

March 18, 2003

Mr. Stan Hammond
Wells & Bennet Realtors
1451 Leimert Boulevard
Oakland, California 94602

Subject: Subsurface Site Investigation – Searway Property
649 Pacific Avenue & 1713 Webster Street, Alameda, California

Alameda County
JUL 3 3 2003
Environmental Health

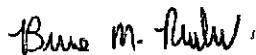
Dear Mr. Hammond:

This report summarizes the subsurface site investigation conducted by Stellar Environmental Solutions, Inc. (SES) at the referenced property. Our work focused on an area of former dry cleaning operations (649 Pacific Avenue space) and a potential underground fuel storage tank (1713 Webster Street space).

The initial site investigation data collected shows soil and groundwater contamination attributed to Stoddard Solvent locally in the area of the former dry cleaner. However, the lateral extent of the Stoddard Solvent contamination still needs to be better defined. In the area of the current restaurant where an underground fuel storage tank (UFST) was suggested to have been closed in place there was no evidence of soil contamination but some residual groundwater contamination by MTBE. The MTBE in groundwater may also have some offsite component associated with it. SES recommends informing the applicable regulatory agencies and completing further definition and assessment of the issues to bring the site towards regulatory closure.

Please contact us at (510) 644-3123 if you have any questions.

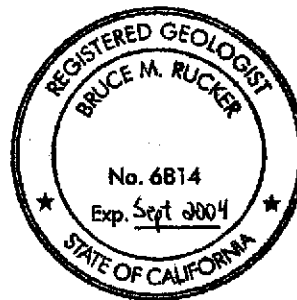
Sincerely,



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



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



**SUBSURFACE SITE
INVESTIGATION REPORT**

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

Prepared for:

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Prepared by:

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March 18, 2003

Project No. 2003-13

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1.0 INTRODUCTION

PROJECT BACKGROUND AND TECHNICAL OBJECTIVES

Stellar Environmental Solutions, Inc. (SES) was retained by Mr. Stan Hammond of Wells & Bennett Realtors (agent for three of the four property owners) to implement a subsurface investigation at the site known as the Searway Property. The subsurface investigation focused on two specific areas of the subject property: 1) a former dry cleaning tenant space at 649 Pacific Avenue, Alameda, California; and 2) a potential underground fuel storage tank (UFST) at 1713 Webster Street, Alameda, California. These two areas are located within the boundaries of one large building that is sub-divided into numerous tenant spaces.

The primary objective of the work was to collect soil and groundwater samples in the two areas to analyze and evaluate the type and magnitude of contamination that may be associated with the former dry cleaning operation and the potential UFST. We understand that previous subject property investigations—apparently related to former UFSTs—have been conducted by other consultants (reports were not available to SES), and that a Phase I Environmental Site Assessment is currently being conducted by another consultant. The work scope of our site investigation was based on verbal information provided by Mr. Hammond and Mr. Carl Searway (minority subject property owner represented by Mr. Hammond). Our scope of work did not include reviewing/evaluating any technical reports (with the exception of a geophysical survey report and information on groundwater flow direction provided by a previous consultant) or regulatory agency files regarding potential or documented contamination.

SITE HISTORY

649 Pacific Avenue

We were informed that dry cleaning operations were conducted in this tenant space (currently utilized for dry storage) beginning in approximately 1940 (termination date unknown to SES), and that documentation exists of 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 considered a potential site contaminant of concern until sampling/analysis demonstrates that it is not present.

1713 Webster Street

We were informed that a UFST (contents, size, and exact location unspecified) may have been located within this tenant space (currently a restaurant) during a previous tenant occupancy. The UFST was reportedly installed in the 1920s. 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.

We were informed that a diesel UFST was removed from the subject property sidewalk area at the corner of Webster Street and Pacific Avenue. Eight groundwater monitoring events were conducted between 1993 and 1995 and indicated variable groundwater flow direction (predominantly westerly with northwesterly and southwesterly flow also observed). Depth to groundwater in wells was between 7 and 10 feet below grade. Analytical results of those groundwater monitoring events were not available to SES. According to Mr. Searway, an additional UFST containing diesel may have been located somewhere on the subject property (based on historical permits), but its location and status (removed or in-place) are unknown.

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 showing 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 – 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;
- 649 Pacific Avenue – Current equipment storage, formerly a 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:

- A commercial building (*to the north*);
- City of Alameda Fire Station (reportedly utilizing or formerly utilizing UFSTs) (*to the west*);
- Pacific Avenue, then a vacant/former service station (*to the south*); and
- Webster Street, then commercial buildings (*to the east*).

Several service stations with UFSTs are located in the immediate vicinity.



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

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

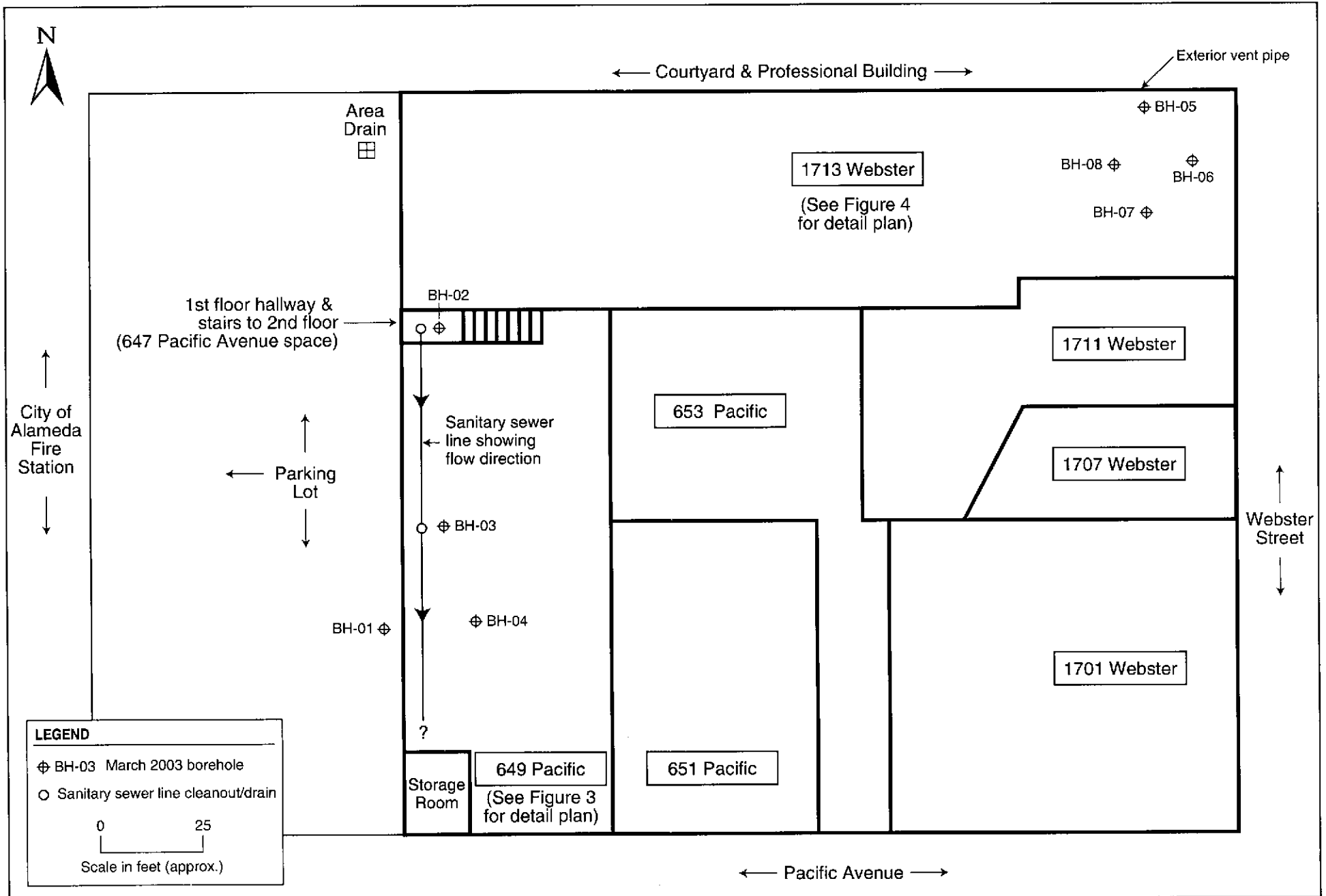
By: MJC

MARCH 2003

Figure 1

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-13-01



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 are no storm drain inlets on the property except for a sump/storm drain inlet just outside the rear (west) door of the 1713 Webster Street space. 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

Our scope of work did not include reviews of previous subject property investigation reports or regulatory agency files on vicinity subsurface investigations. We evaluated subject property lithologic and hydrogeologic conditions by logging the exploratory boreholes in the current investigation (total depth evaluated was 15 feet below grade). Shallow lithology consisted of well-sorted (fine- to medium-grained) sand and clayey sand. Appendix A contains borehole logs from the recent investigation.

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 cuttings 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 higher than encountered in the current investigation (likely within the past year). Water levels rose several feet in boreholes relative to observed saturated soils in drill core samples, indicating that shallow groundwater is under confining or semi-confining conditions.

Groundwater flow in the immediate area of the subject property, based on 1993 through 1995 groundwater monitoring data collected from the three wells installed near the corner of Webster Street and Pacific Avenue, is generally westward with both a southwesterly and northwesterly component noted. Groundwater depths were approximately 6 feet below grade.

3.0 SITE INVESTIGATION ACTIVITIES AND FINDINGS

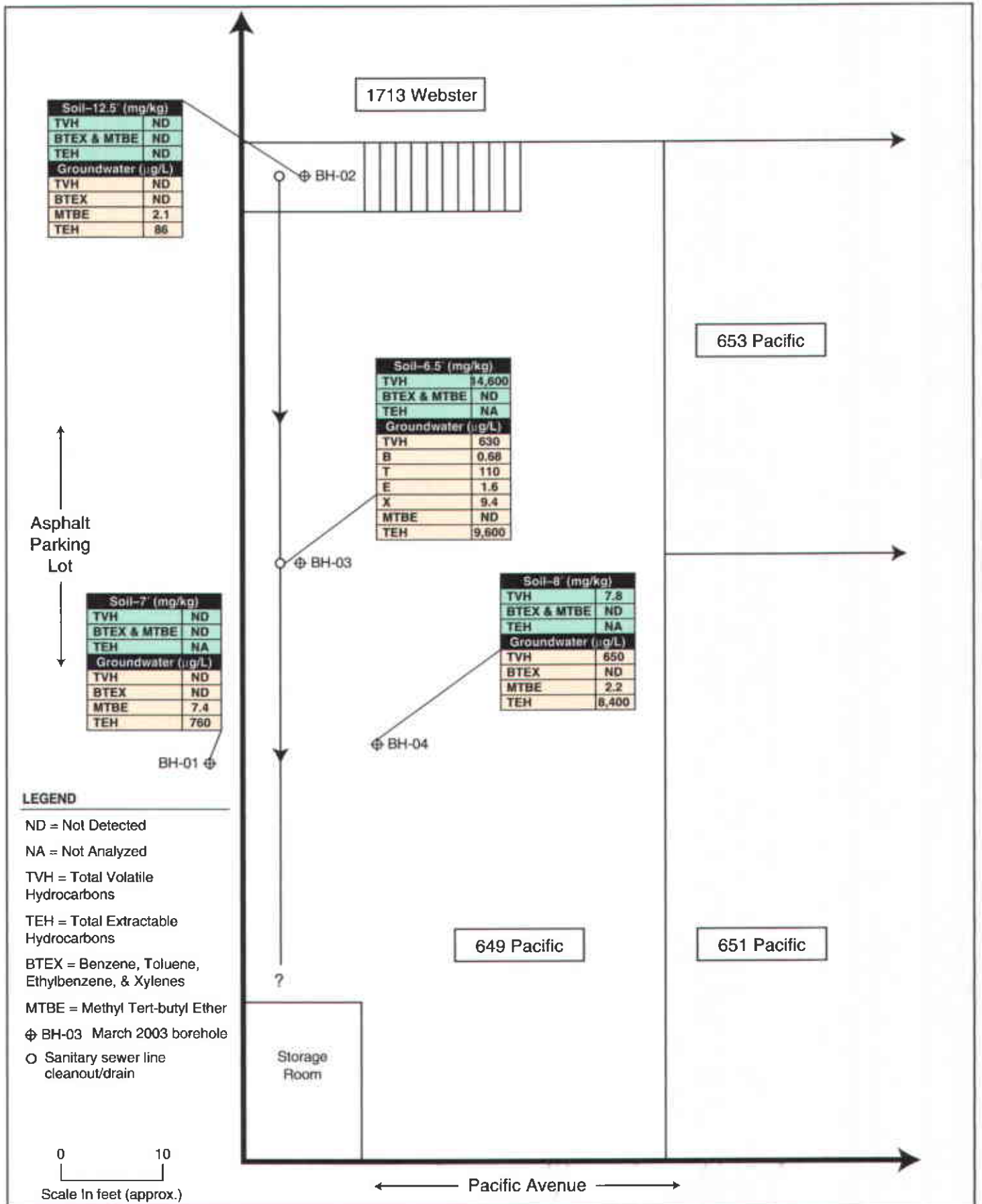
This section summarizes site investigation activities conducted by SES at the subject property in March 2003. Figure 2 (Section 1.0) shows exploratory borehole locations. Figures 3 and 4 are detail layouts of the 649 Pacific Avenue and 1713 Webster Street work areas, respectively. Appendix B contains photodocumentation of our work activities.

DRILLING AND SAMPLING METHODS

Exploratory borehole drilling and sampling was conducted on March 4, 2003 by Precision Sampling, Inc. (C-57 License No. 636387) 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 C). Prior to drilling, a private line-locating firm identified the layout of an underground sanitary sewer line in the 649 Pacific Avenue space, as that line is a potential entry point and migrational pathway for potential contamination. Figure 3 shows the layout of that line, including cleanouts/drains.

The boreholes were drilled with a portable "EnviroCore" rig that advances 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). Borehole geologic logs for boreholes BH-01 through BH-05 are presented in Appendix A. We visually examined soil cores from the remaining boreholes in the 1713 Webster Street space (BH-06 through BH-08), and noted no significant differences in shallow lithology.

One soil sample per borehole was retained for laboratory analysis. Soil samples were field-screened with a MiniRae photoionization detector (PID) for a qualitative assessment of potential contamination during drilling. 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



Soil-12.5' (mg/kg)	
TVH	ND
BTEX & MTBE	ND
TEH	ND
Groundwater (µg/L)	
TVH	ND
BTEX	ND
MTBE	2.1
TEH	86

1713 Webster

⊕ BH-02

Soil-6.5' (mg/kg)	
TVH	14,600
BTEX & MTBE	ND
TEH	NA
Groundwater (µg/L)	
TVH	630
B	0.68
T	110
E	1.6
X	9.4
MTBE	ND
TEH	9,600

653 Pacific

Asphalt Parking Lot

Soil-7' (mg/kg)	
TVH	ND
BTEX & MTBE	ND
TEH	NA
Groundwater (µg/L)	
TVH	ND
BTEX	ND
MTBE	7.4
TEH	760

⊕ BH-01

Soil-8' (mg/kg)	
TVH	7.8
BTEX & MTBE	ND
TEH	NA
Groundwater (µg/L)	
TVH	650
BTEX	ND
MTBE	2.2
TEH	8,400

⊕ BH-04

LEGEND

- ND = Not Detected
- NA = Not Analyzed
- TVH = Total Volatile Hydrocarbons
- TEH = Total Extractable Hydrocarbons
- BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
- MTBE = Methyl Tert-butyl Ether
- ⊕ BH-03 March 2003 borehole
- Sanitary sewer line cleanout/drain

649 Pacific

651 Pacific

Storage Room

0 10
Scale In feet (approx.)

Pacific Avenue



DETAIL LAYOUT OF 649 PACIFIC AVENUE SPACE SHOWING BOREHOLE LOCATIONS & ANALYTICAL RESULTS

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

By: MJC

MARCH 2003

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

Figure 3

2003-19-02



Exterior vent pipe

⊕ BH-05

Soil-8' (mg/kg)	
TVH	ND
BTEX & MTBE	ND
TEH	ND
Groundwater (µg/L)	
TVH	ND
BTEX	ND
MTBE	39
TEH	140

⊕ BH-06

Soil-7.5' (mg/kg)	
TVH & TEH	ND
BTEX & MTBE	ND
Groundwater (µg/L)	
TVH	ND
BTEX & MTBE	ND
TEH	72

⊕ BH-08

Soil-8.5' (mg/kg)	
TVH	ND
BTEX & MTBE	ND
TEH	9.6
Groundwater (µg/L)	
TVH	ND
BTEX	ND
MTBE	340
TEH	150

⊕ BH-07

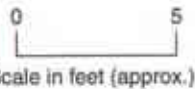
Soil-7.5' (mg/kg)	
TVH	ND
BTEX & MTBE	ND
TEH	1.2
Groundwater (µg/L)	
TVH	ND
BTEX	ND
MTBE	110
TEH	190

Webster Street

Front Door

LEGEND

- ND = Not Detected
- TVH = Total Volatile Hydrocarbons
- TEH = Total Extractable Hydrocarbons
- BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
- MTBE = Methyl Tert-butyl Ether
- ⊕ BH-03 March 2003 borehole



DETAIL OF 1713 WEBSTER STREET SPACE SHOWING BOREHOLE LOCATIONS AND ANALYTICAL RESULTS
649 Pacific Ave. & 1713 Webster St., Alameda, CA

Figure 4

by: MJC

MARCH 2003

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).

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.

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

Former Automotive Operations with Potential UFST (1713 Webster Street)

We were informed that the potential UFST (reportedly closed-in-place) in this space was located in the extreme northwest portion of the space, near the potential vent pipe (the same area in which the previous geophysical survey was conducted). We advanced a total of four exploratory boreholes, as shown on Figure 3. The borehole locations were designed to provide sufficient lateral coverage that a significant release of petroleum product would be detected. 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).

Former Dry Cleaners (649 Pacific Avenue)

We were informed that aboveground dry cleaning machines were located in the southwestern portion of the space, along the western wall. An underground sanitary sewer line (reported to be 30-inch-diameter) runs from north to south along the western wall. Two line cleanouts/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 4 shows the layout of the tenant space, including the sanitary sewer line and cleanout/drain locations, and the exploratory borehole locations advanced by SES.

Boreholes BH-02 and BH-03 were advanced immediately adjacent to the two cleanouts/drains, as these are primary entry points for contamination dumped or spilled in those areas. Borehole BH-01 was advanced approximately 6 feet to the west of the sanitary sewer line, and Borehole BH-04 was advanced approximately 10 feet east of the sanitary sewer line (both approximately mid-way down the line). These two boreholes were designed to evaluate for contamination to the east or west of the sanitary sewer line. A fifth planned borehole near the southern end of the sanitary sewer line could

not be drilled/sampled due to time constraints. The boreholes were advanced to first occurrence of groundwater (10 to 13 feet below grade).

LABORATORY ANALYSES

The following discusses the technical rationale for soil and groundwater sample laboratory analyses. Appendix D contains certified analytical laboratory reports and chain-of-custody records. All current investigation soil and groundwater samples were analyzed by Curtis & Tompkins, Ltd. (Berkeley, California) which maintains current ELAP certifications for all the analytical methods utilized in this investigation.

Former Automotive Operations with Potential UFST (1713 Webster Street)

Soil and groundwater samples collected in this area were analyzed for the following constituents associated with the potential gasoline UFST reported to be at this location, as well as the potential diesel UFST that may be located elsewhere on the subject property, 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.

Former Dry Cleaners (649 Pacific Avenue)

Soil and groundwater samples collected in this area were analyzed for the following constituents associated with the former dry cleaning operation, as well as the potential diesel UFST that may be located elsewhere on the subject property, including:

- Total volatile hydrocarbons – Stoddard Solvent range (TVHss);
- BTEX;
- MTBE;
- TEHd and TEHmo; and
- Chlorinated hydrocarbons (including PCE), by EPA Method 8010.

RESULTS AND EXTENT AND MAGNITUDE OF CONTAMINATION

Tables 1, 2 and 3 summarize the analytical results of the current investigation.

