

BASSELLINE

COPY

REPORT ON
GROUNDWATER
MONITORING

DECEMBER 1997

670 98TH AVENUE
Oakland, California

For:
City of Oakland
Public Works Agency
Oakland, California

93343-F1



ENVIRONMENTAL
PROTECTION
98 JAN -8 PM 6:35

CITY OF OAKLAND



ENVIRONMENTAL SERVICES • 1333 BROADWAY, SUITE 330 • OAKLAND, CALIFORNIA 94612

Public Works Agency

(510) 238-6688
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January 7, 1998

Ms. eva chu
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

**Subject: Groundwater Monitoring Report, 670 98th Avenue,
Oakland, California (94407)**

Dear Ms chu:

Enclosed is one copy of the report entitled, *Report on Groundwater Monitoring, December 1997*, prepared by our consultant, Baseline Environmental Consulting, for the subject site. The reports presents the results of the City's investigation to further define the distribution of chemicals in the groundwater using temporary well points.

Baseline's recommendations include installation of an additional downgradient monitoring well, a revised sampling schedule for the existing monitoring wells, and discontinuing the analysis of samples for chlorinated hydrocarbons. The City is prepared to implement Baseline's recommendations upon concurrence from your office.

Please review the report and call me at 510-238-7695, with any questions or comments.

Sincerely,

Mark B. Hersh
Environmental Program Specialist

cc: Andrew Clark-Clough, PWA/ESD
Kevin O'Dea, Baseline

BASELINE

ENVIRONMENTAL CONSULTING

22 December 1997
93343-F1

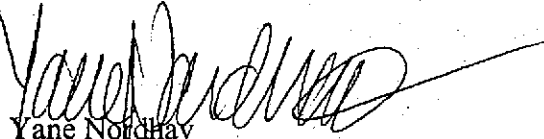
Mr. Mark Hersch
City of Oakland
Environmental Services
1333 Broadway, Suite 330
Oakland, CA 94612

Subject: Report on Groundwater Monitoring, December 1997, 670 98th Avenue, Oakland, California

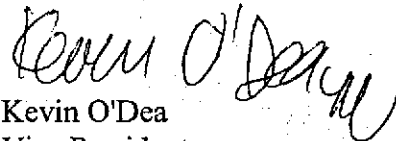
Dear Mark:

Enclosed please find three copies of the Report on Groundwater Monitoring at 670 98th Avenue, Oakland. The Report presents the results of groundwater sampling performed in September 1997 and recommendations for further investigation of groundwater quality at and in the vicinity of the project site. A copy of the Report should be submitted to Ms. eva chu of the Alameda County Department of Environmental Health. If you have any questions or comments, please contact us at your convenience.

Sincerely,



Yane Nordhav
Principal
Reg. Geologist No. 4009



Kevin O'Dea
Vice President

YN/KOD/ss
Enclosure

93343-F1.1297.wpd-12/22/97

REPORT ON GROUNDWATER MONITORING

DECEMBER 1997

670 98TH AVENUE
Oakland, California

For:
City of Oakland
Public Works Agency
Oakland, California

93343-F1

BASELINE Environmental Consulting
5900 Hollis Street, Suite D • Emeryville, California 94608
(510) 420-8686

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REPORT ON WELL POINT INSTALLATION AND GROUNDWATER MONITORING

670 98th Avenue
Oakland, California

INTRODUCTION

BASELINE Environmental Consulting was retained by the City of Oakland, Public Works Agency to monitor the status of groundwater quality at 670 98th Avenue, Oakland (site) (Figure 1). In 1989 and 1990, environmental investigations and interim remedial activities were conducted at the site. The result of these investigations indicated that petroleum and chlorinated hydrocarbons had been released to groundwater at and near the project site. Subsequent sampling confirmed the presence of these compounds in the monitoring well network. The purpose of the recent groundwater monitoring was to investigate the extent of these compounds in the groundwater and to further assess whether there have been any significant changes in groundwater quality since the interim remedial activities were performed.

This report documents the results of the sampling of 13 temporary well points installed in the area surrounding the project site and sampling of six monitoring wells (Figure 2). This work was performed in accordance with recommendations submitted to and approved by the Alameda County Department of Environmental Health.

BACKGROUND

The site was occupied by a Union 76 service station from about 1947 through 1983. An old station building and an underground tank that occupied the site were removed in 1966. During that same year, a new station building, two 10,000-gallon underground gasoline tanks, and one 230-gallon waste oil tank were installed at the site. The station building was demolished and the underground storage tanks were removed in 1983.¹

In addition to the on-site source of subsurface petroleum contamination, an additional potential source of contamination at the site was identified at 692 98th Avenue, located northeast of the site. This property was occupied by a Richfield service station from about 1949 to 1963. In 1970, four 1,000-gallon underground fuel storage tanks were removed; the contents and former tank locations are not known.²

In 1989, during the widening of 98th Avenue, workers encountered contaminated soil while excavating a water line trench at the site. Soil samples collected from the trench were found to contain up to 350 mg/kg total petroleum hydrocarbons (TPH).

¹Subsurface Consultants, Inc., 1989, *Preliminary Contaminated Soil Assessment, 98th and Edes Avenues, Oakland, California*, 17 July.

²Subsurface Consultants, Inc., 1990, *Soil and Groundwater Contamination Assessment, Phase 2, 98th and Edes Avenues, Oakland, California*, 10 April.

In response to the identification of contaminated soils during road widening, a preliminary soil investigation was conducted by Subsurface Consultants, Inc. Soil samples were collected from 14 soil borings. The highest concentrations of TPH were generally detected in soil samples collected at or immediately below the groundwater table.

In 1990, Subsurface Consultants, Inc. further evaluated subsurface conditions and groundwater quality at the site. Eleven soil borings were drilled, and six of the borings were completed as monitoring wells (MW-1 through MW-5, and Well 18; Figure 2). Subsurface Consultants, Inc. concluded that the former tank locations were the primary source of contamination at the site. Groundwater samples were found to contain TPH, benzene, toluene, ethylbenzene, and xylenes (BTEX), and chlorinated hydrocarbons. Aromatic petroleum hydrocarbons were detected in monitoring wells located upgradient of the former tank locations, suggesting that those might originate from an off-site source. The analytical results of groundwater samples collected at the site are summarized in Tables 1 and 2.

Subsurface Consultants, Inc. performed quarterly groundwater monitoring during the second and third quarterly periods of 1990. The concentration of contaminants detected in groundwater samples from each well varied from one quarterly period to the next. In general, elevated concentrations of petroleum hydrocarbons were detected in groundwater samples collected from MW-1 and Well 18 (down- and/or crossgradient from the site), but none were detected in samples from MW-4 and MW-5 (up- and/or crossgradient from the site). Free petroleum product was detected in MW-1 at a thickness of 0.52 feet on 4 October 1990. The report for the investigation concluded that a plume of groundwater containing petroleum hydrocarbons was migrating downgradient (westward) of the site. Chlorinated hydrocarbons have been detected in samples from all wells. The source of chlorinated hydrocarbons was not identified.

Contaminated soil was excavated from the area along the roadway under the direction of Subsurface Consultants, Inc. Soil was excavated within five feet of the centerline of the trench lateral and extended to groundwater, approximately ten feet below ground surface. The former tank excavation backfill was removed until native soil was encountered, ten to 13 feet below ground surface. The soil was treated by aeration and transported off-site for disposal. About 1,200 cubic yards of materials were removed from the site. Soil samples were collected from the sidewalls and base of the excavation. The analytical results indicated that residual concentrations of TPH ranging from 50 to 2,100 mg/kg remained in the soil on-site.³

In 1990, Subsurface Consultants designed a groundwater extraction trench along the northwestern side of 98th Avenue across the street from the project site. The trench and associated piping were installed as part of a proposed groundwater remediation system for collection and treatment of groundwater affected by petroleum and chlorinated hydrocarbons in the area of the site. The system, as designed, was to include a bioreactor system for treatment of groundwater extracted from the trench. The bioreactor system was not installed and extraction of groundwater was never initiated.

³Subsurface Consultants, Inc., 1990, *Progress Report, Contaminated Soil Removal Utility Trench Alignment, 98th and Edes Avenues, Oakland, California*, 13 December.

Hydrogeologic investigation of the site was resumed in 1993 by Applied Geotechnology, Inc. (AGI). Water level measurements were made monthly in April, May, and June 1993 from MW-1, 2, 3, and 4 and Well 18 (the location of well MW-5 had been paved over at this time, precluding sampling and water level measurements of that well). Prior to the water level measurements, the tops of casings of the wells had been surveyed relative to the City of Oakland Datum. During each water level monitoring event, free product was detected in MW-1, ranging in thickness from 0.005 to 0.02 feet. The water level measurements indicated a consistent gradient directed to the northwest.⁴

On 15 April 1993, AGI collected samples from wells MW-2, MW-3, and Well 18. In acknowledgment of contamination reflected by the observed presence of free product in monitoring well MW-1, samples were not collected in this well. In April 1993, MW-4 was buried by fill and was not accessible for sampling. The well was uncovered and subsequently sampled on 24 May 1993. The collected groundwater samples were submitted to CKY, Inc. laboratories for analysis of total petroleum, aromatic, and chlorinated hydrocarbons. The results of the analyses indicated the presence of total petroleum hydrocarbons and aromatic hydrocarbons in the sample from Well 18. One chlorinated hydrocarbon compound, trichloroethene (TCE), was detected in MW-2. No chlorinated hydrocarbon compounds were detected in any of the other samples.

In the report on the 1993 groundwater sampling event, AGI included an evaluation of potential on- and off-site sources of chemical compounds detected in the samples collected from the groundwater monitoring network for the project site. The report identified 39 sites within 2,000 feet of the project site as potential sources of the release of industrial solvents. On the basis of proximity to the site and position relative to groundwater flow direction, the report concluded that nine sites had a low to moderate potential for being associated with the chlorinated hydrocarbons detected in groundwater at and adjacent to the project site. The known waste oil tank at the project site and a suspected waste oil tank at 692 98th Avenue (located adjacent to and northeast of the site) were included as two of the nine "low to moderate" potential sites.

In March 1995, BASELINE collected groundwater quality samples from monitoring wells MW-1, MW-2, MW-3, and Well 18. Monitoring wells MW-4 and MW-5 could not be located at that time. It was not known if the wells had been removed or covered by paving or fill. The groundwater samples were analyzed for total petroleum hydrocarbons (as gasoline and diesel), BTEX, and halogenated hydrocarbons. The results (Tables 1 and 2) of the analyses confirmed the presence of petroleum-related compounds and chlorinated hydrocarbons.

In April and May 1996, BASELINE conducted a subsurface survey in an attempt to locate monitoring wells MW-4 and MW-5 (Figure 2). After locating the wells, the boxes (i.e., Christy boxes) were replaced and the inner two-inch casings were slightly raised for accessibility during future groundwater monitoring events. A six-inch top cap was added to monitoring well MW-4 to replace the damaged original casing. The well locations, well box cover, and top of casing elevations for wells MW-1, MW-2, MW-3, MW-4, and MW-5 were surveyed by Bates and Bailey of Berkeley on 12 July 1996; the top of casing elevations are shown in Table 3.

⁴Applied Geotechnology, 1993, *Limited Phase I Environmental Assessment and Groundwater Monitoring*, 670 and 692 98th Avenue, Oakland, California, 11 August.

In December 1996, BASELINE collected groundwater quality samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5 and Well 18. The groundwater samples were analyzed for TPH as gasoline and diesel, BTEX, and chlorinated hydrocarbons. In addition, the groundwater samples were analyzed for nitrate, sulfate, and total iron to assess the relative activity of intrinsic bioremediation processes. Although groundwater samples from all of the wells contained low levels of chlorinated hydrocarbons, the samples from cross-gradient wells MW-2 and MW-5 were not found to contain detectable TPH and BTEX. A low level of TPH as gasoline (0.79 mg/L) was detected in the upgradient well MW-4. Free product previously observed in MW-1 in 1993 was not detected, and the downgradient wells (MW-1 and Well 18) were found to have detectable levels of aromatic hydrocarbons⁵. Based on these results, it was concluded that the site is a potential source of these contaminants; however, it is possible that upgradient sources may also be contributing to the constituents detected in the groundwater downgradient of the site.

From monitoring the intrinsic bioremediation indicator parameters during the December 1996 sampling event, it was found that bioremediation processes within the aquifer beneath the site are active. The analytical results for chlorinated hydrocarbons for the December 1996 and past sampling events indicate that the extent of these contaminants is not defined. We concluded that the underground waste oil storage tank removed from the site could have been used for the disposal of industrial solvents or other compounds containing chlorinated hydrocarbons. Therefore, the former tank is a potential source of the chlorinated hydrocarbons detected in groundwater. It was also concluded that there may be a potential off-site and upgradient source of chlorinated hydrocarbons.

HYDROGEOLOGY

The site is located in the East Bay Plain and is underlain by fluvial and alluvial fan deposits. The fluvial deposits consist primarily of fine-grained sands, silts, and clays. The alluvial deposits consist of a heterogeneous mixture of clay, silt, sand, and gravel. According to soil and well borings drilled at the site, the subsurface materials encountered at the site consist primarily of silty and sandy clays to depths of approximately 12 to 15 feet below ground surface. This is underlain by a gravelly sand which extends to a depth of approximately 24 feet. The gravelly sand is underlain by interbedded clay, sandy clay, and clayey sand layers.

The regional groundwater gradient is west-northwestward to the Bay, the direction of the ground surface slope. Measurement of groundwater levels in wells at the site indicates that the localized gradient is directed northwestward (Table 3 and Figure 3).⁶ The direction of groundwater flow indicates that wells MW-1, MW-3, and Well 18 are located downgradient to crossgradient of the former tank locations; MW-2, MW-4, and MW-5 are upgradient to crossgradient wells.

⁵Benzene concentrations in MW-1 and Well 18, and the xylene concentration in MW-1 exceed the California maximum contaminant levels (MCLs) for these constituents.

⁶Subsurface Consultants, Inc., 1990, *Soil and Groundwater Contamination Assessment, Phase 2, 98th and Edes Avenues, Oakland, California*, 10 April.

FIELD ACTIVITIES

Well Point Installation

On 22 through 24 September 1997, thirteen soil borings (Figure 2) were drilled for the purpose of well point installation by Precision Sampling, Inc under inspection by an Innovative Technical Solutions, Inc. (ITSI) engineer. Drilling permits were obtained from Alameda County Public Works Agency prior to the commencement of drilling (Appendix A). Due to the location of some of the borings on City streets and sidewalks, these borings were made under Excavation Permits issued by the City Office of Planning and Building (Appendix A). The drilling activities were performed in accordance with a Traffic Diversion Layout Plan approved by the City of Oakland Department of Public Works. Prior to drilling, the boring locations were inspected under the Underground Service Alert protocol. A utility location survey was conducted by California Utility Surveys, Inc. to further reduce the potential of encountering unidentified utilities. All drilling and sampling activities were performed under the requirements of a site-specific health and safety plan prepared by ITSI.

The borings were made using direct-push technology. Under this drilling technique, a dual-tube sampler was advanced using hydraulic pressure. The sampler was advanced in three-foot increments; then the inner sampling tube was extracted through the outer tube. The soil collected in the inner tube was examined prior to being discarded into a sealed steel bucket. Soil borings at WP-5 and WP-6 were continuously logged by a field geologist according to the Unified Soils Classification System (USCS) to evaluate the consistency of stratigraphy with previously obtained subsurface data. Copies of the boring logs are presented in Appendix B. Selected soil intervals from these borings were screened in the field using an organic vapor meter equipped with photoionization detector (PID) by placing a small portion of the soil in a sealed container. The concentration of organic vapor in the headspace of the container was then measured with the PID, and the concentration recorded on the boring log. Following completion of WP-6 and WP-13 and confirmation of expected hydrostratigraphic conditions, the borings for subsequent well points were advanced with a driven point and soil samples were not collected. The depth of the borings ranged between 15 and 18 feet below ground surface.

Soil samples were collected across the soil/water interface zone from the first two borings (WP-5 and WP-6) in the event that an insufficient volume of groundwater was available for sample collection. However, recharge conditions were adequate for groundwater sample collection from each boring, and no soil samples were submitted to the laboratory for analysis.

When the sampler was advanced to below the expected depth of the groundwater level, the inner sampling tube was extracted. The outer tube was left in place to prevent sloughing of the boring and to serve as a temporary well point for groundwater sampling.

Groundwater Sampling Activities

Groundwater samples were collected from all six monitoring wells, MW-1, MW-2, MW-3, MW-4, MW-5 and Well 18, and thirteen well points, WP-1 through WP-3, and WP-5 through WP-14 on 22 through 24 September 1997 (Figure 2). The presence of free product was checked and water levels were measured in each of the wells and well points using a dual-interface probe. Free product was

not identified in any of the wells or well points. The probe was decontaminated by washing with a trisodium phosphate solution and rinsing with deionized water between use at each well.

Approximately three to five well volumes of water were slowly purged from each well using a peristaltic pump and new disposable polyethylene tubing. The temperature, pH, electrical conductivity, and dissolved oxygen (DO) content of the groundwater were monitored during purging of the wells until they appeared to have stabilized. Groundwater sampling forms that document the September 1997 purging and sampling activities at the monitoring wells are included in Appendix C.

Prior to sampling of the well points, up to three gallons of water were slowly pumped from each well point with a peristaltic pump to reduce the potential of collection of turbid groundwater samples. All decontamination rinsate and purged groundwater were stored on-site in sealed, labeled drums pending laboratory analysis.

Groundwater samples were collected with the peristaltic pump and new, disposable polyethylene tubing, and placed in glass bottles. In addition to the samples collected from the wells and well points, one field duplicate (QC-1) was collected from WP-1 and one trip blank was prepared for quality control purposes. The bottles were labeled, placed in a cooler containing blue ice, and transported under chain-of-custody to Chromalab, Inc., a California-certified analytical laboratory. The groundwater samples were analyzed for TPH as gasoline and as diesel (Method 8015M), BTEX (Method 8020A), and chlorinated hydrocarbons (Method 8010A).

Upon completion of sampling, the outer casing was removed from each well point location and the boring was backfilled with "neat" cement. The borings were capped with asphalt to match the surrounding asphalt surface, as applicable (i.e., at locations drilled on asphalt).

FINDINGS

Groundwater Flow Direction

Groundwater elevations ranged from 7.87 to 7.32 feet above City of Oakland datum in the six wells at the site in September 1997. The direction of the groundwater flow was calculated to be to the northwest (N68W), with a gradient of 0.002. The calculated gradient is generally consistent with the gradient calculated from data collected during previous monitoring events. Groundwater elevation data and calculated flow directions are summarized in Table 3 and shown on Figure 3.

Analytical Results

The laboratory report on analysis of the groundwater samples is presented in Appendix D. The analytical results indicate the presence of petroleum hydrocarbons and/or aromatic hydrocarbons (Table 1) in groundwater at the three down- to crossgradient wells (MW-1, MW-3, and Well 18) and at well points WP-5, WP-7, WP-8 and WP-9. Detected levels of TPH as gasoline (TPHg) ranged from 0.076 mg/L at WP-5 to 8.6 mg/L at WP-8. TPHg was not detected at MW-2, MW-4, MW-5, WP-1, WP-2, WP-3, WP-6, WP-10, WP-11, WP-13, and WP-14. The distribution of TPHg in groundwater is shown on Figure 4. TPH as diesel was detected in WP-9 at 0.14 mg/L. Although the detected extractable hydrocarbon was quantified by the laboratory as diesel, the sample chromatogram did not match the laboratory standard for diesel.

Benzene, ethylbenzene and xylenes were detected in the groundwater samples from wells MW-1 and Well 18; BTEX were detected in well points WP-7, WP-8, and WP-12 (Table 1). Detected levels of benzene ranged from 0.0085 mg/L at Well 18 to 3.6 mg/L at WP-8. The distribution of benzene in groundwater is shown on Figure 5. Detected levels of toluene ranged from 0.0014 mg/L at WP-8 to 0.11 mg/L at WP-12; for ethylbenzene, from 0.0048 mg/L at Well 18 to 0.14 mg/L at MW-1; and for xylenes, from 0.001 mg/l at WP-9 to 0.56 mg/L at MW-1. Although TPHg, benzene, ethylbenzene, and xylenes were detected in the initial sample from MW-1, these compounds were not detected in the duplicate sample collected from this well (Table 1).

Notably, the September 1997 concentrations of TPHg and detected aromatic hydrocarbons in groundwater at MW-1, MW-3, and Well 18 have decreased significantly relative to the concentrations measured during the December 1996 sampling event. For example, the reported TPHg and BTEX levels decreased by two orders of magnitude (100 times) at Well 18. The trend of decreasing petroleum and aromatic hydrocarbons at these downgradient positions is consistent with previous sampling results.

Several chlorinated hydrocarbons (Table 2) were detected in the groundwater samples from each of the wells and well points. Trichloroethene (TCE) was detected in each of the wells and well points except MW-5, WP-1, and WP-8, ranging in concentration from 0.0006 mg/L at MW-4 to 0.029 mg/L at WP-2. The distribution of TCE in groundwater is shown in Figure 6.

Tetrachloroethene was detected in each of the wells and well points except WP-8 and WP-9. Detectable levels of 1, 1, 1-trichloroethane (TCA) was detected in each of the wells and well points except MW-5, WP-5, WP-7 and WP-8 (Figure 7). Groundwater samples collected from Well 18 and well points WP-2, WP-11, WP-12 and WP-14 contained detectable levels of 1,1 dichloroethene (DCE). The detected concentrations of DCE ranged from 0.0007 mg/L in Well 18 to 0.0012 mg/L at WP-14. Detectable levels of 1,1 dichloroethane (DCA) were found in MW-1, and in well points WP-7, WP-8, WP-9, WP-12 and WP-14. Total 1,2 DCA were detected in MW-1, and in well points WP-3, WP-5, WP-6, WP-7, and WP-8. Dibromochloromethane and chloroform were not detected above laboratory reporting limits for all well and well point groundwater samples.

CONCLUSIONS

- The TPHg and aromatic hydrocarbons (BTEX) levels measured in the monitoring well network during the September 1997 sampling event indicate a continuing reduction in concentration of these compounds at each of the wells. Detectable levels of BTEX were only identified in MW-1 and Well 18. The decrease in concentrations at these locations over time probably reflects a combination of passive bioremediation of the compounds, diffusion and dilution of the plume, and downgradient migration. Significantly, well points WP-11, WP-13, and WP-14, which are located downgradient of MW-1, did not contain detectable levels of TPHg or BTEX.
- The detection of relatively high TPHg and BTEX at well point location WP-8 may indicate the presence of an isolated area, or hotspot, of groundwater affected by the release petroleum fuel-related hydrocarbons. The hotspot may represent a detached plume that has migrated from an upgradient source, possibly the fuel tanks removed from the project site.

Alternatively, the hotspot may indicate a potential separate release of these compounds at or near the well point location, which is currently a vacant lot; or it could be an aberrant data point.

- The detection of chlorinated hydrocarbons throughout the area investigated during the September 1997 sampling event does not indicate an identifiable source for these compounds at the project site. These compounds have been identified in groundwater samples collected upgradient, cross gradient, and downgradient of the location of the waste oil tank (a potential source of chlorinated hydrocarbons) removed from the project site. However, the widespread presence of low levels of these compounds in groundwater appear to indicate an off-site, upgradient source of chlorinated hydrocarbons. The highest levels of TCE (0.029 mg/L) and PCE (0.047 mg/L) were identified at upgradient locations WP-2 and MW-4 (Figure 5). The highest total chlorinated hydrocarbon concentrations were also detected in MW-4 (0.0497 mg/L) and WP-2 (0.0463 mg/L).

RECOMMENDATIONS

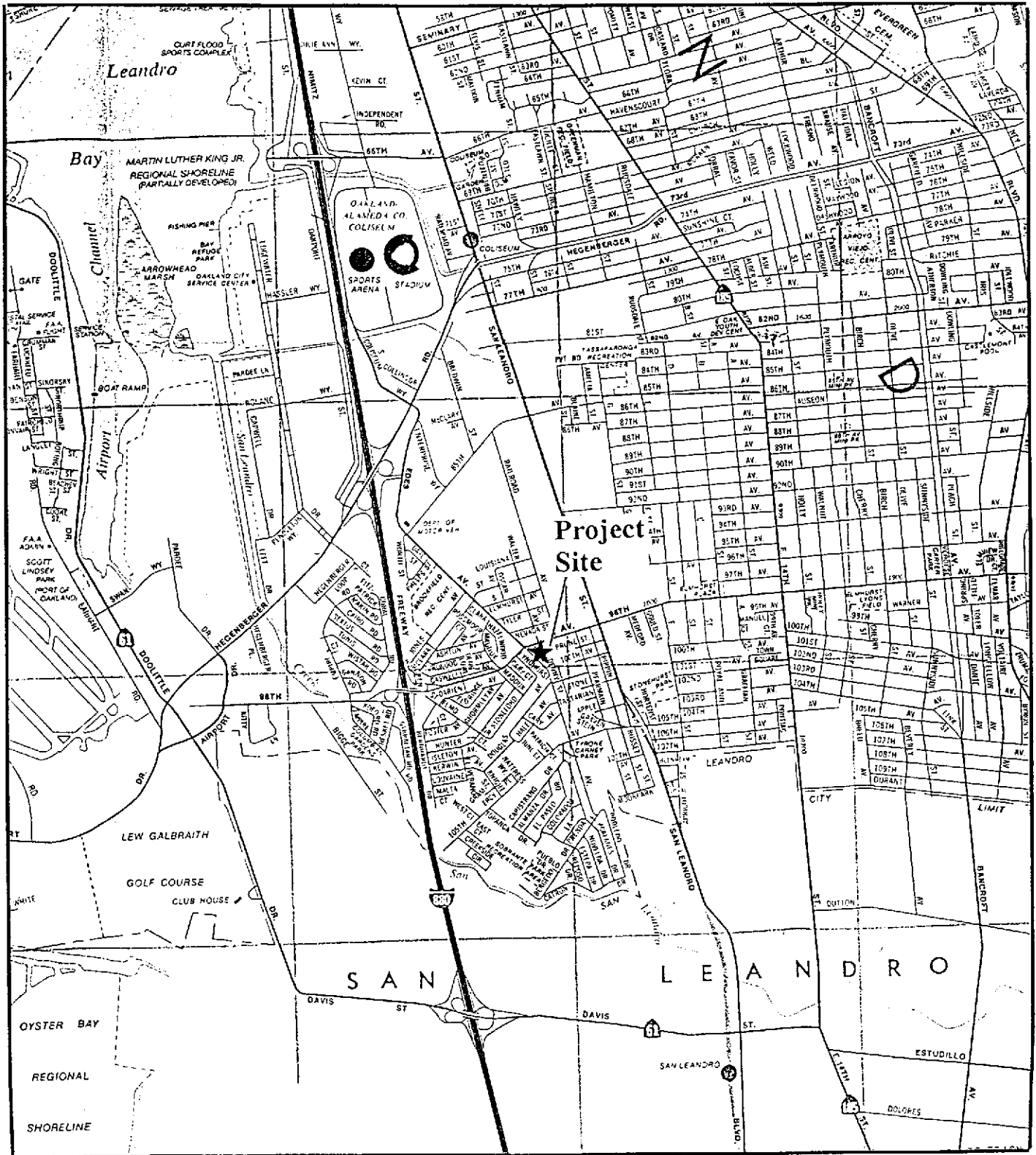
- An additional two-inch PVC monitoring well (MW-6) should be installed along the south side of Nevada Street at a position downgradient of WP-8 (Figure 2). The purpose of the well would be to assess the extent of groundwater affected by the release of petroleum hydrocarbons, to evaluate the potential for plume migration, and to provide a long-term downgradient monitoring point.
- Based on the widespread distribution of chlorinated hydrocarbons in the areal groundwater, further evaluation of the source and distribution of these compounds as part of this investigation is not a productive use of the limited available funds and should not be included in the subsequent monitoring of petroleum hydrocarbon releases from the project site. Therefore, analysis of chlorinated hydrocarbons (EPA Method 8010) in groundwater samples collected during subsequent groundwater monitoring events should be discontinued.
- Monitoring wells Well 18, MW-1, MW-3, and proposed MW-6 should be sampled semi-annually beginning in the Winter Quarter 1998. The collected groundwater samples should be analyzed by a certified laboratory for TPHg (EPA Method 8015) and aromatic hydrocarbons (EPA Method 8020). Regular sampling of monitoring wells MW-2, MW-4, and MW-5 should be discontinued.

