

1828 TRIBUTE ROAD SUITE A  
SACRAMENTO, CA 95815  
916-649-3570  
800-395-3570  
FAX: (916) 649-3819

February 9, 1998  
NWE Project No. 050-000428



Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94302-6577

ENVIRONMENTAL  
ENGINEERING

Subject: **Submittal of Results Report - Soil and Groundwater  
Assessment** *Loop*  
444 Hegenberger ~~Road~~, Oakland, California

INDUSTRIAL  
HYGIENE

Dear Mr. Chan:

CONSTRUCTION  
MANAGEMENT

Northwest Envirocon, Incorporated (NWE) has been authorized to submit the attached report on behalf of our client, McMorgan and Company (McMorgan). The report documents the results of investigative work, including a geophysical survey, collection of soil and groundwater samples, and subsurface exploration with a backhoe performed in July and October 1997. The work was performed in accordance with a work plan prepared by NWE for your review dated May 19, 1997, and modified after conversations with you.

LABORATORY  
SERVICES

It is our understanding that, as part of a redevelopment plan for the area, McMorgan is close to finalizing the sale of the property adjacent to (east-northeast of) the subject site to a hotel company. This transaction will be the first step in redevelopment of the entire parcel, including that portion of the parcel in which the current investigation was conducted. Preliminary negotiations for sale of the subject site between McMorgan and the hotel company have already begun.

MAINTENANCE  
ENGINEERING

With receipt of the investigative results documented in the attached report, NWE and McMorgan anticipate additional assessment work will be necessary at the subject site. McMorgan is willing to proceed with investigative steps to determine the extent of petroleum constituents in soil and groundwater underlying the site. McMorgan looks forward to a coordinated effort involving the City of Oakland and Alameda County to insure that the required environmental work is accomplished efficiently as the potential sale and redevelopment of the property proceeds.

ASBESTOS  
SERVICES

ENVIRONMENTAL  
TRAINING

98 FEB 18 PM 2:29  
ENVIRONMENTAL  
PROTECTION  
DIVISION

**Mr. Barney Chan**  
NWE Project No. 05-000428  
February 9, 1998  
Page 2 of 2

I will call you at the end of next week to discuss this matter. Please contact me at your earliest convenience if you have any questions regarding the report.

Sincerely,

**NORTHWEST ENVIROCON, INC.**

*K. A. van Dam* FOR

Dale A. van Dam, R.G.  
Hydrogeologist

DAvD:davd

cc: Mr. Pat Murray, McMorgan & Company  
Mr. Jack Davis, The Voit Companies





**SOIL AND GROUNDWATER ASSESSMENT**

**444 Hegenberger Road  
Oakland, California**

*12/19/97*

**Project No. 050-000428**

**Prepared for:**

**Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94302-6577**

**Prepared By:**

**Northwest Envirocon, Incorporated  
430 North Vineyard Avenue, Suite 101  
Ontario, California 91764  
(800) 395-3570**

**December 19, 1997**

1828 TRIBJTE ROAD SUITE A  
SACRAMENTO, CA 95815  
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800-395-3570  
FAX: (916) 649-3819

December 19, 1997  
NWE Project No. 05-000428



Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94302-6577

Subject: **Results of Soil and Groundwater Assessment**  
444 Hegenberger Road, Oakland, California

ENVIRONMENTAL  
ENGINEERING

Dear Mr. Chan:

INDUSTRIAL  
HYGIENE

Northwest Envirocon, Incorporated (NWE) has been authorized to perform a geophysical survey and a subsurface investigation at the subject site (Plates 1 and 2). This phase of investigation, consisting of a geophysical survey, collection of soil and groundwater samples, and subsurface exploration with a backhoe was performed in July and October 1997. The work was performed in accordance with a work plan prepared by NWE for your review dated May 19, 1997. After your comments were received, the work plan was modified verbally and approved by Alameda County in June 1997. This letter summarizes the results of the current phase of investigation at the subject site.

CONSTRUCTION  
MANAGEMENT

### Summary of Results

#### Geophysical Survey

LABORATORY  
SERVICES

The westernmost corner of the site was previously occupied by a retail gasoline service station. Available records indicated that at least some underground storage tanks (USTs) had been removed from this portion of the property, but did not prove conclusively that all USTs (or other underground objects) had been removed. A previous geophysical survey had been performed at the subject Property, but at the time of the previous geophysical survey (coordinated by another consulting firm), a portion of the former gasoline service station, near the extreme western corner of the property, had been covered by a soil pile. This geophysical survey was intended to assess a limited portion of the subject Property for the presence or absence of additional USTs, clarifiers, or underground metal product distribution piping.

MAINTENANCE  
ENGINEERING

ASBESTOS  
SERVICES

ENVIRONMENTAL  
TRAINING

On July 24, 1997, Norcal Geophysical Consultants, Inc. (NORCAL) performed a geophysical survey at the subject Property. The surveyed area measured approximately 50 feet parallel to Hegenberger Loop and 50 feet parallel to Hegenberger Road (see Plate 2). NORCAL utilized a "magnetic gradiometer," ground penetrating radar (GPR), and a pipe and cable locator to perform the survey. NORCAL's analysis of the field data indicated the presence of three "anomalous areas." Copies of NORCAL's results letter and field data are included in Attachment A. On the basis of magnetometry, NORCAL characterized one of the anomalies, located near the southeast corner of the surveyed area as "indicative of a buried metal object of fairly significant size." The anomaly located in the northeast portion of the surveyed area was attributed to the proximity of a raised concrete pad. The third anomaly, located along near the north end of the western boundary of the surveyed area, was characterized as a "buried metal object" which could not be fully characterized because part of the object was outside the boundary of the surveyed area.

According to NORCAL, the GPR indicated the presence of metal debris in the shallow subsurface, "but no parabolic reflections indicative of an UST." The data generated by the cable locator correlated with anomalies identified by magnetometry and GPR.

