GW
Type: SAMPLE
Lab ID: 166258-001

Diln Fac: 1.000
Analyzed: 07/12/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	180	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	57-150	8015B
Bromofluorobenzene (FID)	101	65-144	8015B
Trifluorotoluene (PID)	96	54-149	EPA 8021B
Bromofluorobenzene (PID)	104	58-143	EPA 8021B

Field ID: BH-14-GW
Type: SAMPLE

Lab ID: 166258-002

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	ND	50	1.000	07/12/03	8015B
Stoddard Solvent C7-C12	ND	50	1.000	07/12/03	8015B
MTBE	29,000	100	50.00	07/13/03	EPA 8021B
Benzene	ND	0.50	1.000	07/12/03	EPA 8021B
Toluene	ND	0.50	1.000	07/12/03	EPA 8021B
Ethylbenzene	ND	0.50	1.000	07/12/03	EPA 8021B
m,p-Xylenes	ND	0.50	1.000	07/12/03	EPA 8021B
o-Xylene	ND	0.50	1.000	07/12/03	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (FID)	95	57-150	1.000	07/12/03	8015B
Bromofluorobenzene (FID)	102	65-144	1.000	07/12/03	8015B
Trifluorotoluene (PID)	95	54-149	1.000	07/12/03	EPA 8021B
Bromofluorobenzene (PID)	103	58-143	1.000	07/12/03	EPA 8021B

ND= Not Detected
RL= Reporting Limit

1.0

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	07/09/03
Units:	ug/L	Received:	07/09/03
Batch#:	82841		

Field ID:	BH-16-GW	Lab ID:	166258-005
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analyzed	Analysis
Gasoline C7-C12	ND	50	07/12/03	8015B
Stoddard Solvent C7-C12	ND	50	07/12/03	8015B
MTBE	6.0	2.0	07/13/03	EPA 8021B
Benzene	ND	0.50	07/12/03	EPA 8021B
Toluene	ND	0.50	07/12/03	EPA 8021B
Ethylbenzene	ND	0.50	07/12/03	EPA 8021B
m,p-Xylenes	ND	0.50	07/12/03	EPA 8021B
o-Xylene	ND	0.50	07/12/03	EPA 8021B

Surrogate	%REC	Limits	Analyzed	Analysis
Trifluorotoluene (FID)	95	57-150	07/12/03	8015B
Bromofluorobenzene (FID)	103	65-144	07/12/03	8015B
Trifluorotoluene (PID)	97	54-149	07/12/03	EPA 8021B
Bromofluorobenzene (PID)	106	58-143	07/12/03	EPA 8021B

Field ID:	BH-17-GW	Lab ID:	166258-007
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analyzed	Analysis
Gasoline C7-C12	ND	50	07/12/03	8015B
Stoddard Solvent C7-C12	ND	50	07/12/03	8015B
MTBE	4.5	2.0	07/13/03	EPA 8021B
Benzene	ND	0.50	07/12/03	EPA 8021B
Toluene	ND	0.50	07/12/03	EPA 8021B
Ethylbenzene	ND	0.50	07/12/03	EPA 8021B
m,p-Xylenes	ND	0.50	07/12/03	EPA 8021B
o-Xylene	ND	0.50	07/12/03	EPA 8021B

Surrogate	%REC	Limits	Analyzed	Analysis
Trifluorotoluene (FID)	98	57-150	07/12/03	8015B
Bromofluorobenzene (FID)	108	65-144	07/12/03	8015B
Trifluorotoluene (PID)	100	54-149	07/12/03	EPA 8021B
Bromofluorobenzene (PID)	110	58-143	07/12/03	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	07/09/03
Units:	ug/L	Received:	07/09/03
Batch#:	82841		

Field ID:	BH-18-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/12/03
Lab ID:	166258-009		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	11	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	57-150	8015B
Bromofluorobenzene (FID)	100	65-144	8015B
Trifluorotoluene (PID)	94	54-149	EPA 8021B
Bromofluorobenzene (PID)	103	58-143	EPA 8021B

Field ID:	BH-19-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/12/03
Lab ID:	166258-011		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	12	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	57-150	8015B
Bromofluorobenzene (FID)	100	65-144	8015B
Trifluorotoluene (PID)	96	54-149	EPA 8021B
Bromofluorobenzene (PID)	103	58-143	EPA 8021B

ND= Not Detected
RL= Reporting Limit

1.0

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	07/09/03
Units:	ug/L	Received:	07/09/03
Batch#:	82841		

Field ID:	BH-20-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/12/03
Lab ID:	166258-013		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	5.1	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	57-150	8015B
Bromofluorobenzene (FID)	101	65-144	8015B
Trifluorotoluene (PID)	98	54-149	EPA 8021B
Bromofluorobenzene (PID)	105	58-143	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC219072	Analyzed:	07/12/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	87	57-150	8015B
Bromofluorobenzene (FID)	88	65-144	8015B
Trifluorotoluene (PID)	87	54-149	EPA 8021B
Bromofluorobenzene (PID)	88	58-143	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219073	Batch#:	82841
Matrix:	Water	Analyzed:	07/12/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	22.16	111	51-125
Benzene	20.00	19.70	98	78-123
Toluene	20.00	19.15	96	79-120
Ethylbenzene	20.00	19.29	96	80-120
m,p-Xylenes	40.00	40.01	100	76-120
o-Xylene	20.00	19.81	99	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		96	54-149
Bromofluorobenzene (PID)		96	58-143

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219080	Batch#:	82841
Matrix:	Water	Analyzed:	07/12/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	3,000	2,662	89	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		113	57-150
Bromofluorobenzene (FID)		96	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Field ID:	BH-13-GW	Batch#:	82841
MSS Lab ID:	166258-001	Sampled:	07/09/03
Matrix:	Water	Received:	07/09/03
Units:	ug/L	Analyzed:	07/13/03
Diln Fac:	1.000		

Type: MS Lab ID: QC219081

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	26.74	2,000	1,802	89	76-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		108	57-150
Bromofluorobenzene (FID)		99	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC219082

Analyte	Spiked	Result	%REC	Limits	RPD	Li
Gasoline C7-C12	2,000	1,860	92	76-120	3	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		114	57-150
Bromofluorobenzene (FID)		106	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/09/03
Basis:	as received	Received:	07/09/03
Diln Fac:	1.000	Analyzed:	07/14/03
Batch#:	82846		

Field ID: BH-17-8' Lab ID: 166258-006
Type: SAMPLE

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.1	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.1	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.3	ug/Kg	EPA 8021B
Toluene	ND	5.3	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.3	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.3	ug/Kg	EPA 8021B
o-Xylene	ND	5.3	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	90	56-144	8015B
Bromofluorobenzene (FID)	91	51-142	8015B
Trifluorotoluene (PID)	85	45-150	EPA 8021B
Bromofluorobenzene (PID)	90	42-138	EPA 8021B

Field ID: BH-18-8' Lab ID: 166258-008
Type: SAMPLE

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	0.95	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	0.95	mg/Kg	8015B
MTBE	ND	19	ug/Kg	EPA 8021B
Benzene	ND	4.8	ug/Kg	EPA 8021B
Toluene	ND	4.8	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.8	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.8	ug/Kg	EPA 8021B
o-Xylene	ND	4.8	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	88	56-144	8015B
Bromofluorobenzene (FID)	89	51-142	8015B
Trifluorotoluene (PID)	87	45-150	EPA 8021B
Bromofluorobenzene (PID)	88	42-138	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/09/03
Basis:	as received	Received:	07/09/03
Diln Fac:	1.000	Analyzed:	07/14/03
Batch#:	82846		

Field ID: BH-19-8' Lab ID: 166258-010
Type: SAMPLE

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.1	ug/Kg	EPA 8021B
Toluene	ND	5.1	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.1	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	EPA 8021B
o-Xylene	ND	5.1	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	91	56-144	8015B
Bromofluorobenzene (FID)	93	51-142	8015B
Trifluorotoluene (PID)	87	45-150	EPA 8021B
Bromofluorobenzene (PID)	92	42-138	EPA 8021B

Field ID: BH-20-7.5' Lab ID: 166258-012
Type: SAMPLE

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.1	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.1	mg/Kg	8015B
MTBE	ND	22	ug/Kg	EPA 8021B
Benzene	ND	5.4	ug/Kg	EPA 8021B
Toluene	ND	5.4	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.4	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.4	ug/Kg	EPA 8021B
o-Xylene	ND	5.4	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	89	56-144	8015B
Bromofluorobenzene (FID)	89	51-142	8015B
Trifluorotoluene (PID)	88	45-150	EPA 8021B
Bromofluorobenzene (PID)	89	42-138	EPA 8021B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/09/03
Basis:	as received	Received:	07/09/03
Diln Fac:	1.000	Analyzed:	07/14/03
Batch#:	82846		

Type: BLANK Lab ID: QC219096

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	ND	1.0	mg/Kg	8015B
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	88	56-144	8015B
Bromofluorobenzene (FID)	88	51-142	8015B
Trifluorotoluene (PID)	85	45-150	EPA 8021B
Bromofluorobenzene (PID)	89	42-138	EPA 8021B

ND= Not Detected
RL= Reporting Limit

8.0

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	BS	Basis:	as received
Lab ID:	QC219097	Diln Fac:	1.000
Matrix:	Soil	Batch#:	82846
Units:	mg/Kg	Analyzed:	07/14/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.130	91	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		101	56-144
Bromofluorobenzene (FID)		89	51-142
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	BSD	Basis:	as received
Lab ID:	QC219207	Diln Fac:	1.000
Matrix:	Soil	Batch#:	82846
Units:	mg/Kg	Analyzed:	07/15/03

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.00	8.858	89	80-120	3	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		110	56-144
Bromofluorobenzene (FID)		98	51-142
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8021B
Type:	LCS	Basis:	as received
Lab ID:	QC219098	Diln Fac:	1.000
Matrix:	Soil	Batch#:	82846
Units:	ug/Kg	Analyzed:	07/14/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	100.0	97.14	97	65-135
Benzene	100.0	87.37	87	80-121
Toluene	100.0	84.62	85	80-120
Ethylbenzene	100.0	84.52	85	79-120
m,p-Xylenes	200.0	185.8	93	76-120
o-Xylene	100.0	89.71	90	80-120

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		88	45-150
Bromofluorobenzene (PID)		92	42-138

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	07/09/03
Units:	ug/L	Received:	07/09/03
Diln Fac:	1.000	Prepared:	07/10/03
Batch#:	82797		

Field ID: BH-13-GW
Type: SAMPLE
Lab ID: 166258-001
Analyzed: 07/12/03

Analyte	Result	RL
Diesel C10-C24	260 Y	50

Surrogate	%REC	Limits
Hexacosane	101	44-146

Field ID: BH-14-GW
Type: SAMPLE
Lab ID: 166258-002
Analyzed: 07/12/03

Analyte	Result	RL
Diesel C10-C24	160 H Y	50

Surrogate	%REC	Limits
Hexacosane	93	44-146

Field ID: BH-16-GW
Type: SAMPLE
Lab ID: 166258-005
Analyzed: 07/14/03

Analyte	Result	RL
Diesel C10-C24	67 Y	50

Surrogate	%REC	Limits
Hexacosane	90	44-146

Field ID: BH-20-GW
Type: SAMPLE
Lab ID: 166258-013
Analyzed: 07/14/03

Analyte	Result	RL
Diesel C10-C24	140 H Y	50

Surrogate	%REC	Limits
Hexacosane	85	44-146

Type: BLANK
Lab ID: QC218894
Analyzed: 07/14/03
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	99	44-146

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

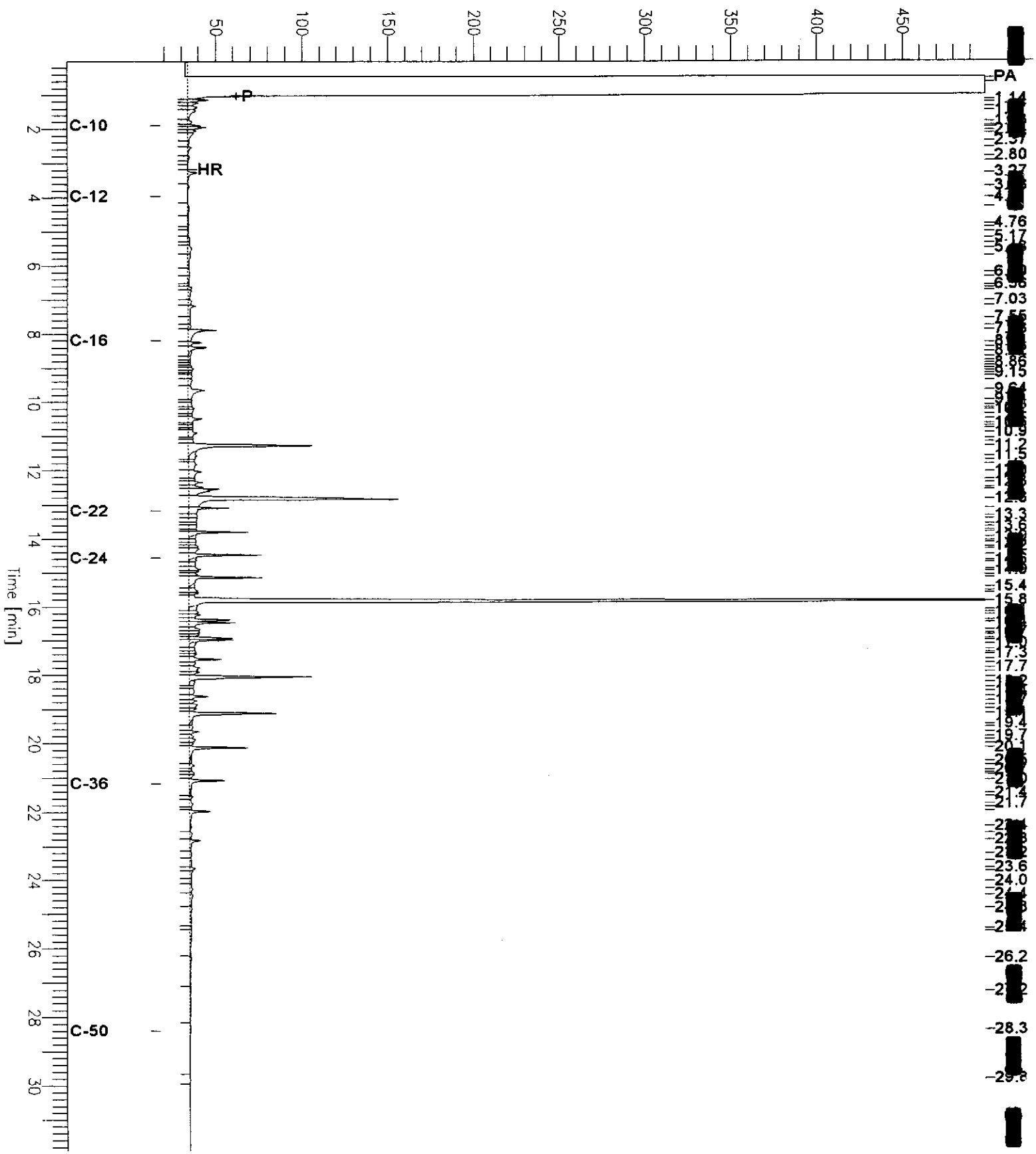
13.0

Chromatogram

Sample Name : 166258-001,82797
FileName : G:\GC17\CHA\192A035.RAW
Method : ATEH184.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 18 mV

Sample #: 82797
Date : 7/12/03 04:15 PM
Time of Injection: 7/12/03 08:07 AM
Low Point : 17.79 mV High Point : 498.45 mV
Plot Scale: 480.7 mV

BH-13-GW

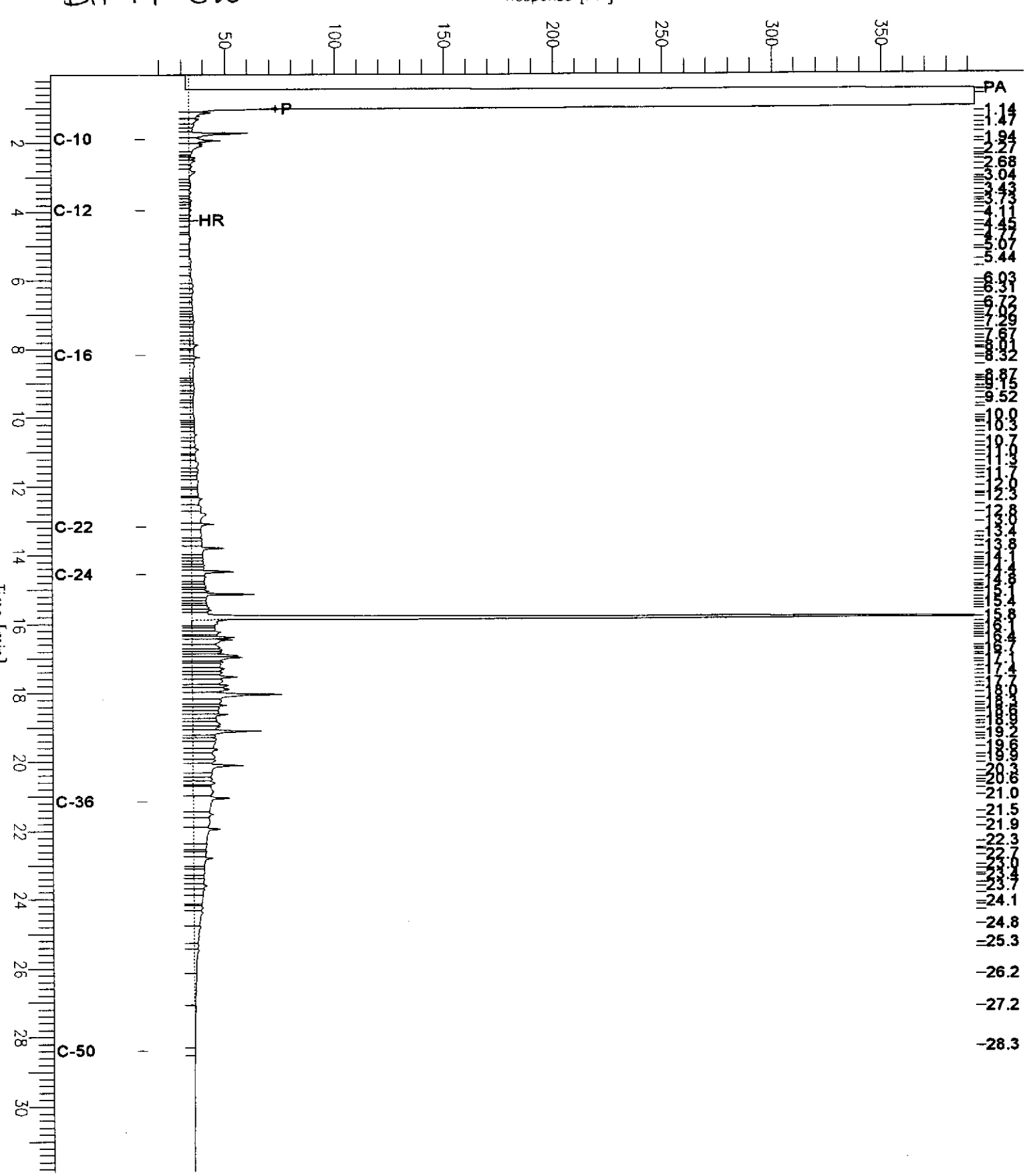


Chromatogram

Sample Name : 166258-002,82797
FileName : G:\GC17\CHA\192A036.RAW
Method : ATEH184.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 14 mV