LIMITATIONS

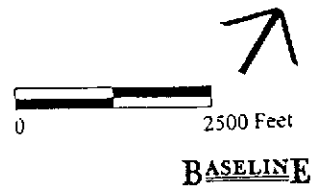
The conclusions presented in this report are professional opinions based on the indicated data described in this report. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study. Changes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

REGIONAL LOCATION

Figure 1

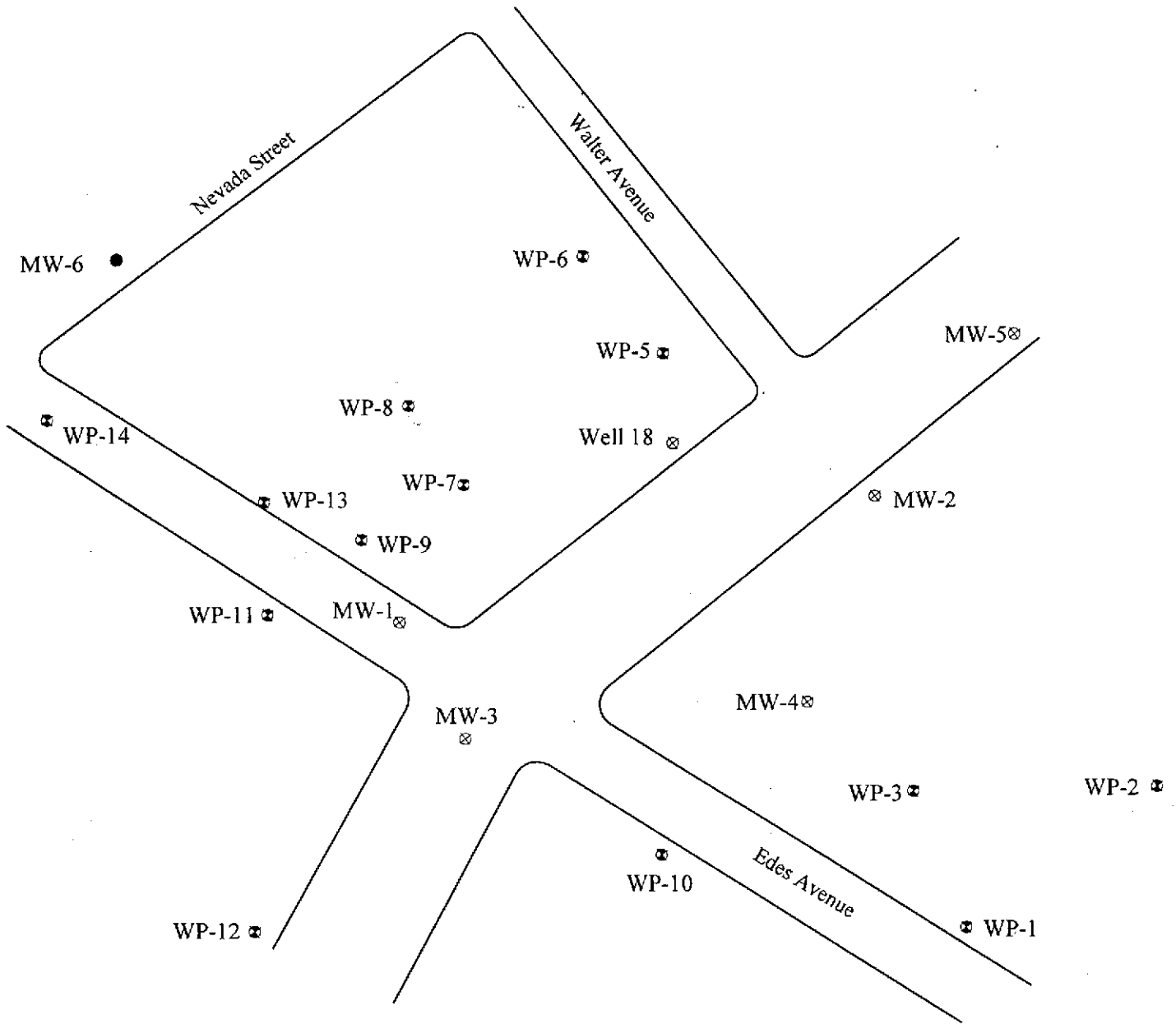


670 98th Avenue
Oakland, California



GROUNDWATER SAMPLE LOCATIONS

Figure 2



Legend

- MW-1 ⊕ Monitoring Well
- WP-1 ⊕ Well Point Location
- MW-6 ● Proposed Monitoring Well

0 100 Feet

BASELINE

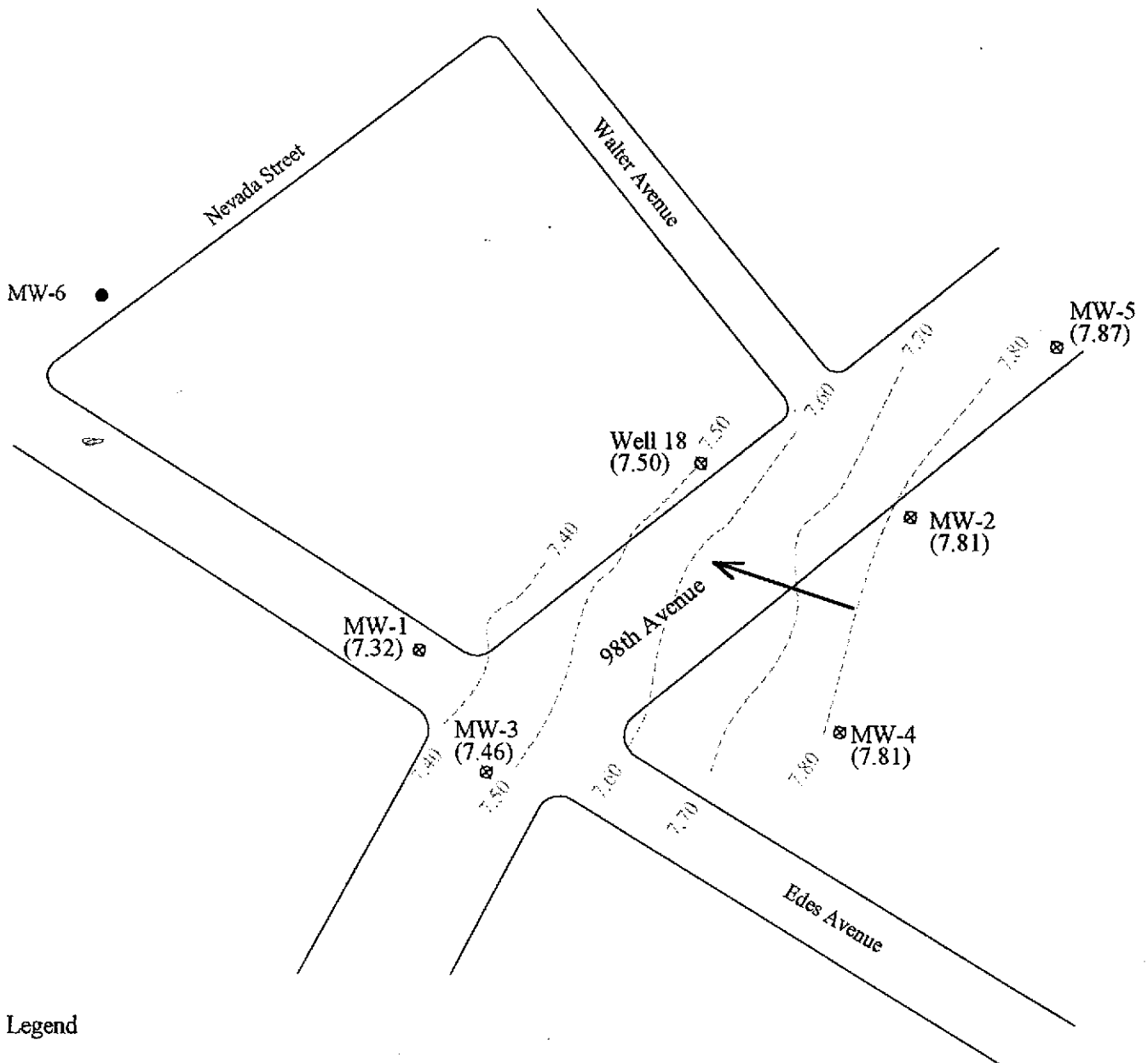
Base map source: Applied Geotechnology Inc., 7-93.

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GROUNDWATER CONTOUR MAP

September 1997

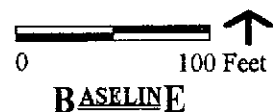
Figure 3



Legend

- MW-1 ⊕ Monitoring Well
Groundwater Elevation (feet)
Based on City of Oakland Vertical Datum
- MW-6 ● Proposed Monitoring Well
- Groundwater Contour Interval (22 September 1997)
(Contour Interval = 0.10 Feet)
- Groundwater Flow Direction (22 September 1997)
(Flow Direction Determined From MW-1, MW-2, and MW-4)

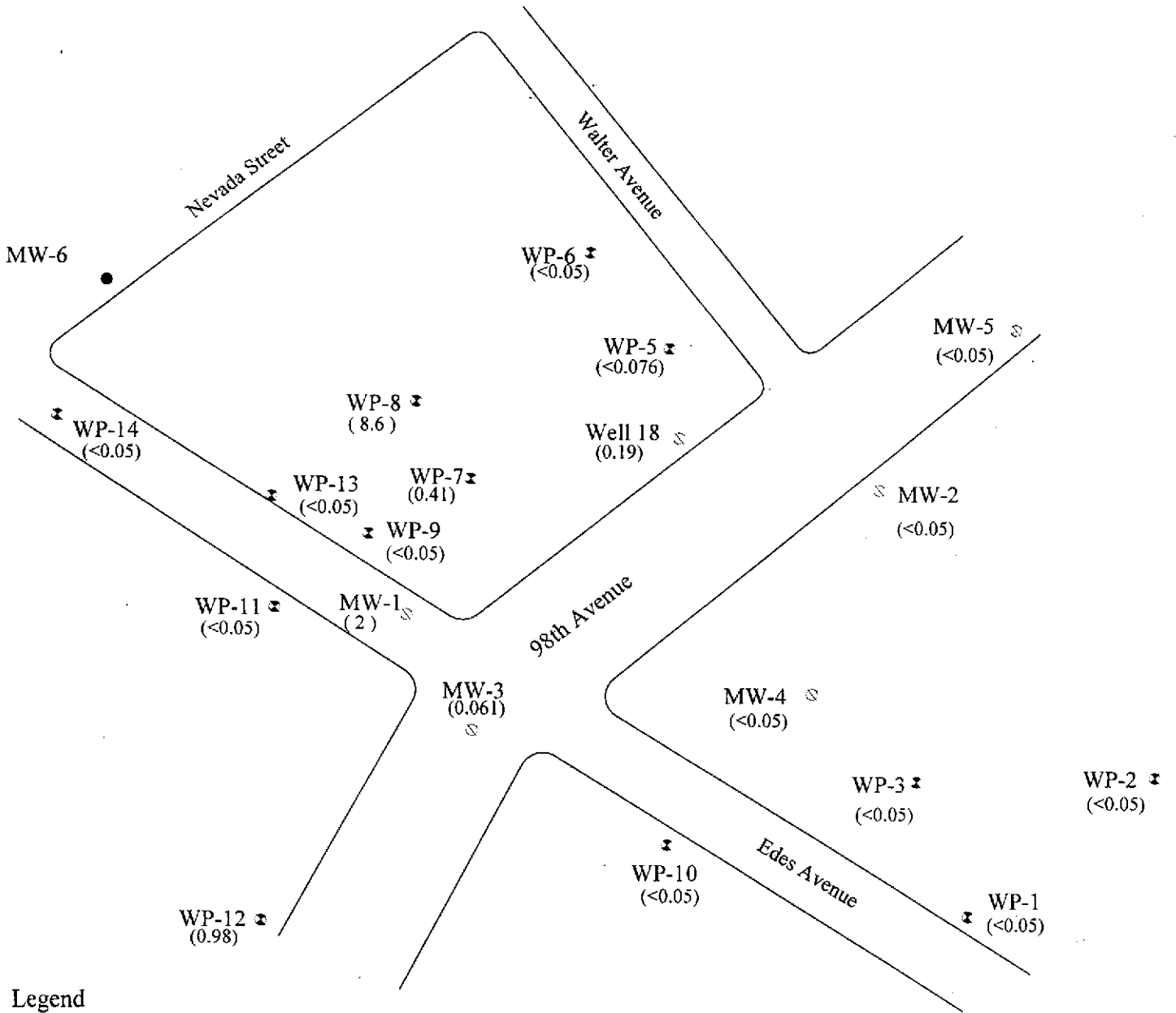
**670 98th Avenue
Oakland, California**



Base map source: Applied Geotechnology Inc., 7-93.

TPH Gasoline CONCENTRATION
September 1997

Figure 4

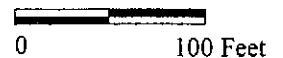


Legend

MW-1 ⊕ (2) Monitoring Well
 (TPH Gasoline Concentration, mg/L)

WP-1 ⊕ (<0.05) Well Point Location
 (TPH Gasoline Concentration, mg/L)

MW-6 ● Proposed Monitoring Well

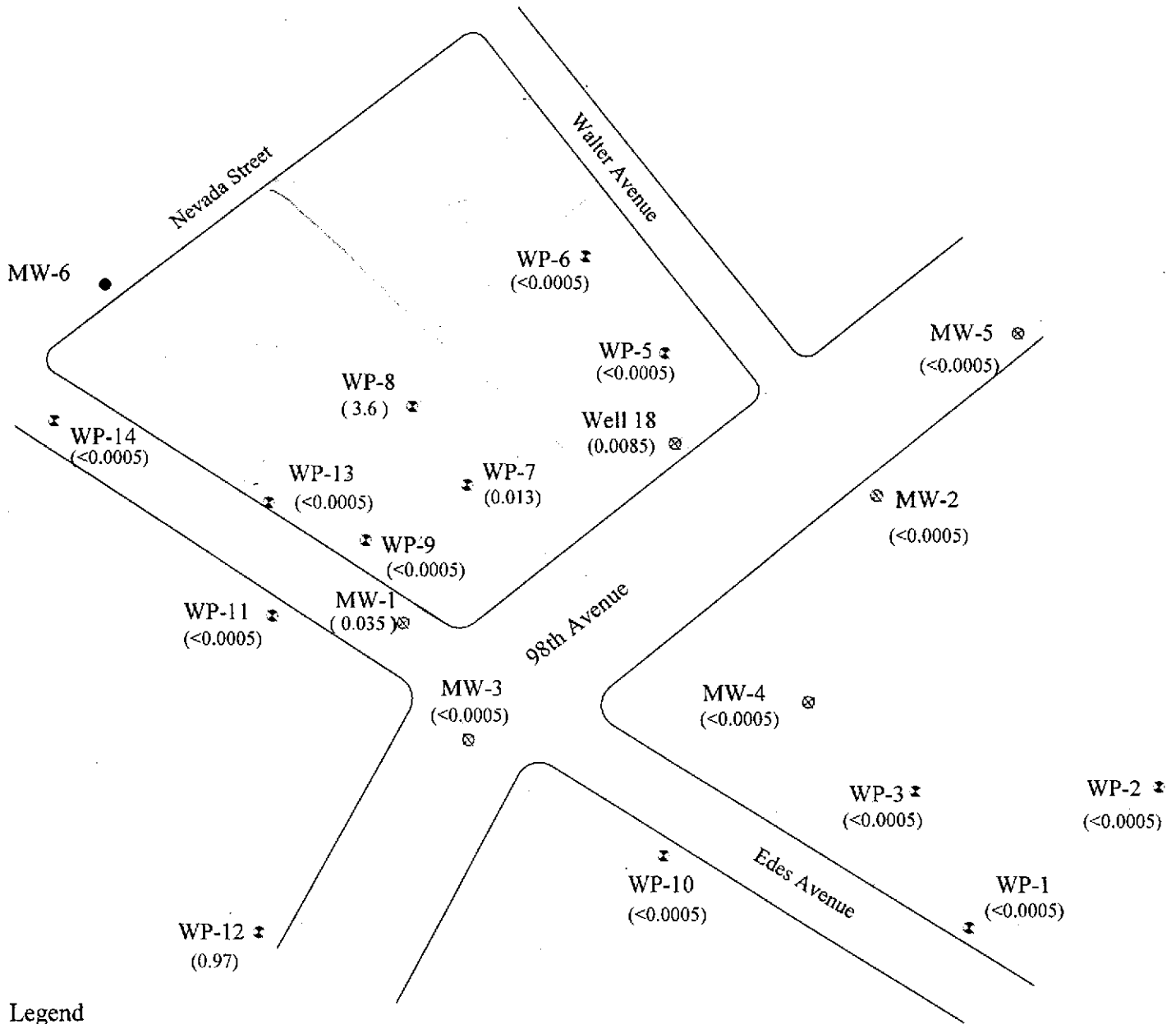


Base map source: Applied Geotechnology Inc., 7-93.

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BENZENE CONCENTRATION
September 1997

Figure 5

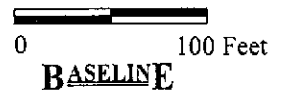


Legend

MW-1 ⊕ Monitoring Well
 (0.035) (Benzene concentration, mg/L)

WP-1 ⊕ Well Point Location
 (<0.0005) (Benzene concentration, mg/L)

MW-6 • Proposed Monitoring Well

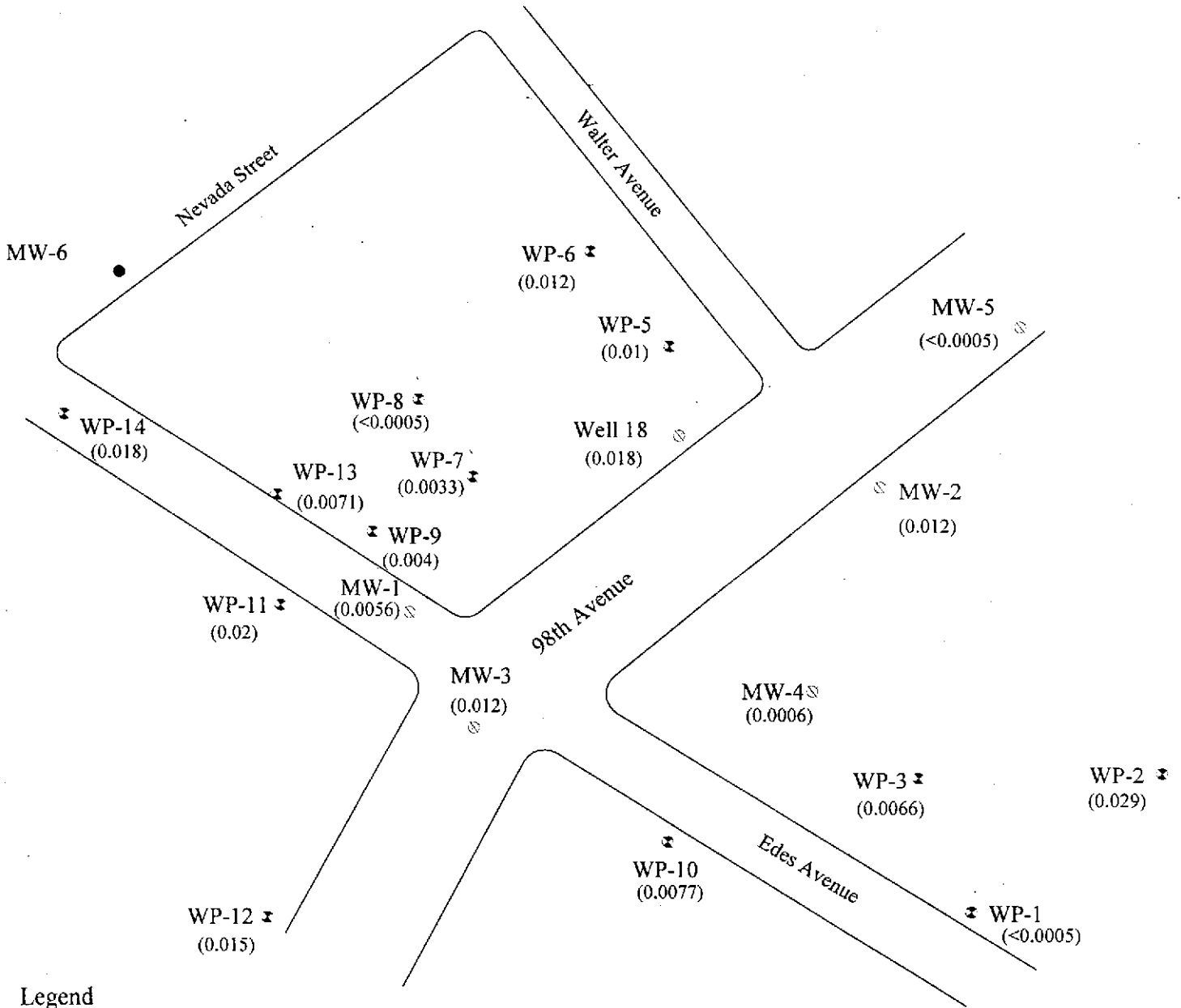


Base map source: Applied Geotechnology Inc., 7-93.

93343F1benz 10/7/97

TRICHLORETHENE CONCENTRATION
September 1997

Figure 6



Legend

MW-1 ⊕ Monitoring Well
 (0.0056) (TCE Concentration, mg/L)

WP-1 ⊕ Well Point Location
 (<0.0005) (TCE Concentration, mg/L)

MW-6 • Proposed Monitoring Well



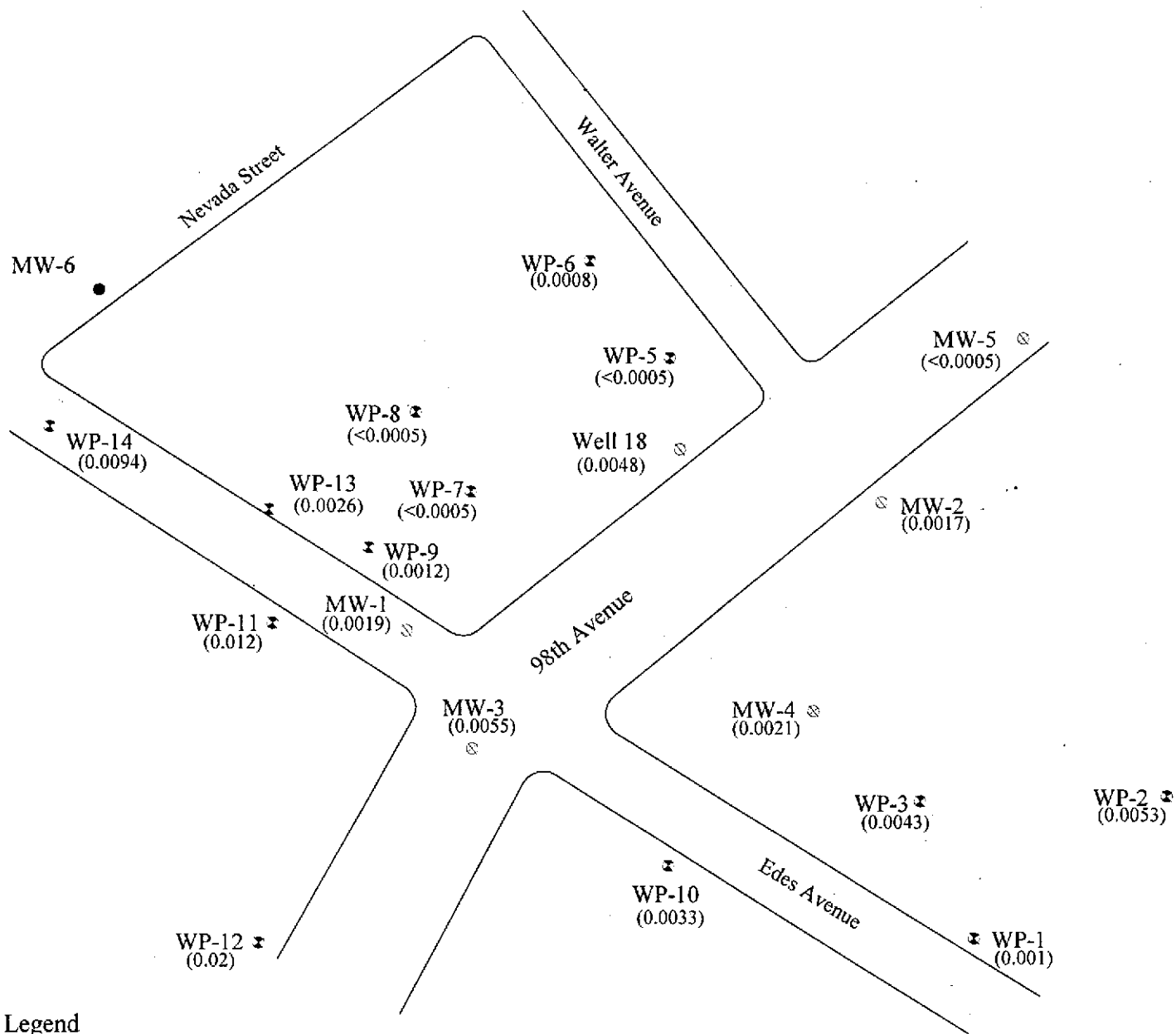
Base map source: Applied Geotechnology Inc., 7-93.

93343F1tceA 10/7/97

1,1,1 TRICHLOROETHANE CONCENTRATION

September 1997

Figure 7

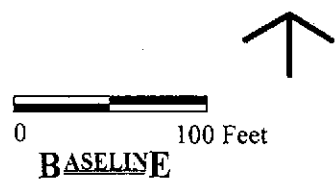


Legend

MW-1 ⊕ Monitoring Well
(0.0019) (1,1 TCA Concentration, mg/L)

WP-1 ⊕ Well Point Location
(0.001) (1,1 TCA Concentration, mg/L)

MW-6 ● Proposed Monitoring Well



Base map source: Applied Geotechnology Inc., 7-93.