#### Soil and Groundwater Sampling

Twelve soil borings were advanced at the subject Property during this phase of investigation. The soil borings are numbered SB-5 through SB-16 on Plate 3 (soil borings SB-1 through SB-4 were advanced during a previous phase of investigation). Soil borings were advanced to depths ranging from 10 to 12 feet below grade using a hollow-stem-auger drill rig. Soil borings SB-5 through SB-14 were advanced in the vicinity of or in the assumed down gradient direction from a former oil/water separator and a former waste oil tank (Plate 3). Soil samples were collected at vertical intervals of 3 feet from each soil boring using a California-modified split-spoon sampler. Groundwater samples were collected using Hydropunch® sampling methodologies. After collection of soil and groundwater samples, each soil boring was abandoned by filling completely with a mixture of cement and bentonite.

Soil encountered in each soil boring consisted of clay, sandy clay, and clayey sand. Groundwater was encountered in each boring at approximately 10 feet below grade. Soil boring logs describing subsurface conditions encountered are contained in Attachment B.

Collected soil samples were analyzed for methyl-tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, total xylenes (BTEX), total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), and oil and grease. Soil sample analytical results are compiled in Table 1.

**Table 1**  
**Soil Sample Analytical Results**  
**444 Hegenberger Road, Oakland, California**  
**October 6, 7, 8, 1997**  
 (all concentrations in milligrams per Kilogram - mg/Kg)

P/D Rd  
 4' > 2000  
 4' 723  
 4' 68  
 4' 1000  
 4' 610  
 4' > 2000  
 4' 308  
 7, 939  
 4' 1145  
 4' 1125

Soil Boring Number	Soil Sample Number	Depth (feet below grade)	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg <sup>2</sup>	TPHd <sup>3</sup>	Oil and Grease
SB-5	SB05-3	3	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<2.0 <sup>4</sup>	<10
SB-6	SB06-3	3	<0.50	0.055	0.053	0.11	0.11	39	<25 <sup>4</sup>	61
SB-7	SB07-3	3	<0.050	0.015	0.011	<0.0050	<0.0050	1.3	<25 <sup>4</sup>	130
SB-8	SB08-3	3	<2.5	1.1	<0.25	2.2	7.6	160	<30 <sup>4</sup>	20
SB-9	SB09-3	3	<0.050	0.017	<0.0050	<0.0050	0.015	1.1	<20 <sup>4</sup>	120
SB-10	SB10-3	3	<0.50	4.7	<0.50	2.3	2.5	750	<100 <sup>4</sup>	25
SB-11	SB11-3	3	<0.50	2.3	0.73	5.1	1.1	260	<15 <sup>4</sup>	37
SB-12	SB12-3	3	<0.050	0.036	0.0070	<0.0050	0.025	1.2	<10 <sup>4</sup>	42
SB-13	SB13-3	3	<0.50	13	0.85	5.8	4.2	930	<150 <sup>4</sup>	780
SB-14	SB14-3	3	<0.50	0.80	0.36	0.087	0.38	62	<10 <sup>4</sup>	51
SB-15	SB15-3	3	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<1.0	<10
	SB16-6	6	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<1.0	<10
SB-16	SB16-3	3	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<1.0	<10
	SB16-6	6	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<2.0 <sup>4</sup>	15

MTBE<sup>1</sup> = Methyl-Tertiary-Butyl Ether.  
 TPHg<sup>2</sup> = Total Petroleum Hydrocarbons as gasoline.  
 TPHd<sup>3</sup> = Total Petroleum Hydrocarbons as diesel.  
 <30<sup>4</sup> = Increased reporting limit due to gasoline and/or oil range interference.

The soil sample analytical results indicate the presence of TPHg and/or oil and grease in every soil sample analyzed except those collected from soil boring SB-5 and SB-15. The soil sample collected from soil boring SB-16 at a depth of 3 feet below grade did not contain petroleum constituents; the soil sample collected from soil boring SB-16 at 6 feet below grade did not contain any petroleum constituents except oil and grease at a concentration of 13 milligrams per Kilogram (mg/Kg). TPHg at concentrations exceeding 100 mg/Kg were detected in soil samples collected from soil borings SB-8, SB-10, SB-11, and SB-13. Oil and grease was present at concentrations exceeding 100 mg/Kg in soil samples collected from soil borings SB-7, SB-9, and SB-13. One or more BTEX constituents were detected in soil samples collected from soil borings SB-5 through SB-14, but generally at concentrations less than 10 mg/Kg. The highest benzene concentrations were detected in soil samples collected from soil borings SB-13 (13 mg/Kg) and SB-10 (4.7 mg/Kg). Copies of certified soil sample analytical reports are contained in Attachment C.

Collected groundwater samples were analyzed for MTBE, BTEX, TPHg, TPHd, and total petroleum hydrocarbons as motor oil (TPHm). Groundwater samples collected from soil borings SB-5, SB-6, SB-8, and SB-9 were also analyzed for volatile organic compounds (VOCs) by U.S. EPA Method. Groundwater sample analytical results are compiled in Table 2.

**Table 2**  
**Groundwater Sample Analytical Results**  
**444 Hegenberger Road, Oakland, California**  
**October 6, 7, 8, 1997**  
 (all concentrations in micrograms per Liter  $\mu$ g/L)

Ground-water Sample Number	MTBE <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPHg <sup>2</sup>	TPHd <sup>3</sup>	TPHm <sup>4</sup>	VOCs <sup>5</sup>
SB05-W	<5.0	4.5	1.1	<0.50	1.4	190	<50	<100	ND <sup>6</sup>
SB06-W	<250	620	<50	800	<50	15,000	180	130	ND <sup>6</sup>
SB07-W	<5.0	45	<5.0	210	<5.0	3,900	<100	<100 <sup>7</sup>	NA <sup>8</sup>
SB08-W	<500	12,000	540	6,900	7,400	52,000	<400 <sup>7</sup>	360	ND <sup>6</sup>
SB09-W	<5.0	55	3.5	40	4.5	1,600	<100 <sup>7</sup>	130	ND <sup>6</sup>
SB10-W	<5.0	280	15	400	120	5,400	<100 <sup>7</sup>	110	NA <sup>8</sup>
SB11-W	<100	2,100	1,800	1,300	4,800	16,000	<50 <sup>7</sup>	<700	NA <sup>8</sup>
SB12-W	<100	460	42	2,100	230	13,000	<700 <sup>7</sup>	890	NA <sup>8</sup>
SB13-W	<250	3,200	67	180	100	23,000	<350 <sup>7</sup>	440	NA <sup>8</sup>
SB14-W	<5.0	95	3.0	120	8.9	2,700	<100 <sup>7</sup>	110	NA <sup>8</sup>
SB15-W	<5.0	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	NA <sup>8</sup>
SB16-W	<5.0	<0.50	<0.50	<0.50	<0.50	<50	<50	<100	NA <sup>8</sup>

