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April 16, 2004

Mr. Don Hwang  
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1131 Harbor Bay Parkway, Suite 250  
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Alameda County  
APR 20 2004  
Environmental Health

Subject: 5725 Thornhill Drive, Oakland, California

Dear Don:

Enclosed for your review is SOMA's report entitled "Soil and Groundwater Investigation and Monitoring Well Installation Report" for the subject site.

If you have any questions or comments, please call me at (925) 244-6600. Your time is greatly appreciated in reviewing this report.

Sincerely

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist



Enclosure

cc: Mr. Mo Mashhoon



**ENVIRONMENTAL ENGINEERING, INC**  
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R0317

## **SOIL AND GROUNDWATER INVESTIGATION AND MONITORING WELL INSTALLATION REPORT**

**5725 Thornhill Drive  
Oakland, California**

April 16, 2004

Project 2832

Prepared for

**Mr. Mo Mashhoon  
1721 Jefferson Street  
Oakland, California**

Prepared by

**SOMA Environmental Engineering, Inc.  
2680 Bishop Drive, Suite 203  
San Ramon, California**

## CERTIFICATION

This report has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Mr. Mo Mashhoon, the former property owner of 5725 Thornhill Drive, Oakland, California. This report includes the details of the soil and groundwater investigation and monitoring well installation as detailed in the original workplan by Aqua Science Engineers, Inc., dated March 22, 2002, and SOMA's subsequent addendums, dated December 29, 2003 and January 29, 2004. The Alameda County Health Care Services approved the workplan and addenda in their letter, "Fuel Leak Case No. RO0000317", dated February 3, 2004.



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



Alameda County  
APR 29 2004  
Environmental Health

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## **1.0 INTRODUCTION**

This report has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Mr. Mo Mashhoon, the former property owner of 5725 Thornhill Drive, Oakland, California (the "Site"). This investigation has been conducted in accordance with the original workplan prepared by Aqua Science Engineers, Inc., along with two SOMA workplan addendums, dated December 29, 2003 and January 29, 2004. This report has been prepared to comply with the Alameda County Health Care Services' (ACHCS) workplan addendum approval letter, dated February 3, 2004.

## **2.0 BACKGROUND**

As shown in Figure 1, the Site is an active ARCO station located at 5725 Thornhill Drive, Oakland, California. The Site is bordered on the northwest by residential property, on the northeast by commercial property, on the southeast by Thornhill Drive, and on the southwest by church property. The subject site has been a gasoline service station since the 1950s.

### **2.1 Previous Activities**

In November 1998, Penn Environmental removed a 550-gallon steel underground waste oil tank (WOT) from the Site. Soil samples collected from the WOT excavation contained up to 1,100,000  $\mu\text{g}/\text{kg}$  total petroleum hydrocarbons as gasoline (TPH-g), 2,700,000  $\mu\text{g}/\text{kg}$  total petroleum hydrocarbons as diesel (TPH-d) and 4,200,000  $\mu\text{g}/\text{kg}$  total petroleum hydrocarbons as motor oil (TPH-Mo).

On February 4, 1999, Penn Environmental overexcavated the contaminated soil surrounding the former WOT. After Penn Environmental removed the contaminated backfill for off-site disposal, Aqua Science Engineers, Inc., (ASE) collected confirmation soil samples from two sidewalls of the excavation. Since

the bottom of the excavation was saturated, sidewall samples were collected from the capillary fringe at approximately 5.5 feet below ground surface (bgs). As requested by Mr. Hernan Gomez of the Oakland Fire Department, the soil samples were analyzed for TPH-g, TPH-d, TPH-Mo, benzene, toluene, ethyl benzene and total xylenes (collectively referred to as BTEX) and methyl tertiary butyl ether (MtBE) using EPA Method 8020. The only compound detected in one of these two soil samples was MtBE at 40 µg/kg.

In July 1999, ASE drilled borehole BH-A in the vicinity of the former WOT using a Geoprobe hydraulic sampling rig, in order to collect groundwater samples for analysis, and to collect samples to analyze for parameters requested by the City of Oakland. No halogenated volatile organic compounds (HVOCs), semi-volatile organic compounds (SVOCs) or polychlorinated biphenols (PCBs) were detected in the soil and groundwater samples collected from the borehole. None of the metal concentrations detected in the soil sample exceeded United States Environmental Protection Agency (US EPA) Region IX preliminary remediation goals (PRGs) for residential soil. As shown in Table 1, total petroleum hydrocarbons were detected in groundwater samples collected from the borehole at 1,700 µg/L in the gasoline range, 10,000 µg/L in the diesel range and 4,700 µg/L in the motor oil range. The only compounds that were detected at concentrations above the California Department of Health Services' (DHS) maximum contaminant levels (MCLs) for drinking water were MtBE and cadmium.

On September 6, 2000, ASE drilled soil boreholes BH-B and BH-C at the Site, using a Geoprobe hydraulic sampling rig. Borehole BH-B was located at the southwest corner of the property. The soil sample collected from borehole BH-B at 7.5 feet bgs contained 240,000 µg/kg TPH-g, 370,000 µg/kg TPH-d, 43 µg/kg benzene, and 130 µg/kg ethyl benzene. The groundwater samples collected from this borehole contained 12,000 µg/L TPH-g, 11,000 µg/L TPH-d, 420 µg/L TPH-Mo, 44 µg/L benzene, 360 µg/L ethyl benzene, 49 µg/L total xylenes, and 4,300

µg/L MtBE. Borehole BH-C was drilled off-site, to the west, near the underground creek conduit. There were no compounds detected above the laboratory reporting limits in the soil sample collected in borehole BH-C. However, groundwater collected from this borehole contained 7,300 µg/L TPH-g, 25,000 µg/L TPH-d, 620 µg/L TPH-Mo, and 5,300 µg/L MtBE.

On October 23, 2000, ASE drilled soil boreholes BH-D and BH-E, at the Site, using a Geoprobe hydraulic sampling rig. ASE also collected water samples from Temescal Creek. The soil sample collected from borehole BH-D at 11 feet bgs contained 7.4 µg/kg ethyl benzene, 23 µg/kg total xylenes, and 330 µg/kg MtBE. Groundwater collected from boring BH-D contained 13,000 µg/L TPH-g, 110,000 µg/L TPH-d, 18,000 µg/L TPH-Mo, 180 µg/L benzene, 490 µg/L ethyl benzene, 1,000 µg/L total xylenes, and 16,000 µg/L MtBE. The soil sample collected from borehole BH-E at 9.5 feet bgs contained 37 µg/kg MTBE. Groundwater collected from this borehole contained 0.95 µg/L toluene, 1.8 µg/L total xylenes, and 730 µg/L MtBE. No hydrocarbons were detected in the water sample collected from Temescal Creek.

## **2.2 Regional Geology**

The U. S. Geologic Survey (USGS) mapped the Site within the San Antonio Formation. The USGS described the upper member of the San Antonio Formation as clay, silt, sand, and gravel, and the lower member of the unit as gravel with a silty clay matrix.

In developed urban areas such as the Bay Area, earthwork construction often involves the emplacement of artificial fill derived from nearby cuts or quarries. Artificial fill is emplaced over native earth materials to provide level building pads and base rock for roadways.

### **3.0 SCOPE OF WORK**

Based on the results of previous investigations and the ACHCS directive, the scope of work included assessing the impact of petroleum contaminants at the Site, and delineating the extent of the groundwater petroleum contaminants emanating from the subject site. SOMA organized the scope of work for this investigation into the following tasks:

- Task 1: Field Preparation: Permit Acquisition, Preparation of a Health and Safety Plan and Utility Clearance**
- Task 2: Subsurface Utility Clearance**
- Task 3: Drilling Temporary Well Boreholes**
- Task 4: Collecting Soil and Groundwater Samples**
- Task 5: Laboratory Analysis**
- Task 6: Decommissioning of Tank Backfill Wells**
- Task 7: Monitoring Well Installation**
- Task 8: Monitoring Well Development**
- Task 9: Surveying of Monitoring Well and Temescal Creek**

### **4.0 INVESTIGATIVE ACTIVITIES**

The following are descriptions of the above tasks.

#### **4.1 Field Preparation: Permit Acquisition, Preparation of a Health and Safety Plan and Utility Clearance**

Prior to commencing field activities, SOMA obtained the necessary drilling permits from the ACHCS and the City of Oakland Public Works Agency Office of Planning and Building and Transportation Services Division. The permits are attached as Appendix A.

A site-specific health and safety plan (HASP) was prepared by SOMA. The HASP was designed to address safety provisions during field activities. It provided

procedures to protect the field crew from physical and chemical hazards resulting from drilling and soil and groundwater sampling. The HASP established personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures and emergency action plans.

SOMA contacted Underground Service Alert (USA) to clear the drilling areas of underground utilities. Following USA clearance, a private utility locator surveyed the drilling areas and located additional subsurface conduits.

#### **4.2 Drilling Temporary Well Boreholes and Collecting Soil and Groundwater Samples**

On March 1 and 2, 2004, nine temporary well boreholes, HP-1 through HP-7, HP-9 and HP-10 were advanced by Gregg Drilling & Testing (Gregg) at the locations depicted in Figure 2. Due to the excessive traffic hazards and the disruption of local traffic flow posed by advancing HP-8 in the middle of the street, this borehole was not drilled. Field observations noted during the investigation, including the total depth of each borehole and their initial encountered water depth, are presented in the temporary wells borehole logs attached as Appendix B.

Using a Geoprobe sampling drill rig, Gregg advanced the boreholes using direct-push technology. During this process, a hollow steel sampler lined with polyethylene tubing was hydraulically driven to the designated depth while collecting continuous soil cores in four-foot long sections.

The temporary well boreholes were advanced to approximately 23 to 28 feet bgs. After splitting the polyethylene tubing to reveal the soil core, SOMA's field geologist logged the borehole lithology, looked for any evidence of petrochemical (i.e. odor or peculiar colors), and field-screened the soil cores with a photo-ionization detector (PID). Appendix B includes the temporary well borehole logs and additional remarks regarding field observations noted during the investigation.

#### **4.2.1 Collecting Soil Samples**

Based on the ACHCS's directive, dated February 3, 2004, at least five soil samples were collected from each borehole. Soil samples were collected with a minimum of one soil sample every 5 feet and at the interface between the groundwater and the unsaturated soils. Sampling also occurred at evident changes in lithology and at areas of obvious contamination. SOMA's field geologist selected soil samples from the 4-foot cores by noting petroleum hydrocarbon odors and cutting a section of the soil-filled polyethylene tubing with a clean hacksaw, covering both ends of the soil tube with Teflon tape, and capping the ends of the core section. Each sample tube was then labeled with a sample ID, the date, the time, and the sampler's initials. Once sealed and labeled, the soil samples were placed on ice in a cooler pending laboratory analysis. SOMA's field geologist maintained the samples under proper chain of custody procedures. Appendix C includes the laboratory reports and the Chain of Custody (COC) form for the soil samples.

#### **4.2.2 Collecting Groundwater Samples**

Groundwater samples were collected following the completion of each temporary well borehole. The field crew collected groundwater samples with a ½-inch diameter disposable bailer and decanted the groundwater samples into 40-milliliter (mL) VOA vials, pre-preserved with hydrochloric acid. SOMA's field geologist verified the 40-mL vials were sealed properly to prevent the inclusion of air bubbles. The samples were stored in a cooler with ice pending delivery to a California State certified analytical laboratory. Appendix D includes the laboratory reports and the COC form for the groundwater samples.

After the field geologist collected the groundwater sample from each temporary well borehole, the borehole was tremie grouted to surface grade with a cement-bentonite grout mixture.

### **4.3 Laboratory Analysis**

Soil and grab groundwater samples were submitted to Curtis & Tompkins, Ltd., Analytical Laboratories. The samples were analyzed for TPH-g, TPH-d and TPH-Mo using EPA Method 8015B; BTEX, MtBE, tert-Butyl Alcohol (TBA), Isopropyl Ether (DIPE), Ethyl tert-Butyl Ether (ETBE), Methyl tert-Amyl Ether (TAME), 1,2-Dichloroethane, 1,2- Dibromoethane (collectively referred to as the gas oxygenates) and Ethanol using EPA Method 8260B. The soil and groundwater analytical results are attached as Appendices C and D, respectively.

### **4.4 Decommissioning of Tank Backfill Wells**

During the Site's investigation activities, Gregg decommissioned the three existing on-site monitoring wells, MW-1, MW-2 and MW-3, under the supervision of SOMA. Inspection of the monitoring well casing revealed that the cement grout overfilled the well annulus leaving no spaces on the casing to connect pressure-grouting equipment. With the verbal approval of Mr. James Yoo of the Alameda County Public Works, the wells were tremie grouted, by use of a pressure pump, from the bottom of the well borehole to surface grade.

### **4.5 Monitoring Well Installation**

SOMA oversaw the installation of three monitoring well boreholes: SOMA-1, SOMA-2 and SOMA-3. Figure 2 shows the locations of the monitoring wells. On March 12, 2004, Woodward Drilling used a hollow stem auger drilling rig to drill each borehole to a designated depth of 28 feet bgs. In order to clear the monitoring well boreholes of utilities, each borehole was hand-augered to a depth of approximately 5 feet bgs.

Based on the soil analytical results during the soil and groundwater investigation phase, SOMA determined that petroleum hydrocarbons pervaded the entire saturated zone. Under the direction of a SOMA field geologist, the monitoring wells were screened to span only the saturated zone observed in the soil cores to



minimize screen lengths. Using factory-slotted schedule 40 PVC screen with 0.01" slots, the drilling crew screened SOMA-1 and SOMA-2 from 12 to 28 feet bgs and SOMA-3 from 16 to 28 feet bgs. The monitoring well boreholes were cased with threaded, blank and slotted schedule 40 PVC pipe. The drilling crew fitted PVC capping to the bottom of the casing without adhesives or tape, and the top of the casing was fitted with a locking well plug.

After the casing was set into the borehole, the monitoring well filter pack was emplaced outside the casing by slowly pouring 2/12 kiln-dried sand material into the annular space from the bottom of the borehole to approximately 2 feet above the screened interval. To prevent grout from infiltrating down into the filter material, a two-foot thick bentonite plug was placed above this filter material. Approximately one to two gallons of distilled water was then added to hydrate the bentonite pellets. After thoroughly hydrating the bentonite seal, the well was sealed from the top of the bentonite layer to about one-foot bgs with neat cement containing approximately 5% bentonite. The well was completed by installing a traffic-rated well vault into concrete. Monitoring well construction details are attached as Appendix E.

#### **4.6 Monitoring Well and Temescal Creek Surveying**

On March 19, 2004, licensed surveyors from Kier & Wright surveyed the casing elevations of the monitoring wells and water level elevations along Temescal Creek. Kier & Wright performed a horizontal and vertical survey on the wells in accordance with the requirements set forth by the State for the GeoTracker database. All well casing elevations were surveyed to mean sea level and latitude and longitude to sub-meter accuracy, using NAD 83. With the survey data, depths to groundwater were converted into groundwater surface elevations to determine the groundwater flow direction beneath the Site.

The water level elevations along Temescal Creek were surveyed in order to evaluate the hydraulic connection between the saturated sediments and

Temescal Creek. The elevation data was specifically used to determine whether or not Temescal Creek is a gaining stream. Monitoring well survey data and water level elevations along Temescal Creek are attached as Appendix F.

#### **4.7 Monitoring Well Development**

On April 7, 2004, Gregg developed the recently installed monitoring wells. The field crew used a bailer to remove sediment-laden water from the wells until the sediment load had substantially decreased. The wells were then purged until the groundwater clarity was clear and groundwater quality parameters stabilized. Approximately 10 to 15 casing volumes were removed from the wells. Appendix G presents the well development logs.

SOMA field personnel will sample the three monitoring wells in the second quarter of 2004. The results of the groundwater sampling event will be presented in SOMA's Second Quarter 2004 Groundwater Monitoring Report.

### **5.0 RESULTS**

#### **5.1 Site Geology and Hydrogeology**

Based on the borehole logs attached as Appendix B, the site investigation area is generally underlain by silty and sandy clay to a depth of 28 feet bgs – descriptive of the upper member of the San Antonio Formation. In the two boreholes advanced near the tank pit, first groundwater was encountered at approximately five feet bgs. In the other seven boreholes advanced away from the tank pit, first groundwater was encountered at approximately 13 to 16 feet bgs. Throughout the boreholes the field geologist noted a slight petroleum hydrocarbon odor.

On April 8, 2004, depths to groundwater were measured inside the newly installed groundwater monitoring wells. Using the well survey data by Kier & Wright, the groundwater elevations at monitoring well locations were calculated. Figure 3

shows the groundwater elevation contour on April 8, 2004. As Figure 3 shows, groundwater flow is to the south/southwest, towards Temescal Creek.

## **5.2 Laboratory Analytical Results**

As shown in Tables 2 and 3, SOMA summarized the laboratory analytical reports attached as Appendices C and D, respectively. The soil and groundwater analytical results are discussed below.

### **5.2.1 Soil Analytical Results**

Based on the petroleum hydrocarbon odors and PID readings, soil samples were analyzed for the specified constituents of concern as described in the approved workplan. As shown in Table 2, soil analytical results indicate detectable levels of TPH-g ranging from 2,600  $\mu\text{g}/\text{kg}$  in HP-5 (15.5-16') to 130,000  $\mu\text{g}/\text{kg}$  in HP-10 (18.5-19'). Analyses of the samples submitted from HP-2, HP-3, HP-4, HP-6, HP-7, HP-8 and HP-9 indicated non-detectable levels of TPH-g.

Soil analytical results indicated detectable levels of TPH-d ranging from 1,100  $\mu\text{g}/\text{kg}$  in HP-4 (14-14.5' and 19-19.5') to 210,000  $\mu\text{g}/\text{kg}$  in HP-2 (9-9.5'). The lab report indicated that only occasional soil samples contained non-detectable levels of TPH-d.

The lab reported that TPH-Mo range from 5,600  $\mu\text{g}/\text{kg}$  in HP9- (21.5-22') to 910,000  $\mu\text{g}/\text{kg}$  in HP-2 (9-9.5'). As with TPH-d, motor oil contaminants generally pervaded the soil samples.

Soil analytical results indicated detectable levels of MtBE ranging from 4.7  $\mu\text{g}/\text{kg}$  in HP-2 (25-25.5') to 270  $\mu\text{g}/\text{kg}$  in HP-10 (18.5-19'). All of the samples submitted from HP-1, HP-3, HP-4 and HP-7 indicated non-detectable levels of MtBE.

Soil analytical results indicate non-detectable levels of BTEX, gas oxygenates and Ethanol in all of the soil samples submitted from each of the borehole locations.

### **5.2.2 Groundwater Analytical Results**

As shown in Table 3, groundwater analytical results indicate detectable levels of TPH-g in HP-1 at 4,200 µg/L, HP-2 at 360 µg/L, HP-5 at 6,700 µg/L, HP-6 at 250 µg/L and HP-10 at 9,700 µg/L. A contour map showing TPH-g concentrations in groundwater is shown in Figure 4.

Groundwater analytical results indicated detectable levels of TPH-d ranged from 160 µg/L in HP-9 to 21,000 µg/L in HP-10. Detectable TPH-Mo concentrations ranged from 650 µg/L in HP-5 to 58,000 µg/L in HP-2. Contour maps showing the TPH-d and TPH-Mo concentrations in the groundwater are shown in Figures 5 and 6, respectively.

Groundwater analytical results indicated detectable levels of MtBE in HP-1 at 11 µg/L, HP-2 at 20 µg/L, HP-5 at 33 µg/L, HP-6 at 8.1 µg/L, HP-9 at 440 µg/L and HP-10 at 1,100 µg/L. A contour map showing MtBE concentrations in the groundwater is shown in Figure 7.

Groundwater analytical results indicated non-detectable levels of BTEX, gas oxygenates and Ethanol in all of the groundwater samples submitted from each of the borehole locations, with the exceptions of HP-6 at 1.5 µg/L of toluene, HP-5 and HP-6 at 0.7 µg/L and 2.5 µg/L, respectively, of total xylenes.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

The temporary well borehole logs show underlying sediments generally consist of silty and sandy clays, with intervening layers of loose to medium dense and fine to

medium gravel. Based on the results of this investigation, the subsurface lithology confirms the USGS mapping.

SOMA decommissioned and replaced the previously existing tank pit wells with three new groundwater monitoring wells. The new wells were installed into native soil adjacent to the existing UST pit to verify the groundwater flow direction and to monitor the groundwater quality in the UST area.

The results of SOMA's soil and groundwater investigation confirm the existence of a petroleum hydrocarbon plume migrating away from the Site. Based on SOMA's investigation, the plume exists along the southern half of the Site and appears to originate from the pump islands. Groundwater analytical results do not indicate that the former USTs have significantly impacted the Site.

As the results of this investigation indicate, the upgradient and lateral extent of the groundwater plumes have been delineated. However, the full downgradient extent of the groundwater chemical plume has not yet been defined. Elevated concentrations of groundwater contaminants exist at the southern property corner, and the groundwater plume migrated off-site to the south, at least 60 feet from the Site. Due to the high solubility and mobility of MtBE, it appears that the MtBE plume has migrated beyond the most distant borehole.

Comparing the groundwater elevation with that of Temescal Creek's surface-water elevation indicates that the elevation of the groundwater in close proximity of Temescal Creek is identical to the surface elevation of the Temescal Creek. Since the groundwater elevation, due to the recent rainfall events, is at its peak levels, it is conceivable that during upcoming dry periods the groundwater elevation would fall significantly below the surface water elevations of Temescal Creek. Therefore, it would be anticipated that Temescal Creek would remain a losing stream throughout the year.

In addition, ASE's stream sampling results indicated no detectable levels of petroleum hydrocarbons and MtBE. This further confirms that the Site's related contaminants are not discharging/ impacting Temescal Creek.

It should be noted that the groundwater elevation in close proximity of Temescal Creek is based on extrapolation of the groundwater elevations in the on-site wells. Additional off-site monitoring wells are needed for:

- 1) An accurate assessment of the hydrogeologic conditions in the off-site areas;
- 2) Delineating the horizontal extent of the MtBE plume in close proximity of Temescal Creek; and
- 3) Verifying the stability of the chemical plume and other attenuation parameters.

SOMA will then use all the available data to evaluate the Site's regulatory status and possibly propose "No Further Action", if warranted.

## 7.0 REFERENCES

Alameda County Health Care Services, February 3, 2004. "Fuel Leak Case No. RO0000317; Mash Petroleum, 5725 Thornhill Drive, Oakland, California".

Aqua Science Engineers, Inc., March 22, 2002. "Workplan for Soil and Groundwater Assessment at 5725 Thornhill Drive, Oakland, California".

Radbruch, Dorothy H., 1969, Geologic Quadrangle Maps of the United States Aerial and Engineering Geology of the East Quadrangle California: Department of the Interior United States Geologic. Published by the U.S. Geological Survey, Washington, D.C.

SOMA Environmental Engineering, Inc., January 29, 2004. "Second Addendum to the Approved Workplan; Fuel Leak Case No. Ro0000317; Mash Petroleum, 5725 Thornhill Drive, Oakland, California".

SOMA Environmental Engineering, Inc., December 29, 2003. "Addendum to the Approved Workplan; Fuel Leak Case No. Ro0000317; Mash Petroleum, 5725 Thornhill Drive, Oakland, California".

# Tables



**TABLE 1**  
**ASE Groundwater Analytical Data**  
**5725 Thornhill Drive Oakland, CA**  
**1999-2000**

Temporary Well Borehole Field ID	Date Sampled	TPH-Gasoline (µg/L)	TPH-Diesel (µg/L)	TPH-Motor Oil (µg/L)	MtBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)
BH-A	08/99	1,700	10,000	4,700	NA	NA	NA	NA	NA
BH-B	09/06/00	12,000	11,000	420	4,300	44	NA	360	49
BH-C	09/06/00	7,300	25,000	620	5,300	NA	NA	NA	NA
BH-D	10/23/00	13,000	110,000	18,000	16,000	180	NA	490	1,000
BH-E	10/23/00	NA	NA	NA	730	NA	0.95	NA	1.8

Notes:

- (1) µg/L= micrograms per Liter
- (2) NA= Analytical Data Not Available

**TABLE 2**  
**Soil Analytical Data**  
**5725 Thornhill Drive Oakland, CA**  
**MARch 1-2, 2004**

Temporary Well Borehole Field ID	Date Sampled	TPH-Gasoline (µg/kg)	TPH-Diesel (µg/kg)	TPH-Motor Oil (µg/kg)	MtBE (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl benzene (µg/kg)	Total Xylenes (µg/kg)
HP1- (5-5.5')	03/01/04	<930	7,800 <sup>HY</sup>	62,000	<4.5	<4.5	<4.5	<4.5	<4.5
HP1- (9-9.5')	03/01/04	16,000 <sup>Y</sup>	6,000 <sup>HY</sup>	17,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP1- (14.5-15')	03/01/04	<1,100	5,400 <sup>HY</sup>	19,000	<4.9	<4.9	<4.9	<4.9	<4.9
HP1- (19.5-20')	03/01/04	<970	2,000 <sup>Y</sup>	<5,000	<4.5	<4.5	<4.5	<4.5	<4.5
HP1- (24.5-25')	03/01/04	<1,000	1,500 <sup>Y</sup>	<5,000	<4.6	<4.6	<4.6	<4.6	<4.6
HP2- (4-4.5')	03/01/04	<1,100	3,500 <sup>HY</sup>	51,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP2- (9-9.5')	03/01/04	<1,100	210,000 <sup>HY</sup>	910,000	<4.3	<4.3	<4.3	<4.3	<4.3
HP2- (14-14.5')	03/01/04	<1,100	5,200 <sup>HY</sup>	34,000	6.3	<4.6	<4.6	<4.6	<4.6
HP2- (19-19.5')	03/01/04	<970	10,000 <sup>HY</sup>	59,000	<4.4	<4.4	<4.4	<4.4	<4.4
HP2- (25-25.5')	03/01/04	<950	6,500 <sup>HY</sup>	39,000	4.7	<4.3	<4.3	<4.3	<4.3
HP3- (5.5-6')	03/01/04	<950	23,000 <sup>HY</sup>	78,000	<4.8	<4.8	<4.8	<4.8	<4.8
HP3- (10-10.5')	03/01/04	<1,000	22,000 <sup>HY</sup>	65,000	<5.0	<5.0	<5.0	<5.0	<5.0
HP3- (16-16.5')	03/01/04	<930	17,000 <sup>HY</sup>	77,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP3- (21-21.5')	03/01/04	<1,100	11,000 <sup>HY</sup>	60,000	<4.5	<4.5	<4.5	<4.5	<4.5
HP3- (26-26.5')	03/01/04	<980	8,300 <sup>HY</sup>	39,000	<4.2	<4.2	<4.2	<4.2	<4.2
HP4- (4-4.5')	03/01/04	<1.0	3,000 <sup>HY</sup>	17,000	<4.6	<4.6	<4.6	<4.6	<4.6
HP4- (9-9.5')	03/01/04	<0.92	<1,000	<5,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP4- (14-14.5')	03/01/04	<1,000	1,100 <sup>HY</sup>	11,000	<4.9	<4.9	<4.9	<4.9	<4.9
HP4- (19-19.5')	03/01/04	<910	1,100 <sup>Y</sup>	<5,000	<4.8	<4.8	<4.8	<4.8	<4.8
HP4- (24-24.5')	03/01/04	<960	5,000 <sup>HY</sup>	42,000 <sup>H</sup>	<4.7	<4.7	<4.7	<4.7	<4.7
HP5- (5-5.5')	03/01/04	<1,000	22,000 <sup>HY</sup>	140,000	17	<4.4	<4.4	<4.4	<4.4
HP5- (10-10.5')	03/01/04	<1,100	<1,000	<5,000	10	<4.3	<4.3	<4.3	<4.3
HP5- (15.5-16')	03/01/04	2,600 <sup>HY</sup>	6,100 <sup>HY</sup>	33,000	24	<4.5	<4.5	<4.5	<4.5
HP5- (19.5-20')	03/01/04	<1,100	1,700 <sup>Y</sup>	<5,000	<4.6	<4.6	<4.6	<4.6	<4.6
HP5- (27-27.5')	03/01/04	9,100 <sup>HY</sup>	2,800 <sup>Y</sup>	<5,000	11	<4.9	<4.9	<4.9	<4.9
HP6- (4-4.5')	03/01/04	<1,100	<1,000	<5,000	<4.3	<4.3	<4.3	<4.3	<4.3
HP6- (9-9.5')	03/01/04	<960	5,400 <sup>HY</sup>	30,000	<4.3	<4.3	<4.3	<4.3	<4.3
HP6- (14-14.5')	03/01/04	<910	2,200 <sup>HY</sup>	16,000	<4.6	<4.6	<4.6	<4.6	<4.6
HP6- (19-19.5')	03/01/04	<910	2,500 <sup>HY</sup>	8,100	4.9	<4.5	<4.5	<4.5	<4.5
HP6- (23.5-24')	03/01/04	<960	3,200 <sup>HY</sup>	19,000	<4.6	<4.6	<4.6	<4.6	<4.6
HP6- (27.5-28')	03/01/04	<1,00	2,200 <sup>Y</sup>	<5,000	7.0	<4.7	<4.7	<4.7	<4.7

**TABLE 2**  
**Soil Analytical Data**  
**5725 Thornhill Drive Oakland, CA**  
**March 1-2, 2004**

Temporary Well Borehole Field ID	Date	TPH-Gasoline (µg/L)	TPH-Diesel (µg/L)	TPH-Motor Oil (µg/L)	MtBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)
HP7- (6-6.5')	03/02/04	<970	6,300 <sup>HY</sup>	16,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP7- (11.5-12')	03/02/04	<1,000	2,000 <sup>HY</sup>	6,400 <sup>HY</sup>	<4.8	<4.8	<4.8	<4.8	<4.8
HP7- (16.5-17')	03/02/04	<930	3,700 <sup>Y</sup>	<5,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP7- (22-22.5')	03/02/04	<920	<1,000	<5,000	<5.0	<5.0	<5.0	<5.0	<5.0
HP7- (26.5-27')	03/02/04	<970	11,000 <sup>HY</sup>	15,000	<5.0	<5.0	<5.0	<5.0	<5.0
HP9- (7-7.5')	03/02/04	<1,100	1,900 <sup>Y</sup>	<5,000	<4.4	<4.4	<4.4	<4.4	<4.4
HP9- (11.5-12')	03/02/04	<960	4,300 <sup>HY</sup>	53,000 <sup>H</sup>	<4.8	<4.8	<4.8	<4.8	<4.8
HP9- (16-16.5')	03/02/04	<990	5,300 <sup>HY</sup>	52,000 <sup>H</sup>	<4.6	<4.6	<4.6	<4.6	<4.6
HP9- (21.5-22')	03/02/04	<980	<1,000	5,600	28	<5.0	<5.0	<5.0	<5.0
HP9- (26.5-27')	03/02/04	<1,100	<990	<5,000	36	<4.4	<4.4	<4.4	<4.4
HP10- (6-6.5')	03/02/04	<940	5,700 <sup>HY</sup>	72,000	<4.7	<4.7	<4.7	<4.7	<4.7
HP10- (11.5-12')	03/02/04	16,000 <sup>Y</sup>	16,000 <sup>LY</sup>	<5,000	94	<5.0	<5.0	<5.0	<5.0
HP10- (18.5-19')	03/02/04	130,000 <sup>Y</sup>	58,000 <sup>HL<sup>Y</sup></sup>	16,000	270	<5.0	<5.0	<5.0	<5.0
HP10- (19.5-20')	03/02/04	<920	<990	<5,000	11	<4.8	<4.8	<4.8	<4.8
HP10- (22.5-23')	03/02/04	3,700 <sup>Y</sup>	8,000 <sup>HY</sup>	22,000	<4.9	<4.9	<4.9	<4.9	<4.9

Notes:

- (1) µg/L= micrograms per Liter
- (2) <= Not detected at or above the laboratory reporting limit
- (3) <sup>H</sup> Heavier hydrocarbons contributed to the quantification
- (4) <sup>L</sup> Lighter hydrocarbons contributed to the quantification
- (5) <sup>Y</sup> Sample exhibits chromatographic pattern which does not resemble standard

**TABLE 3**  
**Groundwater Analytical Data**  
**5725 Thornhill Drive Oakland, CA**  
**March 1-2, 2004**

Temporary Well Borehole Field ID	Date Sampled	TPH-Gasoline (µg/L)	TPH-Diesel (µg/L)	TPH-Motor Oil (µg/L)	MtBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)
HP-1	03/01/04	4,200 <sup>Y</sup>	5,900 <sup>HLY</sup>	11,000	11	<0.5	<0.5	<0.5	<0.5
HP-2	03/01/04	360 <sup>Y</sup>	10,000 <sup>HY</sup>	58,000	20	<0.5	<0.5	<0.5	<0.5
HP-3	03/01/04	<50	3,500 <sup>HY</sup>	5,700	<0.5	<0.5	<0.5	<0.5	<0.5
HP-4	03/01/04	<50	740 <sup>HY</sup>	6,300 <sup>H</sup>	<0.5	<0.5	<0.5	<0.5	<0.5
HP-5	03/01/04	6,700 <sup>Y</sup>	3,600 <sup>HLY</sup>	650	33	<0.5	<0.5	<0.5	0.7
HP-6	03/01/04	250 <sup>HY</sup>	370 <sup>HY</sup>	730	8.1	<0.5	1.5	<0.5	2.5
HP-7	03/02/04	<50	1,600 <sup>HY</sup>	1,400	<0.5	<0.5	<0.5	<0.5	<0.5
HP-9	03/02/04	<50	160 <sup>HY</sup>	1,700	440	<1.3	<1.3	<1.3	<0.5
HP-10	03/02/04	9,700 <sup>Y</sup>	21,000 <sup>HLY</sup>	5,700	1,100	<3.6	<3.6	<3.6	<0.5
MW-1	03/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	03/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	03/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

- (1) µg/L= micrograms per Liter
- (2) <= Not detected at or above the laboratory reporting limit stated
- (3) <sup>H</sup> Heavier hydrocarbons contributed to the quantification
- (4) <sup>L</sup> Lighter hydrocarbons contributed to the quantification
- (5) <sup>Y</sup> Sample exhibits chromatographic pattern which does not resemble standard
- (6) Methyl tert-Amyl Ether (TAME) was detected in HP-9 at 5.2 µg/L and in HP-10 at 13 µg/L
- (7) Monitoring Wells MW-1, MW-2 and MW-3 were decommisioned as per the Alameda County Health Care Services' directive

# Figures



Figure 1: Site vicinity map.



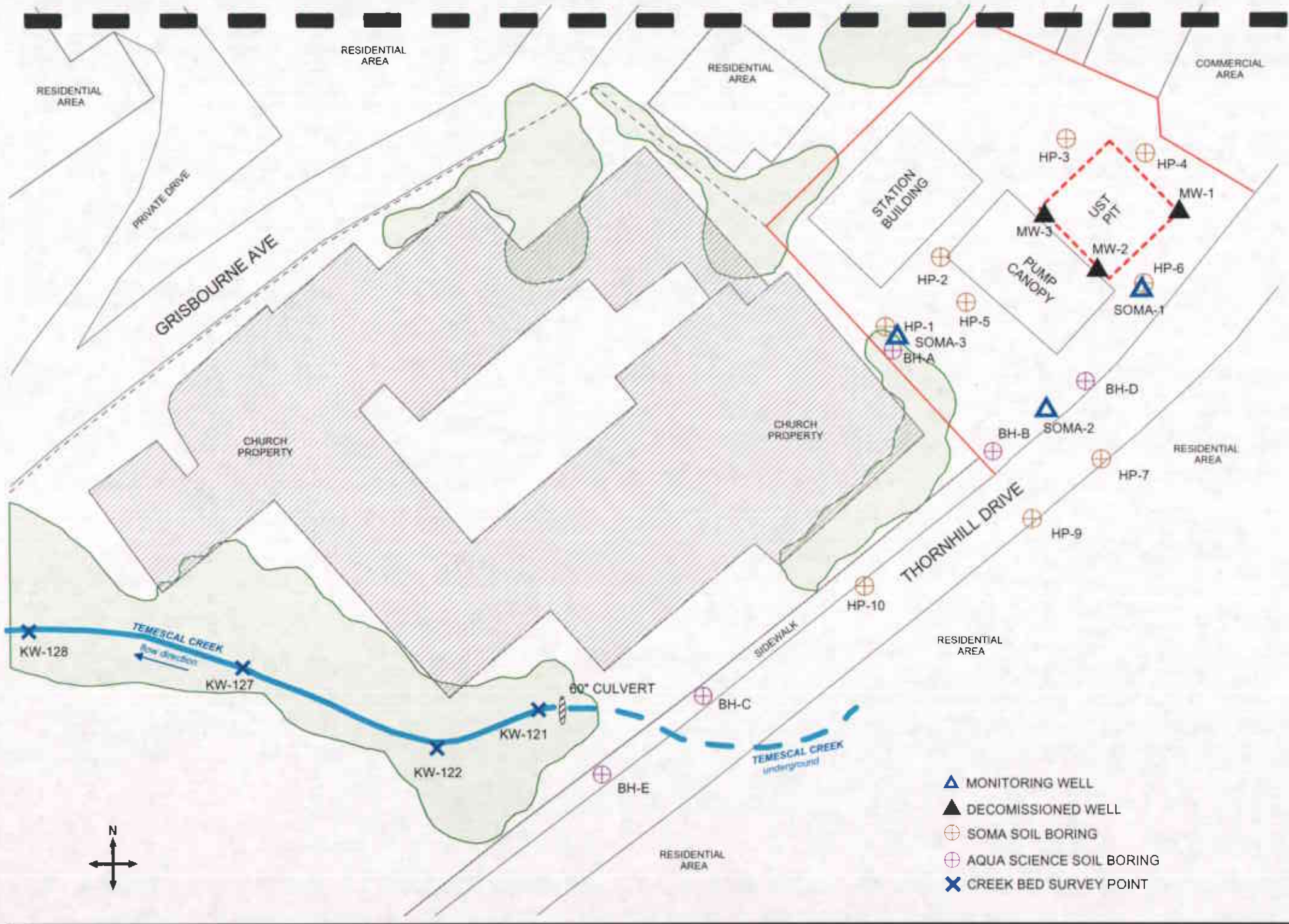


Figure 2: Site map showing locations of monitoring wells, soil borings, creekbed survey points, decommissioned UST backfill wells, and previously drilled soil borings.



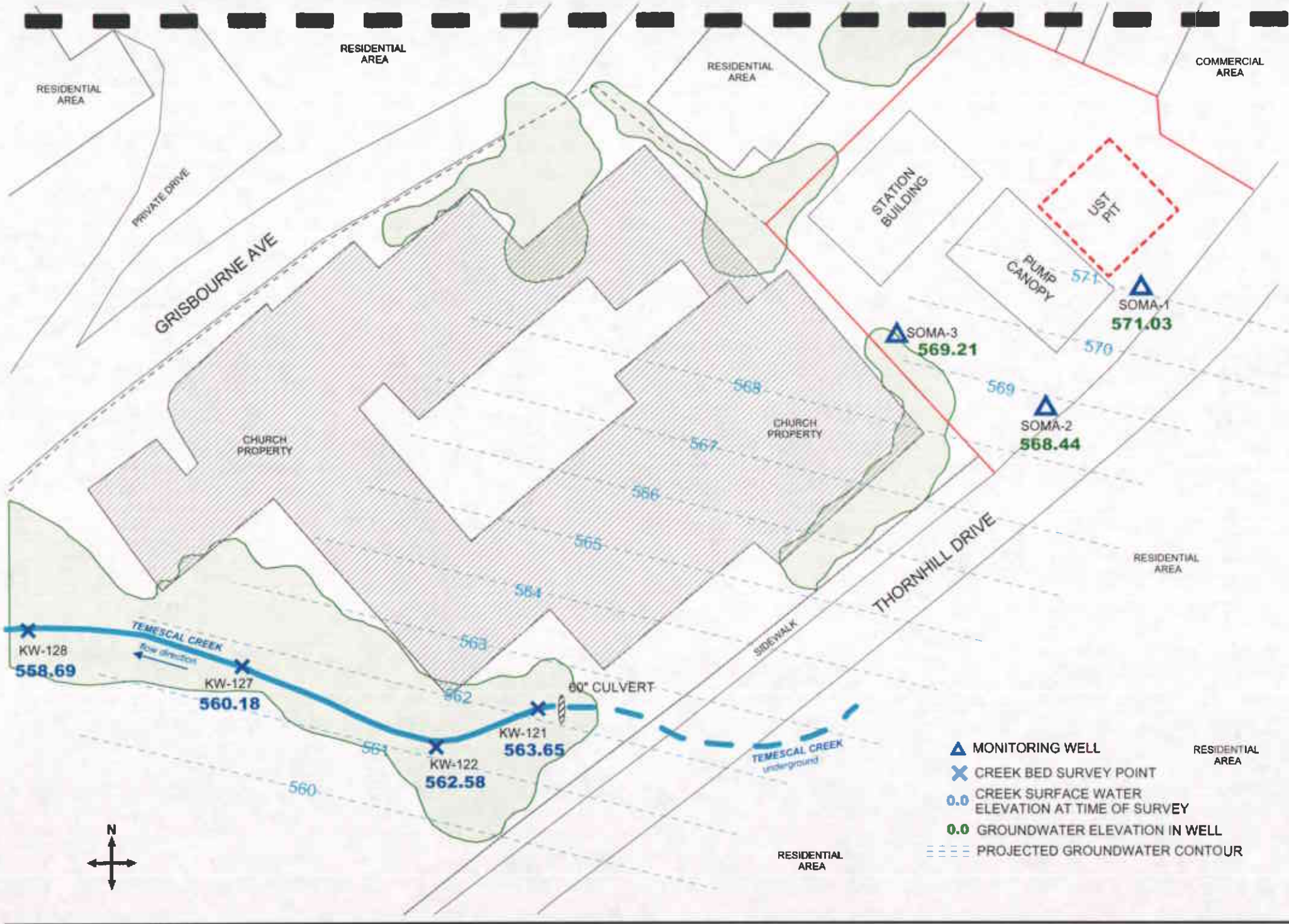
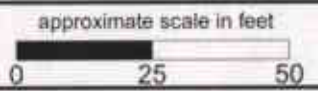


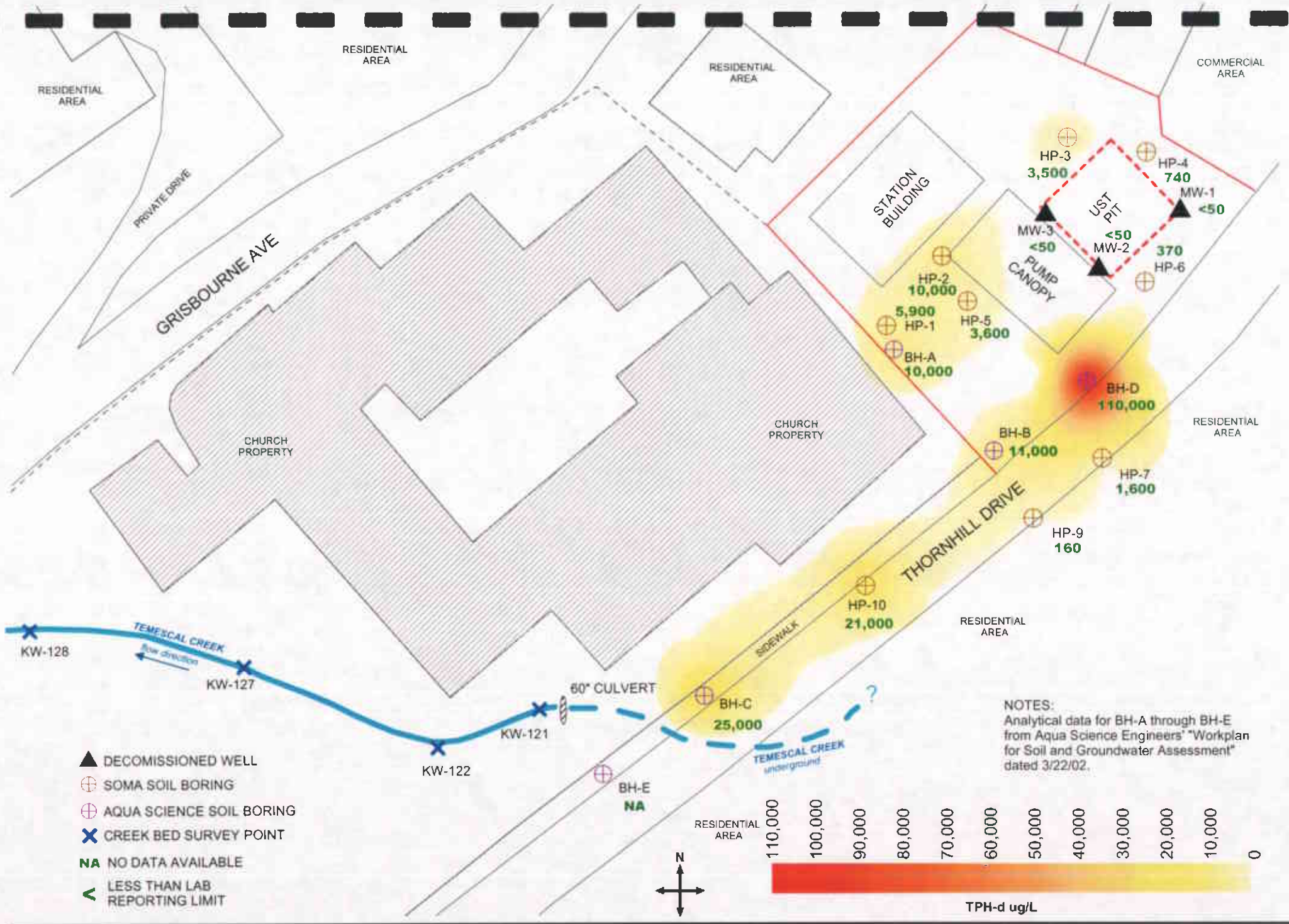
Figure 3: Projected groundwater elevation contour map in feet. April 8, 2004.











NOTES:  
Analytical data for BH-A through BH-E from Aqua Science Engineers' "Workplan for Soil and Groundwater Assessment" dated 3/22/02.

Figure 5: Contour map of TPH-d concentrations in the groundwater.



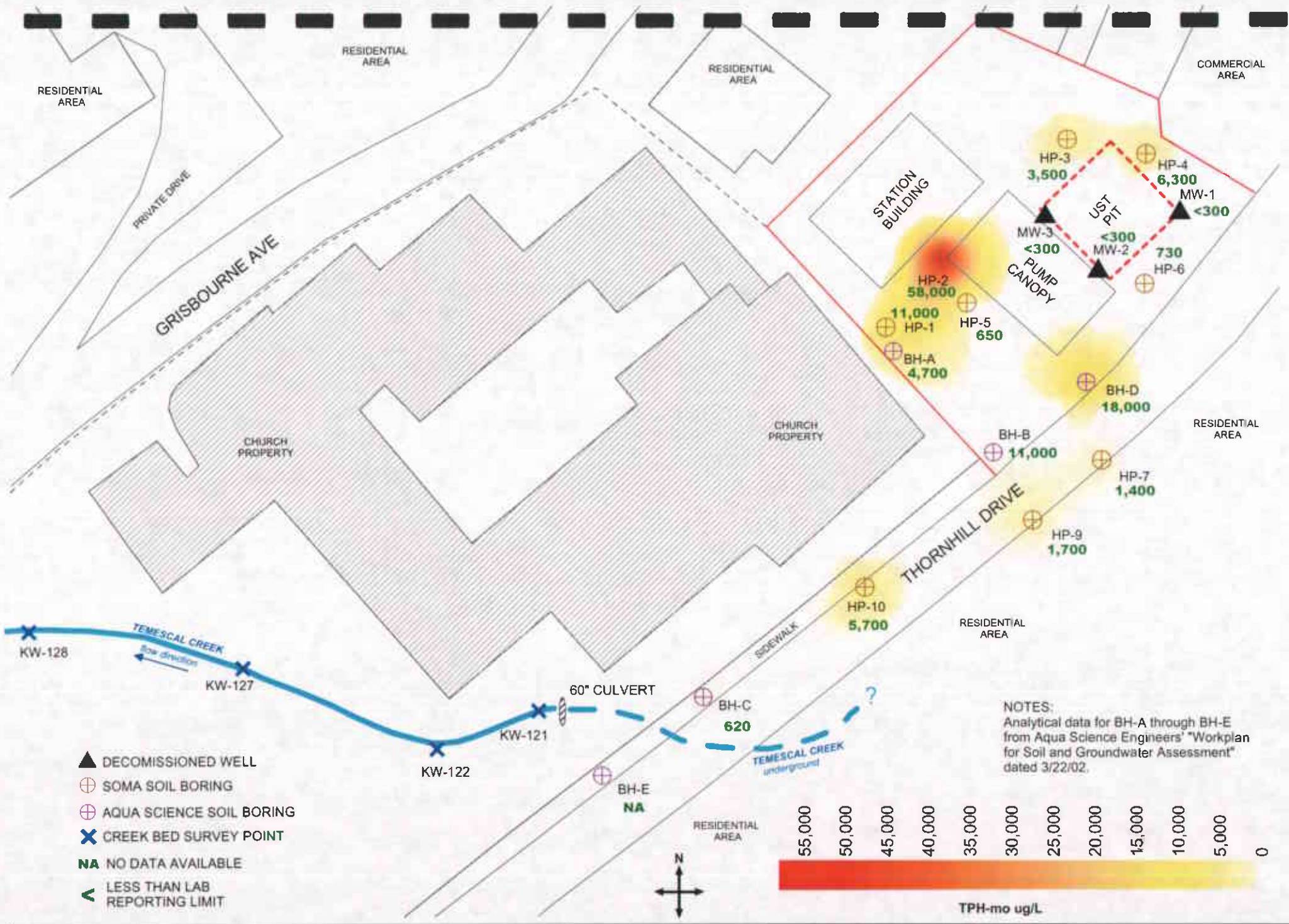
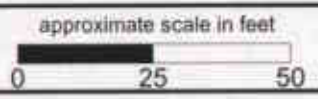


Figure 6: Contour map of TPH-Mo concentrations in the groundwater.

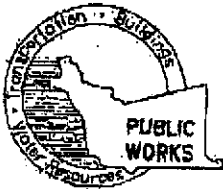






# **Appendix A**

**Drilling Application, Excavation  
and Obstruction Permits**



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James Yoo  
FAX (510) 782-1939

APPLICANTS PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

#### DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-0173  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

#### PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT  
Name: Mo Mashhoon  
Address: 5725 Thornhill Drive (510) 891-9988  
City: Oakland Zip: 94611

#### 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.

APPLICANT  
Name: SOMA Environmental Engineering  
Address: 2680 Bishop Drive (925) 244-6600  
City: San Ramon Zip: 94583

#### 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.

#### TYPE OF PROJECT

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

#### 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"/>

#### D. GEOTECHNICAL / Contamination

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

#### DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	Direct Push	

#### E. CATHODIC

Fill hole annular zone with concrete placed by tremie.

DRILLER'S NAME Gregg Drilling & Testing

#### F. WELL DESTRUCTION

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

DRILLER'S LICENSE NO. 485165

#### G. SPECIAL CONDITIONS

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

#### WELL PROJECTS

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

7" vertical OK as per record - 2-23-04"

#### GEOTECHNICAL PROJECTS

Number of Borings	<u>9</u>	Maximum	_____ ft.
Hole Diameter	<u>1 3/4</u> in.	Depth	<u>30</u> ft.

STARTING DATE March 1, 2004

COMPLETION DATE March 2, 2004

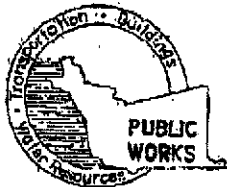
APPROVED \_\_\_\_\_

DATE 3-2-04

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

APPLICANT'S SIGNATURE Eric Jennings DATE 3/2/04

PLEASE PRINT NAME Eric Jennings Rev. 9-18-02



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. BAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James You  
FAX (510) 762-1939

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 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-0174  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Dr. (510) 891-9988  
City Oakland Zip 94611

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Drive (925) 244-6600  
City San Ramon Zip 94583

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Gregg Drilling & Testing

DRILLER'S LICENSE NO. 485165

WELL PROJECTS  
Drill Hole Diameter \_\_\_\_\_ in. Maximum \_\_\_\_\_ ft.  
Casing Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
Surface Seal Depth \_\_\_\_\_ ft. Owner's Well Number MW-1

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

STARTING DATE March 3, 2004

COMPLETION DATE March 3, 2004

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

APPLICANT'S SIGNATURE Eric Jennings DATE Feb 18, 2004

PLEASE PRINT NAME Eric Jennings Rev. 9-18-02

#### PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

- E. CATHODIC**
- Fill hole annulus zone with concrete placed by tremie.

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

#### G. SPECIAL CONDITIONS

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

APPROVED \_\_\_\_\_ DATE 3-2-04



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

#### WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James Yeo  
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 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-0175  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Drive (510) 891-9988  
City Oakland Zip 94611

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Drive Phone (925) 244-6600  
City San Ramon Zip 94583

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Gregg Drilling & Testing

DRILLER'S LICENSE NO. 485165

WELL PROJECTS  
Drill Hole Diameter \_\_\_\_\_ in. Maximum \_\_\_\_\_  
Casing Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
Surface Seal Depth \_\_\_\_\_ ft. Owner's Well Number MW-2

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

STARTING DATE March 3, 2004

COMPLETION DATE March 3, 2004

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

APPLICANT'S SIGNATURE Eric Jennings DATE Feb 19 2004

PLEASE PRINT NAME Eric Jennings Rev. 9-18-02

#### PERMIT CONDITIONS

Circled Permit Requirements Apply

##### A. GENERAL

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

##### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 30 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

##### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

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

##### D. GEOTECHNICAL

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

##### E. CATHODIC

Fill hole anode zone with concrete placed by tremie.

##### F. WELL DESTRUCTION

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

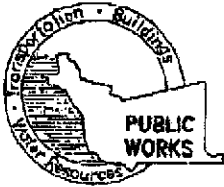
##### G. SPECIAL CONDITIONS

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

APPROVED [Signature] DATE 3-2-04



Feb 19 04 10:37a



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James Yoo  
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-0176  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Drive (510) 891-9988  
City Oakland Zip 94611

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Drive (925) 244-6600  
City San Ramon Zip 94583

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Gregg Drilling & Testing

DRILLER'S LICENSE NO. 485165

WELL PROJECTS  
Drill Hole Diameter \_\_\_\_\_ in. Maximum \_\_\_\_\_  
Casing Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
Surface Seal Depth \_\_\_\_\_ ft. Owner's Well Number MW-3

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

STARTING DATE March 3, 2004

COMPLETION DATE March 3, 2004

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

APPLICANT'S SIGNATURE: [Signature] DATE 03/18/2004

PLEASE PRINT NAME Eric Jennings Rev. 9-18-02

### PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

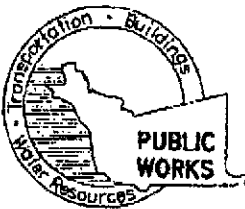
- E. CATHODIC**
- Fill hole annular zone with concrete placed by tremie.

- F. WELL DESTRUCTION** 7642
- Send a map of work site. A separate permit is required for wells deeper than 45 feet.

- G. SPECIAL CONDITIONS**

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

APPROVED [Signature] DATE 3-2-04



## ALAMEDA COUNTY PUBLIC WORKS AGENCY

### WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD, CA. 94544-1395

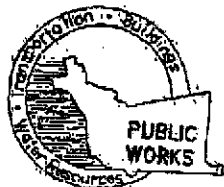
PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W04-0173

### WATER RESOURCES SECTION GROUNDWATER PROTECTION ORDINANCE

#### B#1-GENERAL CONDITIONS: GEOTECHNICAL & CONTAMINATION BOREHOLES

1. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
4. Permit is valid only for the purpose specified herein **March 1 to March 3, 2004**. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
5. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. BAYWARD CA. 94544-1395  
PHONE (510) 670-6633 Janet Yoo  
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 5725 Thornhill Drive  
Oakland, CA 94611

FOR OFFICE USE

PERMIT NUMBER W04-0179  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Drive Phone (510) 891-9988  
City Oakland Zip 94611

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Drive Phone (925) 244-6600  
City San Ramon Zip 94583

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Woodward Drilling

DRILLER'S LICENSE NO. 710079

WELL PROJECTS  
Drill Hole Diameter 6 in. Maximum Depth 30 ft.  
Casing Diameter 7 in. Owner's Well Number SOMA-1  
Surface Seal Depth 1.5 ft.

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

STARTING DATE March 12, 2004

COMPLETION DATE March 12, 2004

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

APPLICANT'S SIGNATURE [Signature] DATE FF9 18 2004

PLEASE PRINT NAME Eric Jennings

Rev. 9-18-02

### PERMIT CONDITIONS

Circle Permit Requirements Apply

#### A. GENERAL

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

#### B. WATER SUPPLY WELLS

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

#### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

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

#### D. GEOTECHNICAL

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

#### E. CATHODIC

Fill hole anodic zone with concrete placed by tremie.