Sample #: 82797 Page 1 of 1
Date : 7/12/03 04:15 PM
Time of Injection: 7/12/03 08:47 AM
Low Point : 13.62 mV High Point : 393.02 mV
Plot Scale: 379.4 mV

BH-14-GW

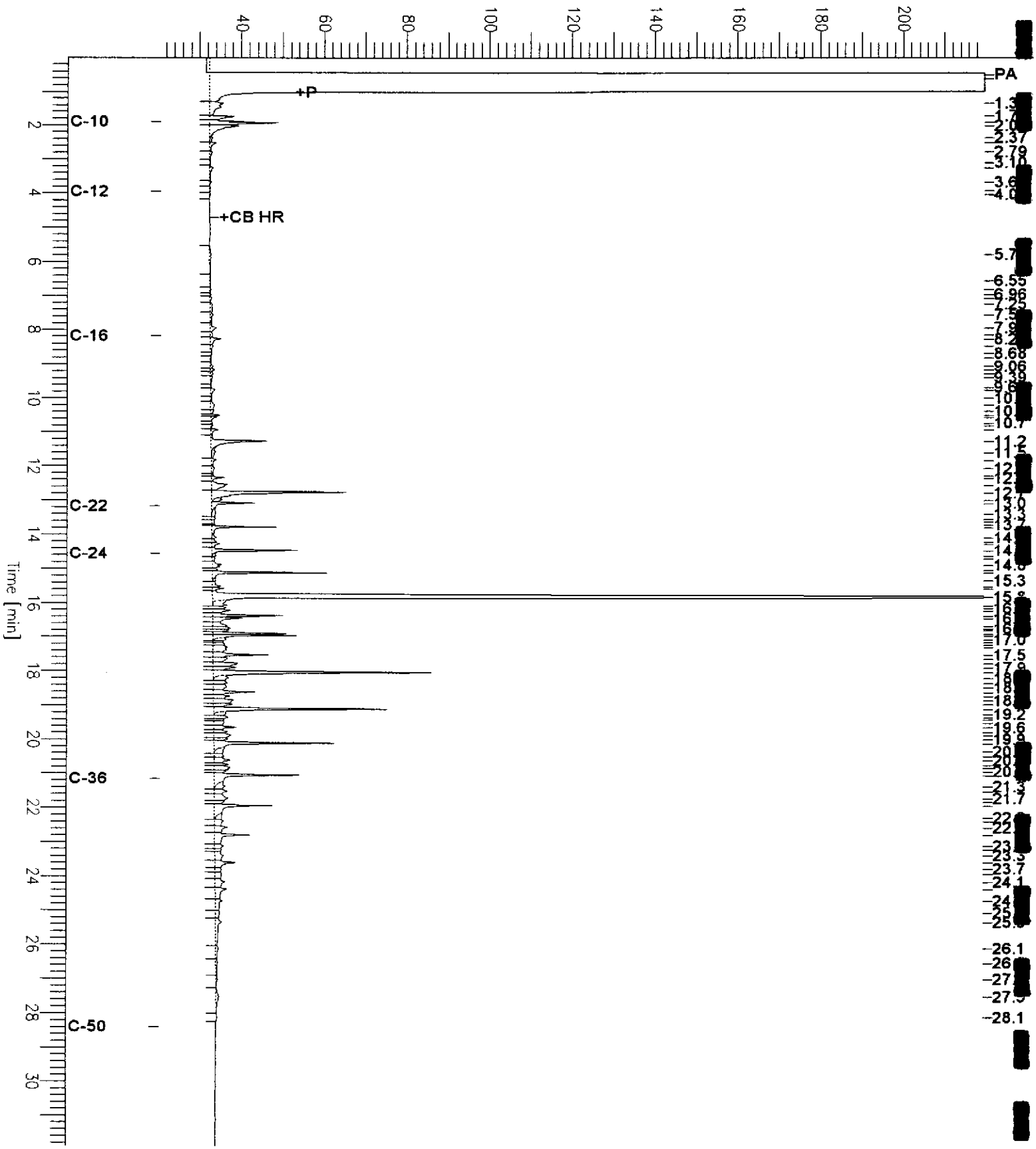


Chromatogram

Sample Name : 166258-005,82797
FileName : G:\GC17\CHA\194A039.RAW
Method : ATEH184.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 21 mV

Sample #: 82797 Page 1 of 1
Date : 7/14/03 02:27 PM
Time of Injection: 7/14/03 01:47 PM
Low Point : 20.63 mV High Point : 219.80 mV
Plot Scale: 199.2 mV

BH-16-GW

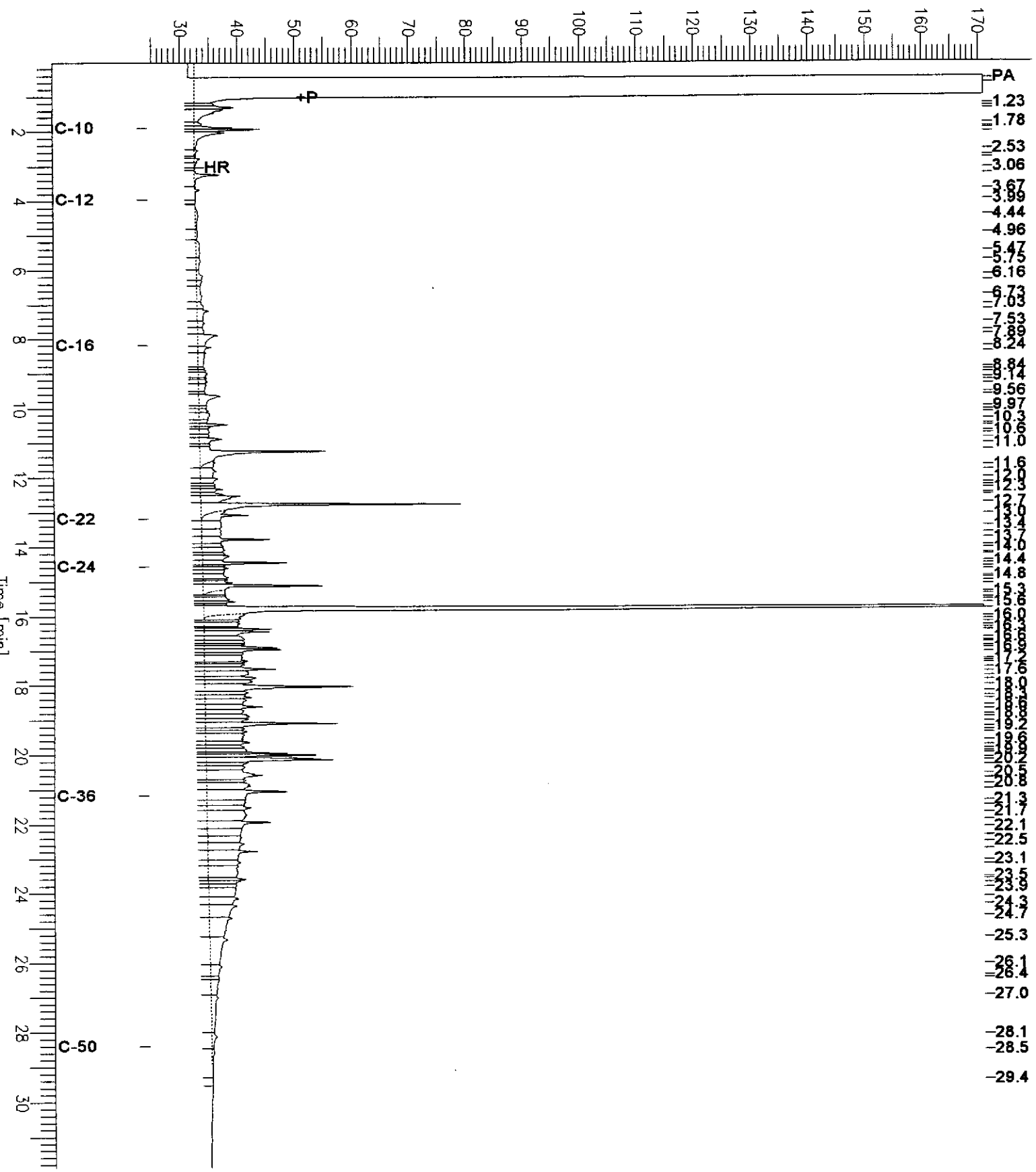


Chromatogram

Sample Name : 166258-013,82797
FileName : G:\GC17\CHA\194A041.RAW
Method : ATEH184.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 24 mV

Sample #: 82797 Page 1 of 1
Date : 7/14/03 03:42 PM
Time of Injection: 7/14/03 03:08 PM
Low Point : 24.31 mV High Point : 170.90 mV
Plot Scale: 146.6 mV

BH-20-GW

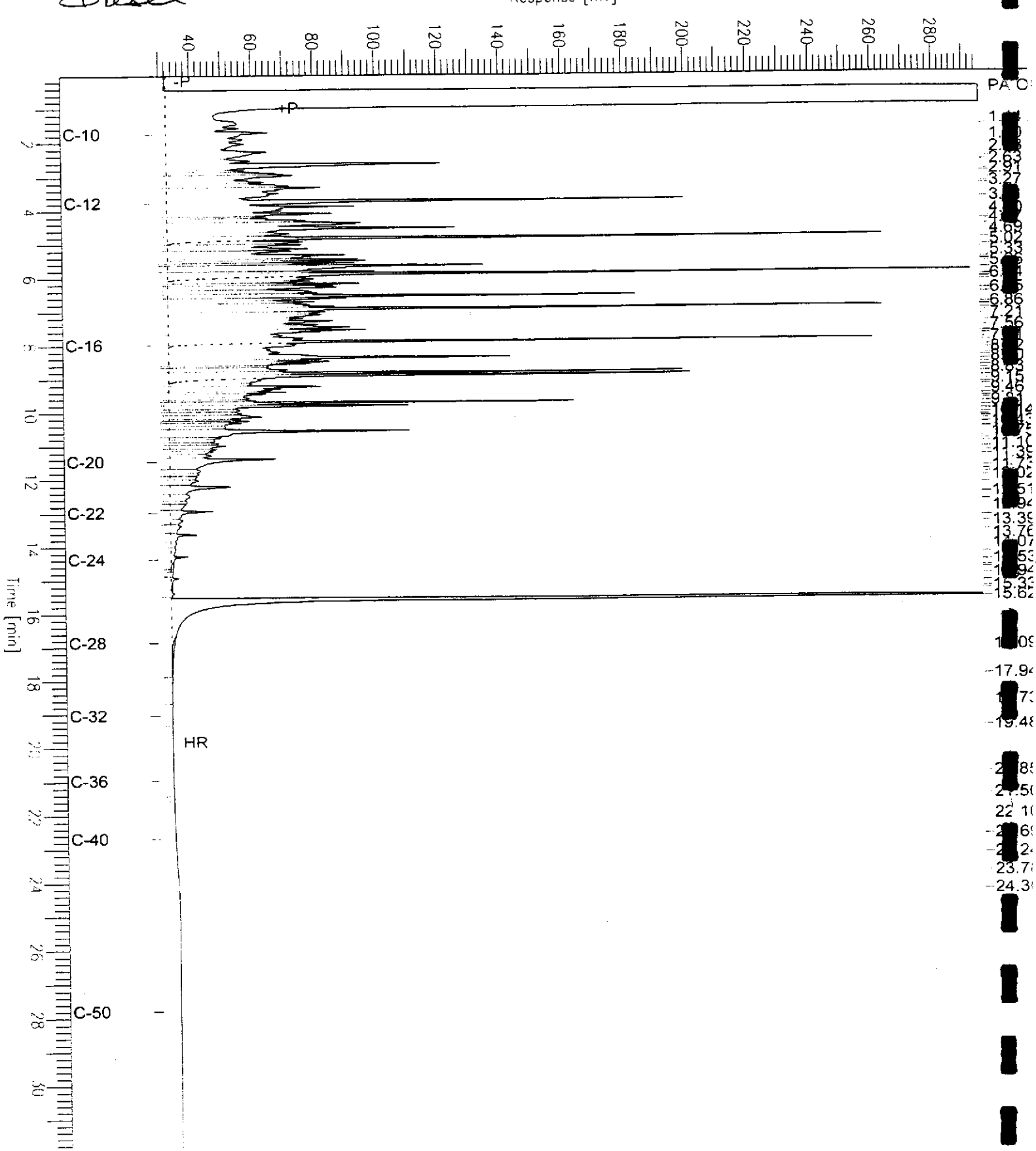


Chromatogram

Sample Name : ccv,03ws0966,dsl
FileName : G:\GC13\CHB\192B002.RAW
Method : BTEH180.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 28 mV

Sample #: 500mg/L
Date : 7/11/03 10:55 AM
Time of Injection: 7/11/03 09:36 AM
Low Point : 28.38 mV High Point : 295.61 mV
Plot Scale: 267.2 mV

Diesel



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	82797
Units:	ug/L	Prepared:	07/10/03
Diln Fac:	1.000	Analyzed:	07/14/03

Type: BS
Lab ID: QC218895

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,632	105	38-137

Surrogate	%REC	Limits
Hexacosane	111	44-146

Type: BSD
Lab ID: QC218896

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,582	103	38-137	2	35

Surrogate	%REC	Limits
Hexacosane	111	44-146

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	82783
Units:	mg/Kg	Sampled:	07/09/03
Basis:	as received	Received:	07/09/03
Diln Fac:	1.000	Prepared:	07/10/03

Field ID: BH-15-2.5' Lab ID: 166258-003
Type: SAMPLE Analyzed: 07/14/03

Analyte	Result	RL
Diesel C10-C24	2.8 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	115	36-141

Field ID: BH-16-1.5' Lab ID: 166258-004
Type: SAMPLE Analyzed: 07/14/03

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	87	36-141

Type: BLANK Analyzed: 07/10/03
Lab ID: QC218853

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	88	36-141

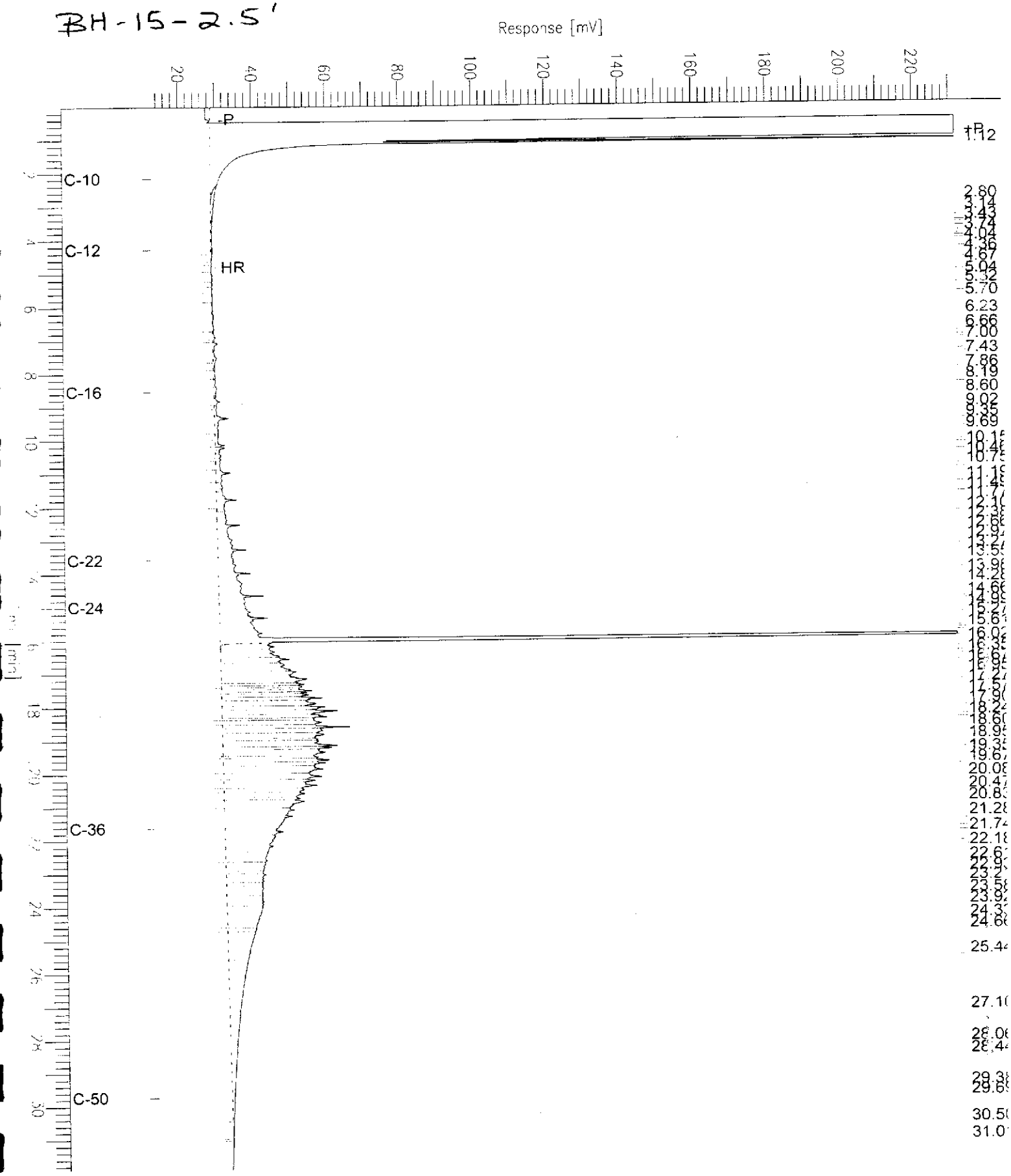
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 166258-003,82783
FileName : G:\GC11\CHA\195A008.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample #: 82783
Date : 7/14/03 06:45 PM
Time of Injection: 7/14/03 04:55 PM
Low Point : 12.84 mV High Point : 231.76 mV
Plot Scale: 218.9 mV