93343F1tca 10/7/97

TABLE 1
SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
PETROLEUM AND AROMATIC HYDROCARBONS
670 98th Avenue, Oakland, California
(mg/L)

Sample ID	Date	Gasoline ¹	Diesel ¹	Kerosene ¹	Motor Oil ¹	Total Oil & Grease ¹	Benzene ²	Toluene ²	Ethylbenzene ²	Xylenes ²	Total Lead
MW-1	2/12/90	0.0551	0.100	--	--	ND	0.0608	0.0119	ND	0.0199	--
	6/30/90	0.95/<0.05	<0.5	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	10/4/90	2,940	<0.2	--	--	--	7.78	26.7	20	20.3	--
	4/15/93	--	--	--	--	--	--	--	--	--	--
	3/31/95	5.9	3	2.3 ⁴	--	--	0.067	0.012	0.092	0.5	0.014
	12/31/96	14	10 ^{5,6}	--	--	--	0.13	<0.025	0.47	2.0	--
	9/22/97	2/ <0.05	<0.051/ <0.054	<0.051/ <0.054	<0.51/ <0.54	--	0.035/ <0.0005	<0.0025/ <0.0005	0.14/ <0.0005	0.56/ <0.0005	--
MW-2	2/13/90	0.0351	0.100	--	--	ND	ND	ND	0.0013	0.004	--
	6/30/90	<0.5/<0.05	<0.5	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	10/4/90	0.0528	<0.2	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	4/15/93	<1.0	<1.0	--	--	--	<0.001	<0.001	<0.001	<0.001	--
	3/31/95	<0.05	<0.05	<0.05	--	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0042
	12/31/96	<0.05	0.2 ^{5,7}	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	9/22/97	<0.05	<0.051	<0.051	<0.51	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-3	2/13/90	ND	0.100	--	--	ND	ND	ND	ND	0.0029	--
	6/30/90	2.6/0.85	<0.5	--	--	--	<0.0005	<0.0005	<0.0005	0.044	--
	10/4/90	0.0429	<0.2	--	--	--	<0.0005	<0.0005	<0.0005	0.0085	--
	4/15/93	<1.0	<1.0	--	--	--	<0.001	<0.001	<0.001	<0.001	--
	3/31/95	1.6	1	0.5 ⁴	--	--	<0.0005	<0.0005	<0.0005	0.0041	<0.003
	12/31/96	0.38	0.62 ^{5,6,8}	--	--	--	<0.0005	<0.0005	<0.0005	0.00065	--
	9/22/97	0.061	<0.051	<0.051	<0.51	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-4	2/13/90	ND	ND	--	--	ND	ND	ND	ND	ND	--
	6/30/90	<0.5/<0.05	<0.5	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	10/4/90	<0.020	<0.2	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	5/24/93	<1.0	<1.0	--	--	--	<0.001	<0.001	<0.001	<0.001	--
	12/31/96	0.79	<0.05	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	9/22/97	<0.05	<0.05	<0.05	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	MW-5	2/13/90	ND	ND	--	--	ND	ND	ND	ND	ND
6/30/90		<0.5/<0.05	<0.5	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
10/4/90		<0.020	<0.2	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
12/31/96		<0.05	<0.05	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
9/22/97		<0.05	<0.051	<0.051	<0.51	--	<0.0005	<0.0005	<0.0005	<0.0005	--

Table 1: Petroleum and Aromatic Hydrocarbon Analytical Results - *continued*

Sample ID	Date	Gasoline ¹	Diesel ¹	Kerosene ¹	Motor Oil ¹	Total Oil & Grease ¹	Benzene ²	Toluene ²	Ethylbenzene ²	Xylenes ²	Total Lead
Well 18	2/14/90	134	17	--		120	3.73	8.92	5.43	22	--
	6/30/90	26/20	2.4	--		--	0.66	0.47	0.18	2.0	--
	10/4/90	4.9	<0.2	--		--	0.082	0.04	0.19	0.635	--
	4/15/93	7	10 ⁴	--		--	0.440	0.180	0.340	1.6	--
	3/31/95	11	-- ³	1.9 ⁴		--	0.19	0.01	0.35	1.3	0.016
	12/31/96	18	<0.05	--		--	0.110 ⁹	0.0023 ⁹	0.10 ⁹	0.23 ⁹	--
	9/22/97	0.19	<0.051	<0.051	<0.51	--	0.0085	<0.0005	0.0048	0.0074	--
WP1-W	9/23/97	<0.05	<0.05	<0.05	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP2-W	9/22/97	<0.05	<0.053	<0.053	<0.53	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP3-W	9/22/97	<0.05	<0.051	<0.051	<0.51	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP5-W	9/22/97	0.076	<0.054	<0.054	<0.54	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP6-W	9/22/97	<0.05	<0.054	<0.054	<0.54	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP7-W	9/24/97	0.41	<0.051	<0.051	<0.51	--	0.013	0.058	0.013	0.081	--
WP8-W	9/24/97	8.6	<0.051	<0.051	<0.51	--	3.6	0.0014	0.016	0.0018	--
WP9-W	9/23/97	<0.05	0.14 ¹⁰	<0.05	<0.5	--	<0.0005	<0.0005	<0.0005	0.001	--
WP10-W	9/23/97	<0.05	<0.05	<0.05	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP11-W	9/23/97	<0.05	<0.053	<0.053	<0.53	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP12-W	9/23/97	0.98	<0.051	<0.051	<0.51	--	0.097	0.11	0.11	0.32	--
WP13-W	9/24/97	<0.05	<0.051	<0.051	<0.51	--	<0.0005	<0.0005	<0.0005	<0.0005	--
WP14-W	9/23/97	<0.05	<0.056	<0.056	<0.56	--	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	3/31/95	<0.05	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
	9/22/97	<0.05	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--

Notes: -- = Constituent not analyzed or data not available.
 <x.x = Constituent not detected at stated reporting limit.
 ND = Constituent not detected; reporting limit unknown.
 xx/xx = Duplicate sample.
 xx = Bolded numbers indicate compounds identified above the level of detection.
 1990 groundwater samples collected by Subsurface Consultants.
 Monitoring well locations are shown on Figure 2.
 Laboratory Reports are included in Appendix D.

- ¹ EPA Test Method 8015 M.
- ² EPA Test Method 8020/602.
- ³ Diesel range not reported by laboratory due to overlap of hydrocarbon ranges.
- ⁴ Laboratory reports that sample chromatogram does not resemble hydrocarbon standards.
- ⁵ Laboratory reports that hydrocarbon reported does not resemble diesel standard.
- ⁶ Laboratory estimated concentration due to overlapping fuel patterns.
- ⁷ Laboratory reports hydrocarbon is in late diesel range.
- ⁸ Laboratory reports hydrocarbon is in early diesel range.
- ⁹ Surrogate recovery was outside laboratory QA/QC limits due to sample interference.
- ¹⁰ Laboratory reports that compound is in the diesel range but its chromatogram does not have a pattern characteristic of petroleum hydrocarbons.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
CHLORINATED HYDROCARBONS
670 98th Avenue, Oakland, California
(mg/L)

Sample ID	Date	1,1 Dichloro-ethene ¹	1,1 Dichloro-ethane ¹	Total 1,2 dichloro-ethene ¹	1,1,1 Trichloro-ethane ¹	Trichloro-ethene ¹	Dibromo-chloro-methane ¹	Tetrachloro-ethene ¹	Chloroform ¹	Total Chlorinated Hydrocarbon
MW-1	2/12/90	ND	ND	ND	0.0051	0.0118	0.009	0.0024	ND	
	6/30/90	<0.001	0.0041	<0.001	0.008	0.013	<0.001	0.0028	<0.001	
	10/4/90	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
	3/31/95	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	
	12/31/96	<0.0005	0.0015	0.001	<0.0005	0.0009	<0.0005	<0.0005	<0.002	0.0034
	9/22/97	<0.0005/ <0.0005	0.0015/ <0.0005	0.0011/ <0.0005	0.0019/ 0.001	0.0056/ <0.0005	<0.0005/ <0.0005	0.0018/ 0.0091	<0.003/ <0.003	0.0119/ 0.0101
MW-2	2/13/90	0.0071	0.0049	ND	0.0116	0.0251	0.0079	0.0085	ND	
	6/30/90	0.0031	0.0051	0.0048	0.015	0.035	<0.001	0.016	<0.001	
	10/4/90	<0.0005	0.0024	<0.0005	0.0063	0.0187	<0.0005	0.0068	<0.0005	
	4/15/93	<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.001	<0.001	
	3/31/95	0.0017	0.0011	0.0014	0.0051	0.046	<0.001	0.022	<0.001	
	12/31/96	<0.0005	0.0006	<0.0005	0.0006	0.0076	<0.0005	0.0035	<0.002	0.0123
	9/22/97	<0.0005	<0.0005	<0.0005	0.0017	0.012	<0.0005	0.0063	<0.003	0.02
MW-3	2/13/90	0.0057	ND	ND	0.0171	0.0217	0.0692	0.0016	ND	
	6/30/90	0.0013	0.0021	0.0035	0.021	0.026	<0.001	0.0062	<0.001	
	10/4/90	<0.0005	<0.0005	<0.0005	0.011	0.0245	<0.0005	0.0051	<0.0005	
	4/15/93	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/31/95	0.0022	<0.001	<0.001	0.018	0.018	<0.002	0.0041	<0.001	
	12/31/96	<0.0005	<0.0005	<0.0005	0.005	0.0088	<0.0005	0.0015	<0.002	0.0153
	9/22/97	<0.0005	<0.0005	<0.0005	0.0055	0.012	<0.0005	0.0028	<0.003	0.0203
MW-4	2/13/90	ND	ND	ND	0.0018	0.0024	0.0153	0.0674	ND	
	6/30/90	<0.001	<0.001	<0.001	0.0027	0.003	<0.001	0.26	<0.001	
	10/4/90	<0.0005	<0.0005	<0.0005	0.0011	0.0028	<0.0005	0.0955	0.0007	
	5/24/93 ²	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	12/31/96	<0.0005	<0.0005	<0.0005	0.0017	0.0007	<0.0005	0.31 ³	<0.002	0.3124
	9/22/97	<0.0005	<0.0005	<0.0005	0.0021	0.0006	<0.0005	0.047 ³	<0.003	0.0497
MW-5	2/13/90	ND	ND	ND	0.0013	0.001	ND	0.0014	ND	
	6/30/90	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	0.0021	<0.001	
	10/4/90	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	0.0007	<0.0005	
	12/31/96	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	0.003	<0.002	0.0035
	9/22/97	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	<0.003	0.0019

Table 2: Chlorinated Hydrocarbon Analytical Results - *continued*

Sample ID	Date	1,1 Dichloro-ethene ¹	1,1 Dichloro-ethane ¹	Total 1,2 dichloro-ethene ¹	1,1,1 Trichloro-ethane ¹	Trichloro-ethene ¹	Dibromo-chloro-methane ¹	Tetrachloro-ethene ¹	Chloroform ¹	Total Chlorinated Hydrocarbon
Well 18	2/14/90	ND	ND	ND	ND	ND	ND	ND	ND	
	6/30/90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10/4/90	<0.005	<0.005	<0.0005	0.009	0.091	<0.005	0.006	<0.0005	
	4/15/93	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/31/95	<0.01	<0.01	<0.01	<0.01	0.029	<0.01	0.01	<0.01	
	12/31/96	<0.0005	<0.0005	<0.0005	0.0021	0.011	<0.0005	0.0056	<0.002	0.0187
	9/22/97	0.0007	<0.0005	<0.0005	0.0048	0.018	<0.0005	0.011	<0.003	0.0345
WP1-W	9/23/97	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	0.0081	<0.003	0.0091
WP2-W	9/22/97	0.001	<0.0005	<0.0005	0.0053	0.029³	<0.0005	0.011	<0.003	0.0463
WP3-W	9/22/97	<0.0005	<0.0005	0.0026	0.0043	0.0066	<0.0005	0.029³	<0.003	0.0425
WP5-W	9/22/97	<0.0005	<0.0005	0.0019	<0.0005	0.01	<0.0005	0.015	<0.003	0.0269
WP6-W	9/22/97	<0.0005	<0.0005	0.0031	0.0008	0.012	<0.0005	0.012	<0.003	0.0279
WP7-W	9/24/97	<0.0005	0.0007	0.0037	<0.0005	0.0033	<0.0005	0.0032	<0.003	0.0109
WP8-W	9/24/97	<0.0005	0.0014	0.0022	<0.0005	<0.0005	<0.0005	<0.0005	<0.003	0.0036
WP9-W	9/23/97	<0.0005	0.0007	<0.0005	0.0012	0.004	<0.0005	<0.0005	<0.003	0.0059
WP10-W	9/23/97	<0.0005	<0.0005	<0.0005	0.0033	0.0077	<0.0005	0.0025	<0.003	0.0135
WP11-W	9/23/97	0.0017	<0.0005	<0.0005	0.012	0.02	<0.0005	0.0039	<0.003	0.0376
WP12-W	9/23/97	0.005	0.001	<0.0005	0.02³	0.015³	<0.0005	0.0021	<0.003	0.0431
WP13-W	9/24/97	<0.0005	<0.0005	<0.0005	0.0026	0.0071	<0.0005	0.0017	<0.003	0.0114
WP14-W	9/23/97	0.0012	0.0013	<0.0005	0.0094	0.018	<0.0005	0.0026	<0.003	0.0325
Trip Blank	3/31/95	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0345
	9/22/97 ⁴	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0079	0.0079

Notes: -- = Constituent not analyzed or data not available.
 xx = Bolded numbers indicate compounds identified above the level of detection.
 <x.x = Constituent not detected at stated reporting limit.
 xx/xx = Duplicate sample.
 1990 groundwater samples collected by Subsurface Consultants.
 ND = Constituent not detected; reporting limit unknown.
 Monitoring well locations are shown on Figure 2.
 Laboratory reports are included in Appendix D.

- ¹ EPA Test Method 8010/601 except where noted.
- ² Surrogate recovery was outside of QA/QC limits due to matrix interference.
- ³ Value taken from EPA Test Method 8240.
- ⁴ Laboratory reported that trichlorofluoromethane (0.0008 mg/L) was detected above laboratory reporting limits.

TABLE 3
GROUNDWATER ELEVATIONS, FLOW DIRECTIONS
AND GRADIENT MAGNITUDES
670 98th Avenue, Oakland, California

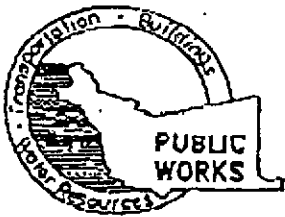
Date	MW-1 ¹		MW-2 ²		MW-3 ³		MW-4 ⁴		MW-5 ⁵		Well 18 ⁶		Ground-water Flow Direction	Gradient Magnitude
	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)	Depth to Ground-water (feet from TOC)	Ground-water Elevation (feet)		
3/1/90 ⁷	8.95	7.24	8.85	7.67	9.17	7.39	9.98	7.73	9.61	--	8.53	7.44	-- ⁸	-- ⁸
3/6/90 ⁷	8.55	7.64	8.46	8.06	8.78	7.78	9.60	8.11	9.23	--	8.11	7.86	-- ⁸	-- ⁸
3/23/90 ⁷	9.17	7.02	9.02	7.50	9.35	7.21	10.20	7.51	9.80	--	8.73	7.24	-- ⁸	-- ⁸
6/30/90 ⁷	9.56	6.63	9.40	7.12	9.74	6.82	10.57	7.14	10.17	--	9.11	6.86	-- ⁸	-- ⁸
10/4/90 ⁷	10.23	5.96	9.80	6.72	10.17	6.39	10.98	6.73	10.59	--	9.50	6.47	-- ⁸	-- ⁸
4/15/93 ⁹	8.47	7.73 ¹⁰	8.31	8.21	8.65	7.91	-- ¹¹	--	-- ¹¹	--	8.06	7.91	-- ⁸	-- ⁸
5/24/93 ⁹	8.93	7.28 ¹⁰	8.73	7.79	9.10	7.46	9.88	7.83	-- ¹¹	--	8.49	7.48	-- ⁸	-- ⁸
6/24/93 ⁹	8.86	7.33 ¹⁰	8.63	7.89	9.02	7.54	9.78	7.93	-- ¹¹	--	8.40	7.57	-- ⁸	-- ⁸
3/31/95	7.47	8.75	7.35	9.17	7.67	8.89	-- ¹¹	--	-- ¹¹	--	7.09 ¹²	8.88	N55W	0.002
12/31/96	6.41	9.77	6.37	10.13	6.62	9.92	8.15	10.25	7.18	10.17	6.01	9.94	N55W	0.002
9/22/97	8.86	7.32	8.69	7.81	9.08	7.46	10.59	7.81	9.48	7.87	8.45	7.50	N68W	0.002

Notes: TOC = Top of well casing.
-- = Data not available.

- ¹ Elevation of top of casing = 16.19 feet above City of Oakland datum (SCI), 16.18 feet (revised 12 July 1996, Bates & Bailey).
- ² Elevation of top of casing = 16.52 feet above City of Oakland datum (SCI), 16.50 feet (revised 12 July 1996, Bates & Bailey).
- ³ Elevation of top of casing = 16.56 feet above City of Oakland datum (SCI), 16.54 feet (revised 12 July 1996, Bates & Bailey).
- ⁴ Elevation of top of casing = 17.71 feet above City of Oakland datum (SCI), 18.40 feet (revised 12 July 1996, Bates & Bailey).

- ⁵ Monitoring well not accessible during elevation survey (SCI), elevation of top of casing = 17.35 feet above City of Oakland datum (revised 12 July 1996, Bates & Bailey).
- ⁶ Elevation of top of casing = 15.97 feet above City of Oakland datum (SCI), 15.95 feet (revised, determined by calculating from revised TOC for MW-1 through MW-5).
- ⁷ Groundwater data collected by Subsurface Consultants, Inc. (SCI).
- ⁸ Groundwater flow direction and gradient magnitude not reported.
- ⁹ Groundwater data collected by Applied Geotechnology, Inc. (AGI).
- ¹⁰ Free product detected. Reported groundwater elevation adjusted by AGI for presence of free product.
- ¹¹ Monitoring wells were inaccessible.
- ¹² Slight petroleum odor and sheen.

APPENDIX A
DRILLING PERMITS



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 670, 98th Ave
Oakland, CA

PERMIT NUMBER 97WR121
WELL NUMBER _____
APN _____

Please see Attached site map
California Coordinates Source _____ ft. Accuracy ± _____ ft.
N _____ ft. CCE _____ ft.
E _____ ft.

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT
Name City of Oakland; Mark Hersh
Address 1333 Broadway Suite 300 Phone (510) 238-6301
City Oakland Zip 94612

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 work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT
Name BASELINE Environmental Consulting Fax 420 1207
Address 5900 Hall's Street Phone 420 8686
City Emeryville CA Zip 94608

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 General
Water Supply Contamination
Monitoring Well Destruction

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 Replacement Domestic
Municipal Irrigation
Industrial Other _____

D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremie cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:
Mud Rotary Air Rotary Auger
Cable Other Well point

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.
F. WELL DESTRUCTION
See attached.

DRILLER'S LICENSE NO. C-57 # 7636387

WELL PROJECTS
Drill Hole Diameter 3 in. Maximum Depth 20 ft.
Casing Diameter 1 in. Number 1
Surface Seal Depth NA ft.
Temporary well points; will be sealed after collection of groundwater.

G. SPECIAL CONDITIONS

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

ESTIMATED STARTING DATE 9-22-97
ESTIMATED COMPLETION DATE 9-29-97

APPROVED [Signature] DATE 9/17/97

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

APPLICANT'S SIGNATURE [Signature] DATE 9-17-97
RG-8 6104



EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL
ENGINEERING

PAGE 2 of 2

PERMIT NUMBER <u>Y 9701123</u>		SITE ADDRESS/LOCATION <u>670 98TH AVE</u>	
APPROX. START DATE <u>9/23/97</u>	APPROX. END DATE <u>9/23/97</u>	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) <u>at 98TH ave.</u>	
CONTRACTOR'S LICENSE # AND CLASS <u>636387</u>		CITY BUSINESS TAX # <u>WEST 7 EDES</u>	
ATTENTION:			
1) State law requires that the contractor/owner call <i>Underground Service Alert (USA)</i> two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: <u>235176</u>			
2) 48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.			
OWNER/BUILDER			
I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than \$500):			
<input type="checkbox"/> I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).			
<input type="checkbox"/> I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).			
<input type="checkbox"/> I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).			
<input type="checkbox"/> I am exempt under Sec. _____, B&PC for this reason _____			
WORKER'S COMPENSATION			
<input type="checkbox"/> I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).			
Policy # _____ Company Name _____			
<input type="checkbox"/> I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars (\$100) or less).			
NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.			
I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.			
Signature of Permittee <u>[Signature]</u>		Date <u>9/19/97</u>	
Agent for <input type="checkbox"/> Contractor <input checked="" type="checkbox"/> Owner			
DATE STREET LAST <u>8/7/97</u>	SPECIAL PAVING DETAIL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
ISSUED BY <u>[Signature]</u>	DATE ISSUED <u>9/19/97</u>		

EXCAVATION

Job Site 670 98TH AV

Parcel# 045 -5276-002-02

Appl# X9701123

Descr soil boring test. at 98th av west of edes. consultant for
city of oakland

Permit Issued 09/19/97

Work Type EXCAVATION-PRIVATE P

USA #

Util Co. Job #
Util Fund #:

Acct#:

Owner BASE LINE ENVIRONMENT

Applicant X Phone: (510) 420-3686

Lic# / --License Classes--

Contractor

Arch/Engr

Agent BELLA HAKRANIA

Applic Addr

\$246.00 TOTAL FEES PAID AT ISSUANCE
\$41.00 Applic \$205.00 Permit
\$.00 Process \$.00 Rec Mgmt
\$.00 Gen Plan \$.00 Invstg
\$.00 Other

CITY OF OAKLAND

Date: 09/19/97 Amt Paid: \$736.00
By: JT Register 892 Receipt# 918396

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL
ENGINEERING

PAGE 2 of 2

PERMIT NUMBER X 9701124		SITE ADDRESS/LOCATION 670 98TH AVE
APPROX. START DATE 9/23/97	APPROX. END DATE 9/23/97	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) at Eder between Nevada & 98TH
CONTRACTOR'S LICENSE # AND CLASS 636387		CITY BUSINESS TAX #

ATTENTION:

- 1) State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: **255176**
- 2) **48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than \$500):

- I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).
- I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).
- I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).
- I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

- I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).
Policy # _____ Company Name _____
- I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars (\$100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

X Bel R **9/19/97**

Signature of Permittee Agent for Contractor Owner Date

DATE STREET LAST RESURFACED 8/92	SPECIAL PAVING DETAIL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
ISSUED BY <u>M. V</u>		DATE ISSUED 9/19/97	

EXCAVATION

Job Site 670 98TH AV

Parcel# 045 -5276-002-02

Appl# X9701124

Descr soil boring test. at edes between nevada & 98th av. consulta Permit Issued 09/19/97
nt for city of oakland.

Work Type EXCAVATION-PRIVATE, E.

USA #

Util Co. Job #
Util Fund #:

Acct#:

Applicant Phone#
N (510) 420-8686

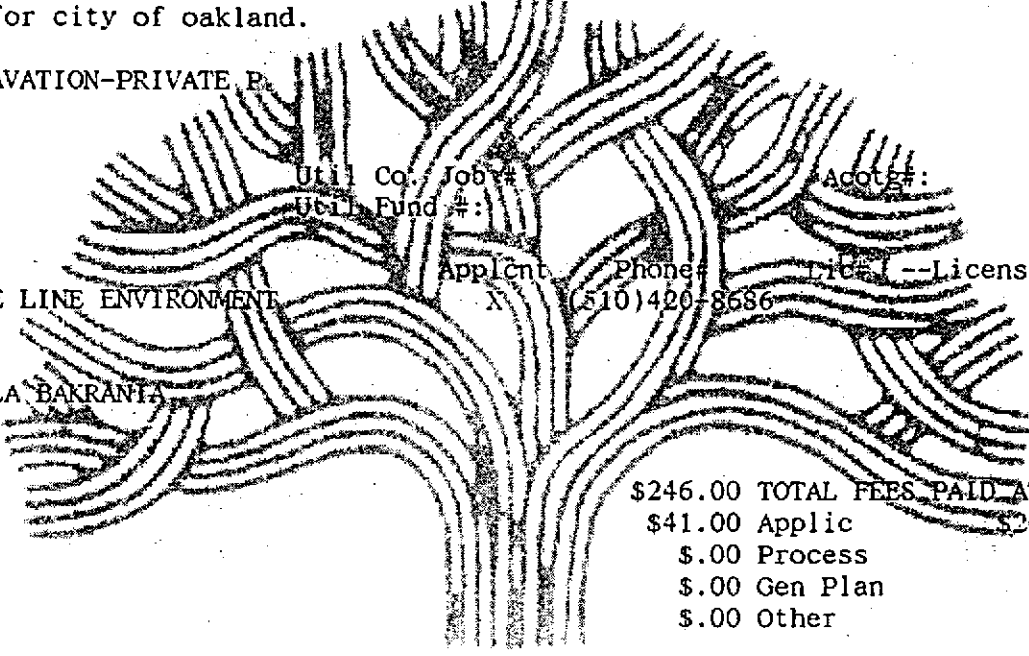
License Classes--

Owner BASE LINE ENVIRONMENT

Contractor
Arch/Engr

Agent BELLA BAKRANIA

Applic Addr



\$246.00 TOTAL FEES PAID AT ISSUANCE
\$41.00 Applic \$205.00 Permit
\$.00 Process \$.00 Rec Mgmt
\$.00 Gen Plan \$.00 Invstg
\$.00 Other

CITY OF OAKLAND

Date: 09/19/97 Amt Paid: \$730.00
By: JT Register R92 Receipt# 019396

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL
ENGINEERING

PAGE 2 of 2

PERMIT NUMBER <i>X9701125</i>		SITE ADDRESS/LOCATION <i>670 98TH AVE.</i>
APPROX. START DATE <i>9/23/97</i>	APPROX. END DATE <i>9/23/97</i>	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) <i>at EDES between</i>
CONTRACTOR'S LICENSE # AND CLASS <i>636387</i>		CITY BUSINESS TAX # <i>98TH & Douglas</i>

ATTENTION:

- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: 255176
- 48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than \$500):

- I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).
- I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).
- I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).
- I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

- I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).
- Policy # _____ Company Name _____
- I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars (\$100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

[Signature] _____ *9/19/97* _____
Signature of Permittee Agent for Contractor Owner Date

DATE STREET LAST RESURFACED <i>8/92</i>	SPECIAL PAVING DETAIL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	HOLIDAY RESTRICTION? (NOV. 1 - JAN. 1) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
ISSUED BY <i>M. Miller</i>		DATE ISSUED <i>9/19/97</i>	

Bella Bakrania
510 420 8686

*Base line environ
mental*

EXCAVATION

Job Site 670 98TH AV

Parcel# 045 -5276-002-02

Appl# X9701125

Descr soil boring test. at edes between 98th & douglas. consultant Permit Issued 09/19/97
for city of oakland.

Work Type EXCAVATION-PRIVATE P

USA #

Util Co Job #
Util Fund #:

Acctg#:

Owner BASE LINE ENVIRONMENT

Applicant X Phone (510) 420-8686

IC#1 --License Classes--

Contractor

Arch/Engr

Agent BELLA BAKRANIA

Public Addr

\$246.00 TOTAL FEES PAID AT ISSUANCE
\$41.00 Applic \$205.00 Permit
\$.00 Process \$.00 Rec Mgmt
\$.00 Gen Plan \$.00 Invstg
\$.00 Other

CITY OF OAKLAND

Date: 09/19/97 Amt Paid: \$730.00
By: JT Register R02 Receipt# 013376

RIGHT OF ENTRY FOR SITE ASSESSMENT

PAMCO, as owners of the real property located at 700 98th Avenue (APN 045-5276-4-5), in the City of Oakland, County of Alameda, State of California, hereby grant the City of Oakland, its employees, agents, and/or contractors the right to enter upon the above referenced real property between September 22 and September 30, 1997, for the purpose of conducting an environmental site assessment.

The environmental site assessment will consist of the following:

- Collection of three groundwater samples using a truck mounted drill rig that will push a retractable sampling rod to a depth of approximately 12 feet, removing the rod, and temporarily inserting a PVC pipe into the hole to retrieve a sample of groundwater.
- The approximately 1.5-inch diameter hole will then be completely filled from the bottom up to the surface with a cement grout.

It is expressly understood that this Right of Entry shall not in any way whatsoever grant or convey any permanent easement or other interest in said property to the City.

The City of Oakland hereby agrees to hold the Owners harmless from and against any claims or liability for any injury or damage to any persons or property occurring in or about the subject property resulting from any negligence or misconduct of the City of Oakland, its employees, agents, and/or contractors and its council members in connection with entry onto subject property and the performance of the environmental site assessment.

All property disturbed in the performances of the environmental site assessment will be restored by the City to its original condition, or better.

By: *[Signature]*
PAMCO

Date: 09/16/97

Accepted:
[Signature]
Frank Fanelli, ASA
Manager, Real Estate Services

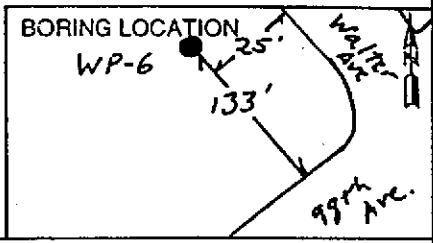
Approved as to
Form and Legality
[Signature]
Office of the City Attorney

APPENDIX B
BORING LOGS

LOCATION 670 98th Ave, Oakland
 SURFACE ELEVATION _____
 DRILLING METHOD Direct Push
 SAMPLING METHOD Enviro Core

BORING DEPTH 16'
 DATE BEGAN 9/22/97
 DATE FINISHED 9/22/97
 LOGGED BY J. Schollard
 EDITED BY _____
 CHECKED BY _____

BORING NO. WP-6
 SHEET 1 OF 1



DEPTH (FEET)	WELL CONSTRUCTION	WATER LEVEL	PID (PPM) B-zone/stem/sample	BLOW COUNTS (BLOWS/FOOT)	SAMPLE TYPE	U.S.C.S.	LITHOLOGY	DESCRIPTION
0			0.0				GV	~3" asphalt GRAVEL with Sand, fine to coarse grained, subangular (SA) to angular (A) gravel and sand, dark grey, dry-damp; no odor; Basalrock
			0.0					
			2.0					Sandy CLAY, fine-coarse grnd. sand, dark grey, damp, low plasticity, stiff; no odor, homogeneous
4.0			3.4				CL	CLAY with Sand, fine grained, olive brown, moist, medium plasticity, med. stiff-stiff; no odor, light grey seams (2 1/8" thick) + black colored pockets (2 1/4" thick) Same, mottled brown and olive-brown, lacks grey + black inclusions
			2.4					
8.0			4.0					gradational contact (8 1/2 - 9 1/2')
		9' (1500) (150)	3.4				SC	clayey SAND, fine grained, mottled light olive-brown and brange brown, moist; no odor Same
12.0			4.4					
					WP6 15 1/2'		GC/SC	Wet at approx. 13 1/2' clayey GRAVEL with Sand to clayey SAND with gravel, fine to coarse grained, SA to sub rounded (SR) gravel and sand, medium brown, predom. moist with pockets of wet material; no odor, homogeneous
16.0			0.0					Total Depth = 16'
								Collected "WP6-W" water sample @ 11.45'
20.0								
24.0								
28.0								
32.0								



Background PID = 0.0 ppm


INNOVATIVE TECHNICAL SOLUTIONS, INC.