#### F. WELL DESTRUCTION

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

#### G. SPECIAL CONDITIONS

MWH-1

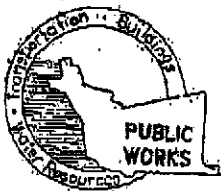
NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED

DATE

3-2-04

Feb 19 04 10:39a



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6633 James Yoo  
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-0180  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Dr. (510) 891-9988  
City Oakland Zip 94611

PERMIT CONDITIONS  
Circle Permit Requirements Apply

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Dr. (925) 244-6600  
City San Ramon Zip 94583

- 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
  - Cathodic Protection
  - Water Supply
  - Monitoring
  - Geotechnical Investigation
  - General
  - Contamination
  - Well Destruction

- 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
  - Municipal
  - Industrial
  - Replacement Domestic
  - Irrigation
  - Other

- 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:**
- Mud Rotary
  - Cable
  - Air Rotary
  - Other
  - Auger

- 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.

DRILLER'S NAME Woodward Drilling

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

DRILLER'S LICENSE NO. 710079

- 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 6 in. Maximum 30 ft.  
Casing Diameter 2 in. Depth 30 ft.  
Surface Seal Depth 1.5 ft. Owner's Well Number SOMA-2

- G. SPECIAL CONDITIONS** RAW # 7  
NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

**GEOTECHNICAL PROJECTS**  
Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

STARTING DATE March 12, 2004

APPROVED [Signature] DATE 3-2-04

COMPLETION DATE March 12, 2004

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

APPLICANT'S SIGNATURE [Signature] DATE Feb. 18, 2004

PLEASE PRINT NAME Eric Jennings Rev. 9-18-02



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-8633 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 5725 Thornhill Drive  
Oakland, CA 94611

PERMIT NUMBER W04-018  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name Mo Mashhoon  
Address 5725 Thornhill Blvd. (510) 891-9988  
City Oakland Zip 94611

APPLICANT  
Name SOMA Environmental Engineering  
Address 2680 Bishop Dr. (925) 244-6600  
City San Ramon Zip 94583

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S NAME Woodward Drilling

DRILLER'S LICENSE NO. 710079

WELL PROJECTS  
Drill Hole Diameter 6 in. Maximum 30 ft.  
Casing Diameter 2 in. Depth 30 ft.  
Surface Seal Depth 12 ft. Owner's Well Number SOMA-3  
5 FEET TO GROUND

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum \_\_\_\_\_  
Bore Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

STARTING DATE March 12, 2004

COMPLETION DATE March 12, 2004

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

APPLICANT'S SIGNATURE Eric Jennings DATE Feb. 18, 2004

BASE PRINT NAME Eric Jennings

Rev. 9-18-02

### PERMIT CONDITIONS

Circled Permit Requirements Apply

#### (A) GENERAL

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

#### B. WATER SUPPLY WELLS

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

#### (C) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

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

#### D. GEOTECHNICAL

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

#### E. CATHODIC

Fill hole anodic zone with concrete placed by tremie.

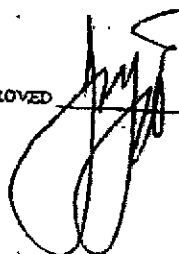
#### F. WELL DESTRUCTION

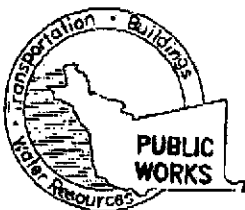
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

#### (G) SPECIAL CONDITIONS

MW#1

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

APPROVED  DATE 3-2-04



ALAMEDA COUNTY PUBLIC WORKS AGENCY  
WATER RESOURCES SECTION  
399 ELMHURST ST. HAYWARD, CA. 94544-1395  
PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W04-0179-0181

WATER RESOURCES SECTION  
GROUNDWATER PROTECTION ORDINANCE  
MWWI-GENERAL CONDITIONS: MONITORING WELL.

1. Prior to installation of any monitoring wells into any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
2. The minimum surface seal thickness two inches of cement grout placed by trowel.
3. All monitoring wells shall have a minimum surface cement seal depth of five (5) feet or the maximum depth practicable or twenty (20) feet.
4. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
5. Permittee, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
6. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
7. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Permit is valid from March 12 to March 12, 2004. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
8. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including: permit number and site map.
9. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

# APPLICATION FOR TRAFFIC CONTROL PLAN



*City of Oakland*

**Public Works Agency**  
Transportation Services Division

Requests may be faxed to (510) 238-7415  
Please Print. All items **MUST** be completed.  
Incomplete applications will be returned.  
**RENEWALS:** edit and fax your old approved plan  
Transportation Services Fee: \$80/hour

Permit Number:	_____
Reviewed By:	_____

10/2003

Contact Person: Eric Jennings Fax: (925) 244-6601  
 Name of Company: SOMA Environmental Engineering Phone: (925) 244-6600  
 Describe type of work to be performed:  
Drill three temporary boreholes using direct push technology.

Location of work: 5725 Thornhill Dr Between Grisborne Ave. And Grisborne Ave.

Work date (s): March 2, 2004  Mon-Fri  Sat-Sun Work Hours: 0700 to 1500

Sketch of work area. You may use the attach diagram to draw the sketch. Sketches (hand drawn or on striping plans) **MUST** include the following (incomplete submittals will be rejected):

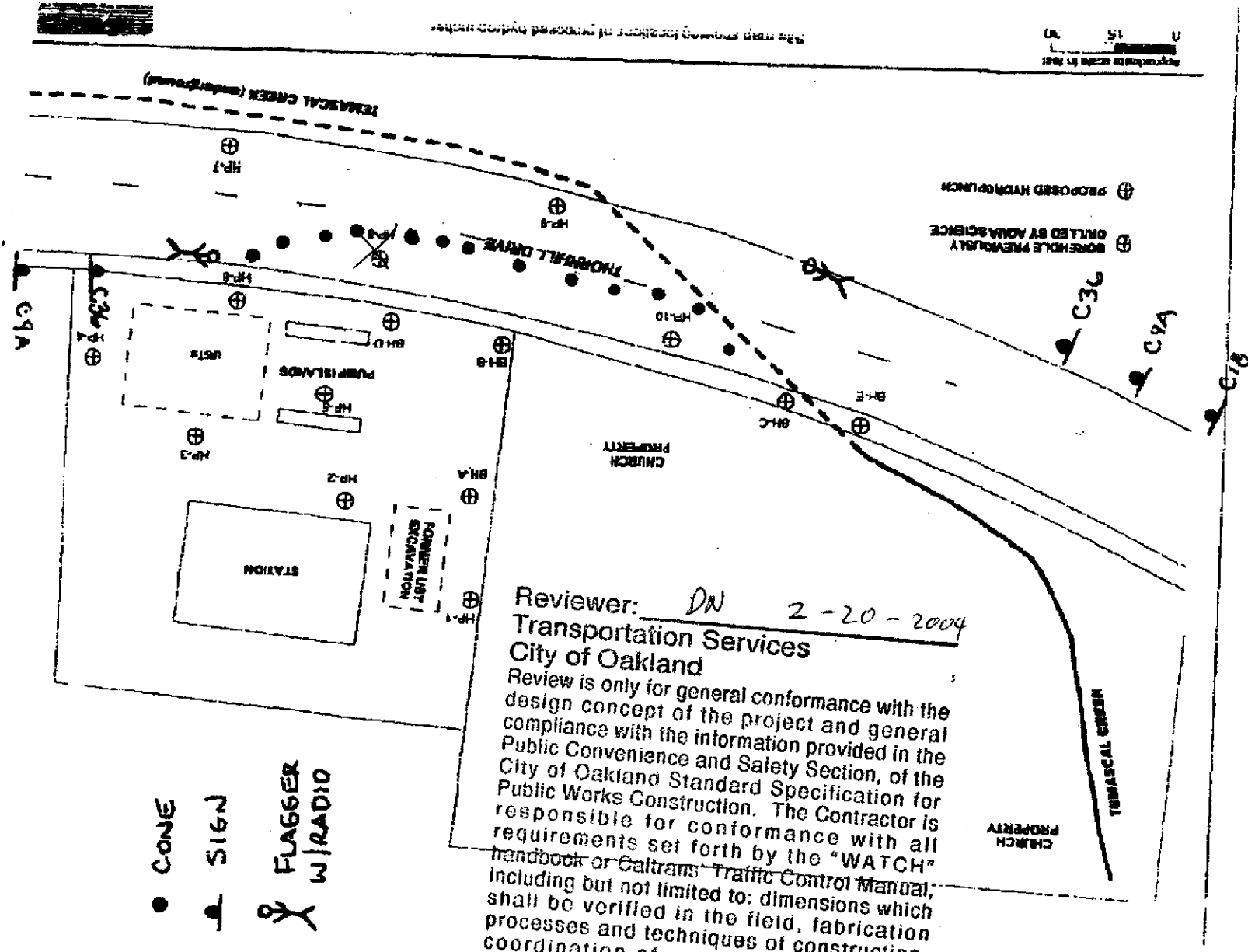
- a. Drawing (8 1/2 x 11 or 11 x 17) of the full width of all streets adjacent to the site. Include the entire block in which your work is located for every street that is adjacent to your site. Add attachments as required.
- b. Street Names, Direction of One Way Streets and North Arrow
- c. Roadway Striping (the lane lines and any pavement arrows for turn lanes) on each street
- d. Work Area (area you plan to use);
- e. Dimensions of street width (curb to curb), lane widths, sidewalk widths
- f. Locations of the advanced warning and construction signs

Copy of typical lane closure/detour plans from the "WATCH" handbook or Caltrans' Traffic Control Manual may be used, but **MUST** show all surrounding street names and staging area.

Transportation Service Division requires a traffic control plan for any Excavation or Obstruction Permit approval. The Contractor must schedule an appointment with Transportation Service Division staff at least three (3) working days prior to any work. Contractors that show up at the office without an appointment will be asked to make an appointment and come back at a later time. Traffic control plans shall follow the guidelines set forth by the "WATCH" handbook or Caltrans' Traffic Control Manual.

250 Frank H. Ogawa Plaza, Suite 4344 Oakland, CA 94612-2033 (510) 238-3466 FAX (510) 238-7415

C18



The main proposed location of proposed hydrounch

Approximate scale to feet  
1" = 15'

Reviewer: DN 2-20-2004  
 Transportation Services  
 City of Oakland  
 Review is only for general conformance with the design concept of the project and general compliance with the information provided in the Public Convenience and Safety Section, of the City of Oakland Standard Specification for Public Works Construction. The Contractor is responsible for conformance with all requirements set forth by the "WATCH" handbook or Caltrans Traffic Control Manual, including but not limited to: dimensions which shall be verified in the field, fabrication processes and techniques of construction, coordination of work, and satisfactory performance of all work



Job Site 5725 THORNHILL DR

Parcel# 048G-7420-007-00

Appl# X0400673

Descr  
soil boring

Permit Issued 02/26/04

Work Type EXCAVATION-PRIVATE P

USA #

Util Co. Job #  
Util Fund #:

Acctg#:

Owner MASH PETROLEUM INC

Applicant

Phone#

Lic# ---License Classes--

Contractor GREGG DRILLING & TESTING, INC. X

(510) 313-5800 485165 C57

Arch/Engr

Agent ERIC JENNINGS

Applic Addr 950 HOWE RD, MARTINEZ, CA., 94553

\$291.84 TOTAL FEES PAID AT ISSUANCE

\$51.00 Applic	\$205.00 Permit
\$.00 Process	\$23.04 Rec Mgmt
\$.00 Gen Plan	\$.00 Invstg
\$.00 Other	\$.00 Tech Enh

CITY OF OAKLAND JOB SITE OAKLAND

# **Appendix B**

## **Temporary Well Borehole Logs**



# GEOLOGIC LOG OF BOREHOLE HP-1

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/1/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 16 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SOIL SPOON SAMPLE core	GW LEVEL	WELL DIAGRAM
				4-6" asphalt			
	5		CL	SILTY CLAY: dark brown; soft; moist; plastic; iron oxide staining; gray fragments. Medium estimated permeability (MEK). Slight petroleum hydrocarbon (PHC) odor.  As above with 5-10% subangular, subrounded gravel to 1/2".			HAND AUGERED TO 5 FT BGS
	10		CL	SILTY SANDY CLAY w/ some Gravel: brown; soft; moist; 15-20% v. fine sand; 10-15% fine to coarse subangular gravel. MEK. No PHC odor.			
	15		CL	SANDY CLAY w/ some Gravel: greenish gray; soft; moist; 20-25% v. fine to fine sand; 10-15% fine to coarse gravel. MEK. Slight PHC odor.  As above with increasing gravel; becomes saturated.  As above.			
	20			As above with slight PHC odor.			
	25		CL	SANDY CLAY w/ Gravel: bluish gray mottled brown; soft; saturated; 20-25% sand; 5-15% fine to coarse subangular to subrounded gravel to 1/2". MEK. Slight PHC odor.  As above with increasing gravel to 1 1/2".			
	30			TOTAL DEPTH: 28 ft bgs.			NO TEMPORARY WELL INSTALLED





# GEOLOGIC LOG OF BOREHOLE HP-3

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/1/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 6.5 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPILL SPOON SAMPLE core	GW LEVEL	WELL DIAGRAM
	0			6" asphalt over 18" base rock.			HAND AUGERED TO 5 FT BGS
	5		CL	SILTY CLAY w/ some Gravel: yellowish brown to brown; silt; saturated; 10-15% subangular to subrounded gravel. Medium to high estimated permeability (MEK-HEK). Slight petroleum hydrocarbon (PHC) odor.	■	▽	
	10			As above.	■		
	15			No recovery from 12-16 ft.			
	20		CL	As above w/ increasing medium to coarse gravel fragments to 1 1/2"	■		
	25		CL	SILTY CLAY: greenish gray; soft; saturated. MEK-HEK. Slight PHC odor.	■		
	30			TOTAL DEPTH: 28 ft bgs.			NO TEMPORARY WELL INSTALLED



# GEOLOGIC LOG OF BOREHOLE HP-4

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/1/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 5 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SOIL SPEC. CORE	SAMPLE	GW LEVEL	WELL DIAGRAM
	0			6" asphalt over 18" base rock.				HAND AUGERED TO 5 FT BGS           NO TEMPORARY WELL INSTALLED
	5		CL	SILTY CLAY w/ some Sand and Gravel: brown; soft to medium stiff; v. moist to saturated; 15-20% v. fine to fine sand; 10-15% fine to coarse subangular gravel. Medium to high estimated permeability (MEK-HEK). Slight petroleum hydrocarbon (PHC) odor.			▽	
	10		CL	SILTY CLAY: grayish brown to gray; soft to medium stiff; saturated; 10% fine to v. fine sand. MEK. Slight PHC odor.				
	15			As above w/ 5-10% subangular to subrounded gravel to 1" and becomes soft.				
	20			No recovery from 20-24 ft.				
	25		CL	SANDY CLAY; greenish gray; soft to loose; v. moist to saturated; 25-30% v. fine to fine sand. MEK-HEK. Slight PHC odor.				
	0		CL	SILTY CLAY w/ some Sand: dark brown; soft to medium stiff; v. moist to saturated; 10-20% v. fine sand. MEK. Slight PHC odor.				
	30			TOTAL DEPTH: 28 ft bgs.				



GEOLOGIC LOG OF BOREHOLE HP-5

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland

Date Drilled: 3/1/04

See Site Map.

Drilling Method: DPT  
 Driller: Gregg Drilling

Casing Elevation: NA

Depth to 1st Groundwater: 16 ft

Logged By: E Jennings

Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SOIL SPEC. SAMPLE CORE	GW LEVEL	WELL DIAGRAM
	0			6" asphalt over 18" base rock.			HAND AUGERED TO 5 FT BGS
	5		CL	SILTY CLAY w/ some Sand and Gravel: dark grayish brown; soft; moist; 10-15% v. fine to fine sand; 10-15% subangular to subrounded gravel to 1/2". Medium estimated permeability (MEK). Slight petroleum hydrocarbon (PHC) odor.  As above with increase from soft to medium stiff and increase in gravel fragments.			
	10		CL	SILTY CLAY w/ some Sand: brown; soft; moist becoming greenish gray at 11.5 ft.			
	15			No recovery from 12-16 ft.			NO TEMPORARY WELL INSTALLED
	20		CL	SANDY CLAY: greenish gray; soft; saturated; 20-25% fine sand. MEK-HEK. No Slight PHC odor.			
	25		CL	SANDY CLAY w/ some Gravel: bluish gray green; soft; saturated; 20-25% v. fine to fine sand; 10-15% subangular to subrounded gravel to 1". HEK. Slight PHC odor.			
	30			As above w/ increase in sand.			
				TOTAL DEPTH: 28 ft bgs.			



# GEOLOGIC LOG OF BOREHOLE HP-5

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/1/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 16 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPILL specimen core	SAMPLE	GW LEVEL	WELL DIAGRAM
	0			6" asphalt over 18" base rock.				HAND AUGERED TO 5 FT BGS           NO TEMPORARY WELL INSTALLED
	5		CL	SILTY CLAY w/ some Sand and Gravel: dark grayish brown; soft; moist; 10-15% v. fine to fine sand; 10-15% subangular to subrounded gravel to 1/2". Medium estimated permeability (MEK). Slight petroleum hydrocarbon (PHC) odor.  As above with increase from soft to medium stiff and increase in gravel fragments.		■		
	10		CL	SILTY CLAY w/ some Sand: brown; soft; moist becoming greenish gray at 11.5 ft.		■		
	15			No recovery from 12-16 ft.		■	▽	
	20		CL	SANDY CLAY: greenish gray; soft; saturated; 20-25% fine sand. MEK-HEK. No Slight PHC odor.		■		
	25		CL	SANDY CLAY w/ some Gravel: bluish gray green; soft; saturated; 20-25% v. fine to fine sand; 10-15% subangular to subrounded gravel to 1". HEK. Slight PHC odor.		■		
	30			As above w/ increase in sand.		■		
				TOTAL DEPTH: 28 ft bgs.				





# GEOLOGIC LOG OF BOREHOLE HP-6

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/1/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 6 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPLIT SPOON SAMPLE CORE	GW LEVEL	WELL DIAGRAM
				6" asphalt over 18" base rock.			HAND AUGERED TO 5 FT BGS
	5		CL	SILTY CLAY w/ some Gravel: dark brown to brown; soft to medium stiff; saturated; 10-15% subangular to subrounded gravel to 1/2". High estimated permeability (HEK) Slight petroleum hydrocarbon (PHC) odor.		▽	
	10		CL	SILTY CLAY w/ some Sand: dark gray; soft to medium stiff; v. fine sand. HEK. Slight PHC odor.  As above w/ increasing in sand and gravel.			
	15		CL	SANDY CLAY w/ trace Gravel: gray brown to brown; soft to medium stiff; 25-30% fine sand; 5-10% fine to coarse gravel. MEK. Slight PHC odor.			
	20		CL	SILTY CLAY w/ some Sand: greenish/bluish gray; soft; saturated; 15-20% fine sand. MEK. Slight PHC odor.  As above w/ increasing amount of sand and subangular to subrounded gravel to 1/2".  As above with gravel to 1 1/2".			
	25						NO TEMPORARY WELL INSTALLED
	30			TOTAL DEPTH: 28 ft bgs.			





# GEOLOGIC LOG OF BOREHOLE HP-9

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/2/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 13 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SPILL SPOON SAMPLE core	GW LEVEL	WELL DIAGRAM
				6-7" asphalt over 12-20" road base.			HAND AUGERED TO 5 FT BGS
	5		CL	SANDY SILT CLAY w/ some Gravel: reddish brown to brown; moderately soft to medium stiff; moist; 15-25% v. fine to fine sand; 15-20% fine to coarse sub-angular to subrounded gravel to 1 1/2"; indications of iron oxid staining. Medium estimated permeability (MEK). Slight petroleum hydrocarbon (PHC) odor.			
18	10		CL	SILTY CLAY w/ some Sand: dark grayish brown; soft; slightly plastic; v. moist to saturated; 15-20% fine sand. MEK. Slight PHC odor.			NO TEMPORARY WELL INSTALLED
12	15		CL	As above w/ 10-15% fine to coarse gravel.		▽	
	20		CL	SILTY SANDY CLAY: bluish gray; medium stiff to stiff; slightly plastic; moist to v. moist; 20-25% fine sand; iron oxide staining. LEK-MEK. Slight PHC odor.			
	20		CL	SILTY CLAY w/ some Sand: brown; soft; v. moist to saturated; 20-25% v. fine to fine sand. MEK-HEK. Slight PHC odor.			
	20		CL	SILTY SANDY CLAY/SANDY SILTY CLAY: bluish gray; soft; v. moist. MEK. Slight PHC odor.			
	25		CL	SILTY SANDY CLAY w/ some Gravel: brown; soft; v. moist; 20-25% sand; 10-15% fine to coarse subangular to subrounded gravel to 1/2". MEK. Slight PHC odor.			
	23			TOTAL DEPTH: 27 ft bgs.			
	30						



# GEOLOGIC LOG OF BOREHOLE HP-10

Boring Location:

Project: 2832  
 Site Location: 5725 Thornhill Dr. Oakland  
 Drilling Method: DPT  
 Driller: Gregg Drilling  
 Logged By: E Jennings

Date Drilled: 3/2/04  
 Casing Elevation: NA  
 Depth to 1st Groundwater: 13 ft  
 Approved By: M Sepehr

See Site Map.

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	SOIL SPOON SAMPLE core	GW LEVEL	WELL DIAGRAM
				6" asphalt over 18" road base.			HAND AUGERED TO 5 FT BGS
	5		CL	SILTY SANDY CLAY: dark reddish brown; soft; slightly plastic to plastic; moist. Low to medium estimated permeability (LEK-MEK). Slight petroleum hydrocarbon (PHC) odor.			
	10			No recovery from 8-12 ft.			
	15		CL	SILTY CLAY: dark greenish gray; soft; plastic; saturated. HEK. Slight PHC odor.			NO TEMPORARY WELL INSTALLED
	18			No recovery from 16-20 ft.			
	20		CL	SILTY CLAY w/ some Sand: gray; soft; saturated; v. fine to fine sand. MEK-HEK. Slight PHC odor.  As above w/ fine to coarse subangular to subrounded gravel to 1/2"			
	25			TOTAL DEPTH: 23 ft bgs.			
	30						

# Appendix C

## Laboratory Report of Soil Analytical and Chain of Custody Form



A N A L Y T I C A L   R E P O R T

Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

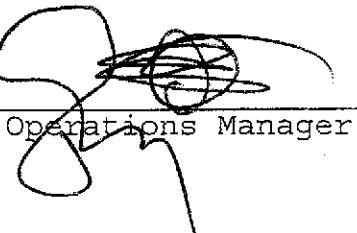
Date: 17-MAR-04  
Lab Job Number: 170926  
Project ID: 2832  
Location: 5725 Thornhill Drive

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

Reviewed by:

  
Project Manager

Reviewed by:

  
Operations Manager

This package may be reproduced only in its entirety.

Laboratory Number: 170926  
Client: SOMA Environmental Engineering Inc.  
Project: 2832  
Request Date: 3/2/04

### CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for 46 soil samples requested from the above referenced project on March 2, 2004. The samples were received cold and intact.

#### **Total Volatile Hydrocarbons:**

The recovery for the matrix spike duplicate of batch 88977 and many surrogate recoveries are outside control limits due to coelution of the surrogate peaks with other hydrocarbon peaks.

No other analytical problems were encountered.

#### **Total Extractable Hydrocarbons:**

No analytical problems were encountered.

#### **Purgeable Organics (EPA 8260):**

The recovery for the surrogate dibromofluoromethane in sample HP-4-(24-24.5') exceeds control limits. The recoveries for the associated surrogates in the sample are acceptable.

No other analytical problems were encountered.





# CHAIN OF CUSTODY

## Curtis & Tompkins, Ltd.

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

C&T LOGIN # 170926

## Analyses

Project No: 2832

Sampler: Eric Jennings / Tony Perini

Project Name: 5725 Thornhill Drive, Oakland

Report To: Joyce Bobek

Turnaround Time: Standard

Company: SOMA Environmental

Telephone: 925-244-6600

Fax: 925-244-6601

Lab No.	Sample ID.	Sampling Date and Time	Matrix			# of Containers	Preservative				TPH-g, TPH-d and TPH-mo (8015)	BTEX and MtBE (8260)	GASOX and ETHANOL (8260)
			Soil	Water	Waste		HCl	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE			
-17	HP2-(4-4.5')	3/1/04 11:30 AM	X			1					X	X	X
-18	HP2-(9-9.5')	3/1/04 11:34 AM	X			1					X	X	X
-19	HP2-(14-14.5')	3/1/04 11:36 AM	X			1					X	X	X
-20	HP2-(19-19.5')	3/1/04 11:42 AM	X			1					X	X	X
-21	HP2-(25-25.5')	3/1/04 11:46 AM	X			1					X	X	X
-22	HP5-(5-5.5')	3/1/04 1:56 PM	X			1					X	X	X
-23	HP5-(10-10.5')	3/1/04 1:59 PM	X			1					X	X	X
-24	HP5-(15.5-16)	3/1/04 2:05 PM	X			1					X	X	X
-25	HP5-(19.5-20')	3/1/04 2:11 PM	X			1					X	X	X
-26	HP5-(27-27.5')	3/1/04 2:21 PM	X			1					X	X	X
-27	HP1-(5-5.5')	3/1/04 3:21 PM	X			1					X	X	X
-28	HP1-(9-9.5')	3/1/04 3:24 PM	X			1					X	X	X
-29	HP1-(14.5-15')	3/1/04 3:27 PM	X			1					X	X	X
-30	HP1-(19.5-20')	3/1/04 3:30 PM	X			1					X	X	X
-31	HP1-(24.5-25')	3/1/04 3:36 PM	X			1					X	X	X
			X			1					X	X	X
			X			1					X	X	X
			X			1					X	X	X

Notes: GASOX: TAME, ETBE, DIPE, TBA, EDB, EDC  
 EDF OUTPUT REQUIRED

Received  On ice  
 Cold  Ambient

RELINQUISHED BY:	RECEIVED BY:
<i>Eric Jennings</i> DATE/TIME: 3/1/04 11:30	<i>Joyce Bobek</i> DATE/TIME: 3/1/04 11:30
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

# CHAIN OF CUSTODY

## Curtis & Tompkins, Ltd.

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

C&T LOGIN # 170926

## Analyses

Sampler: Eric Jennings / ~~Tony P. Smith~~

Report To: Joyce Bobek

Company: SOMA Environmental

Telephone: 925-244-6600

Fax: 925-244-6601

Project No: 2832

Project Name: 5725 Thornhill Drive, Oakland

Turnaround Time: Standard

Lab No.	Sample ID.	Sampling Date and Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCl	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
-32	HP7-(6-6.5)	3/2/04 7:55 AM	X			1				X
-33	HP7-(11.5-12)	3/2/04 7:58 AM	X			1				X
-34	HP7-(16.5-17)	3/2/04 8:00 AM	X			1				X
-35	HP7-(22-22.5)	3/2/04 8:04 AM	X			1				X
-36	HP7-(26.5-27)	3/2/04 8:11 AM	X			1				X
-37	HP9-(7-7.5)	3/2/04 9:5 AM	X			1				X
-38	HP9-(11.5-12)	3/2/04 9:20 AM	X			1				X
-39	HP9-(16-16.5)	3/2/04 9:28 AM	X			1				X
-40	HP9-(21.5-22)	3/2/04 9:30 AM	X			1				X
-41	HP9-(26.5-27)	3/2/04 9:38 AM	X			1				X
-42	HP10-(6-6.5)	3/2/04 11:06 AM	X			1				X
-43	HP10-(11.5-12)	3/2/04 11:10 AM	X			1				X
-44	HP10-(18.5-19)	3/2/04 11:25 AM	X			1				X
-45	HP10-(19.5-20)	3/2/04 11:28 AM	X			1				X
-46	HP10-(22.5-23)	3/2/04 11:40 AM	X			1				X
			X			1				X
			X			1				X

TPH-g, TPH-d and TPH-mo (8015)	BTEX and MTBE (8260)	GASOX and ETHANOL (8260)																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		
X	X	X																		

Notes: GASOX: TAME, ETBE, DIPE, TBA, EDB, EDC  
 EDF OUTPUT REQUIRED

Received  On Ice  
 Cold  Ambient

RELINQUISHED BY: Eric Jennings 3/2/04 (16:00) DATE/TIME

RECEIVED BY: Anna [Signature] 3/2/04 (16:30) DATE/TIME

DATE/TIME

DATE/TIME

**Total Volatile Hydrocarbons**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP3-(5.5-6')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-001	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	71-138
Bromofluorobenzene (FID)	113	73-143

Field ID: HP3-(10-10.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-002	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	71-138
Bromofluorobenzene (FID)	114	73-143

Field ID: HP3-(16-16.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-003	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	71-138
Bromofluorobenzene (FID)	119	73-143

\*= Value outside of QC limits; see narrative  
H= Heavier hydrocarbons contributed to the quantitation  
Y= Sample exhibits chromatographic pattern which does not resemble standard  
b= See narrative  
ND= Not Detected  
RL= Reporting Limit  
LR= Response exceeds instrument's linear range

**Total Volatile Hydrocarbons**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP3-(21-21.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-004	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	71-138
Bromofluorobenzene (FID)	113	73-143

Field ID:	HP3-(26-26.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-005	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	15 *	71-138
Bromofluorobenzene (FID)	20 *	73-143

Field ID:	HP4-(4-4.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-006	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	71-138
Bromofluorobenzene (FID)	112	73-143

\*= Value outside of QC limits; see narrative  
H= Heavier hydrocarbons contributed to the quantitation  
Y= Sample exhibits chromatographic pattern which does not resemble standard  
b= See narrative  
ND= Not Detected  
RL= Reporting Limit  
LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP4-(9-9.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-007	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.92

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	71-138
Bromofluorobenzene (FID)	113	73-143

Field ID: HP4-(14-14.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-008	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	71-138
Bromofluorobenzene (FID)	115	73-143

Field ID: HP4-(19-19.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-009	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.91

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	71-138
Bromofluorobenzene (FID)	117	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP4-(24-24.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-010	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.96

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	71-138
Bromofluorobenzene (FID)	110	73-143

Field ID:	HP6-(4-4.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-011	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	71-138
Bromofluorobenzene (FID)	113	73-143

Field ID:	HP6-(9-9.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-012	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.96

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	71-138
Bromofluorobenzene (FID)	112	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
 Page 4 of 16

**Total Volatile Hydrocarbons**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP6-(14-14.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-013	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.91

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	71-138
Bromofluorobenzene (FID)	112	73-143

Field ID:	HP6-(19-19.5')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-014	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.91

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	71-138
Bromofluorobenzene (FID)	115	73-143

Field ID:	HP6-(23.5-24')	Batch#:	88975
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-015	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.96

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	71-138
Bromofluorobenzene (FID)	109	73-143

\*= Value outside of QC limits; see narrative  
H= Heavier hydrocarbons contributed to the quantitation  
Y= Sample exhibits chromatographic pattern which does not resemble standard  
b= See narrative  
ND= Not Detected  
RL= Reporting Limit  
R= Response exceeds instrument's linear range  
Page 5 of 16

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP6-(27.5-28')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-016	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	71-138
Bromofluorobenzene (FID)	111	73-143

Field ID: HP2-(4-4.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-017	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	71-138
Bromofluorobenzene (FID)	118	73-143

Field ID: HP2-(9-9.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-018	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	71-138
Bromofluorobenzene (FID)	118	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
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### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP2-(14-14.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-019	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	71-138
Bromofluorobenzene (FID)	109	73-143

Field ID: HP2-(19-19.5')	Batch#: 88975
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-020	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	74	71-138
Bromofluorobenzene (FID)	77	73-143

Field ID: HP2-(25-25.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-021	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	71-138
Bromofluorobenzene (FID)	128	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP5-(5-5.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-022	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	71-138
Bromofluorobenzene (FID)	138	73-143

Field ID: HP5-(10-10.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-023	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	71-138
Bromofluorobenzene (FID)	116	73-143

Field ID: HP5-(15.5-16')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-024	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	2.6 H Y	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	71-138
Bromofluorobenzene (FID)	164 *	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
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### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP5-(19.5-20')	Batch#:	88977
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-025	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	71-138
Bromofluorobenzene (FID)	127	73-143

Field ID:	HP5-(27-27.5')	Batch#:	88977
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-026	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	9.1 H Y	0.97
Surrogate	%REC	Limits
Trifluorotoluene (FID)	119	71-138
Bromofluorobenzene (FID)	184 *	73-143

Field ID:	HP1-(5-5.5')	Batch#:	88977
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-027	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.93
Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	71-138
Bromofluorobenzene (FID)	119	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP1-(9-9.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-028	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	16 Y	1.1
Surrogate	%REC	Limits
Trifluorotoluene (FID)	129	71-138
Bromofluorobenzene (FID)	270 *	>LR b 73-143

Field ID: HP1-(14.5-15')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-029	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	71-138
Bromofluorobenzene (FID)	121	73-143

Field ID: HP1-(19.5-20')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-030	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.97
Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	71-138
Bromofluorobenzene (FID)	120	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP1-(24.5-25')	Batch#: 88977
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-031	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	71-138
Bromofluorobenzene (FID)	118	73-143

Field ID: HP7-(6-6.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-032	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	117	73-143

Field ID: HP7-(11.5-12')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-033	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	117	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
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**Total Volatile Hydrocarbons**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP7-(16.5-17')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-034	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	119	73-143

Field ID: HP7-(22-22.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-035	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.92

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	71-138
Bromofluorobenzene (FID)	115	73-143

Field ID: HP7-(26.5-27')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-036	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	120	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP9-(7-7.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-037	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	114	73-143

Field ID: HP9-(11.5-12')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-038	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.96

Surrogate	%REC	Limits
Trifluorotoluene (FID)	109	71-138
Bromofluorobenzene (FID)	119	73-143

Field ID: HP9-(16-16.5')	Batch#: 88977
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-039	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	%REC	Limits
Trifluorotoluene (FID)	109	71-138
Bromofluorobenzene (FID)	117	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range

### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP9- (21.5-22')	Batch#:	88977
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-040	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	71-138
Bromofluorobenzene (FID)	117	73-143

Field ID:	HP9- (26.5-27')	Batch#:	88989
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-041	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	85	71-138
Bromofluorobenzene (FID)	97	73-143

Field ID:	HP10- (6-6.5')	Batch#:	88989
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-042	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	0.94

Surrogate	%REC	Limits
Trifluorotoluene (FID)	86	71-138
Bromofluorobenzene (FID)	97	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
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### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP10-(11.5-12')	Batch#: 88989
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-043	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	16 Y	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	71-138
Bromofluorobenzene (FID)	160 *	73-143

Field ID: HP10-(18.5-19')	Batch#: 88989
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-044	Analyzed: 03/04/04
Diln Fac: 10.00	

Analyte	Result	RL
Gasoline C7-C12	130 Y	10

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	71-138
Bromofluorobenzene (FID)	147 *	73-143

Field ID: HP10-(19.5-20')	Batch#: 88989
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-045	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	0.92

Surrogate	%REC	Limits
Trifluorotoluene (FID)	86	71-138
Bromofluorobenzene (FID)	98	73-143

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 ND= Not Detected  
 RL= Reporting Limit  
 LR= Response exceeds instrument's linear range  
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**Total Volatile Hydrocarbons**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP10-(22.5-23')	Batch#: 88989
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-046	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	3.7 Y	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	90	71-138
Bromofluorobenzene (FID)	115	73-143

Type: BLANK	Batch#: 88975
Lab ID: QC242890	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	84	71-138
Bromofluorobenzene (FID)	94	73-143

Type: BLANK	Batch#: 88977
Lab ID: QC242896	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	71-138
Bromofluorobenzene (FID)	126	73-143

Type: BLANK	Batch#: 88989
Lab ID: QC242950	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	83	71-138
Bromofluorobenzene (FID)	90	73-143

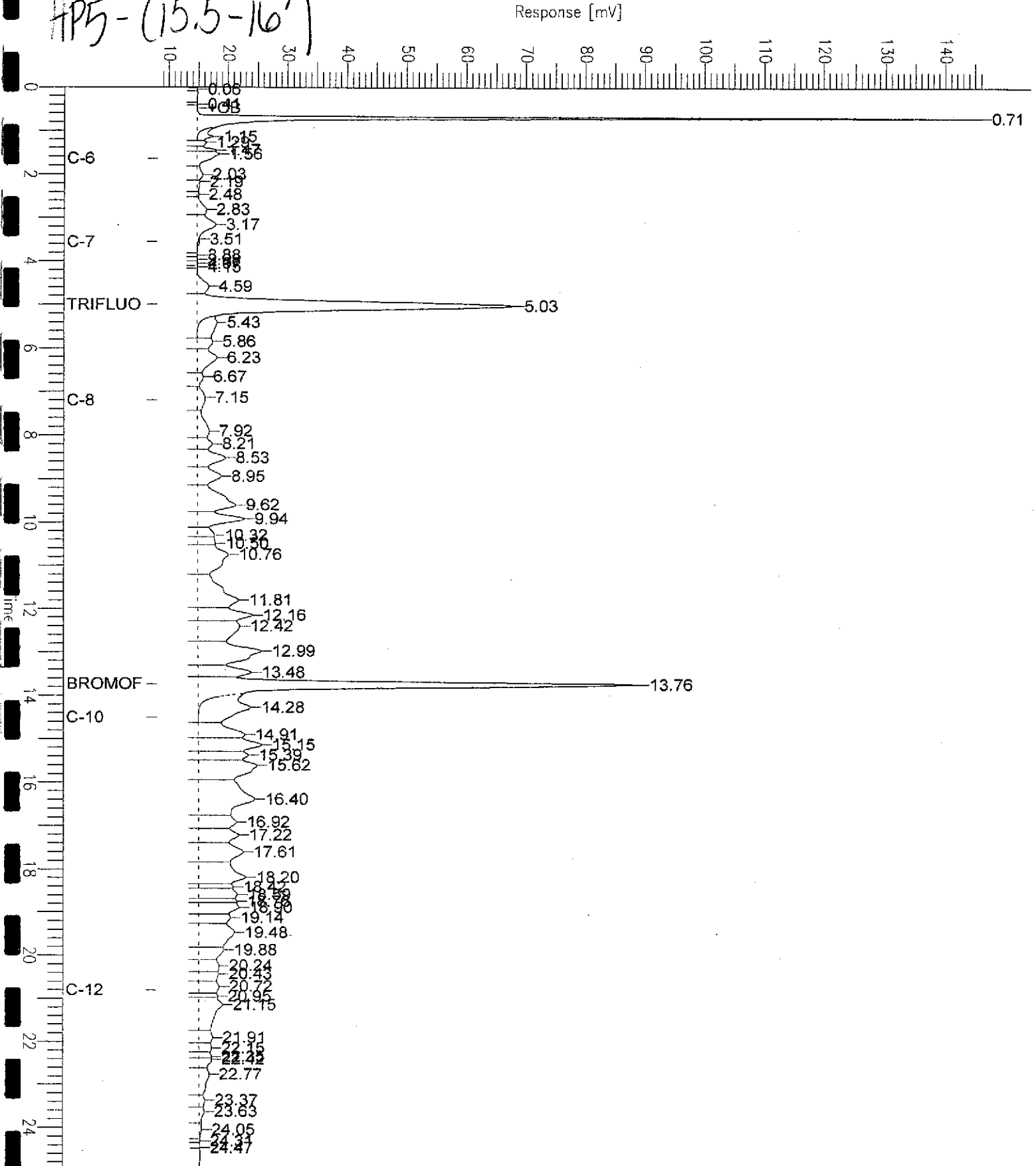
\*= Value outside of QC limits; see narrative  
H= Heavier hydrocarbons contributed to the quantitation  
Y= Sample exhibits chromatographic pattern which does not resemble standard  
b= See narrative  
ND= Not Detected  
RL= Reporting Limit  
LR= Response exceeds instrument's linear range

# Chromatogram

Sample Name : 170926-024,88977,tvh only  
FileName : G:\GC05\DATA\063G006.raw  
Method : TVHBTXB  
Start Time : 0.00 min End Time : 25.00 min  
Scale Factor : 1.0 Plot Offset: 8 mV

Sample #: a Page 1 of 1  
Date : 3/3/04 12:32 PM  
Time of Injection: 3/3/04 12:07 PM  
Low Point : 8.07 mV High Point : 146.04 mV  
Plot Scale: 138.0 mV

HP5 - (15.5-16')



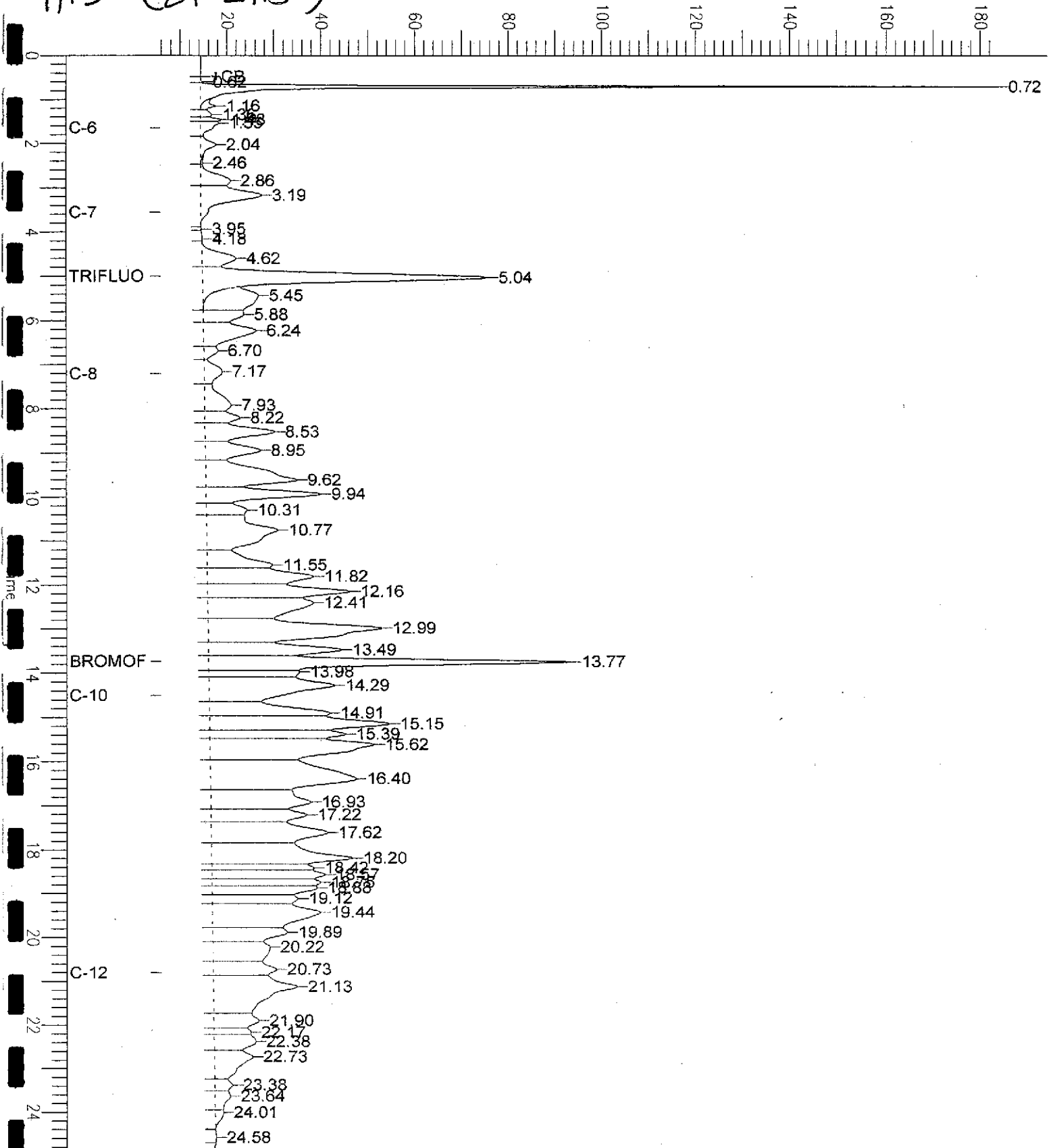
# Chromatogram

Sample Name : 170926-026,88977,tvh  
File Name : G:\GC05\DATA\063G011.raw  
Method : TVHBTXE  
Start Time : 0.00 min End Time : 25.00 min  
Scale Factor : 1.0 Plot Offset : 6 mV

Sample #: a Page 1 of 1  
Date : 3/3/04 03:20 PM  
Time of Injection: 3/3/04 02:55 PM  
Low Point : 5.87 mV High Point : 183.77 mV  
Plot Scale: 177.9 mV

HP5-(27-275')

Response [mV]



# Chromatogram

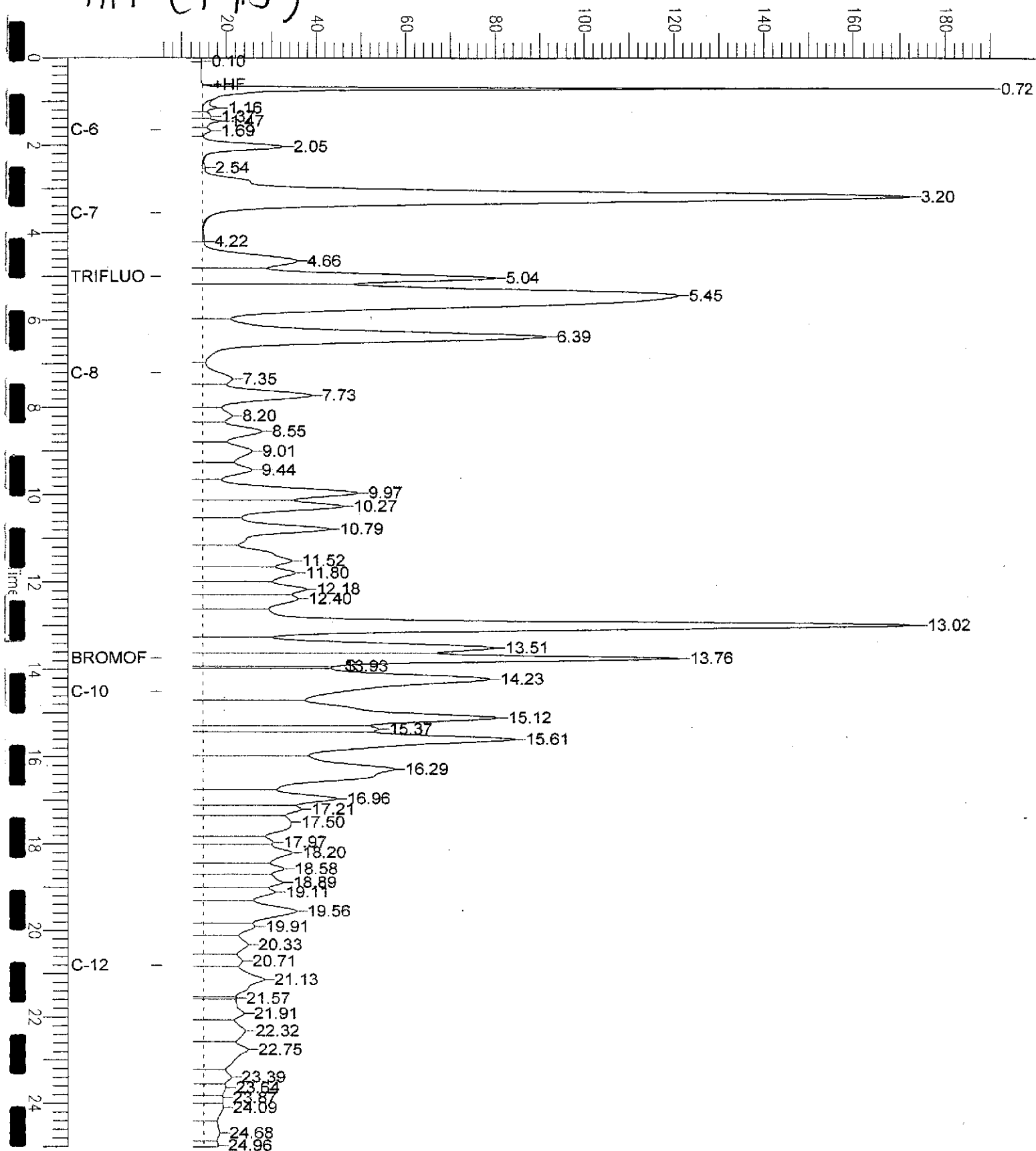
Sample Name : 170926-028,88977,tvh  
File Name : G:\GC05\DATA\063G015.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample #: a  
Date : 3/4/04 07:24 AM  
Time of Injection: 3/3/04 05:10 PM  
Low Point : 5.47 mV  
High Point : 190.13 mV  
Plot Offset: 5 mV  
Plot Scale: 184.7 mV

Page 1 of 1

HPI-(9-9.5)

Response [mV]



GC07 TVH 'A' Data File RTX 502

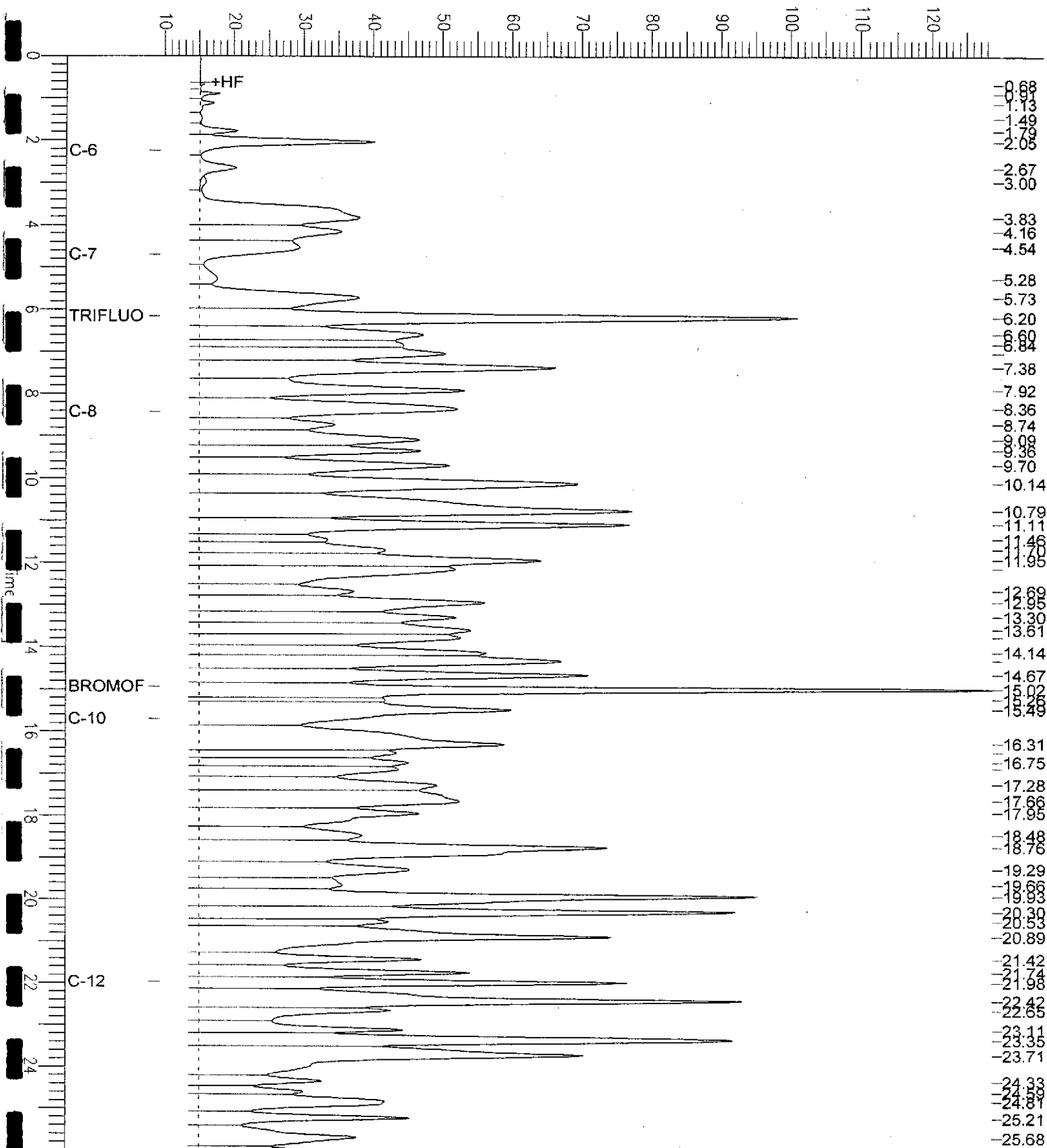
Sample Name : 170926-043,88989,tvh  
FileName : G:\GC07\DATA\063A003.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

End Time : 26.00 min  
Plot Offset : 9 mV

Sample #: a  
Date : 3/4/04 07:12 AM  
Time of Injection: 3/3/04 12:30 PM  
Low Point : 9.39 mV  
High Point : 128.82 mV  
Plot Scale : 119.4 mV

HP10-(11.5-12)

Response [mV]



GC07 TVH 'A' Data File RTX 502

Sample Name : 170926-044,88989,tvh

Sample #: a

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File Name : G:\GC07\DATA\063A028.raw

Date : 3/4/04 07:12 AM

Method : TVHBTXE

Time of Injection: 3/4/04 03:26 AM

Start Time : 0.00 min

End Time : 26.00 min

Low Point : 7.55 mV

High Point : 162.13 mV

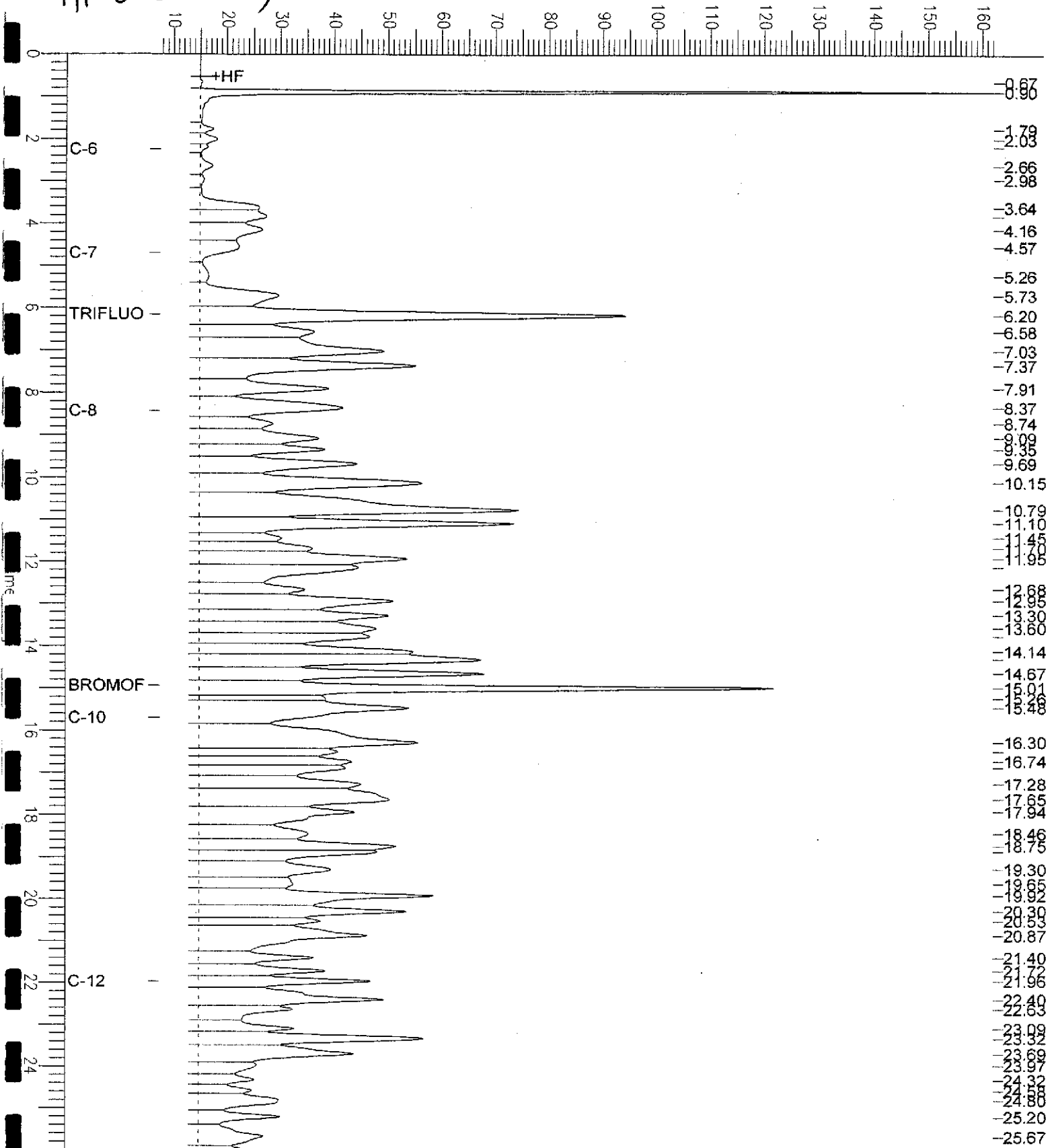
Scale Factor: 1.0

Plot Offset: 8 mV

Plot Scale: 154.6 mV

HP10-(18.5-19)

Response [mV]