BH-15-2.5'

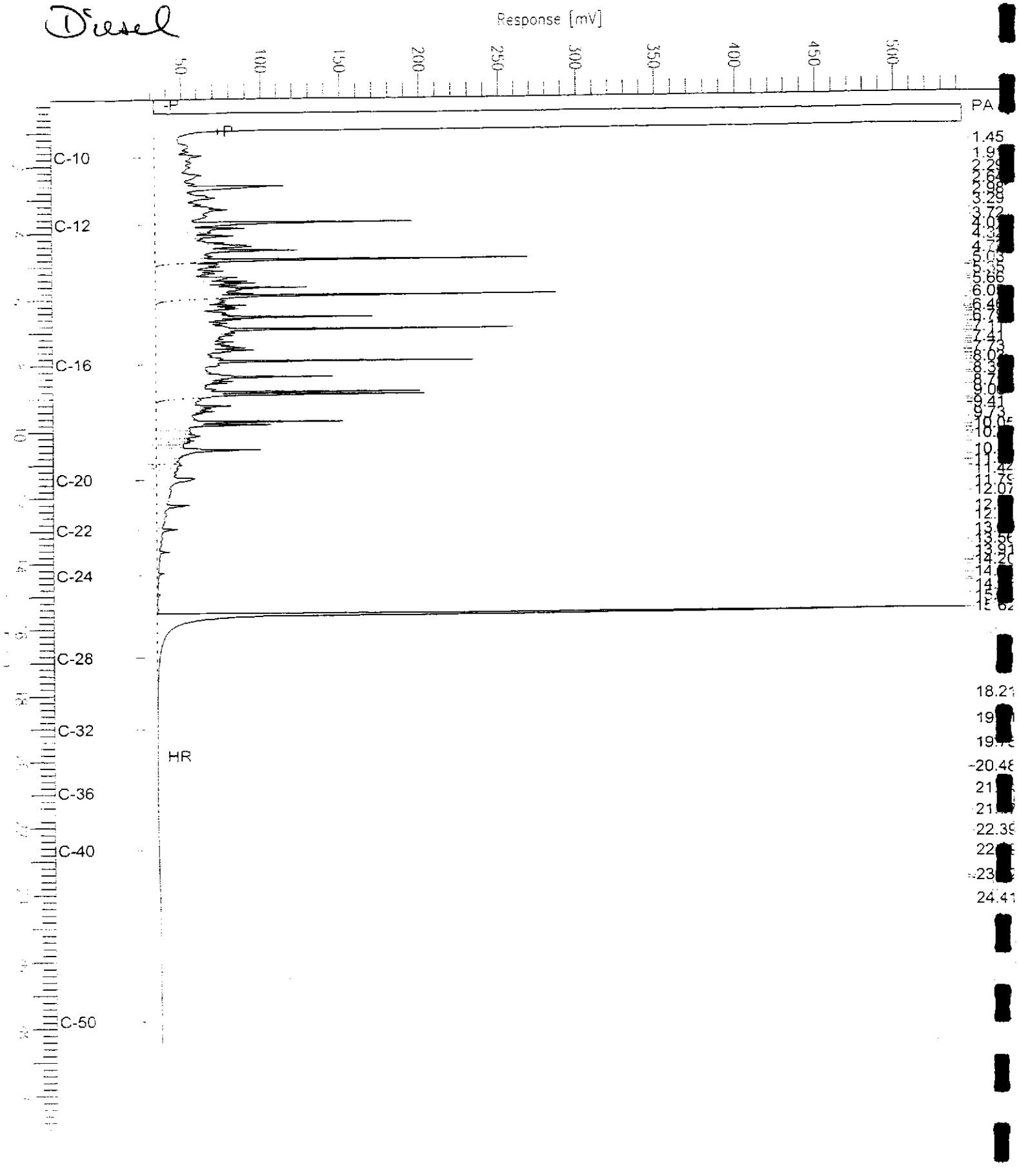


Chromatogram

File Name : ccv,03ws0966.as
eName : G:\GC13\CHB\191B002.RAW
hod : BTEH180.MTH
rt Time : 0.01 min End Time : 31.91 min
le Factor: 0.0 Plot Offset: 25 mV

Sample #: 500mg/L
Date : 7/10/03 04:21 PM
Time of Injection: 7/10/03 03:11 PM
Low Point : 24.96 mV High Point : 543.25 mV
Plot Scale: 518.3 mV

Diesel



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC218854	Batch#:	82783
Matrix:	Soil	Prepared:	07/10/03
Units:	mg/Kg	Analyzed:	07/10/03
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.96	53.05	106	49-129

Surrogate	%REC	Limits
Hexacosane	96	36-141

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166258	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Field ID:	BH-15-2.5'	Batch#:	82783
MSS Lab ID:	166258-003	Sampled:	07/09/03
Matrix:	Soil	Received:	07/09/03
Units:	mg/Kg	Prepared:	07/10/03
Basis:	as received	Analyzed:	07/14/03
Diln Fac:	1.000		

Type: MS Lab ID: QC218855

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.754	50.00	53.86	102	32-134

Surrogate	%REC	Limits
Hexacosane	117	36-141

Type: MSD Lab ID: QC218856

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.07	39.88	74	32-134	30	48

Surrogate	%REC	Limits
Hexacosane	95	36-141

RPD= Relative Percent Difference

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

ANALYTICAL REPORT

Prepared for:

Stellar Environmental Solutions
2198 6th Street
Suite 201
Berkeley, CA 94710

Date: 21-JUL-03
Lab Job Number: 166312
Project ID: 2003-13
Location: Searway Property

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

16651.2

Chain of Custody Record

Lab job no. _____
Date 7/11/03
Page 1 of 3

Laboratory Curtis & Tompkins, Ltd.
Address 2323 Fifth Street
Berkeley, CA 94710
510/486-0900

Method of Shipment Hand delivery
Shipment No. —
Airbill No. —
Cooler No. —
Project Manager Bruce Rucker
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) B.M. Rucker

Project Owner Seaway Family Trust
Site Address NW Corner Webster St + Pacific Avenue
Alameda CA
Project Name Seaway Property
Project Number 2003-13

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH-Stoddard Solvent +	BTEX + MTBE	TEH-diesel	Remarks
1	BH-21-GW	10'-11'	7/10/03	800	H_2O	40 mL VOAs	✓	HCl		2				HOLD
2	BH-21-8'	8'	7/10/03	750	Soil	Acetate Sleeve	✓	—		1	X	X		
3	BH-22-GW	10'-11'	7/10/03	845	H_2O	40 mL VOAs	✓	HCl		2	X	X		
3	BH-22-GW	10'-11'	7/10/03	845	H_2O	1-L Amber	✓	—		1			X	
4	BH-22-8'	8'	7/10/03	830	Soil	Acetate Sleeve	✓	—		1	X	X	X	
5	BH-23-GW	10'-11'	7/10/03	920	H_2O	2/0 mL VOAs	✓	HCl		2				HOLD
6	BH-23-8'	8'	7/10/03	910	Soil	Acetate Sleeve	✓	—		1	X	X	X	~~HOLD~~ (SP)
7	BH-23-11.5'	11.5'	7/10/03	915	Soil	Acetate Sleeve	✓	—		1	X	X	X	~~HOLD~~ (SP)
8	BH-24-GW	10'-11'	7/10/03	1015	H_2O	40 mL VOAs	✓	HCl		2				HOLD
9	BH-24-7'	7'	7/10/03	1005	Soil	Acetate Sleeve	✓	—		1	X	X		
10	BH-25-GW	~10'	7/10/03	1110	H_2O	40 mL VOAs		HCl		2				HOLD
11	BH-25-9'	9'	7/10/03	1050	Soil	Acetate Sleeve		—		1	X	X		

Relinquished by:	Date	Time	Received by:	Date	Time
Signature Bruce M. Rucker			Signature Anna Petrillo	7/11/03	1423
Printed Bruce Rucker			Printed Anna Petrillo		
Company Stellar Env. Solns			Company Curtis Tompkins		

Relinquished by:	Date	Time	Received by:	Date	Time
Signature			Signature		
Printed			Printed		
Company			Company		

Relinquished by:	Date	Time	Received by:	Date	Time
Signature			Signature		
Printed			Printed		
Company			Company		

Turnaround Time: 1 week

Comments:

Received ☑ On Ice ☑ Cold ☐ Ambient ☑ Intact

[redacted] Chain of Custody Record [redacted]

Date 7/11/03

Page 2 of 3

Laboratory: Curtis & Tompkins Ltd.
Address: 2323 Fifth Street, Berkeley, CA 94710, 510/486-0900

Project Owner: Seaway Family Trust
Site Address: NW Corner Webster St & Pacific Avenue, Alameda CA
Project Name: Seaway Property
Project Number: 2003-13

Method of Shipment: hand delivery
Shipment No.: —
Airbill No.: —
Cooler No.: —
Project Manager: Bruce Rueter
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature) B. M. Rueter

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH-Stoddard Solvent	BTEX + MTBE	TEH-Diesel	Remarks
12	BH-26-GW	10'-11'	7/10/03	1200	H_2O	40mL VOAs	✓	HCl		2	X	X		
13	BH-26-8'	8'	7/10/03	1105	Soil	Acetate Sleeve	✓	—		1	X	X		
14	BH-27-GW	~10.5'	7/10/03	1230	H_2O	40 mL VOAs	✓	HCl		2				HOLD
15	BH-28-GW	10'-11'	7/10/03	1415	H_2O	40mL VOAs	✓	HCl		2	X	X		
	BH-28-GW	10'-11'	7/10/03	1415	H_2O	~~40mL VOA~~ 1-L Amber (2)	✓	—		1			X	
16	BH-28-8'	8'	7/10/03	1405	Soil	Acetate Sleeve	✓	—		1	X	X		
17	BH-29-GW	~10.5'	7/10/03	1445	H_2O	40 mL VOAs	✓	HCl		2	X	X		
	BH-29-GW	~10.5'	7/10/03	1445	H_2O	1-L Amber	✓	—		1			X	
18	BH-29-8'	8'	7/10/03	1435	Soil	Acetate Sleeve	✓	—		1	X	X	X	
19	BH-30-GW	~10'	7/10/03	1530	H_2O	40 mL VOAs	✓	HCl		2	X	X		
20	BH-30-8'	8'	7/10/03	1515	Soil	Acetate Sleeve	✓	—		1	X	X		
21	BH-31-GW	~10'	7/11/03	750	H_2O	40mL VOAs	✓	HCl		2	X	X		

Relinquished by	Date	Time	Received by	Date	Time
Signature: Bruce M. Rueter			Signature: Anna Payarillo	7/11/03	1723
Printed: Bruce M. Rueter			Printed: Anna Payarillo		
Company: Stellar Env. Solns			Company: Curtis & Tompkins		

Relinquished by	Date	Time	Received by	Date	Time
Signature:			Signature:		
Printed:			Printed:		
Company:			Company:		

Relinquished by	Date	Time	Received by	Date	Time
Signature:			Signature:		
Printed:			Printed:		
Company:			Company:		

Turnaround Time: 1 week

Comments:

Received ☑ On Ice ☑ Cold ☐ Ambient ☑ Intact

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

1606 312

Chain of Custody Record

Lab job no. _____
Date 7/11/03
Page 3 of 3

Laboratory Curtis & Tompkins, Ltd.
Address 2323 Fifth Street
Berkeley, CA 94710
510/486-0900

Project Owner Seaway Family Trust
Site Address NW corner Webster St + Pacific Avenue
Alameda CA

Project Name Seaway Property
Project Number 2003-13

Method of Shipment hand delivery
Shipment No. —
Airbill No. —
Cooler No. —
Project Manager Bruce Ruckter
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) B.M. Ruckter

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH-Stoddard Solvent	BTEX + MTBE	TEH-Diesel	Remarks
21	BH-31-GW	~10'	7/11/03	750	H_2O	1-L Amber	✓	—		1			X	
22	BH-32-GW	~10'	7/11/03	800	H_2O	40 mL VOAs	✓	HCl		2	X	X		
22	BH-32-GW	~10'	7/11/03	800	H_2O	1-L Amber	✓	—		1			X	
23	BH-33-GW	~10'	7/11/03	900	H_2O	40 mL VOAs	✓	HCl		2	X	X		
23	BH-33-GW	~10'	7/11/03	900	H_2O	1-L Amber	✓	—		1			X	
24	BH-33-6'	6'	7/11/03	945	Soil	Acetate Sleeve	✓	—		1			X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature Bruce M Ruckter		Signature Anna Pajarillo	7/11/03	Signature		Signature	
Printed Bruce Ruckter	Time	Printed Anna Pajarillo	Time 1723	Printed	Time	Printed	Time
Company Stellar Env. Solns		Company Curtis & Tompkins		Company		Company	

Turnaround Time: 1 week

Comments:

Received ☑ On Ice ☑ Cold ☐ Ambient ☑ Intact

Relinquished by:	Date	Received by:	Date
Signature		Signature	
Printed	Time	Printed	Time
Company		Company	

2000-GW-01

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Batch#:	82903
Units:	ug/L	Received:	07/11/03

Field ID:	BH-22-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-003	Analyzed:	07/15/03

Analyte	Result	RL	Analysis
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	5.3	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	57-150	8015B
Bromofluorobenzene (FID)	111	65-144	8015B
Trifluorotoluene (PID)	88	54-149	EPA 8021B
Bromofluorobenzene (PID)	100	58-143	EPA 8021B

Field ID:	BH-26-GW	Lab ID:	166312-012
Type:	SAMPLE	Sampled:	07/10/03

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Stoddard Solvent C7-C12	99,000 H Y	5,000	100.0	07/16/03	8015B
MTBE	ND	2.0	1.000	07/15/03	EPA 8021B
Benzene	ND	0.50	1.000	07/15/03	EPA 8021B
Toluene	ND	0.50	1.000	07/15/03	EPA 8021B
Ethylbenzene	ND	0.50	1.000	07/15/03	EPA 8021B
m,p-Xylenes	ND	0.50	1.000	07/15/03	EPA 8021B
o-Xylene	4.2 C	0.50	1.000	07/15/03	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (FID)	95	57-150	100.0	07/16/03	8015B
Bromofluorobenzene (FID)	98	65-144	100.0	07/16/03	8015B
Trifluorotoluene (PID)	87	54-149	1.000	07/15/03	EPA 8021B
Bromofluorobenzene (PID)	101	58-143	1.000	07/15/03	EPA 8021B

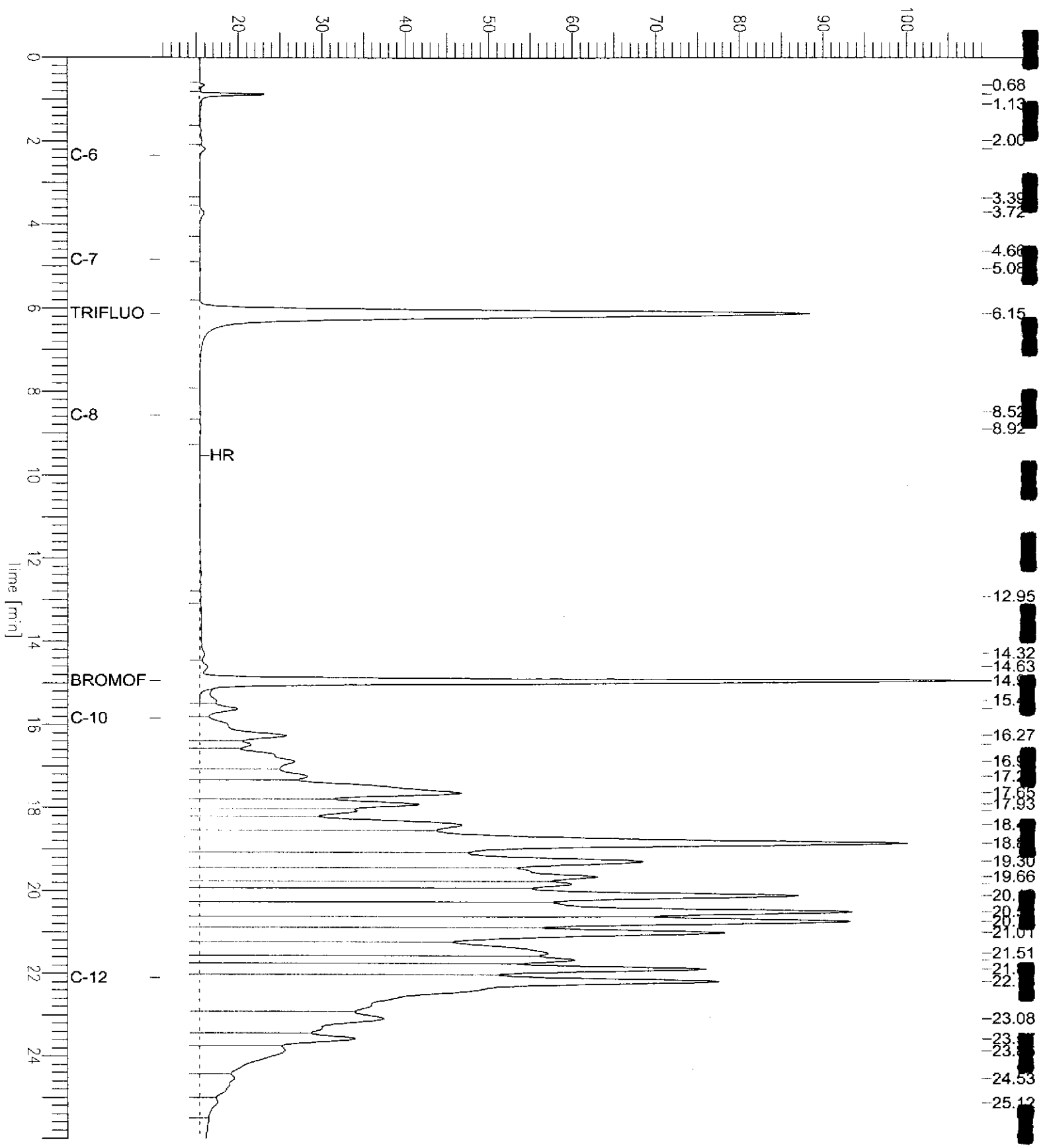
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