PROJECT Baseline / 98th Ave.
 PROJECT NO. 97-044

PROJECT 98th Baseline
 PROJECT NUMBER 97-044
 LOCATION 98th Ave, Oakland
 SURFACE ELEVATION NA

LOGGED BY WKS
 DATE DRILLED 9-24-97
 TOTAL DEPTH 15'
 BORING DIAMETER 4"
 DRILLING COMPANY Precision
 DRILLING METHOD DPT

BORING NO. WA-13
 SHEET 1 OF 1

BORING LOCATION 

Depth (Feet)	Sample Interval	Blow Counts	PID (ppm) B-zone/ftm/sample	Water Level	Well Construction	Lithology / USCS	DESCRIPTION
		NA	0.0		NA	GW / SW	Reddish Brown, Sand and Gravel with silt, fine to medium grained 1/2-3/4 diameter clasts sub angular. Medium dense, Dry
5	X 100% Recovery		2.0			CL	Drk Brown, Silty clay with Sand and Gravel, fine to medium grained 1/2-3/4" sub rounded to rounded clasts, Dry, STIFF, Sample WP13-S; S.O-S.S
	X 100%					ML	
10	X 100%		0.1			CL	Pale Brown, yellowish brown, silt with Sand and clay, Homogeneous STIFF, Damp.
	X 100%					SC	Brown silty clay, trace of gravel + sand. V. fine to fine, 1/2-1/4 diameter sub rounded clasts, Homogeneous, Firm, moist - very moist WP15-S; 9.5-10.0
15	X 100%					SW	Pale Brown, clayey sand, Trace of gravel. loose, very moist Brown Sand with Gravel + Trace silt + clay, fine to medium grained, sub angular clasts up to 1.5 diameter, wet increase in gravel content and sand size @ 14'-15'
20							
25							
30							

TD 15'

CASING DIAMETER _____ CASING LENGTH _____ FROM _____ TO _____
 SCREEN SIZE _____ SCREEN LENGTH _____ FROM _____ TO _____
 SAND TYPE _____ FROM _____ TO _____
 BENTONITE TYPE _____ FROM _____ TO _____
 CEMENT/GROUT _____ FROM _____ TO _____



INNOVATIVE TECHNICAL SOLUTIONS, INC.

APPENDIX C

GROUNDWATER SAMPLING FORMS

MONITORING WELL DEVELOPMENT FORM

PROJECT NAME: 98th / Baseline

PROJECT NO.: 97-044

WELL NO.: MW-1

TESTED BY: WFS

DATE: 9-22-97

Measuring Point Description: Make on TOC

Static Water Level (ft.): 8:56 @ 7.78

Total Well Depth (ft.): 19.30

Sample Method: Peristaltic pump

Water Level Measurement Method: D.I.P

Time Sampled: 8:45

Purge Method: Peristaltic pump

Sample Depth (ft.): 12.0

Time Start Purge: 8:10

Field Filtering: none

Time End Purge: 8:37

Field Preservation: Lab prep. bottles

Comments: WL BS 8:57

CHECKED BY: _____

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	19.30	8.86	= 10.44	<u>0.16</u>	0.64	1.44	= 1.70

Time	8:14	8:19	8:26	8:31	8:37		
Volume Purged (gallons)	1.0	2.5	3	2	2		
Cumulative Volume Purged (gallons)	1.0	3.5	6	8	10		
Cumulative Number of Casing Volumes	0.58	2.1	3.5	4.7	5.9		
Purge Rate (gpm)	0.25	0.50	0.42	0.40	0.33		
Temperature (F°)	21.3	21.8	21.4	21.6	21.7		
pH	6.76	6.72	6.72	6.71	6.70		
Specific Conductivity (umhos/cm)	600	600	600	600	600		
Dissolved Oxygen (mg/L)	—	—	—	—	—		
Turbidity/Color (NTU)		same	same	clear	clear		
Odor	slight	"	"	"	"		
Dewatered?							

Black algal particles in purge water

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 98th / Baseline

PROJECT NO.: 97004

WELL NO.: MW-2

TESTED BY: LKS

DATE: 9-22-97

Measuring Point Description: Mark at TOC

Static Water Level (ft.): 8.69

Total Well Depth (ft.): 27.50

Sample Method: Peristaltic pump

Water Level Measurement Method: DIP

Time Sampled: 12:40

Purge Method: Peristaltic pump

Sample Depth (ft.): 18.0

Time Start Purge: 12:05

Field Filtering: none

Time End Purge: 12:28

Field Preservation: Lab. Prep bottles

Comments: _____

WLBS 8.70

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	27.50	8.69	= 18.81	x <u>0.16</u>	0.64	1.44	= 3
Time	12:08	12:15	12:25	12:29			
Volume Purged (gals)	1	3	4	2			
Cumulative Volume Purged (gals)	1	4	8	10			
Cumulative Number of Casing Volumes	.33	1.33	2.66	3.33			
Purge Rate (gpm)	0.33	0.43	0.40	0.50			
Temperature (F°) or (C°)	19.3	19.6	19.5	19.9			
pH	6.63	6.63	6.62	6.62			
Specific Conductivity (µmhos/cm)	550	550	550	550			
Dissolved Oxygen (mg/L)	-						
Turbidity/Color (NTU)	-						
Odor	-						
Dewatered?	-						

CHECKED BY: _____

DATE: _____

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 98/ⁱⁿBaseline

PROJECT NO.: 97-044

WELL NO.: MW-3

TESTED BY: WKS

DATE: 9-22-97

Measuring Point Description: Mark on TOC

Static Water Level (ft.): 9.08

Total Well Depth (ft.): 22.30

Sample Method: Peristaltic pump

Water Level Measurement Method: D.I.P

Time Sampled: 10:25

Purge Method: Peristaltic pump

Sample Depth (ft.): 18.0

Time Start Purge: 9:45

Field Filtering: none

Time End Purge: 10:15

Field Preservation: none lab prep. bottles

Comments: _____

W.L.B.S. 9.10

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	22.30	9.08	13.22	0.26	0.64	1.44	2.1
Time	9:50	9:56	10:06	10:15			
Volume Purged (gals)	1.5	2.5	3	3			
Cumulative Volume Purged (gals)	1.5	4	7	10			
Cumulative Number of Casing Volumes	0.70	0.95	3.3	4.76			
Purge Rate (gpm)	0.30	0.41	0.30	0.33			
Temperature (F°) or (C°)	21.6	21.5	21.6	21.6			
pH	6.64	6.62	6.61	6.61			
Specific Conductivity (µmhos/cm)	550	525	525	525			
Dissolved Oxygen (mg/L)	-	-	-				
Turbidity/Color (NTU)	/	same	clear	clear			
Odor	-	-	-				
Dewatered?	-	-	-				

CHECKED BY: _____

DATE: _____

clear with orange precipitate

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 98¹²/Baseline

PROJECT NO.: _____

WELL NO.: MW-4 TESTED BY: _____

DATE: 9-22-97

Measuring Point Description: Mark on TOC

Static Water Level (ft.): 10.59

Total Well Depth (ft.): 21.10

Sample Method: Peristaltic Pump

Water Level Measurement Method: DIP

Time Sampled: 11:10

Purge Method: Peristaltic Pump

Sample Depth (ft.): 18.0

Time Start Purge: 10:42

Field Filtering: None

Time End Purge: 11:00

Field Preservation: Lab Prep. bottles

Comments: _____

WL. B.S 10.60 @ 11.03

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	x	Multiplier for Casing Diameter (in)			Casing Volume (gal)
					2	4	6	
	21.10	10.59	= 10.51	x	0.16	0.64	1.44	= 1.7
Time	10:48	10:55	11:00					
Volume Purged (gals)	2	2	1.5					
Cumulative Volume Purged (gals)	2	4	5.5					
Cumulative Number of Casing Volumes	1.2	2.4	3.2					
Purge Rate (gpm)	0.33	0.29	0.30					
Temperature (F° or C°)	20.6	20.1	20.1					
pH	6.62	6.59	6.60					
Specific Conductivity (µmhos/cm)	550	550	550					
Dissolved Oxygen (mg/L)	-	-						
Turbidity/Color (NTU)	-	-						
Odor	-	-						
Dewatered?								

CHECKED BY: _____

DATE: _____

MONITORING WELL PURGE AND SAMPLE FORM

PROJECT NAME: 98th Ave/Casoline

PROJECT NO.: 97-044

WELL NO.: MW-5

TESTED BY: LWS

DATE: 9-22-97

Measuring Point Description: Max on Tol

Static Water Level (ft.): 9.48

Total Well Depth (ft.): 22.0

Sample Method: Peristaltic Pump

Water Level Measurement Method: DIP

Time Sampled: 13:40

Purge Method: Peristaltic pump

Sample Depth (ft.): 18.0

Time Start Purge: 12:59

Field Filtering: none

Time End Purge: 13:22

Field Preservation: Lab prep. bottles

Comments: _____

WLBS 9.49

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	22		9.48		12.52		0.10	0.64	1.44		2
Time	13:04		13:10		13:15		13:22				
Volume Purged (gals)	0.75		2.25		1.5		1.5				
Cumulative Volume Purged (gals)	0.75		3		4.5		6				
Cumulative Number of Casing Volumes	0.38		1.5		2.25		3.0				
Purge Rate (gpm)	0.15		0.38		0.30		0.21				
Temperature (F°) or (C°)	20.7		20.2		20.0		20.0				
pH	6.76		6.73		6.67		6.70				
Specific Conductivity (µmhos/cm)	550		500		500		500				
Dissolved Oxygen (mg/L)	—										
Turbidity/Color (NTU)	—										
Odor	—										
Dewatered?											

CHECKED BY: _____

DATE: _____

13:46 pH 9.97/6.97 C° 33.7 EC 1,100 µmhos AFTER purge

MONITORING WELL DEVELOPMENT FORM

PROJECT NAME: 981 Baseline PROJECT NO.: 97-044

WELL NO.: 18 TESTED BY: WBS DATE: 9-22-97

Measuring Point Description: Mark on TOC Static Water Level (ft.): 8.45 @ 6:55

Total Well Depth (ft.): 16.55 Sample Method: Peristaltic Pump

Water Level Measurement Method: DIP Time Sampled: 7:45

Purge Method: Peristaltic Pump Sample Depth (ft.): 12'00

Time Start Purge: 7:03 Field Filtering: none

Time End Purge: 7:34 Field Preservation: Lab. Prop. bottles

Comments: Water level before sampling (WBS) 8.46' from TOC

CHECKED BY: _____

Well Volume Calculation (fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in)			Casing Volume (gal)
				2	4	6	
	16.55	8.45	= 8.1	x 0.16	0.64	1.44	= 1.32 x 66
Time	7:03	7:08	7:14	7:22	7:28	7:34	
Volume Purged (gallons)	0	1	2	2	1.5	1.5	
Cumulative Volume Purged (gallons)	0	1	3	5	6.5	8.0	
Cumulative Number of Casing Volumes	0	0.76	2.27	3.76	4.9	6.1	
Purge Rate (gpm)	-	0.20	0.33	0.25	0.19	0.25	
Temperature (F°)	-	20.3	20.3	20.5	20.5	20.4	
pH	-	7.05	6.86	6.81	6.72	6.69	
Specific Conductivity (umhos/cm)	-	800	750	675	650	650	
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	
Turbidity/Color (NTU)	-	V.S.T	V.S.T	clear	clear	clear	
Odor	-	slight	"	"	"	-	
Dewatered?	-						

CALIBRATION

Time	pH	EC	Temp C°	
6:49	7.00/10.01	1.000	26.0	Prior to purging
13:46	6.97/9.97	1.000	33.7	After purging

ITSI



WP Borings' Descriptions/Samples:

PROJECT NAME: Baselin/98th Ave

DATE: 9/22-24/97

PROJECT NUMBER: 97-044

DAILY ACTIVITY REPORT

PAGE 1 OF 2

SITE LOCATION: 670 98th Ave, Oakland

TIME	Boring ID	Sample ID	PID (Dcm)	DESCRIPTION OF FIELD ACTIVITIES AND EVENTS / Sample Description
1145	WP-6	WP6-13 1/2'	4.4 (13')	S/W Interface: clayey GRAVEL w/sand to clayey SAND w/gravel, see Boring Log WP-6 (TD=16')
"		WP6-W	—	wet @ ~13 1/2' / DTW inf = 9.0' (Purged* 2-2.5 gallons) Will submit water sample (WP6-W) for analysis only
1320	WP-5	WP5-14 1/2'	3.1	S/W interface: SAND, fn. grained, trace clay, mottled light brown wet; no odor, homogeneous (TD=16')
"		WP5-W	—	wet @ ~14 1/2' / DTW i = 10', DTW e = 9.5' (Purged* 2-2.5 gallons) Will submit water sample (WP5-W) for analysis only.
1515	WP-2	WP2-W	—	No water @ 15', will drive to 18'. water encountered 16'-18'. Depth to water = 12.10 (purged* 2.5 gal.) (TD=18') Will submit water sample (WP2-W) for analysis only.
1600	WP-3	WP3-W	—	DTW = 11.6 TD = 17.1' Purged ~ 0.5 gal until grained sands present; will submit "WP3-W" water sample for analysis.
				REFERENCE SKETCH: dry, moderate fine slow recharge.
				(Continued on pg. 2)

PREPARED BY: Jim Schallard

DISTRIBUTION:

DATE: 9/22/97

Background PID = 0.0 ppm
* purging performed prior to sample collection

CHECKED BY: _____

DATE: _____

PREPARERS SIGNATURE: [Signature]

REVIEWERS SIGNATURE: _____

* Not appropriate for a field activity report when only one responsible person is in the field.



DAILY ACTIVITY REPORT

PROJECT NAME: Dosalin/98th
PROJECT NUMBER: 97-044
SITE LOCATION: 670 98th Ave., Oakland

DATE: 9/23-24/97
PAGE 2 OF 2

TIME	S/W	Boring ID	Sample ID	PID (Feet)	DESCRIPTION OF FIELD ACTIVITIES AND EVENTS			Sample Description/Comments
					DTW	TD	Vol. purged	
7:35	S	WP-1	WP-1; 5.0-5.5	3.7	—	—	—	Brown, Sandy clay cl. Trace of gravel (1/3" - 1/4")
7:40	S		WP-1; 9.5-10.0	3.0	—	—	—	Dark Brown, Silty clay cl. Homogeneous, Trace of veinlets (for submittal to City of Oakland)
8:24	W		WP1-W	—	11.5	18.0	3 gal	} Water samples for submittal to laboratory V.S. Turbid
8:30	W	✓	QC-1	—	—	—	—	
10:30	W	WP-14	WP14-W	—	10.9	16.0	2.5	V.S. Turbid. Water sample for lab analysis
12:00	W	WP-12	WP12-W	—	9.3	16.0	2.5	V.S. Turbid water sample for Lab.
13:40	W	WP-11	WP11-W	—	9.0	16.0	2.5	V.S. Turbid water sample for Lab.
14:40	W	WP-10	WP10-W	—	9.9	15.0	1.5	V.S. Turbid water sample for lab, abundant coarse to medium grained sand bottom of boring pick up during purging. Sand layer possibly from 14'-15' indicated by increase in difficulty advancing tip.
16:30	W	WP-9	WP9-W	—	9.6	16.0	1.0	V.S. Turbid - S. Turbid, water sample for Lab
8:08	S	WP-13	WP13-5.0-5.5	—	—	—	—	- REFERENCE SKETCH
8:16	S		WP13-9.5-10.0	—	—	—	—	
8:45	W	WP-13	WP13-W	—	9.2	15	2	V.S. Turbid w/ some sand grains, water sample for Lab.
10:10	W	WP-8	WP8-W	—	10.2*	15	1.5	V.S. Turbid - S. Turbid water sample for lab.
11:20	W	WP-7	WP7-W	—	10.5*	15	1.0	Slow recharge S. Turbid water sample for Lab
11:46	S	NA	DS-1 DS-2	—	—	—	—	collected soil samples from within soil buckets.
12:30								left site AFTER cleaning up.

PREPARED BY: Bill Scott
DATE: 9/23-24/97
CHECKED BY: _____
DATE: _____

DISTRIBUTION: _____

Dropped Drums off @ U.S. Rental site, a total of 2 - soil (buckets) 6 - H₂O (55-gallon) on site (Two of the six were previously on site from G.W. Sampling event.)

PREPARERS SIGNATURE: _____ REVIEWERS SIGNATURE: _____

* Not appropriate for a field activity report when only one responsible person is in the field.

* W.L. Rising

APPENDIX D
LABORATORY REPORTS

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: MW-1

Spl#: 149065

Matrix: WATER

Sampled: September 22, 1997


Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	---	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	1.1	0.50	N.D.	--	1
1,1-DICHLOROETHANE	1.5	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	1.9	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	5.6	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	1.8	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist


for
Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: MW-2

Spl#: 149066

Matrix: WATER

Sampled: September 22, 1997

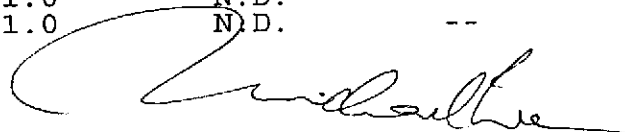
Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	1.7	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	12	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	6.3	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager for

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: MW-3

Spl#: 149067


Matrix: WATER

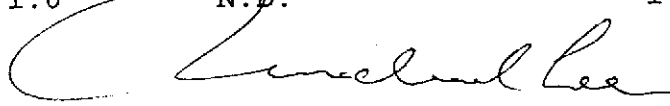
Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	5.5	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	12	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	2.8	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: MW-4

Spl#: 149068

Matrix: WATER

Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	2.1	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	0.60	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	47	0.50	N.D.	--	1
<i>Note: Data obtained from method 8240A.</i>					
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



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Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: MW-5

Spl#: 149069

Matrix: WATER

Sampled: September 22, 1997

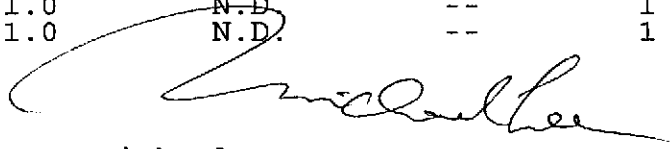
Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	1.9	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



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Environmental Services (SDB)

October 3, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: 18


Spl#: 149070

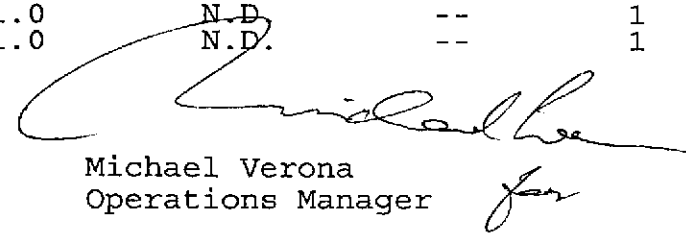
Matrix: WATER

Sampled: September 22, 1997 Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	0.70	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	4.8	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	18	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	11	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


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Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-1

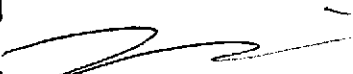
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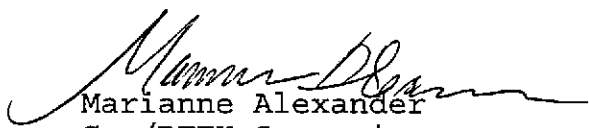
Matrix: WATER

Sampled: September 22, 1997 Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	2000	250	N.D.	88	5
BENZENE	35	2.5	N.D.	96	5
TOLUENE	N.D.	2.5	N.D.	104	5
ETHYL BENZENE	140	2.5	N.D.	106	5
XYLENES	560	2.5	N.D.	104	5


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-256-8998

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
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GC V132 O: BTEXQC0220

KAYVAN 17:33

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-2

Spl#: 149066


Matrix: WATER


Sampled: September 22, 1997

Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	88	1
BENZENE	N.D.	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	106	1
XYLENES	N.D.	0.50	N.D.	104	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH

Project#: 97044

Received: September 22, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-3

Spl#: 149067


Matrix: WATER

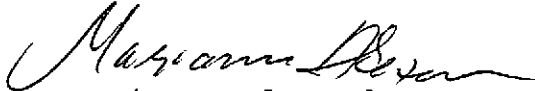
Sampled: September 22, 1997

Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	61	50	N.D.	88	1
BENZENE	N.D.	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	106	1
XYLENES	N.D.	0.50	N.D.	104	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH

Project#: 97044

Received: September 22, 1997

re: One sample for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-4

Spl#: 149068

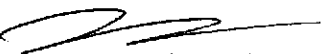
Matrix: WATER


Sampled: September 22, 1997

Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	88	1
BENZENE	N.D.	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	106	1
XYLENES	N.D.	0.50	N.D.	104	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH

Project#: 97044

Received: September 22, 1997

re: One sample for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-5

Spl#: 149069


Matrix: WATER


Sampled: September 22, 1997

Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	88	1
BENZENE	N.D.	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	106	1
XYLENES	N.D.	0.50	N.D.	104	1


Kayvan Kimyai
Chemist


Marianne Alexander
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CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: 18


Spl#: 149070


Matrix: WATER

Sampled: September 22, 1997 Run#: 8859

Analyzed: September 26, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	190	50	N.D.	88	1
BENZENE	8.5	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	4.8	0.50	N.D.	106	1
XYLENES	7.4	0.50	N.D.	104	1


Kayvan Kimyai
Chemist


Marianne Alexander
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CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997


Project#: 97044

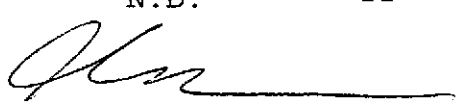
re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-1

Spl#: 149065 Matrix: WATER Extracted: September 26, 1997
Sampled: September 22, 1997 Run#: 8845 Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

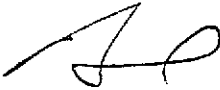
Project#: 97044

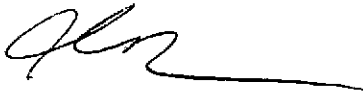
re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-2

Spl#: 149066 Matrix: WATER Extracted: September 26, 1997
Sampled: September 22, 1997 Run#: 8845 Analyzed: September 29, 1997

<u>ANALYTE</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>SPIKE</u> <u>(%)</u>	<u>DILUTION</u> <u>FACTOR</u>
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
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Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-3

Spl#: 149067

Matrix: WATER


Extracted: September 26, 1997

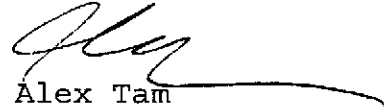
Sampled: September 22, 1997

Run#: 8845

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

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Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH

Project#: 97044

Received: September 22, 1997

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-4

Spl#: 149068

Matrix: WATER

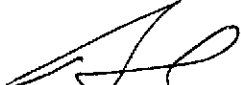
Extracted: September 26, 1997

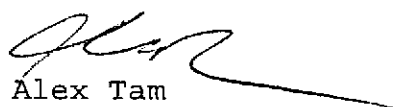
Sampled: September 22, 1997

Run#: 8845

Analyzed: September 27, 1997

<u>ANALYTE</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>SPIKE</u> <u>(%)</u>	<u>DILUTION</u> <u>FACTOR</u>
DIESEL	N.D.	50	N.D.	81.5	1
MOTOR OIL	N.D.	500	N.D.	--	1
KEROSENE	N.D.	50	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-5

Spl#: 149069

Matrix: WATER


Extracted: September 26, 1997


Sampled: September 22, 1997

Run#: 8845

Analyzed: September 27, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709378

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH
Received: September 22, 1997

Project#: 97044

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: 18

Spl#: 149070

Matrix: WATER

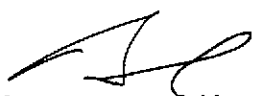
Extracted: September 26, 1997

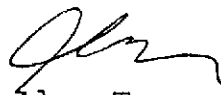
Sampled: September 22, 1997

Run#: 8845

Analyzed: September 27, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Service (SOB)

Sample Receipt Checklist

Client Name: **INNOVATIVE TECHNICAL SOLUTIONS** Date/Time Received: **09/22/97** | 1737

Reference/Submis: **35655** | **9709378** Received by: CK

Checklist completed by: Chris Lowley | 9/25/97 Reviewed by: MW | 9/25/97
Signature | Date | Initials | Date

Matrix: H₂O Carrier name: Client - C/L

- Shipping container/cooler in good condition? Yes No Not Present
 - Custody seals intact on shipping container/cooler? Yes No Not Present
 - Custody seals intact on sample bottles? Yes No Not Present
 - Chain of custody present? Yes No
 - Chain of custody signed when relinquished and received? Yes No
 - Chain of custody agrees with sample labels? Yes No
 - Samples in proper container/bottle? Yes No
 - Sample containers intact? Yes No
 - Sufficient sample volume for indicated test? Yes No
 - All samples received within holding time? Yes No
 - Container/Temp Blank temperature in compliance? Temp: 6.2°C Yes No
 - Water - VOA vials have zero headspace? No VOA vials submitted Yes No
 - Water - pH acceptable upon receipt? yes Adjusted? Checked by: CK
chemist for VOAs
- Any No and/or NA (not applicable) response must be detailed in the comments section below

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: TRIP BLANK

Spl#: 149060


Matrix: WATER

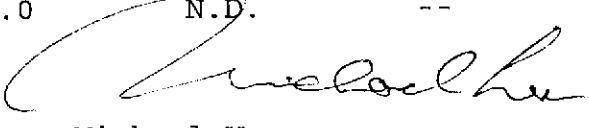
Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	0.80	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	7.9	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager *for*

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP6-W

Spl#: 149061


Matrix: WATER


Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	0.50	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	2.6	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	0.80	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	12	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	12	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP5-W

Spl#: 149062


Matrix: WATER

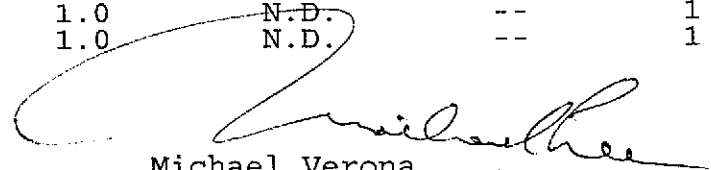
Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	1.9	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	10	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	15	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP2-W

Spl#: 149063

Matrix: WATER

Sampled: September 22, 1997

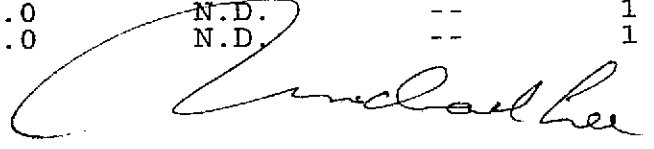
Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	1.0	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	5.3	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	29	0.50	N.D.	110	1
<i>Note: Data obtained from method 8240A.</i>					
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	11	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP3-W

Spl#: 149064

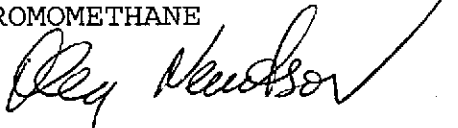
Matrix: WATER

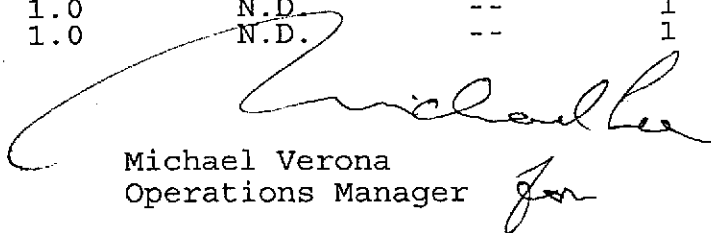
Sampled: September 22, 1997

Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	2.6	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	4.3	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	6.6	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	29	0.50	N.D.	--	1
Note: Data obtained from method 8240A.					
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP5-W

Spl#: 149062

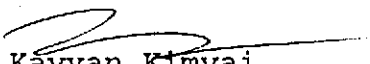
Matrix: WATER

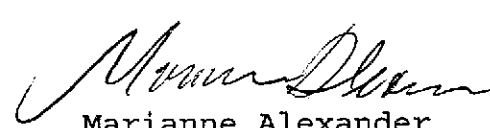
Sampled: September 22, 1997

Run#: 8811

Analyzed: September 25, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	76	50	N.D.	76	1
BENZENE	N.D.	0.50	N.D.	101	1
TOLUENE	N.D.	0.50	N.D.	109	1
ETHYL BENZENE	N.D.	0.50	N.D.	110	1
XYLENES	N.D.	0.50	N.D.	107	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

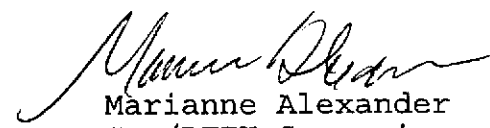
re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP6-W

Spl#: 149061 Matrix: WATER
Sampled: September 22, 1997 Run#: 8811 Analyzed: September 25, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	76	1
BENZENE	N.D.	0.50	N.D.	101	1
TOLUENE	N.D.	0.50	N.D.	109	1
ETHYL BENZENE	N.D.	0.50	N.D.	110	1
XYLENES	N.D.	0.50	N.D.	107	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997


Project#: 97-044


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP6-W

Spl#: 149061 Matrix: WATER Extracted: September 26, 1997
Sampled: September 22, 1997 Run#: 8845 Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	54	N.D.	81.5	1
MOTOR OIL	N.D.	540	N.D.	--	1
KEROSENE	N.D.	54	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997


Project#: 97-044


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP5-W

Spl#: 149062 Matrix: WATER Extracted: September 26, 1997
Sampled: September 22, 1997 Run#: 8845 Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	54	N.D.	81.5	1
MOTOR OIL	N.D.	540	N.D.	--	1
KEROSENE	N.D.	54	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE

Project#: 97-044

Received: September 22, 1997

re: One sample for TEPH analysis.