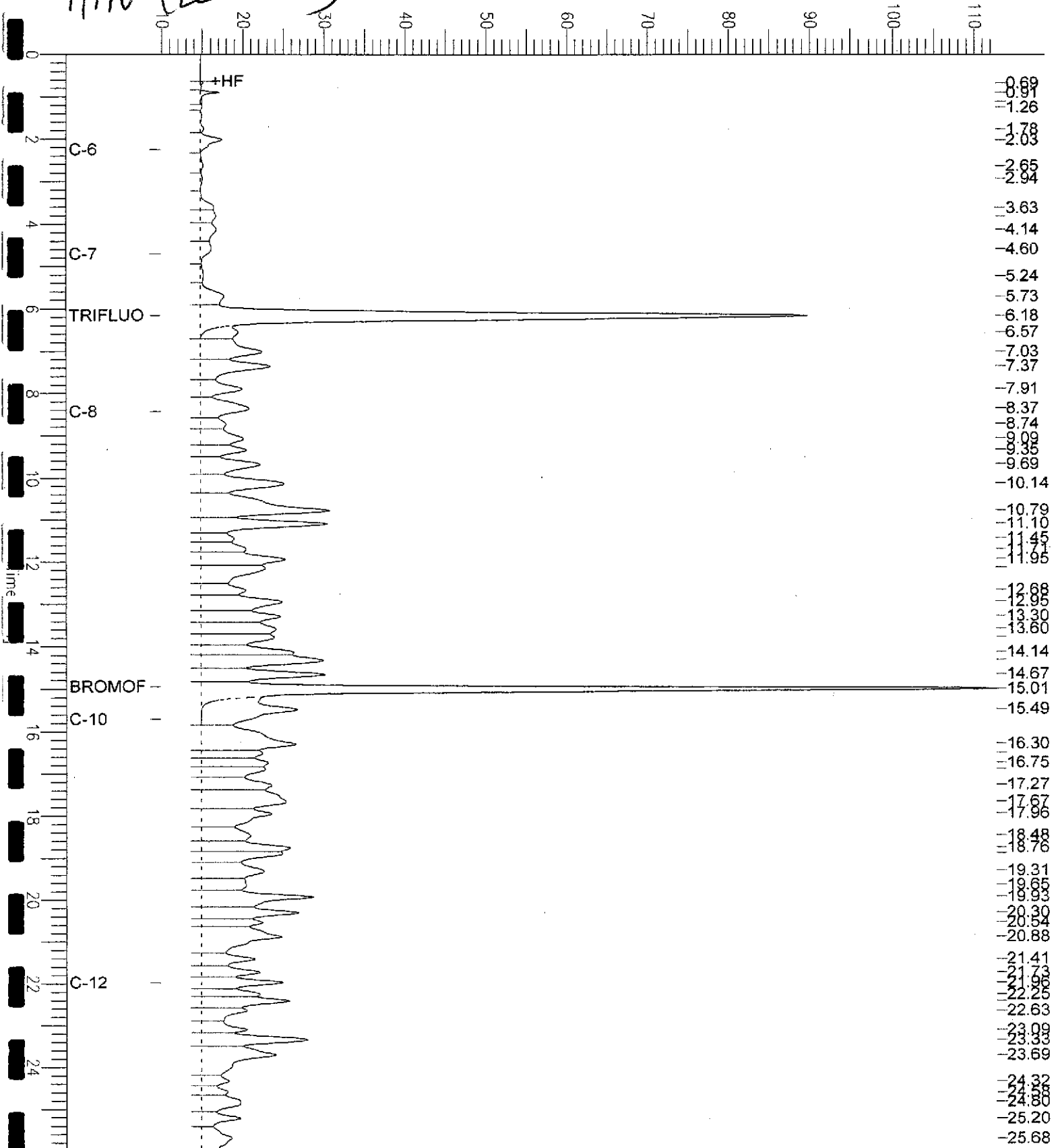
GC07 TVH 'A' Data File RTX 502

Sample Name : 170926-046,88989,tvh  
 File Name : G:\GC07\DATA\063A009.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min End Time : 26.00 min  
 Scale Factor : 1.0 Plot Offset : 10 mV

Sample #: a Page 1 of 1  
 Date : 3/4/04 07:12 AM  
 Time of Injection: 3/3/04 04:00 PM  
 Low Point : 9.85 mV High Point : 112.60 mV  
 Plot Scale: 102.8 mV

HP10-(22.5-23)

Response [mV]





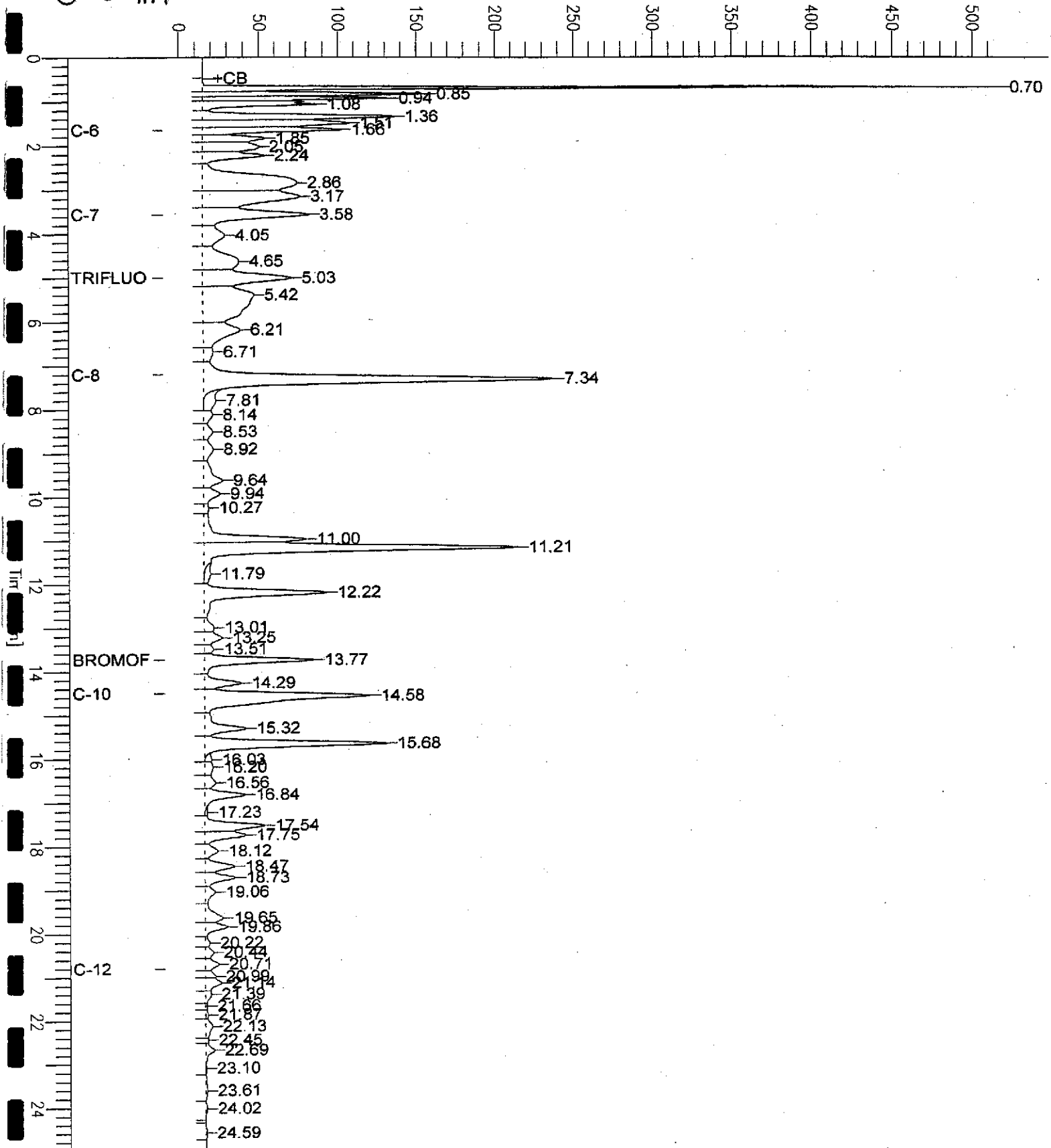
# Chromatogram

Sample Name : CCV/LCS, QC242897, 88977, 04WS0372, 5/5000  
File Name : G:\GC05\DATA\063G002.raw  
Method : TVHBTXE  
Start Time : 0.00 min End Time : 25.00 min  
Scale Factor : 1.0 Plot Offset : -10 mV

Sample # :  
Date : 3/3/04 09:47 AM  
Time of Injection : 3/3/04 09:21 AM  
Low Point : -9.99 mV High Point : 517.05 mV  
Plot Scale : 527.0 mV

Gasoline

Response [mV]



### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC242891	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88975
Units:	mg/Kg	Analyzed:	03/03/04

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.488	95	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	111	71-138
Bromofluorobenzene (FID)	114	73-143

### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC242897	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88977
Units:	mg/Kg	Analyzed:	03/03/04

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	10.39	104	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	71-138
Bromofluorobenzene (FID)	138	73-143

### Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC242951	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88989
Units:	mg/Kg	Analyzed:	03/03/04

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	8.920	89	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	71-138
Bromofluorobenzene (FID)	97	73-143



### Total Volatile Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8015B
Field ID: HP2-(25-25.5')	Diln Fac: 1.000
MSS Lab ID: 170926-021	Batch#: 88977
Matrix: Soil	Sampled: 03/01/04
Units: mg/Kg	Received: 03/02/04
Basis: as received	

Type: MS Analyzed: 03/03/04  
 Lab ID: QC242980

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.7428	11.11	13.91	119	47-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	135	71-138
Bromofluorobenzene (FID)	165 *	73-143

Type: MSD Analyzed: 03/04/04  
 Lab ID: QC242981

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.615	4.334	37 *	47-120	95 *	23

Surrogate	%REC	Limits
Trifluorotoluene (FID)	75	71-138
Bromofluorobenzene (FID)	83	73-143

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



Total Volatile Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8015B
Field ID:	HP10-(6-6.5')	Diln Fac:	1.000
MSS Lab ID:	170926-042	Batch#:	88989
Matrix:	Soil	Sampled:	03/02/04
Units:	mg/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Type: MS Lab ID: QC242961

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.03832	10.99	9.036	82	47-120
Surrogate	%REC	Limits			
Trifluorotoluene (FID)	99	71-138			
Bromofluorobenzene (FID)	102	73-143			

Type: MSD Lab ID: QC242962

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.259	7.241	78	47-120	5	23
Surrogate	%REC	Limits				
Trifluorotoluene (FID)	99	71-138				
Bromofluorobenzene (FID)	101	73-143				

### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP3-(5.5-6')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-001	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	23 H Y	1.0
Motor Oil C24-C36	78	5.0
Surrogate	%REC	Limits
Hexacosane	112	52-131

Field ID: HP3-(10-10.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-002	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	22 H Y	1.0
Motor Oil C24-C36	65	5.0
Surrogate	%REC	Limits
Hexacosane	100	52-131

Field ID: HP3-(16-16.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-003	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	17 H Y	1.0
Motor Oil C24-C36	77	5.0
Surrogate	%REC	Limits
Hexacosane	94	52-131

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



### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP3-(21-21.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-004	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	11 H Y	1.0
Motor Oil C24-C36	60	5.0

Surrogate	%REC	Limits
Hexacosane	83	52-131

Field ID: HP3-(26-26.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-005	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	8.3 H Y	1.0
Motor Oil C24-C36	39	5.0

Surrogate	%REC	Limits
Hexacosane	77	52-131

Field ID: HP4-(4-4.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-006	Analyzed: 03/08/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	3.0 H Y	1.0
Motor Oil C24-C36	17	5.0

Surrogate	%REC	Limits
Hexacosane	105	52-131

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

### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP4-(9-9.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-007	Analyzed: 03/07/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0
Surrogate	%REC	Limits
Hexacosane	76	52-131

Field ID: HP4-(14-14.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-008	Analyzed: 03/08/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	1.1 H Y	0.99
Motor Oil C24-C36	11	5.0
Surrogate	%REC	Limits
Hexacosane	85	52-131

Field ID: HP4-(19-19.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-009	Analyzed: 03/07/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	1.1 Y	1.0
Motor Oil C24-C36	ND	5.0
Surrogate	%REC	Limits
Hexacosane	92	52-131

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



## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP4-(24-24.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-010	Analyzed:	03/08/04
Diln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89039		

Analyte	Result	RL
Diesel C10-C24	5.0 H Y	1.0
Motor Oil C24-C36	42 H	5.0

Surrogate	%REC	Limits
Hexacosane	85	52-131

Field ID:	HP6-(4-4.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-011	Analyzed:	03/06/04
Diln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89039		

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

Surrogate	%REC	Limits
Hexacosane	105	52-131

Field ID:	HP6-(9-9.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-012	Analyzed:	03/08/04
Diln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89039		

Analyte	Result	RL
Diesel C10-C24	5.4 H Y	1.0
Motor Oil C24-C36	30	5.0

Surrogate	%REC	Limits
Hexacosane	88	52-131

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

### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP6-(14-14.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-013	Analyzed: 03/08/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	2.2 H Y	1.0
Motor Oil C24-C36	16	5.0

Surrogate	%REC	Limits
Hexacosane	99	52-131

Field ID: HP6-(19-19.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-014	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	2.5 H Y	1.0
Motor Oil C24-C36	8.1	5.0

Surrogate	%REC	Limits
Hexacosane	106	52-131

Field ID: HP6-(23.5-24')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-015	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Patch#: 89039	

Analyte	Result	RL
Diesel C10-C24	3.2 H Y	1.0
Motor Oil C24-C36	19	5.0

Surrogate	%REC	Limits
Hexacosane	95	52-131

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

### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive	
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B	
Project#: 2832		
Matrix: Soil	Basis: as received	
Units: mg/Kg	Received: 03/02/04	

Field ID: HP6-(27.5-28')	Sampled: 03/01/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-016	Analyzed: 03/07/04	
Diln Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89039		

Analyte	Result	RL
Diesel C10-C24	2.2 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	87	52-131

Field ID: HP2-(4-4.5')	Sampled: 03/01/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-017	Analyzed: 03/09/04	
Diln Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89039		

Analyte	Result	RL
Diesel C10-C24	3.5 H Y	1.0
Motor Oil C24-C36	51	5.0

Surrogate	%REC	Limits
Hexacosane	99	52-131

Field ID: HP2-(9-9.5')	Sampled: 03/01/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-018	Analyzed: 03/08/04	
Diln Fac: 3.000	Prep: SHAKER TABLE	
Batch#: 89039		

Analyte	Result	RL
Diesel C10-C24	210 H Y	3.0
Motor Oil C24-C36	910	15

Surrogate	%REC	Limits
Hexacosane	78	52-131

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

**Total Extractable Hydrocarbons**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP2-(14-14.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-019	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	5.2 H Y	0.99
Motor Oil C24-C36	34	5.0

Surrogate	%REC	Limits
Hexacosane	72	52-131

Field ID: HP2-(19-19.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-020	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89039	

Analyte	Result	RL
Diesel C10-C24	10 H Y	1.0
Motor Oil C24-C36	59	5.0

Surrogate	%REC	Limits
Hexacosane	84	52-131

Field ID: HP2-(25-25.5')	Sampled: 03/01/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-021	Analyzed: 03/09/04
Diln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89040	

Analyte	Result	RL
Diesel C10-C24	6.5 H Y	1.0
Motor Oil C24-C36	39	5.0

Surrogate	%REC	Limits
Hexacosane	91	52-131

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



Total Extractable Hydrocarbons

Lab #: 170926 Location: 5725 Thornhill Drive  
 Client: SOMA Environmental Engineering Inc. Analysis: EPA 8015B  
 Project#: 2832  
 Matrix: Soil Basis: as received  
 Units: mg/Kg Received: 03/02/04

Field ID: HP5-(5-5.5') Sampled: 03/01/04  
 Type: SAMPLE Prepared: 03/04/04  
 Lab ID: 170926-022 Analyzed: 03/09/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89040

Analyte	Result	RL
Diesel C10-C24	22 H Y	0.99
Motor Oil C24-C36	140	5.0

Surrogate	%REC	Limits
Hexacosane	93	52-131

Field ID: HP5-(10-10.5') Sampled: 03/01/04  
 Type: SAMPLE Prepared: 03/08/04  
 Lab ID: 170926-023 Analyzed: 03/09/04  
 Diln Fac: 1.000 Prep: EPA 3550  
 Batch#: 89131

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

Surrogate	%REC	Limits
Hexacosane	89	52-131

Field ID: HP5-(15.5-16') Sampled: 03/01/04  
 Type: SAMPLE Prepared: 03/04/04  
 Lab ID: 170926-024 Analyzed: 03/09/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89040

Analyte	Result	RL
Diesel C10-C24	6.1 H Y	0.99
Motor Oil C24-C36	33	5.0

Surrogate	%REC	Limits
Hexacosane	92	52-131

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



Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP5-(19.5-20')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-025	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	1.7 Y	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	79	52-131

Field ID:	HP5-(27-27.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-026	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	2.8 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	83	52-131

Field ID:	HP1-(5-5.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-027	Analyzed:	03/09/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	7.8 H Y	1.0
Motor Oil C24-C36	62	5.0

Surrogate	%REC	Limits
Hexacosane	91	52-131

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  
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## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP1-(9-9.5')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-028	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	6.0 H Y	1.0
Motor Oil C24-C36	17	5.0

Surrogate	%REC	Limits
Hexacosane	103	52-131

Field ID:	HP1-(14.5-15')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-029	Analyzed:	03/09/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	5.4 H Y	1.0
Motor Oil C24-C36	19	5.0

Surrogate	%REC	Limits
Hexacosane	89	52-131

Field ID:	HP1-(19.5-20')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-030	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	2.0 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	96	52-131

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  
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## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP1-(24.5-25')	Sampled:	03/01/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-031	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	1.5 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	89	52-131

Field ID:	HP7-(6-6.5')	Sampled:	03/02/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-032	Analyzed:	03/09/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89040		

Analyte	Result	RL
Diesel C10-C24	6.3 H Y	1.0
Motor Oil C24-C36	16	5.0

Surrogate	%REC	Limits
Hexacosane	91	52-131

Field ID:	HP7-(11.5-12')	Sampled:	03/02/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-033	Analyzed:	03/07/04
Oiln Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89057		

Analyte	Result	RL
Diesel C10-C24	2.0 H Y	0.99
Motor Oil C24-C36	6.4 Y	5.0

Surrogate	%REC	Limits
Hexacosane	96	52-131

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  
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### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B
Project#: 2832	
Matrix: Soil	Basis: as received
Units: mg/Kg	Received: 03/02/04

Field ID: HP7-(16.5-17')	Sampled: 03/02/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-034	Analyzed: 03/07/04
Oiln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89057	

Analyte	Result	RL
Diesel C10-C24	3.7 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	127	52-131

Field ID: HP7-(22-22.5')	Sampled: 03/02/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-035	Analyzed: 03/07/04
Oiln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89057	

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

Surrogate	%REC	Limits
Hexacosane	83	52-131

Field ID: HP7-(26.5-27')	Sampled: 03/02/04
Type: SAMPLE	Prepared: 03/04/04
Lab ID: 170926-036	Analyzed: 03/07/04
Oiln Fac: 1.000	Prep: SHAKER TABLE
Batch#: 89057	

Analyte	Result	RL
Diesel C10-C24	11 H Y	1.0
Motor Oil C24-C36	15	5.0

Surrogate	%REC	Limits
Hexacosane	84	52-131

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  
 Page 12 of 17



## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Field ID:	HP9-(7-7.5')	Sampled:	03/02/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-037	Analyzed:	03/08/04
Filen Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89057		

Analyte	Result	RL
Diesel C10-C24	1.9 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	96	52-131

Field ID:	HP9-(11.5-12')	Sampled:	03/02/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-038	Analyzed:	03/08/04
Filen Fac:	3.000	Prep:	SHAKER TABLE
Batch#:	89057		

Analyte	Result	RL
Diesel C10-C24	4.3 H Y	3.0
Motor Oil C24-C36	53 H	15

Surrogate	%REC	Limits
Hexacosane	94	52-131

Field ID:	HP9-(16-16.5')	Sampled:	03/02/04
Type:	SAMPLE	Prepared:	03/04/04
Lab ID:	170926-039	Analyzed:	03/08/04
Filen Fac:	1.000	Prep:	SHAKER TABLE
Batch#:	89057		

Analyte	Result	RL
Diesel C10-C24	5.3 H Y	0.99
Motor Oil C24-C36	52 H	5.0

Surrogate	%REC	Limits
Hexacosane	92	52-131

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  
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### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive	
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B	
Project#: 2832		
Matrix: Soil	Basis: as received	
Units: mg/Kg	Received: 03/02/04	

Field ID: HP9-(21.5-22')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-040	Analyzed: 03/08/04	
Oiln Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	5.6	5.0

Surrogate	%REC	Limits
Hexacosane	86	52-131

Field ID: HP9-(26.5-27')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-041	Analyzed: 03/08/04	
Oiln Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	87	52-131

Field ID: HP10-(6-6.5')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-042	Analyzed: 03/10/04	
Oiln Fac: 3.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	5.7 H Y	3.0
Motor Oil C24-C36	72	15

Surrogate	%REC	Limits
Hexacosane	83	52-131

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  
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### Total Extractable Hydrocarbons

Lab #: 170926	Location: 5725 Thornhill Drive	
Client: SOMA Environmental Engineering Inc.	Analysis: EPA 8015B	
Project#: 2832		
Matrix: Soil	Basis: as received	
Units: mg/Kg	Received: 03/02/04	

Field ID: HP10-(11.5-12')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-043	Analyzed: 03/07/04	
Filen Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	16 L Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	97	52-131

Field ID: HP10-(18.5-19')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-044	Analyzed: 03/08/04	
Filen Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	58 H L Y	1.0
Motor Oil C24-C36	16	5.0

Surrogate	%REC	Limits
Hexacosane	90	52-131

Field ID: HP10-(19.5-20')	Sampled: 03/02/04	
Type: SAMPLE	Prepared: 03/04/04	
Lab ID: 170926-045	Analyzed: 03/07/04	
Filen Fac: 1.000	Prep: SHAKER TABLE	
Batch#: 89057		

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	91	52-131

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



Total Extractable Hydrocarbons

Lab #: 170926 Location: 5725 Thornhill Drive  
 Client: SOMA Environmental Engineering Inc. Analysis: EPA 8015B  
 Project#: 2832  
 Matrix: Soil Basis: as received  
 Units: mc/Kg Received: 03/02/04

Well ID: HP10-(22.5-23') Sampled: 03/02/04  
 Type: SAMPLE Prepared: 03/04/04  
 Lab ID: 170926-046 Analyzed: 03/08/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89057

Analyte	Result	RL
Diesel C10-C24	8.0 H Y	0.99
Motor Oil C24-C36	22	5.0

Surrogate	%REC	Limits
Hexacosane	95	52-131

Type: BLANK Prepared: 03/04/04  
 Lab ID: QC243139 Analyzed: 03/06/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89039

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	109	52-131

Type: BLANK Prepared: 03/04/04  
 Lab ID: QC243143 Analyzed: 03/07/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89040

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

Surrogate	%REC	Limits
Hexacosane	91	52-131

Type: BLANK Prepared: 03/04/04  
 Lab ID: QC243202 Analyzed: 03/07/04  
 Diln Fac: 1.000 Prep: SHAKER TABLE  
 Batch#: 89057 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	85	52-131

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



Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Analysis:	EPA 8015B
Project#:	2832		
Matrix:	Soil	Basis:	as received
Units:	mg/Kg	Received:	03/02/04

Type:	BLANK	Prepared:	03/08/04
Lab ID:	QC243496	Analyzed:	03/09/04
Diln Fac:	1.000	Prep:	EPA 3550
Batch#:	89131	Cleanup Method:	EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	68	52-131

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  
 L= Reporting Limit



Sample Name : 170926-001,89039

Sample #: 89039

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FileName : G:\GC17\CHA\060A283.RAW

Date : 3/9/04 10:06 AM

Method : ATEH064.MTH

Time of Injection: 3/9/04 03:42 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 29.04 mV

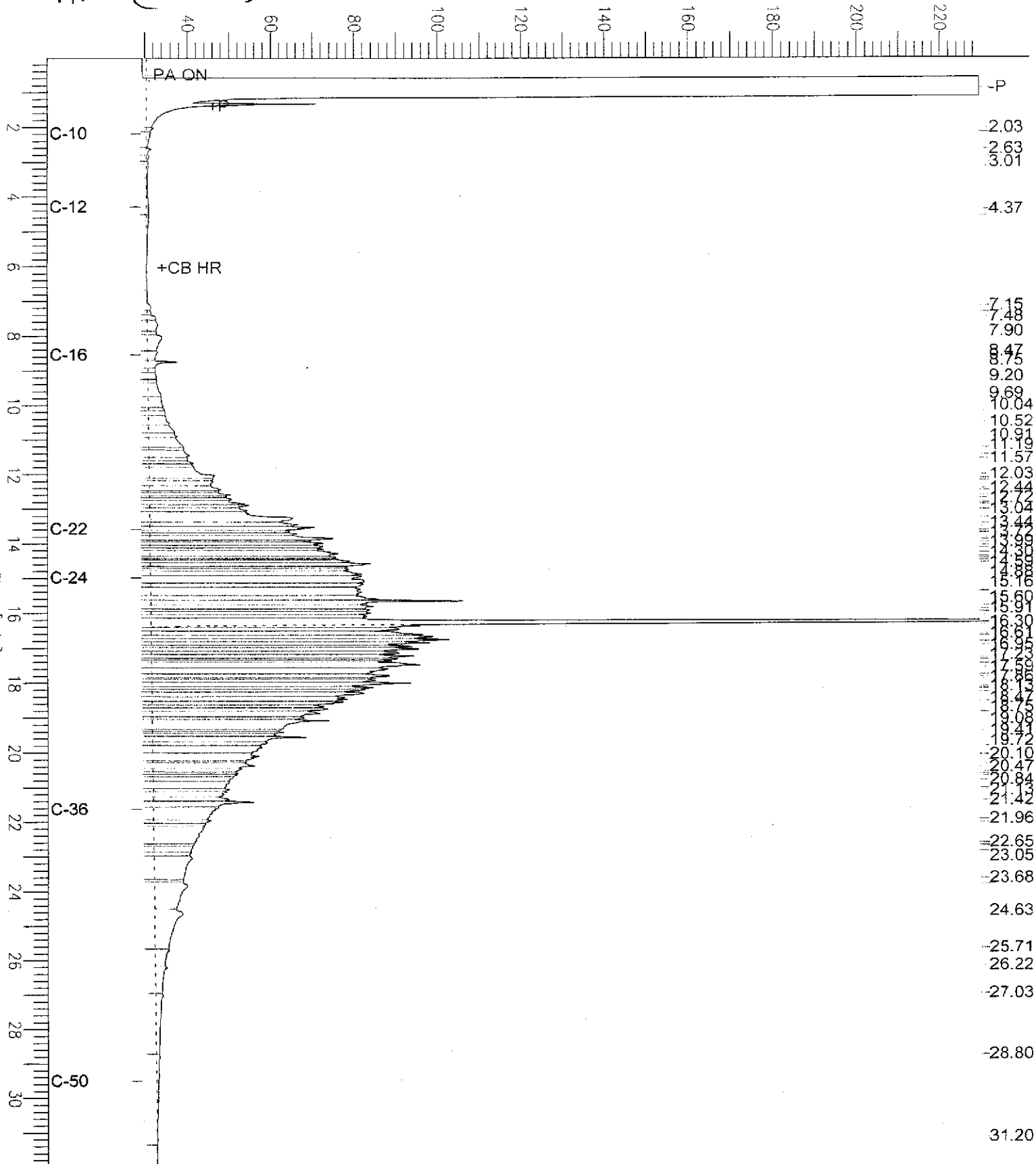
High Point : 229.50 mV

Scale Factor: 0.0 Plot Offset: 29 mV

Plot Scale: 200.5 mV

HP3-(5.5-6')

Response [mV]



# CHROMATOGRAM

Sample Name : 170926-002,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC17\CHA\060A282.RAW

Date : 3/9/04 10:06 AM

Method : ATEH064.MTH

Time of Injection: 3/9/04 03:01 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 26.08 mV

High Point : 274.54 mV

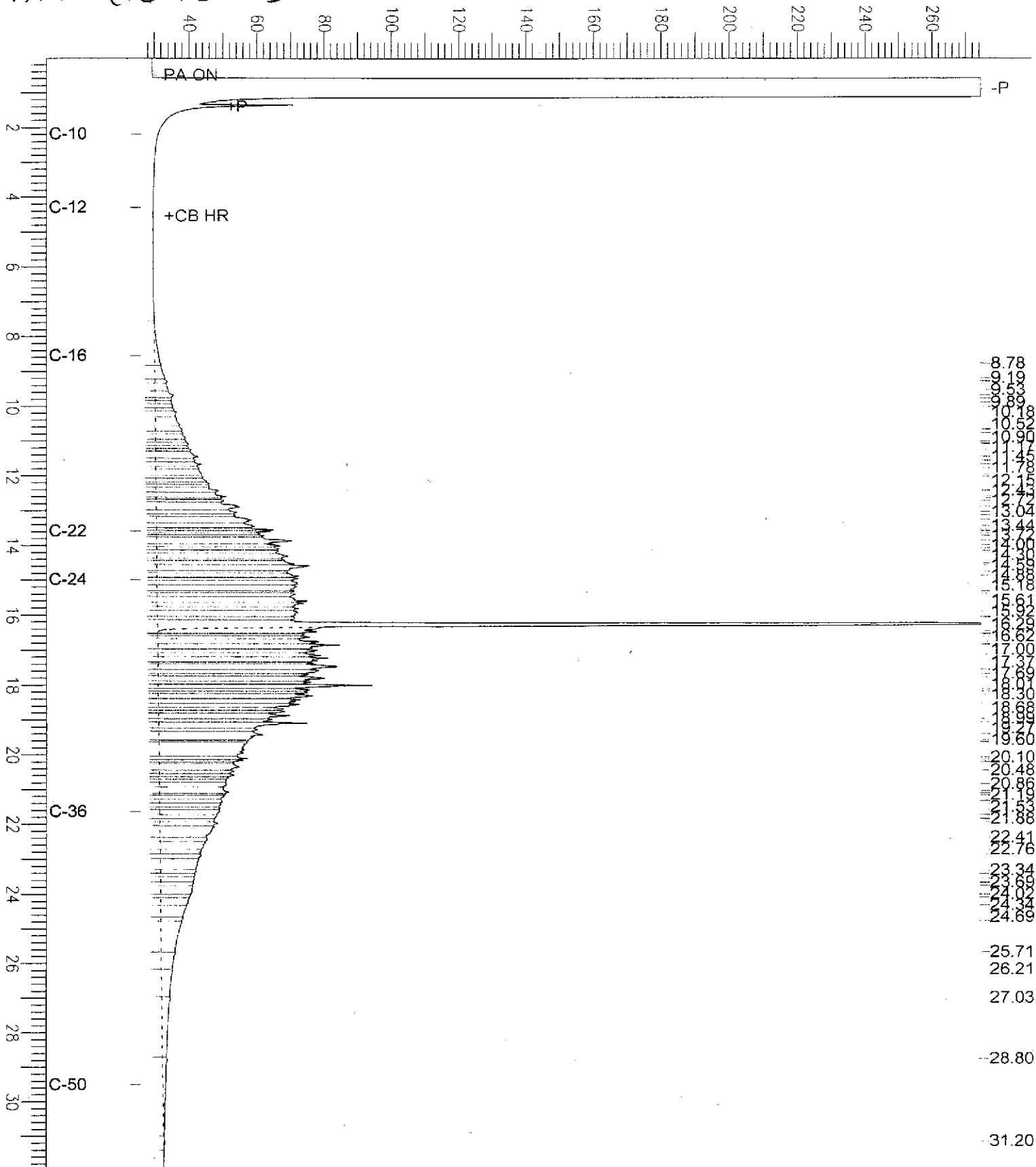
Scale Factor: 0.0

Plot Offset: 26 mV

Plot Scale: 248.5 mV

HP3- (10-10.5')

Response [mV]



20.10  
20.48  
20.80  
21.12  
21.44  
21.76  
22.08  
22.40  
22.72  
23.04  
23.36  
23.68  
24.00  
24.32  
24.64  
24.96  
25.28  
25.60  
25.92  
26.24  
26.56  
26.88  
27.20  
27.52  
27.84  
28.16  
28.48  
28.80  
29.12  
29.44  
29.76  
30.08  
30.40  
30.72  
31.04  
31.20

Sample Name : 170926-003,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC17\CHA\060A280.RAW

Date : 3/9/04 10:05 AM

Method : ATEH064.MTH

Time of Injection: 3/9/04 01:41 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 28.45 mV

High Point : 146.05 mV

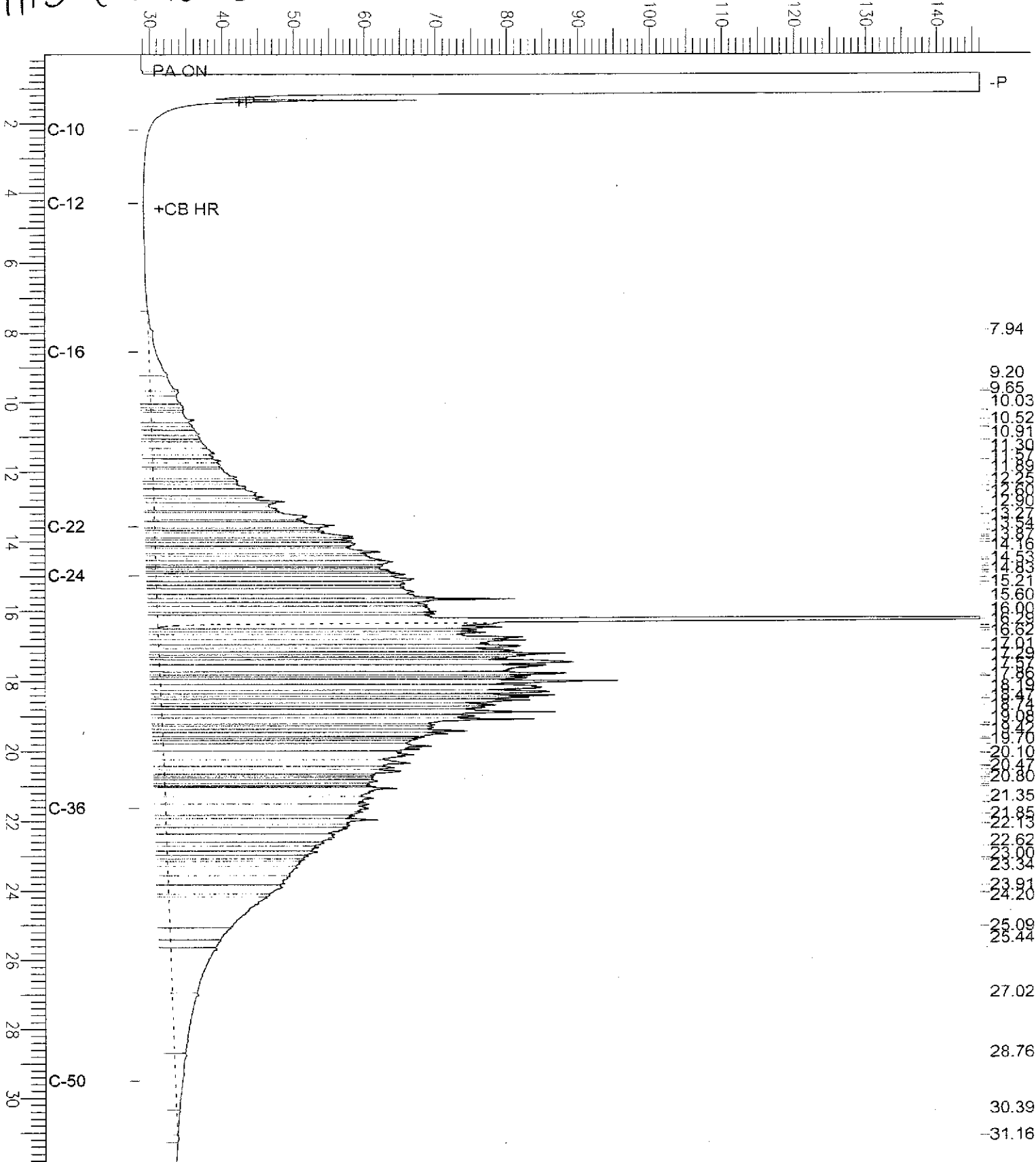
Scale Factor: 0.0

Plot Offset: 28 mV

Plot Scale: 117.6 mV

HP3-(16-165)

Response [mV]



Chromatogram

Sample Name : 170926-004,89039

Sample #: 89039

Page 1 of 1

File Name : G:\GC17\CHA\060A279.RAW

Date : 3/9/04 10:04 AM

Method : ATEH064.MTH

Time of Injection: 3/9/04 01:00 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 27.96 mV

High Point : 202.36 mV

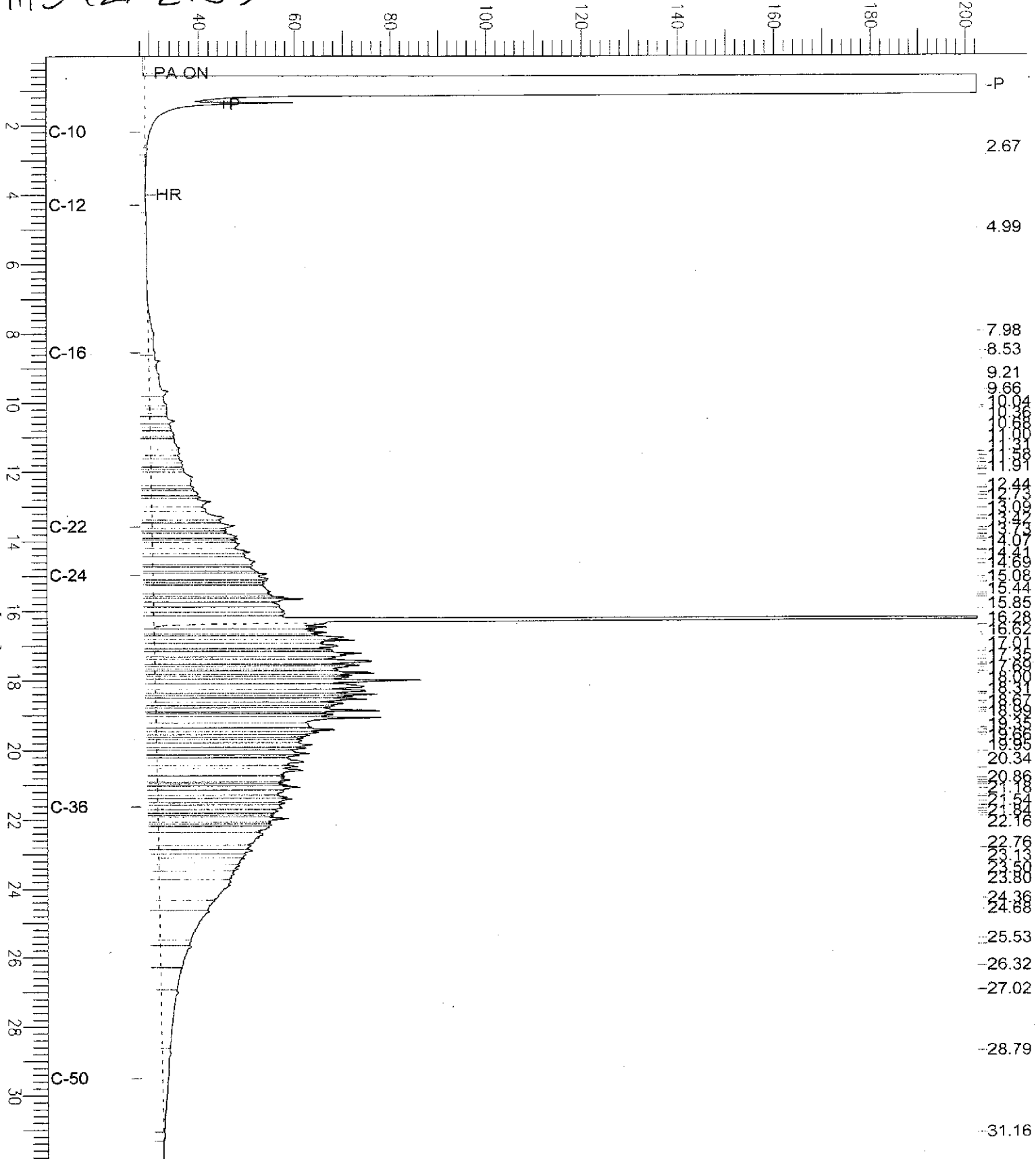
Scale Factor: 0.0

Plot Offset: 28 mV

Plot Scale: 174.4 mV

HPB (21-215)

Response [mV]



Chromatogram

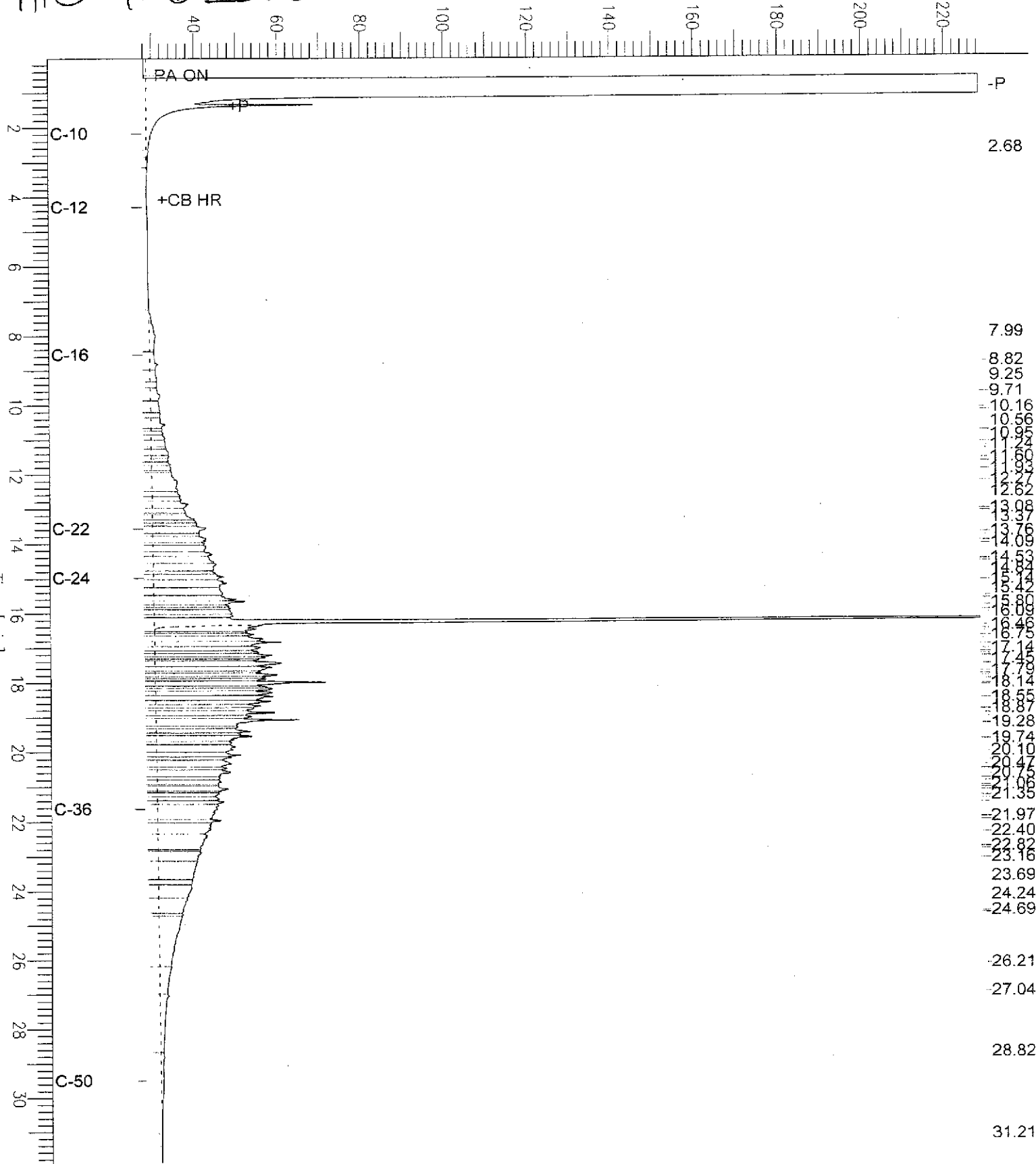
Sample Name : 170926-005,89039  
FileName : G:\GC17\CHA\060A278.RAW  
Method : ATEH064.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 28 mV

Sample #: 89039  
Date : 3/9/04 10:04 AM  
Time of Injection: 3/9/04 12:20 AM  
Low Point : 27.70 mV  
Plot Scale: 200.8 mV

HP3- (26-265)

Response [mV]



Sample Name : 170926-006,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC17\CHA\060A277.RAW

Date : 3/9/04 10:03 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 11:40 PM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 27.24 mV

High Point : 220.75 mV

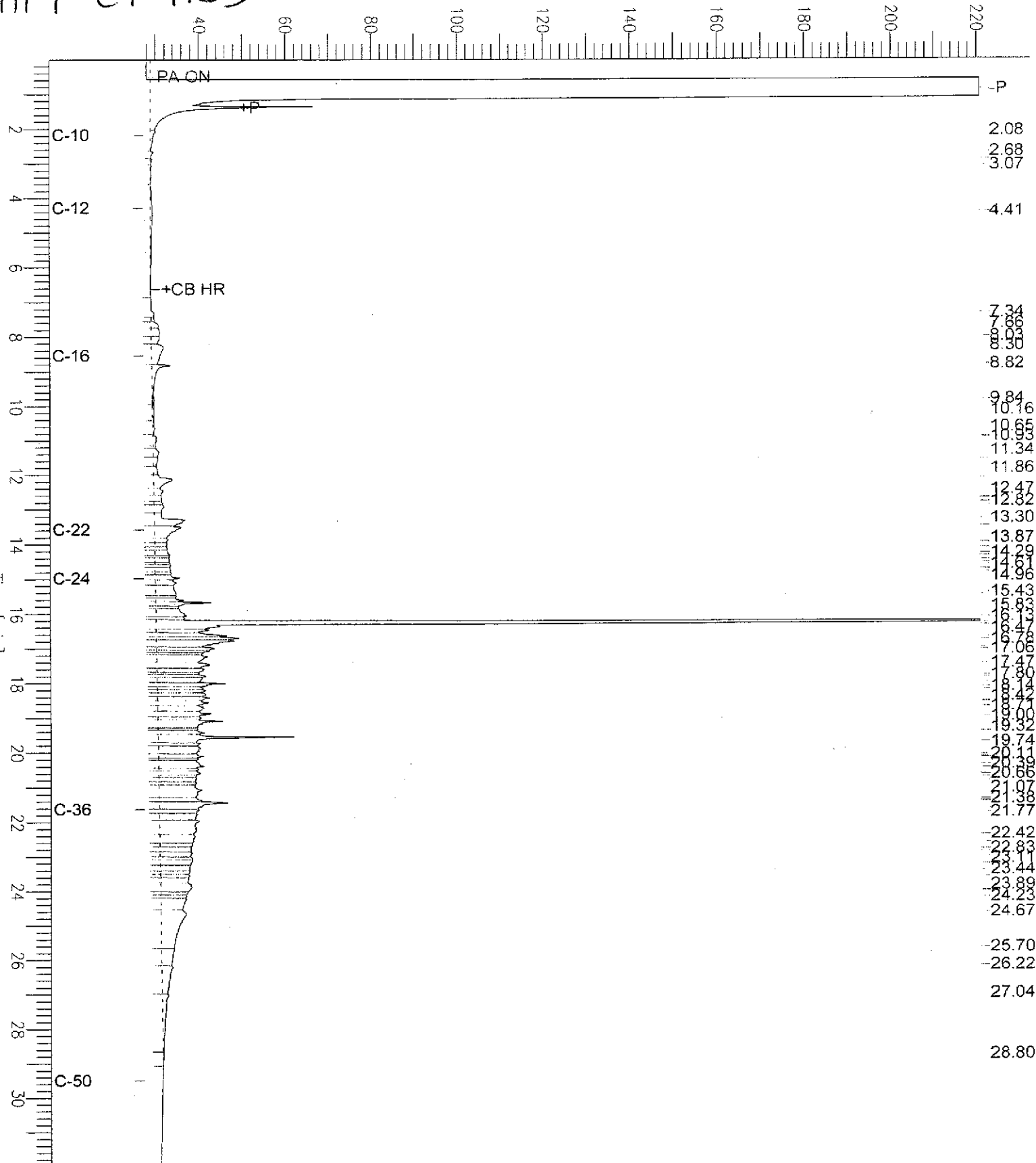
Scale Factor: 0.0

Plot Offset: 27 mV

Plot Scale: 193.5 mV

HP4 - (4-4.5)

Response [mV]



2.08
2.68
3.07
4.41
7.34
7.66
8.03
8.30
8.82
9.84
10.16
10.65
10.83
11.34
11.86
12.47
12.82
13.30
13.87
14.29
14.61
14.96
15.43
15.83
16.14
16.47
16.78
17.06
17.47
17.80
18.14
18.42
18.71
19.00
19.32
19.74
20.11
20.49
20.85
21.07
21.38
21.77
22.42
22.83
23.41
23.44
23.89
24.23
24.67
25.70
26.22
27.04
28.80

Sample Name : 170926-008,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC17\CHA\060A275.RAW

Date : 3/9/04 10:02 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 10:19 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 24.00 mV

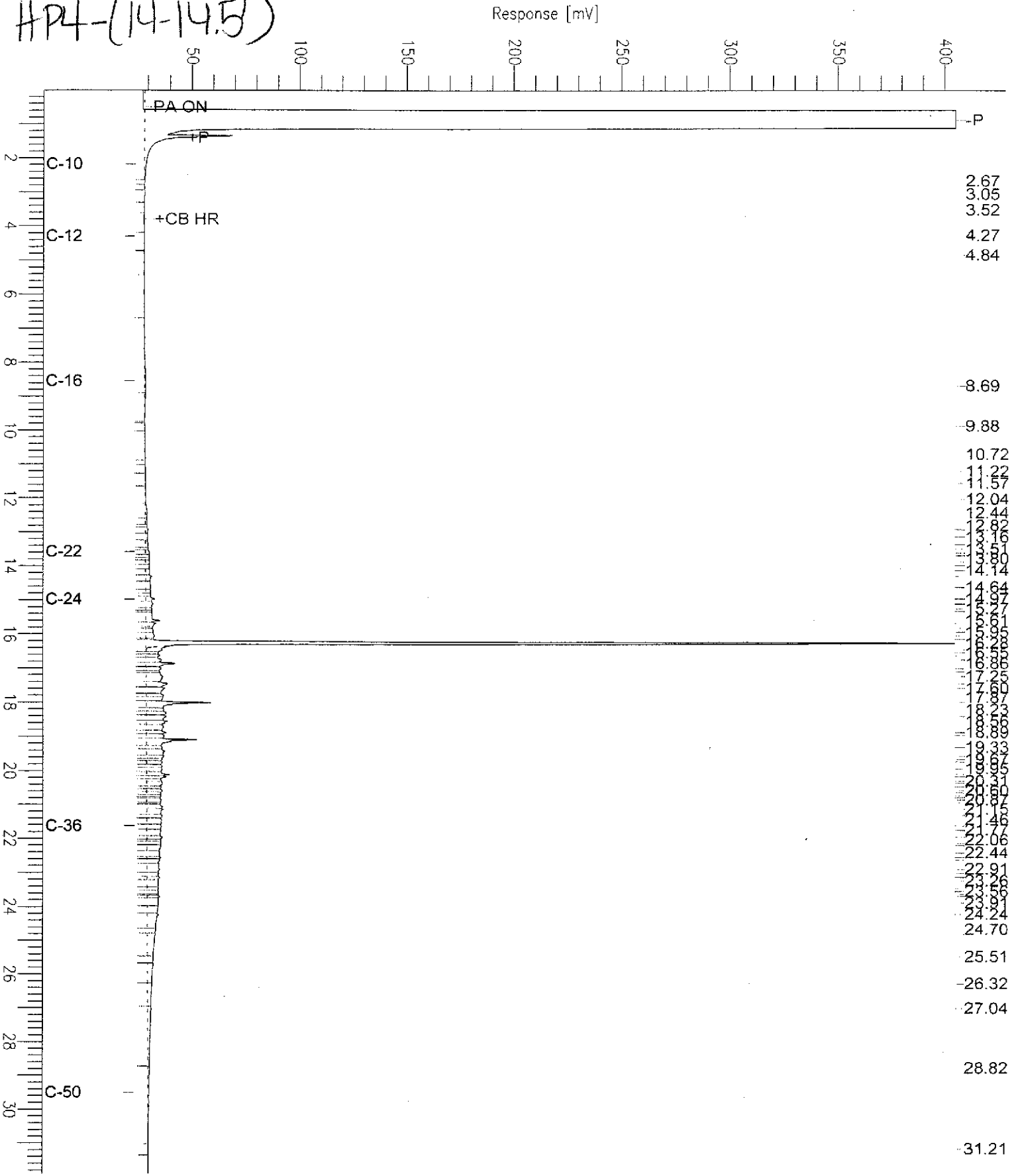
High Point : 405.22 mV

Scale Factor: 0.0

Plot Offset: 24 mV

Plot Scale: 381.2 mV

HP4-(14-14.5)



# Chromatogram

Sample Name : 170926-009,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC17\CHA\060A218.RAW

Date : 3/7/04 03:06 PM

Method : ATEH064.MTH

Time of Injection: 3/7/04 06:37 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 12.93 mV

High Point : 380.59 mV

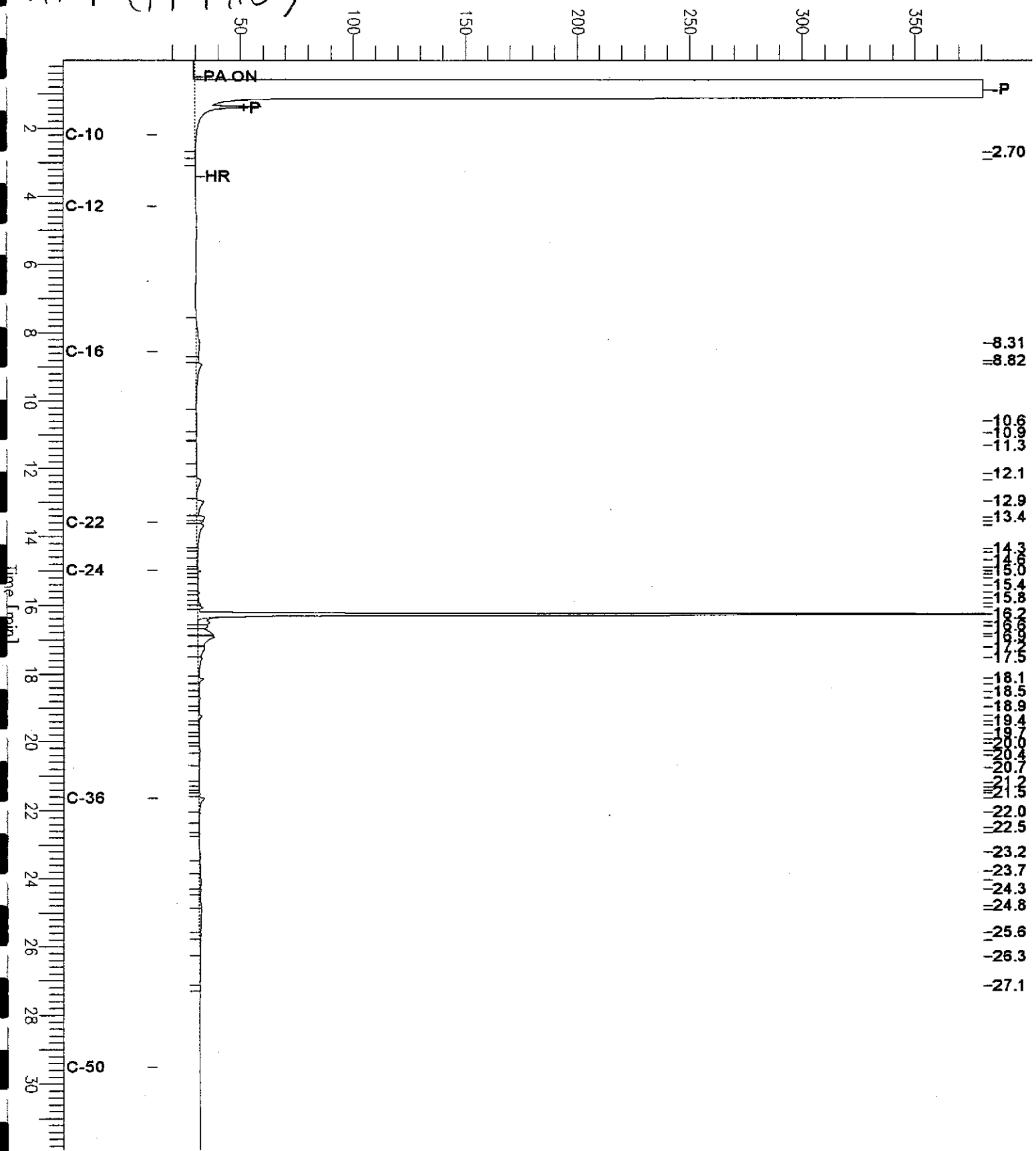
Scale Factor: 0.0

Plot Offset: 13 mV

Plot Scale: 367.7 mV

HP4-(19-19.5')