Table 1
March 2003 Soil and Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons
1713 Webster Street (Restaurant Tenant Space), Alameda, California

Sample I.D.	Sample Depth (feet)	TVHg	TVHss	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TEHd	TEHmo
Soil Analytical Results (mg/kg)										
BH-05-8'	8'	<1.0	<1.0	<0.0051	<0.0051	<0.0051	<0.0051	<0.02	<1.0	<5.0
BH-06-7.5'	7.5'	<1.1	<1.1	<0.0053	<0.0053	<0.0053	<0.0053	<0.021	<1.0	<5.0
BH-07-7.5'	7.5'	<1.1	<1.1	<0.0054	<0.0054	<0.0054	<0.0054	<0.022	1.2	<5.0
BH-08-7.5'	7.5'	<1.0	<1.0	<0.0051	<0.0051	<0.0051	<0.0051	<0.02	1.1	8.5
<i>Soil RBSLs</i>		100	100	0.045	2.6	2.5	1.0	0.028	100	100
Groundwater Analytical Results (µg/L)										
BH-05-GW	10'-13'	<50	<50	<0.5	<0.5	<0.5	<0.5	39	140	<300
BH-06-GW	9' - 10'	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0	72	<300
BH-07-GW	10'-13'	<50	<50	<0.5	<0.5	<0.5	<0.5	110	190	<300
BH-08-GW	10'-13'	<50	<50	<0.5	<0.5	<0.5	<0.5	340	150	<300
<i>Groundwater RBSLs</i>		100	100	1.0	40	30	13	5.0	100	100

Notes:

NA = Sample not analyzed for this contaminant.

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

RBSLs = Regional Water Quality Control Board Risk-Based Screening Levels for surface soils (<10 feet deep) where groundwater is a potential or current drinking water source.

TEHd = Total extractable hydrocarbons diesel-range.

TEHmo = Total extractable hydrocarbons motor oil range.

TVHg = Total volatile hydrocarbons gasoline range.

TVHss = Total volatile hydrocarbons Stoddard Solvent range.

Table 2
March 2003 Soil and Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons
649 Pacific Avenue (Former Dry Cleaner Tenant Space), Alameda, California

Sample I.D.	Sample Depth (feet)	TVHg	TVHss	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TEHd	TEHmo
Soil Analytical Results (mg/kg)										
BH-01-7'	7'	<1.1	<1.1	<5.1	<5.1	<5.1	<5.1	<20	NA	NA
BH-02-12.5'	12.5'	<1.1	<1.1	<5.3	<5.3	<5.3	<5.3	<20	<1.0	<5.0
BH-03-6.5'	6.5'	8,800	5,800	<1.3	<1.3	<1.3	<1.3	<5.0	NA	NA
BH-04-8'	8'	4.7	3.1	<0.0054	<0.0054	<0.0054	<0.0054	<0.022	NA	NA
<i>Soil RBSLs</i>		100	100	0.045	2.6	2.5	1.0	0.028	100	100
Groundwater Analytical Results (µg/L)										
BH-01-GW	10'-12'	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4	290	470
BH-02-GW	10'-13'	<50	<50	<0.5	<0.5	<0.5	<0.5	2.1	86	<300
BH-03-GW	10'-13'	360	270	0.68	110	1.6	9.4	<2.0	7,000	2,600
BH-04-GW	10'-13'	370	280	<0.5	<0.5	<0.5	<0.5	2.2	8,400	<900
<i>Groundwater RBSLs</i>		100	100	1.0	40	30	13	5.0	100	100

Notes:

NA = Sample not analyzed for this contaminant.

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

RBSLs = Regional Water Quality Control Board Risk Based Screening Levels for surface soils (<10 feet deep) where groundwater is a potential or current drinking water source.

TEHd = Total extractable hydrocarbons diesel-range.

TEHmo = Total extractable hydrocarbons motor oil range.

TVHg = Total volatile hydrocarbons gasoline range.

TVHss = Total volatile hydrocarbons Stoddard Solvent range.

Table 3
March 2003 Soil and Groundwater Analytical Results
Volatile Organic Compounds
649 Pacific Avenue (Former Dry Cleaner Tenant Space), 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
<i>Soil RBSLs</i>		260	400	530	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
<i>Groundwater RBSLs</i>		28	5.0	5.0	10	6.0

Notes:

DCE = Dichloroethene.

PCE = Tetrachloroethylene.

RBSLs = Regional Water Quality Control Board RiskBased Screening Levels for surface soils (<10 feet deep) where groundwater is a potential or current drinking water source.

TCE = Trichloroethylene.

VOCs = Volatile organic compounds.

Table includes only detected compounds. See Appendix D for full list of analytes.

Former Automotive Operations with Potential UFST (1713 Webster Street)

Soil

Neither TVH nor the related aromatic hydrocarbons BTEX/MTBE were detected in any of the borehole soil samples. The only compounds detected in soil were extractable-range hydrocarbons (diesel and motor oil) at relatively low concentrations (less than 9 mg/kg), and only in boreholes BH-07 and BH-08. 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 three of the four boreholes (and not in BH-06) between 39 µg/L and 340 µg/L. The two boreholes with the maximum MTBE contamination were BH-07 and BH-08 (to the south and west, respectively). Extractable-range hydrocarbons (only diesel, with no motor oil) were detected in all four boreholes at concentrations ranging from 72 µg/L to 190 µg/L. As with the MTBE, the higher concentrations were detected in BH-07 and BH-08.

The available data indicate that: 1) the boreholes did not encounter backfill material indicative of a UFST, nor did soil samples contain hydrocarbon contamination suggesting the location of the UFST locally; and 2) elevated concentrations of MTBE and extractable hydrocarbons were detected in groundwater data, suggesting a petroleum release in the local site vicinity. The large difference in MTBE concentrations over a relatively small area suggests that the release is proximal to the drilling area (rather than migrating from a distance). However, the direction of groundwater flow from across Webster Street also supports the conceptual model of an offsite source contributing to the MTBE, and there are both current and historical potential fuel leak sources along the east side of Webster Street. While there may be some contribution from offsite sources across Webster Street, the former UFST removed from the Pacific Avenue service station/automotive operation space at the corner of Webster Street and Pacific Avenue in 1994 may also be responsible, and the geometry and type of contamination suggest a localized (onsite) source.

Former Dry Cleaners (649 Pacific Avenue)

Soil

No contamination was detected in borehole BH-02 (the extreme northern, upstream end of the sanitary sewer line).

No VOCs were detected in soil samples at this location. Relatively low concentrations of various VOCs were detected in two of the four borehole groundwater samples. These data suggest a minor release of one or more solvent products; however, the source is unknown and the concentrations are not in excess of regulatory agency screening level criteria (discussed in the following section). Therefore, this release will likely not be of regulatory concern.

Elevated levels of volatile-range hydrocarbons (14,600 mg/Kg) were detected in soil in only one of the four boreholes in this space (BH-04). The laboratory analysis revealed contamination in both the gasoline and Stoddard Solvent ranges; however, the chromatogram does not match either standard. This is a common occurrence with older contaminant releases, as the light (more volatile) fractions are lost and the remaining heavier fractions are degraded. Neither BTEX nor MTBE were detected in any of the soil samples. As shown on the borehole geologic logs (Appendix A), PID readings suggest that soil contamination in boreholes BH-01, BH-3, and BH-04 is confined to depths of approximately 7 to 9 feet below grade.

Groundwater

Elevated levels of volatile-range hydrocarbons (greater than 600 µg/L) were detected in groundwater in only two of the four boreholes in this space (BH-03 and BH-04). Relatively low levels of BTEX and MTBE were also detected in these boreholes, and MTBE was also detected at relatively low levels in BH-02. Elevated levels of extractable-range hydrocarbons (greater than 8,000 µg/L) were detected in boreholes BH-03 and BH-04, and were detected at much lower levels in BH-01 and BH-02.

The available data indicate that: 1) a release of volatile-range hydrocarbons (likely Stoddard Solvent) has occurred, impacting shallow soil and groundwater; 2) extractable-range hydrocarbons are present in groundwater and concentration differences suggest a localized release (rather than one migrating from a distance); 3) concentrations of volatile organic compounds (i.e., dry cleaning chemicals) do not appear to be significant; and 4) some trace contribution of gasoline breakdown components, BTEX and MTBE originate from the east of the dry cleaner operations.

4.0 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 (ACHCSA). The ACHCSA is a Local Oversight Program (LOP) agent for the California Regional Water Quality Control Board (RWQCB) which 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.

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 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 soil; commercial/industrial land use; and groundwater is a potential drinking water source (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:

- Volatile-range hydrocarbons (soil and groundwater, in the former dry cleaning space);
- Extractable-range hydrocarbons (soil and groundwater, in both tenant spaces);
- Toluene (groundwater only, in the former dry cleaning space); and
- MTBE (groundwater only, in both tenant spaces).

The source of the extractable-range hydrocarbon contamination is not known, and could be the result of an onsite source and/or an offsite release that has migrated onto the subject property. The volatile-range hydrocarbons (Stoddard Solvent) detected in both soil and water in the former dry cleaning space is almost certainly related to an onsite release. This should be considered a reportable (to regulatory agencies) release, and further investigation to evaluate its extent will likely be required.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The available data support the following findings and 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 in the immediate area of the subject property, based on 1993 through 1995 groundwater monitoring data collected from the three wells installed near the corner of Webster Street and Pacific Avenue, is generally westward with both a southwesterly and northwesterly component noted. Groundwater depths were approximately 6 feet below grade at that time.

Former Automotive Operations with Potential UFST (1713 Webster Street)

- 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 has not been confirmed.
- The source of the contamination has not been precisely determined, however the distribution of MTBE suggests an onsite release. The detection of the more persistent MTBE and longer-chain diesel fuel-range hydrocarbons suggest that the contamination is quite old. Also, an offsite release could have migrated onto the subject property.
- Based on the detected contamination and the potential that this is a site-sourced release, it should be considered a reportable (to regulatory agencies) release.

Former Dry Cleaners (649 Pacific Avenue)

- Four exploratory boreholes were drilled and sampled (soil and groundwater) in the area of former dry cleaning operations, focusing on the area around a proximal sanitary sewer line and its two cleanouts/drains.

- Volatile-hydrocarbons (including Stoddard Solvent) were detected at elevated concentrations in both soil and groundwater. Maximum concentrations were detected in the borehole adjacent to the sanitary sewer cleanout/drain in the immediate vicinity of the former dry cleaning equipment. Field screening (with a photoionization detector) readings and visual examination of soil cores in the boreholes along the sanitary sewer line indicate that soil contamination is limited to depths of approximately 7 to 9 feet below grade. The concentrations are 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.
- Extractable-range hydrocarbons were also detected in groundwater samples in this tenant space. The wide range of detected concentrations suggests a proximal release (rather than a distal source).
- 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.
- No contamination was detected in the northernmost borehole (at the most upstream cleanout/drain).

Other Areas of Potential Concern

- Other areas of potential concern with regard to environmental liability include: 1) an exterior area drain at the 1713 Webster Street east door that may be open to the subsurface and may have been an entry point for dumped/spilled contamination; and 2) a not-yet-located diesel UFST that may be present somewhere on the subject property.

RECOMMENDATIONS

Based on the findings to date SES recommends:

- Review site documentation completed to date, including local groundwater hydrology and hydrochemistry data and the recently commissioned Phase I to see if that additional information sheds light on the potential location of the UFST and/or potential sources of the detected contamination.
- Install and sample an estimated additional 10 subsurface boreholes on the property (in both the former dry cleaning space and the restaurant), to more definitively document the lateral extent of Stoddard Solvent contamination (in the former dry cleaner operations), and the source(s) of MTBE contamination in groundwater in the current restaurant area.

- Inform applicable regulatory agencies (the ACHCSA and the RWQCB) of the detected contamination in the soil and groundwater through the submission of this report, along with a workplan prepared by SES that articulates the follow-on work scope proposed to better define the extent, magnitude and sources of contamination .

- Complete a site closure assessment report for submission to the regulators after collecting the additional subsurface data.

6.0 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.

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

7.0 LIMITATIONS

This report has been prepared for the exclusive use of Mr. Stan Hammond/Wells & Bennett Realtors, the property owners, 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. 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.

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	
1-2.5'					Aggregate base (fill)	
2				2'=0		
3	•••••			3'=0	Dark brown sand (SP), dry, v. friable, not cohesive, sand is fine-grained	Collected soil sample BH-01-7' for lab analysis
4	•••••			4'=0	4' Becomes medium-grained	
5	•••••			5'=0	5' Sample moist	
6	Diagonal lines			6'=0	Red-brown clayey sand (SC), dry, v. friable, not cohesive	
7	Diagonal lines			7'=22	7-7.5' Blue grey discoloration & solvent odor	
8	Diagonal lines			8'=5	8' Becomes mod. cohesive & moist	
9	Diagonal lines			9'=1.3	9' Becomes mod. stiff, sl. moist, sand is fine-grained	
10	•••••			10'=0		10-12' very slow penetration. Sample 3/4' full
11	•••••			11'=0	Brown sand (SP), wet, dense, not cohesive, sand is med.-grained	
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						

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'					0-1' Not sampled	
1-2.5'					1-2.5' Aggregate base (fill)	
2				2'=0		Collected soil sample BH-02-12.5' for lab analysis
3'=0	•••••				Dark brown sand (SP), dry, v. friable, not cohesive, sand is fine-grained	
4'=0	•••••				4' Becomes medium-grained	
5'=0	•••••				5.5' Sample moist	
6	•••••				Red-brown clayey sand (SC), wet, v. friable, not cohesive	
6'=0	•••••				7'=0	13-15' No sample recovery
8	•••••				8' Becomes mod. cohesive & moist	
8'=0	•••••				9' Becomes mod. stiff, sl. moist, sand is fine-grained	
9'=0	•••••				10' Becomes med.-grained, dense, moist-wet	
10	•••••				10' Becomes med.-grained, dense, moist-wet	
10'=0	•••••				12.5' Becomes fine-grained, sl. moist-moist	
11'=0	•••••				13' Becomes moist-wet	
12	•••••					Collected groundwater sample BH-02-GW
12'=0	•••••					Water level equilibrated to 7.1' below grade.
13'=0	•••••					
14	•••••					
16					Total depth = 15'	
18						
20						

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	?			7'=386	?-?-?-?-?-?	
8	Diagonal hatching with dots			8'=102	Blue grey clayey sand (SC), v. friable, sand is fine-grained moist-wet	
9	Diagonal hatching with dots			9'=123		
10	Diagonal hatching with dots			10'=8	8.5' Color change to light brown, sl.-moist	Strong solvent odor from 7-9'
11	Diagonal hatching with dots			11'=0		
12	Diagonal hatching with dots			12'=0	9.5' Color change to red-brown, v. friable, moist-wet, sand is med.-grained	
13				13'=0	Total depth = 13'	Collected groundwater sample BH-03-GW
14						
16						
18						
20						

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)		
2					Borehole soil samples not explicitly logged. Lithology was similar to that in BH-01	
4						Collected soil sample BH-04-8'
6				5'=0		
6				6'=0	6.5-8.5' Solvent odor & blue-grey discoloration	
8				7'=140		
8				8'=199		
10				9'=6		
10				10'=0		Collected groundwater sample BH-04-GW
12						
14					Total depth = 13'	
16						
18						
20						

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'					0-2' No sample recovery	
2	?				?	
2-3'	•••••			3'=0	Dark brown silty sand (SM), v. friable, not cohesive, dry	
3-4'	•••••			4'=0	Light brown sand (SP), v. friable, not cohesive, dense, dry, sand is fine-grained	Collected soil sample BH-05-8'
4-5.5'	•••••			5'=0	Light brown clayey sand (SC), v. friable, not cohesive, dry, sand is fine-grained	
5.5-6'	•••••			6'=0	Light brown clayey sand (SC), v. friable, not cohesive, dry, sand is fine-grained	
6-7'	•••••			7'=0	Sample wet at 5.5'	
7-8'	•••••			8'=0	6.5' Becomes dry, dense, sl. stiff	Collected groundwater sample BH-05-GW
8-9'	•••••			9'=0	8' Becomes sl. moist, mod. stiff	
9-10'	•••••			10'=0	10.5' Becomes moist to wet	Water level =6.4' after 15 minutes
10-11'	•••••			11'=0		
11-12'	•••••			12'=0		
12-13'	•••••				Total depth = 13'	No evidence of backfill material
13-14'						
14-15'						
15-16'						
16-17'						
17-18'						
18-19'						
19-20'						



Subject: Drilling rig at BH-01 location, exterior parking lot.

Site: 649 Pacific Avenue, Alameda, California

Date Taken: March 4, 2003

Project No.: SES 2003-13

Photographer: Bruce Rucker

Photo No.: 01



Subject: Temporary well casing at BH-02 in hallway leading to second-floor tenant space.

Site: 647 Pacific Avenue, Alameda, California

Date Taken: March 4, 2003

Project No.: SES 2003-13

Photographer: Bruce Rucker

Photo No.: 02



Subject: Drilling rig at BH-03 location (BH-04 location is shown in foreground).

Site: 649 Pacific Avenue, Alameda, California

Date Taken: March 4, 2003

Project No.: SES 2003-13

Photographer: Bruce Rucker

Photo No.: 03



Subject: Interior of tenant space showing borehole locations.

Site: 1713 Webster Street, Alameda, California

Date Taken: March 4, 2003

Project No.: SES 2003-13

Photographer: Bruce Rucker

Photo No.: 04



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94541-3995
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

FOR OFFICE USE

LOCATION OF PROJECT
649 Pacific Avenue + 1713 Webster Street
(California Transit Station)
Hayward, CA

PERMIT NUMBER W03-0145
WELL NUMBER _____
APN _____

CLIENT
Name Wells + Geotech Rentals - Mr. Stan Hummel
Address 1451 Leucost Blvd Phone 510/531-7000
City Concord CA Zip 94522

PERMIT CONDITIONS
Circled Permit Requirements Apply

APPLICANT
Name Stetler Environmental Services
Address 3139 Sirna St Fax 510/674-3455
City Berkeley CA Phone 510/674-2133
Zip 94710

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.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

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.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

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.

DRILLING METHOD:

Mini Rotary	<input type="checkbox"/>	Air-Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	Geoprobe	<input checked="" type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRIILLER'S NAME Tom Grogan Precision Sampling

E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

DRIILLER'S LICENSE NO 636337

F. WELL DESTRUCTION

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

WELL PROJECTS

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

G. SPECIAL CONDITIONS

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


GEOTECHNICAL PROJECTS

Number of Boreings	<u>4</u>	Maximum	_____ ft
Hole Diameter	<u>3</u> in.	Depth	<u>15</u> ft

STARTING DATE 3/7/03

COMPLETION DATE 3/7/03

APPROVED _____ DATE 2-24-03



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 2/24/03

PLEASE PRINT NAME: Bruce M. Rucker Rev. 9-18-02



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
Berkeley, CA 94710

Date: 14-MAR-03
Lab Job Number: 163990
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: Trao Bb.
Project Manager

Reviewed by: [Signature]
Operations Manager

This package may be reproduced only in its entirety.

Chain of Custody Record

Lab job no. _____
 Date 3/5/03
 Page 2 of 2

Laboratory Curtis & Tompkins Ltd. Method of Shipment hand delivery
 Address 2323 Fifth Street Shipment No. _____
Berkeley CA 94710 Airbill No. _____
510/486-0900 Cooler No. _____
 Project Owner _____ Project Manager Bruce Rucke
 Site Address 649 Pacific Avenue > Alameda CA Telephone No. (510) 644-3123
1713 Webster Street Fax No. (510) 644-3859
 Project Name Pacific / Webster Investigation Samplers: (Signature) B.M. Pankin
 Project Number 2003-13

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Filtered	No. of Containers	Analysis Required				Remarks
						Cooler	Chemical			TVH-gas line + Standard Solvent	BTEX + MTBE	EPA 8010	T.E.H. - motor oil + Diesel	
11 BH-06-7.5'	7.5'	3/5/03	1715	S	accrete sleeve	X	/	1	X	X	X			
12 BH-06-6W	/		1730	W	(a)		(a)	3	X	X	X			
13 BH-07-7.5'	7.5'		1800	S	accrete sleeve		/	1	X	X	X			
14 BH-07-6W	/		1830	W	(a)		(a)	3	X	X	X			
15 BH-08-7.5'	7.5'		1855	S	accrete sleeve		/	1	X	X	X			
16 BH-08-6W	/		1910	W	(a)		(a)	3	X	X	X			

11
12
13
14
15
16

Relinquished by: Signature <u>Bruce Rucke</u> Printed <u>Bruce Rucke</u> Company <u>Stellar Env. Solns</u>	Date <u>3/5/03</u> Time _____	Received by: Signature <u>[Signature]</u> Printed <u>Steven Stanley</u> Company <u>C&T</u>	Date <u>3/5/03</u> Time <u>0805</u>	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____
	Turnaround Time: <u>5 day</u> Comments: <u>(a) (b) 40 ml vials w/ HCl + (d) 1-L amber glass</u>		Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____	

2000-00-01

Laboratory Numbers: **163990** Sampled Date: **03/04/03**
Client: **Stellar Environmental Solutions** Received Date: **03/05/03**
Project #: **2003-13**
Location: **Pacific/Webster Investig.**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for five soil samples and eight water samples, which were received from the site referenced above on March 051, 2003. The samples were received cold and intact.