- MTBE<sup>1</sup> = Methyl-Tertiary-Butyl Ether.
- TPHg<sup>2</sup> = Total Petroleum Hydrocarbons as gasoline.
- TPHd<sup>3</sup> = Total Petroleum Hydrocarbons as diesel.
- TPHm<sup>4</sup> = Total Petroleum Hydrocarbons as motor oil.
- VOCs<sup>5</sup> = Volatile Organic Compounds (other than benzene, toluene, ethylbenzene, and total xylenes) by EPA Method 624.
- ND<sup>6</sup> = Not Detected at Method Detection Limit - see laboratory reports for respective compound detection limits.
- <100<sup>7</sup> = Increased reporting limit due to gasoline and/or oil range interference.
- NA<sup>8</sup> = Not analyzed.

Groundwater sample analytical results indicate petroleum constituents were detected in samples collected from every sampling location except soil borings SB-15 and SB-16, which were located in the assumed up gradient direction of the former service station. The highest benzene concentrations were reported in groundwater samples collected from soil boring locations SB-8 (12,000 micrograms per Liter - 1g/L), SB-11 (2,100 1g/L), and SB-13 (3,200 1g/L). The distribution of dissolved benzene in groundwater is illustrated in Plate 4.

TPHg concentrations were highest in groundwater samples collected from soil boring locations SB-6, SB-8, SB-11, SB-12, and SB-13 at concentrations of 15,000, 52,000, 16,000, 13,000, and 11,000  $\mu\text{g/L}$ , respectively. None of the groundwater samples analyzed contained detectable concentrations of VOCs (was 8240 run?) besides BTEX. Copies of certified groundwater sample analytical reports are contained in Attachment D.

#### Exploratory Trenching

On October 8, 1997, a backhoe was used to explore those areas indicated by the geophysical survey to be the potential locations of underground objects. The locations of the exploratory trenches are indicated on Plate 5. The trenches were excavated with a 3 foot wide backhoe bucket to depths of approximately 6 feet below grade. Except for small metal objects and a length of former underground product distribution piping, no underground metallic objects were found at the indicated trench locations. Each trench was backfilled completely after observations were recorded.

#### **Summary and Recommendations**

Soil sample analytical results indicate the presence of petroleum constituents in soil samples collected from above the current depth to groundwater at sampling locations located beneath and assumed down gradient of the former gasoline service station property. Soil samples collected at locations assumed up gradient of the former service station property generally did not contain petroleum constituents. TPHg concentrations in soil samples ranged from 1.1 to 930 mg/Kg; benzene concentrations ranged from 0.017 to 13 mg/Kg.

Current investigation results indicate the presence of dissolved benzene in each groundwater sample collected at a location assumed to be down gradient of former service station facilities at the subject site. The highest concentrations of dissolved benzene were contained in groundwater samples collected from locations in the assumed down gradient direction of the former waste oil tank (SB-8) and the former pump island area (SB-11 and SB-13). Groundwater samples collected in the assumed up gradient direction from the former service station (from soil boring locations SB-15 and SB-16) did not contain detectable concentrations of petroleum constituents. Groundwater samples collected at the assumed down gradient property boundary (soil borings SB-6, SB-10, and SB-13) also contained detectable concentrations of dissolved benzene (at concentrations of 620, 280, and 3,200  $\mu\text{g/L}$ , respectively). These results indicate that the distribution of dissolved petroleum constituents in groundwater extends offsite toward the west.



Mr. Barney Chan  
NWE Project 05-000428  
December 19, 1997  
Page 6 of 6

NWE recommends that access to off-site, down gradient property be acquired to advance soil borings for the purpose of collecting groundwater samples to determine the down gradient extent of groundwater containing petroleum constituents. NWE also recommends that groundwater monitoring wells be installed to allow repeatable monitoring of groundwater to determine the variability of groundwater elevations below the site, to determine the groundwater flow direction, and to assess the seasonal variation of petroleum constituent concentrations in groundwater.

Please contact me at your earliest convenience after review of this document. After verbal discussions with Alameda County, NWE will prepare a work plan outlining the proposed next phase of assessment at the subject Property.