Response [mV]







# Chromatogram

Sample Name : 170926-012,89039

Sample #: 89039

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FileName : G:\GC17\CHA\060A273.RAW

Date : 3/9/04 10:00 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 08:58 PM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 26.54 mV

High Point : 386.18 mV

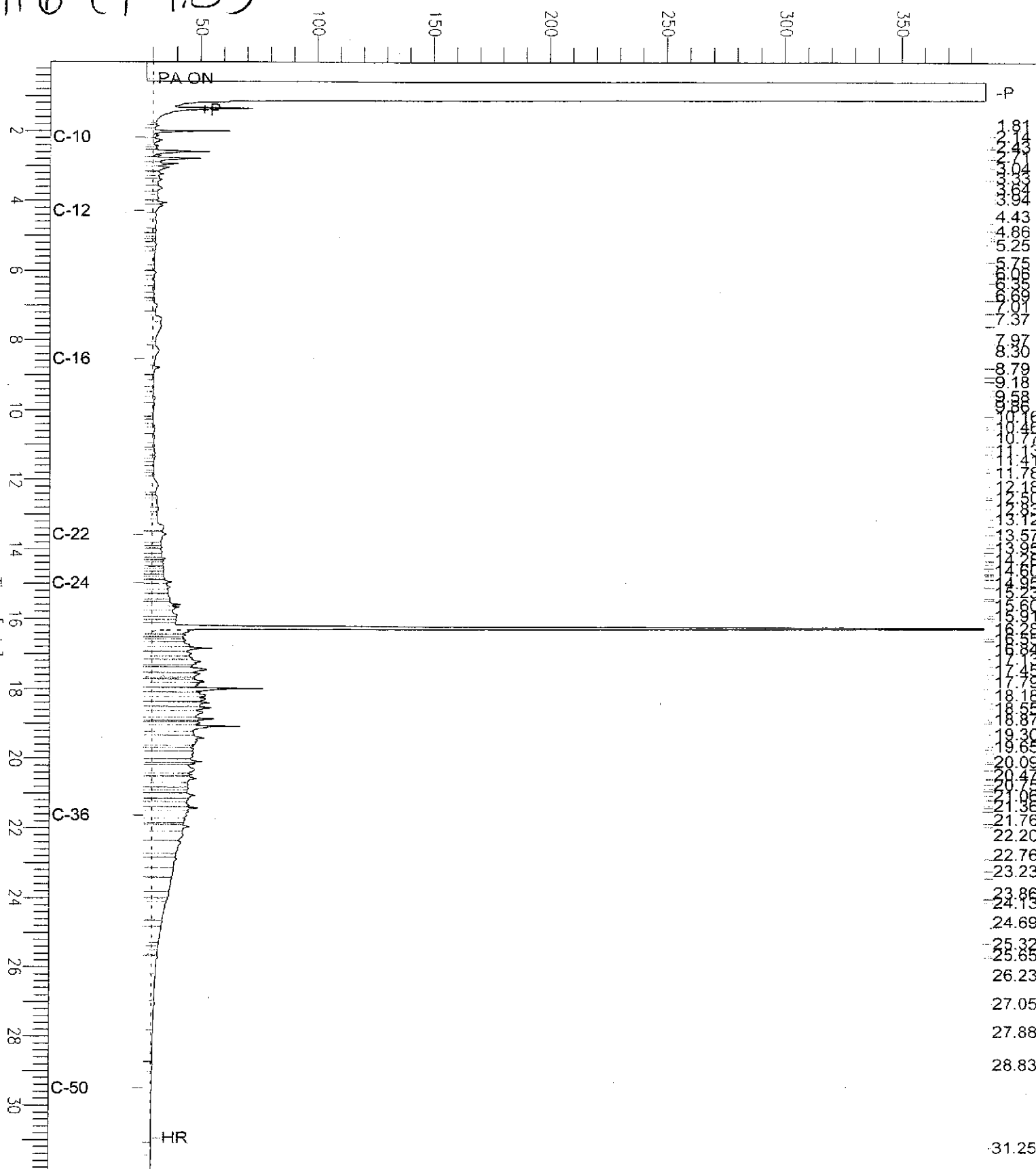
Scale Factor: 0.0

Plot Offset: 27 mV

Plot Scale: 359.6 mV

HP6-(9-9.5')

Response [mV]



2.43  
2.55  
2.75  
2.86  
3.07  
3.27  
3.37  
3.57  
3.67  
3.80  
3.99  
4.18  
4.38  
4.58  
4.78  
4.98  
5.18  
5.38  
5.58  
5.78  
5.98  
6.18  
6.38  
6.58  
6.78  
6.98  
7.18  
7.38  
7.58  
7.78  
7.98  
8.18  
8.38  
8.58  
8.78  
8.98  
9.18  
9.38  
9.58  
9.78  
9.98  
10.18  
10.38  
10.58  
10.78  
10.98  
11.18  
11.38  
11.58  
11.78  
11.98  
12.18  
12.38  
12.58  
12.78  
12.98  
13.18  
13.38  
13.58  
13.78  
13.98  
14.18  
14.38  
14.58  
14.78  
14.98  
15.18  
15.38  
15.58  
15.78  
15.98  
16.18  
16.38  
16.58  
16.78  
16.98  
17.18  
17.38  
17.58  
17.78  
17.98  
18.18  
18.38  
18.58  
18.78  
18.98  
19.18  
19.38  
19.58  
19.78  
19.98  
20.18  
20.38  
20.58  
20.78  
20.98  
21.18  
21.38  
21.58  
21.76  
22.20  
22.76  
23.23  
23.86  
24.13  
24.69  
25.32  
25.65  
26.23  
27.05  
27.88  
28.83  
31.25

# Chromatogram

Sample Name : 170926-013,89039  
FileName : G:\GC17\CHA\060A272.RAW  
Method : ATEH064.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

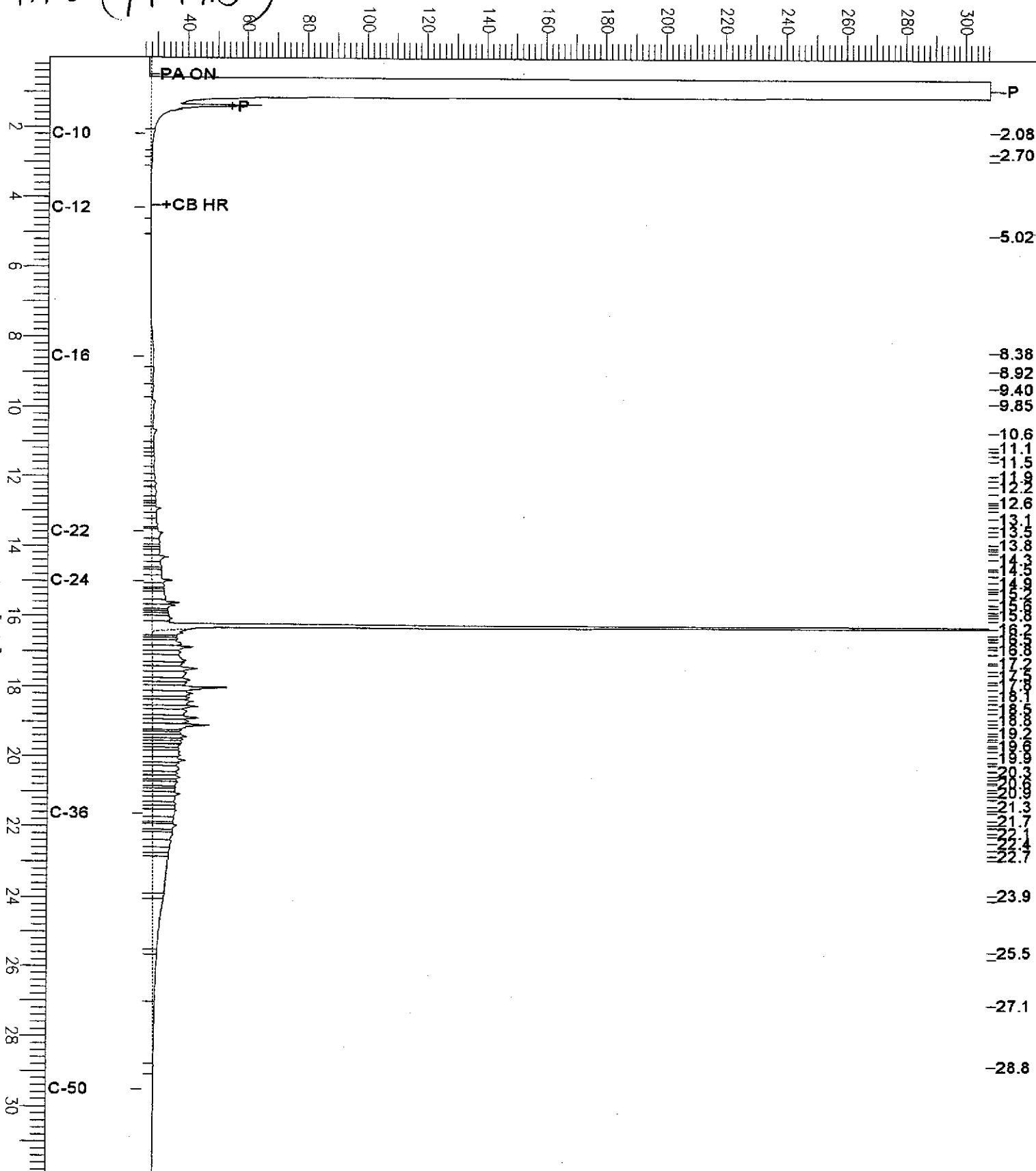
End Time : 31.88 min  
Plot Offset: 26 mV

Sample #: 89039  
Date : 3/9/04 09:51 AM  
Time of Injection: 3/8/04 08:18 PM  
Low Point : 25.75 mV  
Plot Scale: 282.7 mV

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HP6 (14-14.5)

Response [mV]



Sample Name : 170926-014,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC13\CHBA\068B037.RAW

Date : 3/9/04 12:26 PM

Method : BTEH065.MTH

Time of Injection: 3/9/04 08:45 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 30.65 mV

High Point : 158.14 mV

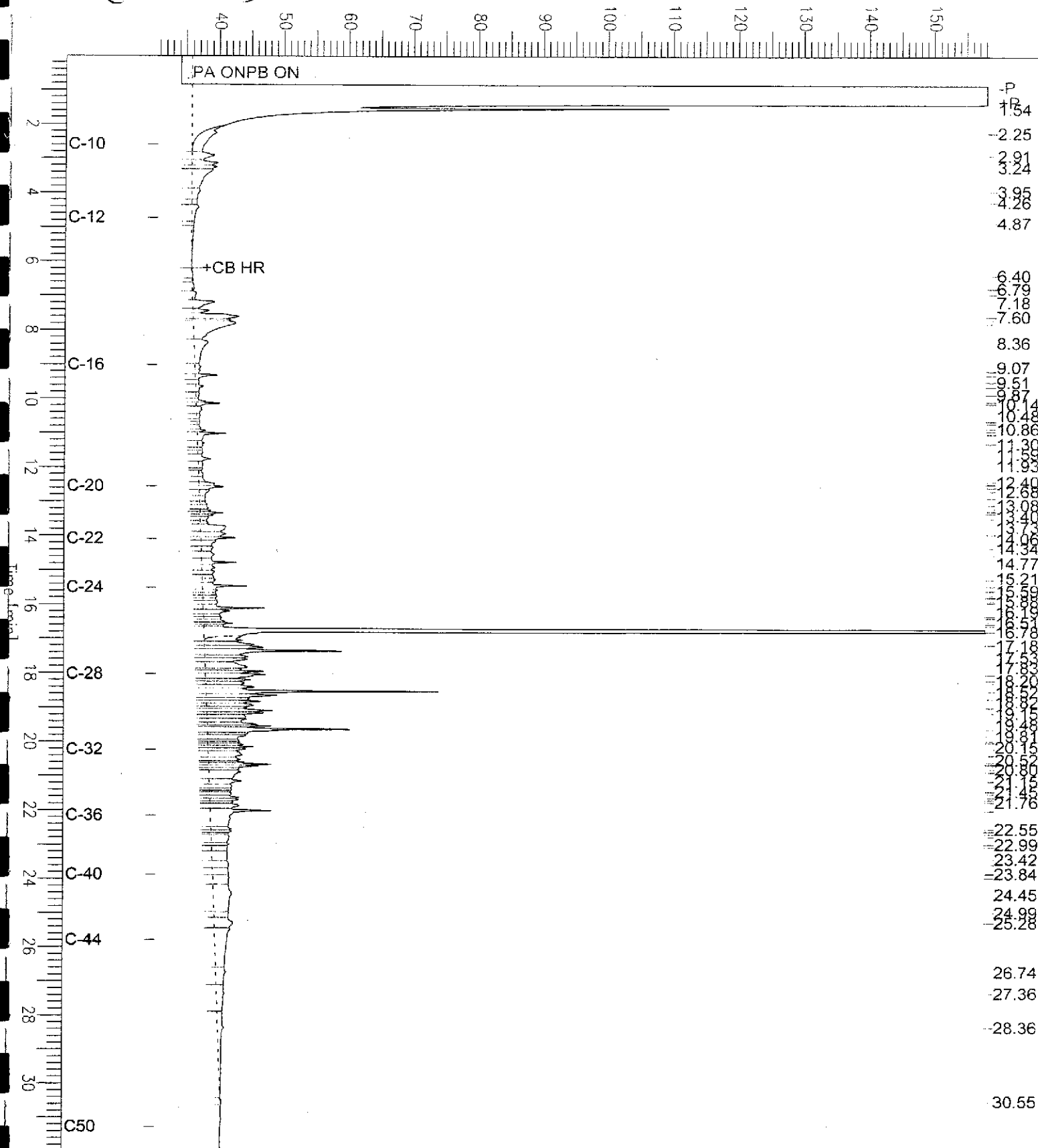
Scale Factor: 0.0

Plot Offset: 31 mV

Plot Scale: 127.5 mV

190-(19-19.5')

Response [mV]



# Chromatogram

Sample Name : 170926-015,89039

Sample #: 89039

Page 1 of 1

FileName : G:\GC13\CHB\068B036.RAW

Date : 3/9/04 12:25 PM

Method : BTEH065.MTH

Time of Injection: 3/9/04 08:06 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 27.10 mV

High Point : 165.88 mV

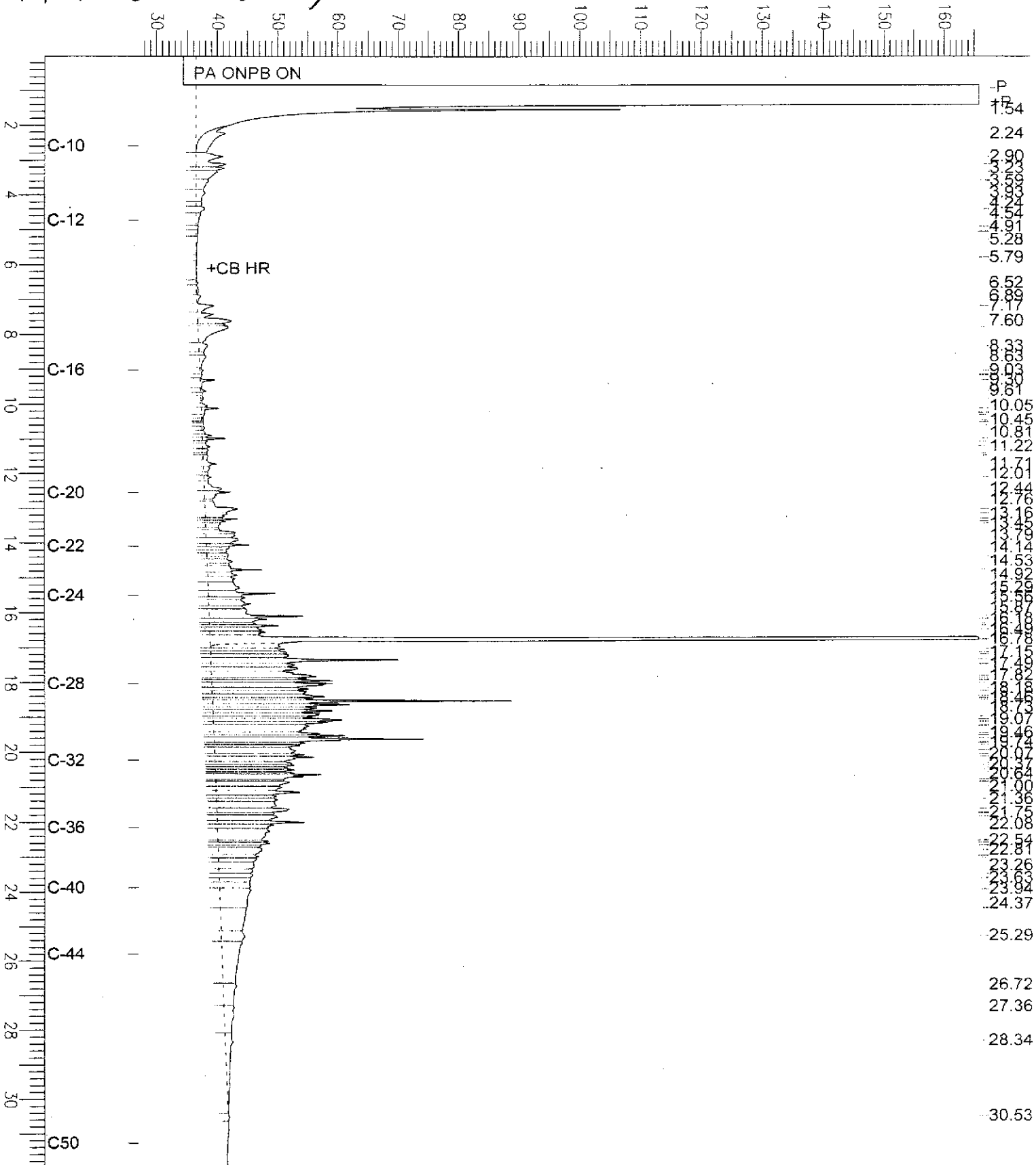
Scale Factor: 0.0

Plot Offset: 27 mV

Plot Scale: 138.8 mV

HP 6- (23.5-24')

Response [mV]



# Chromatogram

Sample Name : 170926-016,89039

Sample #: 89039

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File Name : G:\GC17\CHA\060A228.RAW

Date : 3/7/04 03:14 PM

Method : ATEH064.MTH

Time of Injection: 3/7/04 01:21 PM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 14.91 mV

High Point : 368.85 mV

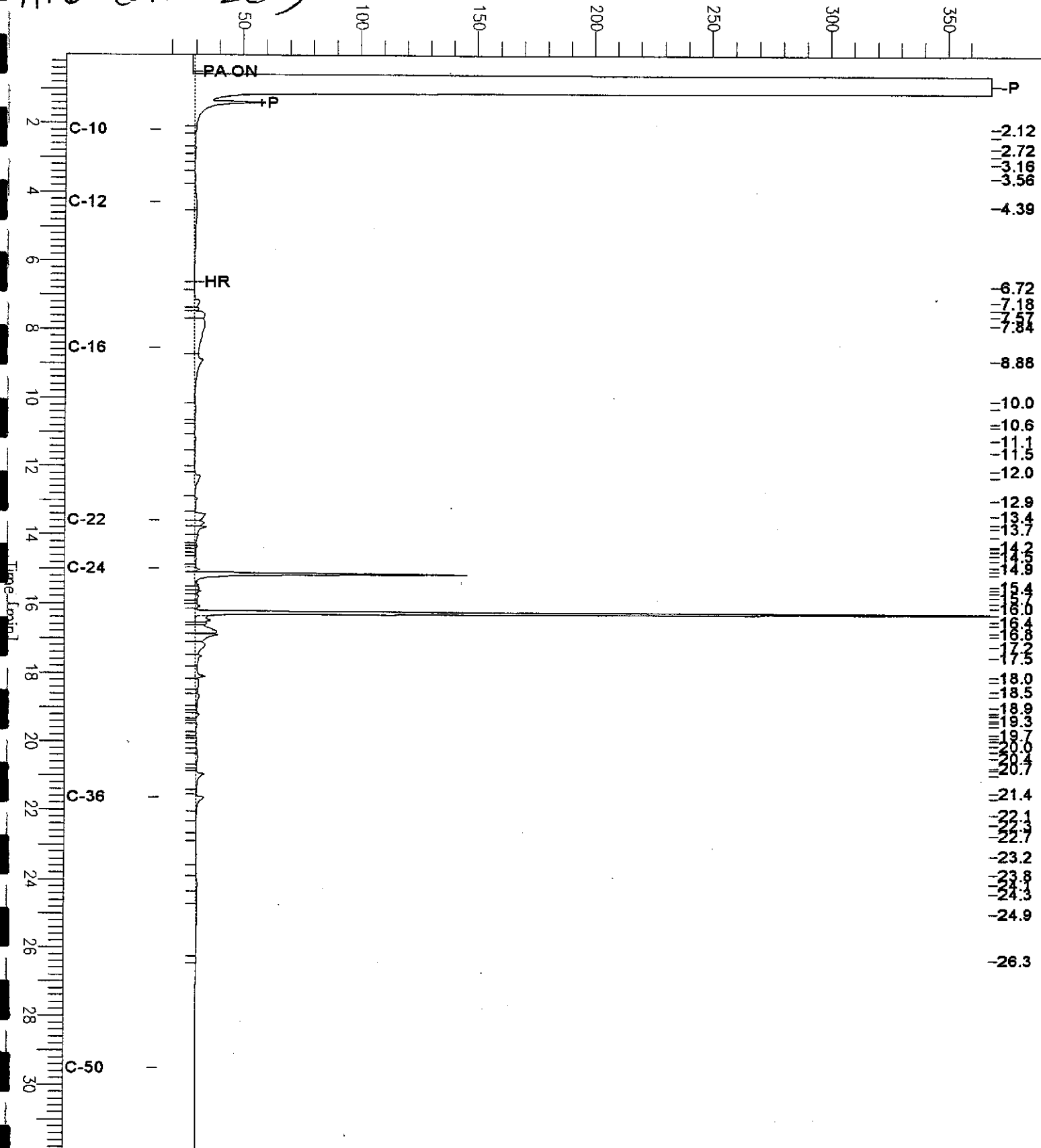
Scale Factor: 0.0

Plot Offset: 15 mV

Plot Scale: 353.9 mV

HP10 - (27.5 - 28')

Response [mV]



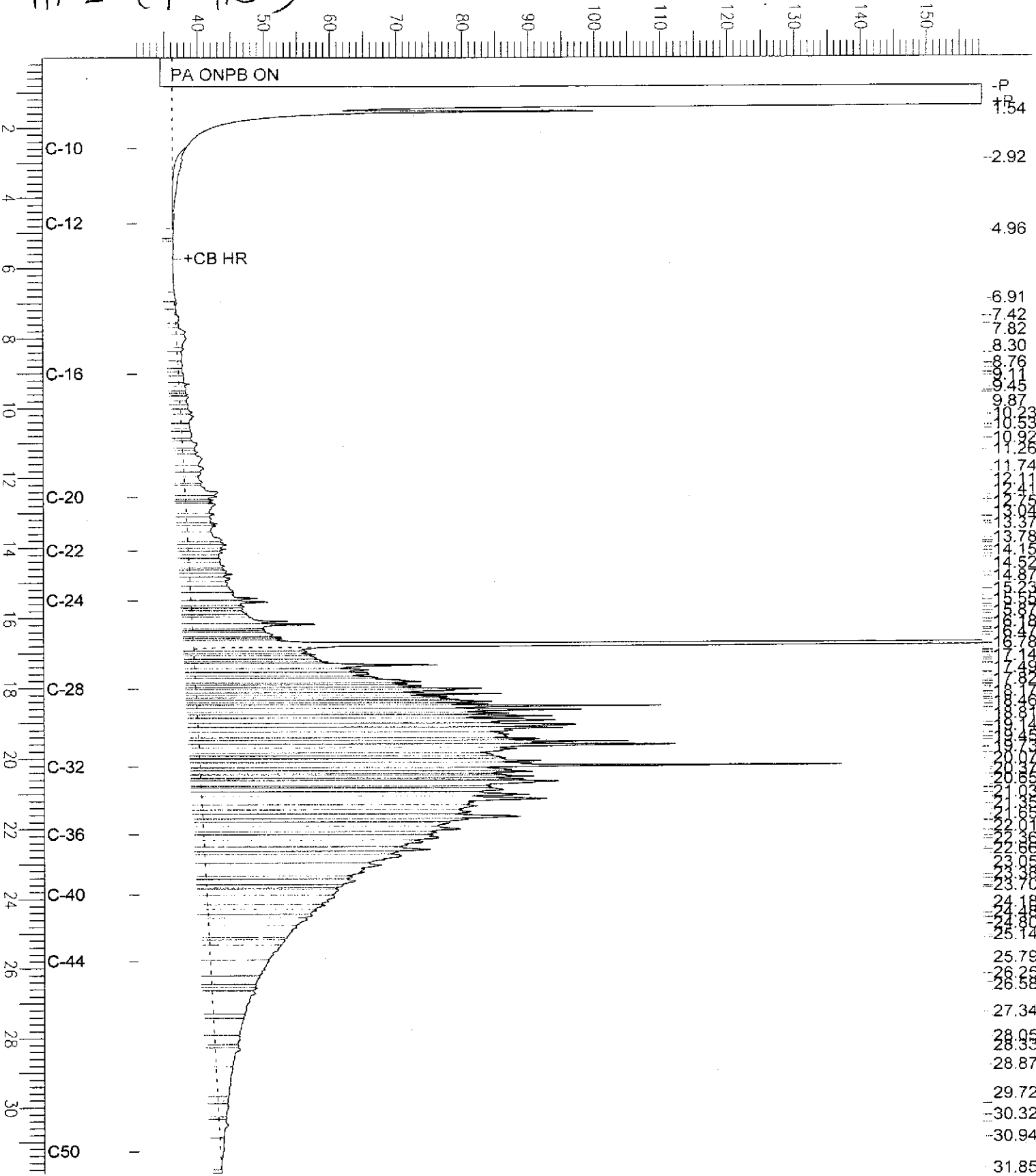
# Chromatogram

Sample Name : 170926-017,89039  
FileName : G:\GC13\CHB\068B035.RAW  
Method : BTEH065.MTH  
Start Time : 0.01 min End Time : 31.91 min  
Scale Factor: 0.0 Plot Offset: 31 mV

Sample #: 89039 Page 1 of 1  
Date : 3/9/04 12:25 PM  
Time of Injection: 3/9/04 07:26 AM  
Low Point : 30.94 mV High Point : 158.44 mV  
Plot Scale: 127.5 mV

HP 2-(4,4,5)

Response [mV]







# Chromatogram

Sample Name : 170926-019,89039

Sample #: 89039

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FileName : G:\GC13\CHB\068B034.RAW

Date : 3/9/04 12:15 PM

Method : BTEH065.MTH

Time of Injection: 3/9/04 06:46 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 27.16 mV

High Point : 113.36 mV

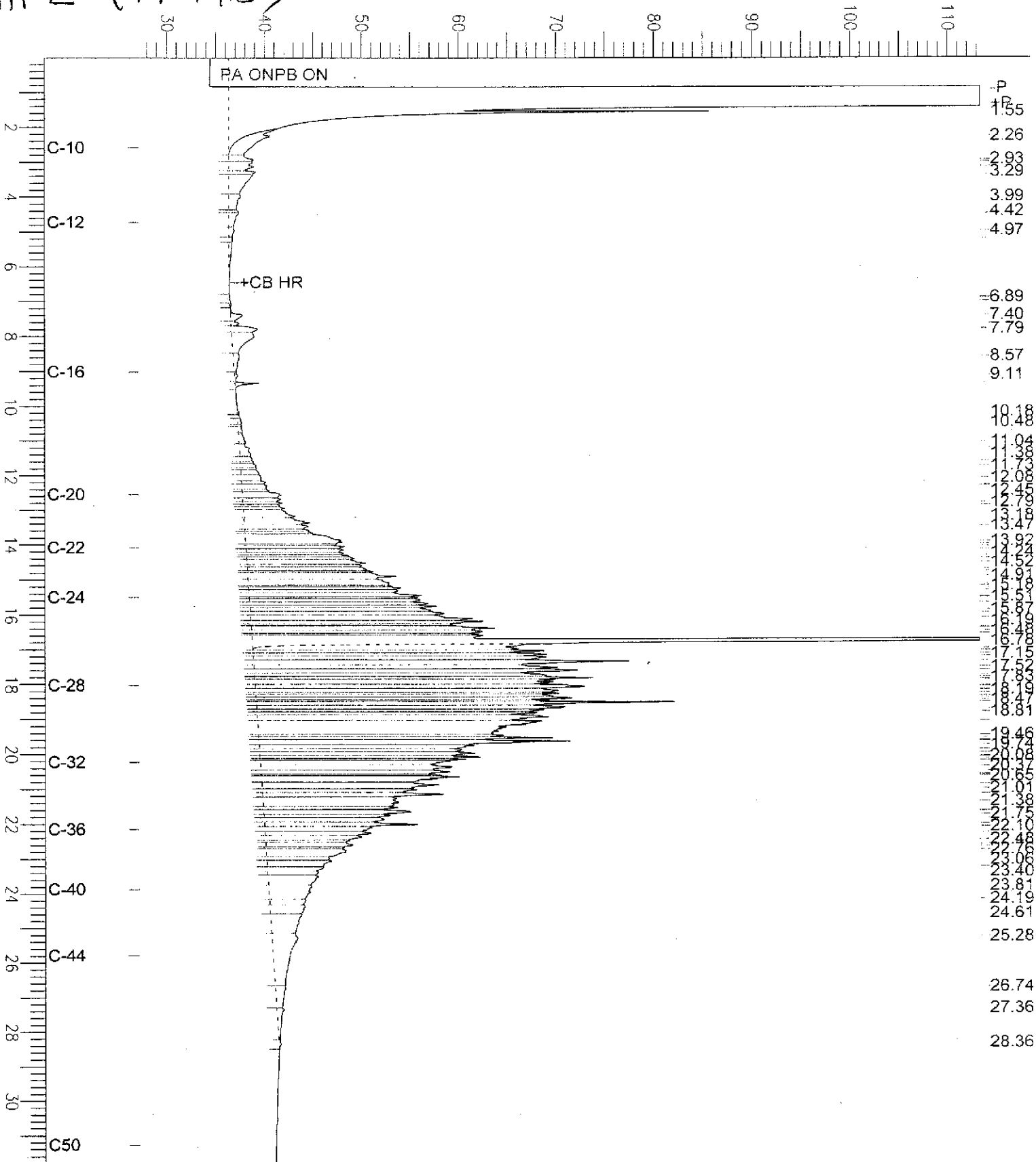
Scale Factor: 0.0

Plot Offset: 27 mV

Plot Scale: 86.2 mV

HP 2 - (14-14.5')

Response [mV]



Retention Time (min)	Response (mV)
1.55	1.55
2.26	2.26
2.93	2.93
3.29	3.29
3.99	3.99
4.42	4.42
4.97	4.97
6.89	6.89
7.40	7.40
7.79	7.79
8.57	8.57
9.11	9.11
10.18	10.18
10.48	10.48
11.04	11.04
11.38	11.38
11.70	11.70
12.08	12.08
12.48	12.48
12.79	12.79
13.19	13.19
13.47	13.47
13.93	13.93
14.24	14.24
14.52	14.52
14.91	14.91
15.18	15.18
15.56	15.56
15.86	15.86
16.16	16.16
16.46	16.46
16.76	16.76
17.06	17.06
17.36	17.36
17.66	17.66
17.96	17.96
18.26	18.26
18.56	18.56
18.86	18.86
19.16	19.16
19.46	19.46
19.76	19.76
20.06	20.06
20.36	20.36
20.66	20.66
20.96	20.96
21.26	21.26
21.56	21.56
21.86	21.86
22.16	22.16
22.46	22.46
22.76	22.76
23.06	23.06
23.36	23.36
23.66	23.66
23.96	23.96
24.26	24.26
24.56	24.56
24.86	24.86
25.16	25.16
25.46	25.46
25.76	25.76
26.06	26.06
26.36	26.36
26.66	26.66
26.96	26.96
27.26	27.26
27.56	27.56
27.86	27.86
28.16	28.16
28.46	28.46
28.76	28.76
29.06	29.06
29.36	29.36
29.66	29.66
29.96	29.96
30.26	30.26
30.56	30.56
30.86	30.86
31.16	31.16
31.46	31.46
31.76	31.76
32.06	32.06
32.36	32.36
32.66	32.66
32.96	32.96
33.26	33.26
33.56	33.56
33.86	33.86
34.16	34.16
34.46	34.46
34.76	34.76
35.06	35.06
35.36	35.36
35.66	35.66
35.96	35.96
36.26	36.26
36.56	36.56
36.86	36.86
37.16	37.16
37.46	37.46
37.76	37.76
38.06	38.06
38.36	38.36
38.66	38.66
38.96	38.96
39.26	39.26
39.56	39.56
39.86	39.86
40.16	40.16
40.46	40.46
40.76	40.76
41.06	41.06
41.36	41.36
41.66	41.66
41.96	41.96
42.26	42.26
42.56	42.56
42.86	42.86
43.16	43.16
43.46	43.46
43.76	43.76
44.06	44.06
44.36	44.36
44.66	44.66
44.96	44.96
45.26	45.26
45.56	45.56
45.86	45.86
46.16	46.16
46.46	46.46
46.76	46.76
47.06	47.06
47.36	47.36
47.66	47.66
47.96	47.96
48.26	48.26
48.56	48.56
48.86	48.86
49.16	49.16
49.46	49.46
49.76	49.76
50.06	50.06
50.36	50.36
50.66	50.66
50.96	50.96
51.26	51.26
51.56	51.56
51.86	51.86
52.16	52.16
52.46	52.46
52.76	52.76
53.06	53.06
53.36	53.36
53.66	53.66
53.96	53.96
54.26	54.26
54.56	54.56
54.86	54.86
55.16	55.16
55.46	55.46
55.76	55.76
56.06	56.06
56.36	56.36
56.66	56.66
56.96	56.96
57.26	57.26
57.56	57.56
57.86	57.86
58.16	58.16
58.46	58.46
58.76	58.76
59.06	59.06
59.36	59.36
59.66	59.66
59.96	59.96
60.26	60.26
60.56	60.56
60.86	60.86
61.16	61.16
61.46	61.46
61.76	61.76
62.06	62.06
62.36	62.36
62.66	62.66
62.96	62.96
63.26	63.26
63.56	63.56
63.86	63.86
64.16	64.16
64.46	64.46
64.76	64.76
65.06	65.06
65.36	65.36
65.66	65.66
65.96	65.96
66.26	66.26
66.56	66.56
66.86	66.86
67.16	67.16
67.46	67.46
67.76	67.76
68.06	68.06
68.36	68.36
68.66	68.66
68.96	68.96
69.26	69.26
69.56	69.56
69.86	69.86
70.16	70.16
70.46	70.46
70.76	70.76
71.06	71.06
71.36	71.36
71.66	71.66
71.96	71.96
72.26	72.26
72.56	72.56
72.86	72.86
73.16	73.16
73.46	73.46
73.76	73.76
74.06	74.06
74.36	74.36
74.66	74.66
74.96	74.96
75.26	75.26
75.56	75.56
75.86	75.86
76.16	76.16
76.46	76.46
76.76	76.76
77.06	77.06
77.36	77.36
77.66	77.66
77.96	77.96
78.26	78.26
78.56	78.56
78.86	78.86
79.16	79.16
79.46	79.46
79.76	79.76
80.06	80.06
80.36	80.36
80.66	80.66
80.96	80.96
81.26	81.26
81.56	81.56
81.86	81.86
82.16	82.16
82.46	82.46
82.76	82.76
83.06	83.06
83.36	83.36
83.66	83.66
83.96	83.96
84.26	84.26
84.56	84.56
84.86	84.86
85.16	85.16
85.46	85.46
85.76	85.76
86.06	86.06
86.36	86.36
86.66	86.66
86.96	86.96
87.26	87.26
87.56	87.56
87.86	87.86
88.16	88.16
88.46	88.46
88.76	88.76
89.06	89.06
89.36	89.36
89.66	89.66
89.96	89.96
90.26	90.26
90.56	90.56
90.86	90.86
91.16	91.16
91.46	91.46
91.76	91.76
92.06	92.06
92.36	92.36
92.66	92.66
92.96	92.96
93.26	93.26
93.56	93.56
93.86	93.86
94.16	94.16
94.46	94.46
94.76	94.76
95.06	95.06
95.36	95.36
95.66	95.66
95.96	95.96
96.26	96.26
96.56	96.56
96.86	96.86
97.16	97.16
97.46	97.46
97.76	97.76
98.06	98.06
98.36	98.36
98.66	98.66
98.96	98.96
99.26	99.26
99.56	99.56
99.86	99.86
100.16	100.16
100.46	100.46
100.76	100.76
101.06	101.06
101.36	101.36
101.66	101.66
101.96	101.96
102.26	102.26
102.56	102.56
102.86	102.86
103.16	103.16
103.46	103.46
103.76	103.76
104.06	104.06
104.36	104.36
104.66	104.66
104.96	104.96
105.26	105.26
105.56	105.56
105.86	105.86
106.16	106.16
106.46	106.46
106.76	106.76
107.06	107.06
107.36	107.36
107.66	107.66
107.96	107.96
108.26	108.26
108.56	108.56
108.86	108.86
109.16	109.16
109.46	109.46
109.76	109.76
110.06	110.06

# Chromatogram

Sample Name : 170926-020,89039

Sample #: 89039

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FileName : G:\GC13\CHB\068B044.RAW

Date : 3/9/04 01:36 PM

Method : BTEH065.MTH

Time of Injection: 3/9/04 12:50 PM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 30.17 mV

High Point : 333.23 mV

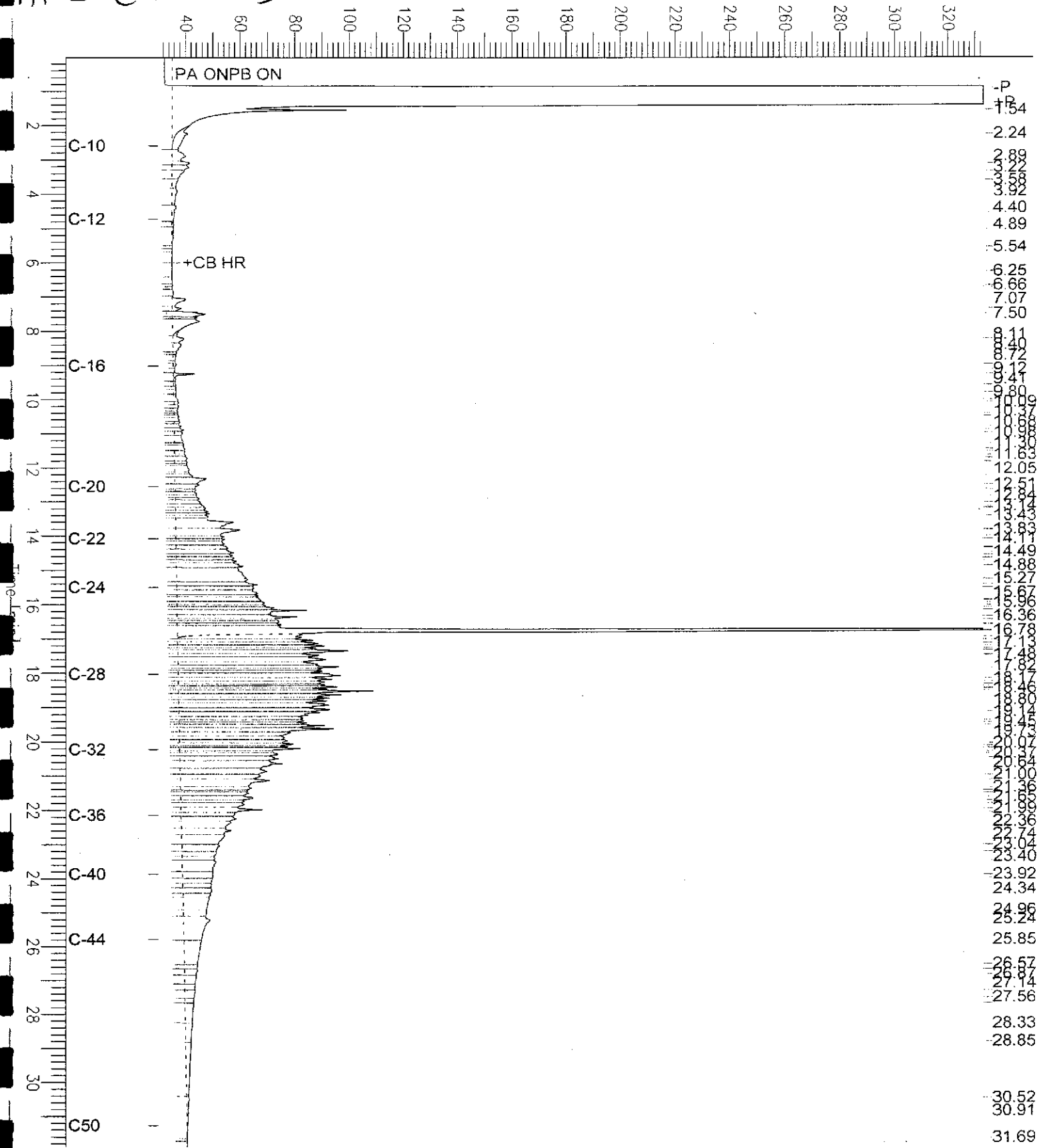
Scale Factor: 0.0

Plot Offset: 30 mV

Plot Scale: 303.1 mV

HP2-(19-19.5')

Response [mV]

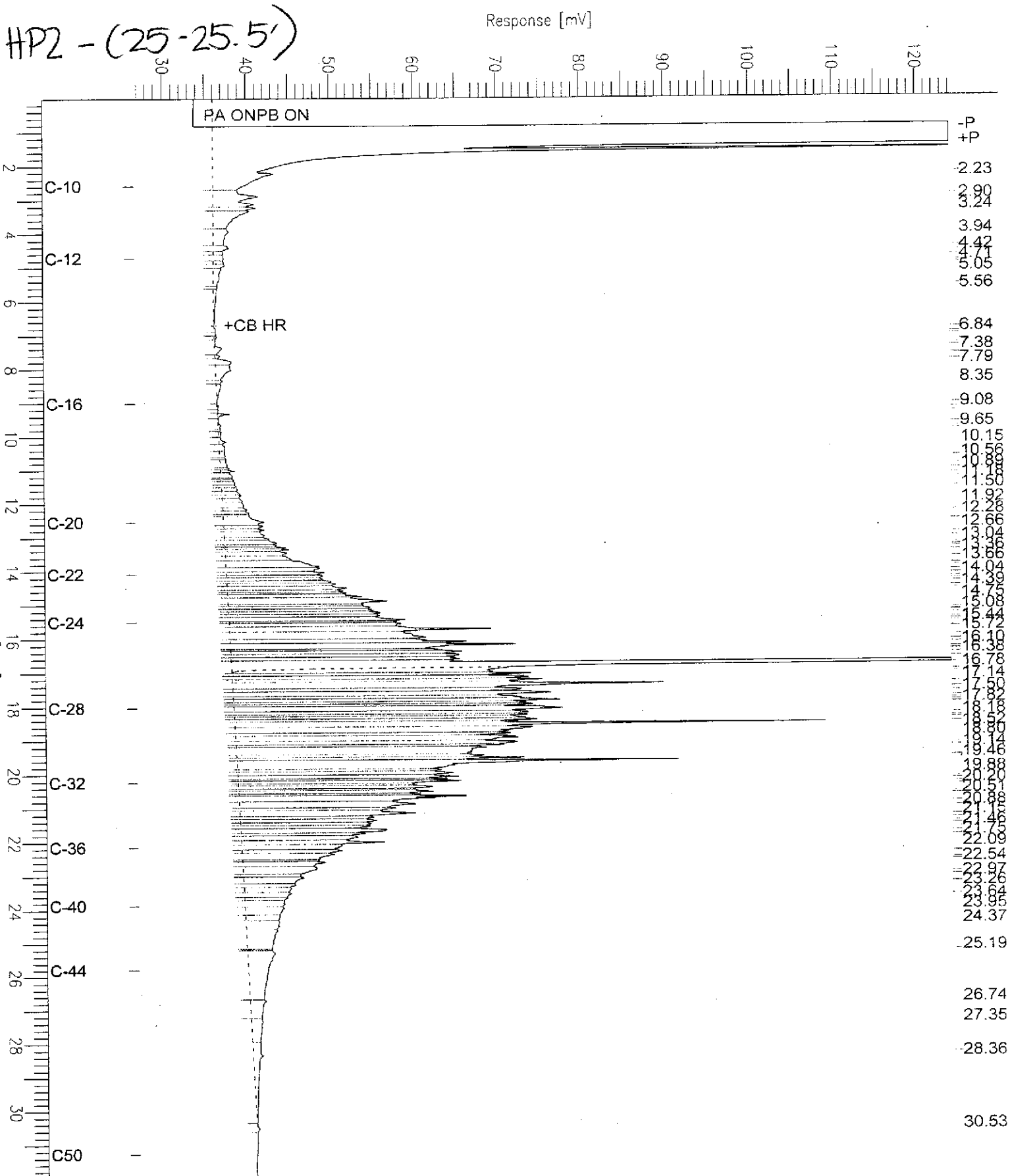


# Chromatogram

Sample Name : 170926-021,89010  
FileName : G:\GC13\CHB\068B038.RAW  
Method : BTEH065.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 27 mV

Sample #: 89040  
Date : 3/9/04 12:27 PM  
Time of Injection: 3/9/04 09:25 AM  
Low Point : 26.67 mV  
Plot Scale: 97.5 mV



# Chromatogram

Sample Name : 170926-022,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC13\CHB\068B040.RAW

Date : 3/9/04 12:28 PM

Method : BTEH065.MTH

Time of Injection: 3/9/04 10:05 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 30.24 mV

High Point : 213.91 mV

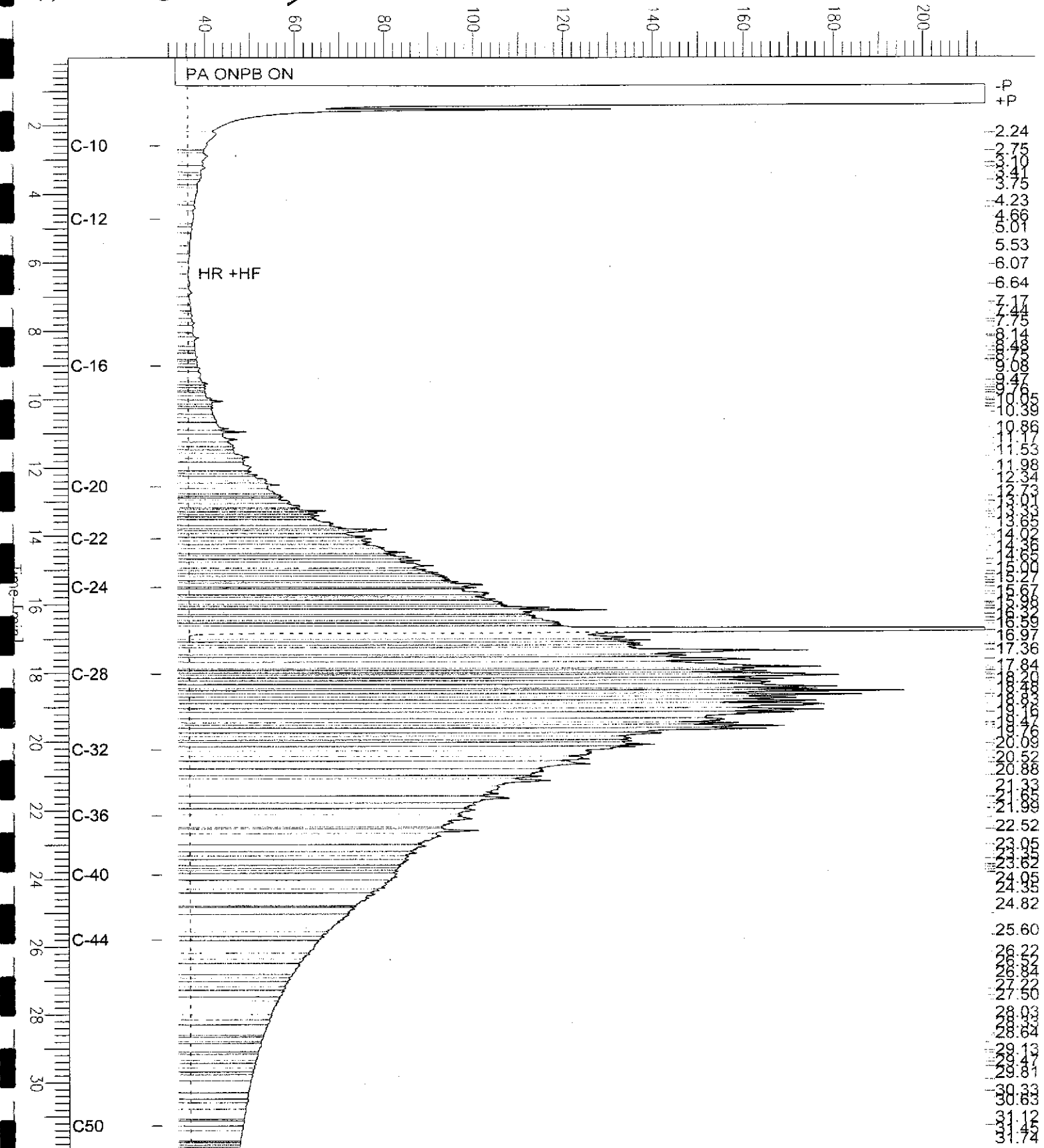
Scale Factor: 0.0

Plot Offset: 30 mV

Plot Scale: 183.7 mV

HP5 - (5-5.5')

Response [mV]



# Chromatogram

Sample Name : 170926-024,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC13\CHB\068B027.RAW

Date : 3/9/04 09:02 AM

Method : BTEH065.MTH

Time of Injection: 3/9/04 02:08 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 19.38 mV

High Point : 499.16 mV

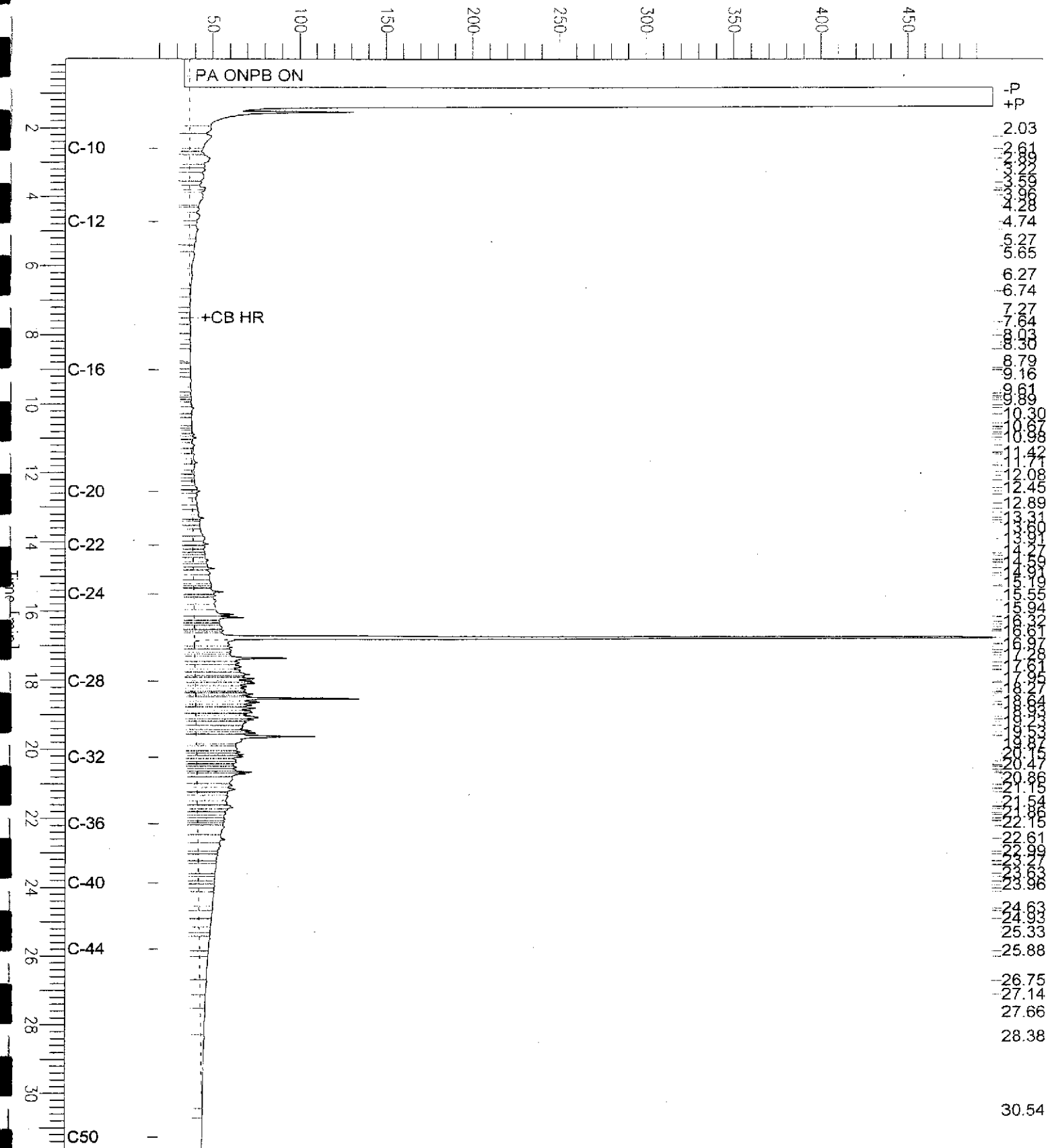
Scale Factor: 0.0

Plot Offset: 19 mV

Plot Scale: 479.8 mV

HP5-(15.5-16')

Response [mV]



# Chromatogram

Sample Name : 170926-025,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC17\CHA\060A217.RAW

Date : 3/7/04 03:05 PM

Method : ATEH064.MTH

Time of Injection: 3/7/04 05:57 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 15.46 mV

High Point : 341.46 mV

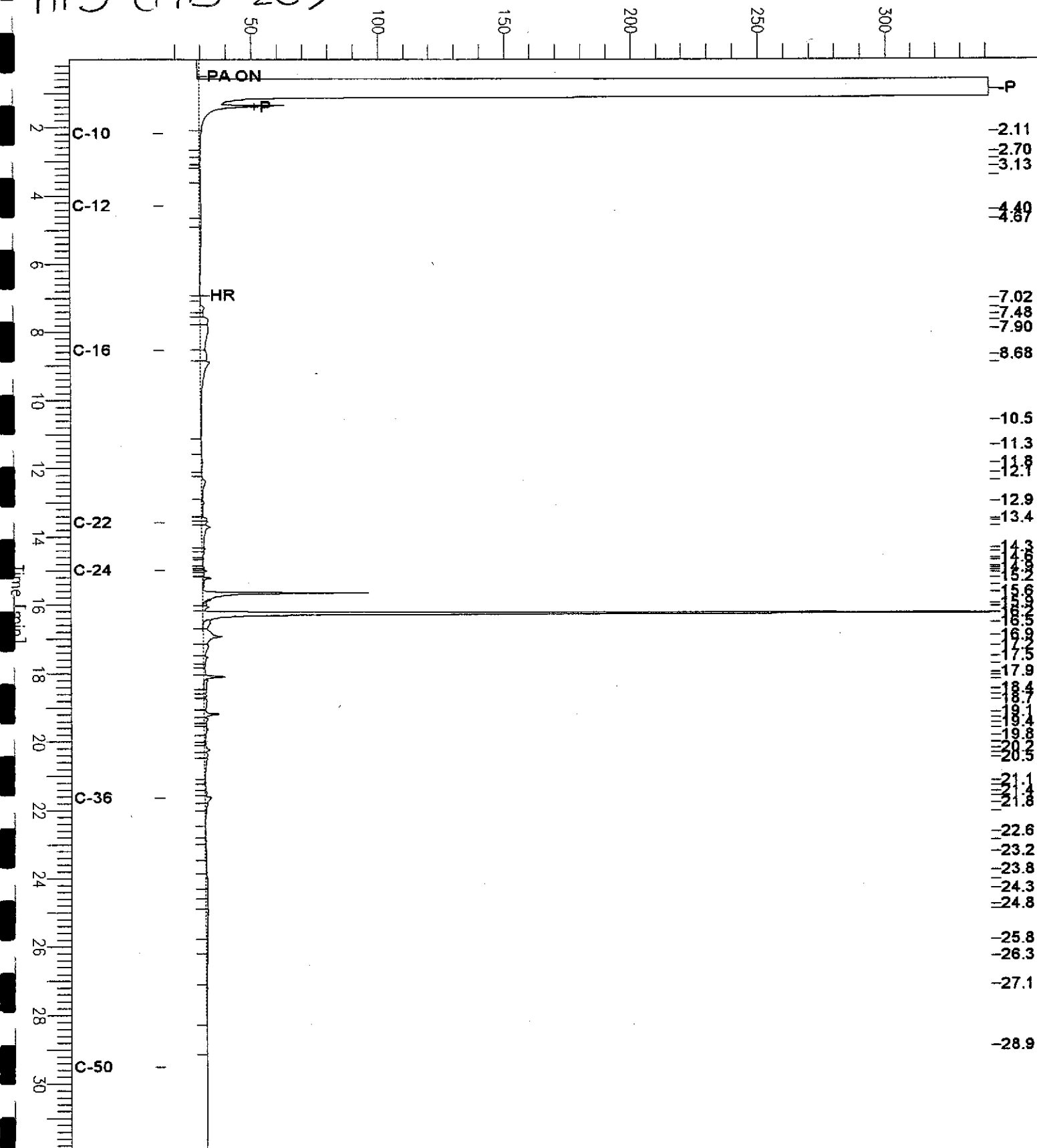
Scale Factor: 0.0

Plot Offset: 15 mV

Plot Scale: 326.0 mV

HP5-(195-20)