Sample Name : 166312-012,82903
FileName : G:\GC07\DATA\196A032.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 11 mV

Sample #: a1 Page 1 of 1
Date : 7/16/03 12:28 PM
Time of Injection: 7/16/03 10:39 AM
Low Point : 10.65 mV High Point : 109.06 mV
Plot Scale: 98.4 mV

BH-26-GW

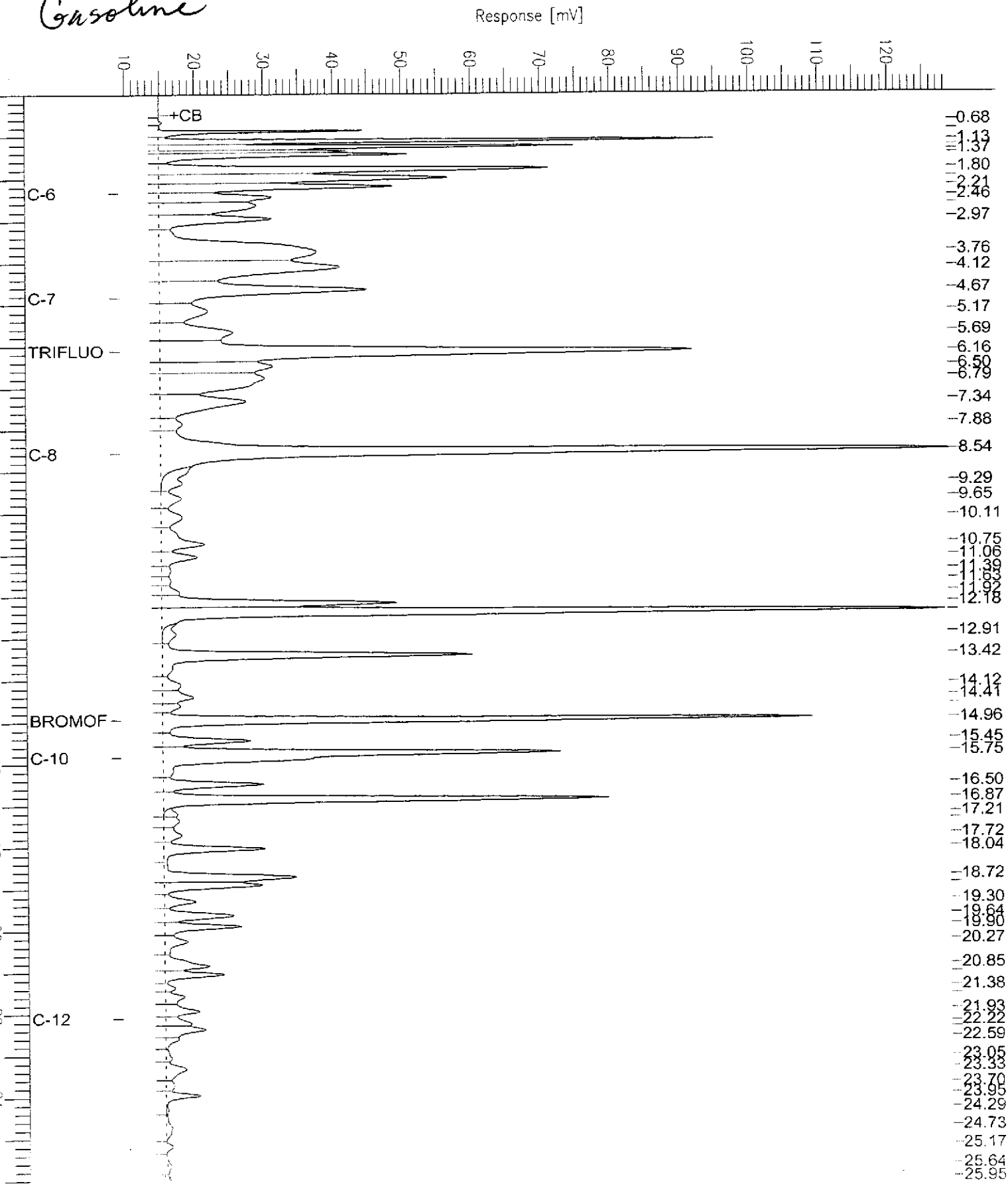


GC07 TVH 'A' Data File RTX 502

Sample Name : ccv/lcs,qc219302,82903,03ws1106,2.5/5000
FileName : G:\GC07\DATA\196A003.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 9 mV

Sample #: Page 1 of 1
Date : 7/15/03 05:47 PM
Time of Injection: 7/15/03 05:21 PM
Low Point : 9.19 mV High Point : 128.53 mV
Plot Scale: 119.3 mV

Gasoline

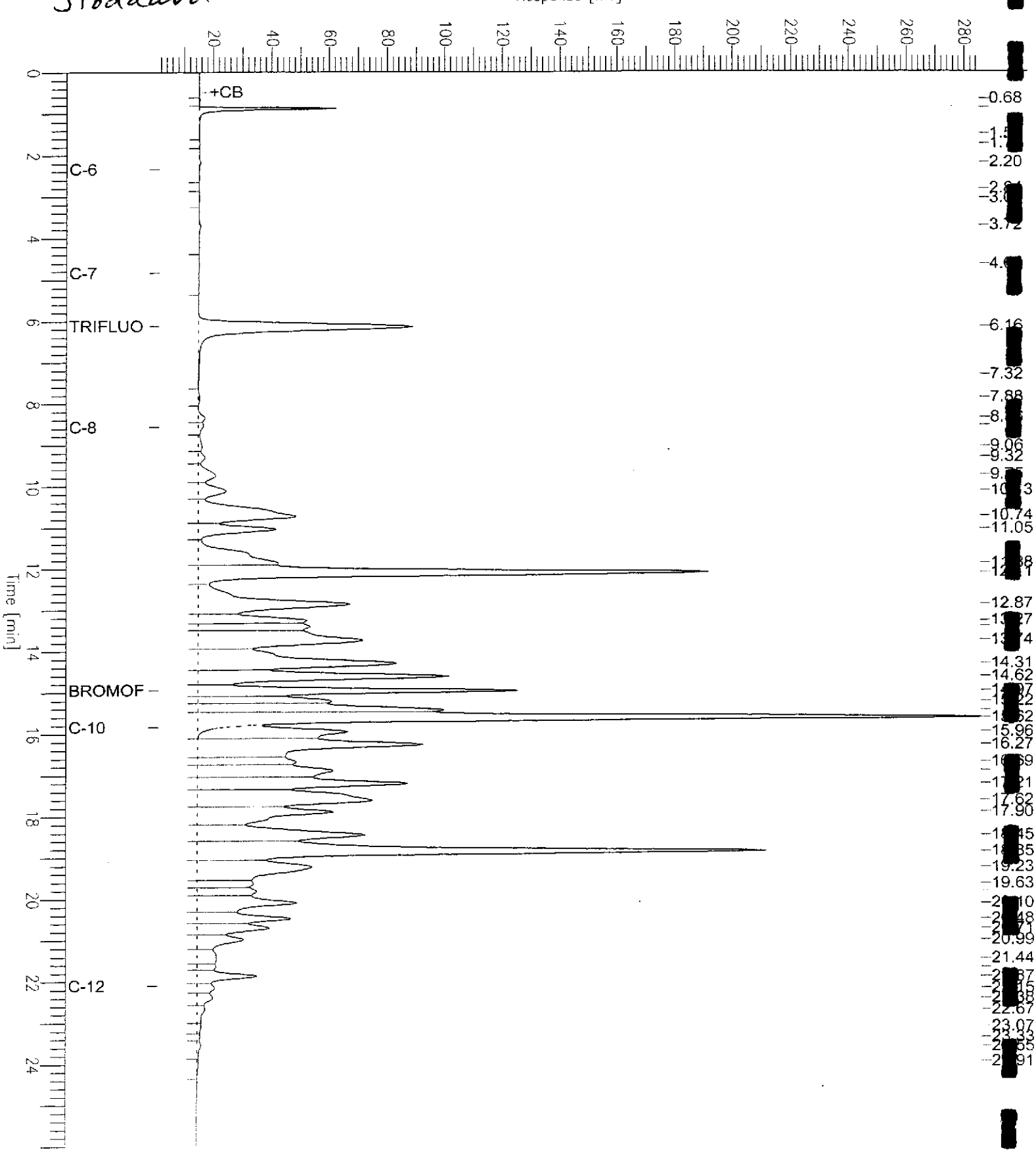


GC07 TVH 'A' Data File RTX 502

Sample Name : ccv,stoddard,82903,03ws0644,5/5000
FileName : G:\GC07\DATA\196A005.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 1 mV

Sample #: Page 1 of 1
Date : 7/15/03 07:06 PM
Time of Injection: 7/15/03 06:40 PM
Low Point : 1.46 mV High Point : 285.10 mV
Plot Scale: 283.6 mV

Stoddard



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Batch#:	82903
Units:	ug/L	Received:	07/11/03

Field ID:	BH-28-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-015	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	4.2	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	0.58	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	57-150	8015B
Bromofluorobenzene (FID)	99	65-144	8015B
Trifluorotoluene (PID)	83	54-149	EPA 8021B
Bromofluorobenzene (PID)	90	58-143	EPA 8021B

Field ID:	BH-29-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-017	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	57-150	8015B
Bromofluorobenzene (FID)	100	65-144	8015B
Trifluorotoluene (PID)	84	54-149	EPA 8021B
Bromofluorobenzene (PID)	91	58-143	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Batch#:	82903
Units:	ug/L	Received:	07/11/03

Field ID:	BH-30-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-019	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	3.3	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	0.63	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	104	57-150	8015B
Bromofluorobenzene (FID)	111	65-144	8015B
Trifluorotoluene (PID)	89	54-149	EPA 8021B
Bromofluorobenzene (PID)	100	58-143	EPA 8021B

Field ID:	BH-31-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/11/03
Lab ID:	166312-021	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	760	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	57-150	8015B
Bromofluorobenzene (FID)	108	65-144	8015B
Trifluorotoluene (PID)	85	54-149	EPA 8021B
Bromofluorobenzene (PID)	96	58-143	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Batch#:	82903
Units:	ug/L	Received:	07/11/03

Field ID:	BH-32-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/11/03
Lab ID:	166312-022	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	32	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	57-150	8015B
Bromofluorobenzene (FID)	102	65-144	8015B
Trifluorotoluene (PID)	82	54-149	EPA 8021B
Bromofluorobenzene (PID)	90	58-143	EPA 8021B

Field ID:	BH-33-GW	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/11/03
Lab ID:	166312-023	Analyzed:	07/16/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	190	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	57-150	8015B
Bromofluorobenzene (FID)	104	65-144	8015B
Trifluorotoluene (PID)	86	54-149	EPA 8021B
Bromofluorobenzene (PID)	94	58-143	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Batch#:	82903
Units:	ug/L	Received:	07/11/03

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC219300	Analyzed:	07/15/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	92	57-150	8015B
Bromofluorobenzene (FID)	92	65-144	8015B
Trifluorotoluene (PID)	81	54-149	EPA 8021B
Bromofluorobenzene (PID)	83	58-143	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219301	Batch#:	82903
Matrix:	Water	Analyzed:	07/15/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	10.00	9.752	98	51-125
Benzene	10.00	9.264	93	78-123
Toluene	10.00	8.520	85	79-120
Ethylbenzene	10.00	8.558	86	80-120
m,p-Xylenes	20.00	18.91	95	76-120
o-Xylene	10.00	9.219	92	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		83	54-149
Bromofluorobenzene (PID)		85	58-143

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219302	Batch#:	82903
Matrix:	Water	Analyzed:	07/15/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	903.2	90	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		109	57-150
Bromofluorobenzene (FID)		100	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Field ID:	BH-28-GW	Batch#:	82903
MSS Lab ID:	166312-015	Sampled:	07/10/03
Matrix:	Water	Received:	07/11/03
Units:	ug/L	Analyzed:	07/16/03
Diln Fac:	1.000		

Type: MS Lab ID: QC219303

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	19.95	2,000	1,713	85	76-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		110	57-150
Bromofluorobenzene (FID)		108	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC219304

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,721	85	76-120	0	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		112	57-150
Bromofluorobenzene (FID)		105	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Field ID:	BH-21-8'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-002		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	0.97	mg/Kg	8015B
MTBE	ND	19	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	56-144	8015B
Bromofluorobenzene (FID)	102	51-142	8015B
Trifluorotoluene (PID)	83	45-150	EPA 8021B
Bromofluorobenzene (PID)	90	42-138	EPA 8021B

Field ID:	BH-22-8'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-004		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	0.98	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	56-144	8015B
Bromofluorobenzene (FID)	98	51-142	8015B
Trifluorotoluene (PID)	82	45-150	EPA 8021B
Bromofluorobenzene (PID)	89	42-138	EPA 8021B

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Field ID:	BH-23-8'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/17/03
Lab ID:	166312-006		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	17 H Y	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.1	ug/Kg	EPA 8021B
Toluene	ND	5.1	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.1	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	EPA 8021B
o-Xylene	ND	5.1	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	90	56-144	8015B
Bromofluorobenzene (FID)	100	51-142	8015B
Trifluorotoluene (PID)	81	45-150	EPA 8021B
Bromofluorobenzene (PID)	86	42-138	EPA 8021B

Field ID:	BH-23-11.5'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-007		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.2	ug/Kg	EPA 8021B
Toluene	ND	5.2	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.2	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.2	ug/Kg	EPA 8021B
o-Xylene	ND	5.2	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	56-144	8015B
Bromofluorobenzene (FID)	101	51-142	8015B
Trifluorotoluene (PID)	81	45-150	EPA 8021B
Bromofluorobenzene (PID)	92	42-138	EPA 8021B

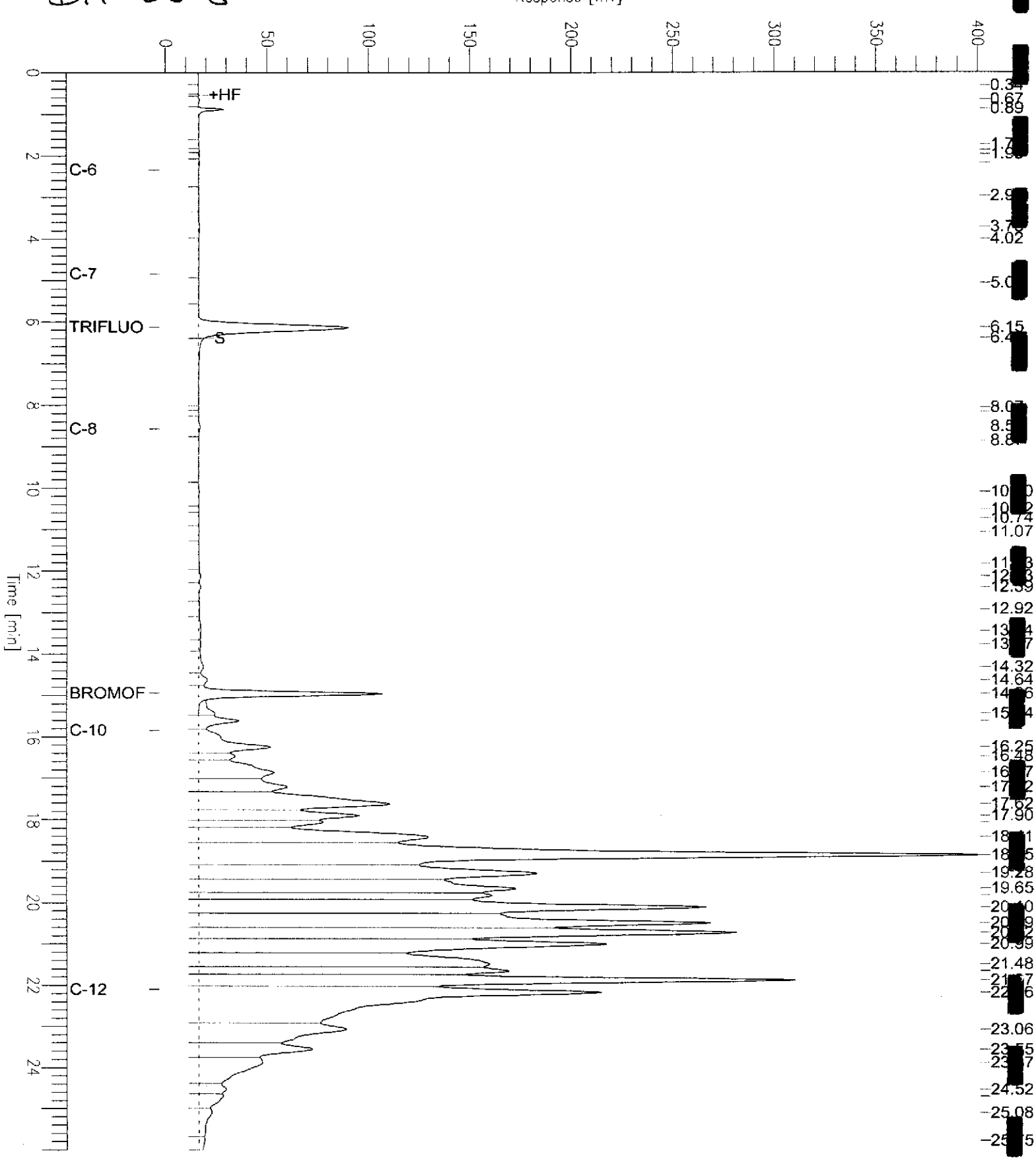
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

Sample Name : 166312-006,82924
FileName : G:\GC07\DATA\197A024.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: -3 mV

Sample #: a
Date : 7/17/03 11:49 AM
Time of Injection: 7/17/03 03:27 AM
Low Point : -3.10 mV High Point : 401.38 mV
Plot Scale: 404.5 mV

BH-23-8'