TVH/BTXE:

No analytical problems were encountered.

TEH (EPA 8015B):

For the water analysis batch # 79685, the blank spike and blank spike duplicate were not spiked with surrogate. The spike recoveries were within quality control criteria therefore the quality of the data should not be affected. No other analytical problems were encountered.

VOCs (EPA 8260B):

No analytical problems were encountered.

STELLAR ENVIRONMENTAL SOLUTIONS

2198 Sixth Street
Berkeley, CA 94710
Telephone: (510) 644-3123
Fax (510) 644-3859

fax

To: Tracy Babjar - Curtis & Tompkins.

Fax #: 510-486-0925 ~~510-644-3859~~

From: Bruce Rucker - Stellar Environmental Solutions BR

Date: March 6, 2003

Subject: Revision to Chain of Custody - 649 Pacific Avenue/1713 Webster Street, Alameda
(samples dropped off on March 5, 2003)

Pages 1 (including this cover sheet)

NOTES:

Tracy-

If not too late, please log in the following change to the chain-of-custody:

Sample BH-05-8' (soil). Add BTEX and MTBE and delete EPA 8010.

Please call me if it is too late to implement this change. Otherwise I will assume that the sample analyses will incorporate this revision. Sorry for my mix-up. Bruce

BH -05- gw delete 8010.

per BR



Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	03/04/03
Units:	ug/L	Received:	03/05/03
Diln Fac:	1.000	Analyzed:	03/05/03
Batch#:	79693		

Field ID: BH-01-GW Lab ID: 163990-002
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	7.4	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	68-145	8015B
Bromofluorobenzene (FID)	99	66-143	8015B
Trifluorotoluene (PID)	97	53-143	EPA 8021B
Bromofluorobenzene (PID)	99	52-142	EPA 8021B

Field ID: BH-02-GW Lab ID: 163990-004
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	2.1	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)	96	68-145	8015B
Bromofluorobenzene (FID)	99	66-143	8015B
Trifluorotoluene (PID)	96	53-143	EPA 8021B
Bromofluorobenzene (PID)	99	52-142	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
 Z= Sample exhibits unknown single peak or peaks

ND= Not Detected
 RL= Reporting Limit



Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Water	Sampled: 03/04/03
Units: ug/L	Received: 03/05/03
Diln Fac: 1.000	Analyzed: 03/05/03
Batch#: 79693	

Field ID: BH-03-GW Lab ID: 163990-006
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	360 H Y Z	50	8015B
Stoddard Solvent C7-C12	270 H Y	50	8015B
MTBE	ND	2.0	EPA 8021B
Benzene	0.68 C	0.50	EPA 8021B
Toluene	110	0.50	EPA 8021B
Ethylbenzene	1.6	0.50	EPA 8021B
m,p-Xylenes	7.0	0.50	EPA 8021B
o-Xylene	2.4	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	108	68-145	8015B
Bromofluorobenzene (FID)	100	66-143	8015B
Trifluorotoluene (PID)	107	53-143	EPA 8021B
Bromofluorobenzene (PID)	101	52-142	EPA 8021B

Field ID: BH-04-GW Lab ID: 163990-008
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	370 H Y	50	8015B
Stoddard Solvent C7-C12	280 H Y	50	8015B
MTBE	2.2	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	68-145	8015B
Bromofluorobenzene (FID)	99	66-143	8015B
Trifluorotoluene (PID)	96	53-143	EPA 8021B
Bromofluorobenzene (PID)	99	52-142	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
 Z= Sample exhibits unknown single peak or peaks
 ND= Not Detected
 RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

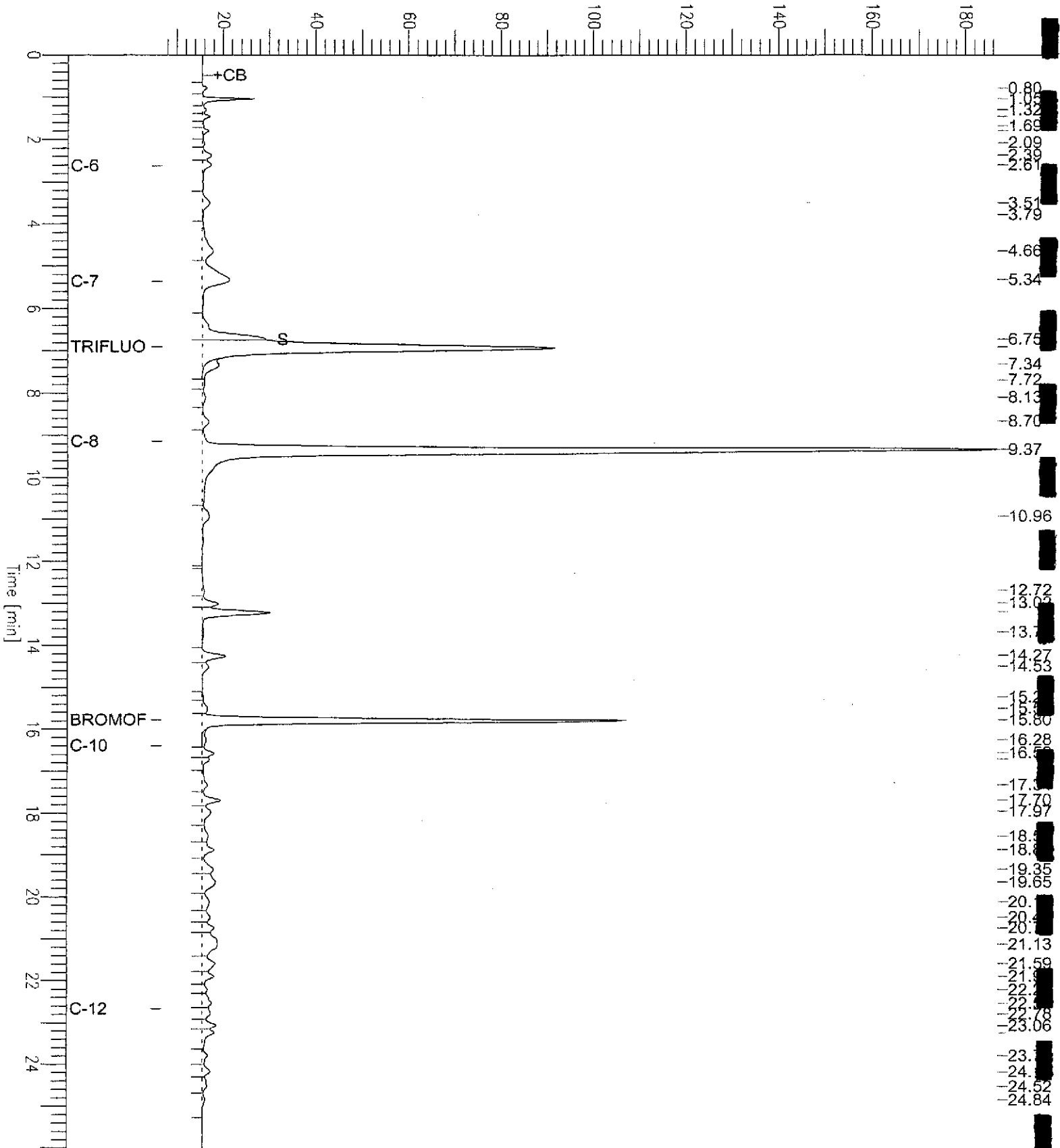
Sample Name : 163990-006,79682,+stodd
 FileName : G:\GC07\DATA\064A009.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Scale Factor: 1.0

End Time : 26.00 min
 Plot Offset: 7 mV

Page 1 of 1
 Sample #: a1
 Date : 3/6/03 10:51 AM
 Time of Injection: 3/5/03 06:52 PM
 Low Point : 6.86 mV
 High Point : 186.92 mV
 Plot Scale: 180.1 mV

BH-03-GW

Response [mV]



GC07 TVH 'A' Data File RTX 502

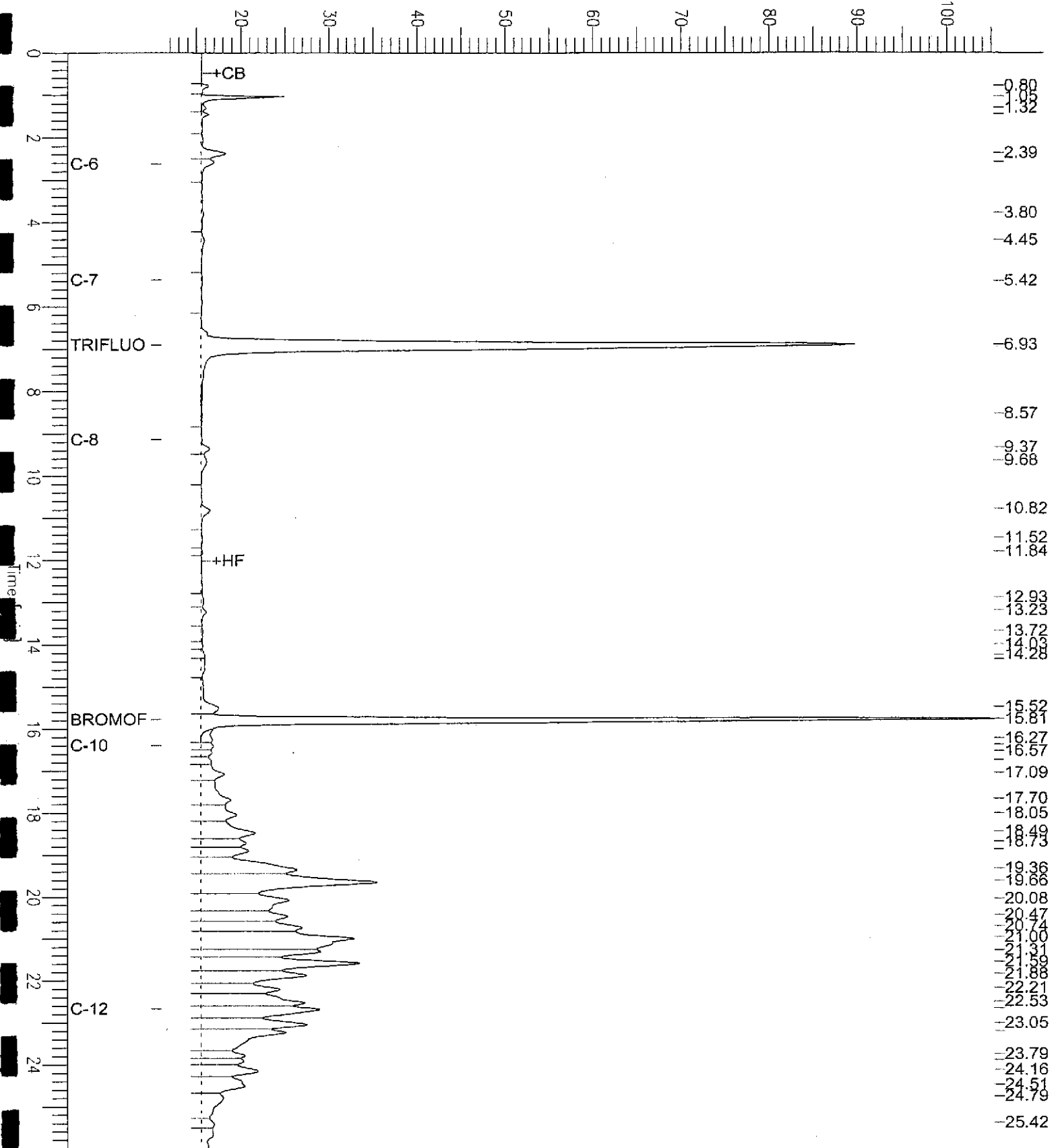
Sample Name : 163990-008,79682,+stodd
 FileName : G:\GC07\DATA\064A010.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Scale Factor : 1.0

End Time : 26.00 min
 Plot Offset : 11 mV

Sample #: a1
 Date : 3/6/03 11:54 AM
 Time of Injection: 3/5/03 07:28 PM
 Low Point : 11.01 mV
 Plot Scale: 94.3 mV
 High Point : 105.28 mV

BH-04-GW

Response [mV]



Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	03/04/03
Units:	ug/L	Received:	03/05/03
Diln Fac:	1.000	Analyzed:	03/05/03
Batch#:	79693		

Field ID: BH-05-GW Lab ID: 163990-010
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	39	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)	102	68-145	8015B
Bromofluorobenzene (FID)	104	66-143	8015B
Trifluorotoluene (PID)	104	53-143	EPA 8021B
Bromofluorobenzene (PID)	105	52-142	EPA 8021B

Field ID: BH-06-GW Lab ID: 163990-012
 Type: SAMPLE

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)	95	68-145	8015B
Bromofluorobenzene (FID)	97	66-143	8015B
Trifluorotoluene (PID)	95	53-143	EPA 8021B
Bromofluorobenzene (PID)	97	52-142	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
 Z= Sample exhibits unknown single peak or peaks
 ND= Not Detected
 RL= Reporting Limit



Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Water	Sampled: 03/04/03
Units: ug/L	Received: 03/05/03
Diln Fac: 1.000	Analyzed: 03/05/03
Batch#: 79693	

Field ID: BH-07-GW Lab ID: 163990-014
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	110	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	68-145	8015B
Bromofluorobenzene (FID)	99	66-143	8015B
Trifluorotoluene (PID)	98	53-143	EPA 8021B
Bromofluorobenzene (PID)	98	52-142	EPA 8021B

Field ID: BH-08-GW Lab ID: 163990-016
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Stoddard Solvent C7-C12	ND	50	8015B
MTBE	340	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	68-145	8015B
Bromofluorobenzene (FID)	99	66-143	8015B
Trifluorotoluene (PID)	97	53-143	EPA 8021B
Bromofluorobenzene (PID)	98	52-142	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
 Z= Sample exhibits unknown single peak or peaks
 ND= Not Detected
 RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

Sample Name : ccv, stodd, 79682, 02ws1767, 5/5000

Sample #:

Page 1 of 1

FileName : G:\GC07\DATA\064A004.raw

Date : 3/5/03 04:25 PM

Method : TVHBTXE

Time of Injection: 3/5/03 03:58 PM

Start Time : 0.00 min

End Time : 26.00 min

Low Point : 3.85 mV

High Point : 242.88 mV

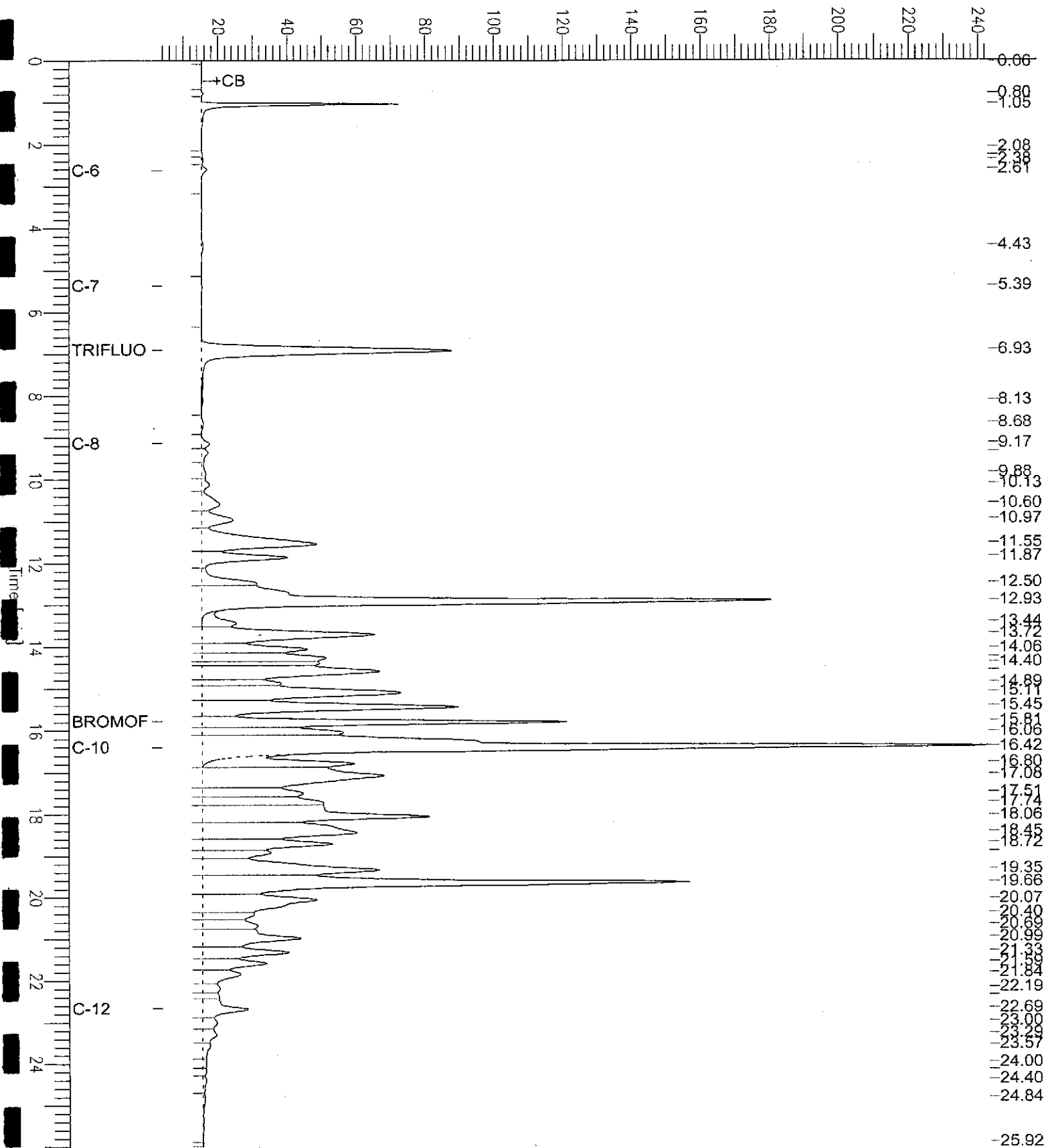
Scale Factor: 1.0

Plot Offset: 4 mV

Plot Scale: 239.0 mV

Stoddard

Response [mV]





Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Water	Sampled:	03/04/03
Units:	ug/L	Received:	03/05/03
Diln Fac:	1.000	Analyzed:	03/05/03
Batch#:	79693		

Type: BLANK Lab ID: QC206664

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)	97	68-145	8015B
Bromofluorobenzene (FID)	98	66-143	8015B
Trifluorotoluene (PID)	96	53-143	EPA 8021B
Bromofluorobenzene (PID)	96	52-142	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
Z= Sample exhibits unknown single peak or peaks

ND= Not Detected
RL= Reporting Limit



Total Volatile Hydrocarbons

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC206665	Batch#:	79693
Matrix:	Water	Analyzed:	03/06/03
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12	2,000	1,988	99	79-120

Surrogate	REC	Limits
Trifluorotoluene (FID)	108	68-145
Bromofluorobenzene (FID)	102	66-143

**Benzene, Toluene, Ethylbenzene, Xylenes**

Lab #:	163990	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:	QC206666	Batch#:	79693
Matrix:	Water	Analyzed:	03/05/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	19.95	100	51-125
Benzene	20.00	19.43	97	65-122
Toluene	20.00	19.88	99	67-121
Ethylbenzene	20.00	19.20	96	70-121
m,p-Xylenes	40.00	38.53	96	72-125
o-Xylene	20.00	19.35	97	73-122

Surrogate	%REC	Limits
Trifluorotoluene (PID)	96	53-143
Bromofluorobenzene (PID)	98	52-142



Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8021B
Field ID:	ZZZZZZZZZZ	Batch#:	79693
MSS Lab ID:	163994-003	Sampled:	03/05/03
Matrix:	Water	Received:	03/05/03
Units:	ug/L	Analyzed:	03/06/03
Diln Fac:	1.000		

Type: MS Lab ID: QC206667

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.3700	20.00	19.72	99	33-131
Benzene	<0.06500	20.00	18.97	95	52-149
Toluene	<0.06000	20.00	18.04	90	69-130
Ethylbenzene	<0.03800	20.00	18.11	91	70-131
m,p-Xylenes	<0.03400	40.00	35.64	89	68-137
o-Xylene	<0.03600	20.00	18.47	92	73-133

Surrogate	%REC	Limits
Trifluorotoluene (PID)	94	53-143
Bromofluorobenzene (PID)	99	52-142

Type: MSD Lab ID: QC206668

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	20.00	14.80	74	33-131	29 *	20
Benzene	20.00	19.87	99	52-149	5	30
Toluene	20.00	18.96	95	69-130	5	30
Ethylbenzene	20.00	18.38	92	70-131	1	30
m,p-Xylenes	40.00	36.39	91	68-137	2	30
o-Xylene	20.00	18.77	94	73-133	2	30