Sincerely,

**NORTHWEST ENVIROCON, INC.**

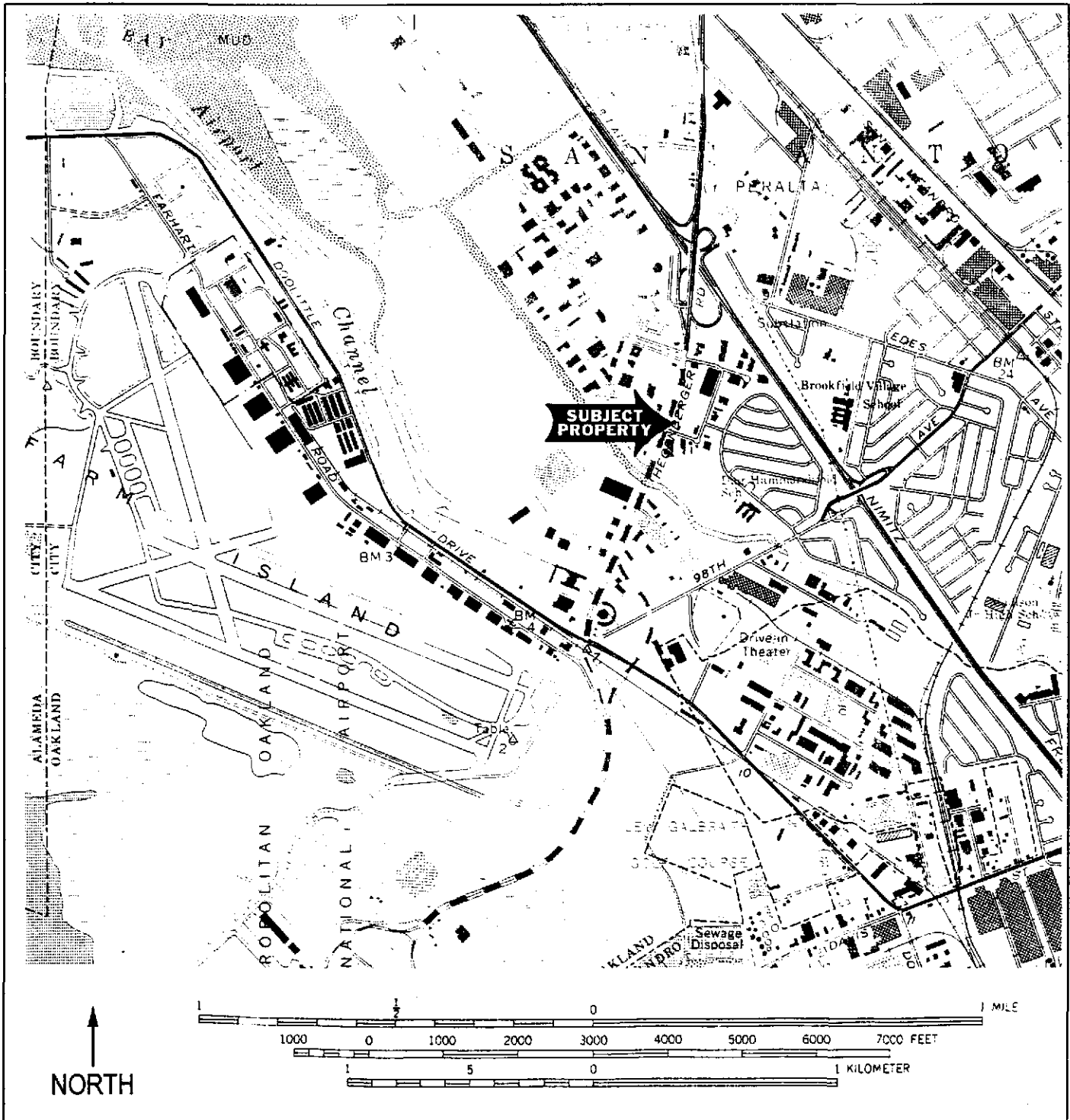
  
FOR

Dale A. van Dam, R.G.  
Hydrogeologist

DAvD:davd

cc: Mr. Jack Davis, The Voit Companies  
Mr. Pat Murray, McMorgan & Company

Attachments



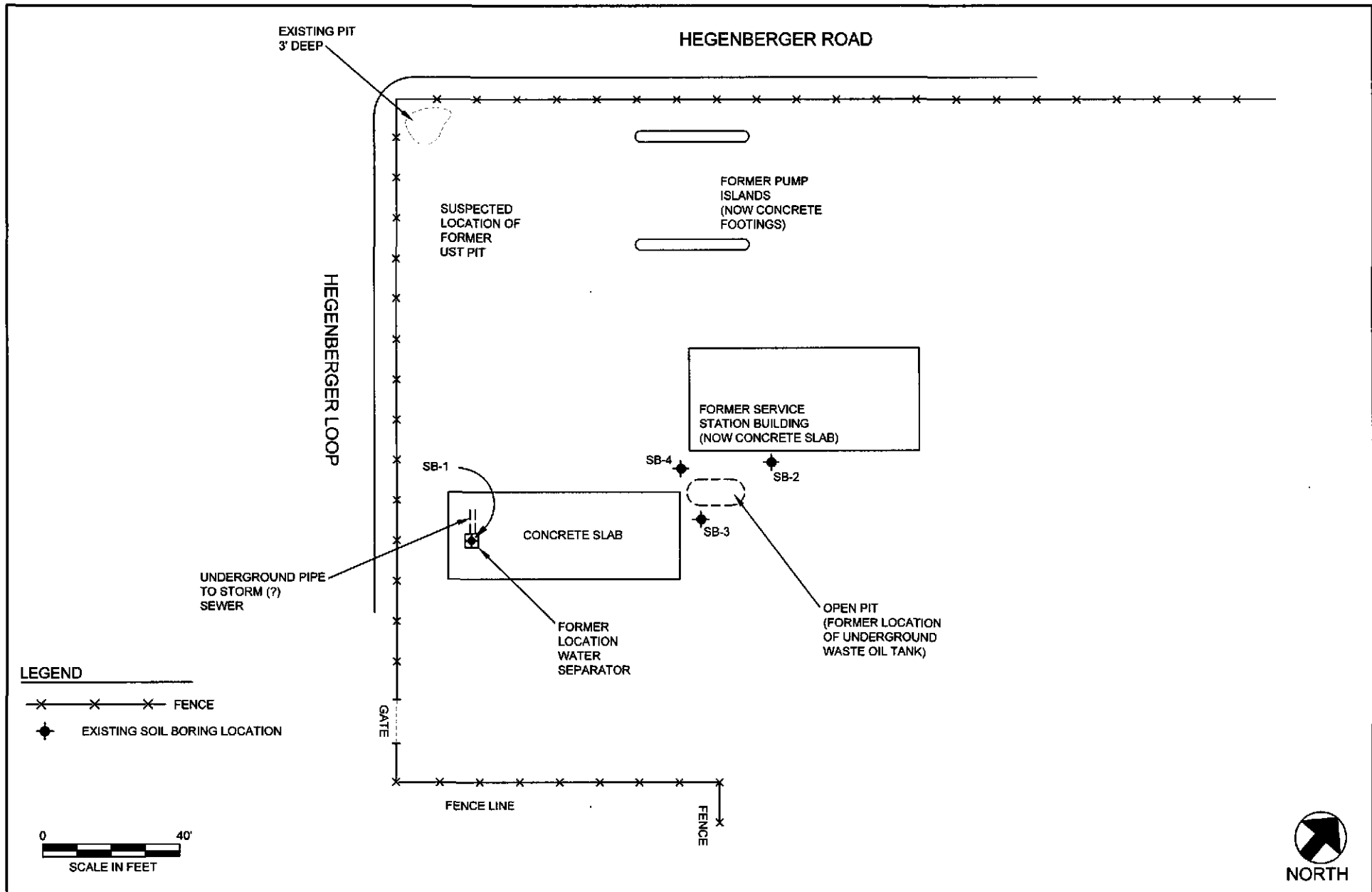
**Northwest Envirocon, Inc.**  
 Environmental Consulting