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Field ID:	BH-24-7'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-009		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	56-144	8015B
Bromofluorobenzene (FID)	107	51-142	8015B
Trifluorotoluene (PID)	86	45-150	EPA 8021B
Bromofluorobenzene (PID)	94	42-138	EPA 8021B

Field ID:	BH-25-9'	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-011		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.2	ug/Kg	EPA 8021B
Toluene	ND	5.2	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.2	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.2	ug/Kg	EPA 8021B
o-Xylene	ND	5.2	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	56-144	8015B
Bromofluorobenzene (FID)	105	51-142	8015B
Trifluorotoluene (PID)	87	45-150	EPA 8021B
Bromofluorobenzene (PID)	93	42-138	EPA 8021B

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Field ID:	BH-26-8'	Lab ID:	166312-013
Type:	SAMPLE	Analyzed:	07/17/03

Analyte	Result	RL	Units	Dil'n Fac	Analysis
Stoddard Solvent C7-C12	1,900 H Y	200	mg/Kg	200.0	8015B
MTBE	ND	2,000	ug/Kg	100.0	EPA 8021B
Benzene	ND	500	ug/Kg	100.0	EPA 8021B
Toluene	ND	500	ug/Kg	100.0	EPA 8021B
Ethylbenzene	ND	500	ug/Kg	100.0	EPA 8021B
m,p-Xylenes	ND	500	ug/Kg	100.0	EPA 8021B
o-Xylene	ND	500	ug/Kg	100.0	EPA 8021B

Surrogate	%REC	Limits	Dil'n Fac	Analysis
Trifluorotoluene (FID)	92	56-144	200.0	8015B
Bromofluorobenzene (FID)	103	51-142	200.0	8015B
Trifluorotoluene (PID)	81	45-150	100.0	EPA 8021B
Bromofluorobenzene (PID)	86	42-138	100.0	EPA 8021B

Field ID:	BH-28-8'	Dil'n Fac:	1.000
Type:	SAMPLE	Analyzed:	07/16/03
Lab ID:	166312-016		

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	0.97	mg/Kg	8015B
MTBE	ND	19	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	56-144	8015B
Bromofluorobenzene (FID)	98	51-142	8015B
Trifluorotoluene (PID)	82	45-150	EPA 8021B
Bromofluorobenzene (PID)	88	42-138	EPA 8021B

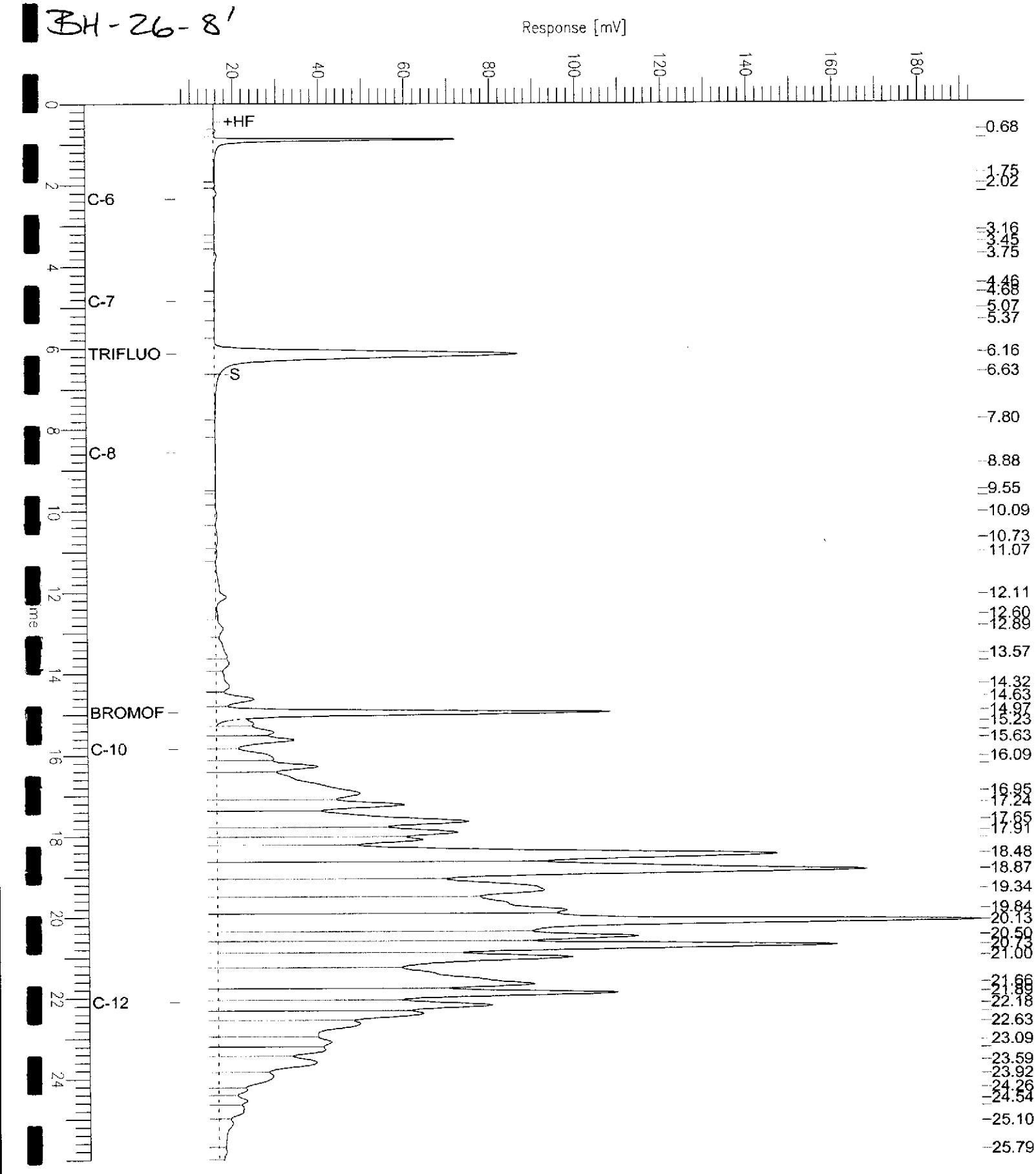
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

Sample Name : 166312-013,82924
leName : G:\GC07\DATA\197A038.raw
thod : TVHBTXE
art Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 7 mV

Sample #: a
Date : 7/17/03 12:14 PM
Time of Injection: 7/17/03 11:46 AM
Low Point : 6.63 mV High Point : 193.88 mV
Plot Scale: 187.2 mV

BH-26-8'

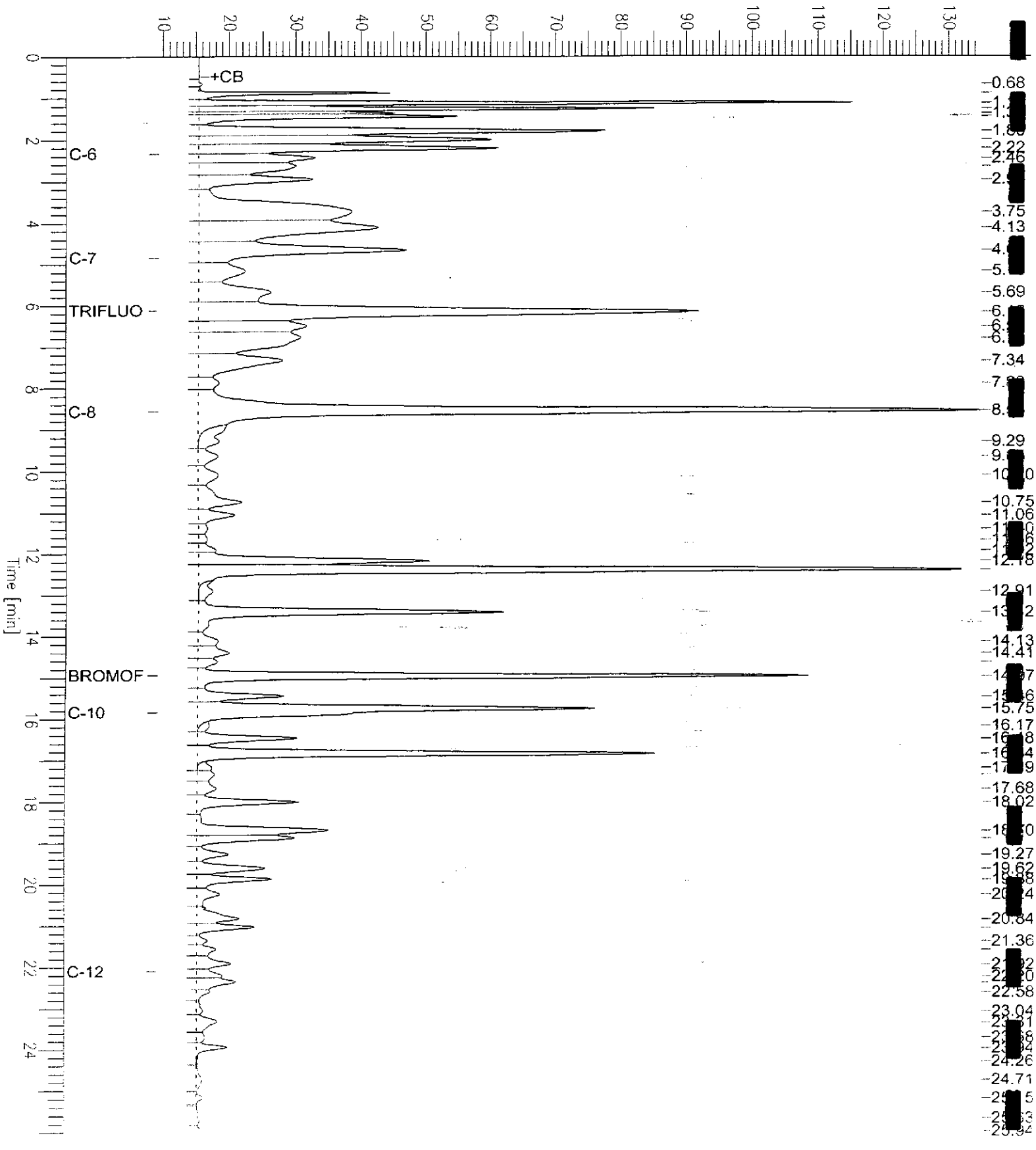


GC07 TVH 'A' Data File RTX 502

Sample Name : ccv/lcs,qc219390,82924,03ws1106,2.5/5000
FileName : G:\GC07\DATA\197A002.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 9 mV

Sample #: Page 1 of 1
Date : 7/16/03 03:03 PM
Time of Injection: 7/16/03 02:37 PM
Low Point : 9.39 mV High Point : 134.97 mV
Plot Scale: 125.6 mV

Gasoline

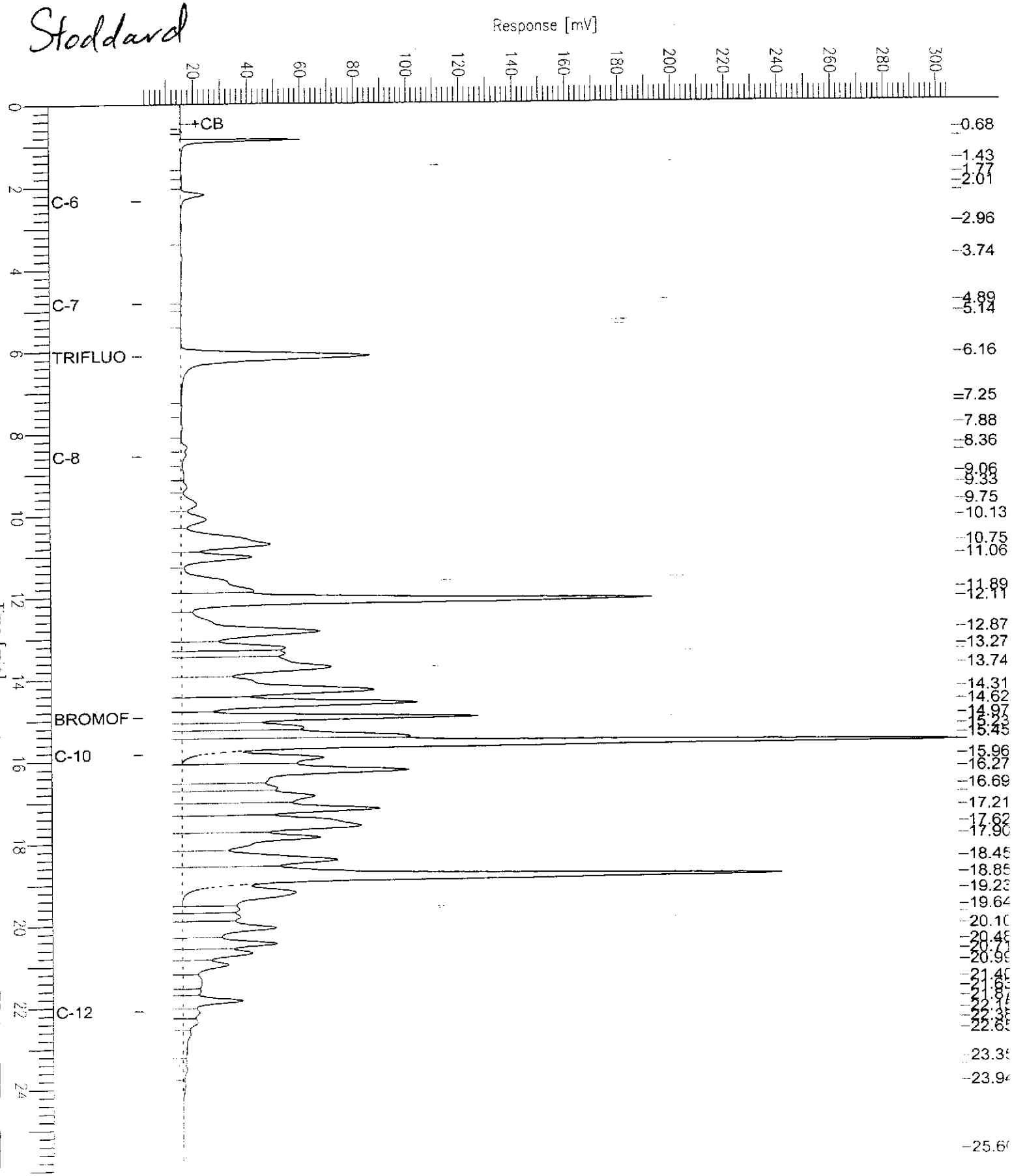


GC07 TVH 'A' Data File RTX 502

Sample Name : ccv,stoddard,82924,03ws0644,5/5000
FileName : G:\GC07\DATA\197A003.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 1 mV

Sample #:
Date : 7/16/03 03:38 PM
Time of Injection: 7/16/03 03:12 PM
Low Point : 0.82 mV High Point : 305.82 mV
Plot Scale: 305.0 mV

Stoddard



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Field ID: BH-29-8' Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/17/03
Lab ID: 166312-018

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	1.1	mg/Kg	8015B
MTBE	ND	21	ug/Kg	EPA 8021B
Benzene	ND	5.3	ug/Kg	EPA 8021B
Toluene	ND	5.3	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.3	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.3	ug/Kg	EPA 8021B
o-Xylene	ND	5.3	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	92	56-144	8015B
Bromofluorobenzene (FID)	100	51-142	8015B
Trifluorotoluene (PID)	79	45-150	EPA 8021B
Bromofluorobenzene (PID)	86	42-138	EPA 8021B

Field ID: BH-30-8' Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/17/03
Lab ID: 166312-020

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	0.97	mg/Kg	8015B
MTBE	ND	19	ug/Kg	EPA 8021B
Benzene	ND	4.9	ug/Kg	EPA 8021B
Toluene	ND	4.9	ug/Kg	EPA 8021B
Ethylbenzene	ND	4.9	ug/Kg	EPA 8021B
m,p-Xylenes	ND	4.9	ug/Kg	EPA 8021B
o-Xylene	ND	4.9	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	56-144	8015B
Bromofluorobenzene (FID)	101	51-142	8015B
Trifluorotoluene (PID)	81	45-150	EPA 8021B
Bromofluorobenzene (PID)	87	42-138	EPA 8021B

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	07/10/03
Basis:	as received	Received:	07/11/03
Batch#:	82924		

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC219388	Analyzed:	07/16/03

Analyte	Result	RL	Units	Analysis
Stoddard Solvent C7-C12	ND	1.0	mg/Kg	8015B
MTBE	ND	20	ug/Kg	EPA 8021B
Benzene	ND	5.0	ug/Kg	EPA 8021B
Toluene	ND	5.0	ug/Kg	EPA 8021B
Ethylbenzene	ND	5.0	ug/Kg	EPA 8021B
m,p-Xylenes	ND	5.0	ug/Kg	EPA 8021B
o-Xylene	ND	5.0	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	56-144	8015B
Bromofluorobenzene (FID)	93	51-142	8015B
Trifluorotoluene (PID)	79	45-150	EPA 8021B
Bromofluorobenzene (PID)	83	42-138	EPA 8021B

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Basis:	as received
Lab ID:	QC219390	Diln Fac:	1.000
Matrix:	Soil	Batch#:	82924
Units:	mg/Kg	Analyzed:	07/16/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	5.000	4.740	95	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	56-144
Bromofluorobenzene (FID)	99	51-142

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8021B
Type:	LCS	Basis:	as received
Lab ID:	QC219389	Diln Fac:	1.000
Matrix:	Soil	Batch#:	82924
Units:	ug/Kg	Analyzed:	07/16/03

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	54.31	109	65-135
Benzene	50.00	47.00	94	80-121
Toluene	50.00	44.19	88	80-120
Ethylbenzene	50.00	42.50	85	79-120
m,p-Xylenes	100.0	97.21	97	76-120
o-Xylene	50.00	46.19	92	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	84	45-150
Bromofluorobenzene (PID)	89	42-138

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Field ID:	BH-21-8'	Diln Fac:	1.000
MSS Lab ID:	166312-002	Batch#:	82924
Matrix:	Soil	Sampled:	07/10/03
Units:	mg/Kg	Received:	07/11/03
Basis:	as received	Analyzed:	07/17/03

Type: MS Lab ID: QC219391

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.08800	9.804	8.288	85	24-134

Surrogate	%REC	Limits
Trifluorotoluene (FID)	121	56-144
Bromofluorobenzene (FID)	101	51-142