Response [mV]



# Chromatogram

Sample Name : 170926-026,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC17\CHA\060A224.RAW

Date : 3/7/04 03:11 PM

Method : ATEH064.MTH

Time of Injection: 3/7/04 10:39 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 12.26 mV

High Point : 324.42 mV

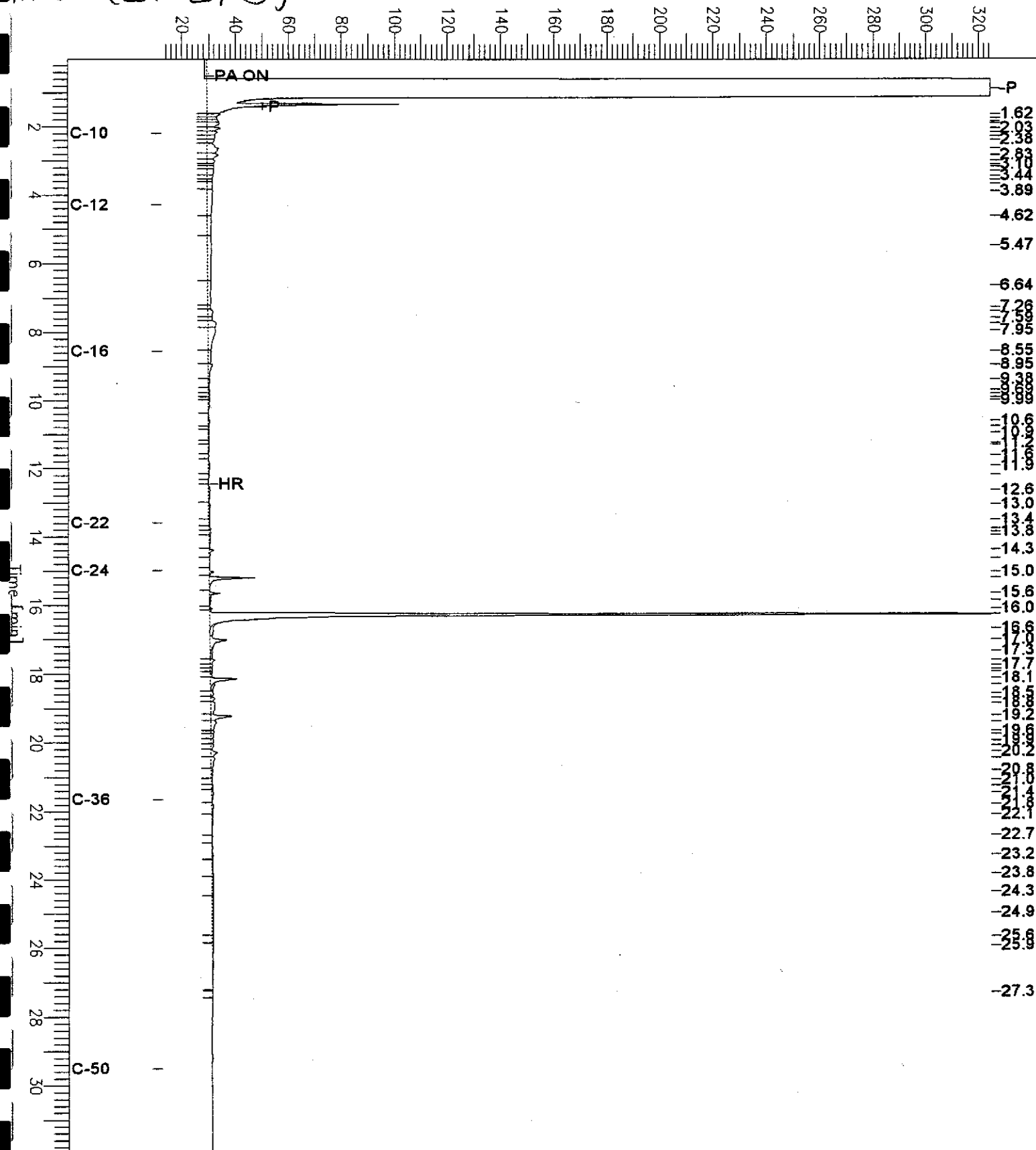
Scale Factor: 0.0

Plot Offset: 12 mV

Plot Scale: 312.2 mV

HP5 - (27-27.5)'

Response [mV]



# Chromatogram

Sample Name : 170926-027,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC13\CHB\068B026.RAW

Date : 3/9/04 09:01 AM

Method : BTEH065.MTH

Time of Injection: 3/9/04 01:29 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 14.86 mV

High Point : 240.00 mV

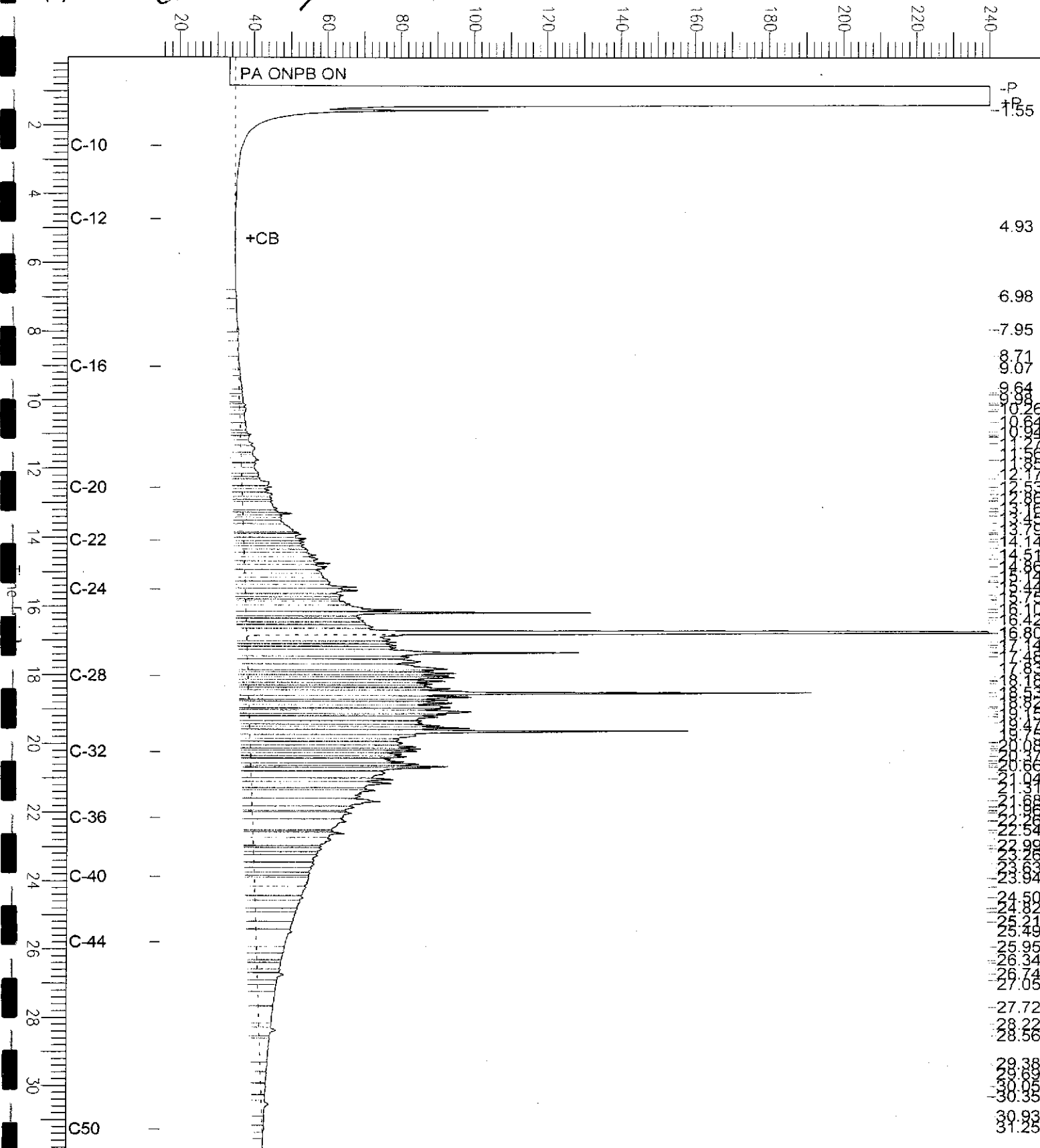
Scale Factor: 0.0

Plot Offset: 15 mV

Plot Scale: 225.1 mV

HPI - (5-55)

Response [mV]





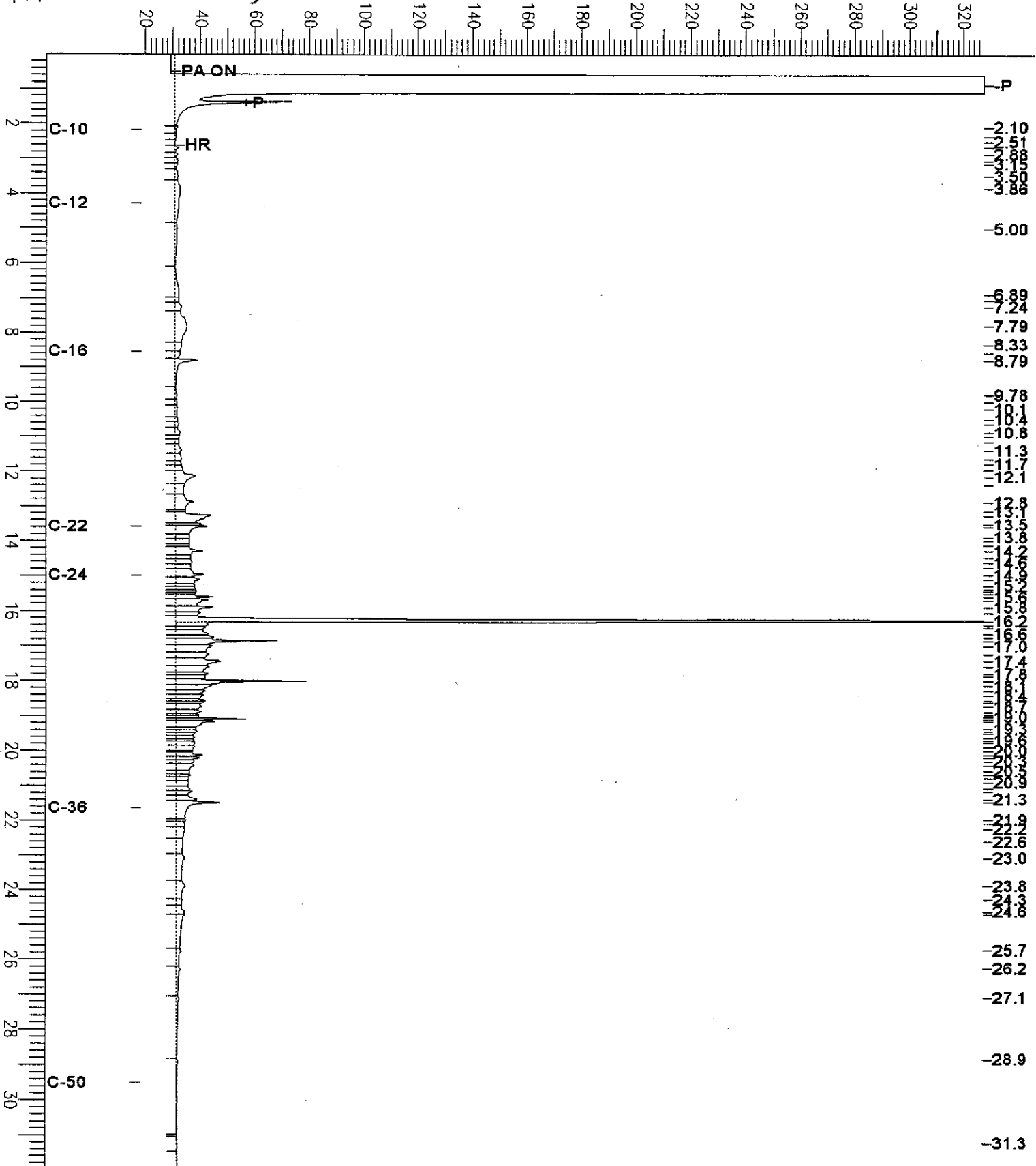
# Chromatogram

Sample Name : 170926-028,89040  
FileName : G:\GC17\CHA\060A219.RAW  
Method : ATEH064.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

Sample #: 89040  
Date : 3/7/04 03:07 PM  
Time of Injection: 3/7/04 07:17 AM  
Low Point : 18.63 mV  
High Point : 327.69 mV  
End Time : 31.91 min  
Plot Offset: 19 mV  
Plot Scale: 309.1 mV

HP1-(9-9.5)

Response [mV]



# Chromatogram

Sample Name : 170926-029,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC13\CHB\068B025.RAW

Date : 3/9/04 09:00 AM

Method : BTEH065.MTH

Time of Injection: 3/9/04 12:49 AM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 32.14 mV

High Point : 187.04 mV

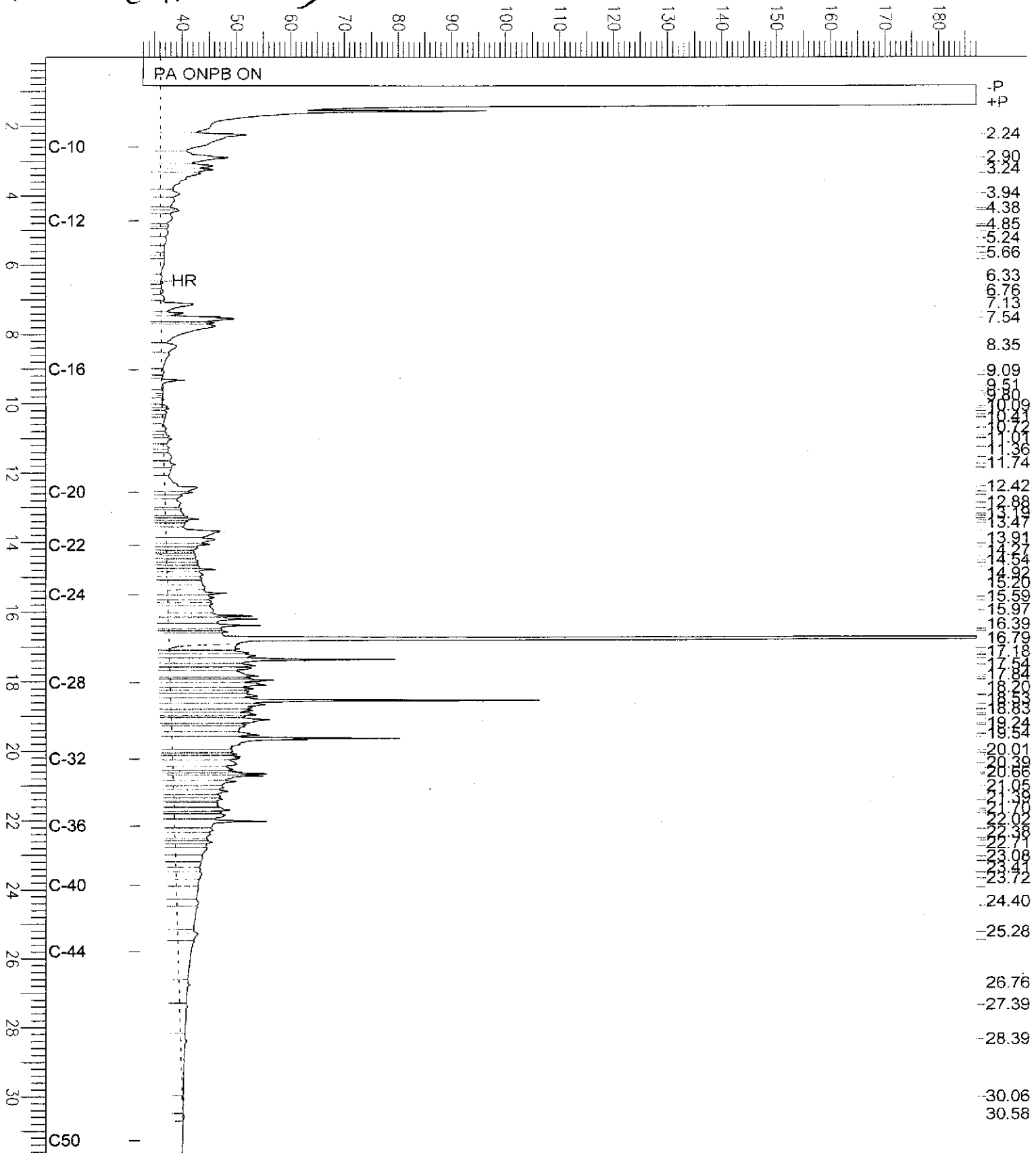
Scale Factor: 0.0

Plot Offset: 32 mV

Plot Scale: 154.9 mV

HP1-(145-15')

Response [mV]



# Chromatogram

Sample Name : 170926-030,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC17\CHA\060A225.RAW

Date : 3/7/04 03:11 PM

Method : ATEH064.MTH

Time of Injection: 3/7/04 11:20 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 14.92 mV

High Point : 346.66 mV

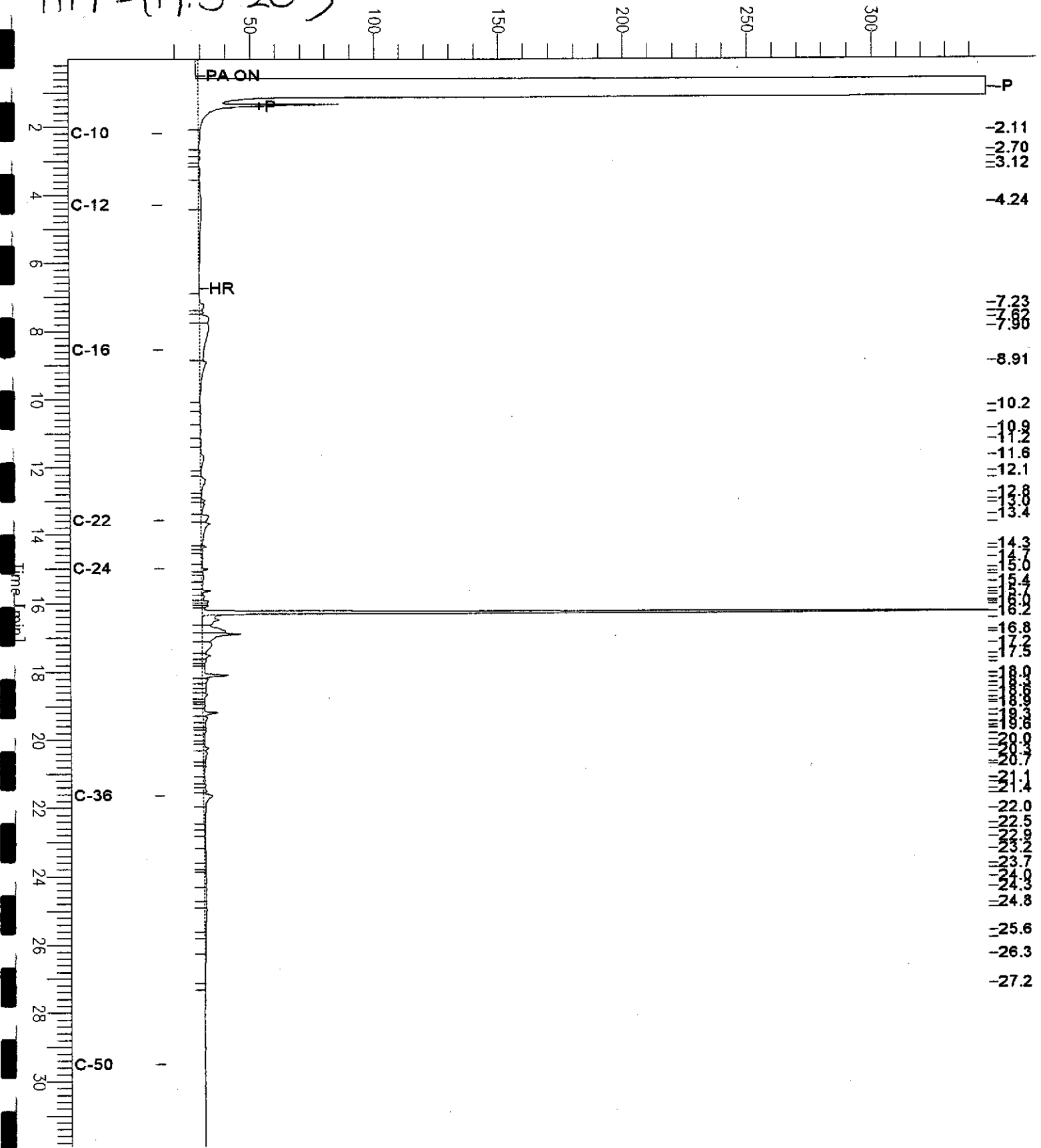
Scale Factor: 0.0

Plot Offset: 15 mV

Plot Scale: 331.7 mV

HPI - (19.5-20')

Response [mV]



# Chromatogram

Sample Name : 170926-031,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC17\CHA\060A226.RAW

Date : 3/7/04 03:12 PM

Method : ATEHO64.MTH

Time of Injection: 3/7/04 12:00 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 17.61 mV

High Point : 332.67 mV

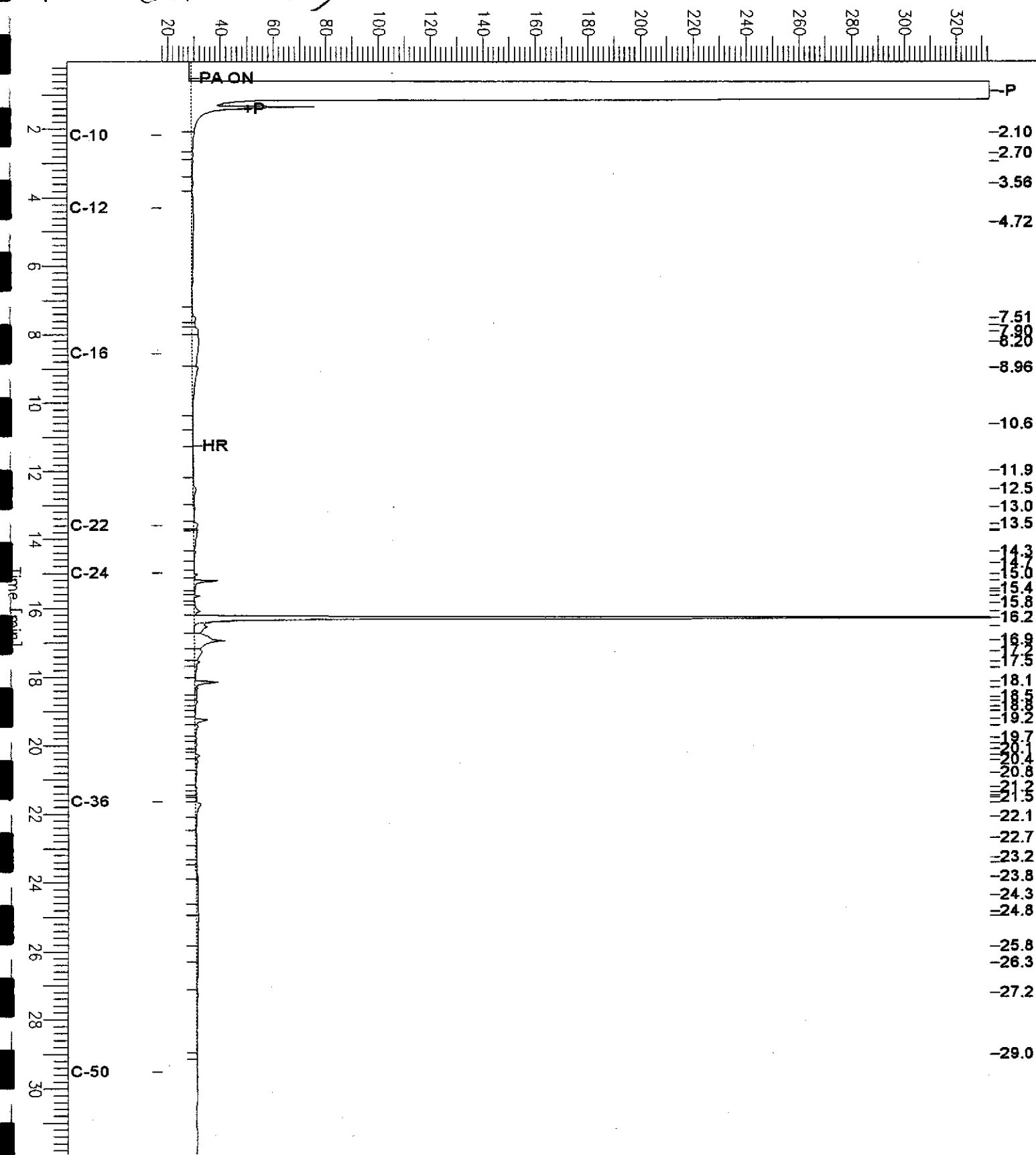
Scale Factor: 0.0

Plot Offset: 18 mV

Plot Scale: 315.1 mV

HPI - (24.5-25')

Response [mV]



# Chromatogram

Sample Name : 170926-032,89040

Sample #: 89040

Page 1 of 1

FileName : G:\GC13\CHB\068B024.RAW

Date : 3/9/04 09:00 AM

Method : BTEH065.MTH

Time of Injection: 3/9/04 12:10 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 27.45 mV

High Point : 262.77 mV

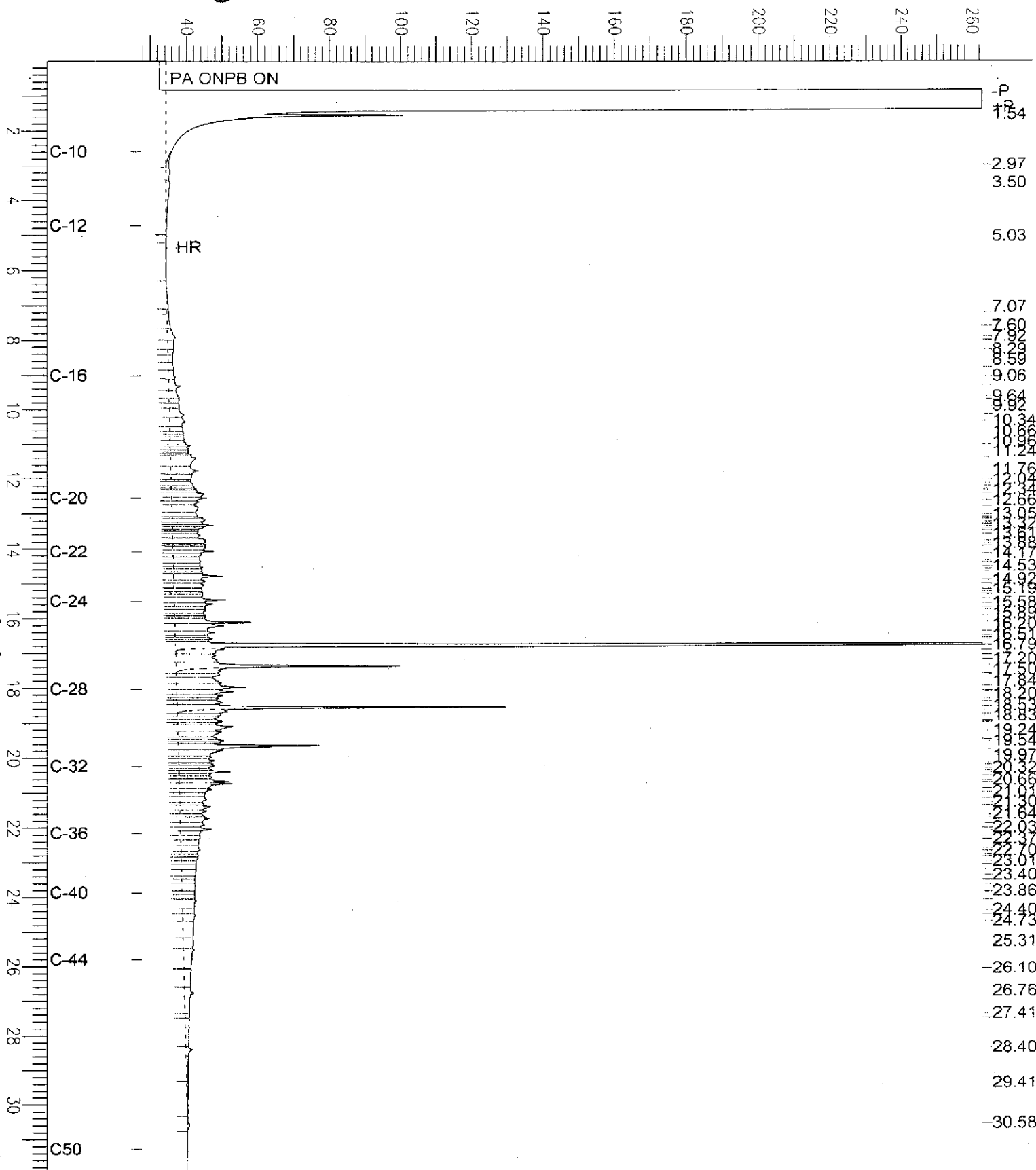
Scale Factor: 0.0

Plot Offset: 27 mV

Plot Scale: 235.3 mV

HP7 - (6-6.5)

Response [mV]



# Chromatogram

Sample Name : 170926-033,89057

Sample #: 89057

Page 1 of 1

File Name : G:\GC17\CHA\060A237.RAW

Date : 3/8/04 09:13 AM

Method : ATEH064.MTH

Time of Injection: 3/7/04 07:23 PM

Start Time : 0.01 min End Time : 31.91 min

Low Point : 19.82 mV

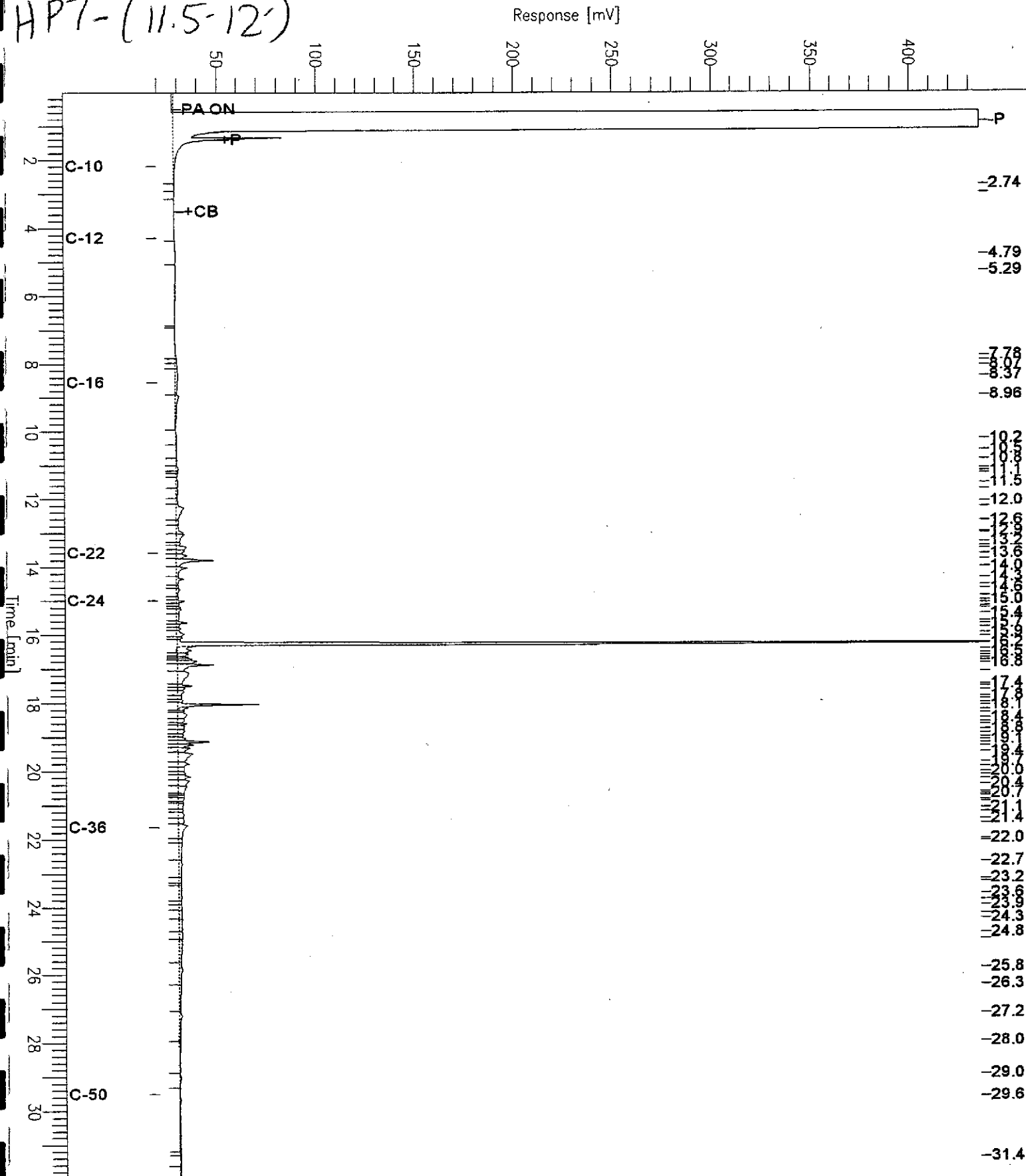
High Point : 435.47 mV

Scale Factor: 0.0

Plot Offset: 20 mV

Plot Scale: 415.6 mV

HP7-(11.5-12)



# Chromatogram

Sample Name : 170926-034,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A238.RAW

Date : 3/8/04 09:13 AM

Method : ATEH064.MTH

Time of Injection: 3/7/04 08:03 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 19.78 mV

High Point : 251.29 mV

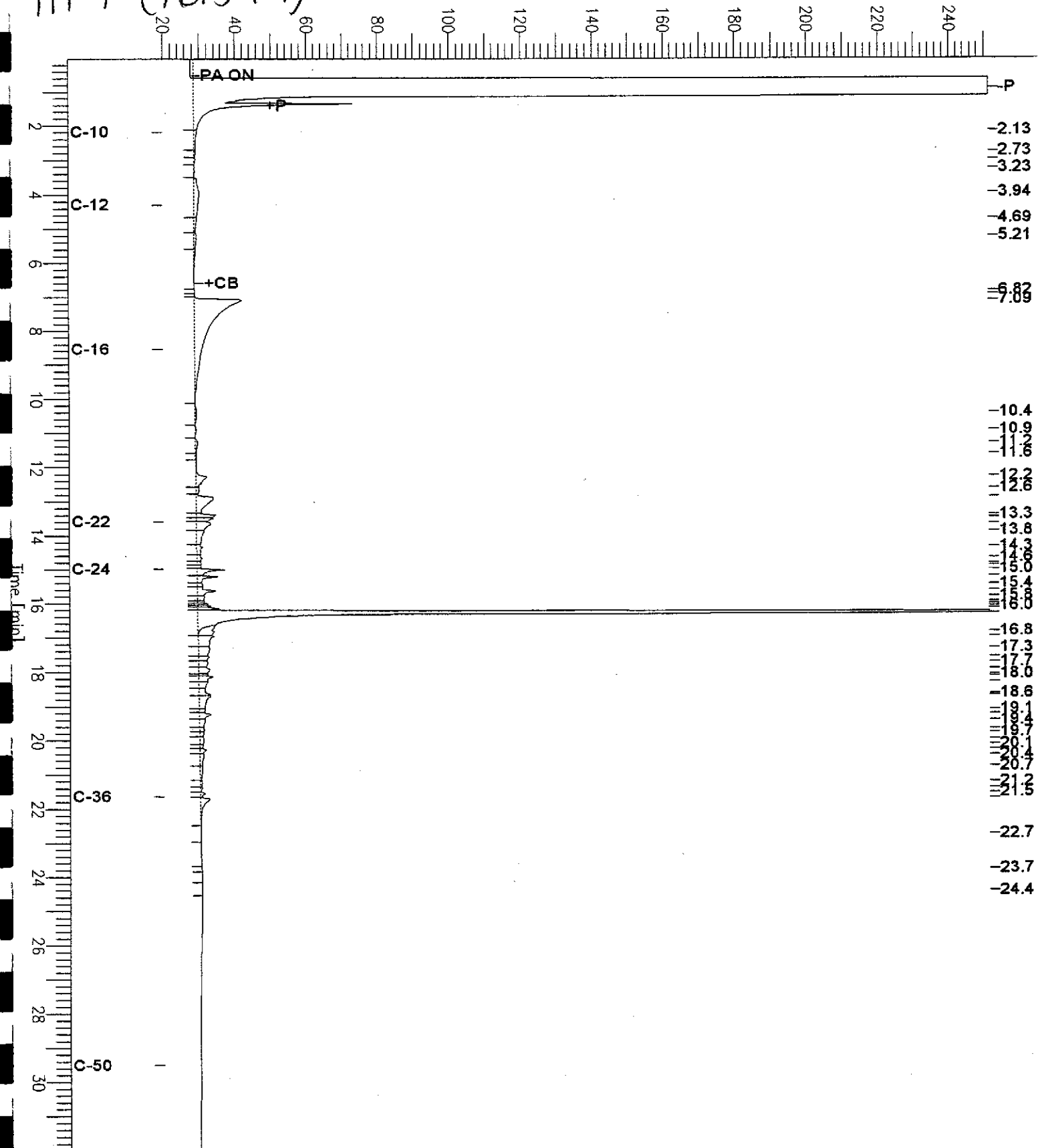
Scale Factor: 0.0

Plot Offset: 20 mV

Plot Scale: 231.5 mV

HP 7-(16.5-17)

Response [mV]



# Chromatogram

Sample Name : 170926-036, 89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A243.RAW

Date : 3/8/04 09:43 AM

Method : ATEH064.MTH

Time of Injection: 3/7/04 11:24 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 17.21 mV

High Point : 326.74 mV

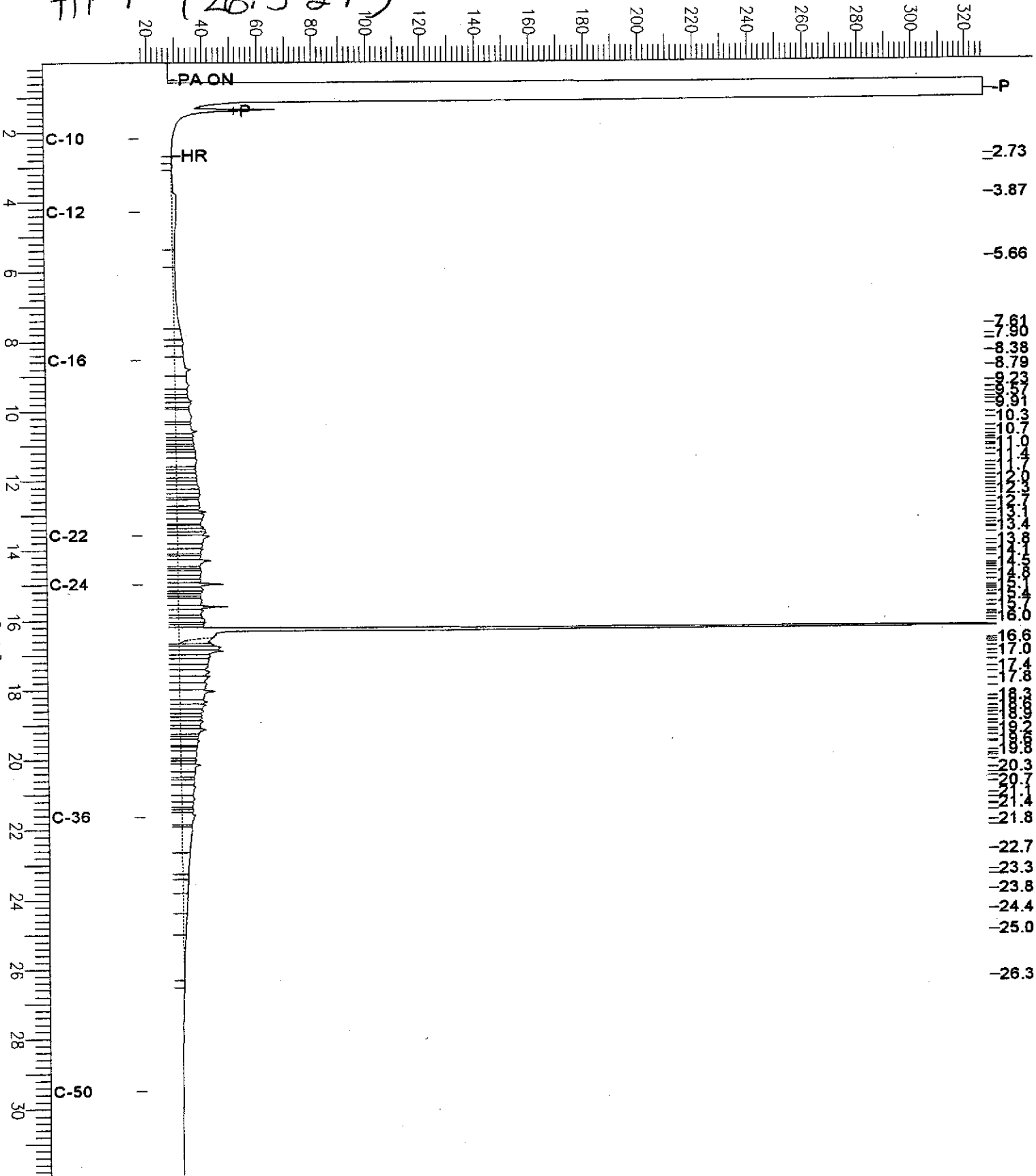
Scale Factor: 0.0

Plot Offset: 17 mV

Plot Scale: 309.5 mV

HP7 - (26.5-27)

Response [mV]





# Chromatogram

Sample Name : 170926-037,89057

Sample #: 89057

Page 1 of 1

File Name : G:\GC17\CHA\060A244.RAW

Date : 3/8/04 09:44 AM

Method : ATEHO64.MTH

Time of Injection: 3/8/04 12:04 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 11.85 mV

High Point : 243.34 mV

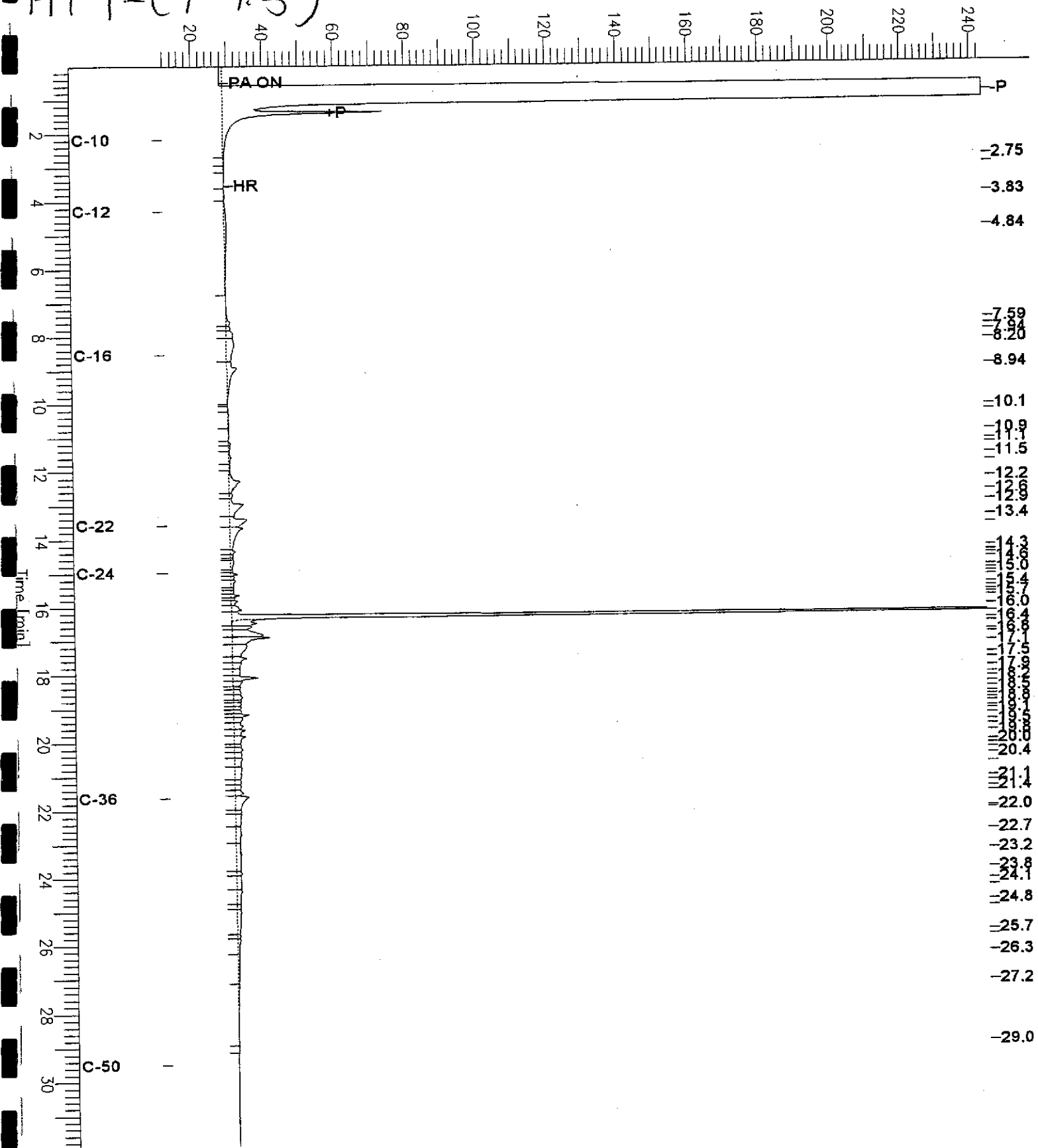
Scale Factor: 0.0

Plot Offset: 12 mV

Plot Scale: 231.5 mV

HP9-(7-7.5')

Response [mV]



# Chromatogram

Sample Name : 170926-038,89057

Sample #: 89057

Page 1 of 1

File Name : G:\GC17\CHA\060A251.RAW

Date : 3/8/04 10:27 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 04:45 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 27.52 mV

High Point : 143.60 mV

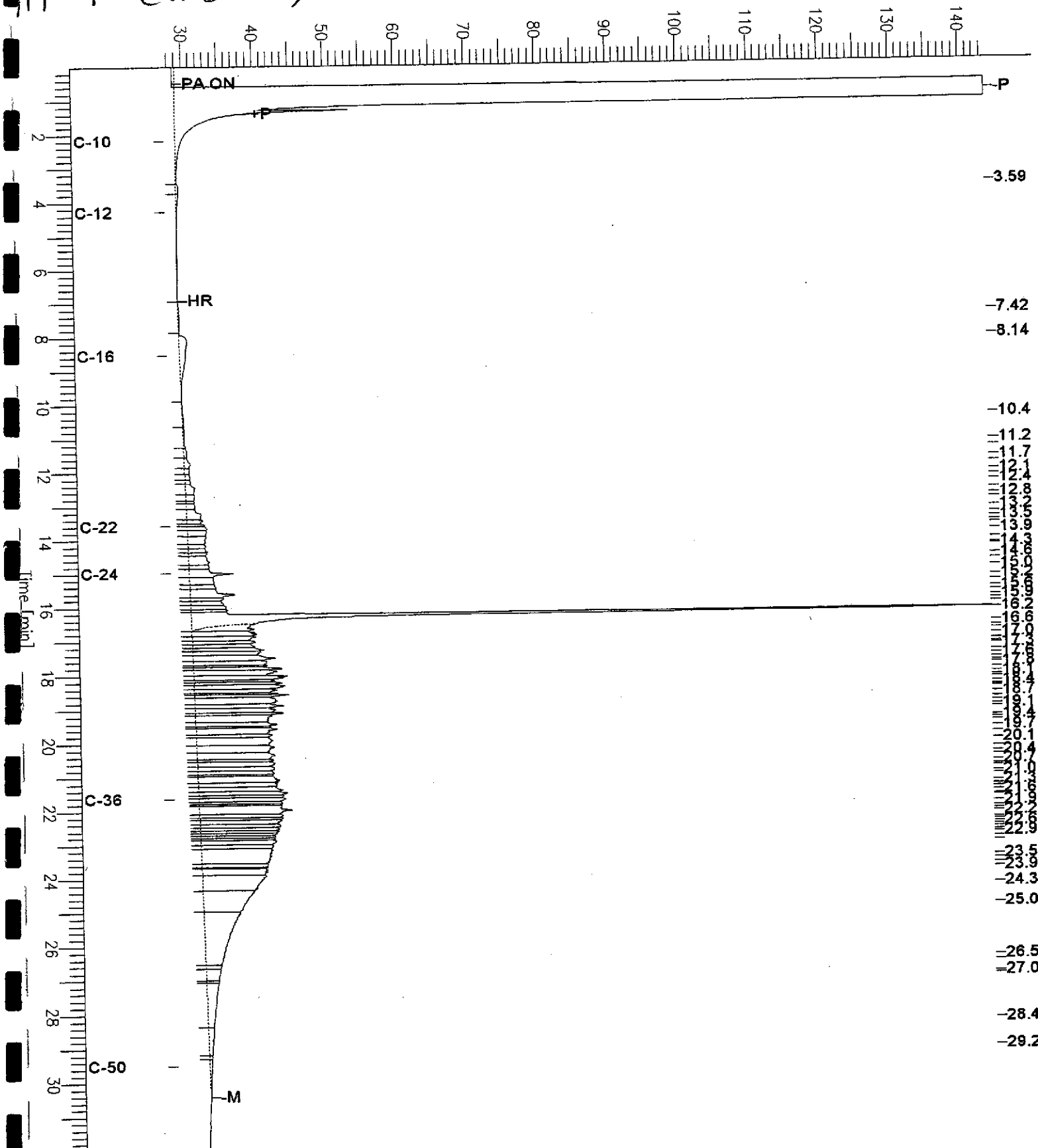
Scale Factor: 0.0

Plot Offset: 28 mV

Plot Scale: 116.1 mV

HP 9 - (11.5-12)

Response [mV]



# Chromatogram

Sample Name : 170926-039,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A249.RAW

Date : 3/8/04 10:25 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 03:25 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 24.83 mV

High Point : 231.62 mV

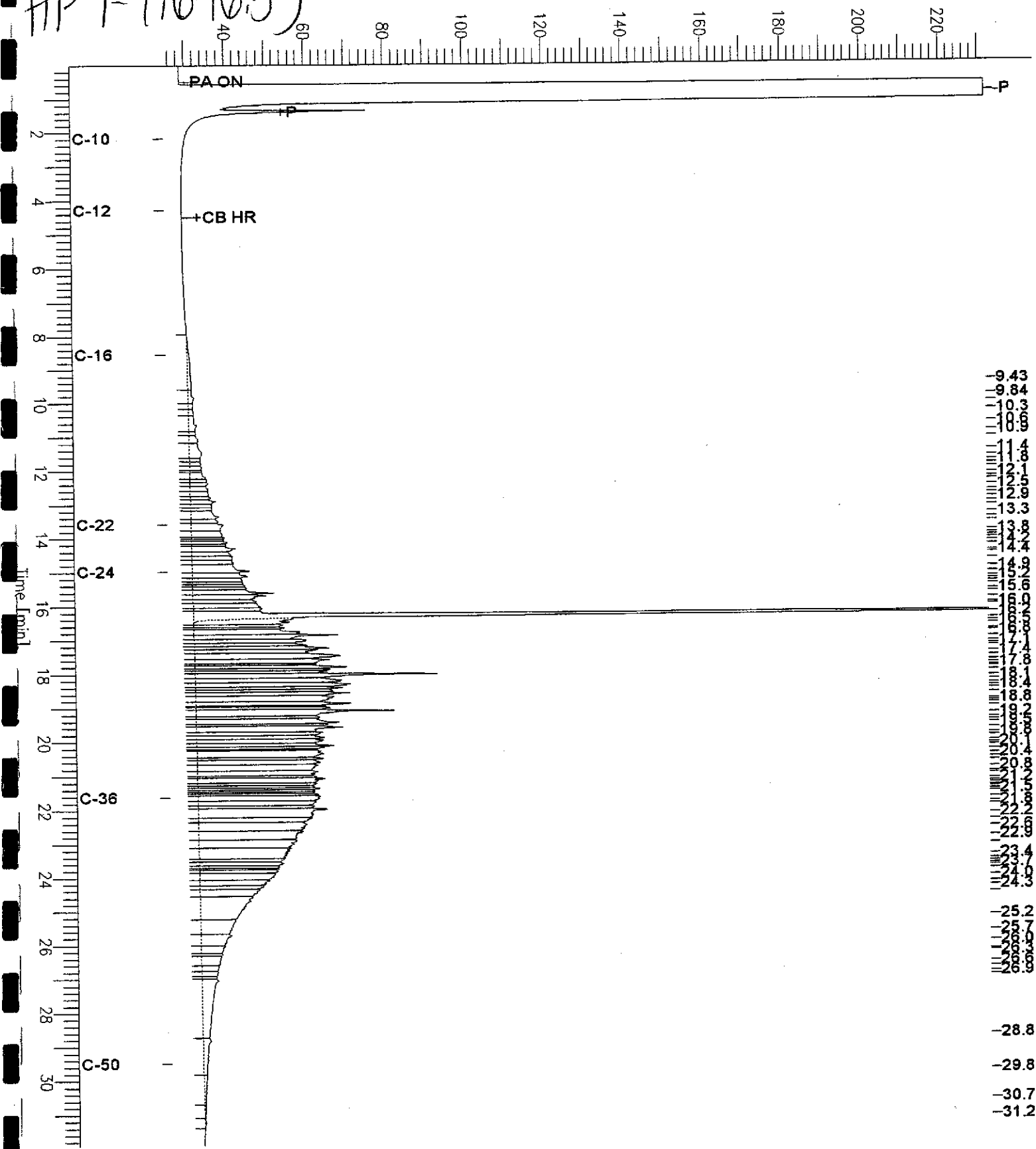
Scale Factor: 0.0

Plot Offset: 25 mV

Plot Scale: 206.8 mV

HP 9- (16-16.5')

Response [mV]



# Chromatogram

Sample Name : 170926-040,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A250.RAW

Date : 3/8/04 10:26 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 04:05 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 24.59 mV

High Point : 359.20 mV

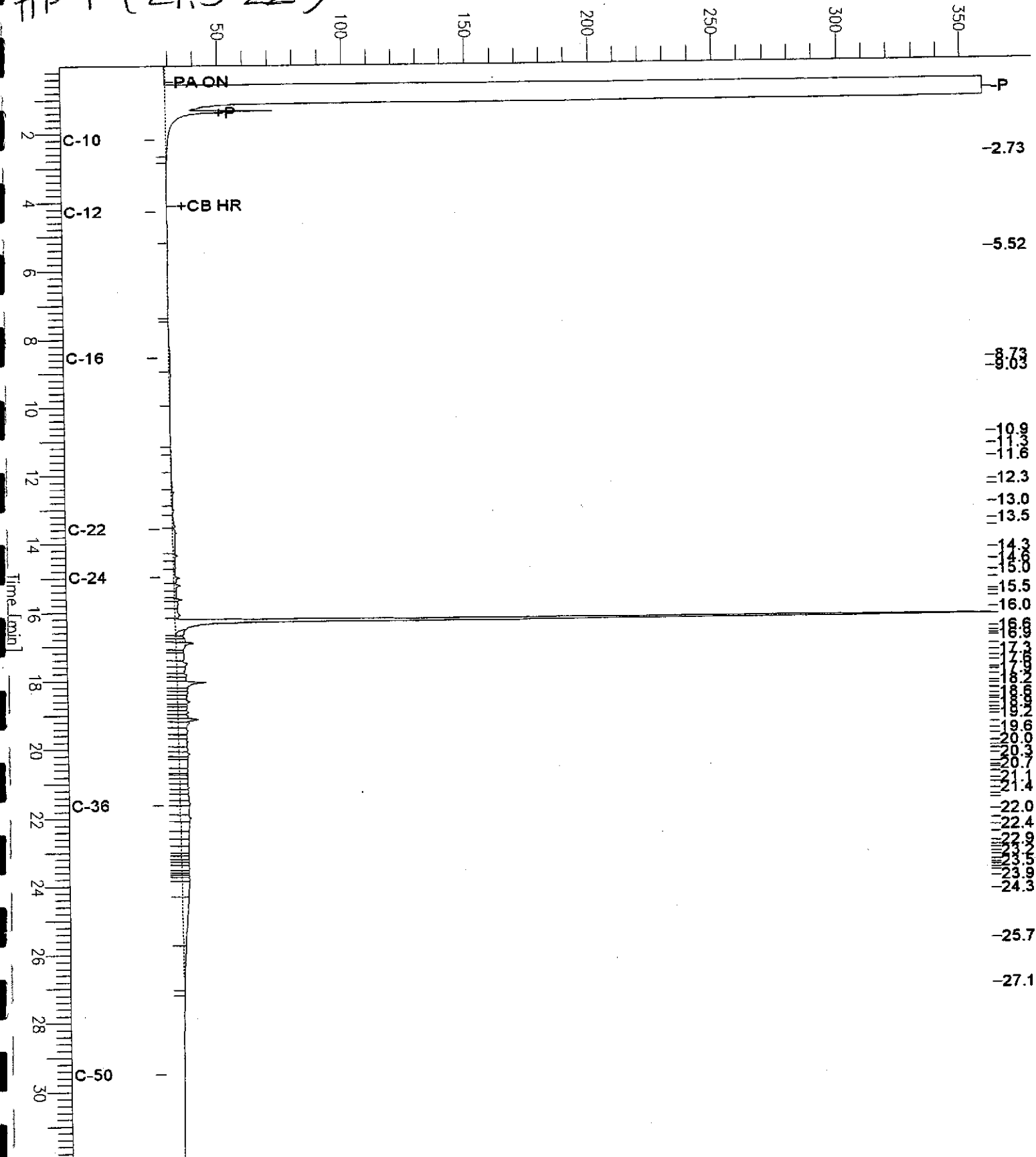
Scale Factor: 0.0

Plot Offset: 25 mV

Plot Scale: 334.6 mV

HP 9-(21.5-22')