USGS 7.5 Minute Topographic Map  
 San Leandro Quadrangle  
 444 Hegenberger Road  
 Oakland, California

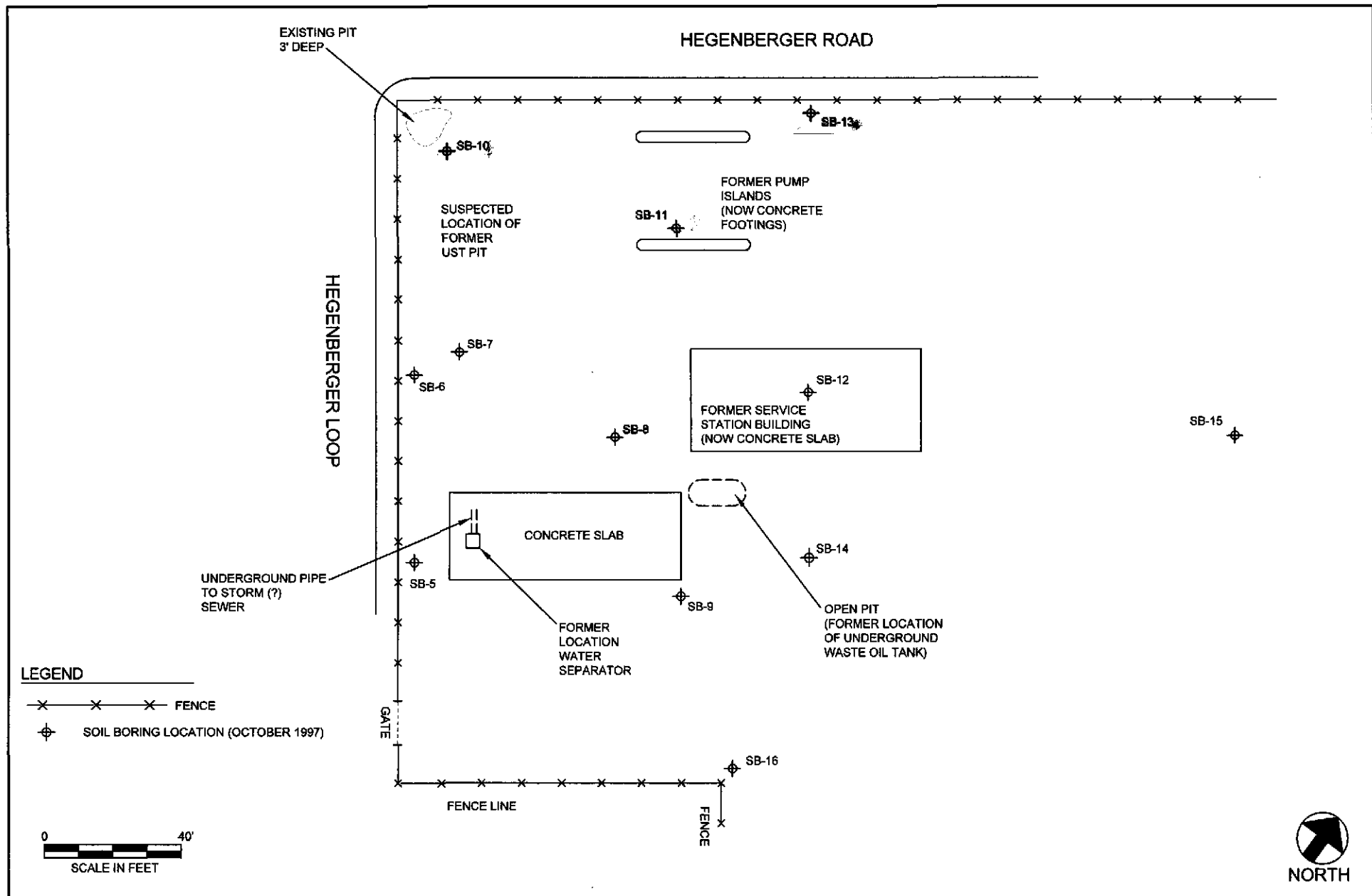
JOB NUMBER:  
 05-000428

DATE:  
 December 1997

PLATE:  
 1

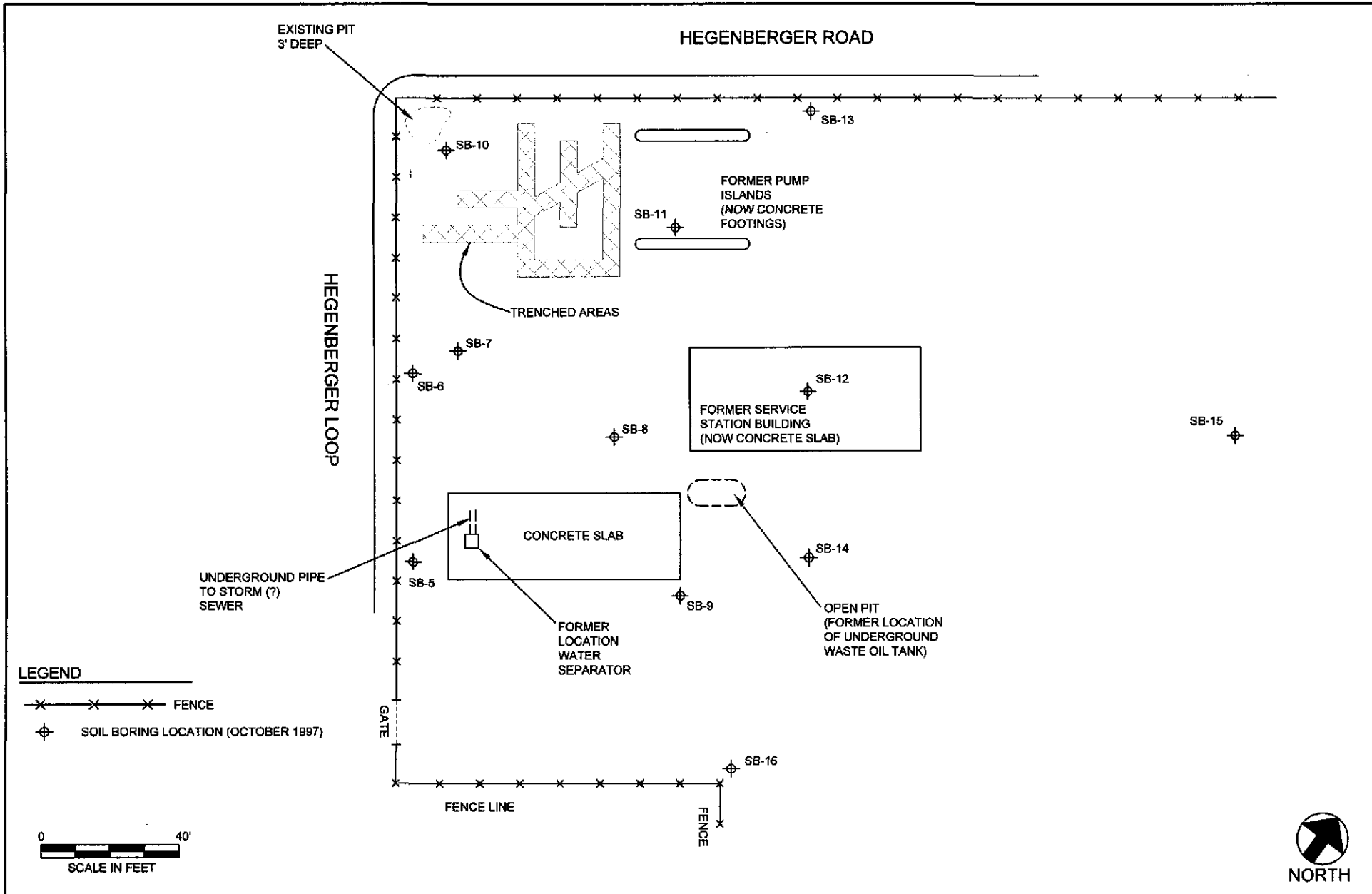


<b>NORTHWEST ENVIROCON, INC.</b> 1828 TRIBUTE ROAD, SUITE A, SACRAMENTO, CA. 95815 (916) 649-3570 FAX: (916) 649-3819		SITE: FORMER SERVICE STATION 444 HEGENBERGER ROAD OAKLAND, CALIFORNIA		DATE: DECEMBER 1997	PROJECT#: 05-000428
				SCALE: 1"=40'	PLATE: 2
DRAWN: CEB	APPROVED: KFG	CLIENT: THE VOIT COMPANIES	DRAWING TITLE: SITE MAP		



<b>NORTHWEST ENVIROCON, INC.</b> 1828 TRIBUTE ROAD, SUITE A, SACRAMENTO, CA. 95815 (916) 649-3570 FAX: (916) 649-3819	<b>SITE:</b> FORMER SERVICE STATION 444 HEGENBERGER ROAD OAKLAND, CALIFORNIA	<b>DATE:</b> DECEMBER 1997	<b>PROJECT#:</b> 05-000428
		<b>SCALE:</b> 1"=40'	<b>PLATE:</b> 3
<b>DRAWN:</b> CEB	<b>APPROVED:</b> KFG	<b>CLIENT:</b> THE VOIT COMPANIES	<b>DRAWING TITLE:</b> SOIL BORING & GROUNDWATER SAMPLING LOCATION MAP





<b>NORTHWEST ENVIROCON, INC.</b> 1828 TRIBUTE ROAD, SUITE A, SACRAMENTO, CA. 95815 (916) 649-3570 FAX: (916) 649-3819		SITE: <b>FORMER SERVICE STATION</b> 444 HEGENBERGER ROAD OAKLAND, CALIFORNIA		DATE: <b>DECEMBER 1997</b>	PROJECT#: <b>05-000428</b>
DRAWN: <b>CEB</b>		APPROVED: <b>KFG</b>		SCALE: <b>1"=40'</b>	PLATE: <b>5</b>
CLIENT: <b>THE VOIT COMPANIES</b>			DRAWING TITLE: <b>EXPLORATORY TRENCH LOCATIONS</b>		

**ATTACHMENT A**  
**RESULTS OF GEOPHYSICAL SURVEY**

July 25, 1997

Mr. Mark A. Isbell  
Northwest Envirocon, Inc.  
1828 Tribute Road  