Type: MSD Lab ID: QC219392

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.20	8.427	83	24-134	2	32

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	56-144
Bromofluorobenzene (FID)	98	51-142

RPD= Relative Percent Difference

8.0

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Received:	07/11/03
Units:	ug/L	Prepared:	07/15/03
Dil'n Fac:	1.000	Analyzed:	07/17/03
Batch#:	82917		

Field ID:	BH-22-GW	Lab ID:	166312-003
Type:	SAMPLE	Sampled:	07/10/03

Analyte	Result	RL
Diesel C10-C24	130 Y	50

Surrogate	%REC	Limits
Hexacosane	115	44-146

Field ID:	BH-28-GW	Lab ID:	166312-015
Type:	SAMPLE	Sampled:	07/10/03

Analyte	Result	RL
Diesel C10-C24	250 H Y	50

Surrogate	%REC	Limits
Hexacosane	106	44-146

Field ID:	BH-29-GW	Lab ID:	166312-017
Type:	SAMPLE	Sampled:	07/10/03

Analyte	Result	RL
Diesel C10-C24	100 Y	50

Surrogate	%REC	Limits
Hexacosane	100	44-146

Field ID:	BH-31-GW	Lab ID:	166312-021
Type:	SAMPLE	Sampled:	07/11/03

Analyte	Result	RL
Diesel C10-C24	210 Y	50

Surrogate	%REC	Limits
Hexacosane	121	44-146

Field ID:	BH-32-GW	Lab ID:	166312-022
Type:	SAMPLE	Sampled:	07/11/03

Analyte	Result	RL
Diesel C10-C24	220 Y	50

Surrogate	%REC	Limits
Hexacosane	110	44-146

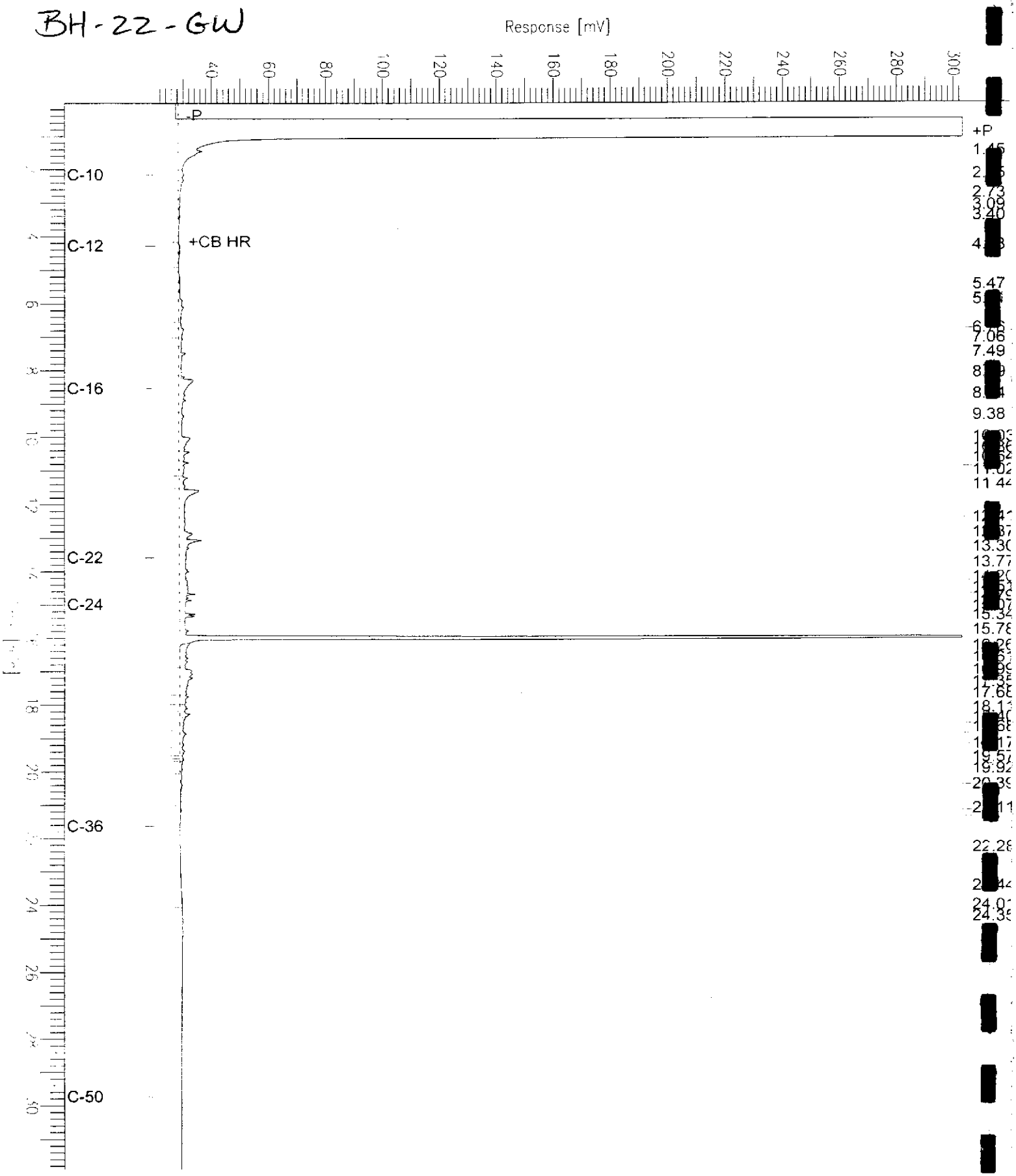
H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 166312-003,82917
FileName : G:\GC11\CHA\198A010.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 20 mV

Sample #: 82917 Page 1 of 1
Date : 7/17/03 06:18 PM
Time of Injection: 7/17/03 05:30 PM
Low Point : 20.14 mV High Point : 303.23 mV
Plot Scale: 283.1 mV

BH-22-GW

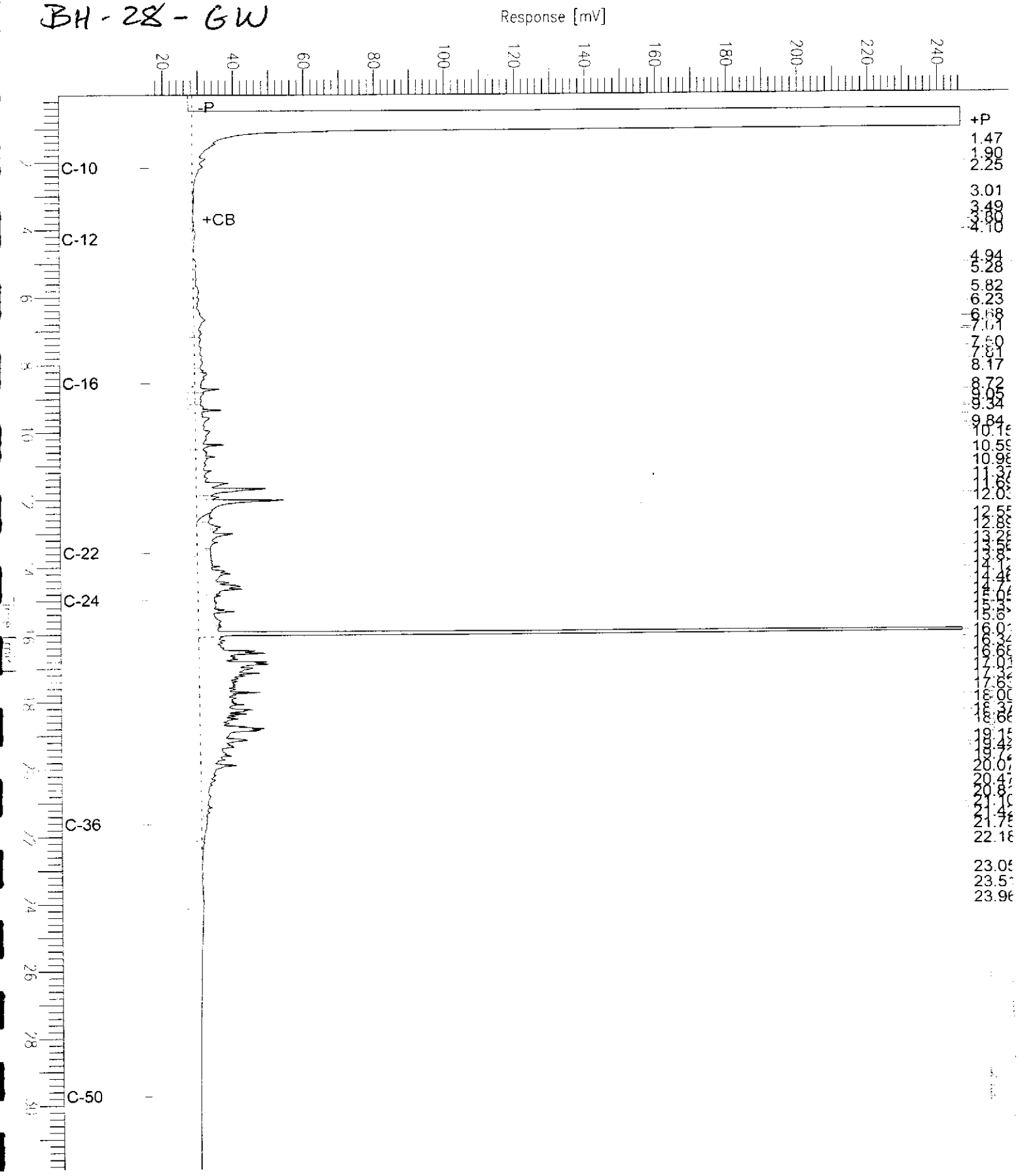


Chromatogram

Sample Name : 166312-015,82917
FileName : G:\GC11\CHA\198A011.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 16 mV

Sample #: 82917
Date : 7/17/03 07:21 PM
Time of Injection: 7/17/03 06:10 PM
Low Point : 16.27 mV High Point : 246.61 mV
Plot Scale: 230.3 mV

BH-28-GW

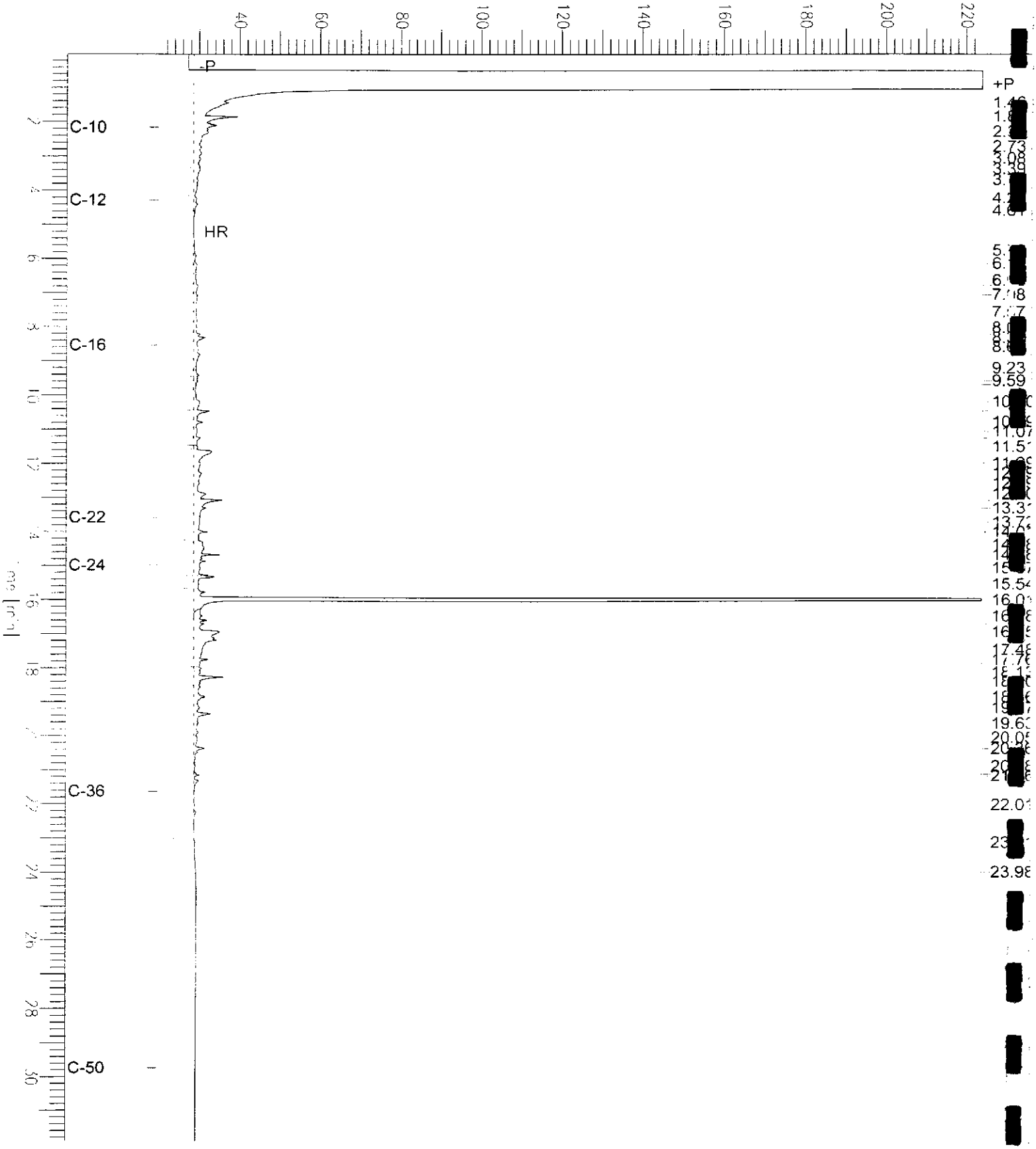


Chromatogram

Sample Name : 166312-017,82917
FileName : G:\GC11\CHA\198A012.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 20 mV

Sample #: 82917 Page 1 of 1
Date : 7/17/03 07:24 PM
Time of Injection: 7/17/03 06:50 PM
Low Point : 20.06 mV High Point : 223.95 mV
Plot Scale: 203.9 mV

BH-29-GW

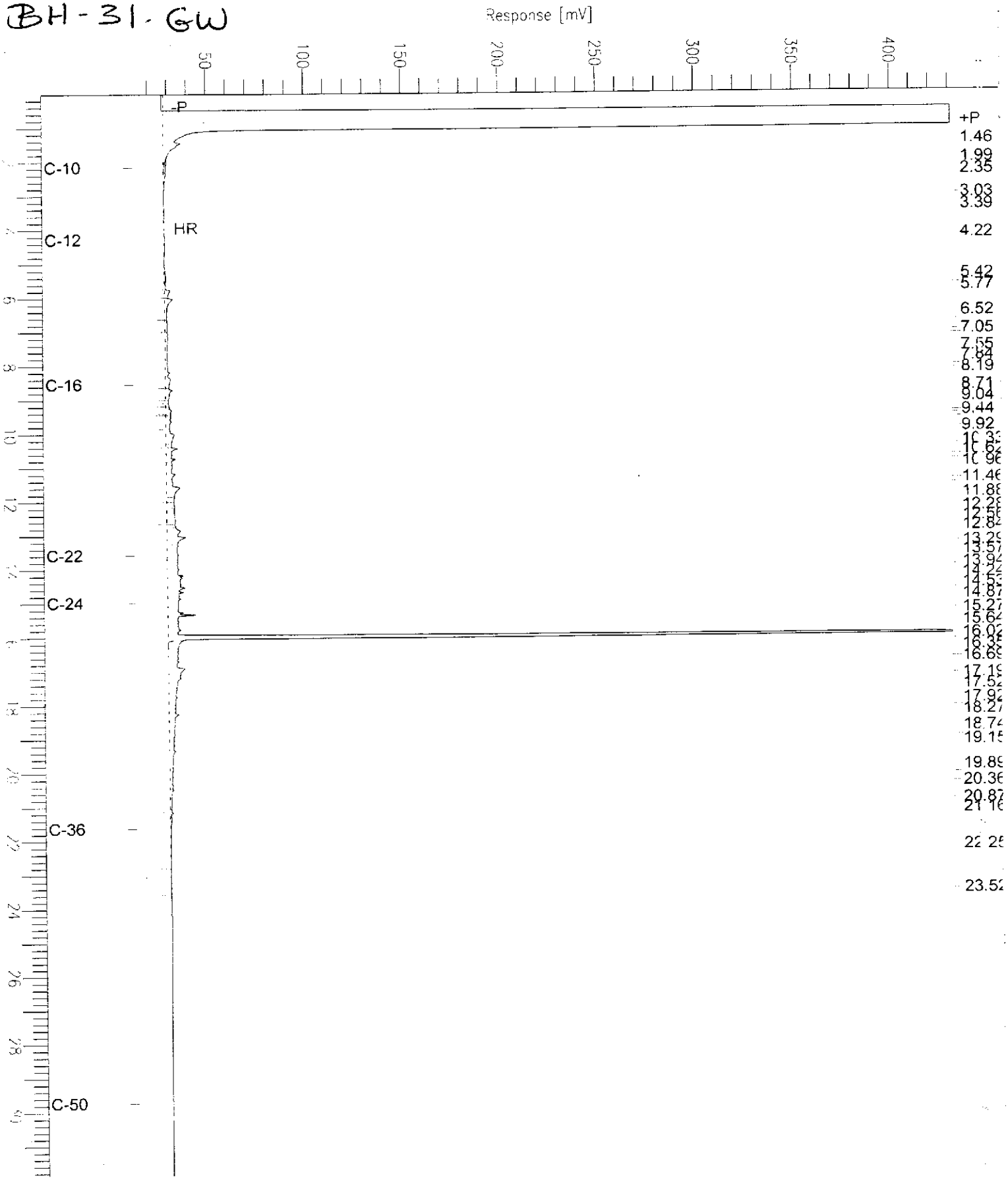


Chromatogram

Sample Name : 166312-021,82917
FileName : G:\GC11\CHA\198A013.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample #: 82917
Date : 7/18/03 06:49 AM
Time of Injection: 7/17/03 07:30 PM
Low Point : 12.78 mV High Point : 431.54 mV
Plot Scale: 418.8 mV