Surrogate	%REC	Limits
Trifluorotoluene (PID)	97	53-143
Bromofluorobenzene (PID)	99	52-142

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Soil	Sampled: 03/04/03
Basis: as received	Received: 03/05/03

Field ID: BH-01-7' Diln Fac: 1.000
 Type: SAMPLE Analyzed: 03/07/03
 Lab ID: 163990-001

Analyte	Result	RL	Units	Batch#	Analysis
Gasoline C7-C12	ND	1.1	mg/Kg	79721	8015B
Stoddard Solvent C7-C12	ND	1.1	mg/Kg	79721	8015B
MTBE	ND	20	ug/Kg	79765	EPA 8021B
Benzene	ND	5.1	ug/Kg	79765	EPA 8021B
Toluene	ND	5.1	ug/Kg	79765	EPA 8021B
Ethylbenzene	ND	5.1	ug/Kg	79765	EPA 8021B
m,p-Xylenes	ND	5.1	ug/Kg	79765	EPA 8021B
o-Xylene	ND	5.1	ug/Kg	79765	EPA 8021B

Surrogate	%REC	Limits	Batch#	Analysis
Trifluorotoluene (FID)	66	58-144	79721	8015B
Bromofluorobenzene (FID)	85	60-146	79721	8015B
Trifluorotoluene (PID)	93	67-146	79765	EPA 8021B
Bromofluorobenzene (PID)	93	60-137	79765	EPA 8021B

Field ID: BH-02-12.5' Diln Fac: 1.000
 Type: SAMPLE Batch#: 79721
 Lab ID: 163990-003 Analyzed: 03/07/03

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)	93	58-144	8015B
Bromofluorobenzene (FID)	119	60-146	8015B
Trifluorotoluene (PID)	91	67-146	EPA 8021B
Bromofluorobenzene (PID)	117	60-137	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 Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Matrix:	Soil	Sampled:	03/04/03
Basis:	as received	Received:	03/05/03

Field ID:	BH-03-6.5'	Diln Fac:	250.0
Type:	SAMPLE	Batch#:	79721
Lab ID:	163990-005	Analyzed:	03/07/03

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	8,800 H Y	250	mg/Kg	8015B
Stoddard Solvent C7-C12	5,800 H Y	250	mg/Kg	8015B
MTBE	ND	5,000	ug/Kg	EPA 8021B
Benzene	ND	1,300	ug/Kg	EPA 8021B
Toluene	ND	1,300	ug/Kg	EPA 8021B
Ethylbenzene	ND	1,300	ug/Kg	EPA 8021B
m,p-Xylenes	ND	1,300	ug/Kg	EPA 8021B
o-Xylene	ND	1,300	ug/Kg	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	91	58-144	8015B
Bromofluorobenzene (FID)	126	60-146	8015B
Trifluorotoluene (PID)	90	67-146	EPA 8021B
Bromofluorobenzene (PID)	115	60-137	EPA 8021B

Field ID:	BH-04-8'	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	79721
Lab ID:	163990-007	Analyzed:	03/06/03

Analyte	Result	RL	Units	Analysis
Gasoline C7-C12	4.7 H Y	1.1	mg/Kg	8015B
Stoddard Solvent C7-C12	3.1 H Y	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)	92	58-144	8015B
Bromofluorobenzene (FID)	117	60-146	8015B
Trifluorotoluene (PID)	92	67-146	EPA 8021B
Bromofluorobenzene (PID)	118	60-137	EPA 8021B

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

GC19 TVH 'X' Data File (FID)

Sample Name : 163990-005,79721,+stodd
 FileName : G:\GC19\DATA\065X031.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Scale Factor: 1.0

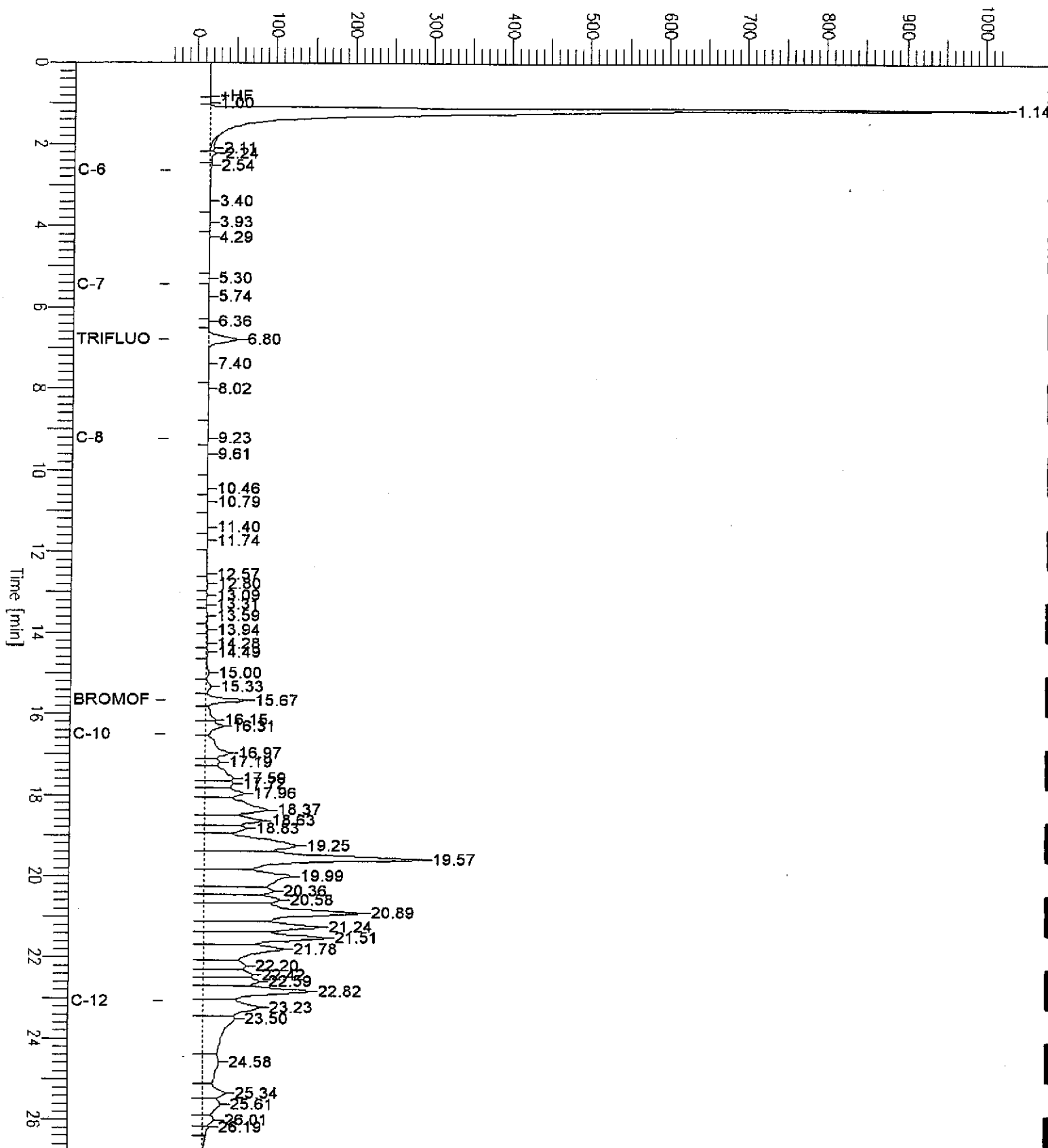
End Time : 26.80 min
 Plot Offset: -35 mV

Sample #: a
 Date : 3/7/03 10:38 AM
 Time of Injection: 3/7/03 04:50 AM
 Low Point : -35.37 mV
 High Point : 1026.45 mV
 Plot Scale: 1061.8 mV

Page 1 of 1

BH-03-6.5'

Response [mV]



GC19 TVH 'X' Data File (FID)

Sample Name : 163990-007,79721

Sample #: a

Page 1 of 1

FileName : G:\GC19\DATA\065X012.raw

Date : 3/7/03 10:22 AM

Method : TVHBTXE

Time of Injection: 3/6/03 06:02 PM

Start Time : 0.00 min End Time : 26.80 min

Low Point : 2.05 mV

High Point : 250.45 mV

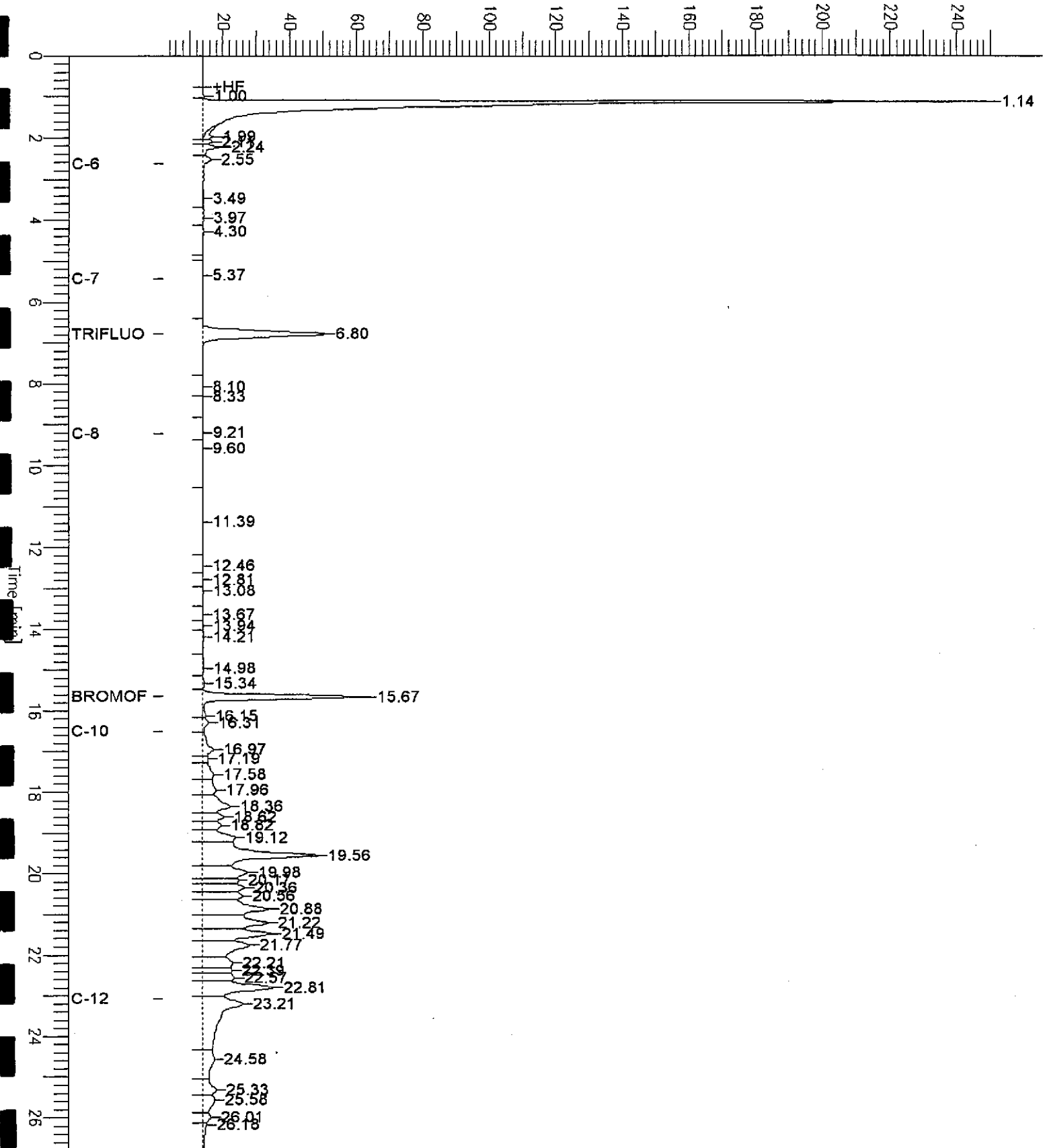
Scale Factor: 1.0

Plot Offset: 2 mV

Plot Scale: 248.4 mV

BH-04-8'

Response [mV]





Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Soil	Sampled: 03/04/03
Basis: as received	Received: 03/05/03

Field ID: BH-05-8'	Diln Fac: 1.000
Type: SAMPLE	Batch#: 79721
Lab ID: 163990-009	Analyzed: 03/06/03

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)	93	58-144	8015B
Bromofluorobenzene (FID)	119	60-146	8015B
Trifluorotoluene (PID)	94	67-146	EPA 8021B
Bromofluorobenzene (PID)	120	60-137	EPA 8021B

Field ID: BH-06-7.5'	Diln Fac: 1.000
Type: SAMPLE	Batch#: 79721
Lab ID: 163990-011	Analyzed: 03/06/03

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)	95	58-144	8015B
Bromofluorobenzene (FID)	122	60-146	8015B
Trifluorotoluene (PID)	95	67-146	EPA 8021B
Bromofluorobenzene (PID)	121	60-137	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 Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Soil	Sampled: 03/04/03
Basis: as received	Received: 03/05/03

Field ID: BH-07-7.5'	Diln Fac: 1.000
Type: SAMPLE	Batch#: 79721
Lab ID: 163990-013	Analyzed: 03/06/03

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)	95	58-144	8015B
Bromofluorobenzene (FID)	125	60-146	8015B
Trifluorotoluene (PID)	94	67-146	EPA 8021B
Bromofluorobenzene (PID)	123	60-137	EPA 8021B

Field ID: BH-08-7.5'	Diln Fac: 1.000
Type: SAMPLE	Batch#: 79721
Lab ID: 163990-015	Analyzed: 03/06/03

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)	92	58-144	8015B
Bromofluorobenzene (FID)	114	60-146	8015B
Trifluorotoluene (PID)	92	67-146	EPA 8021B
Bromofluorobenzene (PID)	116	60-137	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
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GC19 TVH 'X' Data File (FID)

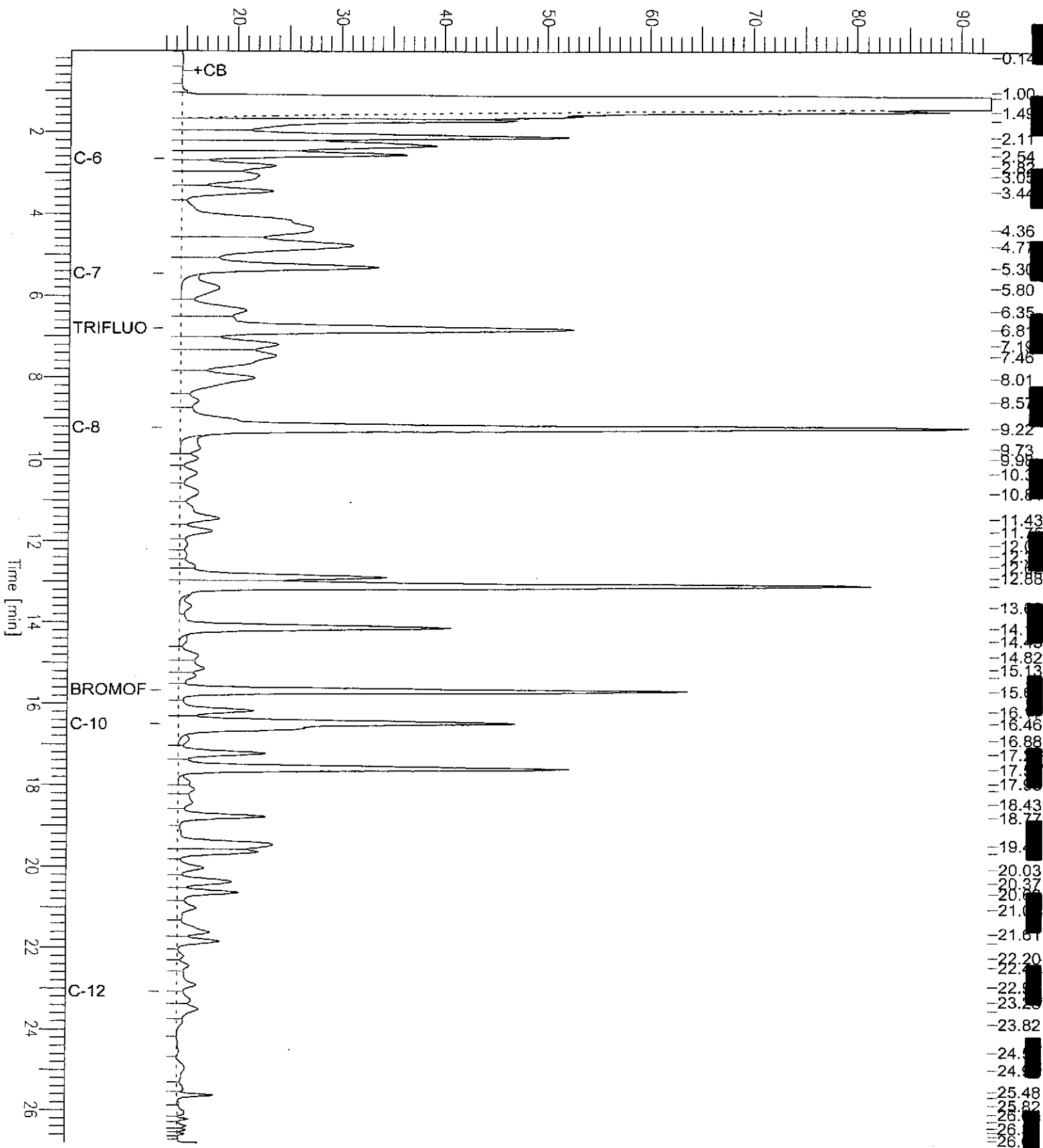
Sample Name : ccv/lcs,qc206781,79721,03ws0291,2.5/5000
FileName : G:\GC19\DATA\065X002.RAW
Method :
Start Time : 0.02 min End Time : 26.80 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample # :
Date : 3/10/03 03:28 PM
Time of Injection: 3/6/03 12:18 PM
Low Point : 12.83 mV High Point : 92.87 mV
Plot Scale: 80.0 mV

Page 1 of 1

Gasoline

Response [mV]



GC19 TVH 'X' Data File (FID)

Sample Name : ccv,stodd,79721,05ws1767,5/5000

Sample #:

Page 1 of 1

File Name : G:\GC19\DATA\065X003.RAW

Date : 3/10/03 03:28 PM

Method :

Time of Injection: 3/6/03 12:52 PM

Start Time : 0.02 min

End Time : 26.80 min

Low Point : 11.95 mV

High Point : 186.59 mV

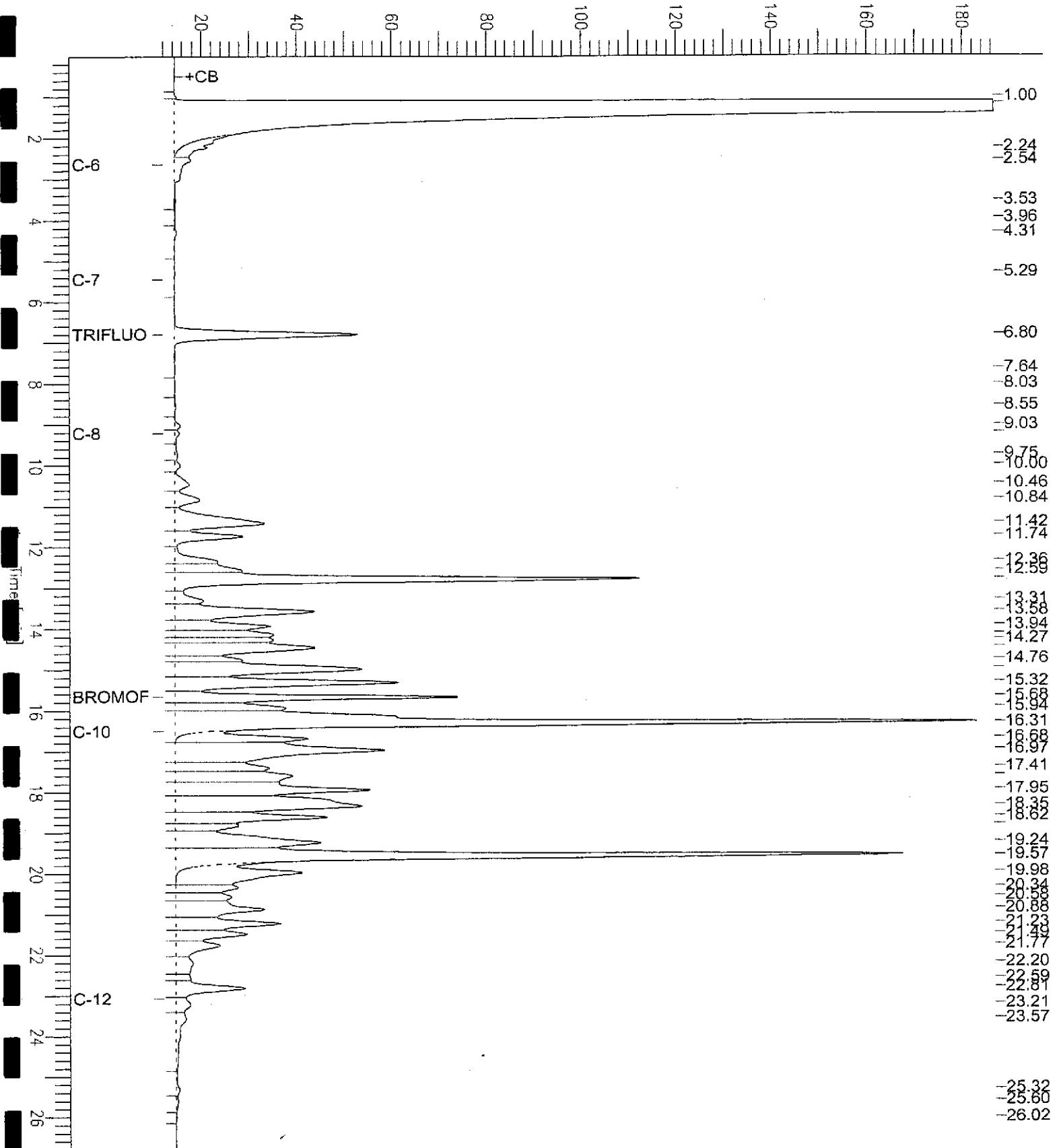
Scale Factor: 0.0

Plot Offset: 12 mV

Plot Scale: 174.6 mV

Stoddard

Response [mV]





Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Matrix: Soil	Sampled: 03/04/03
Basis: as received	Received: 03/05/03

Type: BLANK	Batch#: 79721
Lab ID: QC206779	Analyzed: 03/06/03
Diln Fac: 1.000	

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)	116	60-146	8015B
Trifluorotoluene (PID)	93	67-146	EPA 8021B
Bromofluorobenzene (PID)	117	60-137	EPA 8021B

Type: BLANK	Diln Fac: 1.000
Lab ID: QC206961	Batch#: 79765
Units: ug/Kg	Analyzed: 03/07/03

Analyte	Result	RL	Analysis
MTBE	ND	20	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	58-144	8015B
Bromofluorobenzene (FID)	99	60-146	8015B
Trifluorotoluene (PID)	96	67-146	EPA 8021B
Bromofluorobenzene (PID)	97	60-137	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 Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Type:	LCS	Basis:	as received
Lab ID:	QC206780	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79721
Units:	ug/Kg	Analyzed:	03/06/03

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12		NA			
MTBE	50.00	54.09	108	65-135	EPA 8021B
Benzene	50.00	52.04	104	65-120	EPA 8021B
Toluene	50.00	48.84	98	69-120	EPA 8021B
Ethylbenzene	50.00	48.81	98	68-121	EPA 8021B
m,p-Xylenes	100.0	97.21	97	70-124	EPA 8021B
o-Xylene	50.00	50.50	101	73-121	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	88	58-144	8015B
Bromofluorobenzene (FID)	109	60-146	8015B
Trifluorotoluene (PID)	88	67-146	EPA 8021B
Bromofluorobenzene (PID)	111	60-137	EPA 8021B

Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Type:	LCS	Basis:	as received
Lab ID:	QC206781	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79721
Units:	mg/Kg	Analyzed:	03/06/03

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	5.000	4.948	99	78-120	8015B
MTBE		NA			
Benzene		NA			
Toluene		NA			
Ethylbenzene		NA			
m,p-Xylenes		NA			
o-Xylene		NA			

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	110	58-144	8015B
Bromofluorobenzene (FID)	117	60-146	8015B
Trifluorotoluene (PID)	102	67-146	EPA 8021B
Bromofluorobenzene (PID)	118	60-137	EPA 8021B



Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Type:	LCS	Basis:	as received
Lab ID:	QC206963	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79765
Units:	ug/Kg	Analyzed:	03/07/03

Analyte	Spiked	Result	%REC	Limits	Analysis
MTBE	100.0	106.9	107	65-135	EPA 8021B
Benzene	100.0	103.3	103	65-120	EPA 8021B
Toluene	100.0	104.0	104	69-120	EPA 8021B
Ethylbenzene	100.0	110.1	110	68-121	EPA 8021B
m,p-Xylenes	200.0	217.0	109	70-124	EPA 8021B
o-Xylene	100.0	110.2	110	73-121	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	58-144	8015B
Bromofluorobenzene (FID)	94	60-146	8015B
Trifluorotoluene (PID)	92	67-146	EPA 8021B
Bromofluorobenzene (PID)	95	60-137	EPA 8021B

Curtis & Tompkins Laboratories Analytical Report

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	163999-005	Batch#:	79721
Matrix:	Soil	Sampled:	03/05/03
Units:	mg/Kg	Received:	03/05/03
Basis:	as received	Analyzed:	03/07/03

Type: MS Lab ID: QC206866

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	12.87	10.31	23.00	98	44-133	8015B
MTBE						NA
Benzene						NA
Toluene						NA
Ethylbenzene						NA
m,p-Xylenes						NA
o-Xylene						NA

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	110	58-144	8015B
Bromofluorobenzene (FID)	119	60-146	8015B
Trifluorotoluene (PID)	114	67-146	EPA 8021B
Bromofluorobenzene (PID)	120	60-137	EPA 8021B

Type: MSD Lab ID: QC206867

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	10.42	19.59	65	44-133	16	31	8015B
MTBE							NA
Benzene							NA
Toluene							NA
Ethylbenzene							NA
m,p-Xylenes							NA
o-Xylene							NA

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	110	58-144	8015B
Bromofluorobenzene (FID)	120	60-146	8015B
Trifluorotoluene (PID)	110	67-146	EPA 8021B
Bromofluorobenzene (PID)	122	60-137	EPA 8021B

NA= Not Analyzed

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	
Field ID: ZZZZZZZZZZ	Diln Fac: 1.000
MSS Lab ID: 164022-070	Batch#: 79765
Matrix: Soil	Sampled: 03/05/03
Units: ug/Kg	Received: 03/06/03
Basis: as received	Analyzed: 03/07/03

Type: MS Lab ID: QC207030

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
MTBE	<1.800	99.01	107.9	109	65-135	EPA 8021B
Benzene	<1.500	99.01	101.6	103	47-120	EPA 8021B
Toluene	<1.300	99.01	102.3	103	37-131	EPA 8021B
Ethylbenzene	<1.200	99.01	99.94	101	37-129	EPA 8021B
m,p-Xylenes	<1.100	198.0	203.5	103	35-133	EPA 8021B
o-Xylene	<1.400	99.01	101.6	103	34-134	EPA 8021B

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

Type: MSD Lab ID: QC207031

Analyte	Spiked	Result	%REC	Limits	RPD Lim	Analysis
MTBE	98.04	109.5	112	65-135	2 20	EPA 8021B
Benzene	98.04	104.4	106	47-120	4 30	EPA 8021B
Toluene	98.04	103.8	106	37-131	3 30	EPA 8021B
Ethylbenzene	98.04	101.2	103	37-129	2 30	EPA 8021B
m,p-Xylenes	196.1	206.5	105	35-133	2 30	EPA 8021B
o-Xylene	98.04	103.3	105	34-134	3 30	EPA 8021B

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



Total Extractable Hydrocarbons

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 3520C
Project#: 2003-13	Analysis: EPA 8015B
Matrix: Water	Sampled: 03/04/03
Units: ug/L	Received: 03/05/03
Batch#: 79685	Prepared: 03/05/03

Field ID: BH-01-GW	Diln Fac: 1.000
Type: SAMPLE	Analyzed: 03/08/03
Lab ID: 163990-002	

Analyte	Result	RL
Diesel C10-C24	290 H L Y	50
Motor Oil C24-C36	470	300

Surrogate	%REC	Limits
Hexacosane	109	39-137

Field ID: BH-02-GW	Diln Fac: 1.000
Type: SAMPLE	Analyzed: 03/07/03
Lab ID: 163990-004	

Analyte	Result	RL
Diesel C10-C24	86 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	109	39-137

Field ID: BH-03-GW	Diln Fac: 1.000
Type: SAMPLE	Analyzed: 03/07/03
Lab ID: 163990-006	

Analyte	Result	RL
Diesel C10-C24	7,000 H L Y	50
Motor Oil C24-C36	2,600	300

Surrogate	%REC	Limits
Hexacosane	110	39-137

Field ID: BH-04-GW	Diln Fac: 3.000
Type: SAMPLE	Analyzed: 03/10/03
Lab ID: 163990-008	

Analyte	Result	RL
Diesel C10-C24	8,400 L Y	150
Motor Oil C24-C36	ND	900

Surrogate	%REC	Limits
Hexacosane	100	39-137

H= Heavier hydrocarbons contributed to the quantitation
 L= Lighter hydrocarbons contributed to the quantitation
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit
 Page 1 of 3

Chromatogram

Sample Name : 163990-002,79685

Sample #: 79685

Page 1 of 1

FileName : G:\GC11\CHA\066A014.RAW

Date : 3/9/03 05:47 PM

Method : ATEH065.MTH

Time of Injection: 3/8/03 01:19 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 18.00 mV

High Point : 372.11 mV

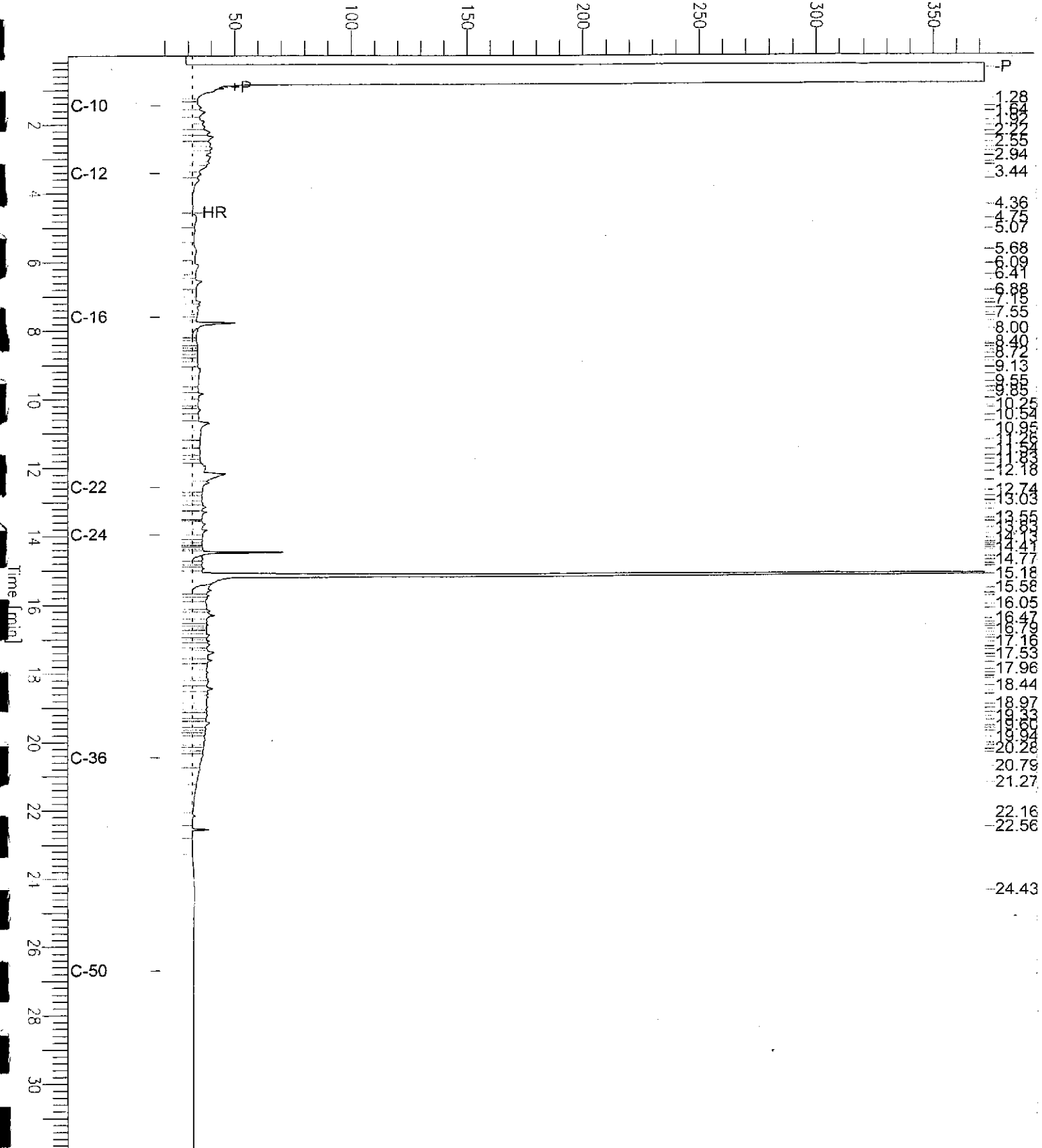
Scale Factor: 0.0

Plot Offset: 18 mV

Plot Scale: 354.1 mV

BH-01-GW

Response [mV]



Chromatogram

Sample Name : 163990-004,79685

Sample #: 79685

Page 1 of 1

FileName : G:\GG17\CHA\065A036.RAW

Date : 3/9/03 06:36 PM

Method : ATEH065.MTH

Time of Injection: 3/7/03 03:50 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 16.68 mV

High Point : 373.73 mV

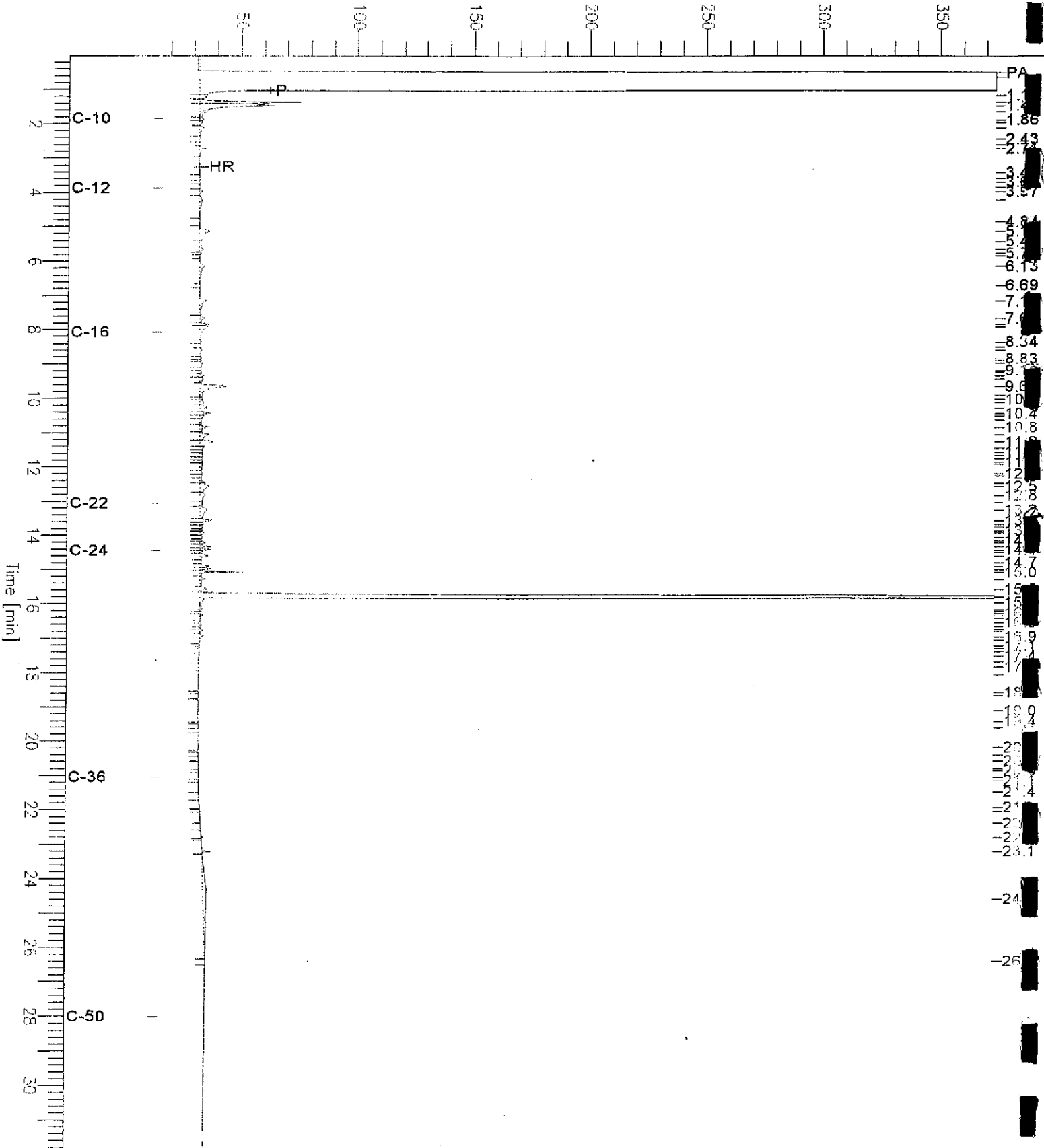
Scale Factor: 0.0

Plot Offset: 17 mV

Plot Scale: 357.1 mV

BH-02-GW

Response [mV]



Chromatogram

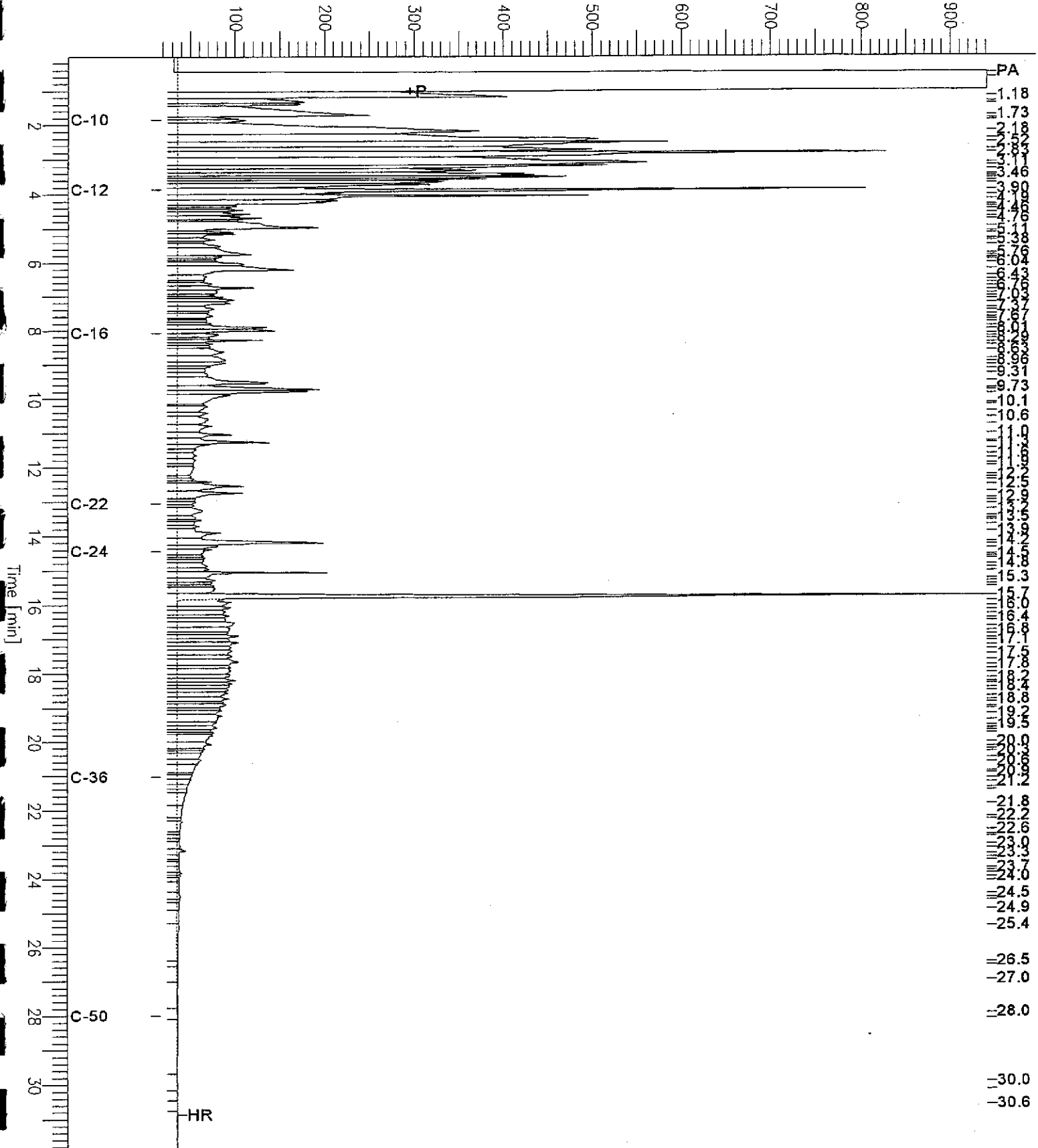
Sample Name : 163990-006,79685
FileName : G:\GC17\CHA\065A042.RAW
Method :
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 17 mV