Suite A  
Sacramento, CA 95815

Re: Geophysical Survey, 444 Hegenberger Road, Oakland, CA

Dear Mark:

On July 24, 1997, Norcal Geophysical Consultants, Inc. (NORCAL) completed a geophysical survey to <sup>55</sup>access the possible presence of underground storage tanks (USTs) at a former service station located at 444 Hegenberger Road, Oakland, California. NORCAL established a survey grid with 5-foot spacing in a 50 feet (north-south) by 50 feet (east-west) area defined by Northwest Envirocon, Inc.. This area was larger than the 35 feet by 35 feet area identified in our proposal to Northwest Envirocon, Inc., dated July 22, 1997. The grid area was relatively flat and covered with grass. Cyclone fencing bounded the grid area on the west and north sides at distances greater than 20 feet. The ground was paved with asphalt concrete north of the grid, and reinforced concrete west and south of the grid area. Two raised concrete pads, resembling pump station foundations were located at the northeast corner of the grid area.

We used a Scintrex magnetic gradiometer, a Geonics SIR 2 ground penetrating radar (GPR) and a Fisher M-Scope pipe and cable locator to survey the grid area. During the field survey, the magnetic data was stored in a data-logger and then transported to NORCAL's office for processing. The GPR survey consisted of west to east traverses along the west-east trending grid lines and selected perpendicular traverses in the north-south direction. The M-Scope was also used to survey the entire grid area along northing and easting lines.