Method: EPA 8015M

Client Sample ID: WP2-W

Spl#: 149063

Matrix: WATER

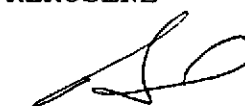
Extracted: September 26, 1997


Sampled: September 22, 1997

Run#: 8845

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	53	N.D.	81.5	1
MOTOR OIL	N.D.	530	N.D.	--	1
KEROSENE	N.D.	53	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 29, 1997

Submission #: 9709377

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: 98TH/BASELINE
Received: September 22, 1997

Project#: 97-044

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP3-W

Spl#: 149064

Matrix: WATER


Extracted: September 26, 1997

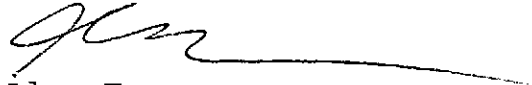
Sampled: September 22, 1997

Run#: 8845

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	81.5	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: INNOVATIVE TECHNICAL SOLUTIONS Date/Time Received: 09/22/97 | 1737

Reference/Submis: 35654 | 9709377 Received by: CR

Checklist completed by: Chris Rowley Signature | 9/25/97 Date | Reviewed by: MW Initials | 9/25/97 Date

Matrix: H₂O Carrier name: Client - C/L _____

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Temp: 6.2 C Yes No
- Water - VOA vials have zero headspace? Yes No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? YES Adjusted? Checked by CR chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP1-W


Spl#: 149145

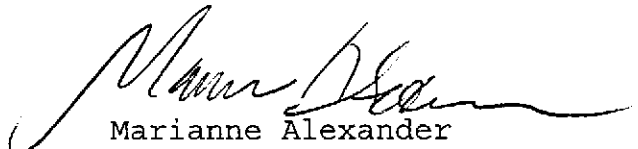
Matrix: WATER

Sampled: September 23, 1997 Run#: 8879

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	84	1
BENZENE	N.D.	0.50	N.D.	102	1
TOLUENE	N.D.	0.50	N.D.	111	1
ETHYL BENZENE	N.D.	0.50	N.D.	113	1
XYLENES	N.D.	0.50	N.D.	110	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-256-8998

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

GC V132 O: BTEXQC0220
KAYVAN 08:07

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: QC-1

Spl#: 149147

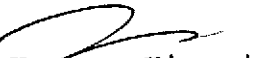
Matrix: WATER

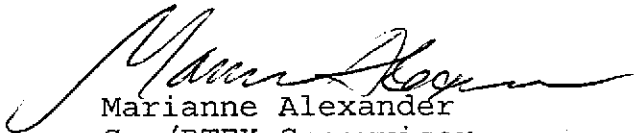
Sampled: September 23, 1997

Run#: 8879

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	84	1
BENZENE	N.D.	0.50	N.D.	102	1
TOLUENE	N.D.	0.50	N.D.	111	1
ETHYL BENZENE	N.D.	0.50	N.D.	113	1
XYLENES	N.D.	0.50	N.D.	110	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

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Federal ID #68-0140157

QC V132 O: BTEXQC0220
KAYVAN 08:07

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP14-W

Spl#: 149151


Matrix: WATER

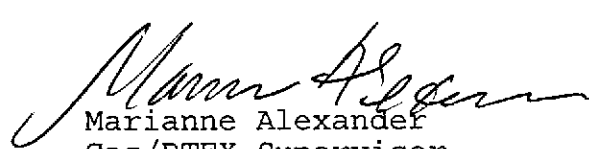
Sampled: September 23, 1997

Run#: 8879

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	84	1
BENZENE	N.D.	0.50	N.D.	102	1
TOLUENE	N.D.	0.50	N.D.	111	1
ETHYL BENZENE	N.D.	0.50	N.D.	113	1
XYLENES	N.D.	0.50	N.D.	110	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS


Atten: Jeff Hess


Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP12-W
Spl#: 149153 Matrix: WATER
Sampled: September 23, 1997 Run#: 8879 Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	980	50	N.D.	84	1
BENZENE	97	0.50	N.D.	102	1
TOLUENE	110	0.50	N.D.	111	1
ETHYL BENZENE	110	0.50	N.D.	113	1
XYLENES	320	0.50	N.D.	110	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP10-W

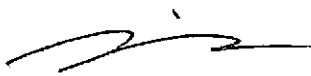
Spl#: 149155


Matrix: WATER

Sampled: September 23, 1997 Run#: 8896

Analyzed: September 30, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	91	1
BENZENE	N.D.	0.50	N.D.	105	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	103	1
XYLENES	N.D.	0.50	N.D.	100	1


Kayvan Kimyai
Chemist


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Federal ID #68-0140157

GCV132 0: BTEXQC0220
KAYVAN 08:07

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK .. Project#: 97-044
Received: September 23, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP9-W

Spl#: 149156


Matrix: WATER

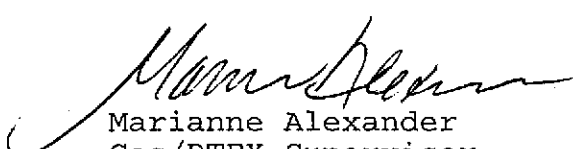
Sampled: September 23, 1997

Run#: 8896

Analyzed: September 30, 1997

ANALYTE	RESULT	REPORTING	BLANK	BLANK	DILUTION
	(ug/L)	LIMIT	RESULT	SPIKE	FACTOR
		(ug/L)	(ug/L)	(%)	
GASOLINE	N.D.	50	N.D.	91	1
BENZENE	N.D.	0.50	N.D.	105	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	103	1
XYLENES	1.0	0.50	N.D.	100	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-256-8998

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Federal ID #68-0140157

GG V132 O: BTEXQC0220
KAYVAN 08:07

CHROMALAB, INC.

Environmental Services (SDB)

October 7, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP11-W

Spl#: 149154


Matrix: WATER

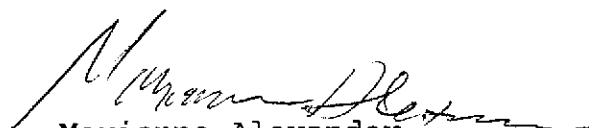
Sampled: September 23, 1997

Run#: 8879

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	84	1
BENZENE	N.D.	0.50	N.D.	102	1
TOLUENE	N.D.	0.50	N.D.	111	1
ETHYL BENZENE	N.D.	0.50	N.D.	113	1
XYLENES	N.D.	0.50	N.D.	110	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK - Project#: 97-044
Received: September 23, 1997

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP1-W

Spl#: 149145

Matrix: WATER

Sampled: September 23, 1997

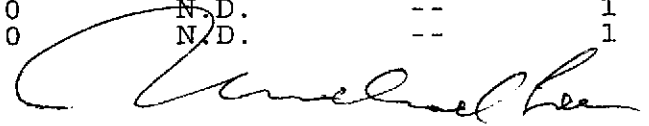
Run#: 8900

Analyzed: September 29, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	94.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	1.0	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	110	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	8.1	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	111	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager

for

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: QC-1

Spl#: 149147

Matrix: WATER

Sampled: September 23, 1997

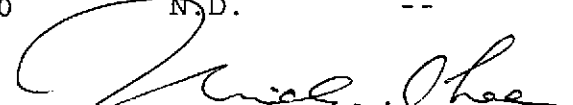
Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	1.0	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	9.1	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP12-W

Spl#: 149153

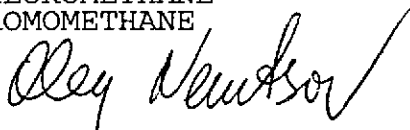
Matrix: WATER

Sampled: September 23, 1997

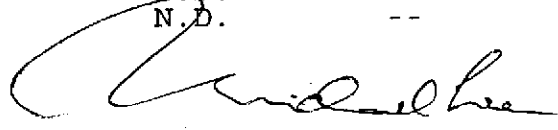
Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	5.0	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	1.0	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	20	0.50	N.D.	--	1
Note: Data obtained from method 8240A.					
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	15	0.50	N.D.	101	1
Note: Data obtained from method 8240A.					
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	2.1	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP14-W

Spl#: 149151


Matrix: WATER

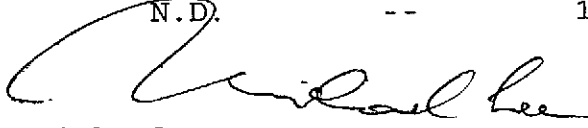
Sampled: September 23, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	1.2	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	1.3	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	9.4	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	18	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	2.6	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP11-W

Spl#: 149154

Matrix: WATER

Sampled: September 23, 1997

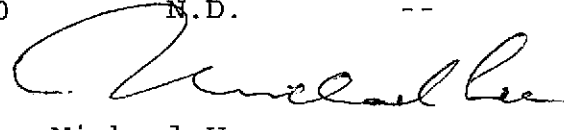
Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	1.7	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	12	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	20	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	3.9	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1



Oleg Nemtsov
Chemist



Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP10-W

Spl#: 149155


Matrix: WATER

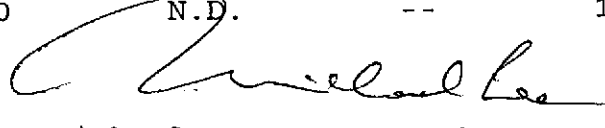
Sampled: September 23, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	3.3	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	7.7	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	2.5	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP9-W

Spl#: 149156


Matrix: WATER


Sampled: September 23, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	0.70	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	1.2	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	4.0	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

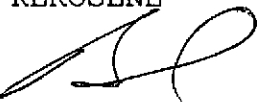
Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

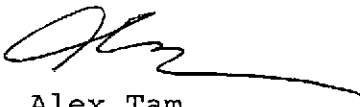
re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP1-W

Spl#: 149145 Matrix: WATER Extracted: September 30, 1997
Sampled: September 23, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	50	N.D.	71.0	1
MOTOR OIL	N.D.	500	N.D.	--	1
KEROSENE	N.D.	50	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

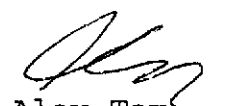
re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: QC-1

Spl#: 149147 Matrix: WATER Extracted: September 30, 1997
Sampled: September 23, 1997 Run#: 8906 Analyzed: September 30, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	54	N.D.	71.0	1
MOTOR OIL	N.D.	540	N.D.	--	1
KEROSENE	N.D.	54	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044


re: One sample for TEPH analysis.
Method: EPA 8015M


Client Sample ID: WP14-W

Spl#: 149151 Matrix: WATER
Sampled: September 23, 1997 Run#: 8906

Extracted: September 30, 1997
Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	56	N.D.	71.0	1
MOTOR OIL	N.D.	560	N.D.	--	1
KEROSENE	N.D.	56	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP12-W

Spl#: 149153 Matrix: WATER Extracted: September 30, 1997
Sampled: September 23, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	71.0	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP11-W

Spl#: 149154 Matrix: WATER Extracted: September 30, 1997
Sampled: September 23, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	53	N.D.	71.0	1
MOTOR OIL	N.D.	530	N.D.	--	1
KEROSENE	N.D.	53	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE., OAK
Received: September 23, 1997

Project#: 97-044


re: One sample for TEPH analysis.
Method: EPA 8015M


Client Sample ID: WP10-W

Spl#: 149155 Matrix: WATER
Sampled: September 23, 1997 Run#: 8906

Extracted: September 30, 1997
Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	50	N.D.	71.0	1
MOTOR OIL	N.D.	500	N.D.	--	1
KEROSENE	N.D.	50	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709389

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE., OAK Project#: 97-044
Received: September 23, 1997

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP9-W

Spl#: 149156 Matrix: WATER Extracted: September 30, 1997
Sampled: September 23, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	140	50	N.D.	71.0	1
<i>Note: Compounds reported are in the Diesel range. They do not have a pattern characteristic of petroleum hydrocarbons.</i>					
MOTOR OIL	N.D.	500	N.D.	--	1
KEROSENE	N.D.	50	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

09389/141115-141136

INNOVATIVE TECHNICAL SOLUTIONS, Inc.



2855 Mitchell Drive, Suite 118
Walnut Creek, California 94598
(510) 256-8898 (Tel), (510) 256-8998 (Fax)

CLIENT: ITSI
DUE: 09/30/97
REF #: 35706

35706

PROJECT NAME: Baseline / 98th Ave., Oakland
PROJECT NUMBER: 97-044
SITE LOCATION: 670 98th Ave., Oakland, CA

DATE: 9/23/97
PAGE: 1 of 2

CHAIN OF CUSTODY

SAMPLE I.D.	SAMPLE DEPTH	DATE	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS										SPECIAL INSTRUCTIONS/ NOTES/ COMMENTS	TOTAL NUMBER OF ANALYSES	
							TPH as Gas/BTEX - 8015/8020	TPH as Diesel - 8015	TPH - 8015 (Silica Gel) <i>TPH M.O., Kerosene, Diesel</i>	TRPH - 418.1	Oil and Grease - 5520 D&F	LUFT Metals (Cd, Cr, Ni, Pb, Zn)	CAM 17 Metals	VOCs - 8240	SVOCs - 8270	Organic Halogens (Chlorobrom) 8010			
Frig Blank		<u>9/23/97</u>		<u>3</u>	<u>VOA</u>	<u>W</u>	X											<u>Not used as test</u>	<u>2</u>
<u>WPI-W</u>			<u>8:24</u>	<u>5</u>	<u>VOA</u>	<u>W</u>	X												<u>1</u>
<u>QC-1</u>			<u>8:30</u>	<u>5</u>	<u>VOA</u>		X												<u>2</u>
<u>WPI4-W</u>			<u>10:30</u>	<u>5</u>	<u>VOA</u>		X												<u>1</u>
<u>WPI2-W</u>			<u>12:00</u>	<u>5</u>	<u>VOA</u>		X												<u>2</u>
<u>WPI1-W</u>			<u>1340</u>	<u>5</u>	<u>VOA</u>		X												<u>1</u>
<u>WPI0-W</u>			<u>1440</u>	<u>5</u>	<u>VOA</u>		X												<u>2</u>
TOTAL NUMBER OF CONTAINERS				<u>40</u>	TOTAL TESTS		<u>6</u>	<u>5</u>							<u>6</u>				<u>17</u>

Chroma Lab, Petaluma

SAMPLED BY: Bill Scott SPECIAL INSTRUCTIONS/COMMENTS: Please provide Chromatograms, Standard T.A.T.

RECEIVED BY: _____ RECEIVED BY: _____ RECEIVED BY: Michael Kravitz

Printed Name _____ Signature _____ Printed Name _____ Signature _____ Printed Name _____ Signature _____

Company _____ Date and Time _____ Company _____ Date and Time _____ Company _____ Date and Time _____

SEND RESULTS TO: Self Hess @ ITSI (above address)

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: INNOVATIVE TECHNICAL SOLUTIONS Date/Time Received: 09/23/97 | 1730

Reference/Submis: 35706 | 9709389 Received by: MN

Checklist completed by: Chris Rowley 9/25/97 Reviewed by: MN 9/25/97
Signature | Date Initials | Date

Matrix: H2O Carrier name: Client - C/L

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Temp: 7.3 °C Yes No
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? YES Adjusted? Checked by: CR
chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP7-W

Spl#: 149447

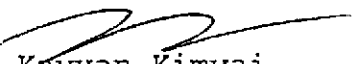
Matrix: WATER

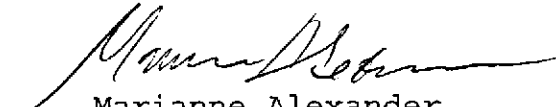
Sampled: September 24, 1997

Run#: 8923

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	410	50	N.D.	86	1
BENZENE	13	0.50	N.D.	96	1
TOLUENE	58	0.50	N.D.	96	1
ETHYL BENZENE	13	0.50	N.D.	95	1
XYLENES	81	0.50	N.D.	93	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-256-8998

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

GC V132 O: BTEXQC0220
KAYVAN 09.35

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997


re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP13-W

Spl#: 149445 Matrix: WATER
Sampled: September 24, 1997 Run#: 8923 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	86	1
BENZENE	N.D.	0.50	N.D.	96	1
TOLUENE	N.D.	0.50	N.D.	96	1
ETHYL BENZENE	N.D.	0.50	N.D.	95	1
XYLENES	N.D.	0.50	N.D.	93	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-256-8998

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

GC V132 O: BTEXQC0220
KAYVAN 09:34

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: WP8-W

Spl#: 149446


Matrix: WATER

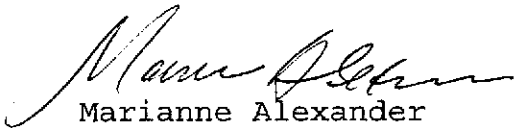
Sampled: September 24, 1997

Run#: 8923

Analyzed: October 1, 1997

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
TOLUENE	1.4	0.50	N.D.	96	1
ETHYL BENZENE	16	0.50	N.D.	95	1
XYLENES	1.8	0.50	N.D.	93	1
GASOLINE	8600	1000	N.D.	86	20
BENZENE	3600	10	N.D.	96	20


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP13-W

Spl#: 149445 Matrix: WATER Extracted: September 30, 1997
Sampled: September 24, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	71.0	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

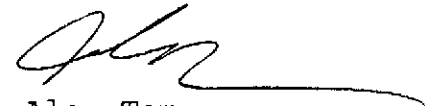
re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP8-W

Spl#: 149446 Matrix: WATER Extracted: September 30, 1997
Sampled: September 24, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	71.0	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess


Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997


re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: WP7-W

Spl#: 149447 Matrix: WATER Extracted: September 30, 1997
Sampled: September 24, 1997 Run#: 8906 Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
DIESEL	N.D.	51	N.D.	71.0	1
MOTOR OIL	N.D.	510	N.D.	--	1
KEROSENE	N.D.	51	N.D.	--	1


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

re: One sample for Semivolatile Organics (B/NAs) analysis.
Method: SW846 Method 8270A Nov 1990

Client Sample ID: DS-1,2

Spl#: 149448

Matrix: SOIL

Extracted: September 30, 1997

Sampled: September 24, 1997

Run#: 8907

Analyzed: September 30, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
PHENOL	N.D.	0.10	N.D.	52.0	1
BIS(2-CHLOROETHYL) ETHER	N.D.	0.10	N.D.	--	1
2-CHLOROPHENOL	N.D.	0.10	N.D.	63.5	1
1,3-DICHLOROBENZENE	N.D.	0.10	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.10	N.D.	57.9	1
BENZYL ALCOHOL	N.D.	0.20	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.10	N.D.	--	1
2-METHYLPHENOL	N.D.	0.10	N.D.	--	1
BIS(2-CHLOROISOPROPYL) ETHER	N.D.	0.10	N.D.	--	1
4-METHYLPHENOL	N.D.	0.20	N.D.	--	1
N-NITROSO-DI-N-PROPYLAMINE	N.D.	0.10	N.D.	52.6	1
HEXACHLOROETHANE	N.D.	0.10	N.D.	--	1
NITROBENZENE	N.D.	0.10	N.D.	--	1
ISOPHORONE	N.D.	0.10	N.D.	--	1
2-NITROPHENOL	N.D.	0.10	N.D.	--	1
2,4-DIMETHYLPHENOL	N.D.	0.10	N.D.	--	1
BIS(2-CHLOROETHOXY) METHANE	N.D.	0.10	N.D.	--	1
2,4-DICHLOROPHENOL	N.D.	0.10	N.D.	--	1
1,2,4-TRICHLOROBENZENE	N.D.	0.10	N.D.	55.2	1
NAPHTHALENE	N.D.	0.10	N.D.	--	1
4-CHLOROANILINE	N.D.	0.20	N.D.	--	1
HEXACHLOROBUTADIENE	N.D.	0.10	N.D.	--	1
4-CHLORO-3-METHYLPHENOL	N.D.	0.20	N.D.	73.0	1
2-METHYLNAPHTHALENE	N.D.	0.10	N.D.	--	1
HEXACHLOROCYCLOPENTADIENE	N.D.	0.10	N.D.	--	1
2,4,6-TRICHLOROPHENOL	N.D.	0.10	N.D.	--	1
2,4,5-TRICHLOROPHENOL	N.D.	0.10	N.D.	--	1
2-CHLORONAPHTHALENE	N.D.	0.10	N.D.	--	1
2-NITROANILINE	N.D.	0.50	N.D.	--	1
DIMETHYL PHTHALATE	N.D.	0.50	N.D.	--	1
ACENAPHTHYLENE	N.D.	0.10	N.D.	--	1
3-NITROANILINE	N.D.	0.10	N.D.	--	1
ACENAPHTHENE	N.D.	0.10	N.D.	68.8	1
2,4-DINITROPHENOL	N.D.	0.50	N.D.	--	1
4-NITROPHENOL	N.D.	0.50	N.D.	104	1
DIBENZOFURAN	N.D.	0.10	N.D.	--	1
2,4-DINITROTOLUENE	N.D.	0.10	N.D.	71.8	1
2,6-DINITROTOLUENE	N.D.	0.20	N.D.	--	1
DIETHYL PHTHALATE	N.D.	0.50	N.D.	--	1
4-CHLOROPHENYL PHENYL ETHER	N.D.	0.10	N.D.	--	1

CHROMALAB, INC.

Environmental Services (SDB)

October 1, 1997

Submission #: 9709413

page 2

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND
Received: September 24, 1997

Project#: 97-044

re: One sample for Semivolatile Organics (B/NAs) analysis, continued.
Method: SW846 Method 8270A Nov 1990

Client Sample ID: DS-1,2

Spl#: 149448

Matrix: SOIL


Extracted: September 30, 1997

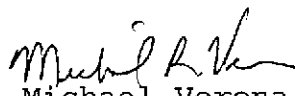
Sampled: September 24, 1997

Run#: 8907

Analyzed: September 30, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
FLUORENE	N.D.	0.10	N.D.	--	1
4-NITROANILINE	N.D.	0.50	N.D.	--	1
2-METHYL-4,6-DINITROPHENOL	N.D.	0.50	N.D.	--	1
N-NITROSO-DI-N-PHENYLAMINE	N.D.	0.10	N.D.	--	1
4-BROMOPHENYL PHENYL ETHER	N.D.	0.10	N.D.	--	1
HEXACHLOROBENZENE	N.D.	0.10	N.D.	--	1
PENTACHLOROPHENOL	N.D.	0.50	N.D.	63.5	1
PHENANTHRENE	N.D.	0.10	N.D.	--	1
ANTHRACENE	N.D.	0.10	N.D.	--	1
DI-N-BUTYL PHTHALATE	N.D.	2.0	N.D.	--	1
FLUORANTHENE	N.D.	0.10	N.D.	--	1
PYRENE	N.D.	0.10	N.D.	60.0	1
BUTYL BENZYL PHTHALATE	N.D.	0.50	N.D.	--	1
3,3'-DICHLOROBENZIDINE	N.D.	0.20	N.D.	--	1
BENZO (A) ANTHRACENE	N.D.	0.10	N.D.	--	1
BIS (2-ETHYLHEXYL) PHTHALATE	N.D.	0.50	N.D.	--	1
CHRYSENE	N.D.	0.10	N.D.	--	1
DI-N-OCTYL PHTHALATE	N.D.	0.50	N.D.	--	1
BENZO (B) FLUORANTHENE	N.D.	0.10	N.D.	--	1
BENZO (K) FLUORANTHENE	N.D.	0.20	N.D.	--	1
BENZO (A) PYRENE	N.D.	0.050	N.D.	--	1
INDENO (1,2,3 C,D) PYRENE	N.D.	0.20	N.D.	--	1
DIBENZO (A,H) ANTHRACENE	N.D.	0.20	N.D.	--	1
BENZO (G,H,I) PERYLENE	N.D.	0.20	N.D.	--	1
BENZOIC ACID	N.D.	0.50	N.D.	--	1


Michael Lee
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP13-W

Spl#: 149445

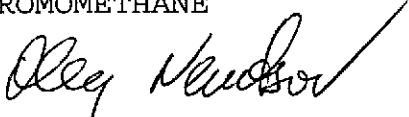
Matrix: WATER

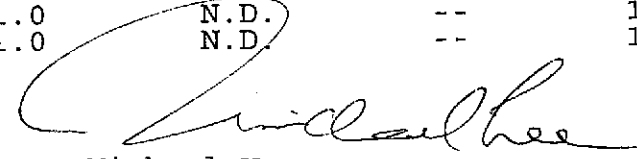
Sampled: September 24, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	2.6	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	7.1	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	1.7	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager *for*

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND
Received: September 24, 1997

Project#: 97-044

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP8-W

Spl#: 149446


Matrix: WATER

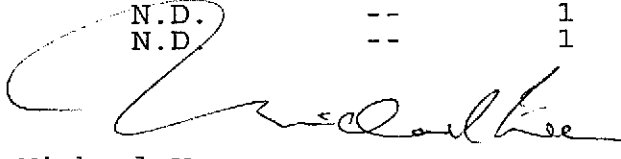
Sampled: September 24, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE Spike (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	2.2	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	1.4	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND Project#: 97-044
Received: September 24, 1997

re: One sample for Volatile Halogenated Organics analysis.
Method: SW846 Method 8010A July 1992

Client Sample ID: WP7-W

Spl#: 149447

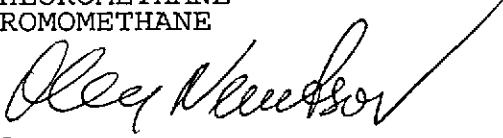
Matrix: WATER

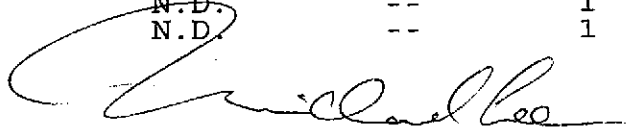

Sampled: September 24, 1997

Run#: 8986

Analyzed: October 1, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	78.0	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	3.7	0.50	N.D.	--	1
1,1-DICHLOROETHANE	0.70	0.50	N.D.	--	1
CHLOROFORM	N.D.	3.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	3.3	0.50	N.D.	101	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	3.2	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	100	1
BROMOFORM	N.D.	2.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROMETHANE	N.D.	1.0	N.D.	--	1
BROMOMETHANE	N.D.	1.0	N.D.	--	1


Oleg Nemtsov
Chemist


Michael Verona
Operations Manager 

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND

Project#: 97-044

Received: September 24, 1997

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: DS-1,2

Spl#: 149448

Matrix: SOIL

Sampled: September 24, 1997

Run#: 8987

Analyzed: October 3, 1997

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
ACETONE	N.D.	50	N.D.	--	1
BENZENE	N.D.	5.0	N.D.	91.4	1
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--	1
BROMOFORM	N.D.	5.0	N.D.	--	1
BROMOMETHANE	N.D.	10	N.D.	--	1
2-BUTANONE (MEK)	N.D.	100	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--	1
CHLOROBENZENE	N.D.	5.0	N.D.	100	1
CHLOROETHANE	N.D.	5.0	N.D.	--	1
2-CHLOROETHYLVINYLETHER	N.D.	10	N.D.	--	1
CHLOROFORM	N.D.	5.0	N.D.	--	1
CHLOROMETHANE	N.D.	10	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	93.9	1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--	1
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--	1
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	--	1
ETHYLBENZENE	N.D.	5.0	N.D.	--	1
2-HEXANONE	N.D.	50	N.D.	--	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
4-METHYL-2-PENTANONE (MIBK)	N.D.	50	N.D.	--	1
STYRENE	N.D.	5.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--	1
TETRACHLOROETHENE	N.D.	5.0	N.D.	--	1
TOLUENE	N.D.	5.0	N.D.	98.1	1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--	1
TRICHLOROETHENE	N.D.	5.0	N.D.	94.2	1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	--	1
VINYL ACETATE	N.D.	50	N.D.	--	1
VINYL CHLORIDE	N.D.	5.0	N.D.	--	1
TOTAL XYLENES	N.D.	5.0	N.D.	--	1

CHROMALAB, INC.