BH-31-GW

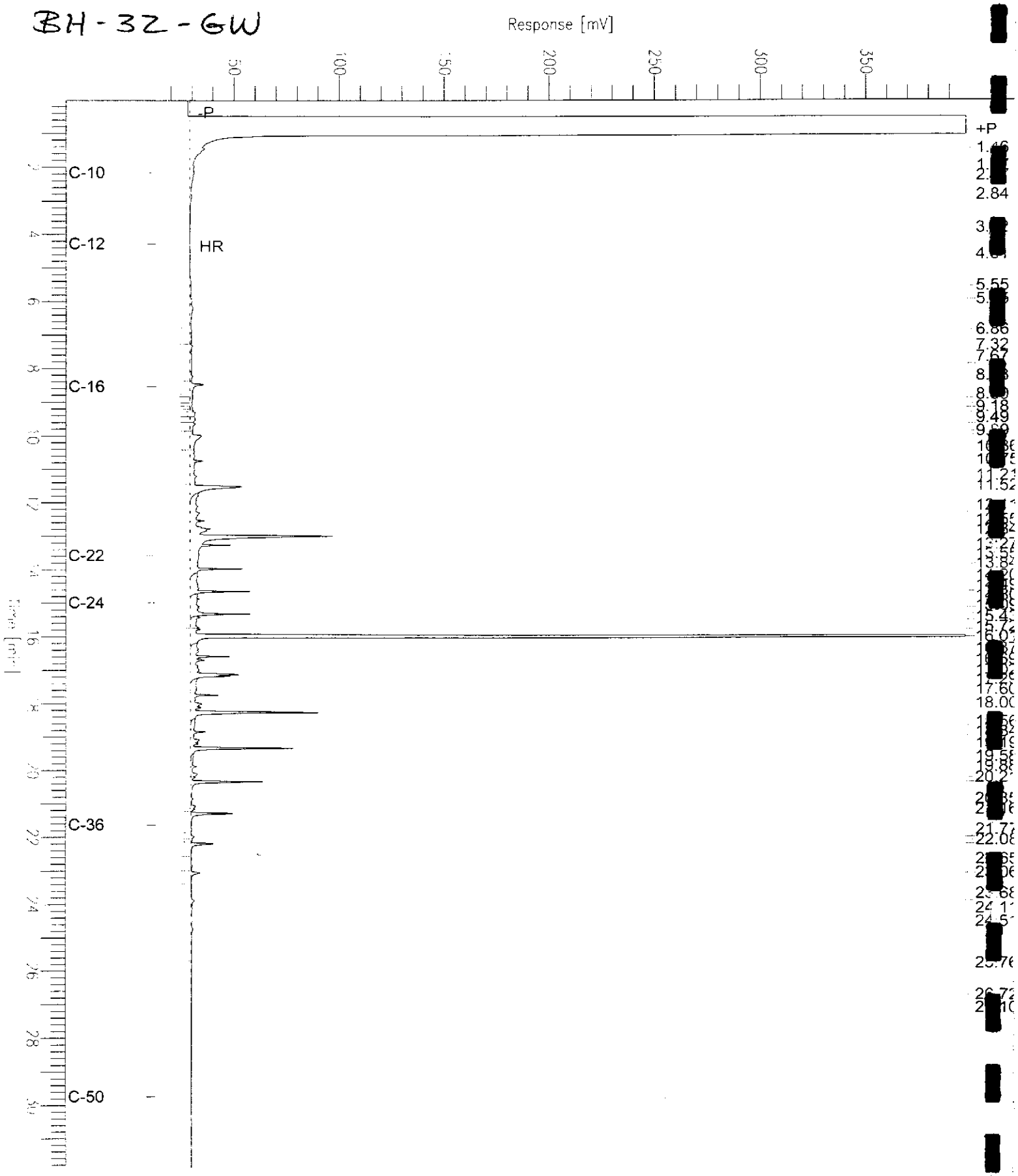


Chromatogram

Sample Name : 166312-022,82917
FileName : G:\GC11\CHA\198A014.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample #: 82917 Page 1 of 1
Date : 7/18/03 06:50 AM
Time of Injection: 7/17/03 08:11 PM
Low Point : 13.20 mV High Point : 397.96 mV
Plot Scale: 384.8 mV

BH-32-GW



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Received:	07/11/03
Units:	ug/L	Prepared:	07/15/03
Dil'n Fac:	1.000	Analyzed:	07/17/03
Batch#:	82917		

Field ID:	BH-33-GW	Lab ID:	166312-023
Type:	SAMPLE	Sampled:	07/11/03

Analyte	Result	RL
Diesel C10-C24	160 Y	50

Surrogate	%REC	Limits
Hexacosane	138	44-146

Type:	BLANK	Cleanup Method:	EPA 3630C
Lab ID:	QC219356		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	122	44-146

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

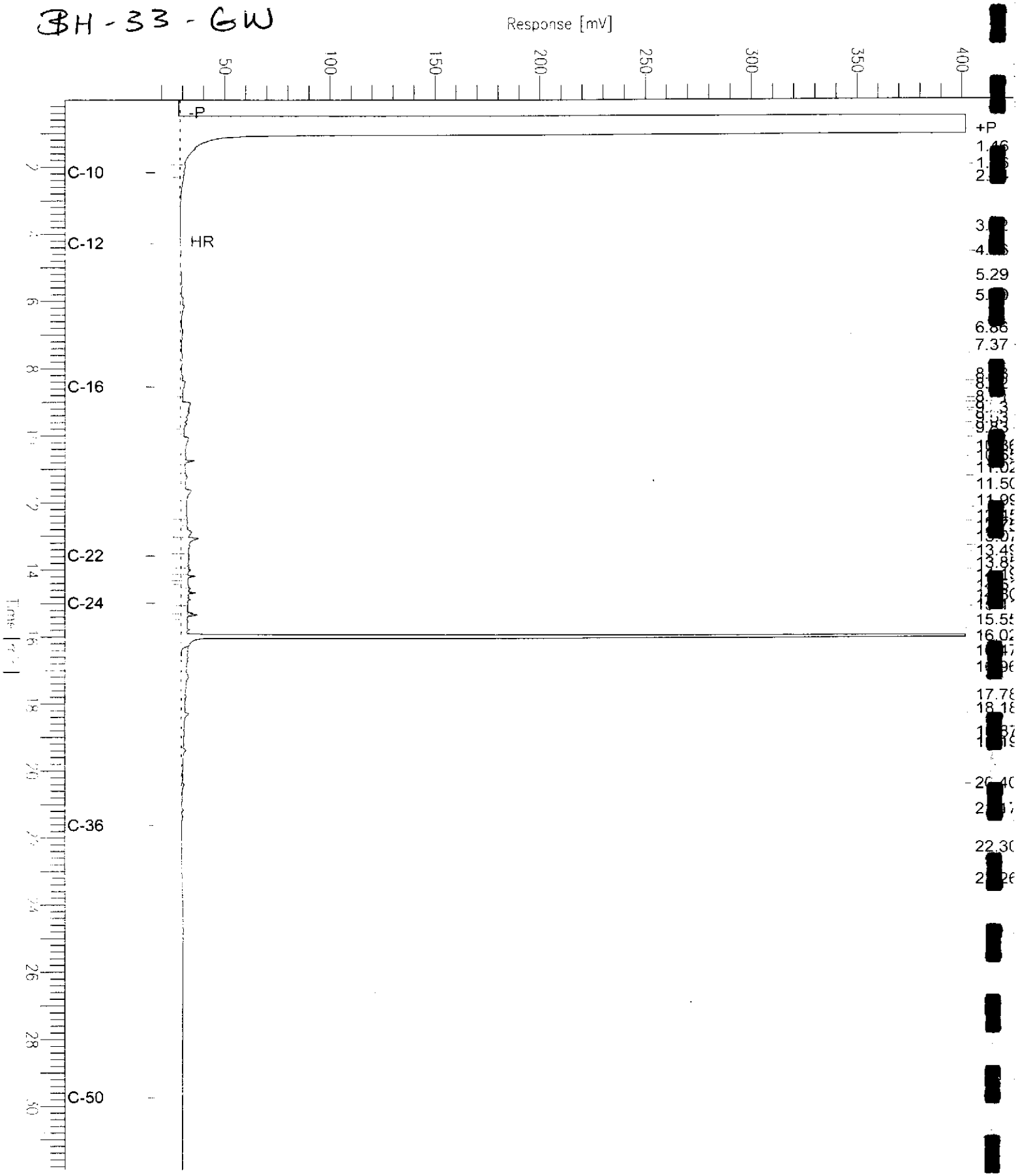
15.0

Chromatogram

Sample Name : 166312-023,82917
FileName : G:\GC11\CHA\198A015.RAW
Method : ATEH191.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 17 mV

Sample #: 82917 Page 1 of 1
Date : 7/18/03 06:50 AM
Time of Injection: 7/17/03 08:51 PM
Low Point : 17.15 mV High Point : 401.80 mV
Plot Scale: 384.6 mV

BH-33-GW

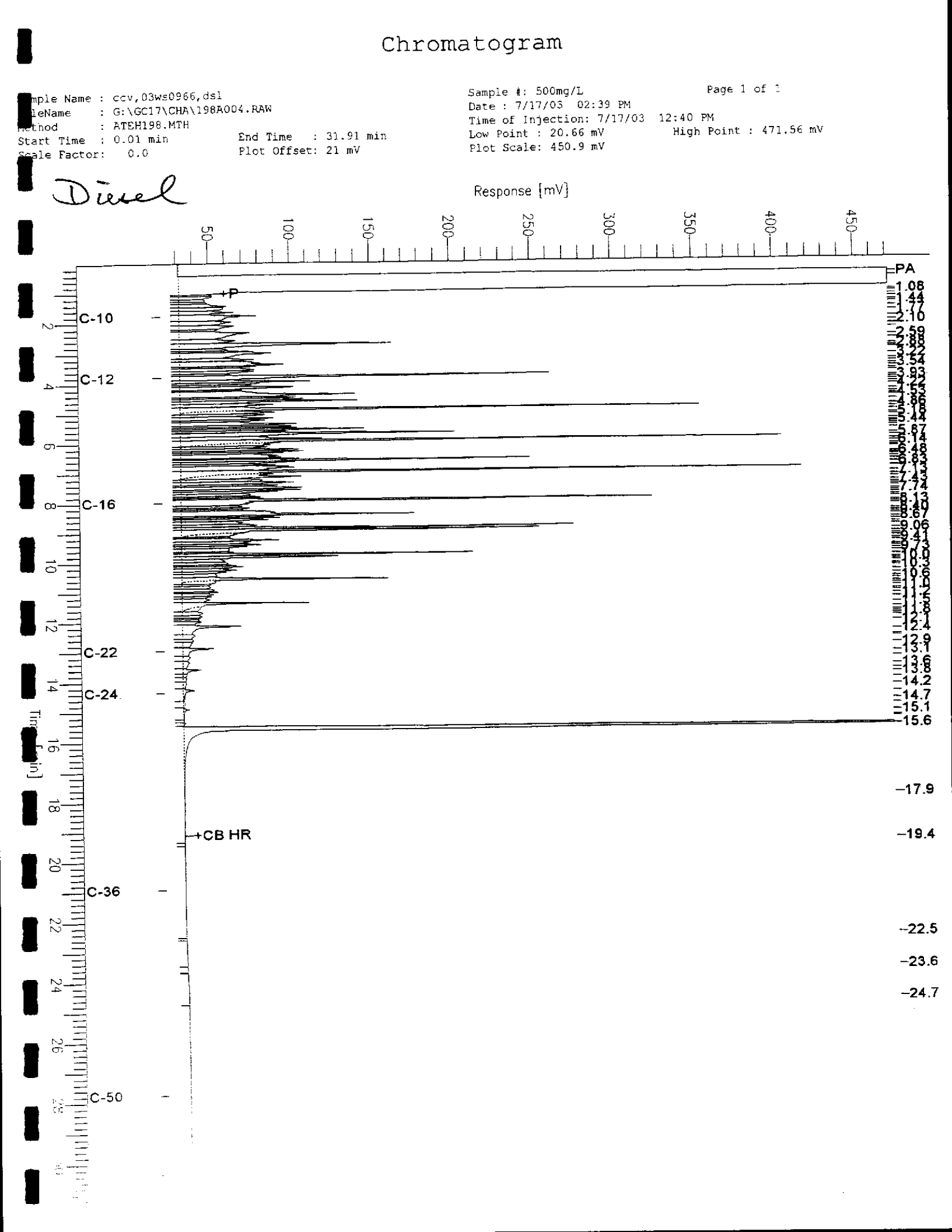


Chromatogram

mple Name : ccv,03ws0966,dsl
leName : G:\GC17\CHA\198A004.RAW
ethod : ATEH198.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 21 mV

Sample #: 500mg/L Page 1 of 1
Date : 7/17/03 02:39 PM
Time of Injection: 7/17/03 12:40 PM
Low Point : 20.66 mV High Point : 471.56 mV
Plot Scale: 450.9 mV

Diesel



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219357	Batch#:	82917
Matrix:	Water	Prepared:	07/15/03
Units:	ug/L	Analyzed:	07/18/03

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,175	87	38-137

Surrogate	%REC	Limits
Hexacosane	101	44-146

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	82917
MSS Lab ID:	166232-002	Sampled:	07/08/03
Matrix:	Water	Received:	07/08/03
Units:	ug/L	Prepared:	07/15/03
Diln Fac:	1.000	Analyzed:	07/17/03

Type: MS Lab ID: QC219358

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<29.00	2,500	2,591	104	35-138

Surrogate	%REC	Limits
Hexacosane	113	44-146

Type: MSD Lab ID: QC219359

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,854	114	35-138	10	33

Surrogate	%REC	Limits
Hexacosane	128	44-146

RPD= Relative Percent Difference

17.0

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	82908
Units:	mg/Kg	Received:	07/11/03
Basis:	as received	Prepared:	07/15/03

Field ID:	BH-22-8'	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-004	Analyzed:	07/17/03

Analyte	Result	RL
Diesel C10-C24	5.2 Y	1.0

Surrogate	%REC	Limits
Hexacosane	117	36-141

Field ID:	BH-23-8'	Diln Fac:	25.00
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-006	Analyzed:	07/18/03

Analyte	Result	RL
Diesel C10-C24	3,700 L Y	25

Surrogate	%REC	Limits
Hexacosane	DO	36-141

Field ID:	BH-23-11.5'	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-007	Analyzed:	07/17/03

Analyte	Result	RL
Diesel C10-C24	9.4 L Y	1.0

Surrogate	%REC	Limits
Hexacosane	111	36-141

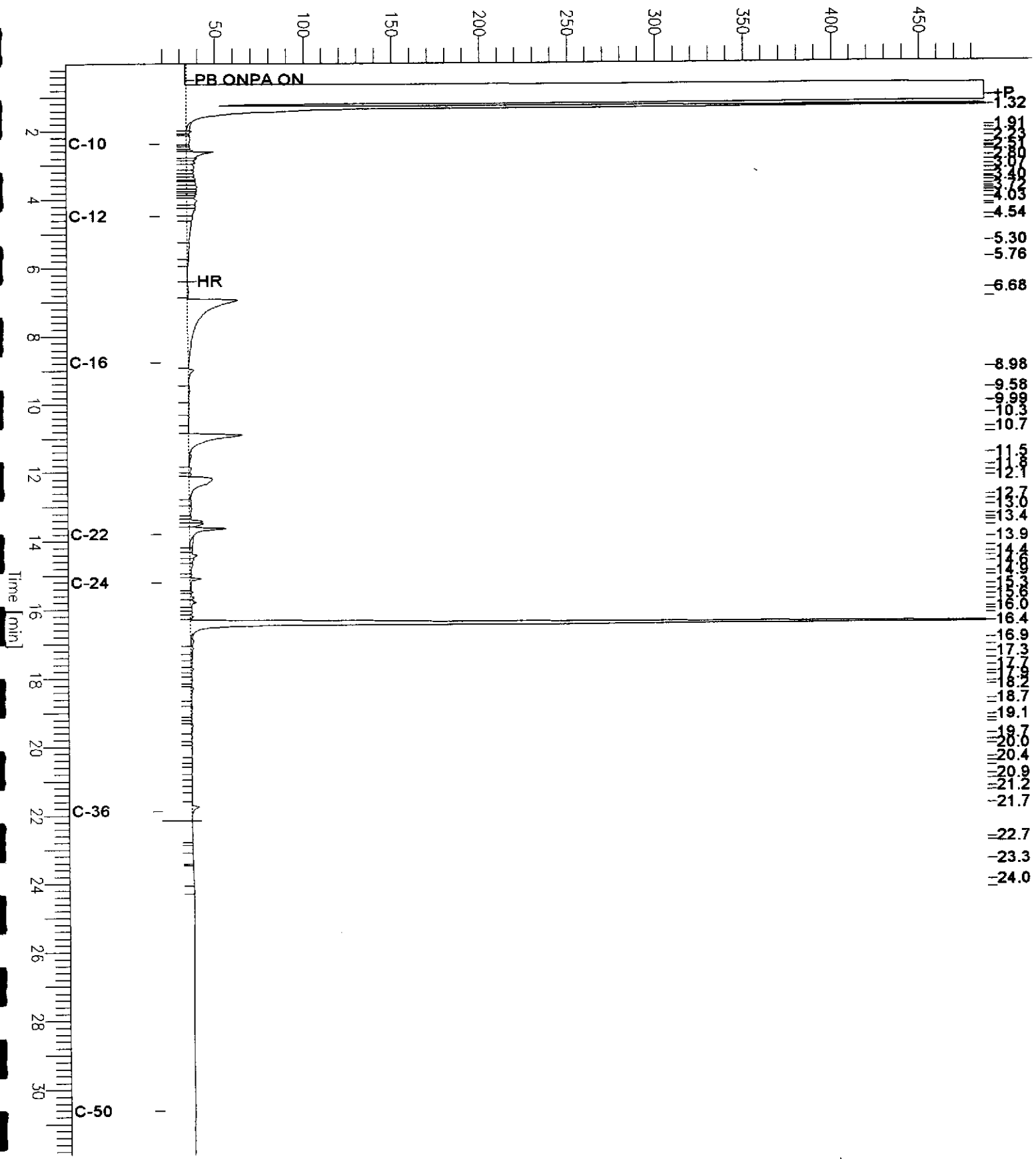
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 166312-004,82908
FileName : G:\GC15\CHB\195B079.RAW
Method : BTEH196.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 18 mV

Sample #: 82908 Page 1 of 1
Date : 7/17/03 08:45 AM
Time of Injection: 7/17/03 03:33 AM
Low Point : 18.32 mV High Point : 487.37 mV
Plot Scale: 469.0 mV