On July 25, 1997, the magnetometer data was downloaded and processed to produce the attached draft vertical gradient contour map. The map shows the presence of three anomalous areas. The anomaly located in the southeast quadrant of the grid area, at grid coordinates 15 north, 40 east, is indicative of a buried metal object of fairly significant size. The anomaly located in the northeast corner of the grid area is likely due to the presence of the nearby raised concrete pad. The third anomaly, located along the north end of the west grid boundary, is indicative of a buried metal object however, it is not completely resolved because part of the object is outside of the surveyed area.

The locations of the GPR traverses are illustrated on the attached draft site map. The GPR records show reflection patterns indicative of metal debris present in the shallow subsurface soil and on the ground surface but no parabolic reflections indicative of a UST.

In general, the M-Scope survey identified the presence of metal objects in areas that correlate

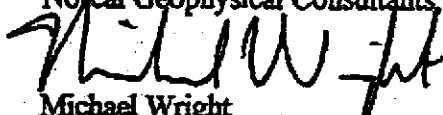


Mr. Mark A. Isbell  
July 25, 1997  
Page Two

with the vertical magnetic gradient anomalies and in areas with metal debris identified with the GPR.

We appreciate the opportunity to assist you in your efforts. If you have questions or require additional information please let us know.

Sincerely,  
Norcal Geophysical Consultants, Inc.



Michael Wright  
Geologist and Geophysicist

Attachment: Draft Site Map, 1 Page  
Draft Magnetometer Survey Map, 1 page

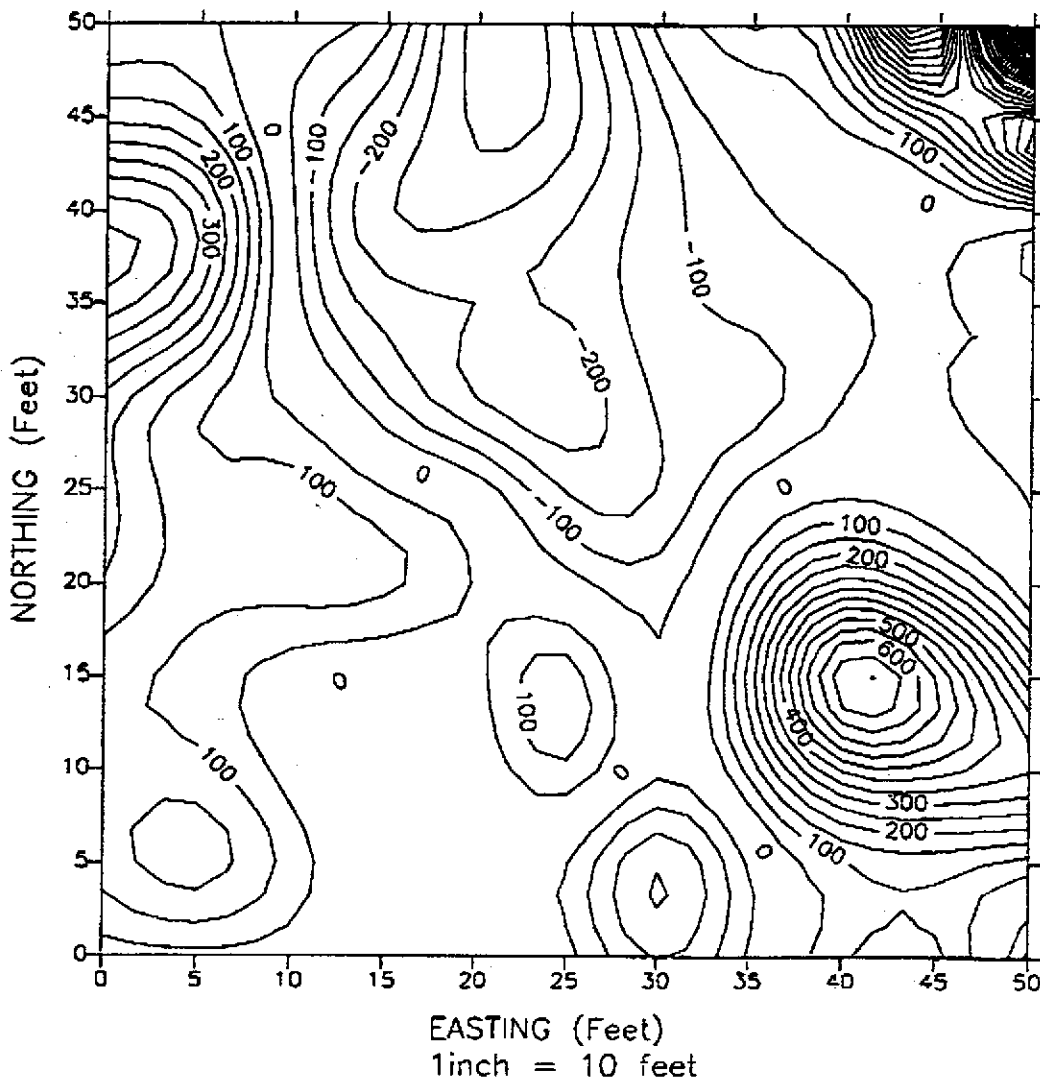
C: Dale van Dam, Northwest Envirocon, Inc.  
Ken Blom, R.Gp., R.G., NORCAL

mw/nwcc0725.doc



# DRAFT

Vertical Gradient Contour Map (CI = 50 nT/m)  
Northwest Envirocon - 444 Hegenberger, Oakland

















NORTHWEST ENVIROCON INC.  
Field Log of Test Pit or Auger Hole

Site Location <b>444 HEGENBERGER</b>	Boring # <b>SB11</b>
Project # <b>05-428</b> Date <b>10/7/97</b>	Sheet <b>1 of 1</b>
Drilling Contractor <b>ALL TERRAIN DRILLING</b>	
Driller <b>RICHARD</b>	Logger <b>DAVID COPP</b>
Start _____ Finish _____	Boring Diameter <b>8"</b>
Drilling Method <b>HOLLOW STEM AUGER</b> <del>GEOPROBE</del>	
Sampling Method <b>SPLIT SPOON</b> <b>SLEEVE - <del>DIAPHRAGM</del></b>	
n/s est. water depth <b>10'</b> elev _____	