Environmental Services (SDB)

October 3, 1997

Submission #: 9709413

page 2

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND

Project#: 97-044

Received: September 24, 1997

re: One sample for Volatile Organics by GC/MS analysis, continued.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: DS-1,2

Spl#: 149448

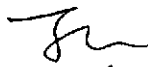
Matrix: SOIL

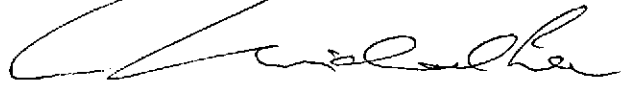

Sampled: September 24, 1997

Run#: 8987

Analyzed: October 3, 1997

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
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June Zhao
Chemist


Michael Verona
Operations Manager 

CHROMALAB, INC.

Environmental Services (SDB)

October 27, 1997

Submission #: 9709413

INNOVATIVE TECHNICAL SOLUTIONS

Atten: Jeff Hess

Project: BASELINE/98TH AVE, OAKLAND
 Received: September 24, 1997

Project#: 97-044

re: Blank spike and duplicate report for Semivolatile Organics (B/NAs) analysis.

Method: SW846 Method 8270A Nov 1990

Matrix: SOIL
 Lab Run#: 8907

Analyzed: September 30, 1997

Analyte	Spike Amount		Spike Amount Found		Spike Recov		Control %		% RPD	Lim
	BSP	Dup	BSP	Dup	BSP	Dup	Limits	RPD		
	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(%)	(%)				
PHENOL	2.00	2.00	1.04	1.13	52.0	56.5	26-90	8.29	35	
2-CHLOROPHENOL	2.00	2.00	1.27	1.39	63.5	69.5	27-123	9.02	35	
1,4-DICHLOROBENZENE	1.00	1.00	0.579	0.662	57.9	66.2	28-104	13.4	30	
N-NITROSO-DI-N-PROPYLAMINE	1.00	1.00	0.526	0.578	52.6	57.8	25-114	9.42	39	
1,2,4-TRICHLOROBENZENE	1.00	1.00	0.552	0.629	55.2	62.9	38-107	13.0	35	
4-CHLORO-3-METHYLPHENOL	2.00	2.00	1.46	1.55	73.0	77.5	26-103	5.98	33	
ACENAPHTHENE	1.00	1.00	0.688	0.765	68.8	76.5	49-102	10.6	30	
4-NITROPHENOL	2.00	2.00	2.08	2.27	104	114	17-109	9.17	35	
2,4-DINITROTOLUENE	1.00	1.00	0.718	0.834	71.8	83.4	28-89	14.9	38	
PENTACHLOROPHENOL	2.00	2.00	1.27	1.34	63.5	67.0	11-114	5.36	35	
PYRENE	1.00	1.00	0.600	0.675	60.0	67.5	25-117	11.8	35	

ITSI 1330 Broadway, Suite 1625
 Oakland, California 94612
 (510) 286-8888 (Tel), (510) 286-8889 (Fax)

PROJECT NAME: Baseline/98th Ave, Oakland
 PROJECT NUMBER: 97-044
 SITE LOCATION: 670 98th Ave, Oakland, CA

CHAIN OF CUSTODY

DATE: 9-24-97
 PAGE: 1 of 1

SAMPLE ID.	SAMPLE DEPTH	DATE	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS											SPECIAL INSTRUCTIONS/COMMENTS							
							TPH as Gas/BTEX - 8015/8030	TPH as Diesel - 8015	TPH as Diesel - 8015, M.O. Kerosene (w/ Silica Gel Cleanup)	TEPH - 8015	TEPH-8015 (w/ Silica Gel Cleanup)	TRPH - 418.1	Oil and Grease - 5520	Purgeable Halocarbons - 601/8010	VOCs - 624/ 8240	SVOCs - 625/8270	LUFT Metals (Cd, Cr, Ni, Pb, Zn)		CAM 17 Metals						
WP13-W		9-24-97	8:45	2	Leaker	Water			X																
WP13-W			8:45	5	VOAs	Water	X					X													
WP8-W			10:10	2	Leaker				X															} Potentially elevated concentrations	
WP8-W			10:10	5	VOAs		X					X													
WP7-W			11:20	2	Leaker				X																
WP7-W			11:20	5	VOAs		X					X													
DS-1		9-22-97	14:40	1	S.S.	Soil	X	X				X	X	X											} <u>RECAL</u> COMPOSITE INTO 1 sample; HOLD only the following: <u>TPH Gas/BTEX, TPH diesel, mo. kerosene, and 8010</u>
DS-2		9-24-97	11:46	1	S.S.	Soil	X	X				X	X	X											
				TOTAL NUMBER OF CONTAINERS	23			TOTAL TESTS	84	84				84											

SAMPLED BY: _____ SPECIAL INSTRUCTIONS/COMMENTS: SEE NOTE

RELINQUISHED BY: <u>William K Scott</u> Printed Name: <u>William K Scott</u> Signature: _____ Company: <u>ITSI</u> Date and Time: <u>9-24-97 / 4:55 PM</u>	RELINQUISHED BY: <u>MUSA ATIFRI</u> Printed Name: <u>MUSA ATIFRI</u> Signature: _____ Company: _____ Date and Time: <u>9-24-97 1906</u>	RELINQUISHED BY: _____ Printed Name: _____ Signature: _____ Company: _____ Date and Time: _____
RECEIVED BY: _____ Printed Name: _____ Signature: _____ Company: _____ Date and Time: _____	RECEIVED BY: _____ Printed Name: _____ Signature: _____ Company: _____ Date and Time: _____	RECEIVED BY: <u>MUSA ATIFRI</u> Printed Name: <u>MUSA ATIFRI</u> Signature: _____ Company: <u>CHROMALAB</u> Date and Time: <u>9/24/97</u>

SEND RESULTS TO: Jeff Hess @ ITSI (above address.) Rec'd Mike Narany 9/24/97 1900

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: INNOVATIVE TECHNICAL SOLUTIONS Date/Time Received: 09/24/97 | 1655

Reference/Submis: 35734 9709413 Received by: MA

Checklist completed by: Chris Penick 9/25/97 Reviewed by: MN 9/25/97

Matrix: H2O / Soil Carrier name: Client - C/L

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Temp: 5.0°C Yes No
- Water - VOA vials have zero headspace? Yes No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes Adjusted? Checked by CR Chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

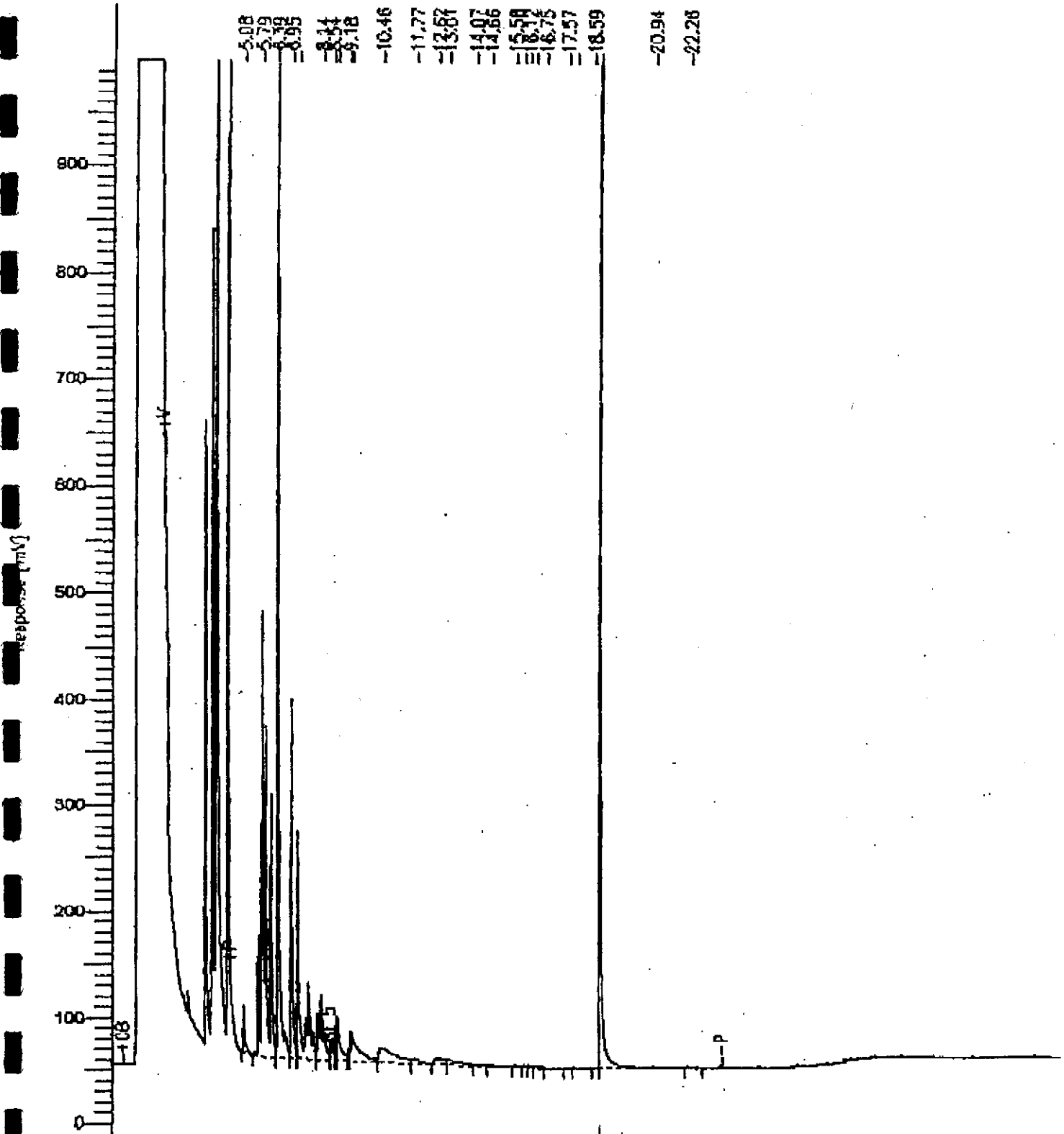
diesel analysis

Sample Name : 9709278/HW1
File Name : F:\MS29011...
Method : 480403
Start Time : 0.00 min
Injection Volume : 0.0

End Time : 92.33 min
Plot Offset : 0 mV

Sample # 148063
Date : 9/29/97 17:02
Time of Injection: 9/29/97 16:25
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1



diesel analysis

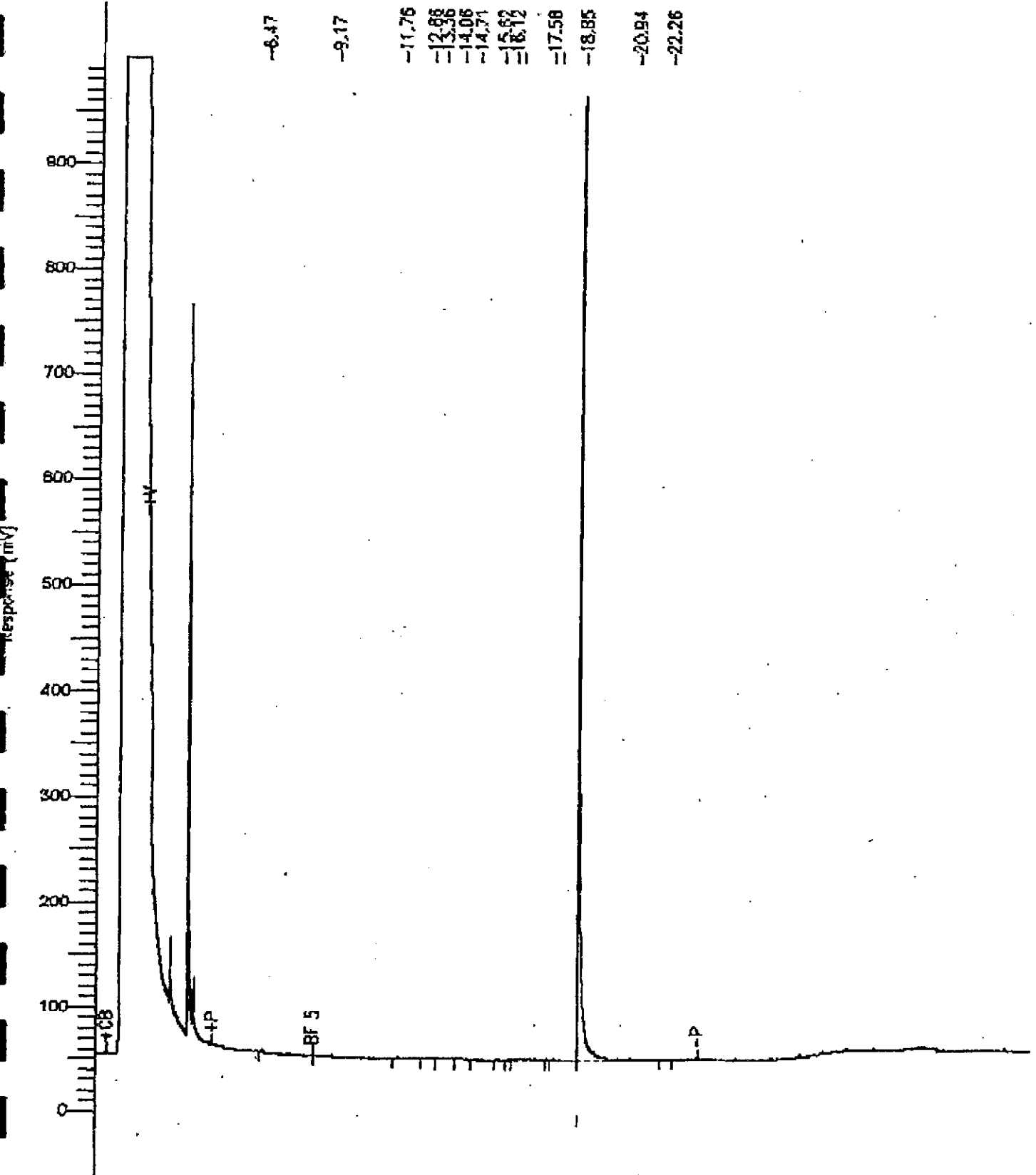
Sample Name : 9709376/MW3
File Name : F:\M220008.caw
Method : 400403
Start Time : 0.00 min
Scale Factor : 0.0

End Time : 36.39 min
Plot Offset : 0 mV

Sample #: 149066
Date : 9/29/97 14:43
Time of Injection: 9/29/97 14:07
Low Point : 0.00 mV High Point : 1000.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1

- 6.47
- 9.17
- 11.76
- 13.88
- 13.96
- 14.06
- 14.71
- 15.82
- 16.12
- 17.58
- 18.85
- 20.94
- 22.26



diesel analysis

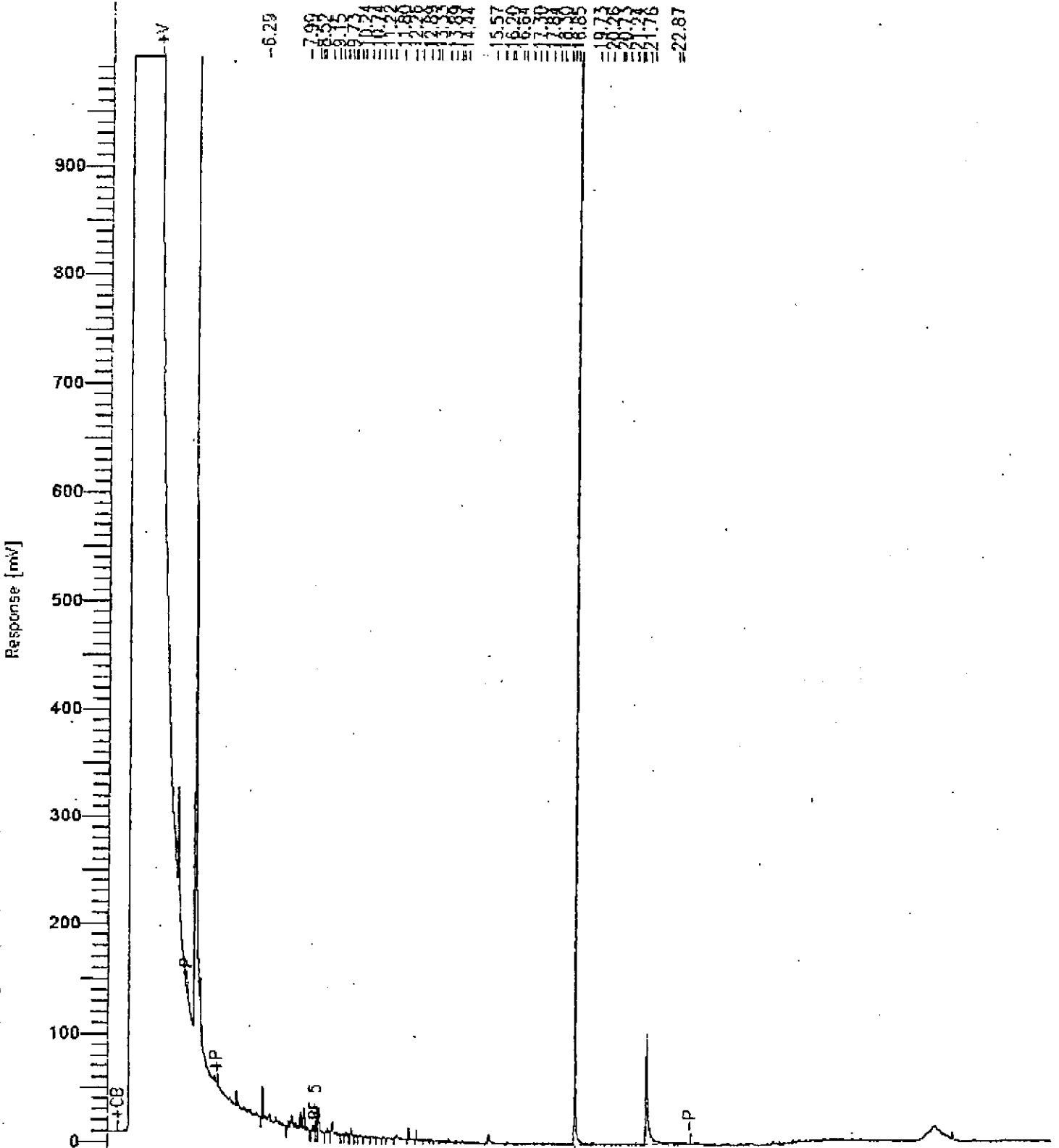
Sample Name : 9709278/MW3
FileName : M:\929006.raw
Method : 100718
Start Time : 0.00 min
Scale Factor: 0.0

End Time : 38.00 min
Plot Offset: 0 mV

Sample #: 149067
Date : 9/29/97 13:16
Time of Injection: 9/29/97 12:38
Low Point : 0.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1

High Point : 1000.00 mV



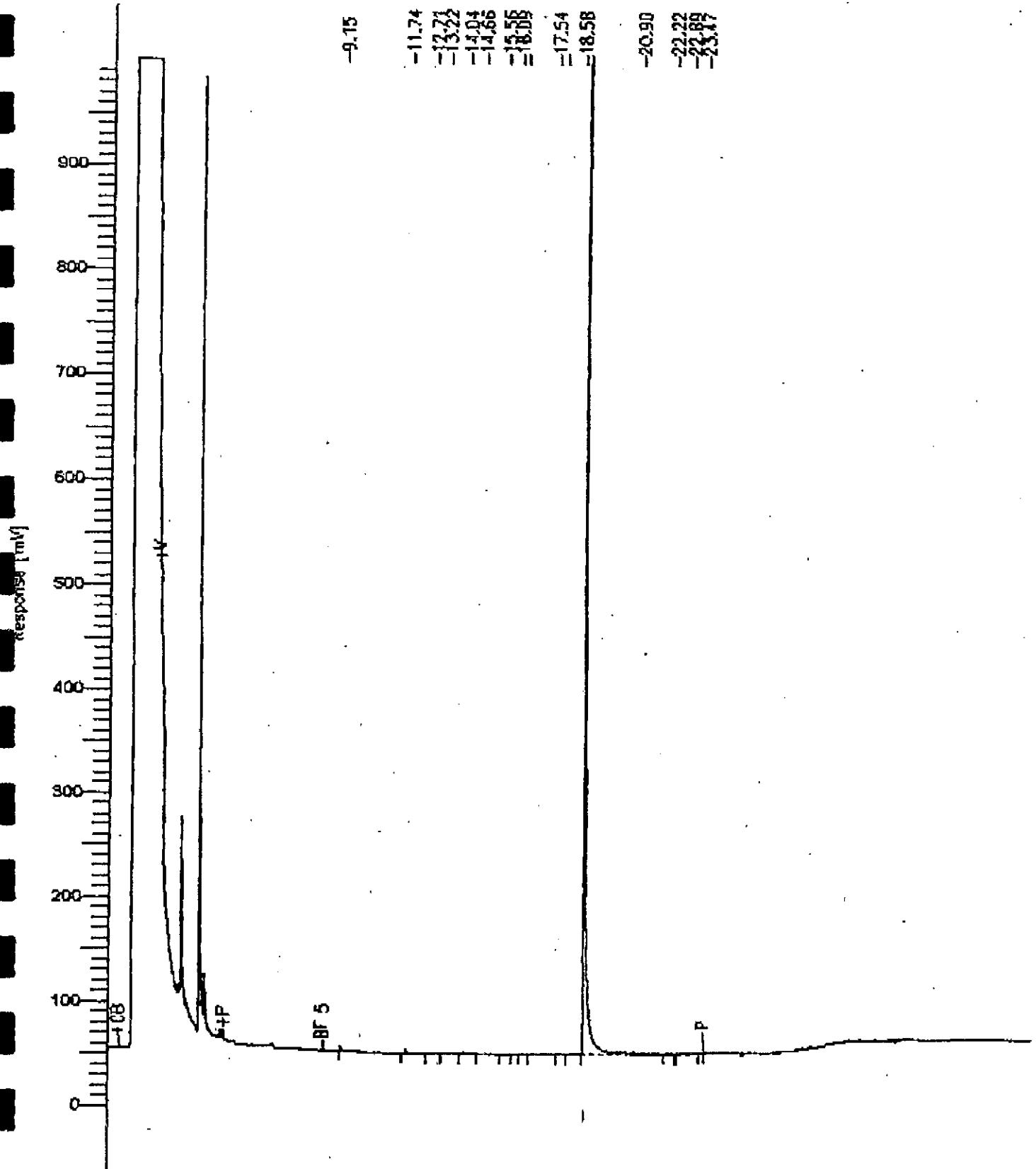
diesel analysis

Sample Name : 9709370/MW4
File Name : F:\m026026.com
Method : 40-403
Start Time : 8.00 min
Scale Factor : 0.0

End Time : 26.93 min
Plot Offset : 0 mV

Sample # 149068
Date : 9/27/97 07:11
Time of Injection: 9/27/97 06:34
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1



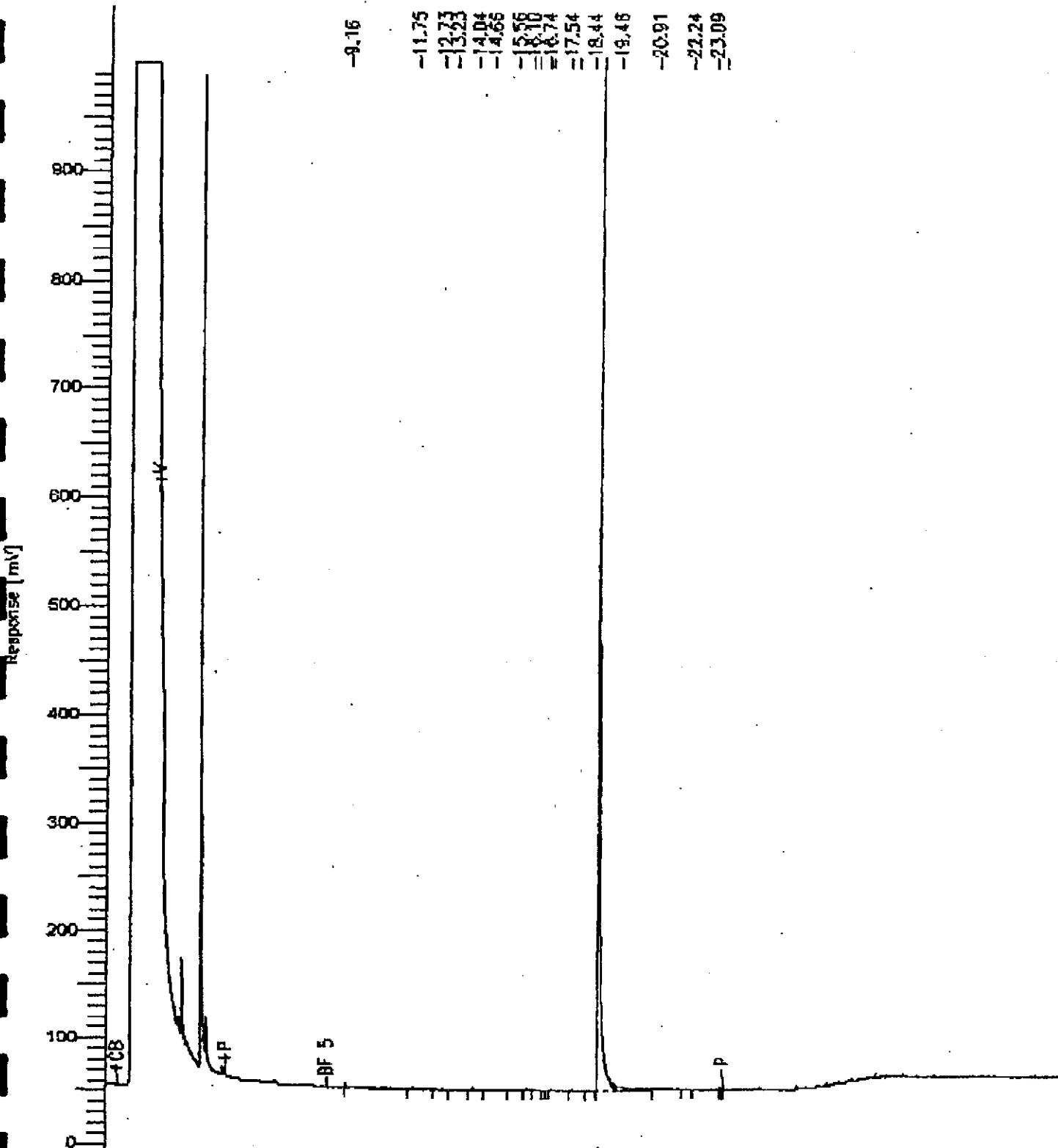
diesel analysis

Sample Name : 9709370/MWS
 File Name : F:\MS26025.ruv
 Method : 40403
 Start Time : 0.00 min
 Scale Factor : 0.0