Sample #: 79685
Date : 3/9/03 07:30 PM
Time of Injection: 3/7/03 07:48 PM
Low Point : 17.37 mV
Plot Scale: 924.0 mV
High Point : 941.39 mV

BH-03-GW

Response [mV]



Chromatogram

Sample Name : 163990-008,79685

Sample #: 79685

Page 1 of 1

FileName : G:\GC11\CHA\068A017.RAW

Date : 3/10/03 09:42 AM

Method : ATEH065.MTH

Time of Injection: 3/10/03 04:46 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 24.07 mV

High Point : 512.85 mV

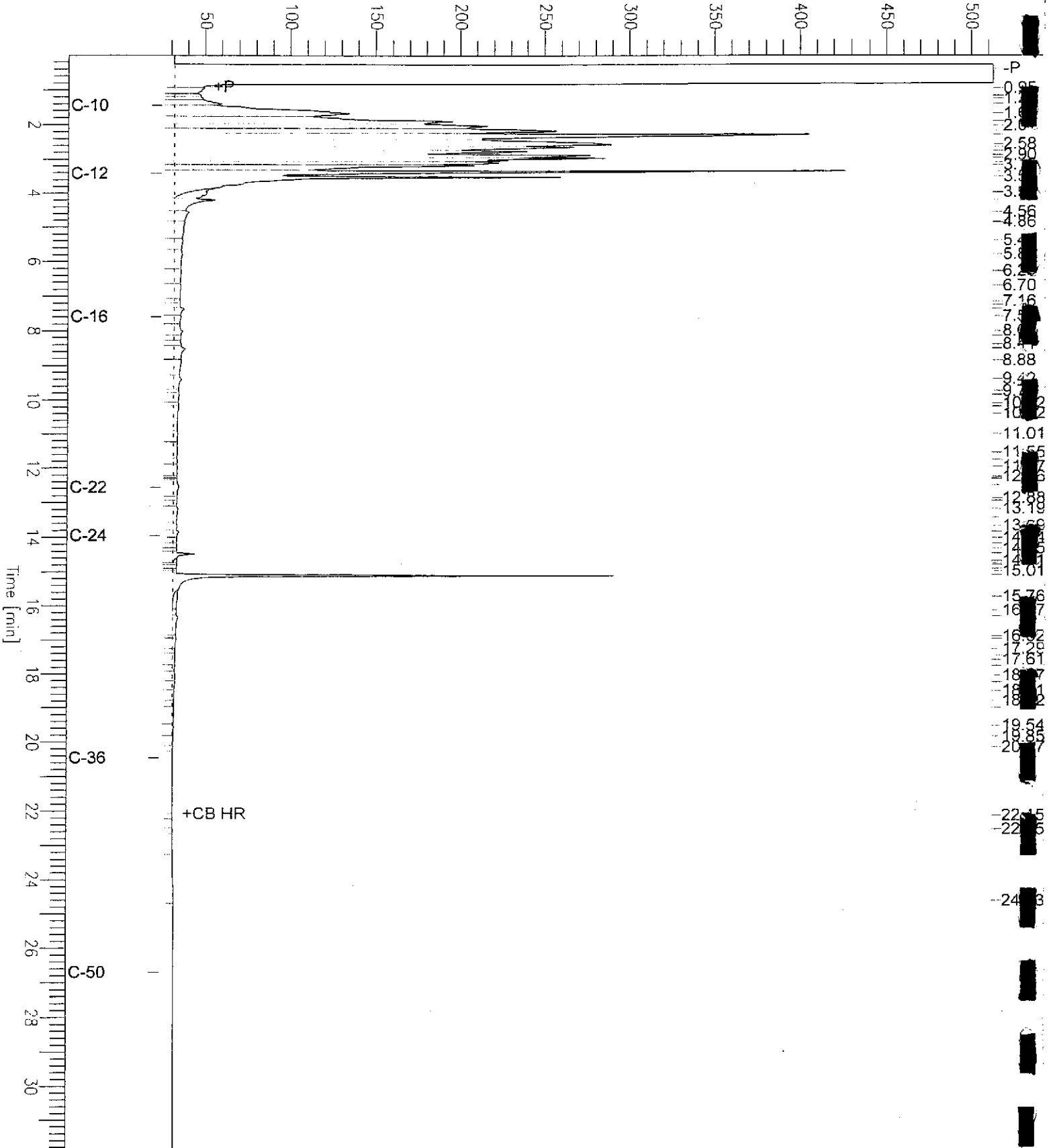
Scale Factor: 0.0

Plot Offset: 24 mV

Plot Scale: 488.8 mV

BH-04-GW

Response [mV]



Total Extractable Hydrocarbons

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	03/04/03
Units:	ug/L	Received:	03/05/03
Batch#:	79685	Prepared:	03/05/03

Field ID:	BH-05-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/07/03
Lab ID:	163990-010		

Analyte	Result	RL
Diesel C10-C24	140 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	102	39-137

Field ID:	BH-06-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/07/03
Lab ID:	163990-012		

Analyte	Result	RL
Diesel C10-C24	72 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	107	39-137

Field ID:	BH-07-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/07/03
Lab ID:	163990-014		

Analyte	Result	RL
Diesel C10-C24	190 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	104	39-137

Field ID:	BH-08-GW	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	03/07/03
Lab ID:	163990-016		

Analyte	Result	RL
Diesel C10-C24	150 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	111	39-137

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

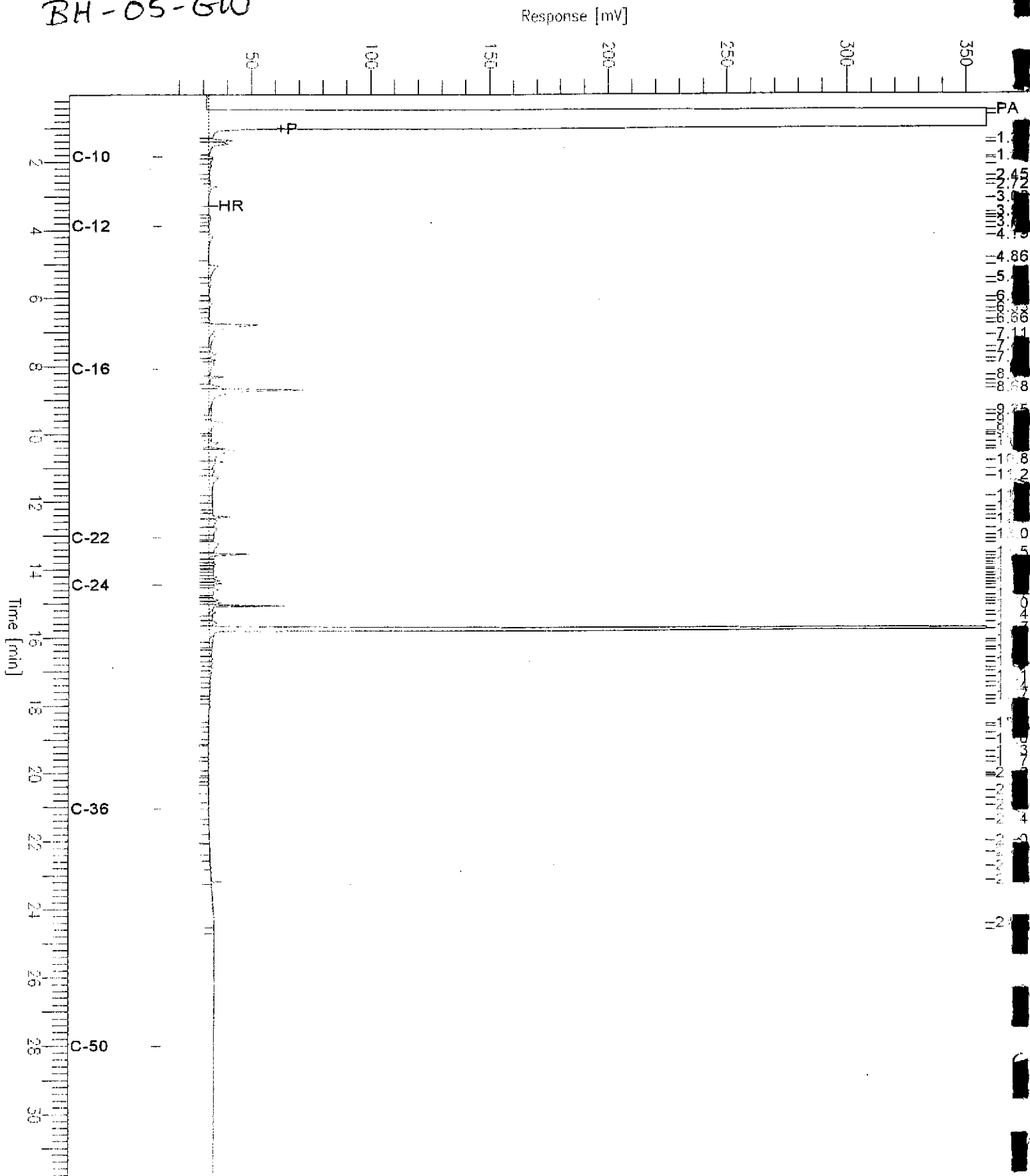
Chromatogram

Sample Name : 163990-010, 79685
FileName : G:\AQ17\ACHAOC\8A049.RAW
Method : ATRH066.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 13 mV

Sample #: 79685
Date : 3/9/03 06:37 PM
Time of Injection: 3/7/03 05:09 PM
Low Point : 12.87 mV
High Point : 358.78 mV
Plot Scale: 345.9 mV

BH-05-GW

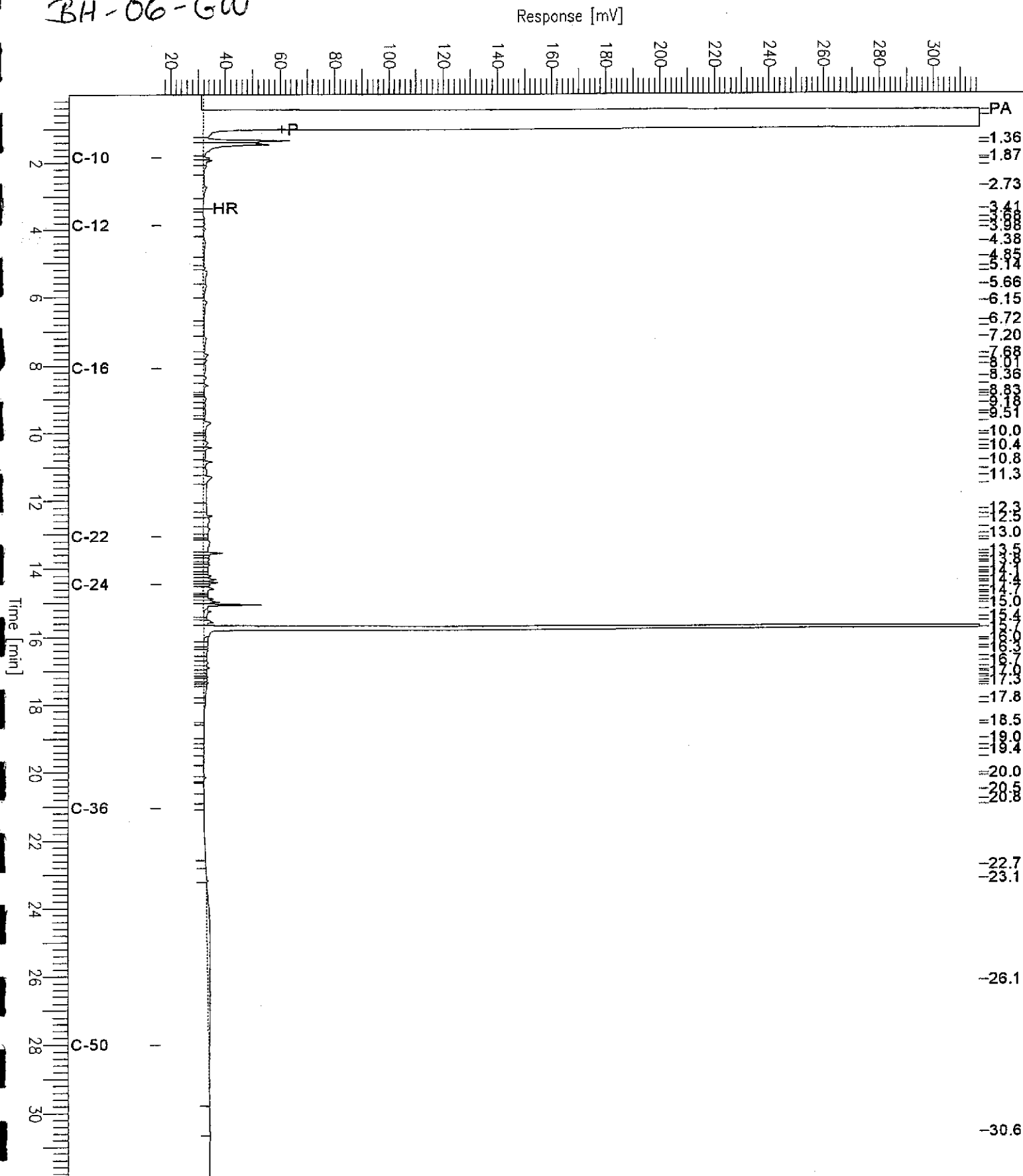


Chromatogram

Sample Name : 163990-012,79685
 FileName : G:\GC17\CHA\065A039.RAW
 Method :
 Start Time : 0.01 min
 Scale Factor: 0.0

Sample #: 79685
 Date : 3/9/03 07:30 PM
 Time of Injection: 3/7/03 05:49 PM
 Low Point : 16.54 mV
 Plot Scale: 300.7 mV
 High Point : 317.26 mV

BH-06-GW



Chromatogram

Sample Name : 163990-014,79685

Sample #: 79685

Page 1 of 1

FileName : G:\GC17\CHAM\065A\040.RAW

Date : 3/9/03 06:40 PM

Method : ATEH065.MTH

Time of Injection: 3/7/03 06:28 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 16.63 mV

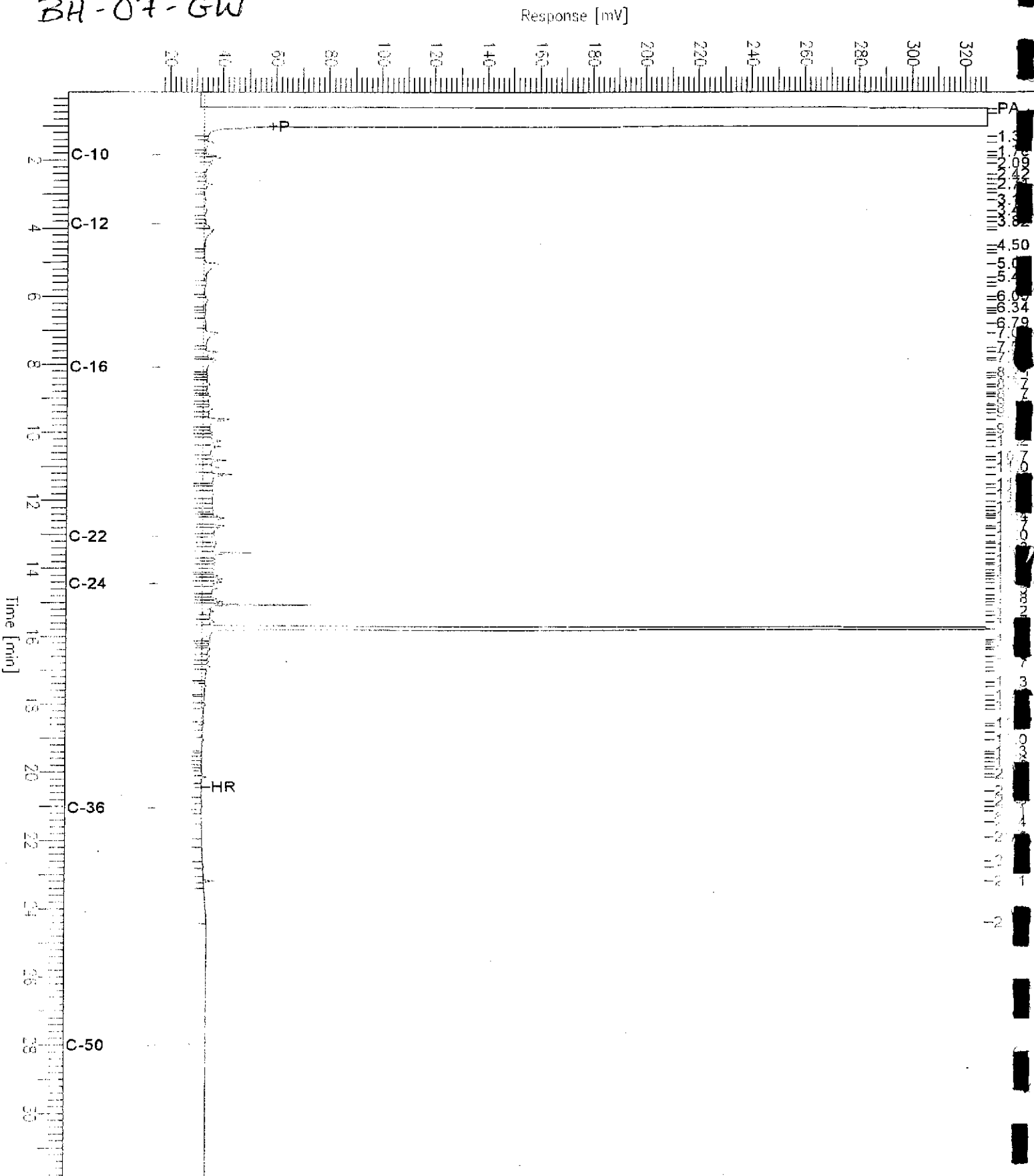
High Point : 328.59 mV

Scale Factor: 0.0

Plot Offset: 17 mV

Plot Scale: 312.0 mV

BH-07-GW



Chromatogram

Sample Name : 163990-016,79685
FileName : G:\GC17\CHA\065A041.RAW
Method :
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 13 mV

Sample #: 79685

Date : 3/9/03 07:30 PM

Time of Injection: 3/7/03 07:08 PM

Low Point : 13.26 mV

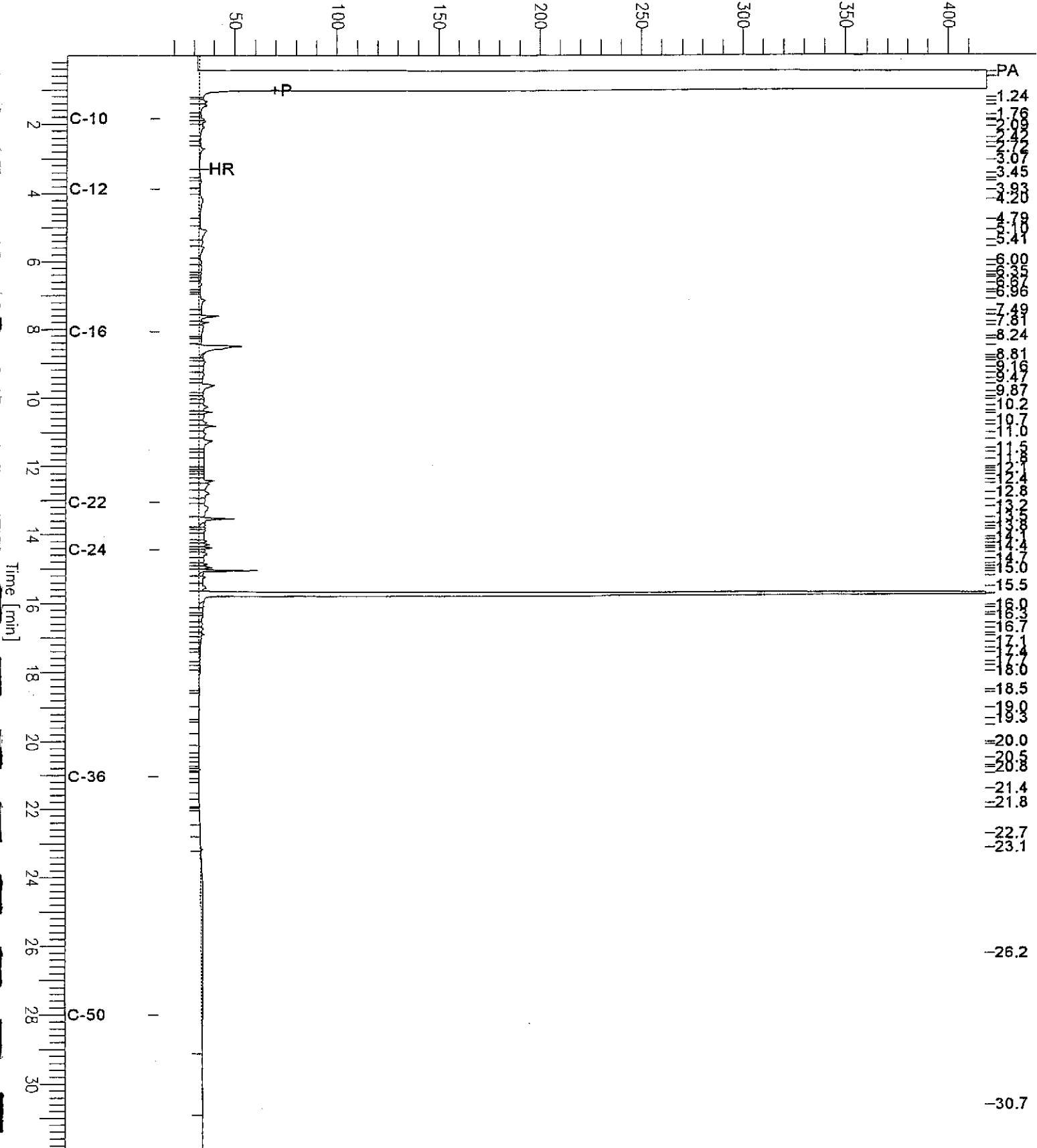
Plot Scale: 405.9 mV

Page 1 of 1

High Point : 419.12 mV

BH-08-GW

Response [mV]