Response [mV]



Chromatogram

Sample Name : 170926-042,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC13\CHB\068B063.RAW

Date : 3/10/04 08:27 AM

Method : BTEH065.MTH

Time of Injection: 3/10/04 02:29 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 20.22 mV

High Point : 272.10 mV

Scale Factor: 0.0

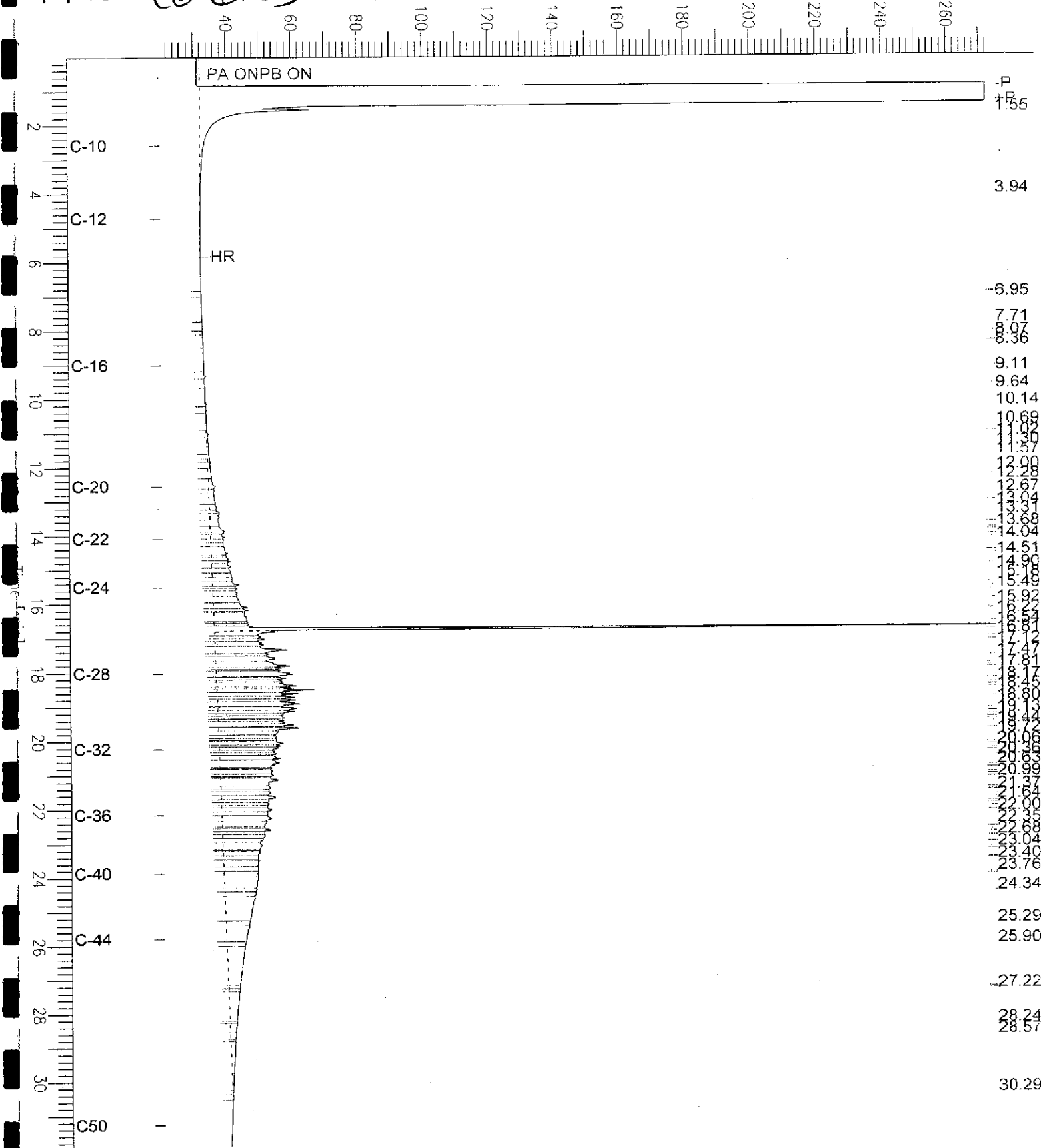
Plot Offset: 20 mV

Plot Scale: 251.9 mV

HP10-(66.5)

Response [mV]

PA ONPB ON



1.55
3.94
6.95
7.71
8.07
8.36
9.11
9.64
10.14
10.68
11.00
11.07
11.57
12.00
12.28
12.67
13.04
13.33
13.68
14.04
14.51
14.87
15.22
15.60
15.99
16.38
16.77
17.16
17.55
17.94
18.33
18.72
19.11
19.50
19.89
20.28
20.67
21.06
21.45
21.84
22.23
22.62
23.01
23.40
23.79
24.18
24.57
24.96
25.35
25.74
26.13
26.52
26.91
27.30
27.69
28.08
28.47
28.86
29.25
29.64
30.03
30.42
30.81
31.20
31.59
31.98

# Chromatogram

Sample Name : 170926-043,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A240.RAW

Date : 3/8/04 09:15 AM

Method : ATEH064.MTH

Time of Injection: 3/7/04 09:24 PM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 19.68 mV

High Point : 198.28 mV

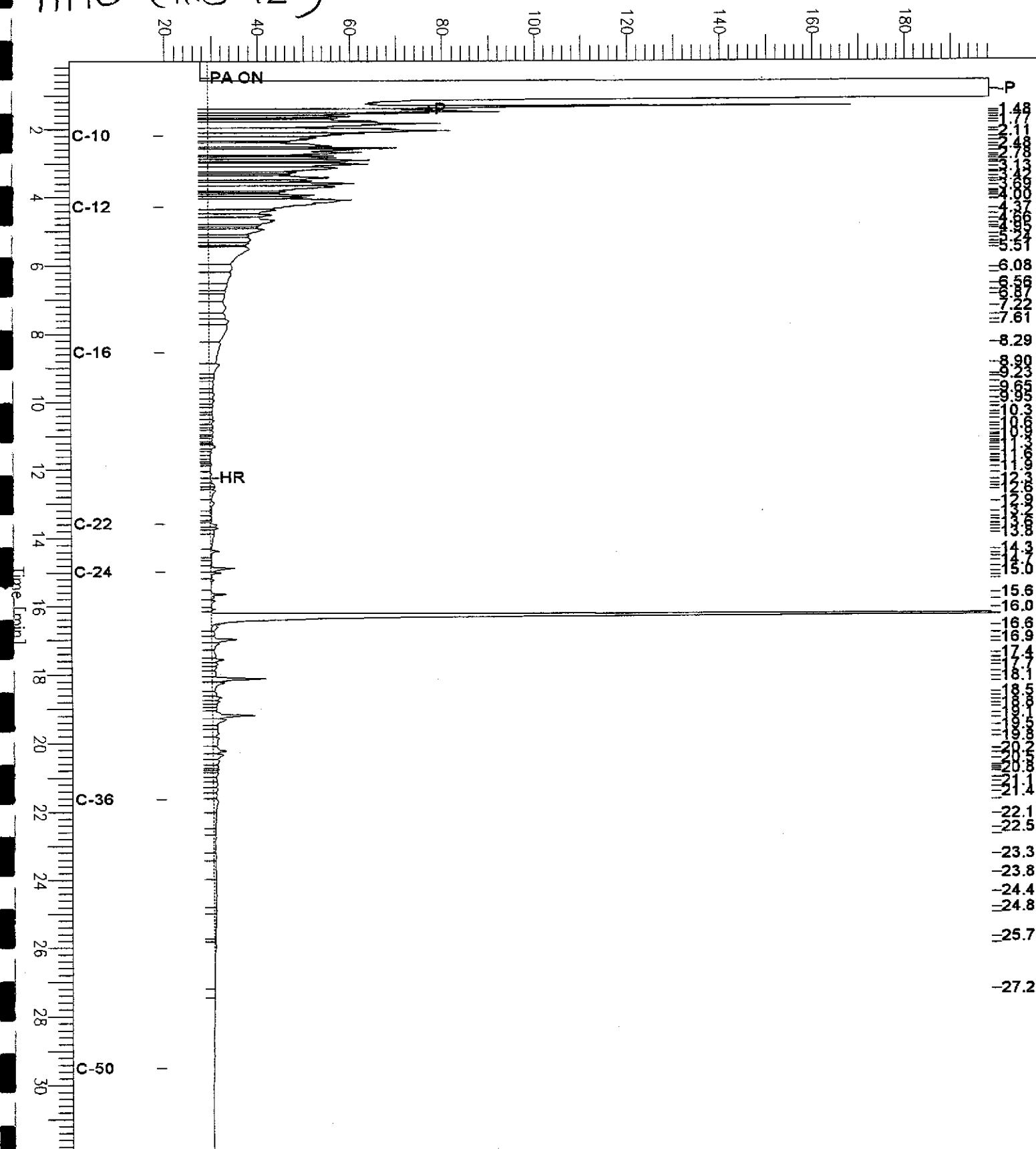
Scale Factor: 0.0

Plot Offset: 20 mV

Plot Scale: 178.6 mV

HPIO-(11.5-12')

Response [mV]



# Chromatogram

Sample Name : 170926-044,89057

Sample #: 89057

Page 1 of 1

FileName : G:\GC17\CHA\060A253.RAW

Date : 3/8/04 10:29 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 06:05 AM

Start Time : 0.01 min

End Time : 31.91 min

Low Point : 3.30 mV

High Point : 356.27 mV

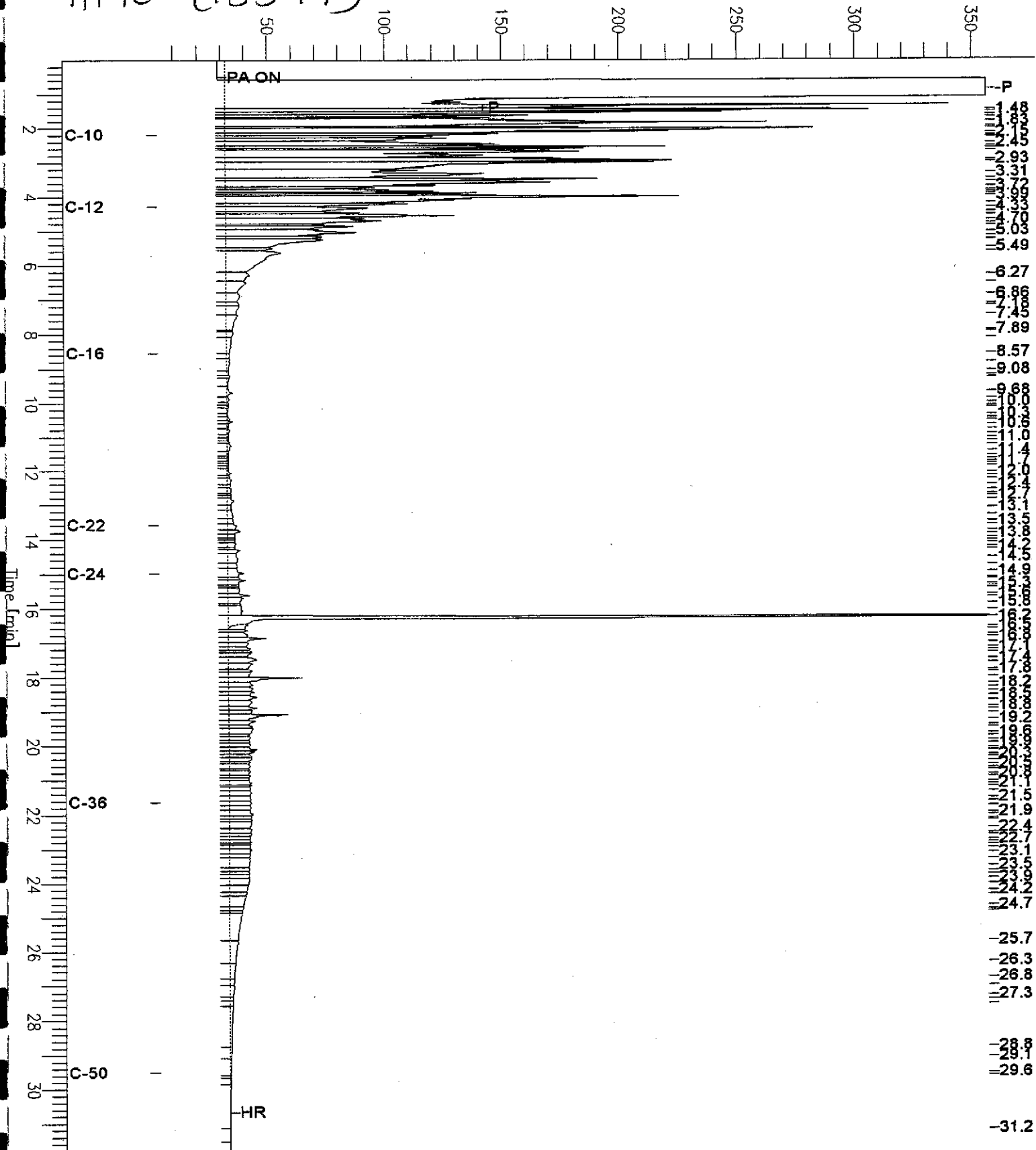
Scale Factor: 0.0

Plot Offset: 3 mV

Plot Scale: 353.0 mV

HP10-(18.5-19)

Response [mV]



- 1.48
- 2.45
- 2.93
- 3.31
- 3.66
- 3.83
- 4.47
- 4.70
- 5.03
- 5.49
- 6.27
- 6.86
- 7.16
- 7.45
- 7.89
- 8.57
- 9.08
- 9.68
- 10.03
- 10.66
- 11.0
- 11.4
- 12.0
- 12.4
- 12.7
- 13.1
- 13.5
- 13.9
- 14.2
- 14.5
- 14.8
- 15.1
- 15.4
- 15.7
- 16.0
- 16.3
- 16.6
- 16.9
- 17.2
- 17.5
- 17.8
- 18.1
- 18.4
- 18.7
- 19.0
- 19.3
- 19.6
- 19.9
- 20.2
- 20.5
- 20.8
- 21.1
- 21.4
- 21.7
- 22.0
- 22.3
- 22.6
- 22.9
- 23.2
- 23.5
- 23.8
- 24.1
- 24.4
- 24.7
- 25.7
- 26.3
- 26.8
- 27.3
- 28.8
- 29.1
- 29.6
- 31.2

# Chromatogram

Sample Name : 170926-046,89057

Sample #: 89057

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FileName : G:\GC17\CHA\060A252.RAW

Date : 3/8/04 10:28 AM

Method : ATEH064.MTH

Time of Injection: 3/8/04 05:25 AM

Start Time : 0.01 min

End Time : 31.91 min

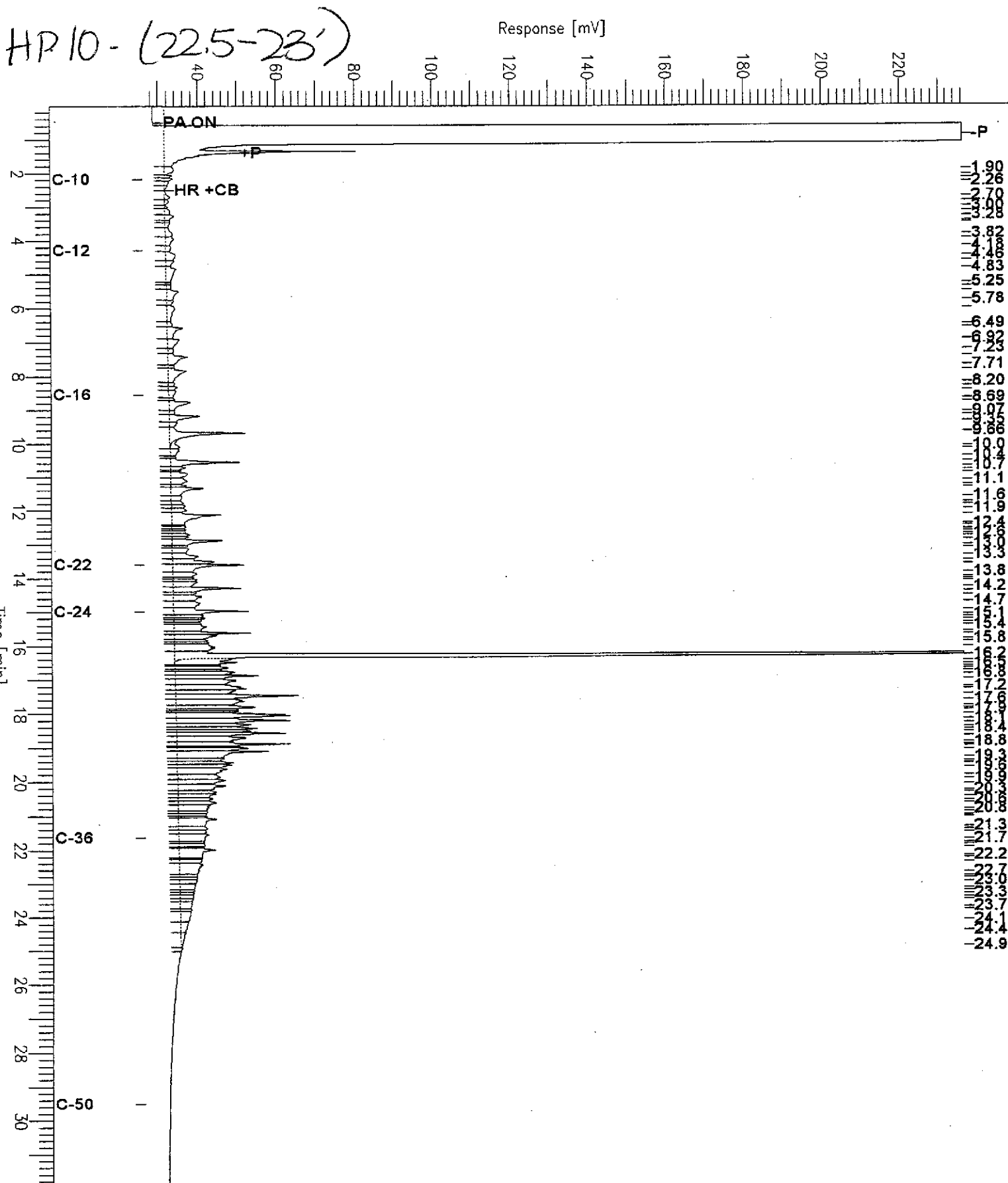
Low Point : 26.05 mV

High Point : 236.35 mV

Scale Factor: 0.0

Plot Offset: 26 mV

Plot Scale: 210.3 mV



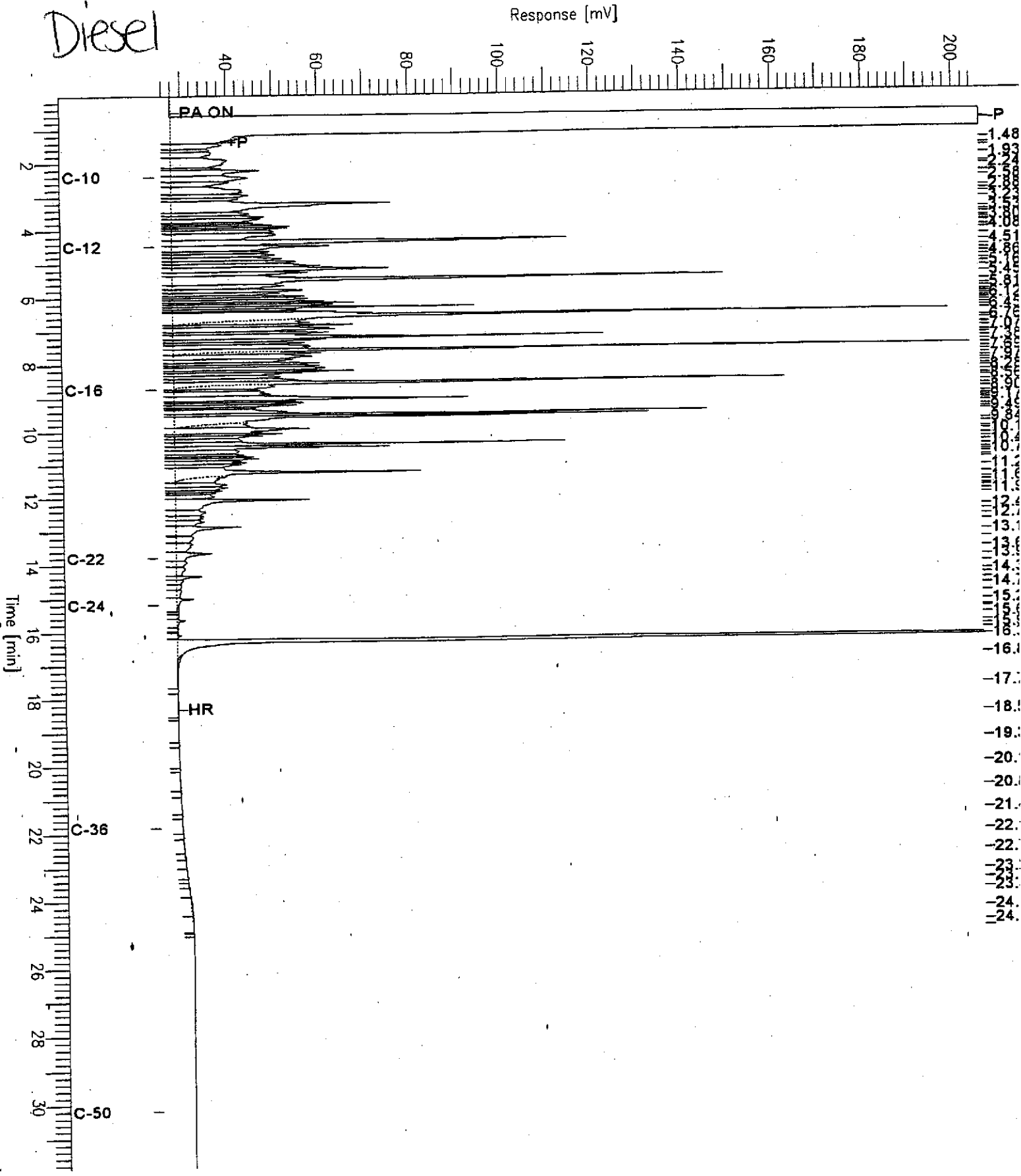


Sample Name : ccv,04ws0218,dsl  
FileName : G:\GC17\CHA\060A003.RAW  
Method : ATEH053.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 24 mV

Sample #: 500mg/L  
Date : 2/29/04 04:40 PM  
Time of Injection: 2/29/04 04:06 PM  
Low Point : 24.31 mV  
Plot Scale: 181.7 mV

Diesel

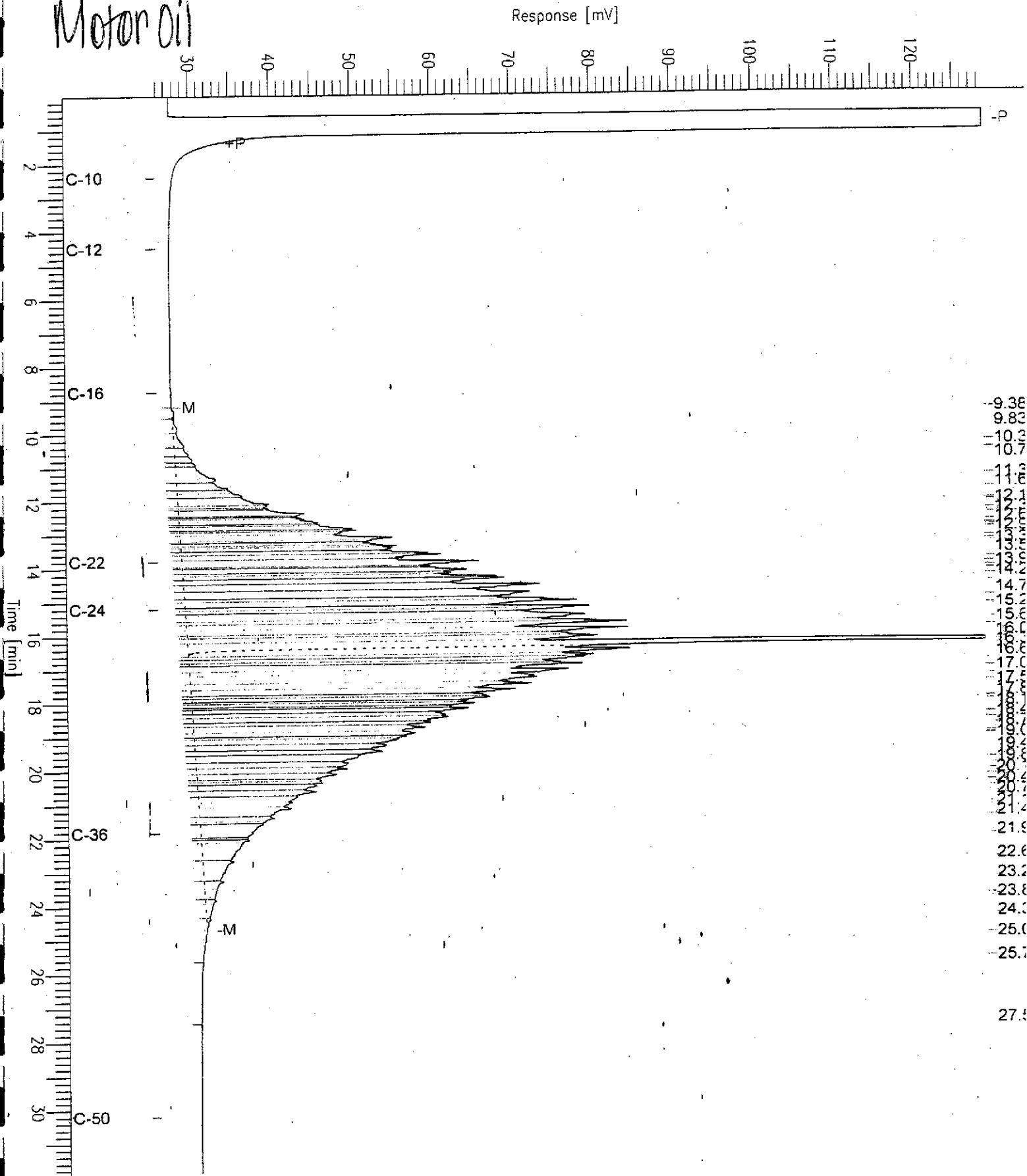


Sample Name : ccv,04ws0244.mo  
FileName : G:\GC17\CHA\060A004.RAW  
Method : ATEH053.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

End Time : 31.91 min  
Plot Offset: 26 mV

Sample #: 500mg/L  
Date : 3/1/04 09:11 AM  
Time of Injection: 2/29/04 04:46 PM  
Low Point : 26.00 mV  
Plot Scale: 102.6 mV  
High Point : 128.61 mV

*Motor Oil*



## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC243140	Batch#:	89039
Matrix:	Soil	Prepared:	03/04/04
Units:	mg/Kg	Analyzed:	03/05/04
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.94	54.42	109	56-129
Surrogate	%REC	Limits		
Hexacosane	116	52-131		



Batch QC Report

Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC243144	Batch#:	89040
Matrix:	Soil	Prepared:	03/04/04
Units:	mg/Kg	Analyzed:	03/05/04
Basis:	as received		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.51	44.43	90	56-129

Surrogate	%REC	Limits
Hexacosane	91	52-131

## Batch QC Report

**Total Extractable Hydrocarbons**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC243203	Batch#:	89057
Matrix:	Soil	Prepared:	03/04/04
Units:	mg/Kg	Analyzed:	03/06/04
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.31	51.32	102	56-129
Surrogate	%REC	Limits		
Hexacosane	98	52-131		

## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3550
Project#:	2832	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC243497	Batch#:	89131
Matrix:	Soil	Prepared:	03/08/04
Units:	mg/Kg	Analyzed:	03/09/04
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.92	43.84	88	56-129

Surrogate	%REC	Limits
Hexacosane	91	52-131

## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Field ID:	HP3-(26-26.5')	Batch#:	89039
MSS Lab ID:	170926-005	Sampled:	03/01/04
Matrix:	Soil	Received:	03/02/04
Units:	mg/Kg	Prepared:	03/04/04
Basis:	as received	Analyzed:	03/05/04
Diln Fac:	1.000		

Type: MS Lab ID: QC243141

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	8.334	50.35	52.54	88	27-146

Surrogate	%REC	Limits
Hexacosane	86	52-131

Type: MSD Lab ID: QC243142

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.45	38.06	59	27-146	32	50

Surrogate	%REC	Limits
Hexacosane	53	52-131

## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	89040
MSS Lab ID:	170929-004	Sampled:	03/02/04
Matrix:	Soil	Received:	03/03/04
Units:	mg/Kg	Prepared:	03/04/04
Basis:	as received	Analyzed:	03/05/04
Diln Fac:	1.000		

Type: MS Lab ID: QC243145

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	1.146	49.58	45.56	90	27-146

Surrogate	%REC	Limits
Hexacosane	93	52-131

Type: MSD Lab ID: QC243146

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.84	47.93	94	27-146	5	50

Surrogate	%REC	Limits
Hexacosane	96	52-131



## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	SHAKER TABLE
Project#:	2832	Analysis:	EPA 8015B
Field ID:	HP9-(21.5-22')	Diln Fac:	1.000
MSS Lab ID:	170926-040	Batch#:	89057
Matrix:	Soil	Sampled:	03/02/04
Units:	mg/Kg	Received:	03/02/04
Basis:	as received	Prepared:	03/04/04

Type: MS Analyzed: 03/06/04  
 Lab ID: QC243204

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.4797	50.29	51.44	101	27-146

Surrogate	%REC	Limits
Hexacosane	103	52-131

Type: MSD Analyzed: 03/08/04  
 Lab ID: QC243205

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.00	46.63	92	27-146	9	50

Surrogate	%REC	Limits
Hexacosane	92	52-131

## Batch QC Report

## Total Extractable Hydrocarbons

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3550
Project#:	2832	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
ISS Lab ID:	170746-016	Batch#:	89131
Matrix:	Soil	Sampled:	02/23/04
Units:	mg/Kg	Received:	02/23/04
Basis:	as received	Prepared:	03/08/04

Type:	MS	Analyzed:	03/09/04
Lab ID:	QC243498	Cleanup Method:	EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	9.075	49.93	49.01	80	27-146

Surrogate	%REC	Limits
Hexacosane	82	52-131

Type:	MSD	Analyzed:	03/10/04
Lab ID:	QC243499	Cleanup Method:	EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.08	37.41	57	27-146	27	50

Surrogate	%REC	Limits
Hexacosane	73	52-131



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(5.5-6')	Diln Fac:	0.9615
Lab ID:	170926-001	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	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	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

## Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP3-(10-10.5')	Diln Fac: 1.000
Lab ID: 170926-002	Batch#: 88988
Matrix: Soil	Sampled: 03/01/04
Units: ug/Kg	Received: 03/02/04
Basis: as received	Analyzed: 03/03/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

ND = Not Detected  
 RL = Reporting Limit



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(16-16.5')	Diln Fac:	0.9434
Lab ID:	170926-003	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-123

ND = Not Detected  
RL = Reporting Limit



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(21-21.5')	Diln Fac:	0.9091
Lab ID:	170926-004	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-123

ND = Not Detected  
RL = Reporting Limit



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(26-26.5')	Diln Fac:	0.8475
Lab ID:	170926-005	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.2
Benzene	ND	4.2
Toluene	ND	4.2
Chlorobenzene	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-123

ND = Not Detected  
RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP4-(4-4.5')	Diln Fac:	0.9259
Lab ID:	170926-006	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-123

ND = Not Detected  
 RL = Reporting Limit





Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP4-(9-9.5')	Diln Fac:	0.9434
Lab ID:	170926-007	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

= Not Detected  
= Reporting Limit



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP4-(14-14.5')	Diln Fac:	0.9804
Lab ID:	170926-008	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	105	80-123

ND = Not Detected  
RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP4-(19-19.5')	Diln Fac:	0.9615
Lab ID:	170926-009	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	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	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

= Not Detected  
 = Reporting Limit  
 Page 1 of 1

**Purgeable Aromatics by GC/MS**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP4-(24-24.5')	Diln Fac:	0.9434
Lab ID:	170926-010	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
m,3-Dichlorobenzene	ND	4.7
m,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-123

ND = Not Detected  
 RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP6-(4-4.5')	Diln Fac:	0.8621
Lab ID:	170926-011	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP6-(9-9.5')	Diln Fac:	0.8621
Lab ID:	170926-012	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RI
MTBE	ND	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-123



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP6-(14-14.5')	Diln Fac:	0.9259
Lab ID:	170926-013	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	107	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

ND = Not Detected  
RL = Reporting Limit

### Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP6-(19-19.5')	Diln Fac: 0.8929
Lab ID: 170926-014	Batch#: 88992
Matrix: Soil	Sampled: 03/01/04
Units: ug/Kg	Received: 03/02/04
Basis: as received	Analyzed: 03/03/04

Analyte	Result	RL
MTBE	4.9	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-123

ND = Not Detected  
 RL = Reporting Limit



**Purgeable Aromatics by GC/MS**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP6-(23.5-24')	Diln Fac:	0.9259
Lab ID:	170926-015	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	105	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

ND = Not Detected  
RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP6-(27.5-28')	Diln Fac:	0.9434
Lab ID:	170926-016	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	7.0	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	97	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP2-(4-4.5')	Diln Fac:	0.9434
Lab ID:	170926-017	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
m,3-Dichlorobenzene	ND	4.7
m,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

= Not Detected  
 = Reporting Limit



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP2-(9-9.5')	Diln Fac:	0.8621
Lab ID:	170926-018	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-123

ND = Not Detected  
RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP2-(14-14.5')	Diln Fac:	0.9259
Lab ID:	170926-019	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	6.3	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	107	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

= Not Detected  
 = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP2-(19-19.5')	Diln Fac:	0.8772
Lab ID:	170926-020	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.4
Benzene	ND	4.4
Toluene	ND	4.4
Chlorobenzene	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP2-(25-25.5')	Diln Fac:	0.8621
Lab ID:	170926-021	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	4.7	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP5-(5-5.5')	Diln Fac:	0.8772
Lab ID:	170926-022	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	17	4.4
Benzene	ND	4.4
Toluene	ND	4.4
Chlorobenzene	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

ND = Not Detected  
 RL = Reporting Limit



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP5-(10-10.5')	Diln Fac:	0.8621
Lab ID:	170926-023	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	10	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP5-(15.5-16')	Diln Fac:	0.9091
Lab ID:	170926-024	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	24	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP5-(19.5-20')	Diln Fac:	0.9259
Lab ID:	170926-025	Batch#:	88992
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	104	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-123

ND = Not Detected  
 RL = Reporting Limit



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP5-(27-27.5')	Diln Fac:	0.9804
Lab ID:	170926-026	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	11	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	106	80-120
Bromofluorobenzene	102	80-123

- Not Detected  
- Reporting Limit



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP1-(5-5.5')	Diln Fac:	0.9091
Lab ID:	170926-027	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-123

ND = Not Detected  
RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP1-(9-9.5')	Diln Fac:	0.9434
Lab ID:	170926-028	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	107	80-120
Bromofluorobenzene	99	80-123

ND = Not Detected  
 RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP1-(14.5-15')	Diln Fac:	0.9804
Lab ID:	170926-029	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-123

ND = Not Detected  
 RL = Reporting Limit

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP1-(19.5-20')	Diln Fac:	0.9091
Lab ID:	170926-030	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RI
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	96	80-123





## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP1-(24.5-25')	Diln Fac:	0.9259
Lab ID:	170926-031	Batch#:	89033
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/05/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	93	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP7-(6-6.5')	Diln Fac:	0.9434
Lab ID:	170926-032	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	104	80-123

ND = Not Detected  
 RL = Reporting Limit  
 Page 1 of 1

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP7-(11.5-12')	Diln Fac:	0.9615
Lab ID:	170926-033	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	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	112	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP7-(16.5-17')	Diln Fac:	0.9434
Lab ID:	170926-034	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123

## Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP7-(22-22.5')	Diln Fac: 1.000
Lab ID: 170926-035	Batch#: 89038
Matrix: Soil	Sampled: 03/02/04
Units: ug/Kg	Received: 03/02/04
Basis: as received	Analyzed: 03/04/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123



Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP7-(26.5-27')	Diln Fac:	1.000
Lab ID:	170926-036	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP9-(7-7.5')	Diln Fac:	0.8772
Lab ID:	170926-037	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.4
Benzene	ND	4.4
Toluene	ND	4.4
Chlorobenzene	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	115	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP9-(11.5-12')	Diln Fac:	0.9615
Lab ID:	170926-038	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	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	112	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP9-(16-16.5')	Diln Fac:	0.9259
Lab ID:	170926-039	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	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	113	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP9- (21.5-22')	Diln Fac:	1.000
Lab ID:	170926-040	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	28	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	111	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP9-(26.5-27')	Diln Fac:	0.8772
Lab ID:	170926-041	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	36	4.4
Benzene	ND	4.4
Toluene	ND	4.4
Chlorobenzene	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4

Surrogate	%RRC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP10-(6-6.5')	Diln Fac:	0.9434
Lab ID:	170926-042	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

## Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP10-(11.5-12')	Diln Fac: 1.000
Lab ID: 170926-043	Batch#: 89038
Matrix: Soil	Sampled: 03/02/04
Units: ug/Kg	Received: 03/02/04
Basis: as received	Analyzed: 03/04/04

Analyte	Result	RL
MTBE	94	
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	115	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP10-(18.5-19')	Basis:	as received
Lab ID:	170926-044	Sampled:	03/02/04
Matrix:	Soil	Received:	03/02/04
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
MTBE	270	25	5.000	89073	03/05/04
Benzene	ND	5.0	1.000	89038	03/04/04
Toluene	ND	5.0	1.000	89038	03/04/04
Chlorobenzene	ND	5.0	1.000	89038	03/04/04
Ethylbenzene	ND	5.0	1.000	89038	03/04/04
m,p-Xylenes	ND	5.0	1.000	89038	03/04/04
o-Xylene	ND	5.0	1.000	89038	03/04/04
1,3-Dichlorobenzene	ND	5.0	1.000	89038	03/04/04
1,4-Dichlorobenzene	ND	5.0	1.000	89038	03/04/04
1,2-Dichlorobenzene	ND	5.0	1.000	89038	03/04/04
		5.0	1.000	89038	03/04/04

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
1,2-Dichloroethane-d4	108	80-120	1.000	89038	03/04/04
Toluene-d8	101	80-120	1.000	89038	03/04/04
Bromofluorobenzene	99	80-123	1.000	89038	03/04/04

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP10-(19.5-20')	Diln Fac:	0.9615
Lab ID:	170926-045	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	11	
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	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	104	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP10-(22.5-23')	Diln Fac:	0.9804
Lab ID:	170926-046	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/04/04

Analyte	Result	RL
MTBE	ND	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC242949	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88988
Units:	ug/Kg	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	107	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC242960	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88992
Units:	ug/Kg	Analyzed:	03/03/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	104	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-123

## Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Type: BLANK	Basis: as received
Lab ID: QC243178	Diln Fac: 1.000
Matrix: Soil	Batch#: 89033
Units: ug/Kg	Analyzed: 03/04/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	99	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-123

Purgeable Aromatics by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Type: BLANK	Basis: as received
Lab ID: QC243138	Diln Fac: 1.000
Matrix: Soil	Batch#: 89038
Units: ug/Kg	Analyzed: 03/04/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	112	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

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

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Type: BLANK	Basis: as received
Lab ID: QC243269	Diln Fac: 1.000
Matrix: Soil	Batch#: 89073
Units: ug/Kg	Analyzed: 03/05/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	103	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC243292	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89073
Units:	ug/Kg	Analyzed:	03/05/04

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	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	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-123

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

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC242946	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88988
Units:	ug/Kg	Analyzed:	03/03/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	53.32	107	74-120
Benzene	50.00	50.51	101	80-120
Toluene	50.00	54.61	109	80-120
Chlorobenzene	50.00	49.90	100	80-120
Ethylbenzene	50.00	52.42	105	80-120
m,p-Xylenes	100.0	104.8	105	80-120
o-Xylene	50.00	54.78	110	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	106	80-120
Bromofluorobenzene	100	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(5.5-6')	Diln Fac:	0.9615
MSS Lab ID:	170926-001	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received		

Type: MS Analyzed: 03/03/04  
 Lab ID: QC243013

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1200	48.08	49.83	104	66-120
Benzene	<0.05300	48.08	43.85	91	67-120
Toluene	<0.1300	48.08	46.70	97	61-120
Chlorobenzene	<0.07400	48.08	41.44	86	58-120
Ethylbenzene	<0.06200	48.08	44.35	92	58-120
m,p-Xylenes	<0.1700	96.15	87.79	91	54-122
o-Xylene	<0.08800	48.08	43.77	91	57-121

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	106	80-120
Bromofluorobenzene	105	80-123

Type: MSD Analyzed: 03/04/04  
 Lab ID: QC243014

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	48.08	52.35	109	66-120	5	20
Benzene	48.08	45.25	94	67-120	3	20
Toluene	48.08	46.15	96	61-120	1	20
Chlorobenzene	48.08	43.16	90	58-120	4	20
Ethylbenzene	48.08	46.03	96	58-120	4	20
m,p-Xylenes	96.15	90.24	94	54-122	3	22
o-Xylene	48.08	45.83	95	57-121	5	21

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC242958	Diln Fac:	1.000
Matrix:	Soil	Batch#:	88992
Units:	ug/Kg	Analyzed:	03/03/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	54.24	108	74-120
Benzene	50.00	50.10	100	80-120
Toluene	50.00	50.96	102	80-120
Chlorobenzene	50.00	49.81	100	80-120
Ethylbenzene	50.00	51.90	104	80-120
m,p-Xylenes	100.0	102.9	103	80-120
o-Xylene	50.00	51.34	103	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	94	80-123





Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243119	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89033
Units:	ug/Kg	Analyzed:	03/04/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	55.89	112	74-120
Benzene	50.00	51.07	102	80-120
Toluene	50.00	53.77	108	80-120
Chlorobenzene	50.00	50.49	101	80-120
Ethylbenzene	50.00	52.98	106	80-120
m,p-Xylenes	100.0	105.5	105	80-120
o-Xylene	50.00	54.21	108	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	105	80-120
Bromofluorobenzene	97	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9804
MSS Lab ID:	170948-001	Batch#:	89033
Matrix:	Soil	Sampled:	03/03/04
Units:	ug/Kg	Received:	03/03/04
Basis:	as received		

Type: MS Analyzed: 03/04/04  
 Lab ID: QC243176

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1200	49.02	46.71	95	66-120
Benzene	<0.05400	49.02	43.95	90	67-120
Toluene	<0.1300	49.02	44.95	92	61-120
Chlorobenzene	<0.07500	49.02	41.61	85	58-120
Ethylbenzene	<0.06400	49.02	44.47	91	58-120
m,p-Xylenes	<0.1700	98.04	87.09	89	54-122
o-Xylene	<0.09000	49.02	45.67	93	57-121

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	93	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	96	80-123

Type: MSD Analyzed: 03/05/04  
 Lab ID: QC243177

Analyte	Spiked	Result	%REC	Limits	RPD	Lin
MTBE	49.02	45.01	92	66-120	4	20
Benzene	49.02	43.28	88	67-120	2	20
Toluene	49.02	44.71	91	61-120	1	20
Chlorobenzene	49.02	41.26	84	58-120	1	20
Ethylbenzene	49.02	44.21	90	58-120	1	20
m,p-Xylenes	98.04	87.01	89	54-122	0	22
o-Xylene	49.02	43.33	88	57-121	5	21

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	92	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	98	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243136	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89038
Units:	ug/Kg	Analyzed:	03/04/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	52.66	105	74-120
Benzene	50.00	48.48	97	80-120
Toluene	50.00	48.59	97	80-120
Chlorobenzene	50.00	47.78	96	80-120
Ethylbenzene	50.00	51.20	102	80-120
m, p-Xylenes	100.0	102.5	102	80-120
o-Xylene	50.00	50.21	100	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-123





## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243268	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89073
Units:	ug/Kg	Analyzed:	03/05/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	48.07	96	74-120
Benzene	50.00	45.96	92	80-120
Toluene	50.00	47.29	95	80-120
Chlorobenzene	50.00	47.44	95	80-120
Ethylbenzene	50.00	49.89	100	80-120
m,p-Xylenes	100.0	96.41	96	80-120
o-Xylene	50.00	47.21	94	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-123



## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9615
MSS Lab ID:	170874-016	Batch#:	89073
Matrix:	Soil	Sampled:	02/27/04
Units:	ug/Kg	Received:	02/27/04
Basis:	as received	Analyzed:	03/06/04

Type: MS Lab ID: QC243290

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.3900	48.08	46.39	96	66-120
Benzene	2.146	48.08	44.06	87	67-120
Toluene	17.33	48.08	52.83	74	61-120
Chlorobenzene	<0.2400	48.08	44.77	93	58-120
Ethylbenzene	1.759	48.08	48.40	97	58-120
m,p-Xylenes	5.228	96.15	105.5	104	54-122
o-Xylene	2.331	48.08	53.15	106	57-121

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	88	80-123

Type: MSD Lab ID: QC243291

Analyte	Spiked	Result	%REC	Limits	RPD	L4m
MTBE	48.08	44.17	92	66-120	5	20
Benzene	48.08	45.55	90	67-120	3	20
Toluene	48.08	61.94	93	61-120	16	20
Chlorobenzene	48.08	44.01	92	58-120	2	20
Ethylbenzene	48.08	49.41	99	58-120	2	20
m,p-Xylenes	96.15	107.1	106	54-122	2	22
o-Xylene	48.08	53.54	107	57-121	1	21

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	91	80-123

RPD= Relative Percent Difference



**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP3-(5.5-6')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-001	Analyzed: 03/03/04
Diln Fac: 0.9615	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	96
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
1,2-Dichloroethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethanol	ND	960

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

Field ID: HP3-(10-10.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-002	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	119	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP3-(16-16.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-003	Analyzed: 03/03/04
Diln Fac: 0.9434	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-123

Field ID: HP3-(21-21.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-004	Analyzed: 03/03/04
Diln Fac: 0.9091	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	91
MTBE	ND	4.5
Isopropyl Ether (DIPE)	ND	4.5
Ethyl tert-Butyl Ether (ETBE)	ND	4.5
Methyl tert-Amyl Ether (TAME)	ND	4.5
1,2-Dichloroethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Ethanol	ND	910

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-120
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-123

Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP3-(26-26.5')	Batch#:	88988
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-005	Analyzed:	03/03/04
Diln Fac:	0.8475		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	85
MTBE	ND	4.2
Isopropyl Ether (DIPE)	ND	4.2
Ethyl tert-Butyl Ether (ETBE)	ND	4.2
Methyl tert-Amyl Ether (TAME)	ND	4.2
1,2-Dichloroethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Ethanol	ND	4.2
		850

Surrogate	REC	Limits
Dibromofluoromethane	117	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-123

Field ID:	HP4-(4-4.5')	Batch#:	88988
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-006	Analyzed:	03/03/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	ND	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	4.6
		930

Surrogate	REC	Limits
Dibromofluoromethane	118	80-120
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP4-(9-9.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-007	Analyzed: 03/03/04
Diln Fac: 0.9434	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	4.7
		940

Surrogate	%REC	Limits
Dibromofluoromethane	120	80-120
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Field ID: HP4-(14-14.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-008	Analyzed: 03/03/04
Diln Fac: 0.9804	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	ND	
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
1,2-Dichloroethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethanol	ND	4.9
		980

Surrogate	%REC	Limits
Dibromofluoromethane	120	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	105	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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### Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP4-(19-19.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-009	Analyzed: 03/03/04
Diln Fac: 0.9615	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	96
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
1,2-Dichloroethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethanol	ND	960

Surrogate	%REC	Limits
Dibromofluoromethane	116	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Field ID: HP4-(24-24.5')	Batch#: 88988
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-010	Analyzed: 03/03/04
Diln Fac: 0.9434	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	122 *	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-123

\* = Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID: HP6-(4-4.5')  
 Type: SAMPLE  
 Lab ID: 170926-011  
 Diln Fac: 0.8621

Batch#: 89033  
 Sampled: 03/01/04  
 Analyzed: 03/04/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	86
MTBE	ND	4.3
Isopropyl Ether (DIPE)	ND	4.3
Ethyl tert-Butyl Ether (ETBE)	ND	4.3
Methyl tert-Amyl Ether (TAME)	ND	4.3
1,2-Dichloroethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Ethanol	ND	4.3
		860

Surrogate	REC	Limits
Dibromofluoromethane	115	80-120
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-123

Field ID: HP6-(9-9.5')  
 Type: SAMPLE  
 Lab ID: 170926-012  
 Diln Fac: 0.8621

Batch#: 89033  
 Sampled: 03/01/04  
 Analyzed: 03/04/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	86
MTBE	ND	4.3
Isopropyl Ether (DIPE)	ND	4.3
Ethyl tert-Butyl Ether (ETBE)	ND	4.3
Methyl tert-Amyl Ether (TAME)	ND	4.3
1,2-Dichloroethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Ethanol	ND	4.3
		860

Surrogate	REC	Limits
Dibromofluoromethane	115	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP6-(14-14.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-013	Analyzed:	03/03/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	ND	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	930

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

Field ID:	HP6-(19-19.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-014	Analyzed:	03/03/04
Diln Fac:	0.8929		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	89
MTBE	4.9	4.5
Isopropyl Ether (DIPE)	ND	4.5
Ethyl tert-Butyl Ether (ETBE)	ND	4.5
Methyl tert-Amyl Ether (TAME)	ND	4.5
1,2-Dichloroethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Ethanol	ND	890

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP6-(23.5-24')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-015	Analyzed: 03/03/04
Diln Fac: 0.9259	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	ND	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	930

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	105	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

Field ID: HP6-(27.5-28')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-016	Analyzed: 03/03/04
Diln Fac: 0.9434	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	7.0	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	83	80-120
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	97	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP2-(4-4.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-017	Analyzed:	03/03/04
Diln Fac:	0.9434		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

Field ID:	HP2-(9-9.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-018	Analyzed:	03/03/04
Diln Fac:	0.8621		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	86
MTBE	ND	4.3
Isopropyl Ether (DIPE)	ND	4.3
Ethyl tert-Butyl Ether (ETBE)	ND	4.3
Methyl tert-Amyl Ether (TAME)	ND	4.3
1,2-Dichloroethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Ethanol	ND	860

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-120
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-123

= Value outside of QC limits; see narrative

NA= Not Analyzed

ND= Not Detected

R= Reporting Limit

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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP2-(14-14.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-019	Analyzed:	03/03/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	6.3	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	930

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-120
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

Field ID:	HP2-(19-19.5')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-020	Analyzed:	03/03/04
Diln Fac:	0.8772		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	88
MTBE	ND	4.4
Isopropyl Ether (DIPE)	ND	4.4
Ethyl tert-Butyl Ether (ETBE)	ND	4.4
Methyl tert-Amyl Ether (TAME)	ND	4.4
1,2-Dichloroethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Ethanol	ND	880

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP2-(25-25.5')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-021	Analyzed: 03/03/04
Diln Fac: 0.8621	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	86
MTBE	4.7	4.3
Isopropyl Ether (DIPE)	ND	4.3
Ethyl tert-Butyl Ether (ETBE)	ND	4.3
Methyl tert-Amyl Ether (TAME)	ND	4.3
1,2-Dichloroethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Ethanol	ND	4.3
		860

Surrogate	REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-123

Field ID: HP5-(5-5.5')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-022	Analyzed: 03/03/04
Diln Fac: 0.8772	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	88
MTBE	17	4.4
Isopropyl Ether (DIPE)	ND	4.4
Ethyl tert-Butyl Ether (ETBE)	ND	4.4
Methyl tert-Amyl Ether (TAME)	ND	4.4
1,2-Dichloroethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Ethanol	ND	4.4
		880

Surrogate	REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP5-(10-10.5')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-023	Analyzed: 03/03/04
Diln Fac: 0.8621	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	86
MTBE	10	4.3
Isopropyl Ether (DIPE)	ND	4.3
Ethyl tert-Butyl Ether (ETBE)	ND	4.3
Methyl tert-Amyl Ether (TAME)	ND	4.3
1,2-Dichloroethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Ethanol	ND	860

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

Field ID: HP5-(15.5-16')	Batch#: 88992
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-024	Analyzed: 03/03/04
Diln Fac: 0.9091	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	91
MTBE	24	4.5
Isopropyl Ether (DIPE)	ND	4.5
Ethyl tert-Butyl Ether (ETBE)	ND	4.5
Methyl tert-Amyl Ether (TAME)	ND	4.5
1,2-Dichloroethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Ethanol	ND	910

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP5-(19.5-20')	Batch#:	88992
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-025	Analyzed:	03/03/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	ND	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	930

Surrogate	*REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-123

Field ID:	HP5-(27-27.5')	Batch#:	89033
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-026	Analyzed:	03/04/04
Diln Fac:	0.9804		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	11	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
1,2-Dichloroethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethanol	ND	980

Surrogate	*REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	106	80-120
Bromofluorobenzene	102	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP1-(5-5.5')	Batch#:	89033
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-027	Analyzed:	03/04/04
Diln Fac:	0.9091		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	91
MTBE	ND	4.5
Isopropyl Ether (DIPE)	ND	4.5
Ethyl tert-Butyl Ether (ETBE)	ND	4.5
Methyl tert-Amyl Ether (TAME)	ND	4.5
1,2-Dichloroethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Ethanol	ND	910

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-123

Field ID:	HP1-(9-9.5')	Batch#:	89033
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-028	Analyzed:	03/04/04
Diln Fac:	0.9434		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-120
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	107	80-120
Bromofluorobenzene	99	80-123

= Value outside of QC limits; see narrative

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

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### Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP1-(14.5-15')	Batch#: 89033
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-029	Analyzed: 03/04/04
Diln Fac: 0.9804	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	ND	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
1,2-Dichloroethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethanol	ND	980

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	95	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-123

Field ID: HP1-(19.5-20')	Batch#: 89033
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170926-030	Analyzed: 03/04/04
Diln Fac: 0.9091	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	91
MTBE	ND	4.5
Isopropyl Ether (DIPE)	ND	4.5
Ethyl tert-Butyl Ether (ETBE)	ND	4.5
Methyl tert-Amyl Ether (TAME)	ND	4.5
1,2-Dichloroethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Ethanol	ND	910

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	96	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP1-(24.5-25')	Batch#:	89033
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170926-031	Analyzed:	03/05/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	
MTBE	ND	93
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	4.6
		930

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	93	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Field ID:	HP7-(6-6.5')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-032	Analyzed:	03/04/04
Diln Fac:	0.9434		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	
MTBE	ND	94
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	4.7
		940

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	104	80-123

= Value outside of QC limits; see narrative

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

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Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP7-(11.5-12')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-033	Analyzed:	03/04/04
Diln Fac:	0.9615		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	96
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
1,2-Dichloroethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethanol	ND	960

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

Field ID:	HP7-(16.5-17')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-034	Analyzed:	03/04/04
Diln Fac:	0.9434		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	940

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP7-(22-22.5')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-035	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Field ID:	HP7-(26.5-27')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-036	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP9-(7-7.5')	Batch#: 89038
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-037	Analyzed: 03/04/04
Diln Fac: 0.8772	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	88
MTBE	ND	4.4
Isopropyl Ether (DIPE)	ND	4.4
Ethyl tert-Butyl Ether (ETBE)	ND	4.4
Methyl tert-Amyl Ether (TAME)	ND	4.4
1,2-Dichloroethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Ethanol	ND	880

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	115	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123