End Time : 36.33 min
 Plot Offset : 0 mV

Sample #: 149069
 Date : 9/27/97 06:25
 Time of Injection: 9/27/97 03:49
 Low Limit : 0.00 mV
 High Limit : 1000.00 mV
 Plot Scale: 1000.0 mV

Page 1 of 1



diesel analysis

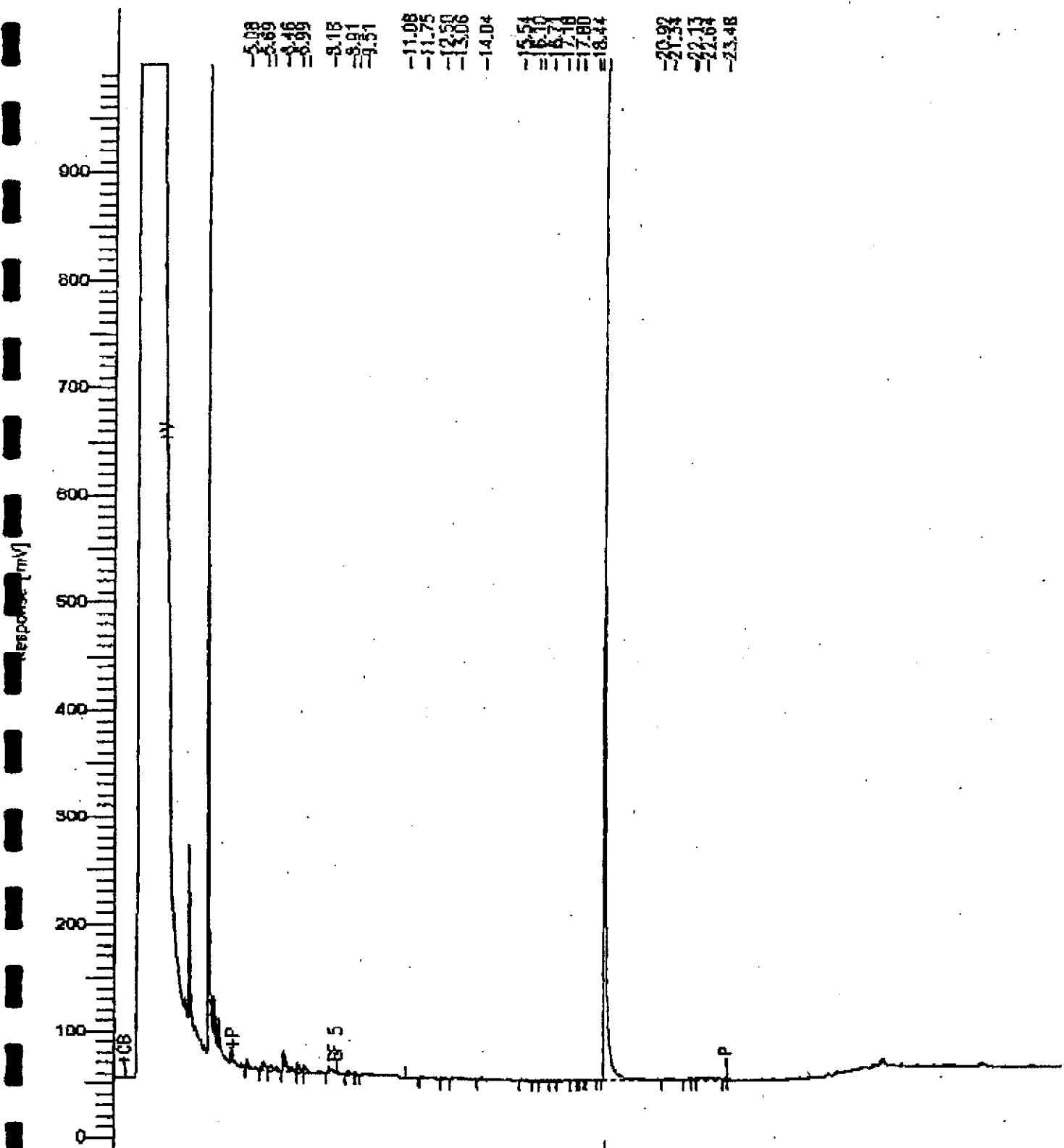
Sample Name : 9709378/18
 File Name : F:\MS26024.raw
 Method : MSD403
 Start Time : 0.00 min
 Scale Factor : 0.0

End Time : 36.33 min
 Plot Offset : 0 mV

Sample #: 149070
 Date : 9/27/97 05:39
 Time of Injection: 9/27/97 05:03
 Low Point : 0.00 mV
 High Point : 1000.00 mV
 Plot Scale: 1000.0 mV

Page 1 of 1

- 5.08
- 6.89
- 8.46
- 8.99
- 9.18
- 9.91
- 9.91
- 11.06
- 11.75
- 12.58
- 13.06
- 14.04
- 15.54
- 16.70
- 16.71
- 17.18
- 17.80
- 18.44
- 20.92
- 21.34
- 22.13
- 22.64
- 23.48



diesel analysis

Sample Name : ~~45007-0001~~
FileName : M:\S910020.raw
Method : 100719
Start Time : 0.00 min
Scale Factor: 0.0

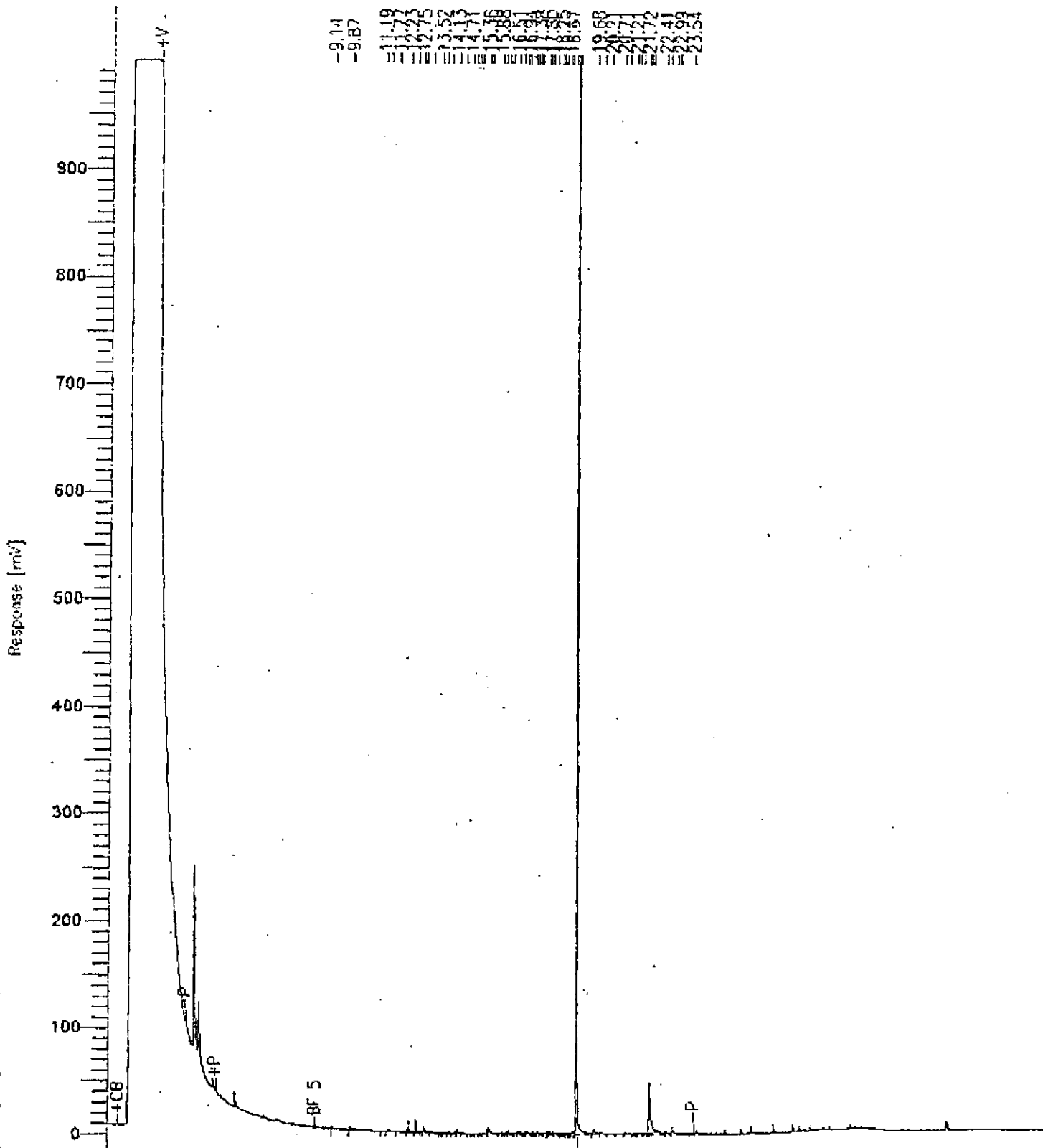
9709389/WPIW
SAT 10/1/97

End Time : 38.00 min
Plot Offset: 0 mV

Sample #: 45007-149145
Date : 10/1/97 00:59
Time of Injection: 10/1/97 00:21
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1

0.14	1.19	1.77	2.75	3.52	4.17	5.38	6.83	8.46	9.87	10.67	12.42	14.07	15.82	17.57	19.32	21.07	22.82	24.57	26.32	28.07	29.82	31.57	33.32	35.07	36.82	38.57	
-9.87																											



WPI-W

diesel analysis

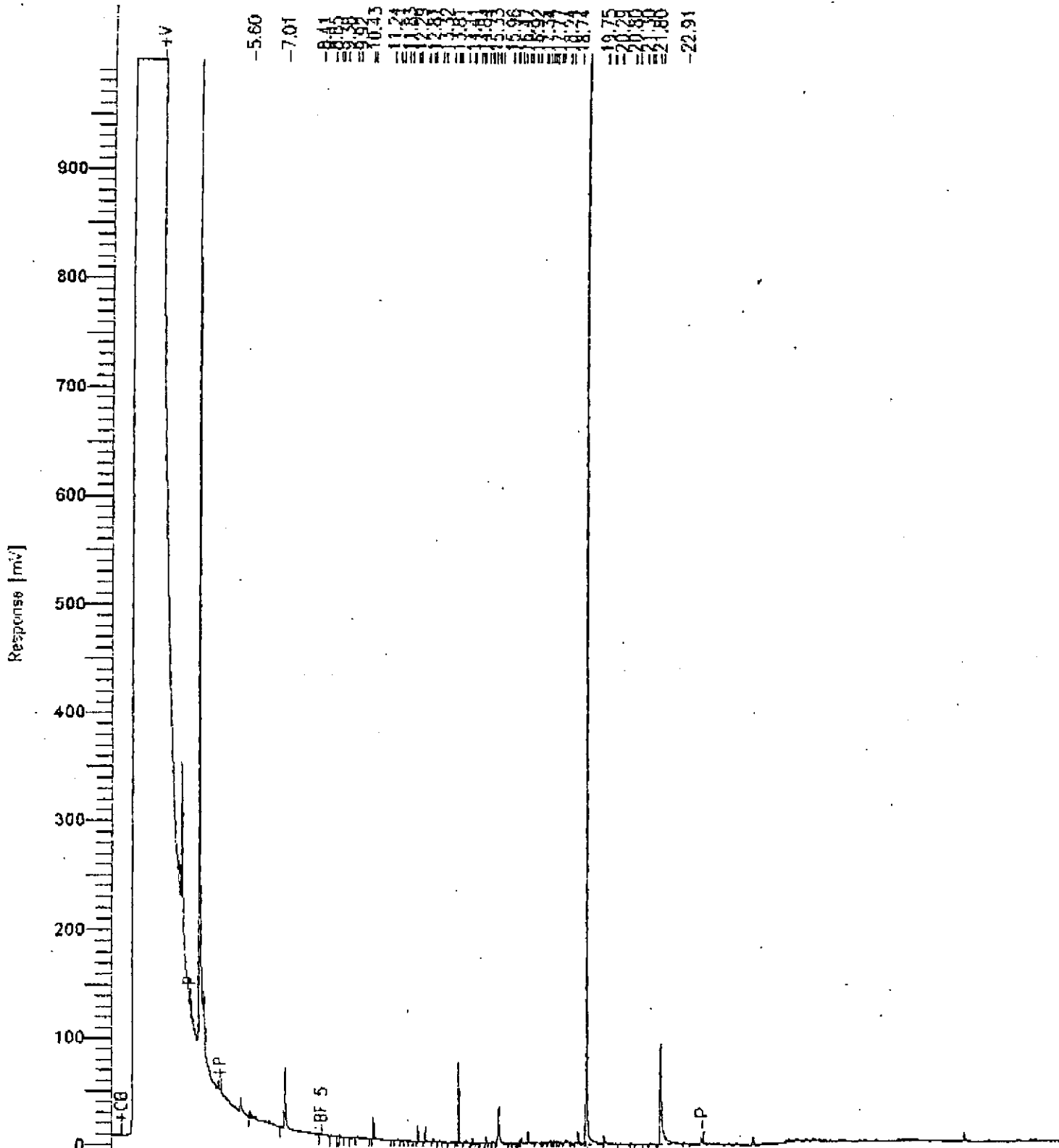
Sample Name : 9709377/WP3V
FileName : M:\9929009.raw
Method : 1D0713
Start Time : 0.00 min
Scale Factor: 0.0

End Time : 38.00 min
Plot Offset: 0 mV

Sample #: 149064
Date : 9/29/97 15:32
Time of Injection: 9/29/97 14:54
Low Point : 0.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1

High Point : 1000.00 mV



WP3-W

diesel analysis

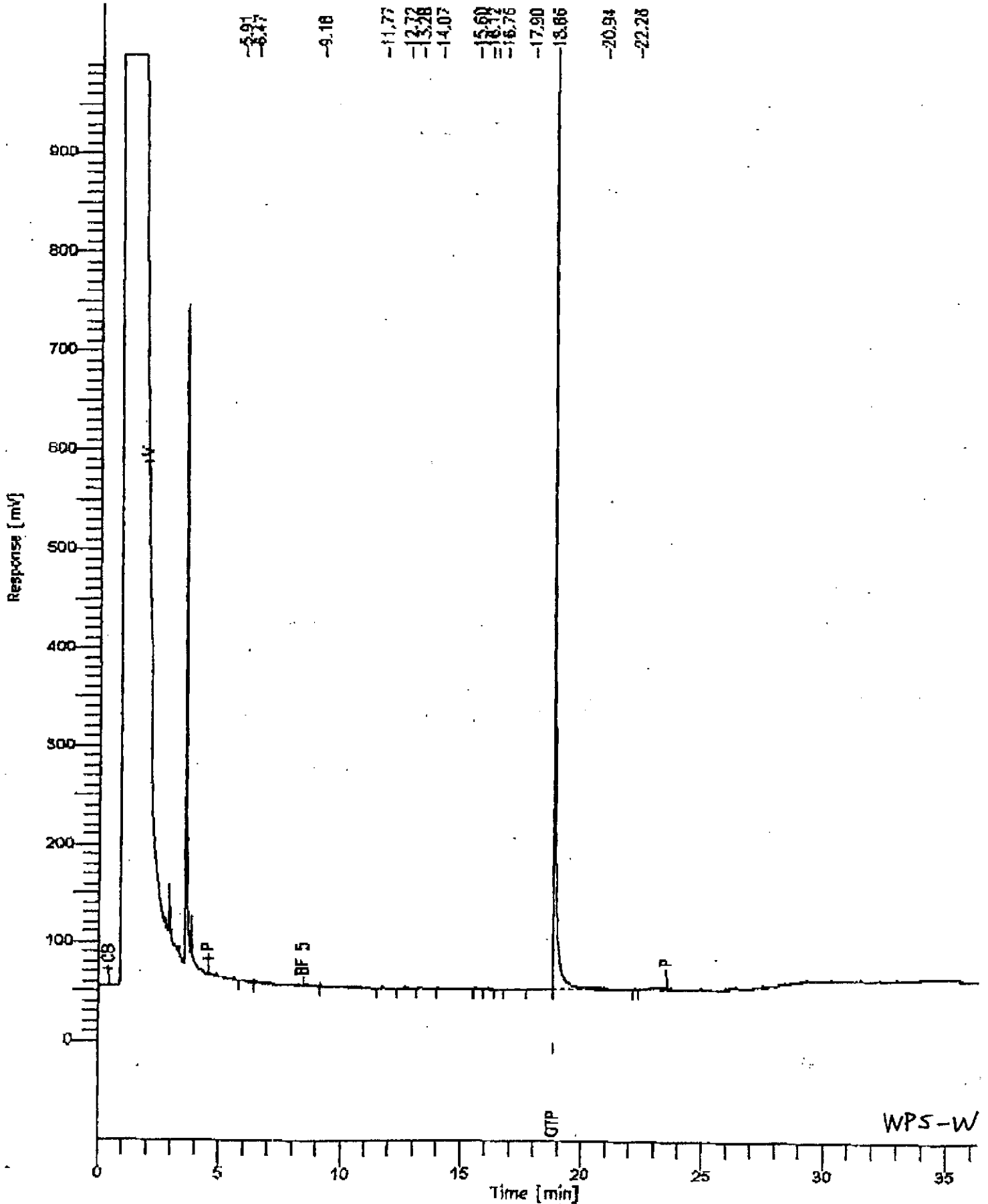
Sample Name : 9709377/WPSW
File Name : F:\MS20009.rnw
Method : 400-903
Start Time : 0.00 min
Scale Factor : 0.0

End Time : 36.33 min
Plot Offset : 0 mV

Sample #: 149062
Date : 9/29/97 15:30
Time of Injection: 9/29/97 14:53
Low Point : 0.00 mV
Plot Scale: 1000.0 mV

Page 1 of 1

High Point : 1000.00 mV

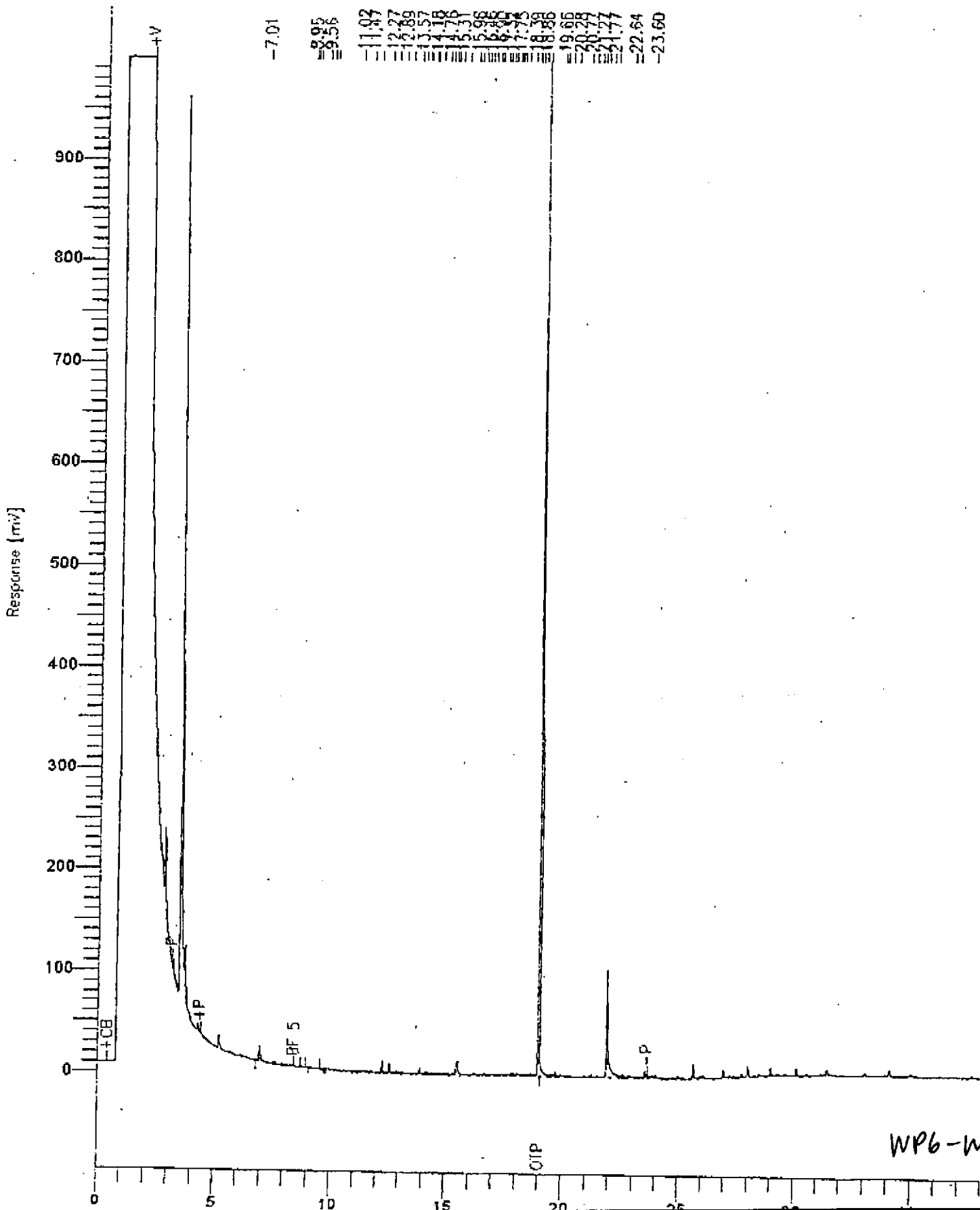


diesel analysis

Sample Name : 9709377/wr66
File Name : H:\929007.raw
Method : 1D0719
Start time : 0.00 min
Scale Factor : 0.0

End Time : 38.00 min
Plot Offset: 0 mV

Sample #: 149061
Date : 9/29/97 14:01
Time of Injection: 9/29/97 13:23
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV



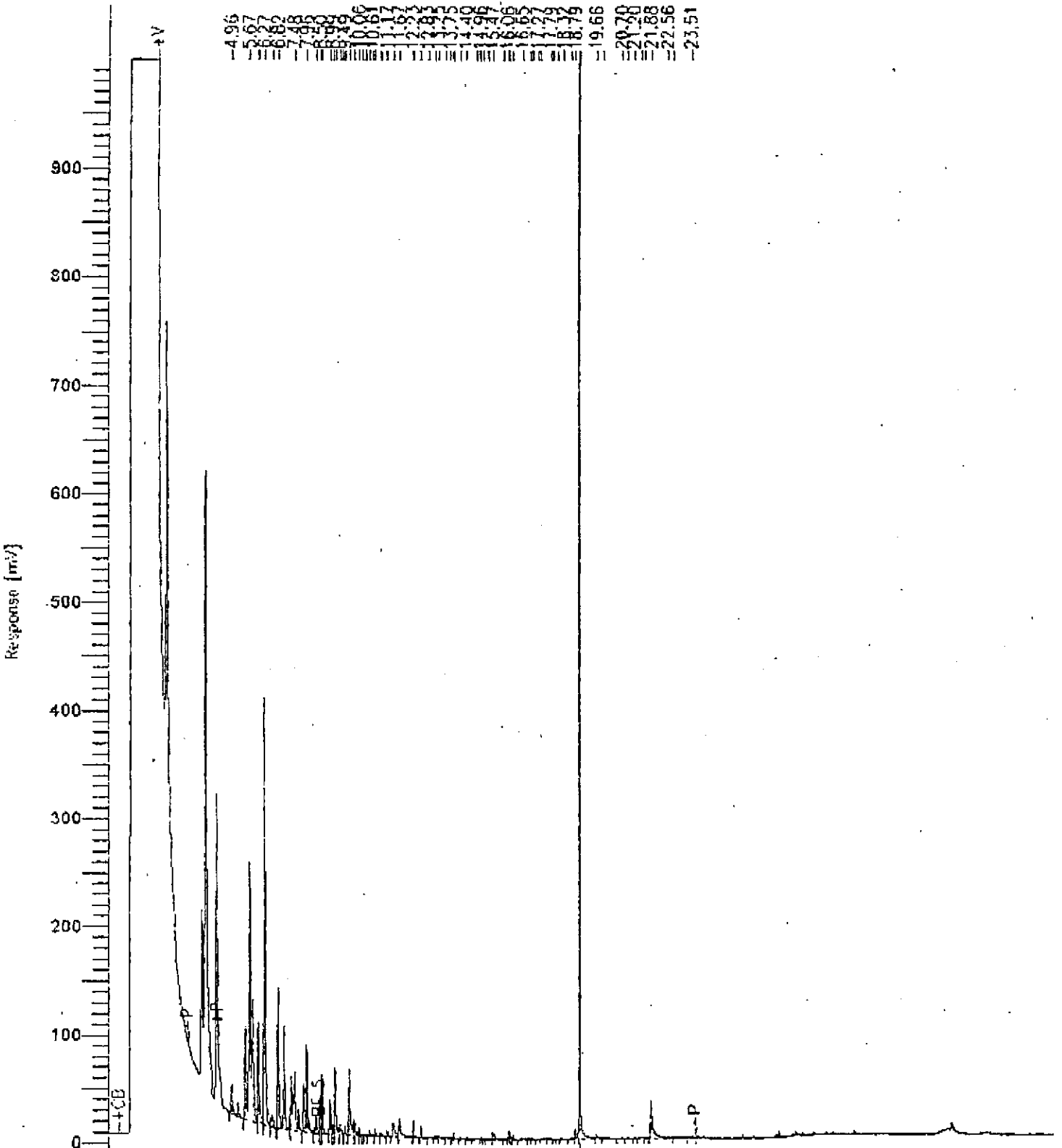
WP6-W

diesel analysis

Sample Name : 9702385/WP70W
File Name : M:\3930029.raw
Method : 1D0718
Start Time : 0.00 min
Scale Factor : 0.0

6th
10/21/97
End Time : 38.00 min
Plot Offset : 0 mV

Sample #: 447
Date : 10/1/97 07:45
Time of Injection: 10/1/97 07:07
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV



WP70W

diesel analysis

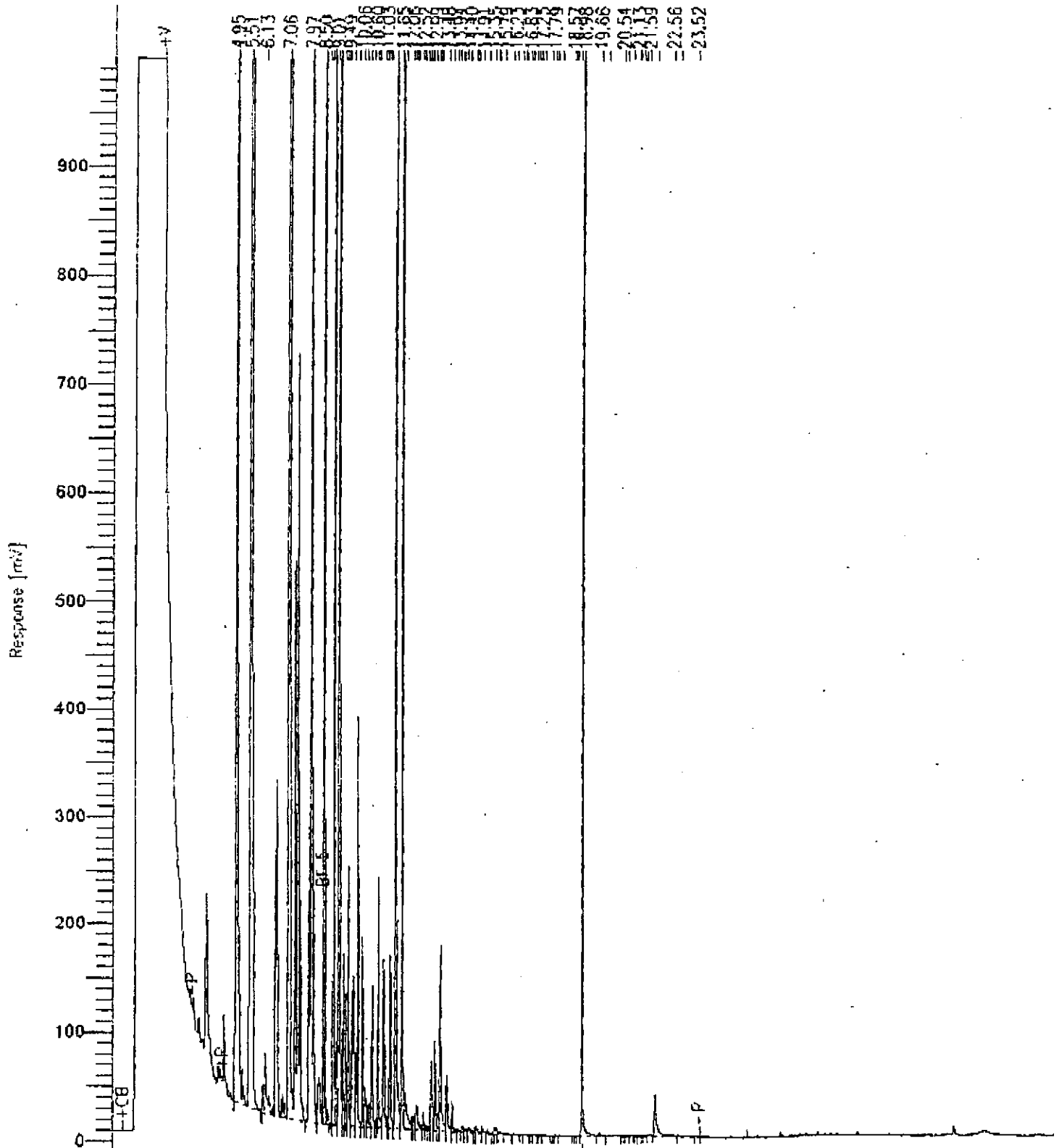
Sample Name : 97093007 WP12W
 File Name : M:\S930030.raw
 Method : 120718
 Start Time : 0.00 min
 Scale Factor : 0.0