Chromatogram

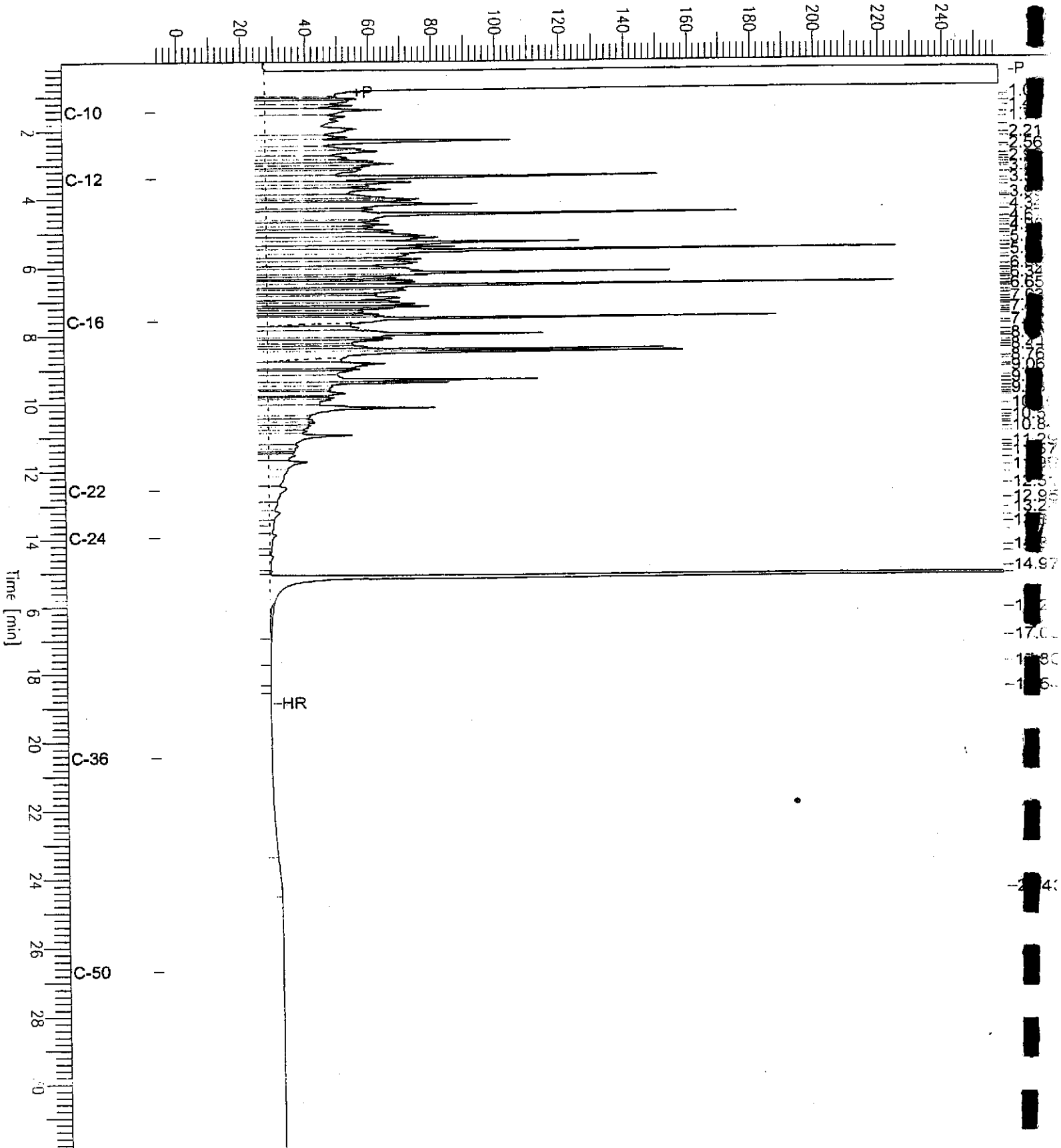
Sample Name : ccv,03ws0276,ds1
FileName : G:\GC11\CHA\066A002.RAW
Method : ATEH065.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : -7 mV

Sample #: 500mg/L
Date : 3/7/03 07:12 PM
Time of Injection: 3/7/03 05:19 PM
Low Point : -6.55 mV
Plot Scale: 264.1 mV
High Point : 257.58 mV

Diesel

Response [mV]



Chromatogram

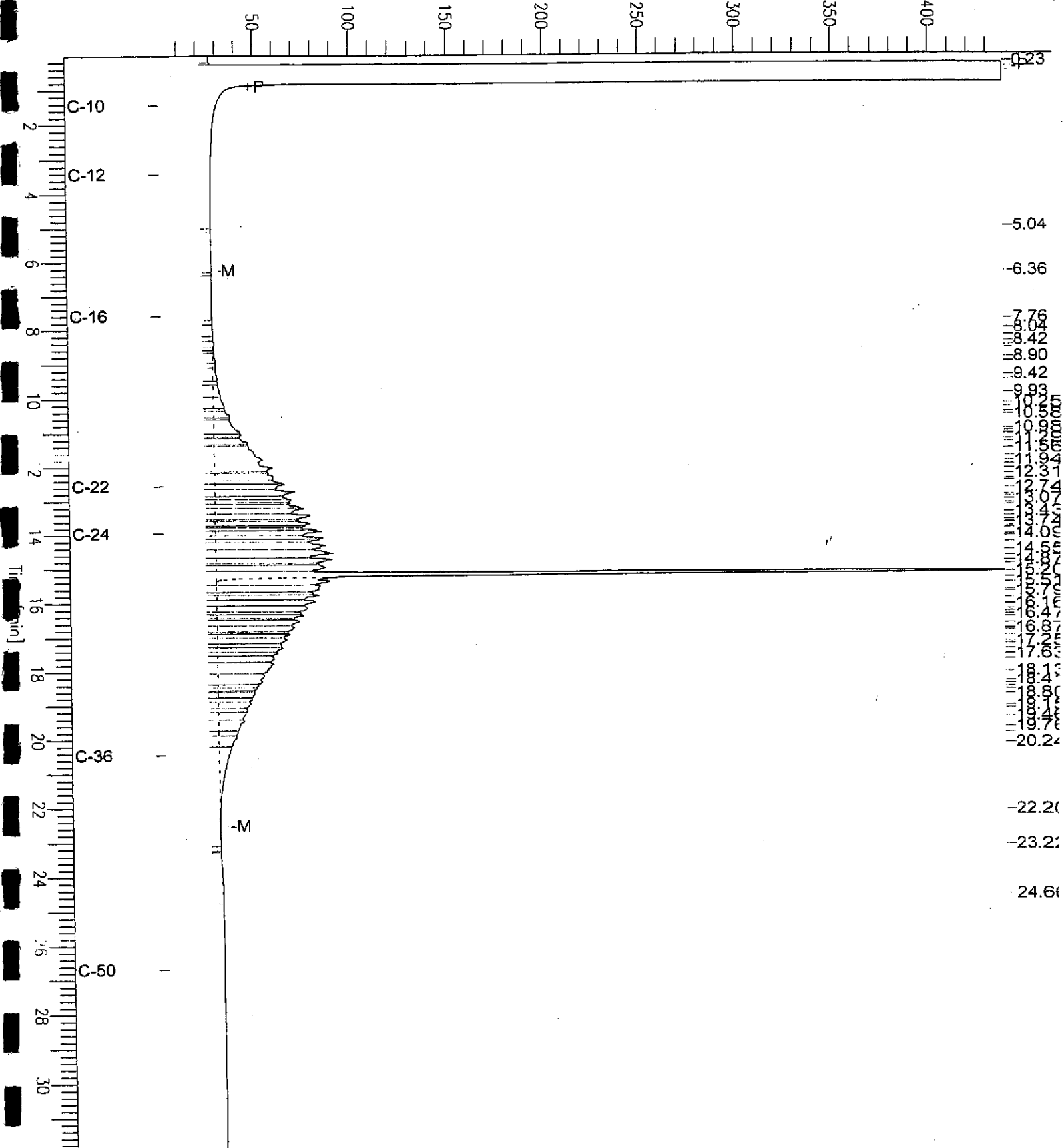
Sample Name : ccv_03ws0384.mo
Sample Name : G:\GC11\CHA\066A003.RAW
Method : ATEH065.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 1 mV

Sample #: 500mg/L
Date : 3/7/03 07:12 PM
Time of Injection: 3/7/03 05:59 PM
Low Point : 0.96 mV
High Point : 438.78 mV
Plot Scale: 437.8 mV

Motor Oil

Response [mV]



Total Extractable Hydrocarbons

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	03/04/03
Units:	ug/L	Received:	03/05/03
Batch#:	79685	Prepared:	03/05/03

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC206693	Analyzed:	03/07/03

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	XRC	Limits
Hexacosane	108	39-137

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

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-13	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	79685
Units:	ug/L	Prepared:	03/05/03
Diln Fac:	1.000	Analyzed:	03/07/03

Type: BS Lab ID: QC206694

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,316	93	37-120

Surrogate	%REC	Limits
Hexacosane	0 *	39-137

Type: BSD Lab ID: QC206695

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,213	89	37-120	5	26

Surrogate	%REC	Limits
Hexacosane	0 *	39-137

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Total Extractable Hydrocarbons

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: SHAKER TABLE
Project#: 2003-13	Analysis: EPA 8015B
Matrix: Soil	Batch#: 79748
Units: mg/Kg	Sampled: 03/04/03
Basis: as received	Received: 03/05/03
Diln Fac: 1.000	Prepared: 03/07/03

Field ID: BH-02-12.5'	Lab ID: 163990-003	
Type: SAMPLE	Analyzed: 03/10/03	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	80	48-137

Field ID: BH-05-8'	Lab ID: 163990-009	
Type: SAMPLE	Analyzed: 03/10/03	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	80	48-137

Field ID: BH-06-7.5'	Lab ID: 163990-011	
Type: SAMPLE	Analyzed: 03/10/03	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	67	48-137

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit

Total Extractable Hydrocarbons

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: SHAKER TABLE
Project#: 2003-13	Analysis: EPA 8015B
Matrix: Soil	Batch#: 79748
Units: mg/Kg	Sampled: 03/04/03
Basis: as received	Received: 03/05/03
Diln Fac: 1.000	Prepared: 03/07/03

Field ID: BH-07-7.5'	Lab ID: 163990-013
Type: SAMPLE	Analyzed: 03/10/03

Analyte	Result	RL
Diesel C10-C24	1.2 Y Z	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	87	48-137

Field ID: BH-08-7.5'	Lab ID: 163990-015
Type: SAMPLE	Analyzed: 03/10/03

Analyte	Result	RL
Diesel C10-C24	1.1 Y	0.99
Motor Oil C24-C36	8.5 Y Z	5.0

Surrogate	%REC	Limits
Hexacosane	66	48-137

Type: BLANK	Analyzed: 03/09/03
Lab ID: QC206900	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	86	48-137

Y= Sample exhibits chromatographic pattern which does not resemble standard
 Z= Sample exhibits unknown single peak or peaks
 D= Not Detected
 RL= Reporting Limit

Chromatogram

Sample Name : 163990-013,79748

Sample #: 79748

Page 1 of 1

FileName : G:\GC11\CHA\068A022.RAW

Date : 3/10/03 09:45 AM

Method : ATEH065.MTH

Time of Injection: 3/10/03 08:07 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 22.63 mV

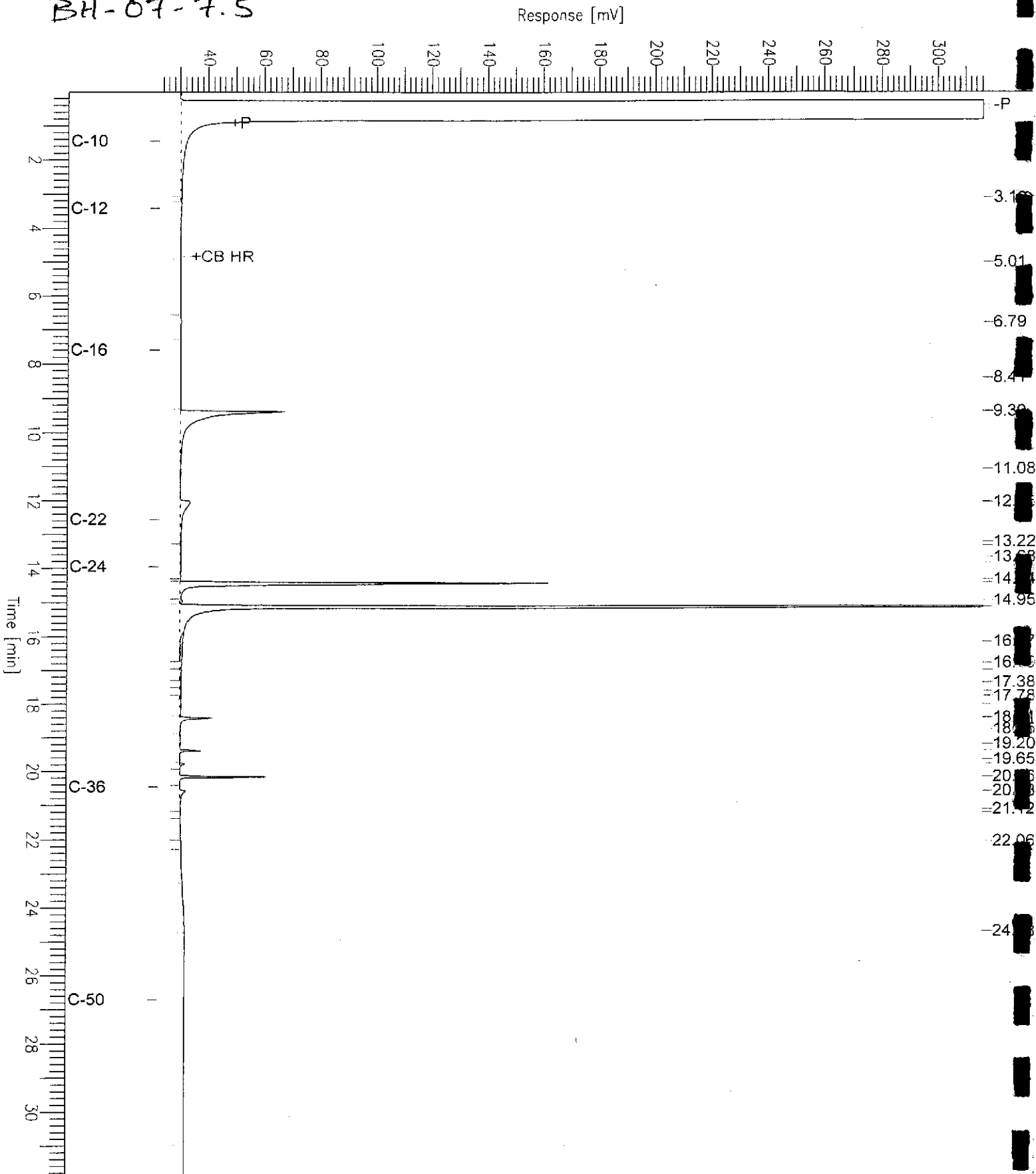
High Point : 316.32 mV

Scale Factor: 0.0

Plot Offset: 23 mV

Plot Scale: 293.7 mV

BH-07-7.5'



Chromatogram

Sample Name : 163990-015,79748
FileName : G:\GC11\CHA\068A023.RAW
Method : ATEH065.MTH
Start Time : 0.01 min
Scale Factor: 0.0

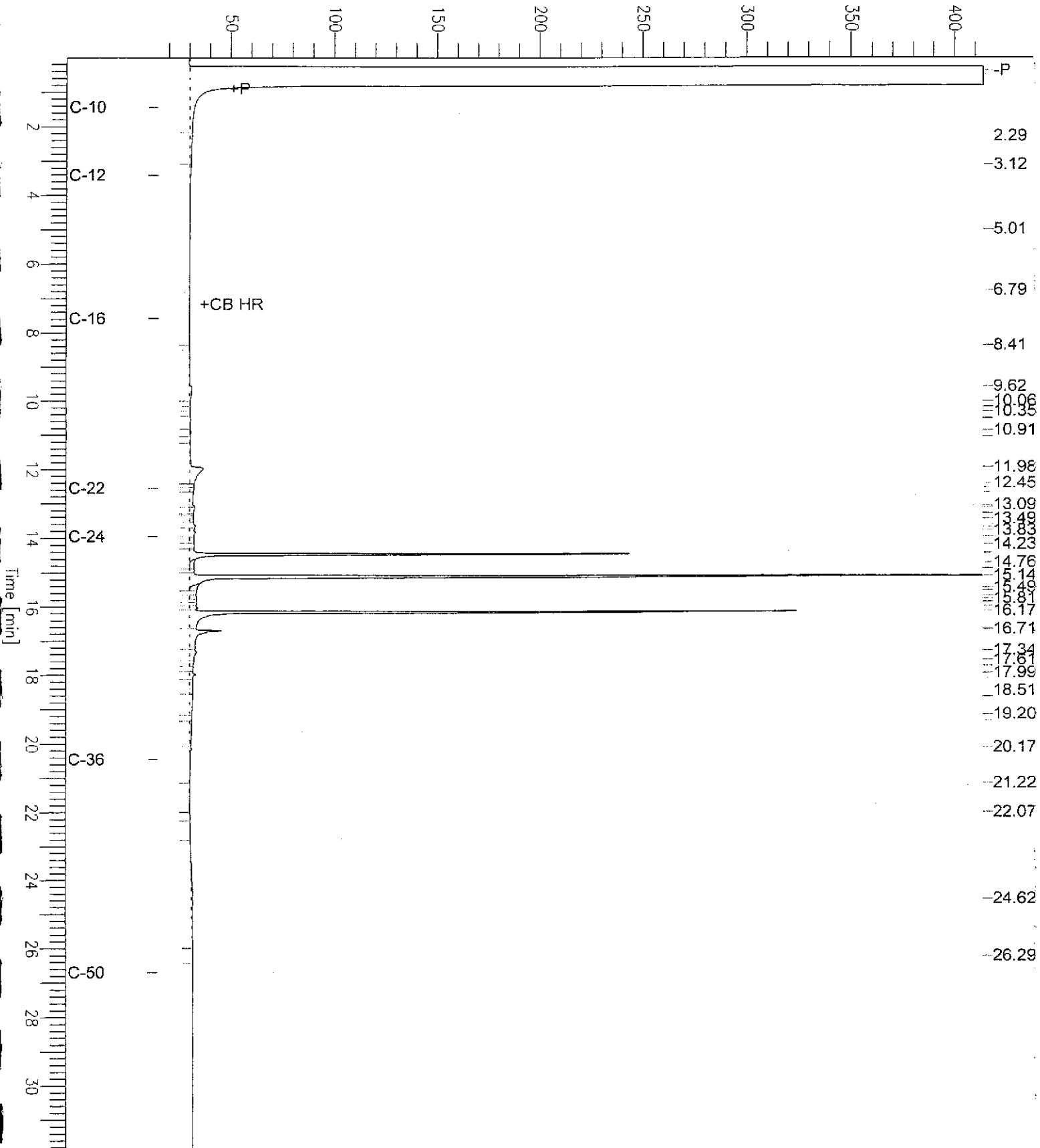
End Time : 31.91 min
Plot Offset: 15 mV

Sample #: 79748
Date : 3/10/03 09:45 AM
Time of Injection: 3/10/03 08:47 AM
Low Point : 14.87 mV
Plot Scale: 399.2 mV
High Point : 414.05 mV