Field ID: HP9-(11.5-12')	Batch#: 89038
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-038	Analyzed: 03/04/04
Diln Fac: 0.9615	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	96
MTBE	ND	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
1,2-Dichloroethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethanol	ND	960

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

= Value outside of QC limits; see narrative

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP9-(16-16.5')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-039	Analyzed:	03/04/04
Diln Fac:	0.9259		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	93
MTBE	ND	4.6
Isopropyl Ether (DIPE)	ND	4.6
Ethyl tert-Butyl Ether (ETBE)	ND	4.6
Methyl tert-Amyl Ether (TAME)	ND	4.6
1,2-Dichloroethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Ethanol	ND	930

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	113	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-123

Field ID:	HP9-(21.5-22')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-040	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	28	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID: HP9-(26.5-27')  
 Type: SAMPLE  
 Lab ID: 170926-041  
 Diln Fac: 0.8772

Batch#: 89038  
 Sampled: 03/02/04  
 Analyzed: 03/04/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	88
MTBE	36	4.4
Isopropyl Ether (DIPE)	ND	4.4
Ethyl tert-Butyl Ether (ETBE)	ND	4.4
Methyl tert-Amyl Ether (TAME)	ND	4.4
1,2-Dichloroethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Ethanol	ND	4.4
		880

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-123

Field ID: HP10-(6-6.5')  
 Type: SAMPLE  
 Lab ID: 170926-042  
 Diln Fac: 0.9434

Batch#: 89038  
 Sampled: 03/02/04  
 Analyzed: 03/04/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
1,2-Dichloroethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethanol	ND	4.7
		940

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	116	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit

## Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260E
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Field ID: HP10-(11.5-12')	Batch#: 89038
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170926-043	Analyzed: 03/04/04
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	94	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-120
1,2-Dichloroethane-d4	115	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-123

Field ID: HP10-(18.5-19')	Lab ID: 170926-044
Type: SAMPLE	Sampled: 03/02/04

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
tert-Butyl Alcohol (TBA)	ND	100	1.000	89038	03/04/04
MTBE	270	25	5.000	89073	03/05/04
Isopropyl Ether (DIPE)	ND	5.0	1.000	89038	03/04/04
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	1.000	89038	03/04/04
Methyl tert-Amyl Ether (TAME)	ND	5.0	1.000	89038	03/04/04
1,2-Dichloroethane	ND	5.0	1.000	89038	03/04/04
1,2-Dibromoethane	ND	5.0	1.000	89038	03/04/04
Ethanol	ND	1,000	1.000	89038	03/04/04

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	97	80-120	1.000	89038	03/04/04
1,2-Dichloroethane-d4	108	80-120	1.000	89038	03/04/04
Toluene-d8	101	80-120	1.000	89038	03/04/04
Bromofluorobenzene	99	80-123	1.000	89038	03/04/04

Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Field ID:	HP10-(19.5-20')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-045	Analyzed:	03/04/04
Diln Fac:	0.9615		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	96
MTBE	11	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
1,2-Dichloroethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethanol	ND	960

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-120
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-123

Field ID:	HP10-(22.5-23')	Batch#:	89038
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170926-046	Analyzed:	03/04/04
Diln Fac:	0.9804		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	ND	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
1,2-Dichloroethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethanol	ND	980

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit

## Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Soil	Basis: as received
Units: ug/Kg	Received: 03/02/04

Type: BLANK	Batch#: 88988
Lab ID: QC242949	Analyzed: 03/03/04
File Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-120
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-123

Type: BLANK	Batch#: 88992
Lab ID: QC242960	Analyzed: 03/03/04
File Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Type:	BLANK	Batch#:	89033
Lab ID:	QC243121	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	NA	
MTBE	ND	
Isopropyl Ether (DIPE)	NA	5.0
Ethyl tert-Butyl Ether (ETBE)	NA	
Methyl tert-Amyl Ether (TAME)	NA	
1,2-Dichloroethane	ND	
1,2-Dibromoethane	ND	5.0
Ethanol	NA	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-120
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-123

Type:	BLANK	Batch#:	89033
Lab ID:	QC243178	Analyzed:	03/04/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	
MTBE	ND	100
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	5.0
		1,000

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-123

**Gasoline Oxygenates by GC/MS**

Lab #: 170926      Location: 5725 Thornhill Drive  
 Client: SOMA Environmental Engineering Inc.      Prep: EPA 5030B  
 Project#: 2832      Analysis: EPA 8260B  
 Matrix: Soil      Basis: as received  
 Units: ug/Kg      Received: 03/02/04

Type: BLANK      Batch#: 89038  
 Lab ID: QC243138      Analyzed: 03/04/04  
 Diln Fac: 1.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-123

Type: BLANK      Batch#: 89073  
 Lab ID: QC243269      Analyzed: 03/05/04  
 Diln Fac: 1.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	NA	
MTBE	ND	5.0
Isopropyl Ether (DIPE)	NA	
Ethyl tert-Butyl Ether (ETBE)	NA	
Methyl tert-Amyl Ether (TAME)	NA	
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	NA	

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Basis:	as received
Units:	ug/Kg	Received:	03/02/04

Type:	BLANK	Batch#:	89073
Lab ID:	QC243292	Analyzed:	03/05/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	NA	
MTBE	ND	5.0
Isopropyl Ether (DIPE)	NA	
Ethyl tert-Butyl Ether (ETBE)	NA	
Methyl tert-Amyl Ether (TAME)	NA	
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	NA	

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-123

= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit  
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## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Soil	Diln Fac:	1.000
Units:	ug/Kg	Batch#:	88988
Basis:	as received	Analyzed:	03/03/04

Type: BS Lab ID: QC242947

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	265.5	106	70-130
MTBE	50.00	58.30	117	74-120
Isopropyl Ether (DIPE)	50.00	58.50	117	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	61.55	123	70-130
Methyl tert-Amyl Ether (TAME)	50.00	59.57	119	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	106	80-123

Type: BSD Lab ID: QC242948

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	250.0	277.6	111	70-130	4	20
MTBE	50.00	58.97	118	74-120	1	20
Isopropyl Ether (DIPE)	50.00	58.44	117	70-130	0	20
Ethyl tert-Butyl Ether (ETBE)	50.00	62.80	126	70-130	2	20
Methyl tert-Amyl Ether (TAME)	50.00	59.95	120	70-130	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	91	80-120
Bromofluorobenzene	105	80-123

## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP3-(5.5-6')	Diln Fac:	0.9615
MSS Lab ID:	170926-001	Batch#:	88988
Matrix:	Soil	Sampled:	03/01/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received		

Type: MS Analyzed: 03/03/04  
 Lab ID: QC243013

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1200	48.08	49.83	104	66-120
Surrogate	%REC	Limits			
Dibromofluoromethane	105	80-120			
1,2-Dichloroethane-d4	103	80-120			
Toluene-d8	106	80-120			
Bromofluorobenzene	105	80-123			

Type: MSD Analyzed: 03/04/04  
 Lab ID: QC243014

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	48.08	52.35	109	66-120	5	20
Surrogate	%REC	Limits				
Dibromofluoromethane	105	80-120				
1,2-Dichloroethane-d4	102	80-120				
Toluene-d8	101	80-120				
Bromofluorobenzene	98	80-123				

### Gasoline Oxygenates by GC/MS

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Type: LCS	Basis: as received
Lab ID: QC242959	Diln Fac: 1.000
Matrix: Soil	Batch#: 88992
Units: ug/Kg	Analyzed: 03/03/04

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	279.8	112	70-130
MTBE	50.00	47.51	95	74-120
Isopropyl Ether (DIPE)	50.00	49.37	99	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	52.80	106	70-130
Methyl tert-Amyl Ether (TAME)	50.00	55.56	111	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-120
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

**Gasoline Oxygenates by GC/MS**

Lab #: 170926	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP2-(4-4.5')	Diln Fac: 0.9434
MSS Lab ID: 170926-017	Batch#: 88992
Matrix: Soil	Sampled: 03/01/04
Units: ug/Kg	Received: 03/02/04
Basis: as received	Analyzed: 03/03/04

Type: MS Lab ID: QC243015

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	1.038	47.17	46.35	96	66-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-123

Type: MSD Lab ID: QC243016

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	47.17	46.99	97	66-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-123

## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243120	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89033
Units:	ug/Kg	Analyzed:	03/04/04

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	287.8	115	70-130
MTBE	50.00	57.68	115	74-120
Isopropyl Ether (DIPE)	50.00	57.54	115	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	59.40	119	70-130
Methyl tert-Amyl Ether (TAME)	50.00	58.71	117	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-120
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	107	80-123



## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9804
MSS Lab ID:	170948-001	Batch#:	89033
Matrix:	Soil	Sampled:	03/03/04
Units:	ug/Kg	Received:	03/03/04
Basis:	as received		

Type: MS Analyzed: 03/04/04  
 Lab ID: QC243176

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1200	49.02	46.71	95	66-120
Surrogate	%REC	Limits			
Dibromofluoromethane	92	80-120			
1,2-Dichloroethane-d4	93	80-120			
Toluene-d8	101	80-120			
Bromofluorobenzene	96	80-123			

Type: MSD Analyzed: 03/05/04  
 Lab ID: QC243177

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	49.02	45.01	92	66-120	4	20
Surrogate	%REC	Limits				
Dibromofluoromethane	90	80-120				
1,2-Dichloroethane-d4	92	80-120				
Toluene-d8	103	80-120				
Bromofluorobenzene	98	80-123				

## Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243137	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89038
Units:	ug/Kg	Analyzed:	03/04/04

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	277.1	111	70-130
MTBE	50.00	49.85	100	74-120
Isopropyl Ether (DIPE)	50.00	49.96	100	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	53.10	106	70-130
Methyl tert-Amyl Ether (TAME)	50.00	55.34	111	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-123



Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP7-(6-6.5')	Diln Fac:	0.9434
MSS Lab ID:	170926-032	Batch#:	89038
Matrix:	Soil	Sampled:	03/02/04
Units:	ug/Kg	Received:	03/02/04
Basis:	as received	Analyzed:	03/05/04

Type: MS Lab ID: QC243181

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.3800	47.17	49.68	105	66-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-123

Type: MSD Lab ID: QC243182

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	47.17	47.87	101	66-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-123

## Purgeable Aromatics by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC243137	Diln Fac:	1.000
Matrix:	Soil	Batch#:	89038
Units:	ug/Kg	Analyzed:	03/04/04

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	49.85	100	74-120
Benzene		NA		
Toluene		NA		
Chlorobenzene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-123



Gasoline Oxygenates by GC/MS

Lab #:	170926	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9615
MSS Lab ID:	170874-016	Batch#:	89073
Matrix:	Soil	Sampled:	02/27/04
Units:	ug/Kg	Received:	02/27/04
Basis:	as received	Analyzed:	03/06/04

Type: MS Lab ID: QC243290

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.3900	48.08	46.39	96	66-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	88	80-123

Type: MSD Lab ID: QC243291

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	48.08	44.17	92	66-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	91	80-123

# **Appendix D**

## **Laboratory Report of Groundwater Analytical and Chain of Custody Form**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T

Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Date: 17-MAR-04  
Lab Job Number: 170923  
Project ID: 2832  
Location: 5725 Thornhill Drive

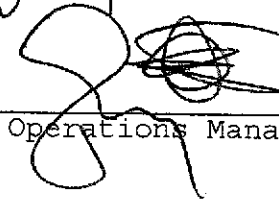
This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to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

Reviewed by:



Project Manager

Reviewed by:



Operations Manager

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Curtis & Tompkins, Ltd.

Laboratory Number: 170923  
Client: SOMA Environmental Engineering Inc.  
Project: 2832  
Request Date: 3/2/04

#### CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for twelve water samples requested from the above referenced project on March 2, 2004. The samples were received cold and intact.

**Total Volatile Hydrocarbons:**

Many surrogate recoveries are outside control limits due to coelution of the surrogate peaks with other hydrocarbon peaks.

No other analytical problems were encountered.

**Total Extractable Hydrocarbons:**

The recovery for the surrogate in sample MW-3 exceeds control limits. The recoveries for the analytes are not detected (ND).

No other analytical problems were encountered.

**Purgeable Organics (EPA 8260):**

No analytical problems were encountered.





**Total Volatile Hydrocarbons**

Lab #: 170923 Location: 5725 Thornhill Drive  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: STANDARD Analysis: EPA 8015B  
 Matrix: Water Batch#: 88932  
 Units: ug/L Received: 03/02/04

Field ID: HP-3 Diln Fac: 1.000  
 Type: SAMPLE Sampled: 03/01/04  
 Lab ID: 170923-001 Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	88	74-142
Bromofluorobenzene (FID)	98	80-139

Field ID: HP-4 Diln Fac: 1.000  
 Type: SAMPLE Sampled: 03/01/04  
 Lab ID: 170923-002 Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	85	74-142
Bromofluorobenzene (FID)	100	80-139

Field ID: HP-6 Diln Fac: 1.000  
 Type: SAMPLE Sampled: 03/01/04  
 Lab ID: 170923-003 Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	250 H Y	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	87	74-142
Bromofluorobenzene (FID)	102	80-139

Field ID: HP-2 Diln Fac: 1.000  
 Type: SAMPLE Sampled: 03/01/04  
 Lab ID: 170923-004 Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	360 Y	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	92	74-142
Bromofluorobenzene (FID)	106	80-139

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 D= Not Detected  
 L= Reporting Limit  
 R= Response exceeds instrument's linear range



**Total Volatile Hydrocarbons**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Batch#: 88932
Units: ug/L	Received: 03/02/04

Field ID: HP-5	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170923-005	Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	6,700 Y	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	119	74-142
Bromofluorobenzene (FID)	238 *	>LR b 80-139

Field ID: HP-1	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170923-006	Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	4,200 Y	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	135	74-142
Bromofluorobenzene (FID)	157 *	80-139

Field ID: HP-7	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-007	Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	74-142
Bromofluorobenzene (FID)	108	80-139

Field ID: HP-9	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-008	Analyzed: 03/02/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	87	74-142
Bromofluorobenzene (FID)	100	80-139

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 D= Not Detected  
 L= Reporting Limit  
 >LR= Response exceeds instrument's linear range



**Total Volatile Hydrocarbons**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Batch#: 88932
Units: ug/L	Received: 03/02/04

Field ID: HP-10	Diln Fac: 5.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-009	Analyzed: 03/03/04

Analyte	Result	RL
Gasoline C7-C12	9,700 Y	250
Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	74-142
Bromofluorobenzene (FID)	133	80-139

Field ID: MW-1	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-010	Analyzed: 03/03/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	85	74-142
Bromofluorobenzene (FID)	101	80-139

Field ID: MW-2	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-011	Analyzed: 03/03/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	84	74-142
Bromofluorobenzene (FID)	102	80-139

Field ID: MW-3	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-012	Analyzed: 03/03/04

Analyte	Result	RL
Gasoline C7-C12	ND	50
Surrogate	%REC	Limits
Trifluorotoluene (FID)	85	74-142
Bromofluorobenzene (FID)	99	80-139

\*= Value outside of QC limits; see narrative  
 H= Heavier hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 D= Not Detected  
 L= Reporting Limit  
 LR= Response exceeds instrument's linear range



Total Volatile Hydrocarbons

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	88932
Units:	ug/L	Received:	03/02/04

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC242744	Analyzed:	03/02/04

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	87	74-142
Bromofluorobenzene (FID)	96	80-139

\*= Value outside of QC limits; see narrative  
H= Heavier hydrocarbons contributed to the quantitation  
Y= Sample exhibits chromatographic pattern which does not resemble standard  
b= See narrative  
D= Not Detected  
L= Reporting Limit  
>LR= Response exceeds instrument's linear range

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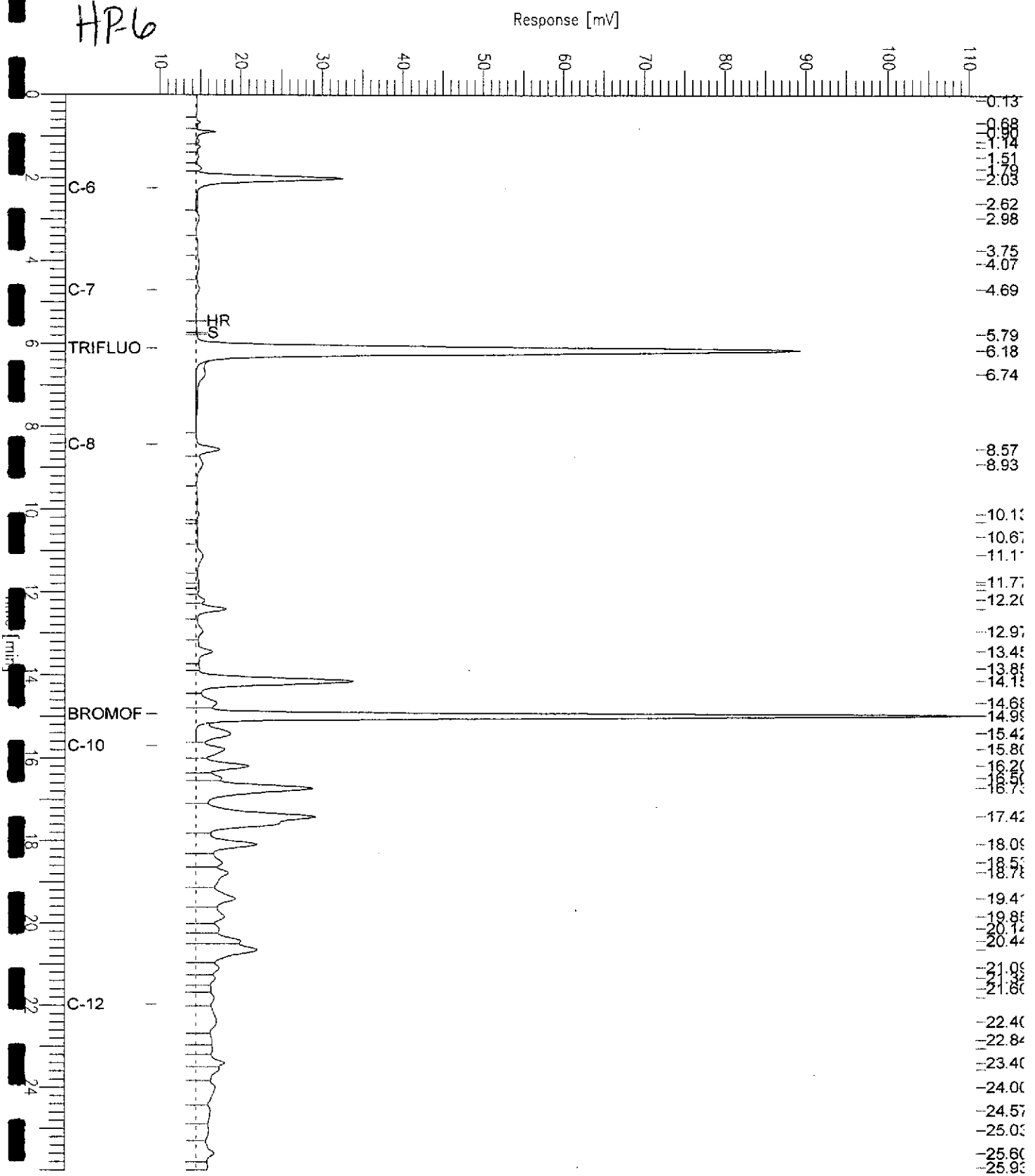
# GC07 TVH 'A' Data File RTX 502

Sample Name : 170923-003,88932,tvh  
 FileName : G:\GC07\DATA\062A007.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min  
 Scale Factor: 1.0

End Time : 26.00 min  
 Plot Offset: 10 mV

Sample #: a1.3  
 Date : 3/3/04 09:25 AM  
 Time of Injection: 3/2/04 06:44 PM  
 Low Point : 9.67 mV  
 Plot Scale: 101.2 mV  
 High Point : 110.90 mV

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GC07 TVH 'A' Data File RTX 502

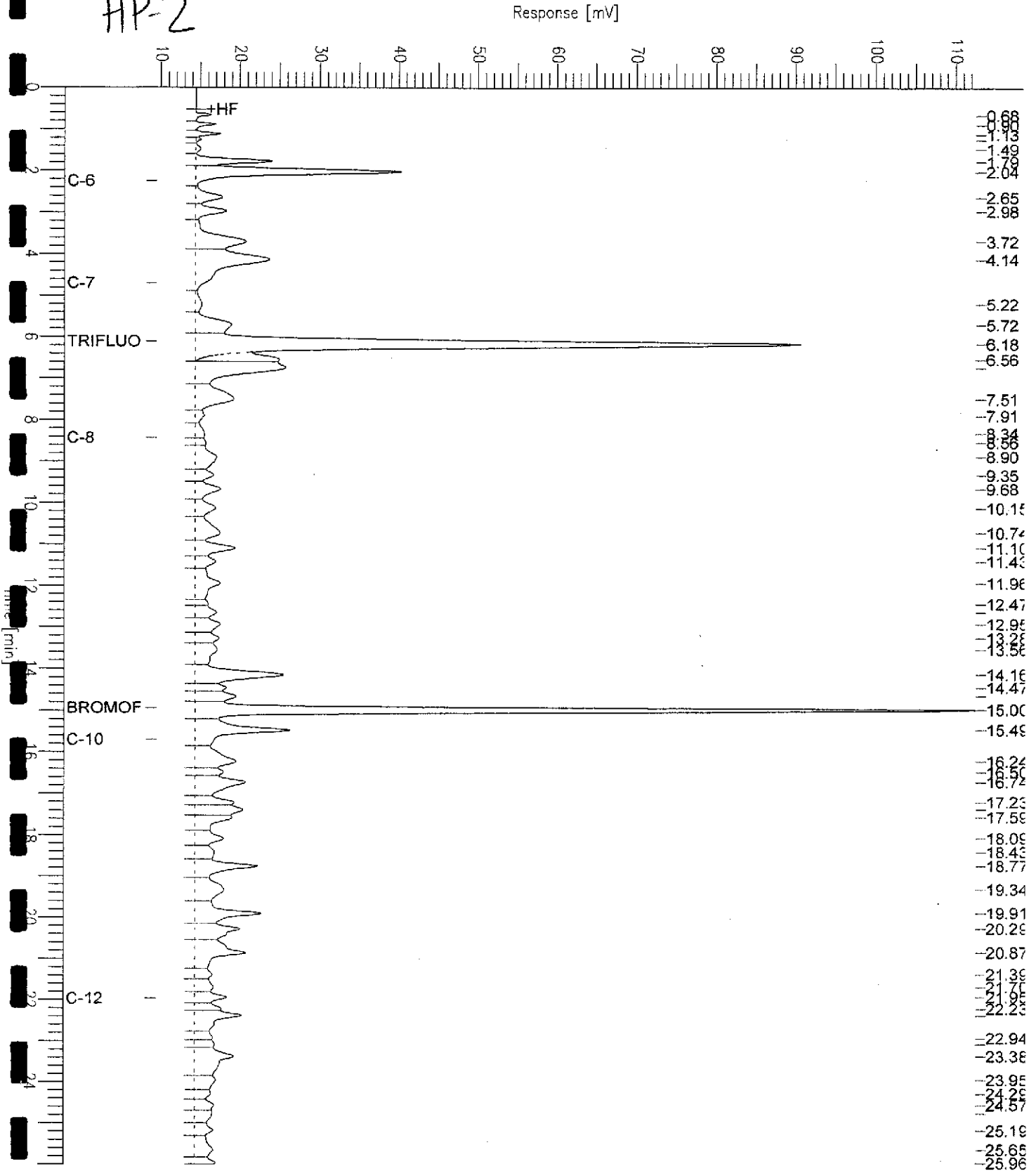
Sample Name : 170923-004,88932,tvh  
 FileName : G:\GC07\DATA\062A008.raw  
 Method : TVHETXE  
 Start Time : 0.00 min  
 Scale Factor: 1.0

End Time : 26.00 min  
 Plot Offset: 10 mV

Sample #: a1.3  
 Date : 3/3/04 09:25 AM  
 Time of Injection: 3/2/04 07:19 PM  
 Low Point : 9.50 mV  
 Plot Scale: 103.0 mV  
 High Point : 112.55 mV

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HP-2



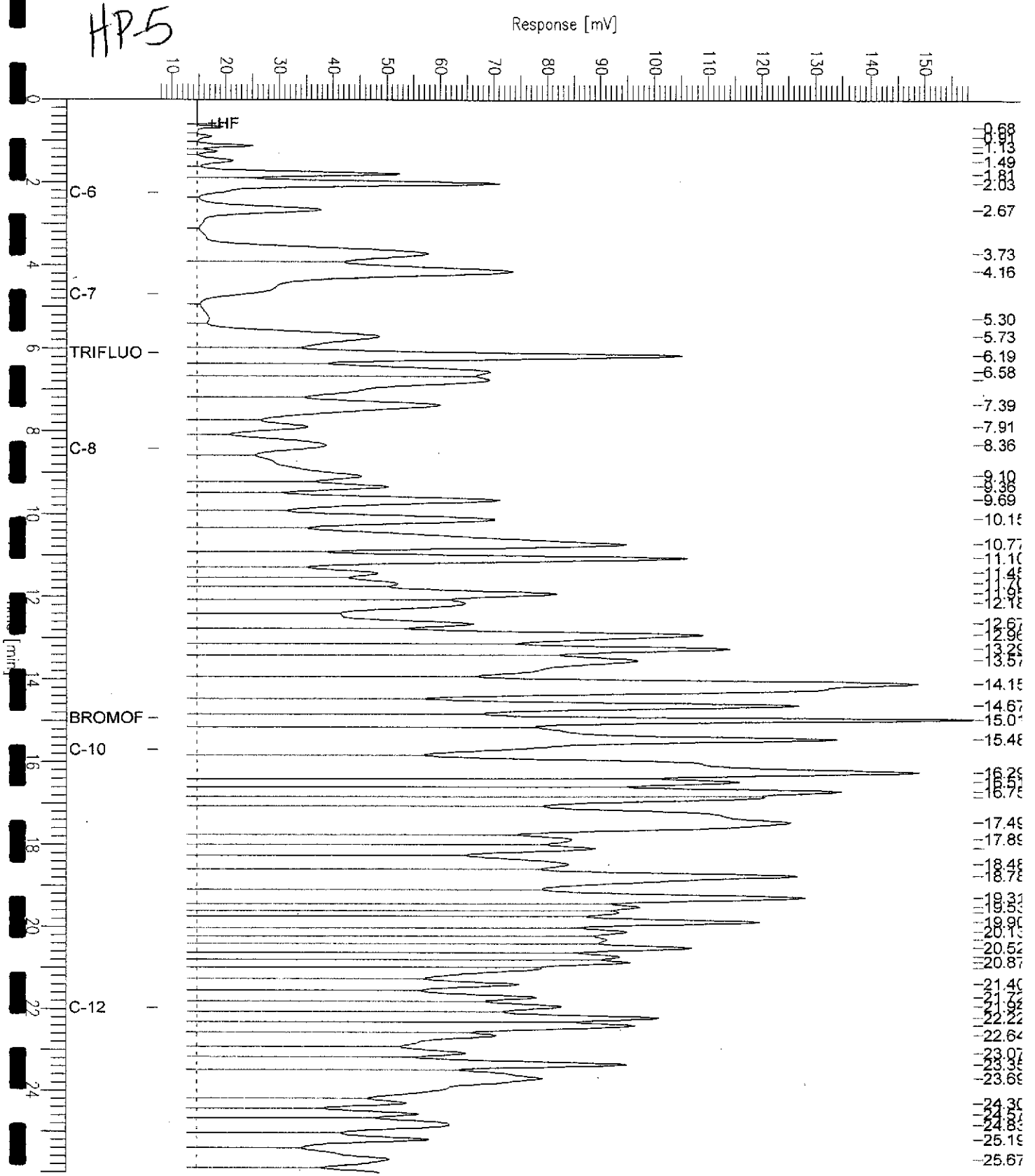
# GC07 TVH 'A' Data File RTX 502

Sample Name : 170923-005,88932,tvh  
 FileName : G:\GC07\DATA\062A011.raw  
 Method : TVHBTXB  
 Start Time : 0.00 min  
 Scale Factor: 1.0

End Time : 26.00 min  
 Plot Offset: 7 mV

Sample #: a1.3  
 Date : 3/3/04 07:10 AM  
 Time of Injection: 3/2/04 09:04 PM  
 Low Point : 7.45 mV  
 Plot Scale: 151.5 mV  
 High Point : 158.98 mV

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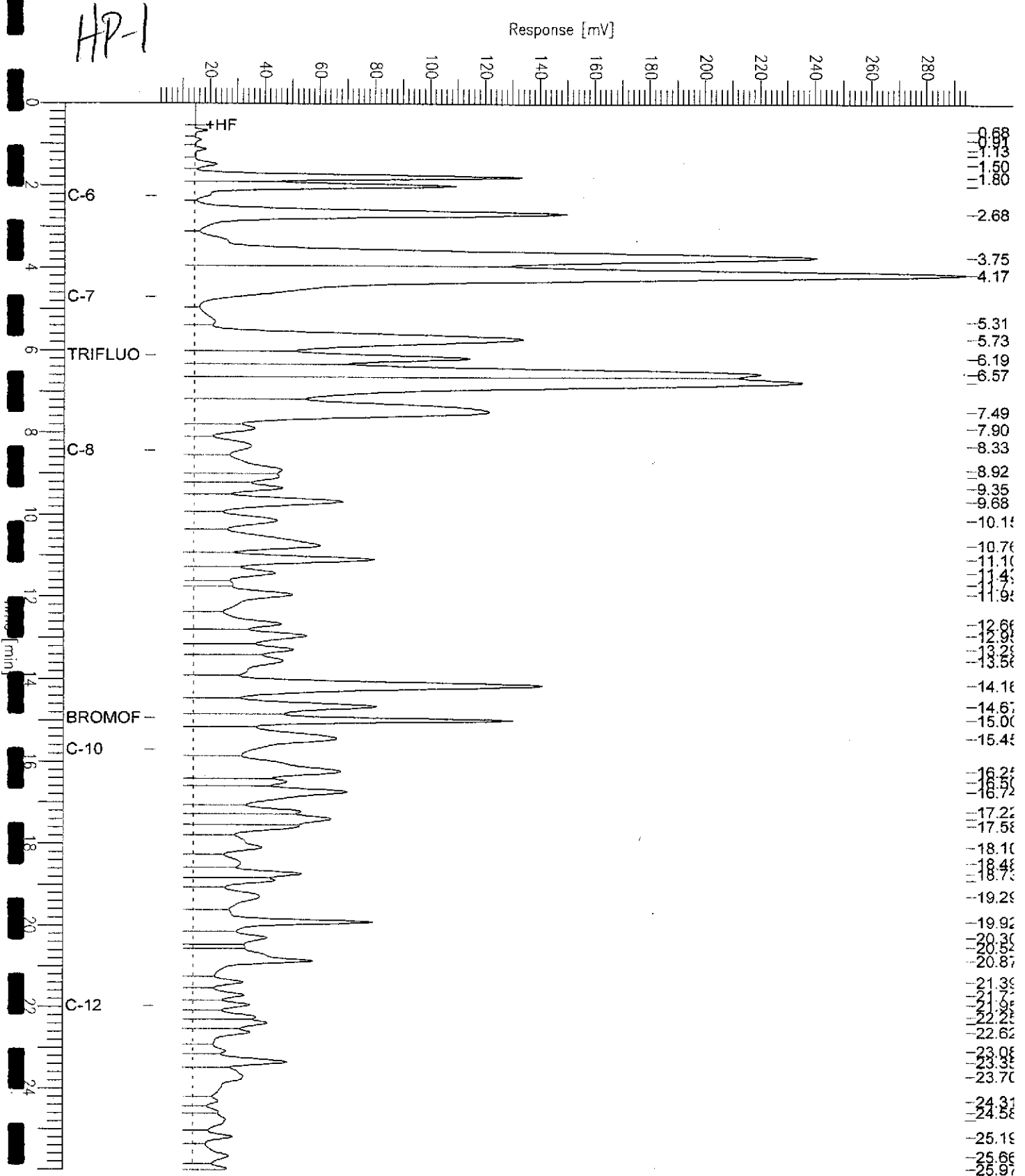
# GC07 TVH 'A' Data File RTX 502

Sample Name : 170923-006,88932,tvh  
 FileName : G:\GC07\DATA\062A009.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min  
 Scale Factor : 1.0

End Time : 26.00 min  
 Plot Offset: 0 mV

Sample #: a7  
 Date : 3/3/04 09:25 AM  
 Time of Injection: 3/2/04 07:53 PM  
 Low Point : 0.41 mV  
 High Point : 294.82 mV  
 Plot Scale: 294.4 mV

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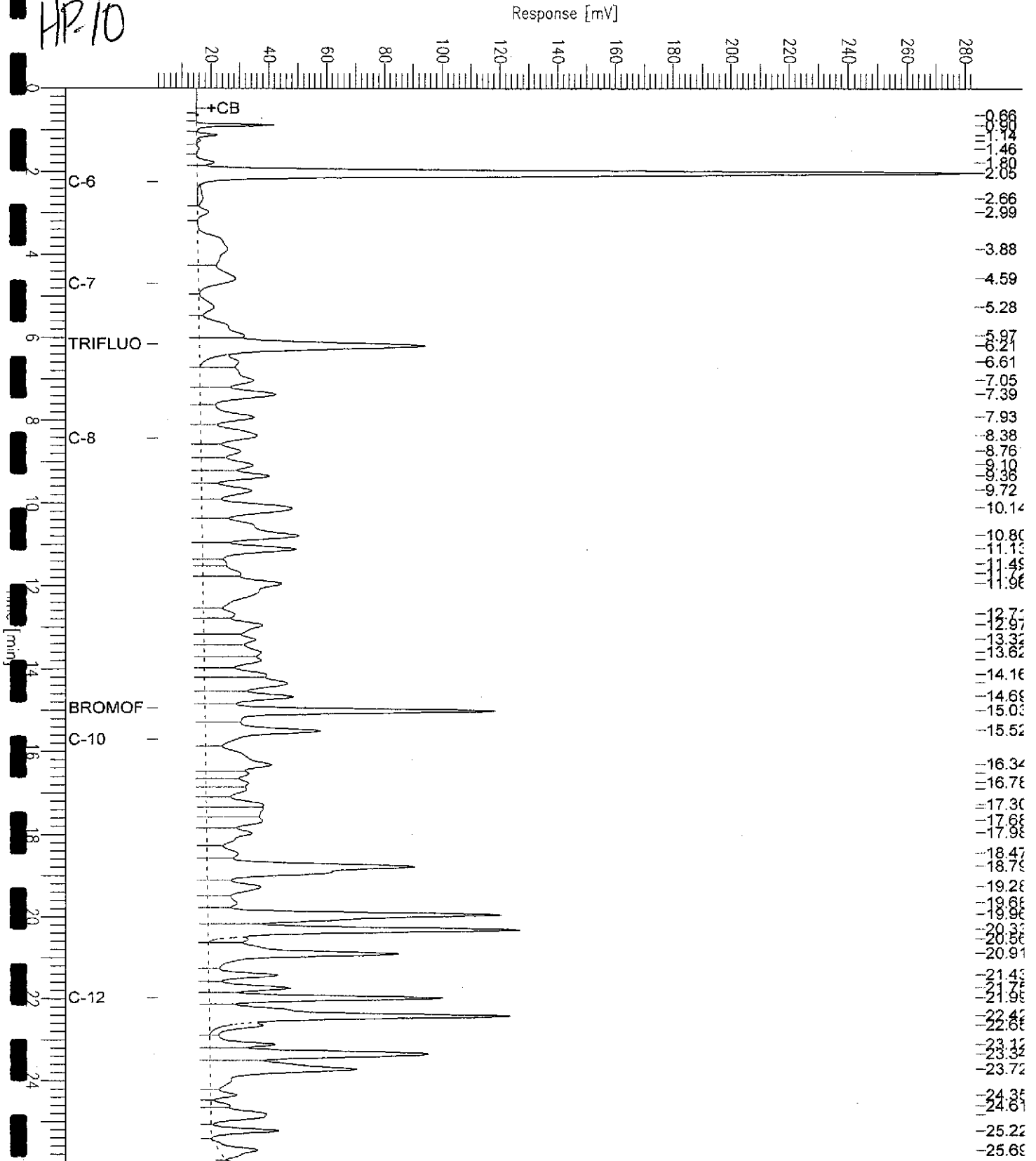
# GC07 TVH 'A' Data File RTX 502

Sample Name : 170923-009,88932,tvh  
 FileName : g:\gc07\data\062a024.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min  
 Scale Factor: 1.0

End Time : 26.00 min  
 Plot Offset: 2 mV

Page 1 of 1  
 Sample #: f7  
 Date : 3/3/04 11:01 AM  
 Time of Injection: 3/3/04 07:28 AM  
 Low Point : 1.61 mV  
 High Point : 283.46 mV  
 Plot Scale: 281.9 mV

HP-10

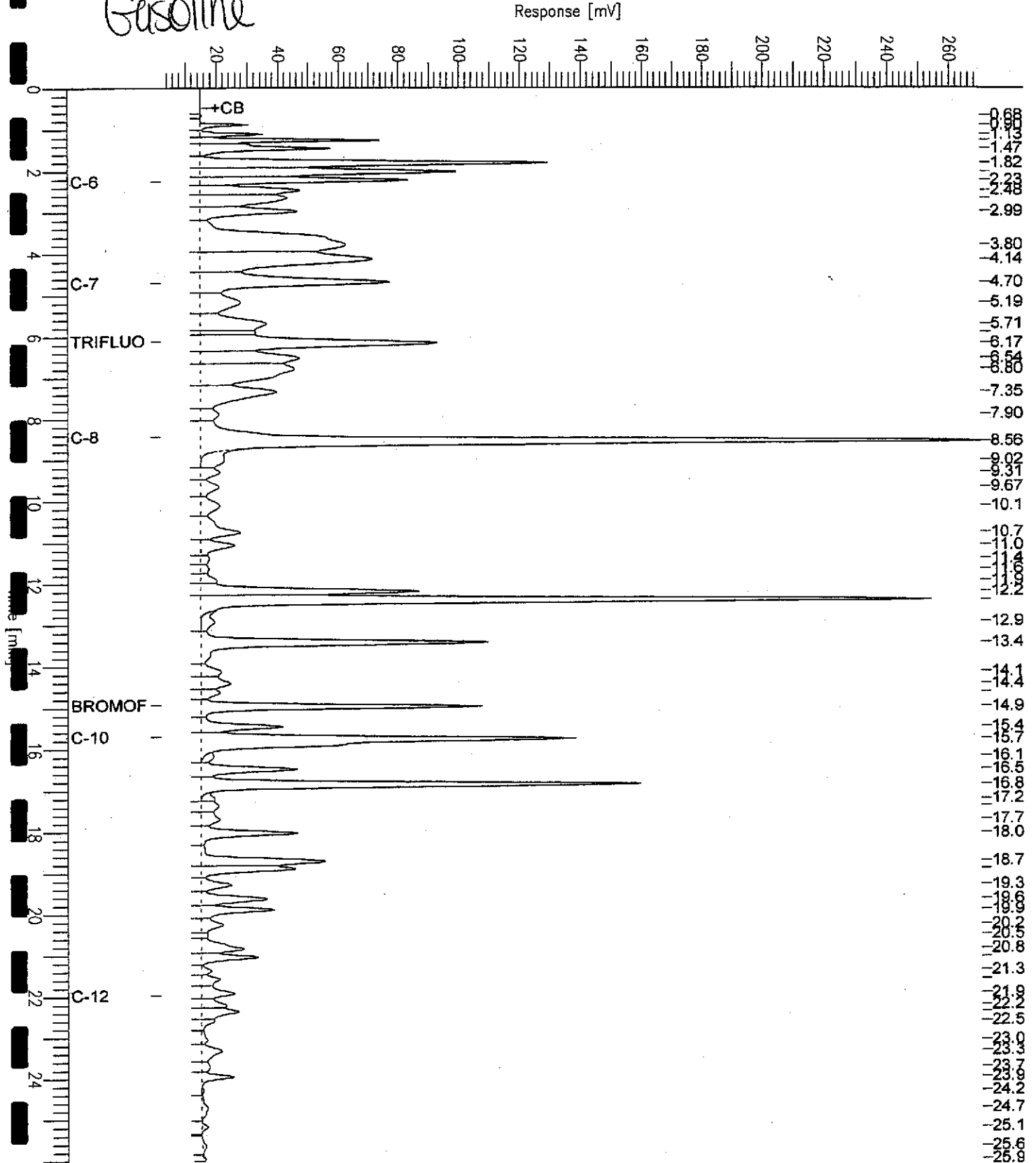


GC07 TVH 'A' Data File RTX 502

Sample Name : ccv/lcs,qc242745,88932,04ws0372,5/5000  
File Name : G:\GC07\DATA\062A002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 3/2/04 01:28 PM  
Time of Injection: 3/2/04 01:02 PM  
Low Point : 2.12 mV  
Plot Scale: 267.8 mV  
End Time : 26.00 min  
Plot Offset: 2 mV  
High Point : 269.92 mV

Gasoline





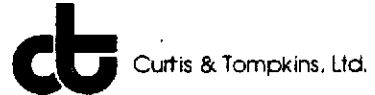
Total Volatile Hydrocarbons

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC242745	Batch#:	88932
Matrix:	Water	Analyzed:	03/02/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,897	95	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	74-142
Bromofluorobenzene (FID)	98	80-139





**Total Extractable Hydrocarbons**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Prepared:	03/04/04
Batch#:	89047		

Field ID:	HP-3	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-001	Analyzed:	03/07/04

Analyte	Result	RL
Diesel C10-C24	3,500 H Y	50
Motor Oil C24-C36	5,700	300

Surrogate	%REC	Limits
Hexacosane	116	53-142

Field ID:	HP-4	Diln Fac:	3.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-002	Analyzed:	03/08/04

Analyte	Result	RL
Diesel C10-C24	740 H Y	150
Motor Oil C24-C36	6,300 H	900

Surrogate	%REC	Limits
Hexacosane	81	53-142

Field ID:	HP-6	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-003	Analyzed:	03/07/04

Analyte	Result	RL
Diesel C10-C24	370 H Y	50
Motor Oil C24-C36	730	300

Surrogate	%REC	Limits
Hexacosane	128	53-142

Field ID:	HP-2	Diln Fac:	3.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-004	Analyzed:	03/08/04

Analyte	Result	RL
Diesel C10-C24	10,000 H Y	150
Motor Oil C24-C36	58,000	900

Surrogate	%REC	Limits
Hexacosane	100	53-142

Value outside of QC limits; see narrative

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= Diluted Out

N= Not Detected

RL= Reporting Limit

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**Total Extractable Hydrocarbons**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Prepared:	03/04/04
Batch#:	89047		

Field ID:	HP-5	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-005	Analyzed:	03/07/04

Analyte	Result	RL
Diesel C10-C24	3,600 H L Y	50
Motor Oil C24-C36	650	300

Surrogate	%REC	Limits
Hexacosane	128	53-142

Field ID:	HP-1	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-006	Analyzed:	03/07/04

Analyte	Result	RL
Diesel C10-C24	5,900 H L Y	50
Motor Oil C24-C36	11,000	300

Surrogate	%REC	Limits
Hexacosane	91	53-142

Field ID:	HP-7	Diln Fac:	2.000
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-007	Analyzed:	03/09/04

Analyte	Result	RL
Diesel C10-C24	1,600 H Y	100
Motor Oil C24-C36	1,400	600

Surrogate	%REC	Limits
Hexacosane	85	53-142

Field ID:	HP-9	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-008	Analyzed:	03/07/04

Analyte	Result	RL
Diesel C10-C24	160 H Y	50
Motor Oil C24-C36	1,700	300

Surrogate	%REC	Limits
Hexacosane	104	53-142

\* Value outside of QC limits; see narrative  
 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= Diluted Out  
 N= Not Detected  
 RL= Reporting Limit  
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**Total Extractable Hydrocarbons**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 3520C
Project#: 2832	Analysis: EPA 8015B
Matrix: Water	Received: 03/02/04
Units: ug/L	Prepared: 03/04/04
Batch#: 89047	

Field ID: HP-10	Diln Fac: 10.00
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-009	Analyzed: 03/09/04

Analyte	Result	RL
Diesel C10-C24	21,000 H L Y	50
Motor Oil C24-C36	5,700	3,000

Surrogate	%REC	Limits
Hexacosane	DO	53-142

Field ID: MW-1	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-010	Analyzed: 03/07/04

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

Surrogate	%REC	Limits
Hexacosane	98	53-142

Field ID: MW-2	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-011	Analyzed: 03/07/04

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

Surrogate	%REC	Limits
Hexacosane	134	53-142

Field ID: MW-3	Diln Fac: 1.000
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-012	Analyzed: 03/07/04

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

Surrogate	%REC	Limits
Hexacosane	146 *	53-142

Value outside of QC limits; see narrative

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= Diluted Out

ND= Not Detected

RL= Reporting Limit





Total Extractable Hydrocarbons

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Prepared:	03/04/04
Batch#:	89047		

Type:	BLANK	Analyzed:	03/08/04
Lab ID:	QC243160	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

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

Surrogate	REC	Limits
Hexacosane	104	53-142

Value outside of QC limits; see narrative  
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= Diluted Out  
N= Not Detected  
RL= Reporting Limit

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# Chromatogram

Sample Name : 170923-001,89047  
 File Name : G:\GC13\CHB\064B092.RAW  
 Method : BTEH065.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

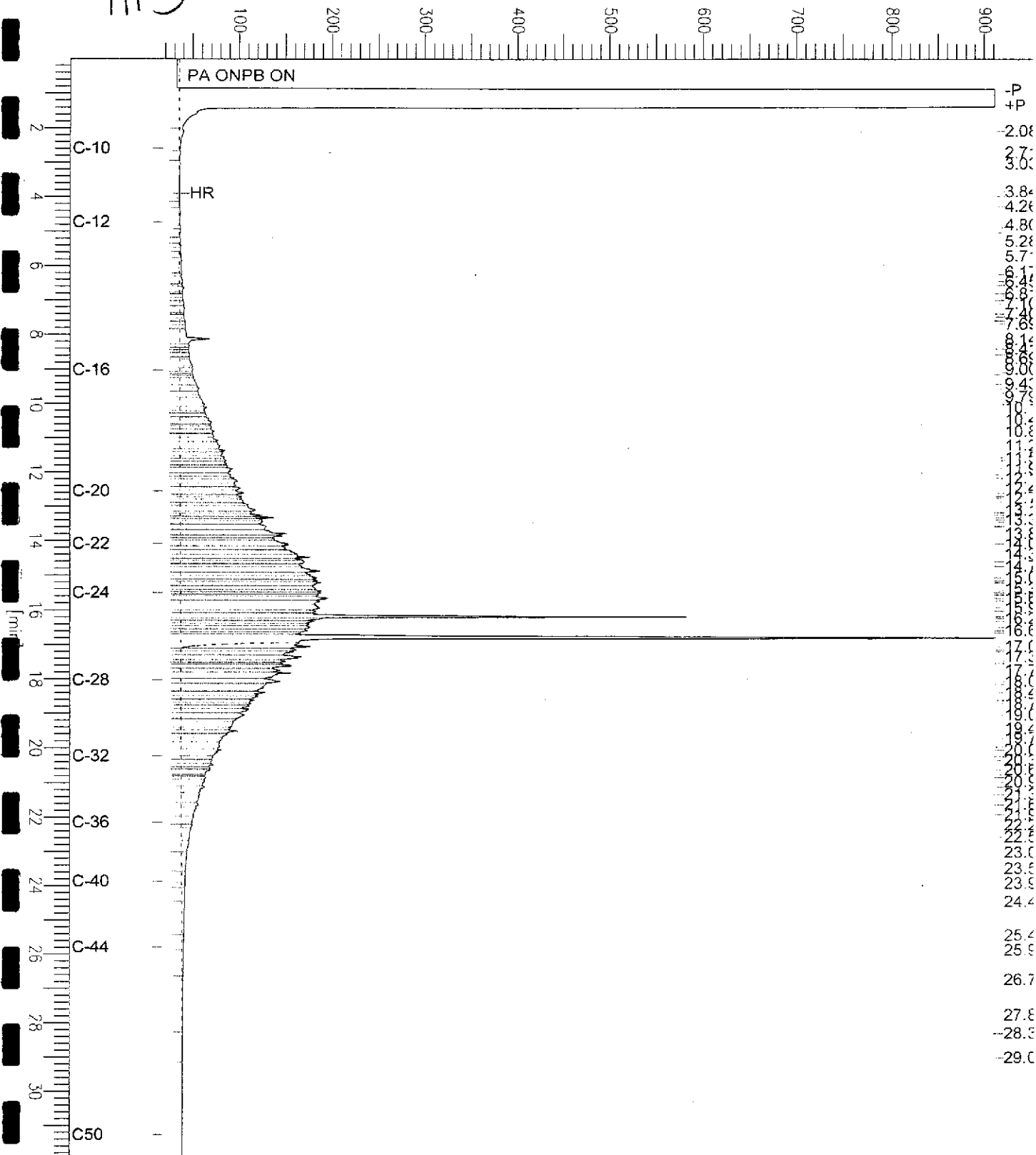
End Time : 31.91 min  
 Plot Offset: 18 mV

Sample #: 89047  
 Date : 3/8/04 08:52 AM  
 Time of Injection: 3/7/04 01:32 PM  
 Low Point : 17.89 mV  
 Plot Scale: 893.5 mV

Page 1 of 1

HP3

Response [mV]



# Chromatogram

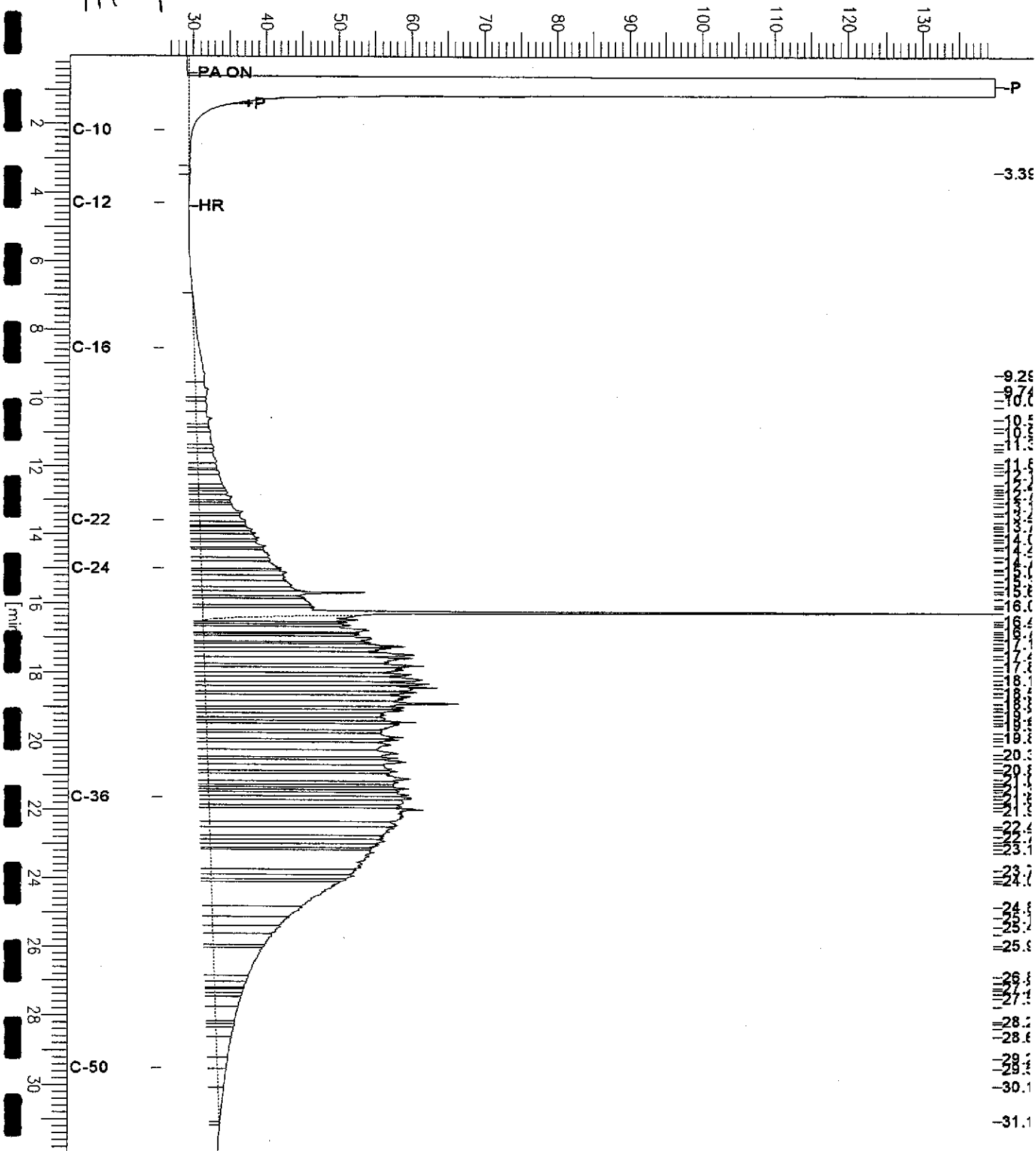
Sample Name : 170923-002,89047  
File Name : G:\GC17\CHA\060A254.RAW  
Method : ATEH064.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

Sample #: 89047  
Date : 3/8/04 10:29 AM  
Time of Injection: 3/8/04 06:45 AM  
End Time : 31.91 min  
Plot Offset: 26 mV  
Low Point : 26.02 mV  
High Point : 139.99 mV  
Plot Scale: 114.0 mV

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HP-A

Response [mV]

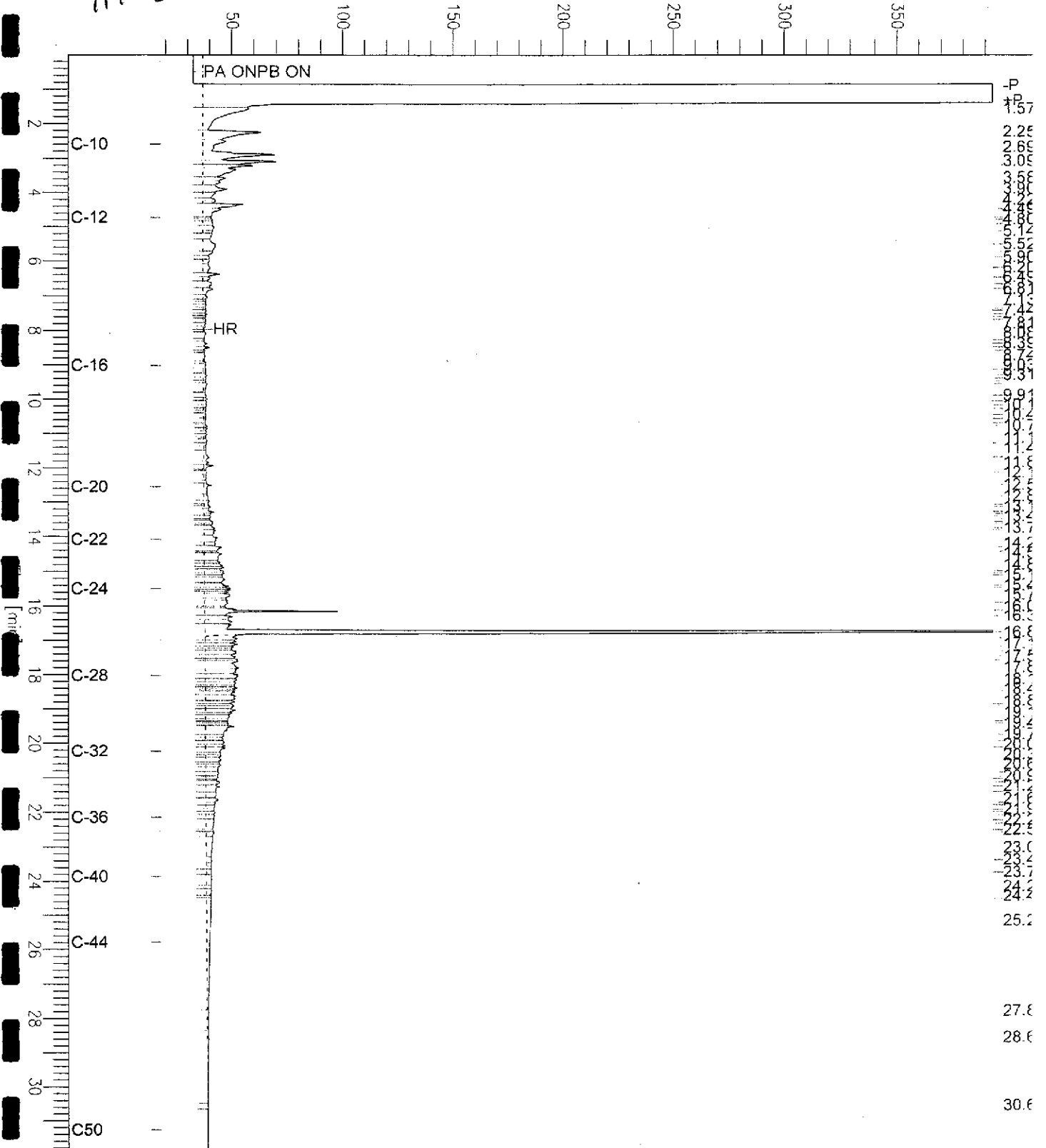


# Chromatogram

Sample Name : 170923-003,89047 Sample #: 89047 Page 1 of 1  
 File Name : G:\GC13\CHB\064B093.RAW Date : 3/8/04 08:54 AM  
 Method : BTEH065.MTH Time of Injection: 3/7/04 02:12 PM  
 Start Time : 0.01 min End Time : 31.91 min Low Point : 17.85 mV High Point : 393.34 mV  
 Scale Factor: 0.0 Plot Offset: 18 mV Plot Scale: 375.5 mV