End Time : 38.00 min
 Plot Offset : 0 mV

delta H
10/21/97

Sample #: 149154
 Date : 10/1/97 08:20
 Time of Injection: 10/1/97 07:52
 Low Point : 0.00 mV
 High Point : 1000.00 mV
 Plot Scale: 1000.0 mV

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WP8-W

diesel analysis

9709389/wp10w

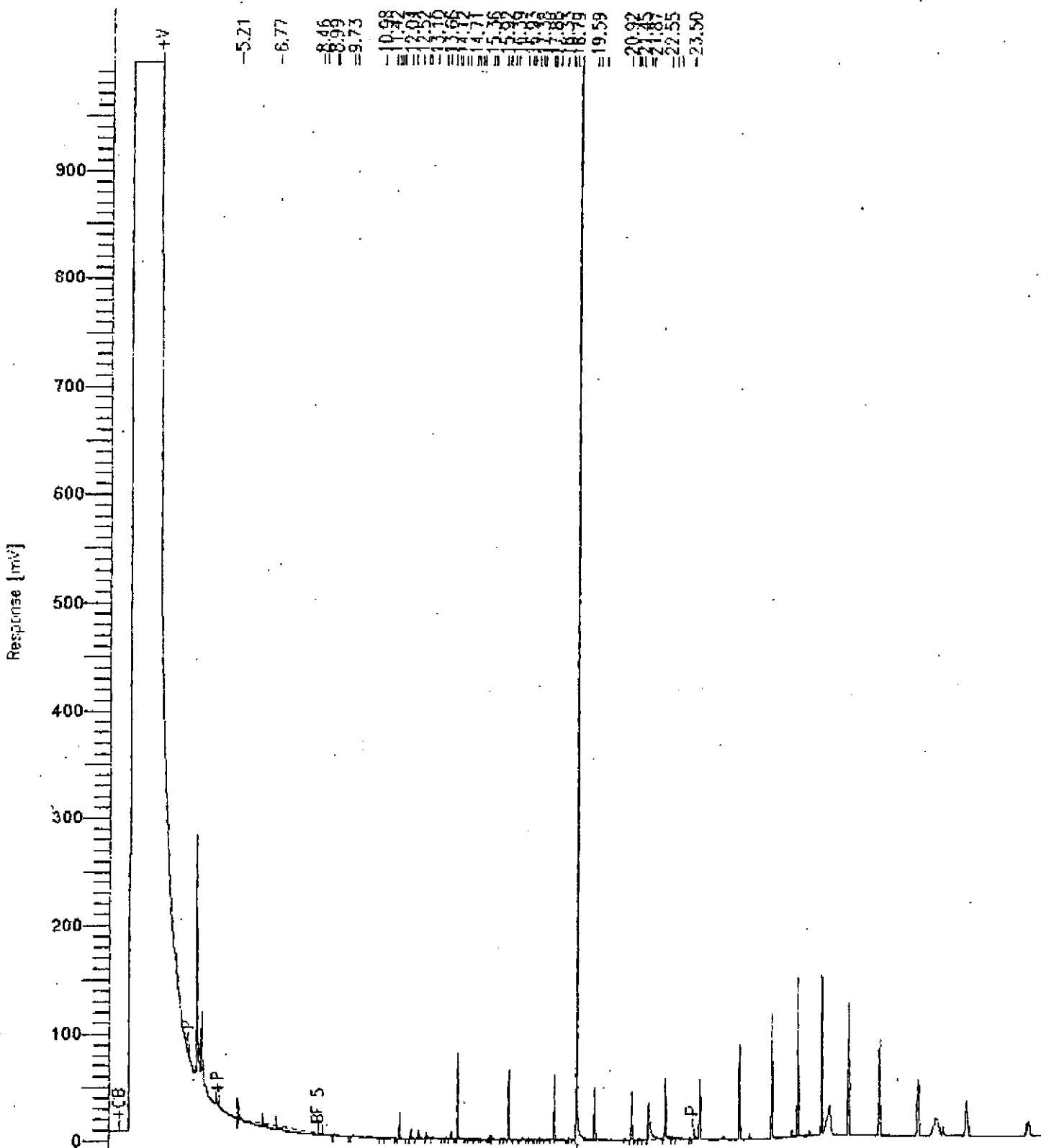
149155

Sample Name : ~~NO 230FFR~~
FileName : M:\9930027.DAS
Method : 100718.MTH
Start Time : 0.00 min
Scale Factors : 0.0

End Time : 30.00 min
Plot Offset: 0 mv

Sample #: ~~000000~~
Date : 10/1/97 10:55
Time of Injection: 10/1/97 05:37
Low Point : 0.00 mv
High Point : 1000.00 mv
Plot Scale: 1000.0 mv

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WP10-W

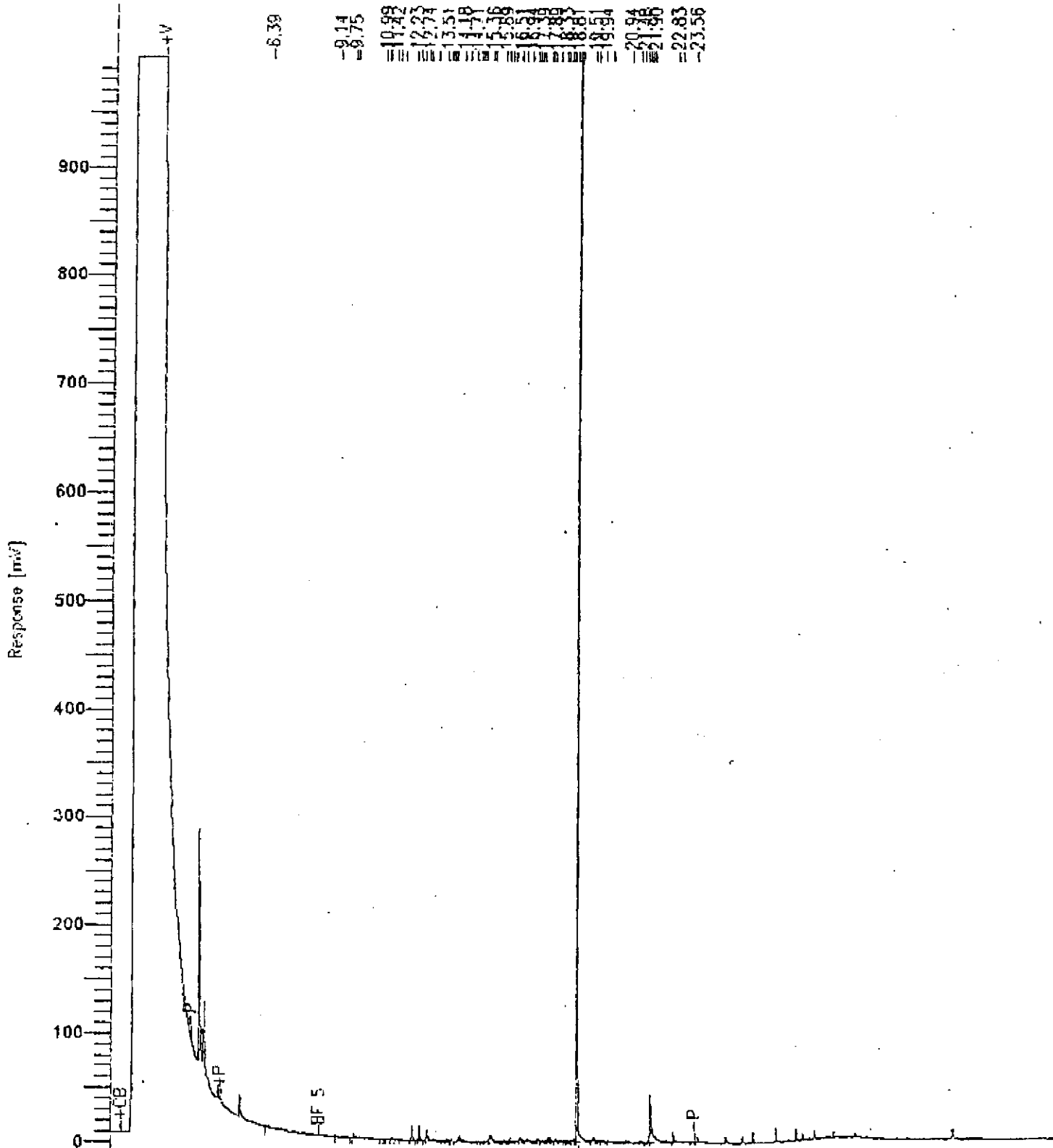
diesel analysis

Sample Name : 9709389/WP12
FileName : M:\9930022.raw
Method : 100718
Start Time : 0.00 min
Scale Factor : 0.0

BAH
10/21/97
End Time : 38.00 min
Plot Offset : 0 mv

Sample #: 148143
Date : 10/1/97 02:29
Time of Injection: 10/1/97 01:51
Low Point : 0.00 mV
High Point : 1000.00 mV
Plot Scale: 1000.0 mV

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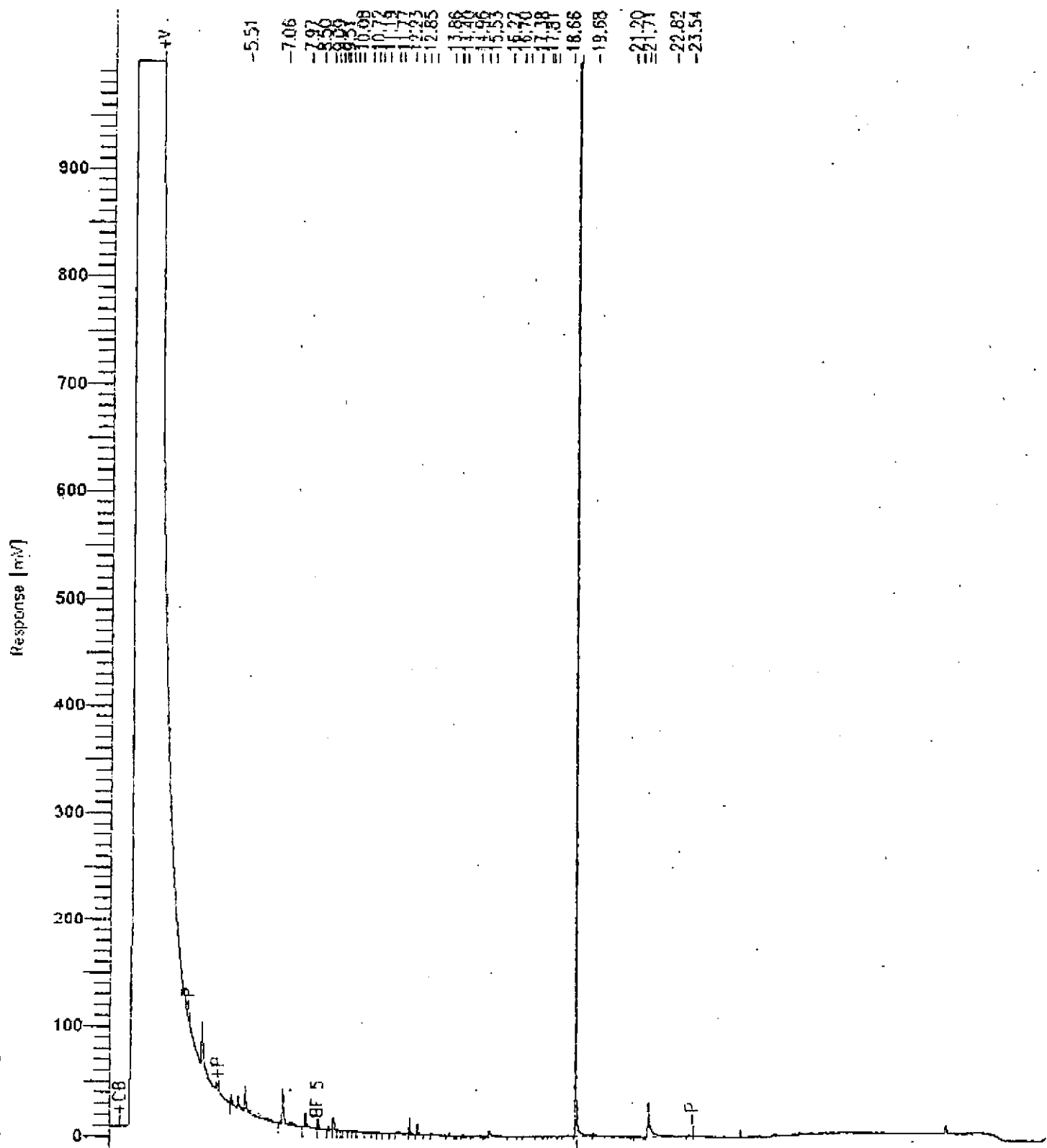
WP12-W

diesel analysis

Sample Name : 9709413/WB7W
 FileName : H:\5930031.raw
 Method : 100718
 Start Time : 0.00 min
 Scale Factor: 0.0

SAH
10/21/97
 End Time : 38.00 min
 Plot Offset: 0 mV

Sample #: 1494-5
 Date : 10/1/97 09:16
 Time of Injection: 10/1/97 08:38
 Low Point : 0.00 mV
 High Point : 1000.00 mV
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WP13-W

diesel analysis

Sample Name : 97093994
File Name : F:\S930021.raw
Method : 1D0718
Start Time : 0.00 min
Scale Factor : 0.0

End Time : 38.00 min
Plot Offset: 0 mV

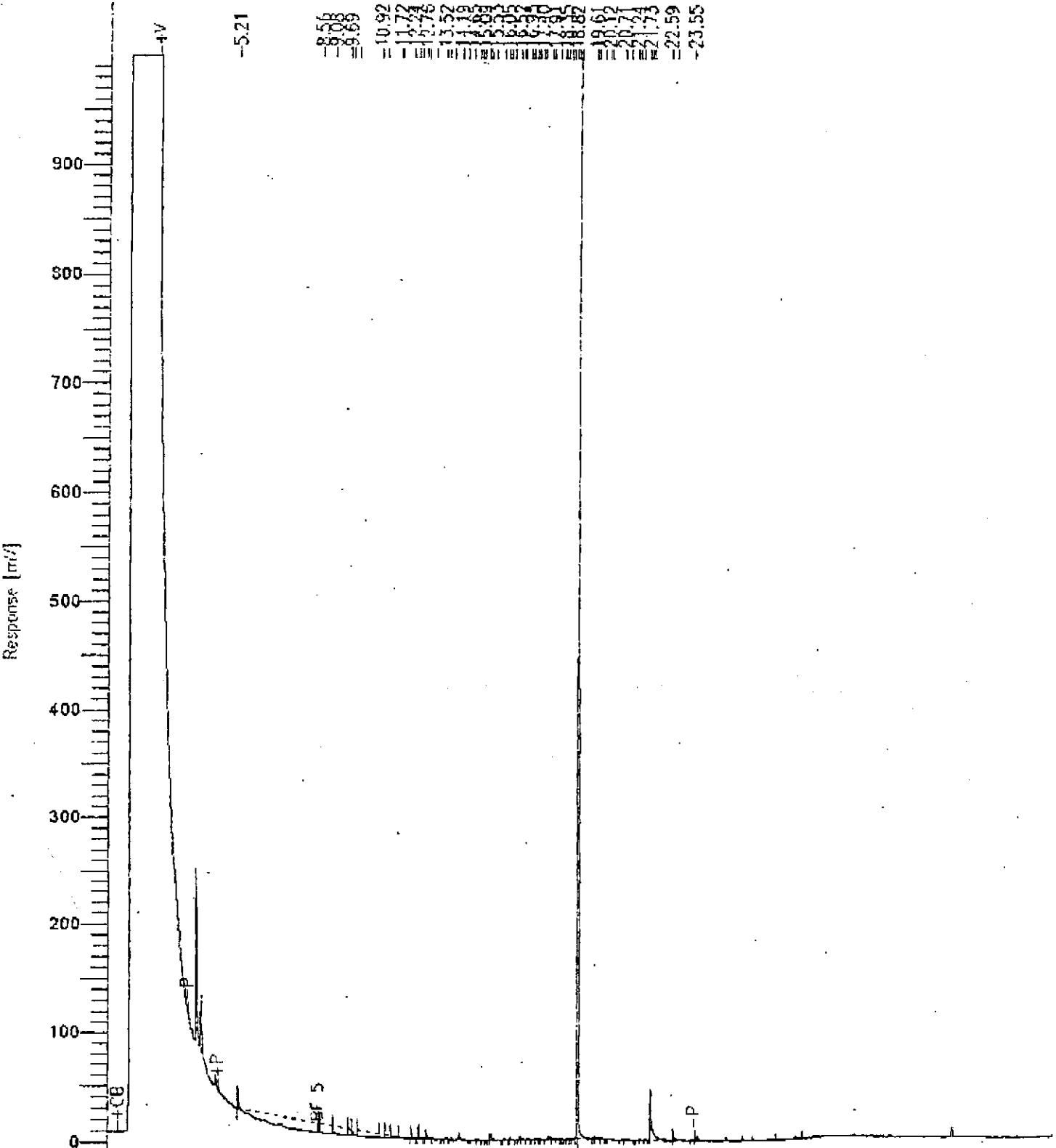
Sample #: 149147
Date : 10/1/97 01:44
Time of Injection: 10/1/97 01:06
Low Point : 0.00 mV
Plot Scale: 1000.0 mV
High Point : 1000.00 mV

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wp1fw

ASTH
10/1/97

51



wp1a-w

MOTOR OIL ANALYSIS

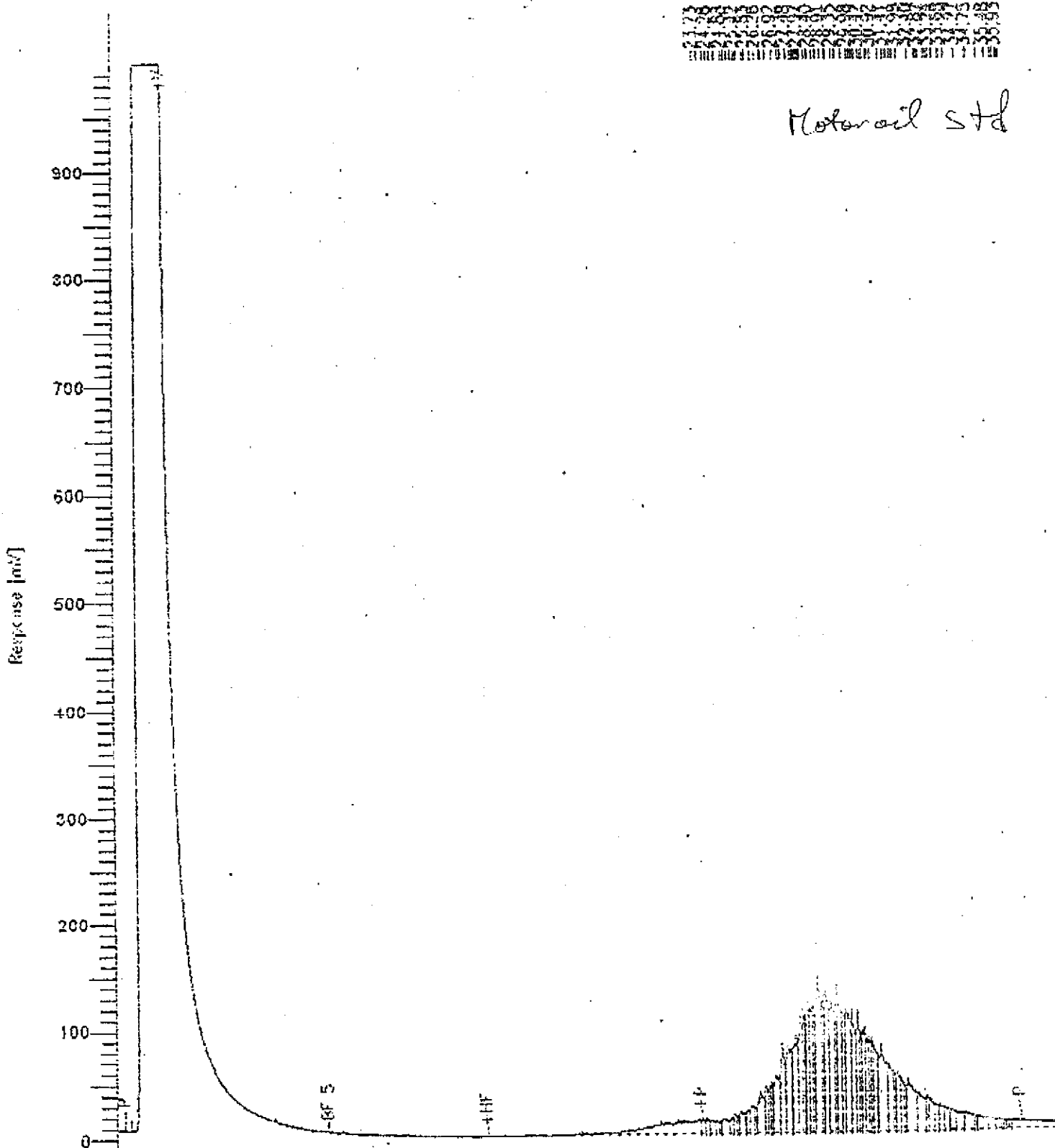
Sample Name : MO 0302PM
 File Name : H:\2007020.raw
 Method : LMO911
 Start Time : 0.00 min
 Scale Factor : 0.0

End time : 33.00 min
 Plot Offset : 0 mV

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 Sample #: M02027
 Date : 10/3/97 11:07
 Time of Injection: 10/3/97 10:29
 Low Point : 0.00 mV High Point : 1000.00 mV
 Plot Scale: 1000.0 mV

(Faded, illegible text)

Motoroil std



**Quality Control Checklist
for Review of Laboratory Report**

Job No.: 93343-F1

Site: 670 98th AVENUE

Laboratory: CHROMALAB

Laboratory Report No: 97044

Report Date: 9 OCTOBER 1997

BASELINE Review By: BFB

	Yes	No	NA
GENERAL QUESTIONS (Describe "no" responses below in "comments" section)			
1. Are the units in the laboratory report appropriate and consistent throughout the report? (e.g., mg/L for liquids, µg/kg vs. mg/kg)	X		X
2. Are the detection limits appropriate based on the intended use of the data? (e.g., detection limits below applicable MCLs for water quality issues?)	X		X
3a. Are detection limits appropriate based on the analysis performed? (i.e., not elevated due to dilution effects)	X		X
3b. If no, is an explanation provided? (If no, call the lab for an explanation).			X
4a. Were the samples analyzed within the appropriate holding time? (generally 2 weeks for volatiles, and up to 6 months for metals)	X		X
4b. If no, was it flagged in the report?			X
5. Was the lab report signed and dated as being reviewed by the laboratory director, QA manager, or other appropriate personnel?	X		X
6. Are the results consistent with previous analytical results from the site? (Contact the lab if results do not appear to be consistent with previous results and request review/reanalysis of data, as appropriate.)	X		
7a. Do the chromatograms confirm quantitative laboratory results? (petroleum hydrocarbons)	X		
7b. Do the chromatograms confirm laboratory notes, if present? (e.g., sample exhibits lighter hydrocarbon than standard).	X		
QA/QC QUESTIONS			
<i>Field/Laboratory Quality Control</i>			
8. Are field blanks reported as "ND"? (groundwater samples) <i>A field blank is a sample of DI water which is prepared in the field using the same collection and handling procedures as the other samples collected, and used to demonstrate that the sampling procedure has not contaminated the sample.</i>			X
9. Are trip blanks reported as "ND"? (groundwater samples/volatiles analyses) <i>A trip blank is a sample of contaminant-free matrix placed in an appropriate container by the laboratory and transported with field samples collected. Provides information regarding positive interferences introduced during sample transport, storage, preservation, and analysis. The sample is NOT opened in the field.</i>		X <i>see note</i>	
10. Are duplicate samples results consistent with the original sample? (groundwater samples) <i>Field duplicates consist of two independent samples collected at the same sampling location during a single sampling event. Used to evaluate precision of analytical data and sampling technique. (Differences between the duplicate and sample results may also be attributed to environmental variability.)</i>			X

Laboratory Quality Control Checklist

	Yes	No	NA
<p>Batch Quality Control <i>(Samples are batched together by matrix [soil or water] and analyses requested. A batch generally contains 20 or fewer samples of the same matrix type, and is prepared using the same reagents, standards, procedures, and time frame. QC samples are run with each batch to assess performance of the entire measurement process.)</i></p>			
11a. Are all sample QA/QC limits within laboratory control limits?	X		X
11b. If exceedances of lab QC goals were identified, were they flagged in the report?			X
11c. If exceedances of lab QC goals were identified, were any corrective actions made by the laboratory? (Call lab to verify)			X
12. Are method blanks for the analytical method(s) below laboratory reporting limits? A method blank is run for each analytical batch. Used to assess laboratory contamination and prevent false positive results. Method blanks should be "ND." However, common laboratory contaminants include acetone, methylene chloride, diethylhexyl phthalate, and di-n-octyl phthalate.	X		X
13. Are laboratory control samples (LCS) and LCS duplicate (LCSD) within laboratory limits? Limits should be provided on the report. LCS is a reagent blank spiked with a representative selection of target analyte(s) and prepared in same manner as samples analyzed. The LCS should be spiked with the same analytes at the same concentrations as the matrix spike (below). The LCS is free of interferences from the sample matrix and demonstrates the ability of the laboratory instruments to recover the target analytes, especially if the MS/MSD fails QC goals. Accuracy (recovery information) is generally reported as % spike recovery; precision (reproducibility of results) between LCS and LCSD is generally reported as relative percent difference (RPD). LCS/LCSD can be run in addition to, or in lieu of, matrix QC data (if insufficient sample material is available). BS only	X		X
14. Are the Matrix QC data (e.g., MS/MSD) within laboratory limits? Limits should be provided on laboratory report. The lab selects a sample and analyses a spike and spike duplicate of that sample. Alternatively, the lab can analyze a duplicate, and spike of a sample, if the sample is expected to contain target analytes. Matrix QC data is used to obtain precision and accuracy information; this information is reported in the same manner as LCS/LCSD. Not reported			X
<p>Sample Quality Control</p>			
15. Are the surrogate spikes reported within the laboratory's acceptable recovery limits? A surrogate is a non-target analyte, which is similar in chemical structure as the analyte(s) being analyzed for. The surrogate is not commonly found in environmental samples. A known concentration of the surrogate is spiked into the sample or QA "sample" prior to extraction or sample preparation. Results are usually reported as % recovery of the spike. Used to evaluate the lab's accuracy of individual samples for volatiles including EPA Methods 8240, 8260, 8270, 8220, 8080, 8010, and 8015M. Failure to meet lab's acceptance limits results in rebatching and reanalysis of the sample. Repeated failure indicates that the sample result may be biased or is not amenable to analysis by the method used.			X

Comments: 9. In the trip blanks, 0.0008 mg/L trichloro fluoromethane and 0.0079 mg/L chloroform were detected. These analytes were not detected in any of the other samples in this batch/QC.