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BH-08-7.5'

Response [mV]



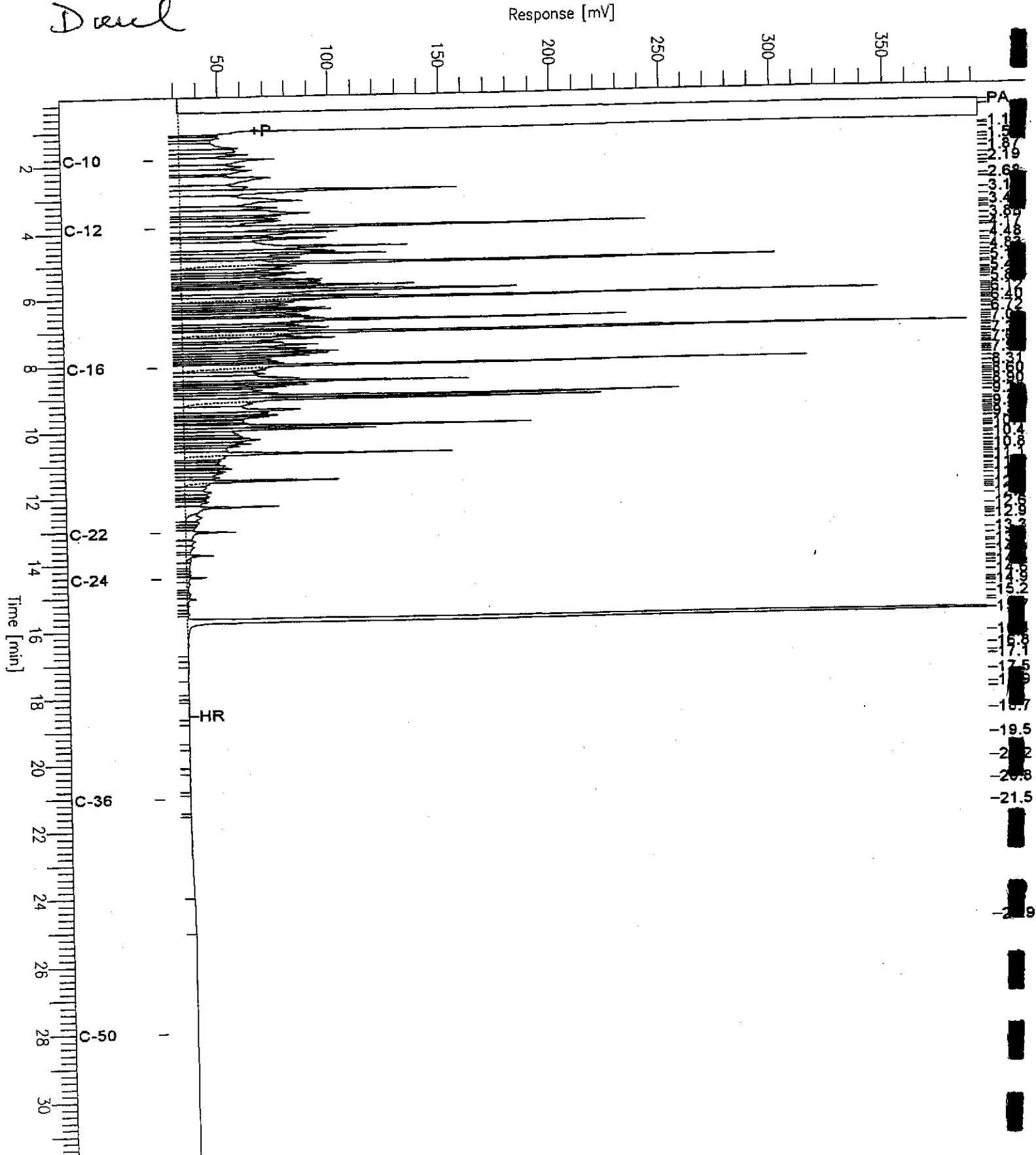
Chromatogram

Sample Name : ccv_03ws0276_dsl
FileName : G:\GC17\CHA\068A002.RAW
Method : ATEH065.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : 21 mV

Sample #: 500mg/L
Date : 3/9/03 08:08 PM
Time of Injection: 3/9/03 06:09 PM
Low Point : 20.75 mV
Plot Scale: 372.1 mV
High Point : 392.83 mV

Diesel



Chromatogram

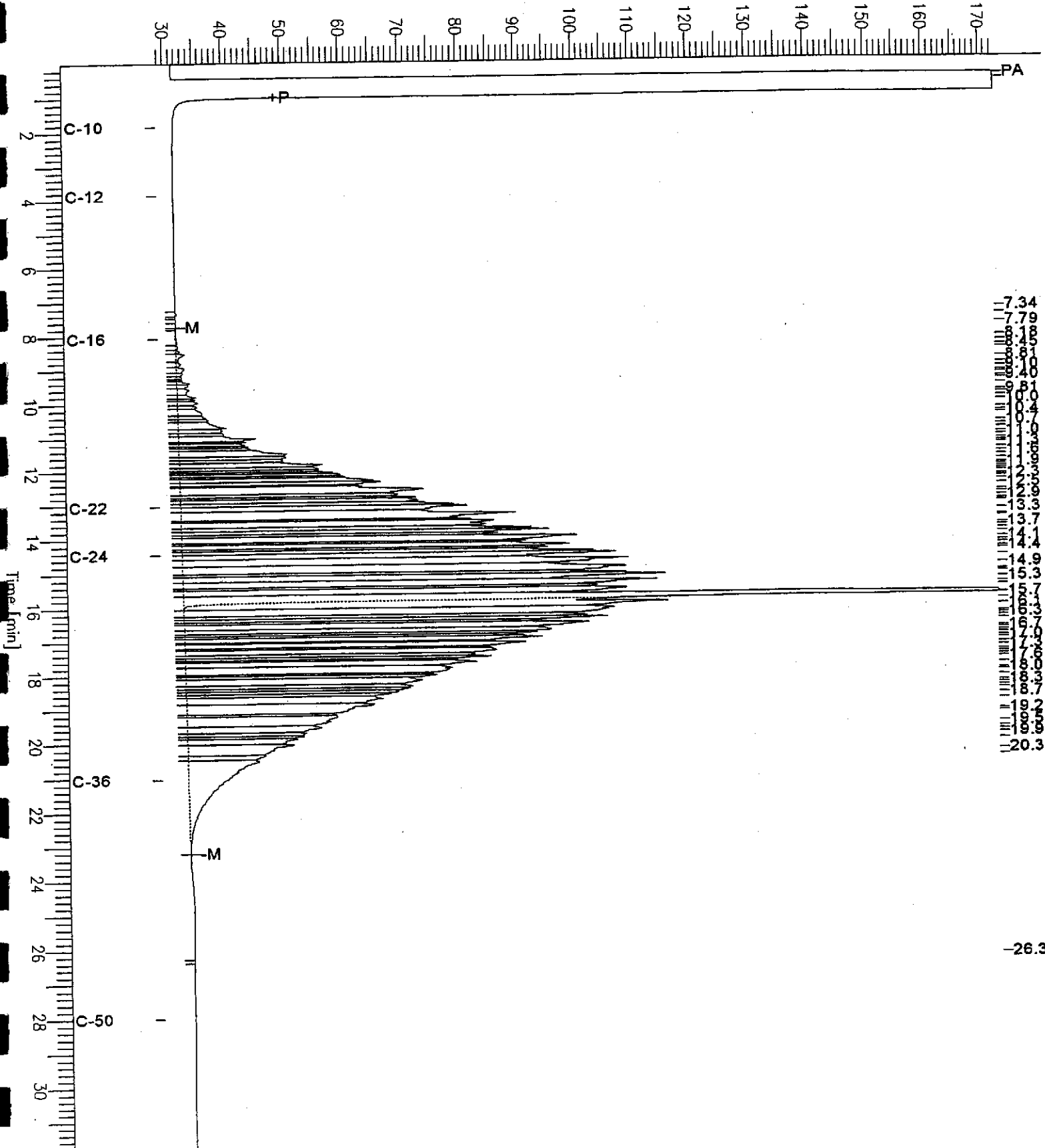
Sample Name : ccv,03ws0384,mo
FileName : G:\GC17\CHA\068A003.RAW
Method : ATEH065.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : 29 mV

Sample #: 500mg/L
Date : 3/9/03 08:09 PM
Time of Injection: 3/9/03 06:48 PM
Low Point : 28.76 mV
Plot Scale: 143.8 mV
High Point : 172.51 mV

Motor Oil

Response [mV]



7.34
7.79
8.24
8.69
9.14
9.59
10.04
10.49
10.94
11.39
11.84
12.29
12.74
13.19
13.64
14.09
14.54
14.99
15.44
15.89
16.34
16.79
17.24
17.69
18.14
18.59
19.04
19.49
19.94
20.3



Total Extractable Hydrocarbons

Lab #:	163990	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:	QC206901	Batch#:	79748
Matrix:	Soil	Prepared:	03/07/03
Units:	mg/Kg	Analyzed:	03/09/03
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.00	40.80	82	56-121

Surrogate	%REC	Limits
Hexacosane	81	48-137

Total Extractable Hydrocarbons

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	SHAKER TABLE
Project#:	2003-13	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	79748
MSS Lab ID:	164001-013	Sampled:	03/05/03
Matrix:	Soil	Received:	03/05/03
Units:	mg/Kg	Prepared:	03/07/03
Basis:	as received	Analyzed:	03/09/03
Diln Fac:	1.000		

Type: MS Lab ID: QC206902

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<0.7000	49.88	34.63	69	37-128

Surrogate	%REC	Limits
Hexacosane	69	48-137

Type: MSD Lab ID: QC206903

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.95	41.89	84	37-128	19	37

Surrogate	%REC	Limits
Hexacosane	83	48-137



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-01-GW	Batch#:	79711
Lab ID:	163990-002	Sampled:	03/04/03
Matrix:	Water	Received:	03/05/03
Units:	ug/L	Analyzed:	03/06/03
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected

RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-02-GW	Batch#:	79711
Lab ID:	163990-004	Sampled:	03/04/03
Matrix:	Water	Received:	03/05/03
Units:	ug/L	Analyzed:	03/07/03
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%RAC	Limits
1,2-Dichloroethane-d4	103	77-130
Toluene-d8	97	80-120
Bromofluorobenzene	110	80-120

D= Not Detected

RL= Reporting Limit



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-03-GW	Batch#:	79711
Lab ID:	163990-006	Sampled:	03/04/03
Matrix:	Water	Received:	03/05/03
Units:	ug/L	Analyzed:	03/07/03
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	1.0	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.3	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	1.9	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected

RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	Analysis: EPA 8260B
Field ID: BH-04-GW	Batch#: 79711
Lab ID: 163990-008	Sampled: 03/04/03
Matrix: Water	Received: 03/05/03
Units: ug/L	Analyzed: 03/07/03
Diln Fac: 1.000	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	0.5	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	0.7	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	2.6	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
 RL= Reporting Limit
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Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC206734	Batch#:	79711
Matrix:	Water	Analyzed:	03/06/03
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

Purgeable Halocarbons by GC/MS

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC206735	Batch#: 79711
Matrix: Water	Analyzed: 03/06/03
Units: ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	REC	Limits
1,2-Dichloroethane-d4	115	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC206733	Batch#:	79711
Matrix:	Water	Analyzed:	03/06/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	46.93	94	59-172
Trichloroethene	50.00	51.12	102	62-137
Chlorobenzene	50.00	49.36	99	60-133

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	77-130
Toluene-d8	103	80-120
Bromofluorobenzene	108	80-120

Purgeable Halocarbons by GC/MS

Lab #: 163990	Location: Pacific/Webster Investig.
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2003-13	Analysis: EPA 8260B
Field ID: ZZZZZZZZZZ	Batch#: 79711
MSS Lab ID: 163974-001	Sampled: 03/04/03
Matrix: Water	Received: 03/04/03
Units: ug/L	Analyzed: 03/06/03
Diln Fac: 1.000	

Type: MS Lab ID: QC206736

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1700	50.00	47.89	96	59-172
Trichloroethene	<0.1300	50.00	49.53	99	62-137
Chlorobenzene	<0.09200	50.00	48.09	96	60-133

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	77-130
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-120

Type: MSD Lab ID: QC206737

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	44.55	89	59-172	7	22
Trichloroethene	50.00	49.93	100	62-137	1	24
Chlorobenzene	50.00	49.31	99	60-133	3	21

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	77-130
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-01-7'	Diln Fac:	0.9259
Lab ID:	163990-001	Batch#:	79723
Matrix:	Soil	Sampled:	03/04/03
Units:	ug/Kg	Received:	03/05/03
Basis:	as received	Analyzed:	03/06/03

Analyte	Result	RL
Chloromethane	ND	9.3
Vinyl Chloride	ND	9.3
Bromomethane	ND	9.3
Chloroethane	ND	9.3
Trichlorofluoromethane	ND	4.6
Freon 113	ND	4.6
1,1-Dichloroethene	ND	4.6
Methylene Chloride	ND	19
trans-1,2-Dichloroethene	ND	4.6
1,1-Dichloroethane	ND	4.6
cis-1,2-Dichloroethene	ND	4.6
Chloroform	ND	4.6
1,1,1-Trichloroethane	ND	4.6
Carbon Tetrachloride	ND	4.6
1,2-Dichloroethane	ND	4.6
Trichloroethene	ND	4.6
1,2-Dichloropropane	ND	4.6
Bromodichloromethane	ND	4.6
cis-1,3-Dichloropropene	ND	4.6
trans-1,3-Dichloropropene	ND	4.6
1,1,2-Trichloroethane	ND	4.6
Tetrachloroethene	ND	4.6
Dibromochloromethane	ND	4.6
Chlorobenzene	ND	4.6
Bromoform	ND	9.3
1,1,2,2-Tetrachloroethane	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6

Surrogate	REC	Limits
1,2-Dichloroethane-d4	100	75-128
Toluene-d8	88	80-120
Bromofluorobenzene	103	75-127



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-02-12.5'	Diln Fac:	1.042
Lab ID:	163990-003	Batch#:	79723
Matrix:	Soil	Sampled:	03/04/03
Units:	ug/Kg	Received:	03/05/03
Basis:	as received	Analyzed:	03/06/03

Analyte	Result	RL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.2
Freon 113	ND	5.2
1,1-Dichloroethene	ND	5.2
Methylene Chloride	ND	21
trans-1,2-Dichloroethene	ND	5.2
1,1-Dichloroethane	ND	5.2
cis-1,2-Dichloroethene	ND	5.2
Chloroform	ND	5.2
1,1,1-Trichloroethane	ND	5.2
Carbon Tetrachloride	ND	5.2
1,2-Dichloroethane	ND	5.2
Trichloroethene	ND	5.2
1,2-Dichloropropane	ND	5.2
Bromodichloromethane	ND	5.2
cis-1,3-Dichloropropene	ND	5.2
trans-1,3-Dichloropropene	ND	5.2
1,1,2-Trichloroethane	ND	5.2
Tetrachloroethene	ND	5.2
Dibromochloromethane	ND	5.2
Chlorobenzene	ND	5.2
Bromoform	ND	10
1,1,2,2-Tetrachloroethane	ND	5.2
1,3-Dichlorobenzene	ND	5.2
1,4-Dichlorobenzene	ND	5.2
1,2-Dichlorobenzene	ND	5.2

Surrogate	SPC	Limite
1,2-Dichloroethane-d4	96	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	102	75-127

ND= Not Detected
 RL= Reporting Limit
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Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-04-8'	Diln Fac:	0.9615
Lab ID:	163990-007	Batch#:	79723
Matrix:	Soil	Sampled:	03/04/03
Units:	ug/Kg	Received:	03/05/03
Basis:	as received	Analyzed:	03/06/03

Analyte	Result	RL
Chloromethane	ND	9.6
Vinyl Chloride	ND	9.6
Bromomethane	ND	9.6
Chloroethane	ND	9.6
Trichlorofluoromethane	ND	4.8
Freon 113	ND	4.8
1,1-Dichloroethene	ND	4.8
Methylene Chloride	ND	19
trans-1,2-Dichloroethene	ND	4.8
1,1-Dichloroethane	ND	4.8
cis-1,2-Dichloroethene	ND	4.8
Chloroform	ND	4.8
1,1,1-Trichloroethane	ND	4.8
Carbon Tetrachloride	ND	4.8
1,2-Dichloroethane	ND	4.8
Trichloroethene	ND	4.8
1,2-Dichloropropane	ND	4.8
Bromodichloromethane	ND	4.8
cis-1,3-Dichloropropene	ND	4.8
trans-1,3-Dichloropropene	ND	4.8
1,1,2-Trichloroethane	ND	4.8
Tetrachloroethene	ND	4.8
Dibromochloromethane	ND	4.8
Chlorobenzene	ND	4.8
Bromoform	ND	9.6
1,1,2,2-Tetrachloroethane	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	75-128
Toluene-d8	88	80-120
Bromofluorobenzene	99	75-127

Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC206785	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79723
Units:	ug/Kg	Analyzed:	03/06/03

Analyte	Result	RL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	REC	Limits
1,2-Dichloroethane-d4	100	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	103	75-127

ND= Not Detected

RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC206854	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79723
Units:	ug/Kg	Analyzed:	03/06/03

Analyte	Result	RL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	REC	Limits
1,2-Dichloroethane-d4	96	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	101	75-127

Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC207135	Batch#:	79804
Matrix:	Water	Analyzed:	03/10/03
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	88	75-128
Toluene-d8	86	80-120
Bromofluorobenzene	95	75-127

ND= Not Detected

RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC206784	Diln Fac:	1.000
Matrix:	Soil	Batch#:	79723
Units:	ug/Kg	Analyzed:	03/06/03

Analyte	Spiked	Result	%RRC	Limits
1,1-Dichloroethene	50.00	50.71	101	70-131
Trichloroethene	50.00	50.38	101	79-120
Chlorobenzene	50.00	50.77	102	80-120

Surrogate	%RRC	Limits
1,2-Dichloroethane-d4	96	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	100	75-127

**Purgeable Halocarbons by GC/MS**

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC207134	Batch#:	79804
Matrix:	Water	Analyzed:	03/10/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	50.00	48.31	97	70-131
Trichloroethene	50.00	51.87	104	79-120
Chlorobenzene	50.00	53.40	107	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	75-128
Toluene-d8	87	80-120
Bromofluorobenzene	90	75-127



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	BH-01-7'	Diln Fac:	0.9259
MSS Lab ID:	163990-001	Batch#:	79723
Matrix:	Soil	Sampled:	03/04/03
Units:	ug/Kg	Received:	03/05/03
Basis:	as received	Analyzed:	03/06/03

Type: MS Lab ID: QC206791

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.3100	46.30	46.59	101	57-134
Trichloroethene	<0.2900	46.30	44.50	96	37-133
Chlorobenzene	<0.1400	46.30	44.22	96	42-128

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	75-128
Toluene-d8	88	80-120
Bromofluorobenzene	100	75-127

Type: MSD Lab ID: QC206792

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	46.30	45.00	97	57-134	3	20
Trichloroethene	46.30	44.70	97	37-133	0	21
Chlorobenzene	46.30	45.24	98	42-128	2	23

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	98	75-127



Purgeable Halocarbons by GC/MS

Lab #:	163990	Location:	Pacific/Webster Investig.
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-13	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	25.00
MSS Lab ID:	164029-006	Batch#:	79804
Matrix:	Soil	Sampled:	03/06/03
Units:	ug/Kg	Received:	03/06/03
Basis:	as received	Analyzed:	03/11/03

Type: MS Lab ID: QC207225

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<8.200	1,250	1,148	92	57-134
Trichloroethene	<7.900	1,250	1,197	96	37-133
Chlorobenzene	58.61	1,250	1,235	94	42-128

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	88	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	108	75-127

Type: MSD Lab ID: QC207226

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	1,250	1,174	94	57-134	2	20
Trichloroethene	1,250	1,243	99	37-133	4	21
Chlorobenzene	1,250	1,274	97	42-128	3	23

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	75-128
Toluene-d8	89	80-120
Bromofluorobenzene	113	75-127

RPD= Relative Percent Difference