*HP-6*

Response [mV]



# Chromatogram

Sample Name : 170923-004,89047  
File Name : G:\GC17\CHA\060A263.RAW  
Method : ATEH064.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

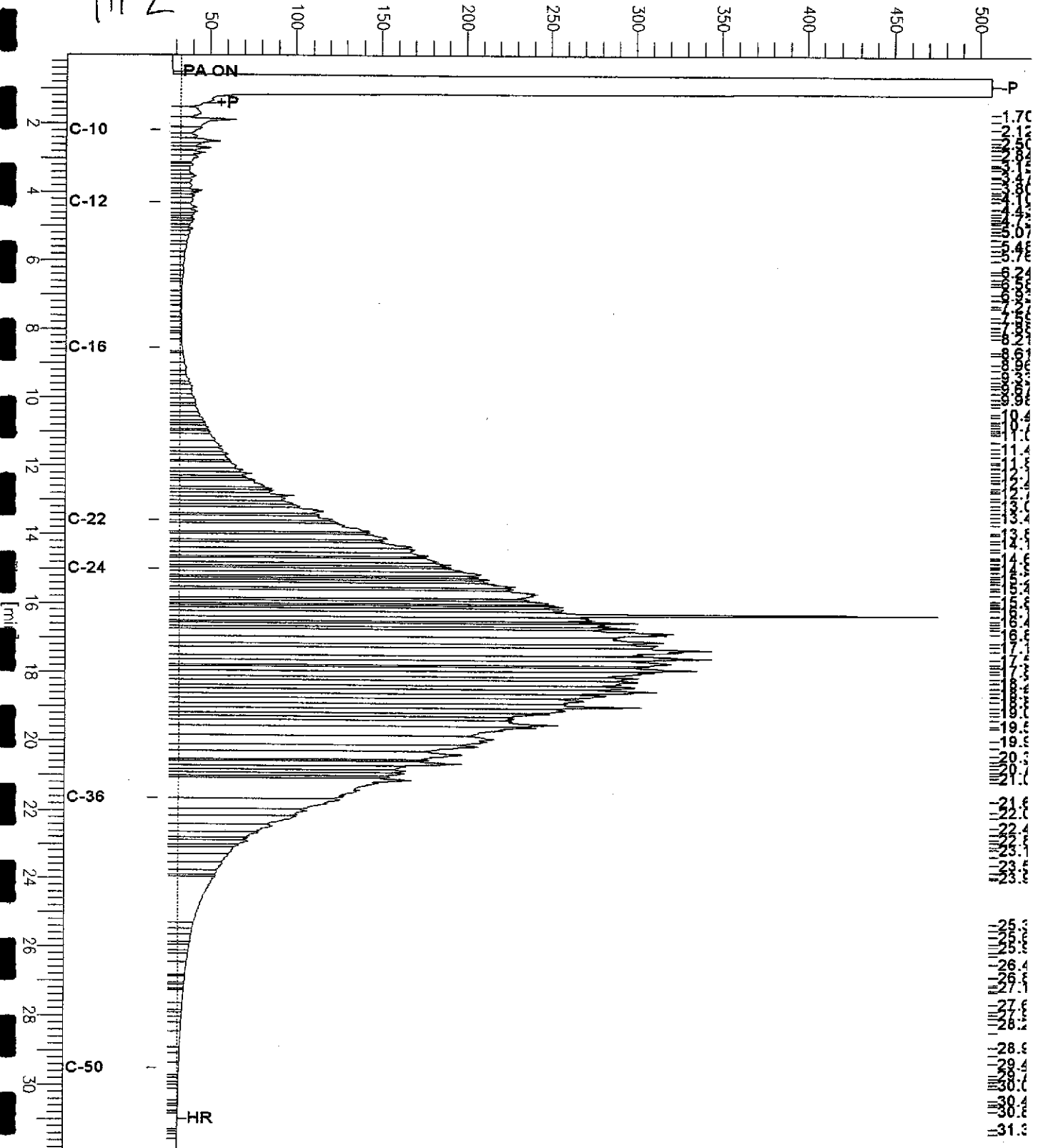
End Time : 31.91 min  
Plot Offset: 21 mV

Sample #: 89047  
Date : 3/8/04 03:02 PM  
Time of Injection: 3/8/04 01:56 PM  
Low Point : 20.54 mV  
Plot Scale: 486.1 mV

Page 1 of 1

HP-2

Response [mV]



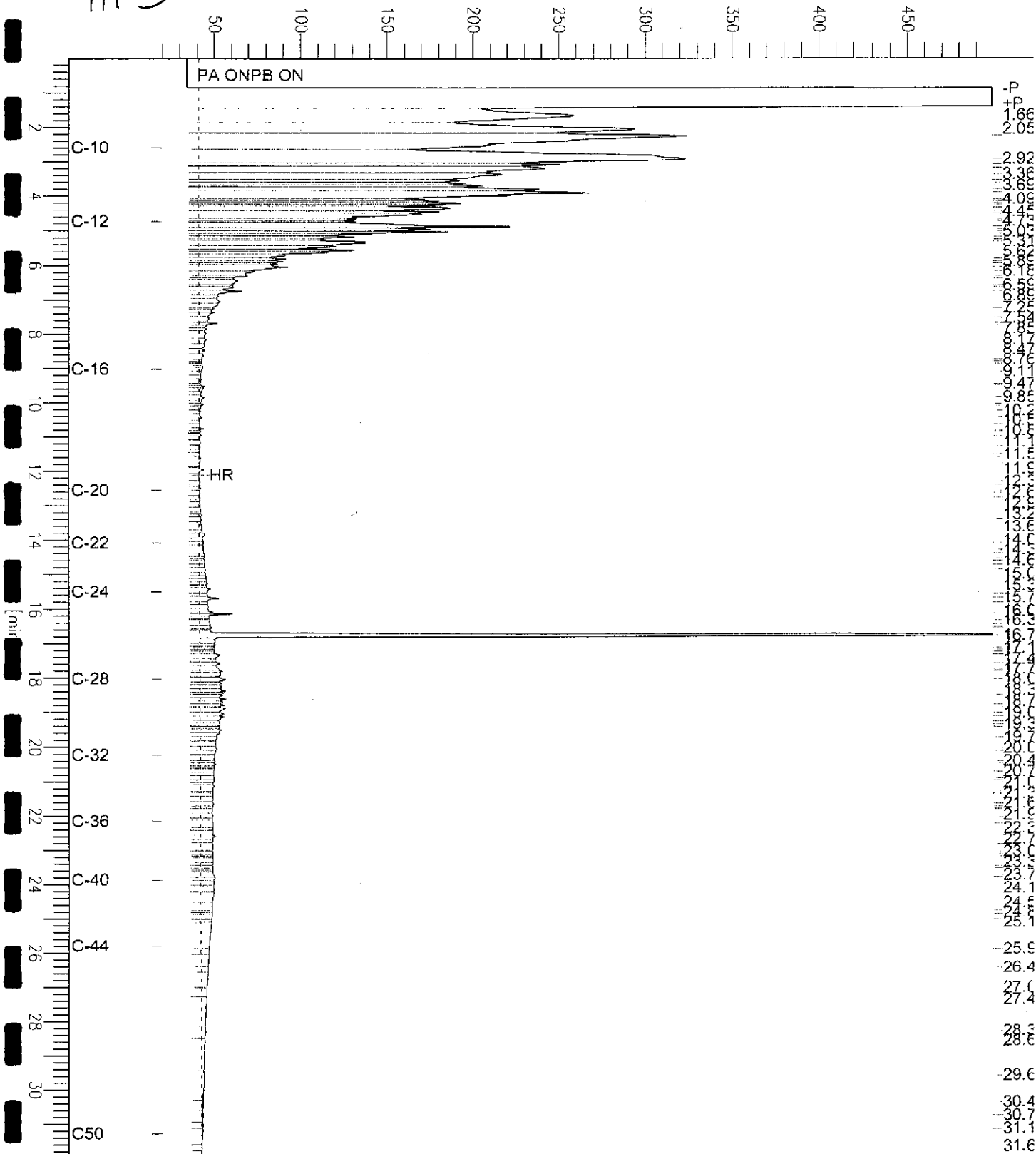
# Chromatogram

Sample Name : 170923-005,89047  
 File Name : G:\GC13\CHB\064B085.RAW  
 Method : BTEH065.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

Sample #: 89047  
 Date : 3/7/04 07:07 PM  
 Time of Injection: 3/7/04 08:53 AM  
 End Time : 31.91 min  
 Plot Offset: 20 mV  
 Low Point : 19.55 mV  
 High Point : 499.33 mV  
 Plot Scale: 479.8 mV

*HR5*

Response [mV]

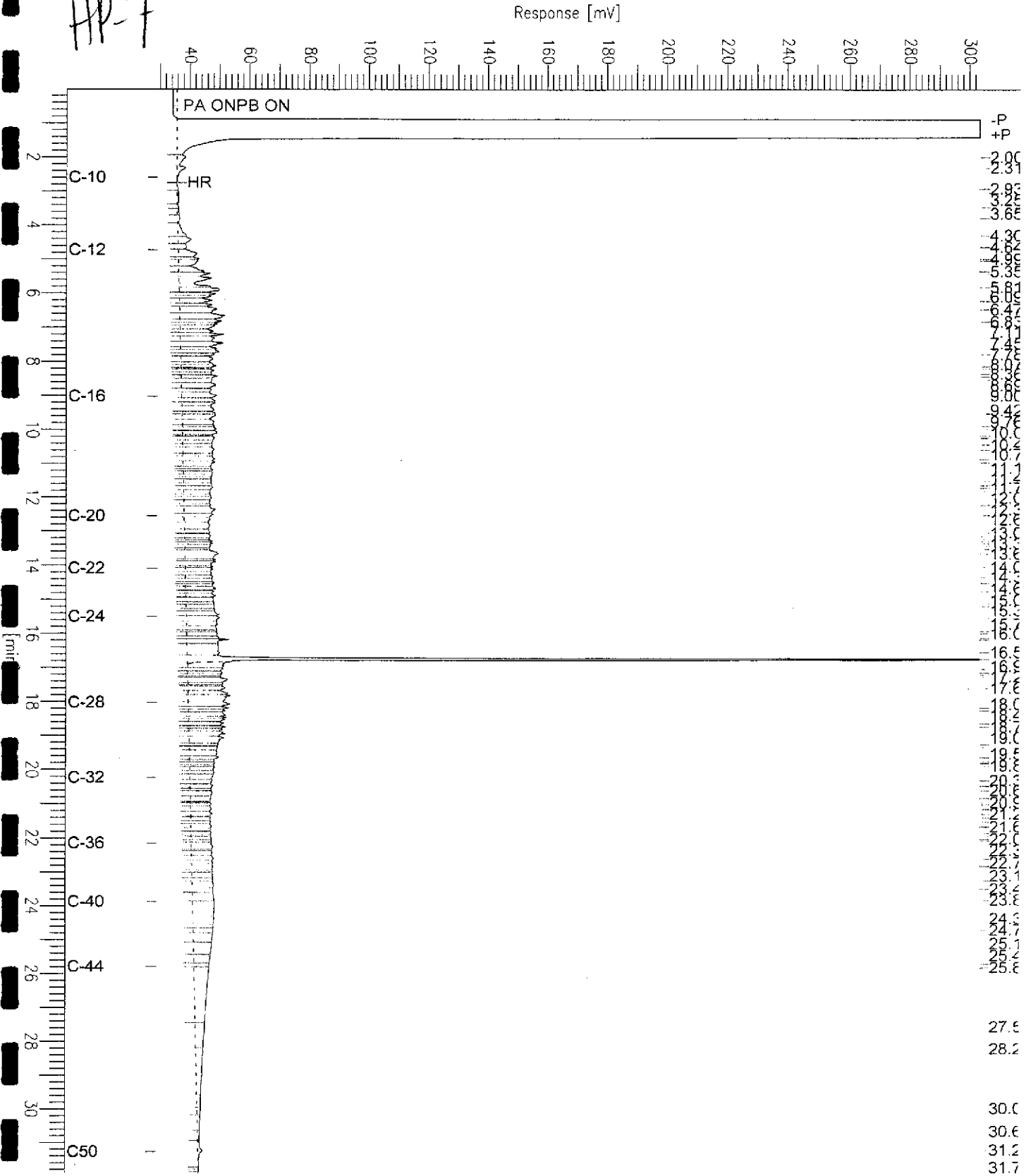




# Chromatogram

Sample Name : 170923-007,89047  
 File Name : G:\GC13\CHB\068B028.RAW  
 Method : BTEH065.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

Sample #: 89047  
 Date : 3/9/04 09:36 AM  
 Time of Injection: 3/9/04 02:46 AM  
 End Time : 31.91 min  
 Plot Offset: 29 mV  
 Low Point : 29.35 mV  
 High Point : 303.57 mV  
 Plot Scale: 274.2 mV





# Chromatogram

Sample Name : 170923-008,89047  
 File Name : G:\GC13\CHB\064B096.RAW  
 Method : BTEH065.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

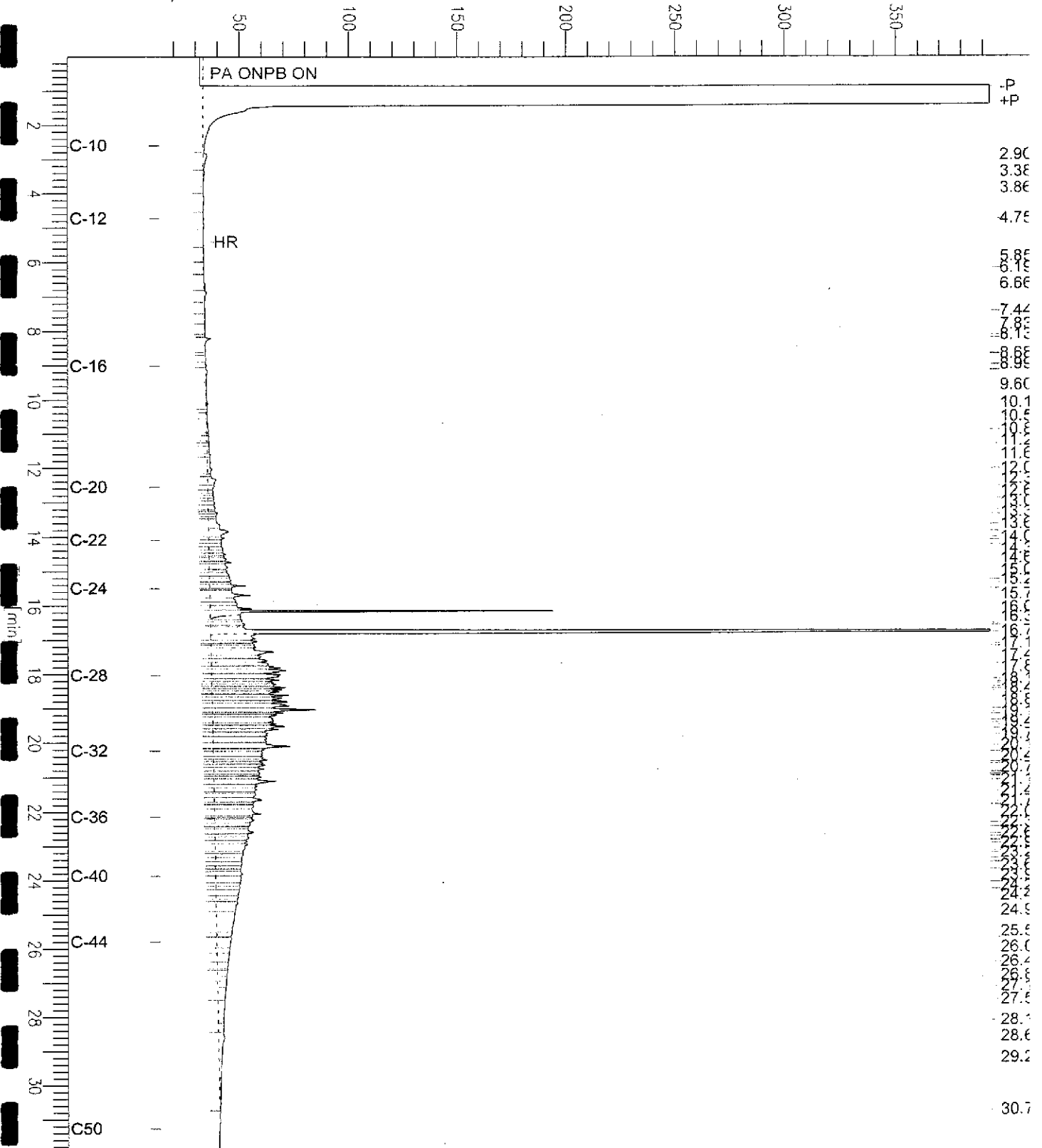
End Time : 31.91 min  
 Plot Offset: 14 mV

Sample #: 89047  
 Date : 3/8/04 08:58 AM  
 Time of Injection: 3/7/04 04:10 PM  
 Low Point : 13.61 mV  
 Plot Scale: 379.4 mV

Page 1 of 1

HP-9

Response [mV]





# Chromatogram

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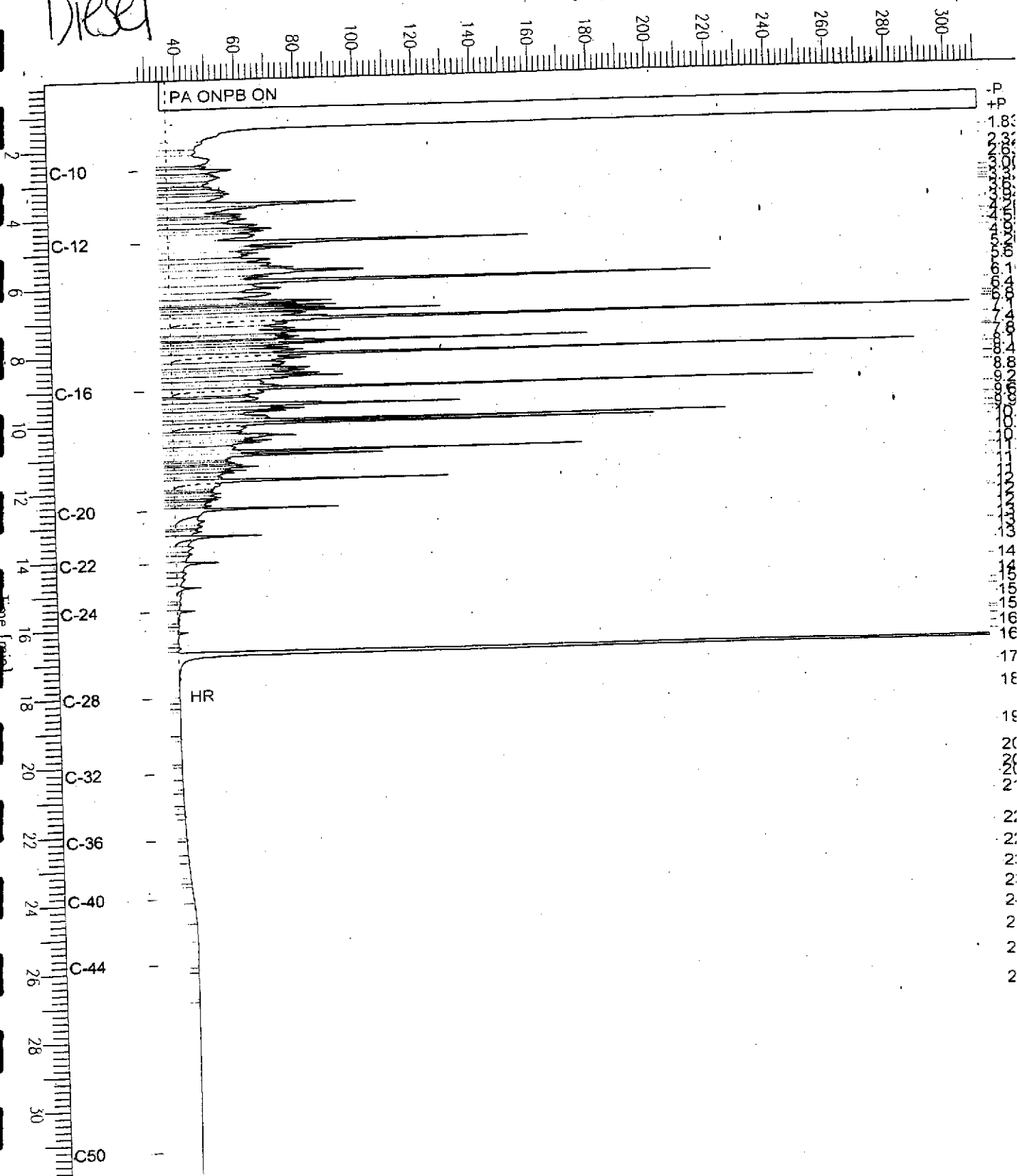
Sample Name : ccv\_03ws207B.dsl  
File Name : G:\GC13\CHB\068B002.RAW  
Method : BTEH065.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

End Time : 31.91 min  
Plot Offset : 28 mV

Sample #: 500mg/L  
Date : 3/8/04 09:56 AM  
Time of Injection: 3/8/04 09:02 AM  
Low Point : 27.59 mV  
Plot Scale: 283.6 mV  
High Point : 311.15 mV

*Diesel*

Response [mV]



1.8  
2.0  
2.2  
2.4  
2.6  
2.8  
3.0  
3.2  
3.4  
3.6  
3.8  
4.0  
4.2  
4.4  
4.6  
4.8  
5.0  
5.2  
5.4  
5.6  
5.8  
6.0  
6.2  
6.4  
6.6  
6.8  
7.0  
7.2  
7.4  
7.6  
7.8  
8.0  
8.2  
8.4  
8.6  
8.8  
9.0  
9.2  
9.4  
9.6  
9.8  
10.0  
10.2  
10.4  
10.6  
10.8  
11.0  
11.2  
11.4  
11.6  
11.8  
12.0  
12.2  
12.4  
12.6  
12.8  
13.0  
13.2  
13.4  
13.6  
13.8  
14.0  
14.2  
14.4  
14.6  
14.8  
15.0  
15.2  
15.4  
15.6  
15.8  
16.0  
16.2  
16.4  
16.6  
16.8  
17.0  
17.2  
17.4  
17.6  
17.8  
18.0  
18.2  
18.4  
18.6  
18.8  
19.0  
19.2  
19.4  
19.6  
19.8  
20.0  
20.2  
20.4  
20.6  
20.8  
21.0  
21.2  
21.4  
21.6  
21.8  
22.0  
22.2  
22.4  
22.6  
22.8  
23.0  
23.2  
23.4  
23.6  
23.8  
24.0  
24.2  
24.4  
24.6  
24.8  
25.0  
25.2  
25.4  
25.6  
25.8  
26.0  
26.2  
26.4  
26.6  
26.8  
27.0  
27.2  
27.4  
27.6  
27.8  
28.0  
28.2  
28.4  
28.6  
28.8  
29.0  
29.2  
29.4  
29.6  
29.8  
30.0

# Chromatogram

Sample Name : ccv\_04ws0244.mo  
File Name : G:\GC13\CHB\068B003.RAW  
Method : BTEH065.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

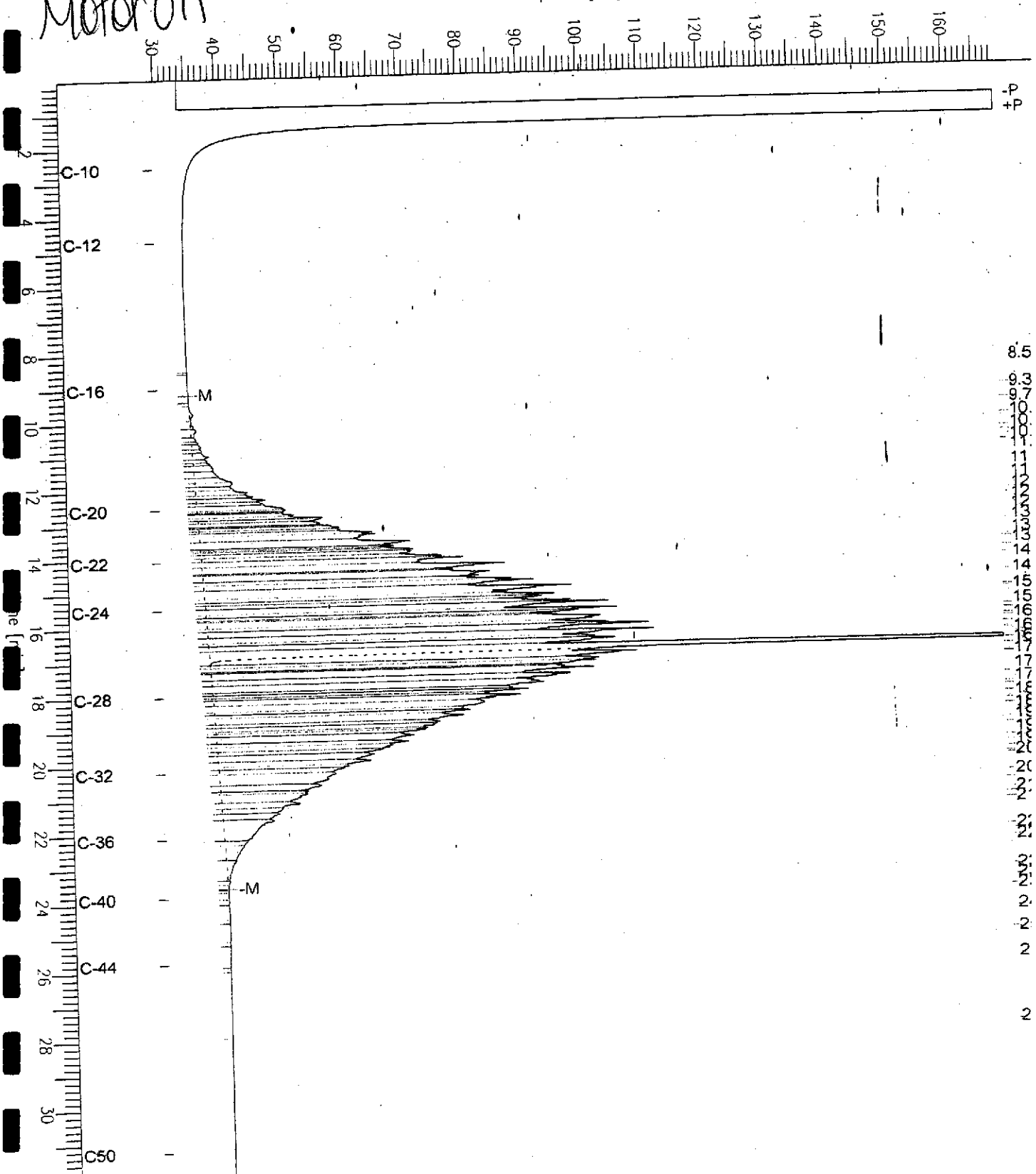
End Time : 31.91 min  
Plot Offset: 30 mV

Sample #: 500mg/L  
Date : 3/8/04 10:44 AM  
Time of Injection: 3/8/04 09:42 AM  
Low Point : 29.84 mV  
Plot Scale: 138.7 mV  
High Point : 168.58 mV

Page 1 of 1

*Motor Oil*

Response [mV]



8.5  
9.0  
9.5  
10.0  
10.5  
11.0  
11.5  
12.0  
12.5  
13.0  
13.5  
14.0  
14.5  
15.0  
15.5  
16.0  
16.5  
17.0  
17.5  
18.0  
18.5  
19.0  
19.5  
20.0  
20.5  
21.0  
21.5  
22.0  
22.5  
23.0  
23.5  
24.0  
24.5  
25.0  
25.5  
26.0  
26.5  
27.0  
27.5  
28.0  
28.5  
29.0  
29.5  
30.0



Batch QC Report

Total Extractable Hydrocarbons

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2832	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	89047
Units:	ug/L	Prepared:	03/04/04
Diln Fac:	1.000	Analyzed:	03/08/04

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC243161

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	3,157	126	57-128

Surrogate	%REC	Limits
Hexacosane	137	53-142

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC243162

Analyte	Spiked	Result	%REC	Limits	RPD	Lin
Diesel C10-C24	2,500	2,801	112	57-128	12	38

Surrogate	%REC	Limits
Hexacosane	120	53-142



Purgeable Aromatics by GC/MS

Lab #: 170923 Location: 5725 Thornhill Drive  
Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
Project#: 2832 Analysis: EPA 8260B  
Field ID: HP-3 Batch#: 88994  
Lab ID: 170923-001 Sampled: 03/01/04  
Matrix: Water Received: 03/02/04  
Units: ug/L Analyzed: 03/03/04  
Diln Fac: 1.000

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-120

## Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-4	Batch#:	88994
Lab ID:	170923-002	Sampled:	03/01/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%RBC	Limits
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-120



**Purgeable Aromatics by GC/MS**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: HP-6	Batch#: 88994
Lab ID: 170923-003	Sampled: 03/01/04
Matrix: Water	Received: 03/02/04
Units: ug/L	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
MTBE	8.1	0.5
Benzene	ND	0.5
Toluene	1.5	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	1.7	0.5
o-Xylene	0.8	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-120





Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-2	Batch#:	88994
Lab ID:	170923-004	Sampled:	03/01/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	20	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%RHC	Limits
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120



Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-5	Batch#:	88994
Lab ID:	170923-005	Sampled:	03/01/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	33	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.7	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	94	80-120

**Purgeable Aromatics by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-1	Batch#:	88994
Lab ID:	170923-006	Sampled:	03/01/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	11	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-124
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120



Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-7	Batch#:	88994
Lab ID:	170923-007	Sampled:	03/02/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-120

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

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-9	Batch#:	89078
Lab ID:	170923-008	Sampled:	03/02/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/05/04
Diln Fac:	2.500		

Analyte	Result	RL
MTBE	440	1.3
Benzene	ND	1.3
Toluene	ND	1.3
Chlorobenzene	ND	1.3
Ethylbenzene	ND	1.3
m,p-Xylenes	ND	1.3
o-Xylene	ND	1.3
1,3-Dichlorobenzene	ND	1.3
1,4-Dichlorobenzene	ND	1.3
1,2-Dichlorobenzene	ND	1.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

## Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	HP-10	Batch#:	88994
Lab ID:	170923-009	Sampled:	03/02/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	7.143		

Analyte	Result	RL
MTBE	1,100	3.6
Benzene	ND	3.6
Toluene	ND	3.6
Chlorobenzene	ND	3.6
Ethylbenzene	ND	3.6
m,p-Xylenes	ND	3.6
o-Xylene	ND	3.6
1,3-Dichlorobenzene	ND	3.6
1,4-Dichlorobenzene	ND	3.6
1,2-Dichlorobenzene	ND	3.6

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120



**Purgeable Aromatics by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	88994
Lab ID:	170923-010	Sampled:	03/02/04
Matrix:	Water	Received:	03/02/04
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

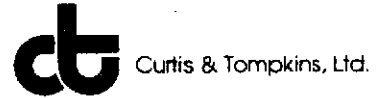
Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

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

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Field ID: MW-3	Batch#: 88994
Lab ID: 170923-012	Sampled: 03/02/04
Matrix: Water	Received: 03/02/04
Units: ug/L	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120

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

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC242968	Batch#:	88994
Matrix:	Water	Analyzed:	03/03/04
Units:	ug/L		

Analyte	Result	RL
TBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

N = Not Detected  
RL = Reporting Limit  
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Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC243283	Batch#:	89078
Matrix:	Water	Analyzed:	03/05/04
Units:	ug/L		

Analyte	Result	RL
TBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
m,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	90	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120



Purgeable Aromatics by GC/MS

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	88994
Units:	ug/L	Analyzed:	03/03/04
Diln Fac:	1.000		

Type: BS Lab ID: QC242966

Analyte	Spiked	Result	%REC	Limits
MIBK	50.00	45.93	92	76-123
Benzene	25.00	23.80	95	80-120
Toluene	25.00	24.03	96	80-120
Chlorobenzene	25.00	24.72	99	80-120
Ethylbenzene	25.00	25.29	101	80-121
m,p-Xylenes	50.00	51.88	104	80-122
o-Xylene	25.00	26.40	106	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-120

Type: BSD Lab ID: QC242967

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MIBK	50.00	47.84	96	76-123	4	20
Benzene	25.00	25.15	101	80-120	6	20
Toluene	25.00	25.17	101	80-120	5	20
Chlorobenzene	25.00	26.22	105	80-120	6	20
Ethylbenzene	25.00	26.23	105	80-121	4	20
m,p-Xylenes	50.00	51.97	104	80-122	0	20
o-Xylene	25.00	26.28	105	80-120	0	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-124
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

**Purgeable Aromatics by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	89078
Units:	ug/L	Analyzed:	03/05/04
Injection Fac:	1.000		

Type: BS Lab ID: QC243281

Analyte	Spiked	Result	%REC	Limits
TBE	50.00	47.51	95	76-123
Benzene	25.00	25.03	100	80-120
Toluene	25.00	25.14	101	80-120
Chlorobenzene	25.00	26.52	106	80-120
Ethylbenzene	25.00	25.73	103	80-121
m,p-Xylenes	50.00	49.87	100	80-122
o-Xylene	25.00	25.03	100	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	93	80-124
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC243282

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
TBE	50.00	48.06	96	76-123	1	20
Benzene	25.00	24.43	98	80-120	2	20
Toluene	25.00	24.04	96	80-120	4	20
Chlorobenzene	25.00	25.85	103	80-120	3	20
Ethylbenzene	25.00	24.75	99	80-121	4	20
m,p-Xylenes	50.00	47.81	96	80-122	4	20
o-Xylene	25.00	24.45	98	80-120	2	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	91	80-124
Toluene-d8	96	80-120
Bromofluorobenzene	101	80-120



**Gasoline Oxygenates by GC/MS**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Water	Received: 03/02/04
Units: ug/L	

Field ID: HP-3	Batch#: 88994
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170923-001	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-120

Field ID: HP-4	Batch#: 88994
Type: SAMPLE	Sampled: 03/01/04
Lab ID: 170923-002	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-120

ND = Not Detected  
 RL = Reporting Limit  
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**Gasoline Oxygenates by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Received:	03/02/04
Units:	ug/L		

Field ID:	HP-6	Batch#:	88994
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-003	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	8.1	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	96	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-120

Field ID:	HP-2	Batch#:	88994
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-004	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	20	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120



**Gasoline Oxygenates by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Received:	03/02/04
Units:	ug/L		

Field ID:	HP-5	Batch#:	88994
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-005	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	33	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Ethyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	97	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	94	80-120

Field ID:	HP-1	Batch#:	88994
Type:	SAMPLE	Sampled:	03/01/04
Lab ID:	170923-006	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	11	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Ethyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	97	80-124
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120





**Gasoline Oxygenates by GC/MS**

Lab #: 170923	Location: 5725 Thornhill Drive
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2832	Analysis: EPA 8260B
Matrix: Water	Received: 03/02/04
Units: ug/L	

Field ID: HP-7	Batch#: 88994
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-007	Analyzed: 03/03/04
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-120

Field ID: HP-9	Batch#: 89078
Type: SAMPLE	Sampled: 03/02/04
Lab ID: 170923-008	Analyzed: 03/05/04
Diln Fac: 2.500	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	25
MTBE	440	1.3
Isopropyl Ether (DIPE)	ND	1.3
Ethyl tert-Butyl Ether (ETBE)	ND	1.3
Methyl tert-Amyl Ether (TAME)	5.2	1.3
1,2-Dichloroethane	ND	1.3
1,2-Dibromoethane	ND	1.3
Ethanol	ND	2,500

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120



**Gasoline Oxygenates by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Received:	03/02/04
Units:	ug/L		

Field ID:	HP-10	Batch#:	88994
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-009	Analyzed:	03/03/04
Diln Fac:	7.143		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	71
MTBE	1,100	3.6
Isopropyl Ether (DIPE)	ND	3.6
Ethyl tert-Butyl Ether (ETBE)	ND	3.6
Methyl tert-Amyl Ether (TAME)	13	3.6
1,2-Dichloroethane	ND	3.6
1,2-Dibromoethane	ND	3.6
Ethanol	ND	7,100

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120

Field ID:	MW-1	Batch#:	88994
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-010	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	96	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120



**Gasoline Oxygenates by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Received:	03/02/04
Units:	ug/L		

Field ID:	MW-2	Batch#:	88994
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-011	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-120

Field ID:	MW-3	Batch#:	88994
Type:	SAMPLE	Sampled:	03/02/04
Lab ID:	170923-012	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	95	80-124
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120



**Gasoline Oxygenates by GC/MS**

Lab #:	170923	Location:	5725 Thornhill Drive
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2832	Analysis:	EPA 8260B
Matrix:	Water	Received:	03/02/04
Units:	ug/L		

Type:	BLANK	Batch#:	88994
Lab ID:	QC242968	Analyzed:	03/03/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	94	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

Type:	BLANK	Batch#:	89078
Lab ID:	QC243283	Analyzed:	03/05/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	90	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120





# Appendix E

## Monitoring Well Construction Details



# WELL CONSTRUCTION DIAGRAM OF SOMA-1

Boring Location:

Project: 2832

Date Drilled:

Site Location: 5725 Thornhill Dr  
Oakland CA

Casing Elevation:

See Site Map.

Drilling Method:

Depth to 1st Groundwater:

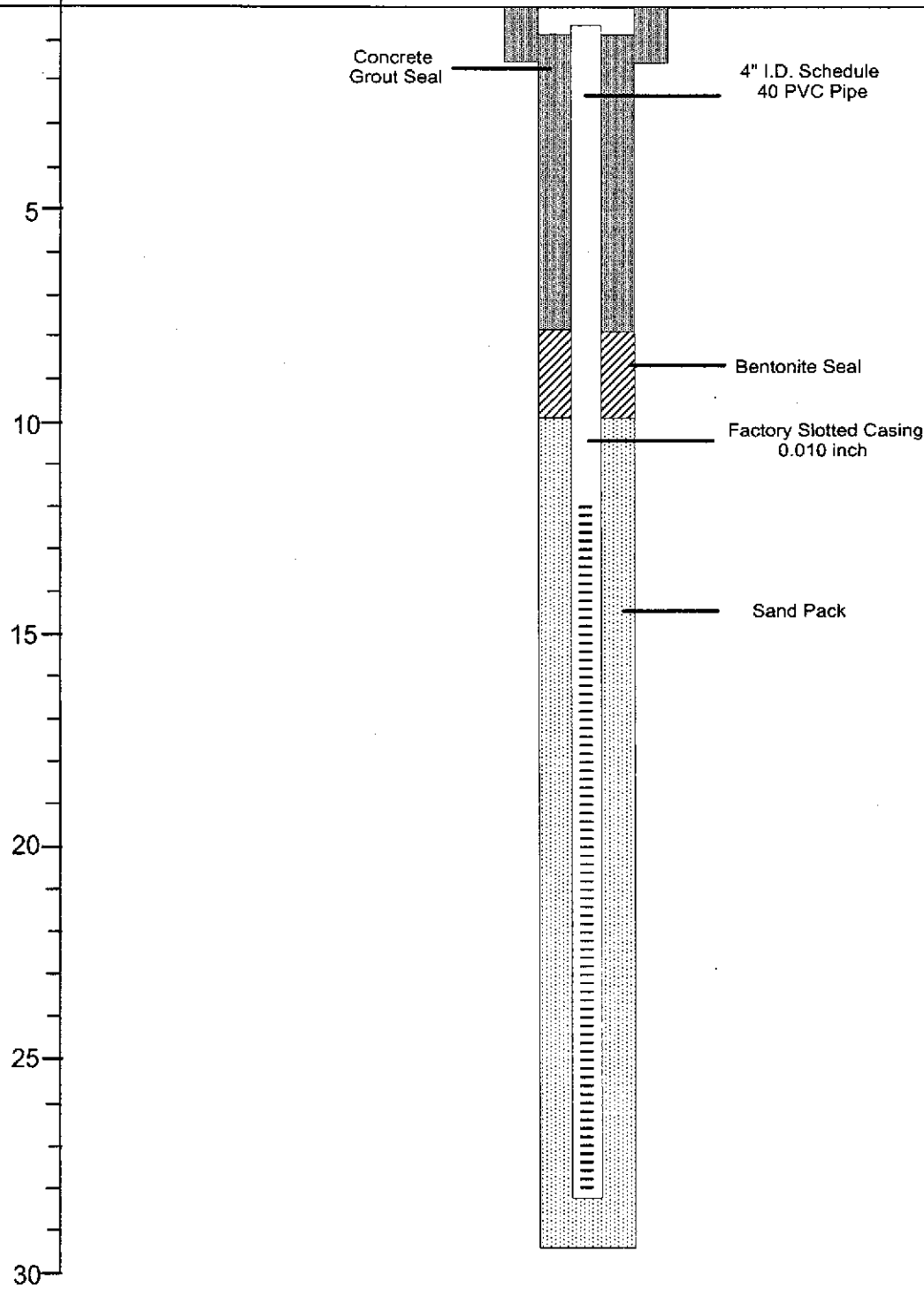
Driller:

Approved By: M Sepehr

Logged By:

DEPTH

## MONITORING WELL CONSTRUCTION DIAGRAM







# WELL CONSTRUCTION DIAGRAM OF SOMA-2

Boring Location:

Project: 2832

Date Drilled:

Site Location: 5725 Thornhill Dr  
Oakland CA

Casing Elevation:

See Site Map.

Drilling Method:

Depth to 1st Groundwater:

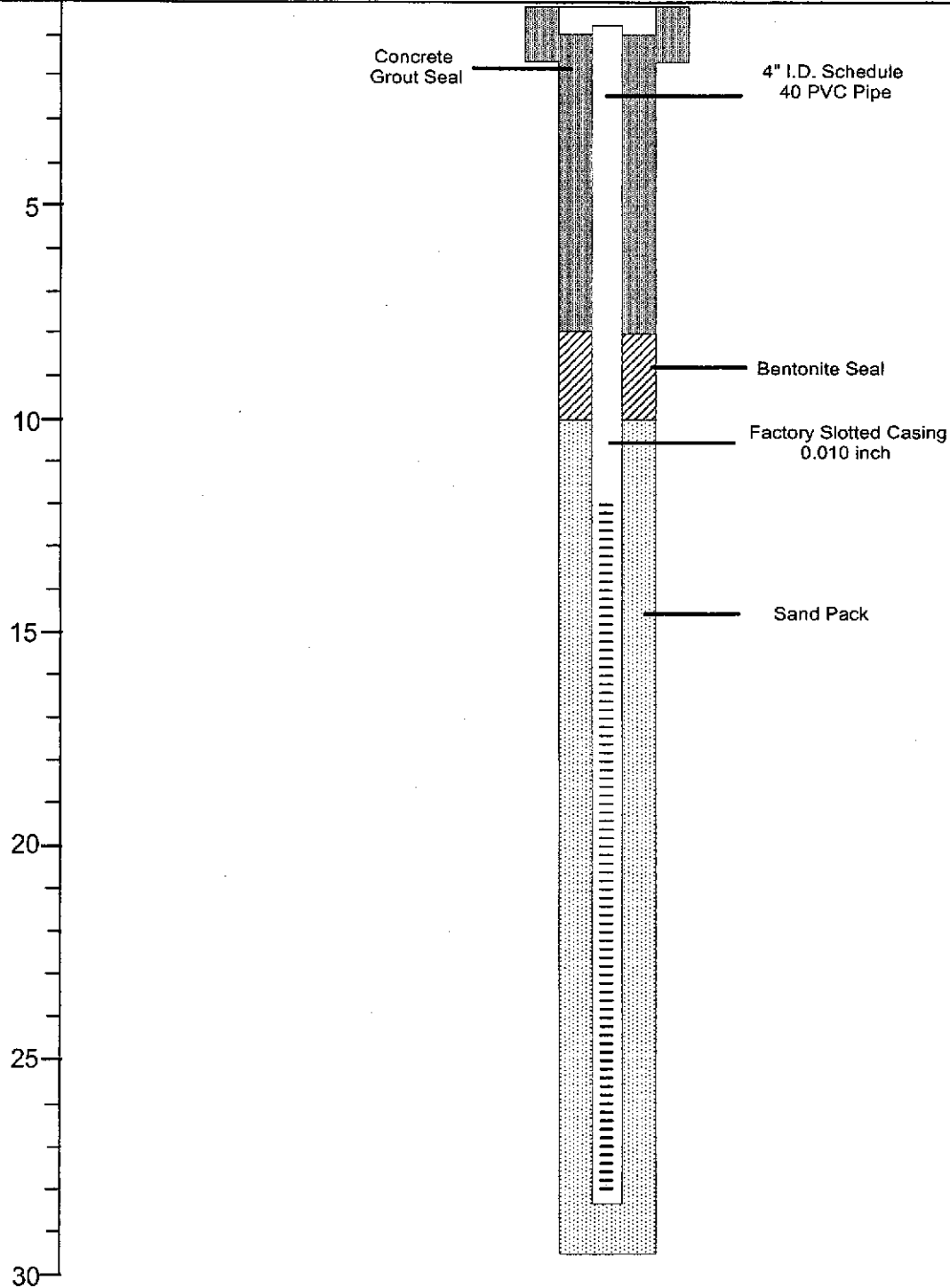
Driller:

Approved By: M Sepehr

Logged By:

DEPTH

## MONITORING WELL CONSTRUCTION DIAGRAM





# WELL CONSTRUCTION DIAGRAM OF SOMA-3

Boring Location:

Project: 2832  
Site Location: 5725 Thornhill Dr  
Oakland CA  
Drilling Method:

Date Drilled:  
Casing Elevation:

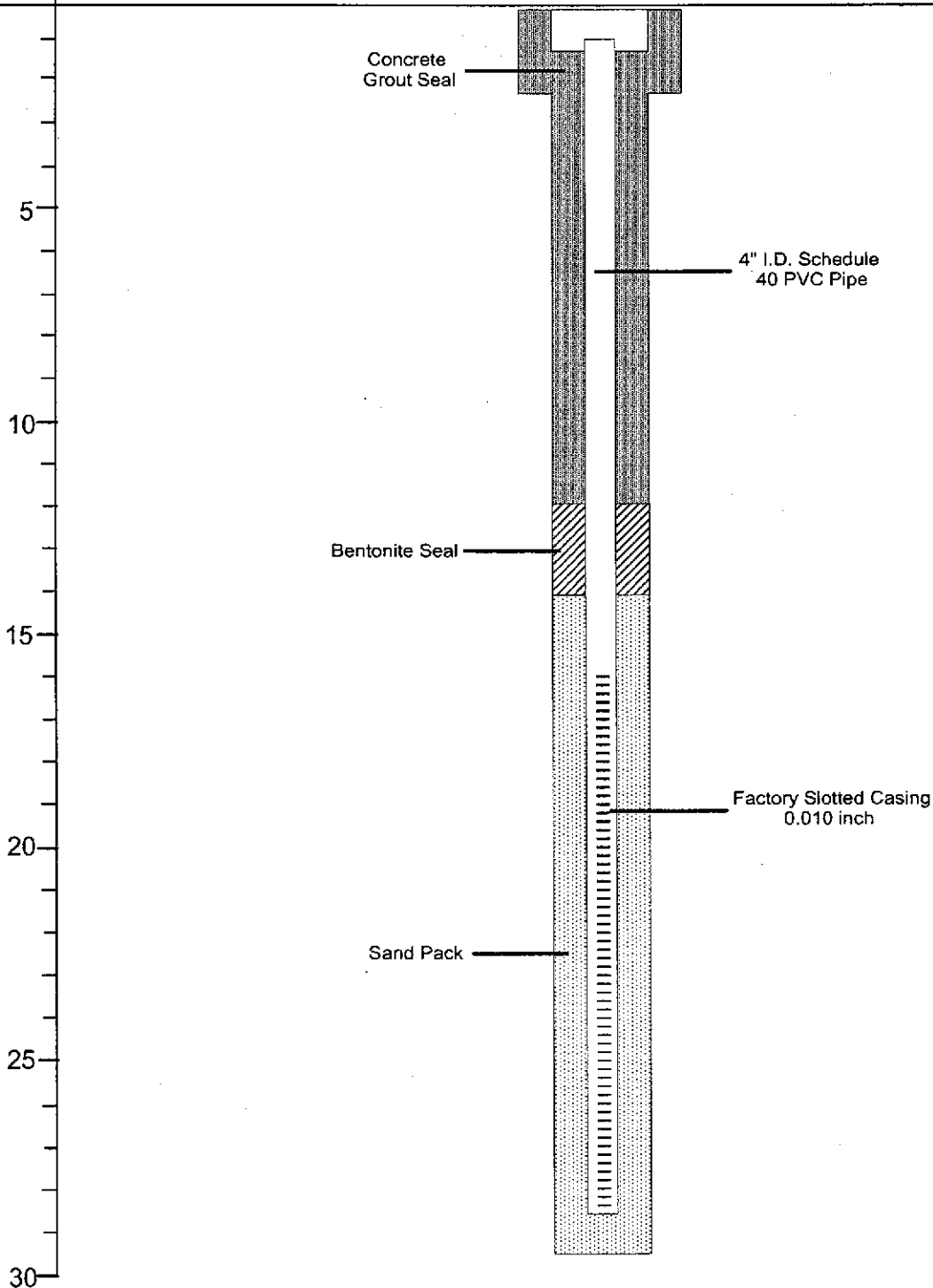
See Site Map.

Driller:  
Logged By:

Depth to 1st Groundwater:  
Approved By: M Sepehr

DEPTH

## MONITORING WELL CONSTRUCTION DIAGRAM



# **Appendix F**

## **Monitoring Well and Temescal Creek Survey**

**TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS**

SOMA ENVIRONMENTAL, PROJECT # 2830  
5725 THORNHILL DRIVE, OAKLAND

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
SOMA-1	2130799.64	6067141.82	576.47	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.73174"	W 122°12'44.98565"	576.72	RIM
			576.70	CONC.
SOMA-2	2130764.55	6067114.08	575.50	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.37985"	W 122°12'45.32339"	575.74	RIM
			575.75	CONC.
SOMA-3	2130785.85	6067071.01	575.92	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.58261"	W 122°12'45.86506"	576.31	RIM
			576.30	CONC.

**ADDITIONAL POINTS**

PT#	NORTHING (FT.)	EASTING (FT.)	ELEVATION (FT.)	DESCRIPTION
108	2130820.55	6067045.27	N/A	BL<
109	2130800.14	6067066.40	N/A	BL<
110	2130830.97	6067096.14	N/A	BL<
104	2130818.02	6067033.92	N/A	BLOCK WALL 8" <PT
105	2130808.04	6067041.66	N/A	BLOCK WALL 8" END
106	2130821.74	6067037.78	N/A	BLOCK WALL 8" END
107	2130821.83	6067037.75	N/A	FNC-WD B-C CL
111	2130872.58	6067087.64	N/A	FNC-WD END CL
112	2130837.52	6067194.12	N/A	FOGL
113	2130793.20	6067156.45	N/A	FOGL
114	2130759.63	6067123.75	N/A	FOGL
115	2130740.79	6067101.26	N/A	FOGL END
117	2130628.30	6066947.69	N/A	TC
116	2130738.69	6067095.34	N/A	TC END
128	2130693.29	6066817.93	558.29	C/L CREEK +0.4' TO TOP OF WATER
127	2130685.30	6066880.75	559.78	C/L CREEK +0.4' TO TOP OF WATER
122	2130664.83	6066937.67	562.81	C/L CREEK +0.4' TO TOP OF WATER
121	2130676.03	6066966.79	563.15	C/L 60" CULVERT +0.5' TO TOP OF WATER

**Kier & Wright Engineers Surveyors, Inc.**

1233 Quarry Lane, Suite 145, Pleasanton, CA 94566

Phone (925) 249-6555,

Fax (925) 249-6563

DATE: 3/28/04  
JOB# A04549

**TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS**

SOMA ENVIRONMENTAL, PROJECT # 2830  
5725 THORNHILL DRIVE, OAKLAND

**BENCH MARK:** NGS Bench mark No.PID# HT2487

DESCRIPTION FROM NGS DATA SHEET:

DESCRIBED BY EAST BAY MUNICIPAL UTILITIES DISTRICT 1947 (SPH) THE AZIMUTH MARK IS AN EBMUD TRIANGULATION STATION DISC SET 1 FOOT BELOW THE SURFACE AND COVERED BY AN 8 INCH IRON CASTING WITH A REMOVABLE LID MARKED CITY MONUMENT. IT IS IN THE SIDEWALK IN FRONT OF A SAFEWAY STORE AT THE INTERSECTION OF GRAND AND WILDWOOD AVENUES. IT IS 1.5 FEET SOUTHEAST OF THE SOUTHEAST CURB OF WILDWOOD AVE., 6.2 FEET OF EAST CURB OF GRAND AVE. AND 10.4 FEET NORTHEAST OF POWERPOLE. THE MARK IS STAMPED LINDA AZIMUTH MARK 1947.

Elevation =37. FEET NAVD88 Datum  
BY VERTCON

**HORIZONTAL CONTROL:**

PID - AA5496

NORTHING =1,988,577.07 , EASTING = 6,077,862.13 FEET; EPOCH DATE = 1991.35

PID - HT2541

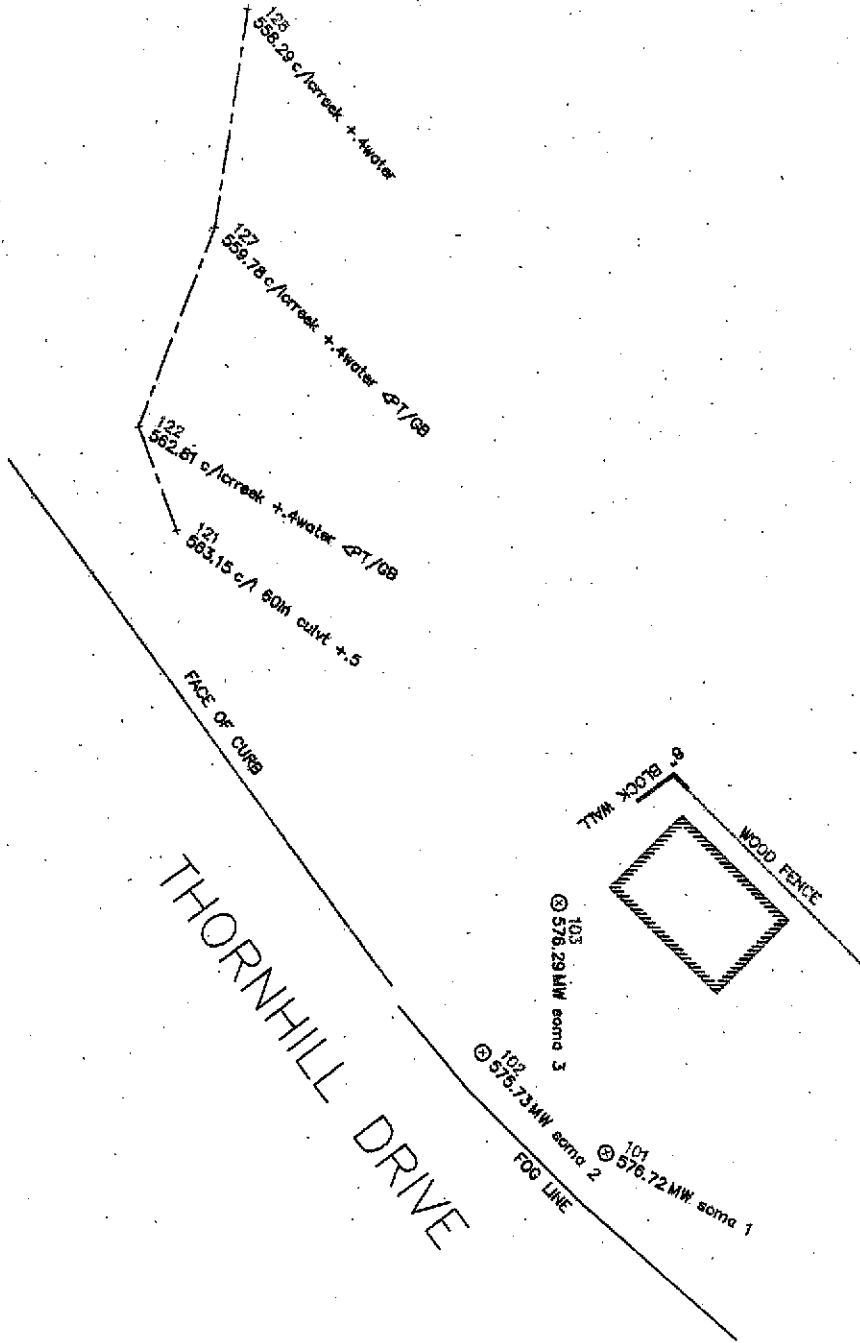
NORTHING = 2,130,331.28 , EASTING = 6,062,624.49 FEET; EPOCH DATE = 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.

**Kier & Wright Engineers Surveyors, Inc.**  
1233 Quarry Lane, Suite 145, Pleasanton, CA 94566  
Phone (925) 249-6555,  
Fax (925) 249-6563

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# **Appendix G**

## Well Development Logs