BH-22-8'

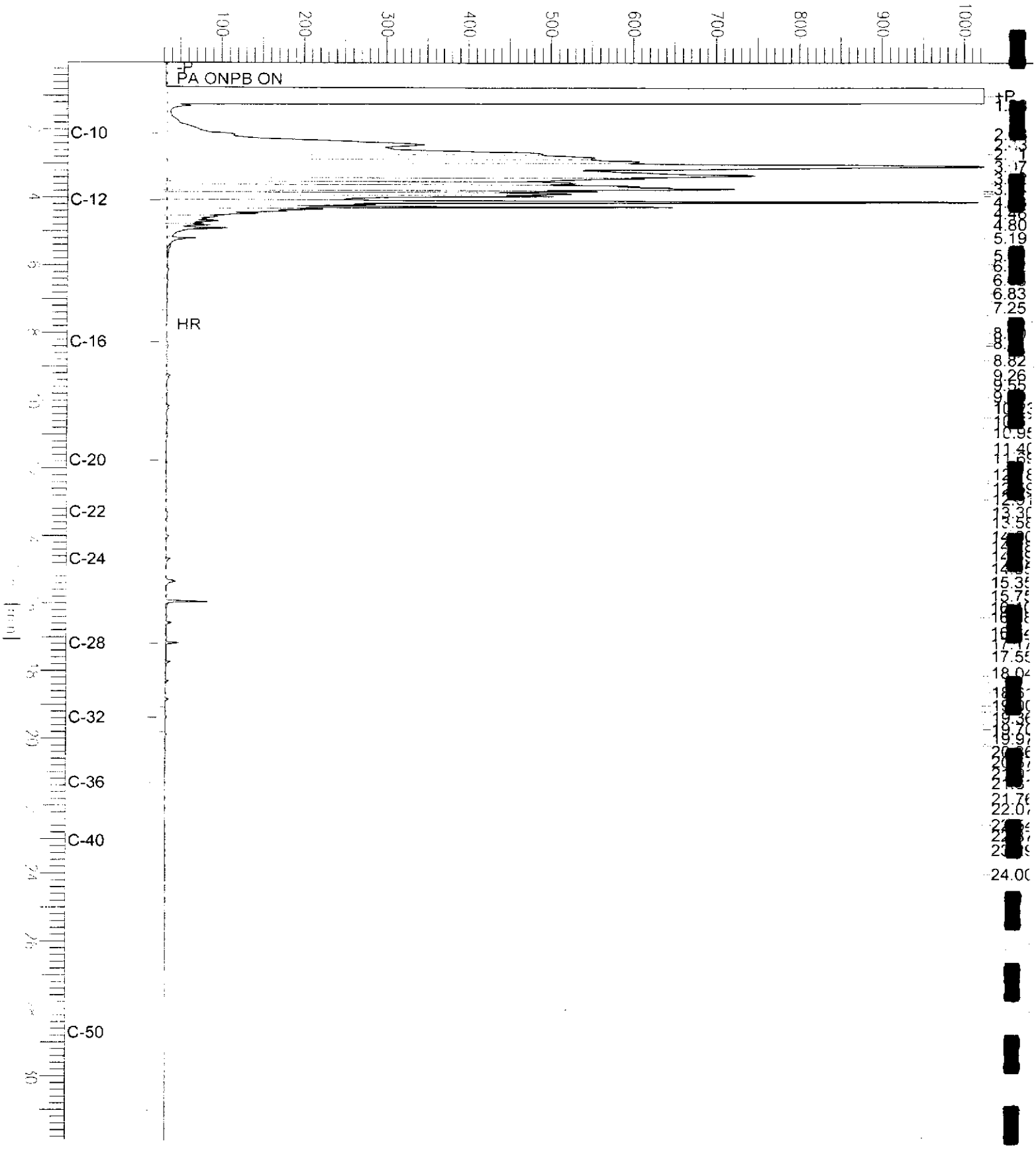


Chromatogram

Sample Name : 166312-006,82908
FileName : G:\GC13\CHB\199B005.RAW
Method : BTEH196.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 25 mV

Sample #: 82908 Page 1 of 1
Date : 7/18/03 11:07 AM
Time of Injection: 7/18/03 10:13 AM
Low Point : 25.33 mV High Point : 1024.00 mV
Plot Scale: 998.7 mV

BH-23-8'

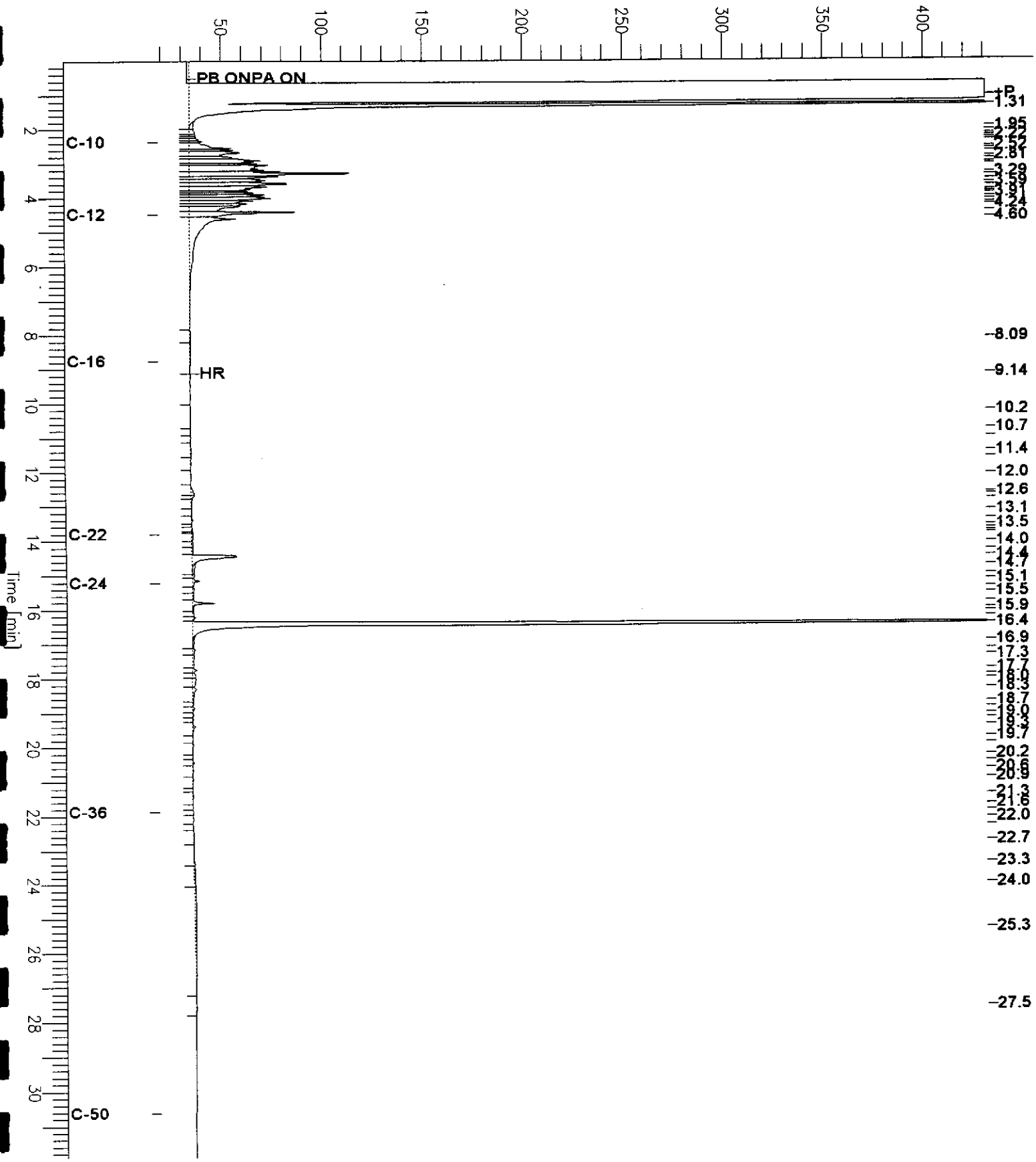


Chromatogram

Sample Name : 166312-007,82908
FileName : G:\GC15\CHB\195B081.RAW
Method : BTEH196.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 19 mV

Sample #: 82908 Page 1 of 1
Date : 7/17/03 08:46 AM
Time of Injection: 7/17/03 04:55 AM
Low Point : 18.62 mV High Point : 431.19 mV
Plot Scale: 412.6 mV

BH-23-11.5'



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	82908
Units:	mg/Kg	Received:	07/11/03
Basis:	as received	Prepared:	07/15/03

Field ID:	BH-29-8'	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/10/03
Lab ID:	166312-018	Analyzed:	07/17/03

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	91	36-141

Field ID:	BH-33-6'	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	07/11/03
Lab ID:	166312-024	Analyzed:	07/17/03

Analyte	Result	RL
Diesel C10-C24	2.3 Y	1.0

Surrogate	%REC	Limits
Hexacosane	98	36-141

Type:	BLANK	Analyzed:	07/16/03
Lab ID:	QC219321	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	71	36-141

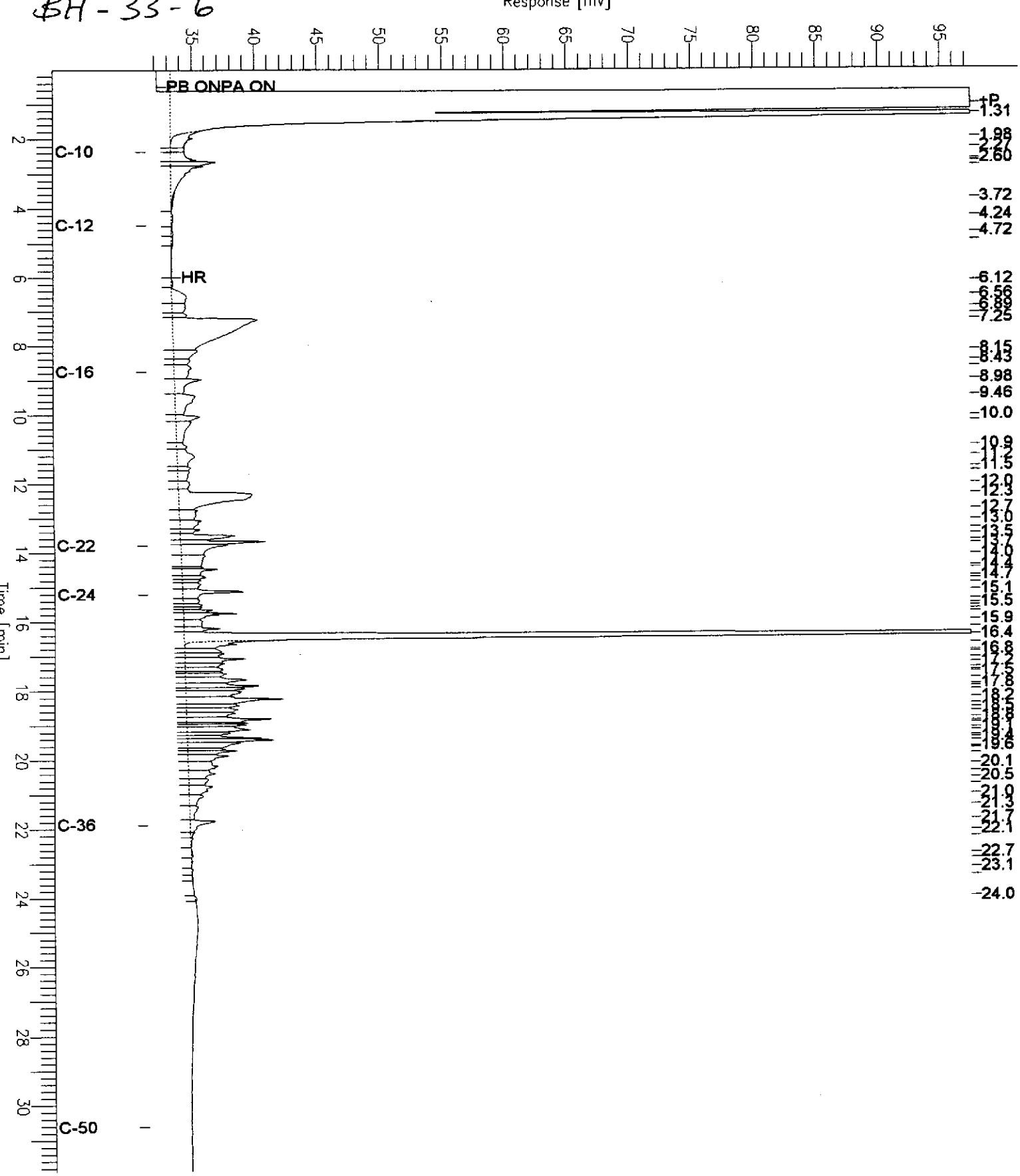
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 166312-024,82908
FileName : G:\GC15\CHB\195B088.RAW
Method : BTEH196.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 31 mV

Sample #: 82908 Page 1 of 1
Date : 7/17/03 12:17 PM
Time of Injection: 7/17/03 09:40 AM
Low Point : 31.33 mV High Point : 97.47 mV
Plot Scale: 66.1 mV

BH-33-6'



Chromatogram

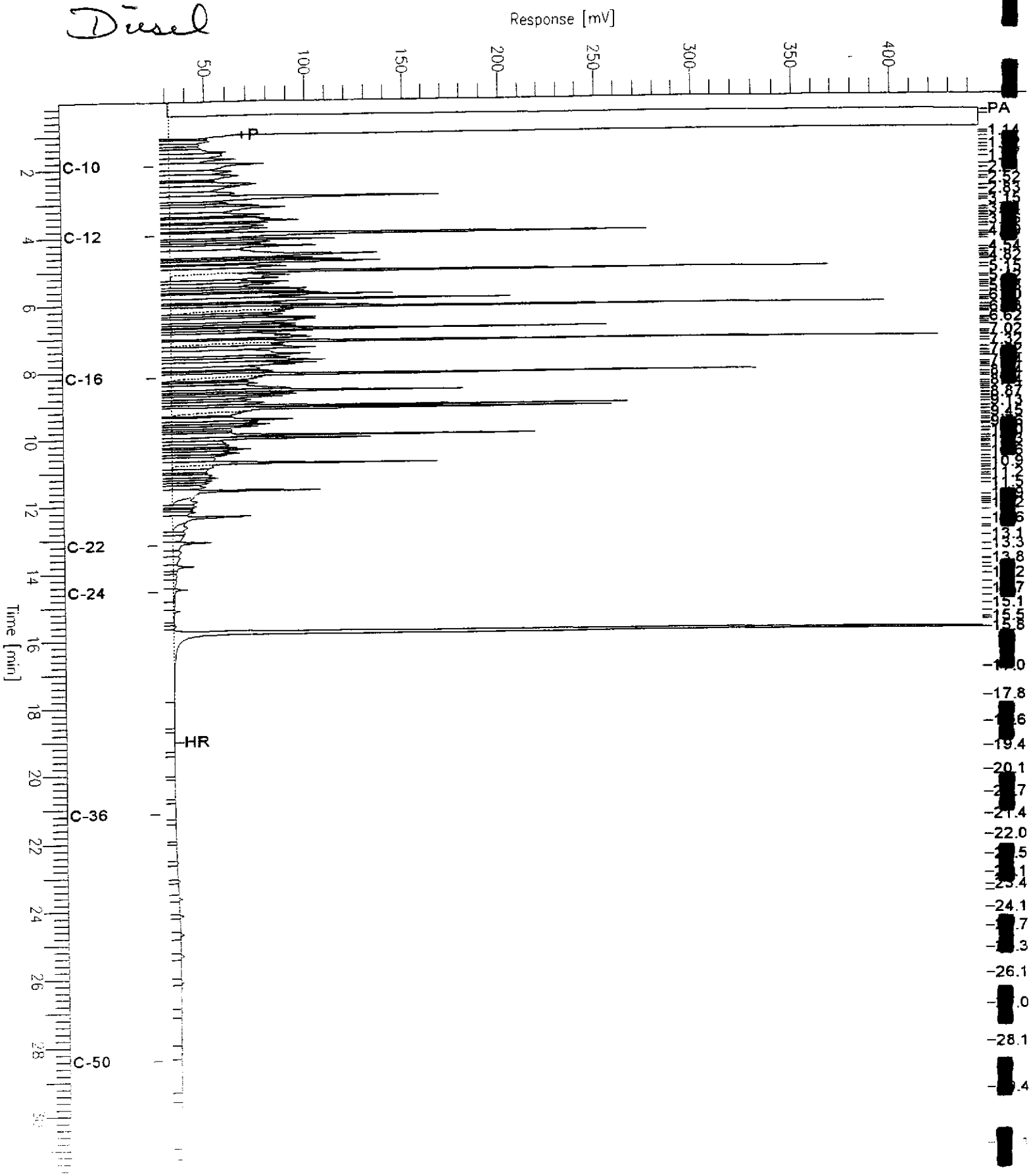
Sample Name : ccv,03ws0966,dsl
FileName : G:\GC17\CHA\194A002.RAW
Method : ATEH184.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 24 mV

Sample #: 500mg/L
Date : 7/13/03 01:16 PM
Time of Injection: 7/13/03 12:40 PM
Low Point : 24.19 mV
Plot Scale: 421.0 mV

High Point : 445.24 mV

Diesel



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC219322	Batch#:	82908
Matrix:	Soil	Prepared:	07/15/03
Units:	mg/Kg	Analyzed:	07/16/03
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.93	43.64	87	49-129

Surrogate	%REC	Limits
Hexacosane	103	36-141

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	166312	Location:	Searway Property
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	82908
MSS Lab ID:	166321-002	Sampled:	07/10/03
Matrix:	Soil	Received:	07/14/03
Units:	mg/Kg	Prepared:	07/15/03
Basis:	as received	Analyzed:	07/17/03
Diln Fac:	1.000		

Type: MS
Lab ID: QC219323

Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	62.43	50.02	128.0	131	32-134

Surrogate	%REC	Limits
Hexacosane	93	36-141

Type: MSD
Lab ID: QC219324

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.62	124.3	125	32-134	3	48

Surrogate	%REC	Limits
Hexacosane	97	36-141

RPD= Relative Percent Difference