Depth	Cas.	Annu.	Well Legend	Screening Results (ppm)	Sample #	# Rec.	Blow Ct.	USCS	Description of Material
1								<b>SC</b>	Reddish-brown coarse sand clayey Sand w/ med. gravel s. no odors
2									
3									
4				308	SB11-3		10	<b>CL</b>	dark gray to black medium grained Sandy clay - slight moist. moderate odor
5									
6								<b>OH</b>	dark gray heavy plastic clay w/ organics moderate odor
7									
8									
9								<b>V</b>	moderate gasoline odor in H <sub>2</sub> O
10									
11									
12									

no sample  
at 6' possible











**ATTACHMENT C**

**SOIL SAMPLE LABORATORY REPORT AND  
CHAIN OF CUSTODY DOCUMENTATION,**



October 22, 1997

Dale van Dam  
Northwest Envirocon, Inc.  
1828 Tribute Road, Suite A  
Sacramento, CA 95815

Subject : <sup>14</sup> 26 Soil and 12 Water samples  
Project Name : 444 Hegenberger  
Project Number :

Location : 444 Hegenberger

Dear Mr. van Dam,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

WEST Laboratory is certified by the State of California (# 1346). If you have any questions regarding procedures or results, please call me at 916-757-0920.

Sincerely,

  
Stewart Podolsky

Subject : <sup>14</sup> 26 Soil and 12 Water samples  
Project Name : 444 Hegenberger  
Project Number :  
  
Location : 444 Hegenberger

## Case Narrative

EPA 8240 Sample SB08-W

High 1,2-Dichloroethane-d4 surrogate recovery was due to the high level of gasoline in the sample.

  
Stewart Podolsky

Sample Log 17482

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : 444 Hegenberger  
Sampled : 10/06/97, 10/08/97  
Received : 10/08/97  
Matrix : Soil

SAMPLE	Date Analyzed	(MRL) <small>ng/kg</small>	Measured Value <small>ng/kg</small>
SB05-3	10/20/97	(.050)	<.050
SB06-3	10/20/97	(.50)	<.50
SB07-3	10/20/97	(.050)	<.050
SB08-3	10/18/97	(2.5)	<2.5
SB09-3	10/20/97	(.050)	<.050
SB10-3	10/20/97	(.50)	<.50
SB11-3	10/21/97	(.50)	<.50
SB12-3	10/20/97	(.050)	<.050
SB13-3	10/21/97	(.50)	<.50
SB14-3	10/20/97	(.50)	<.50
SB15-3	10/18/97	(.050)	<.050
SB15-6	10/18/97	(.050)	<.050
SB16-3	10/18/97	(.050)	<.050
SB16-6	10/18/97	(.050)	<.050

Approved By:

  
\_\_\_\_\_  
Stewart Podolsky  
Senior Chemist

Sample: SB05-3

From : 444 Hegenberger

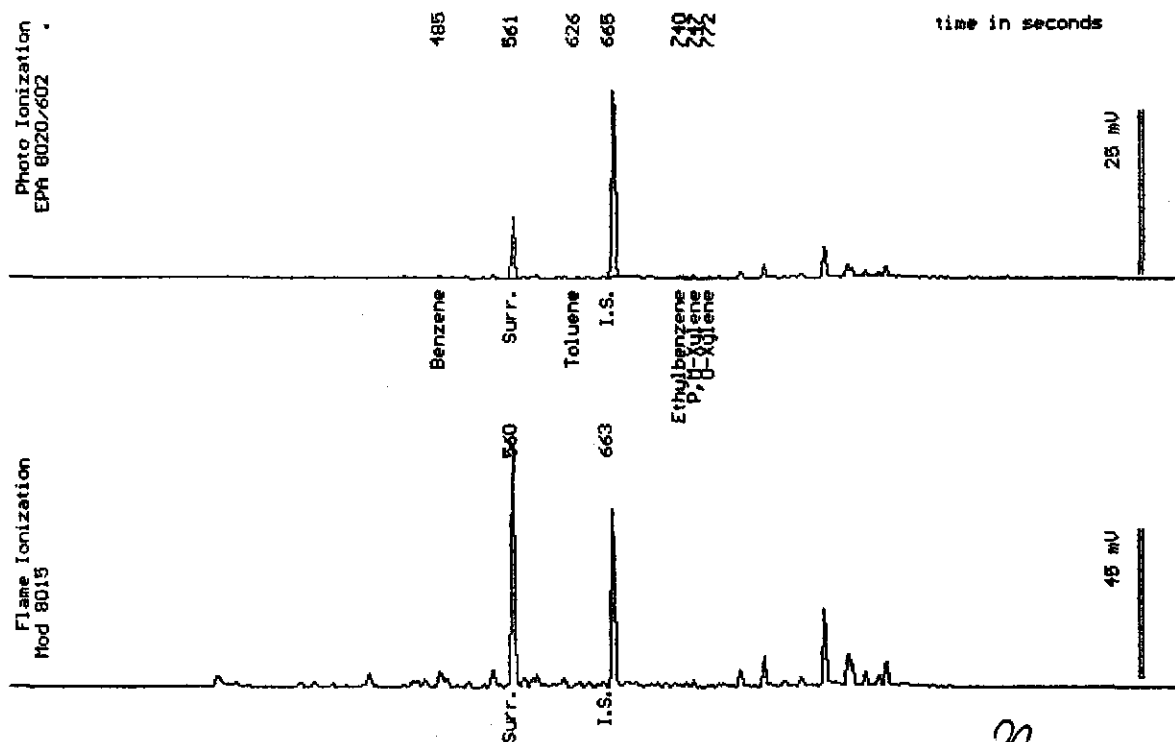
Sampled : 10/06/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) <small>ng/kg</small>	Measured Value <small>ng/kg</small>
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		99 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB06-3

From : 444 Hegenberger

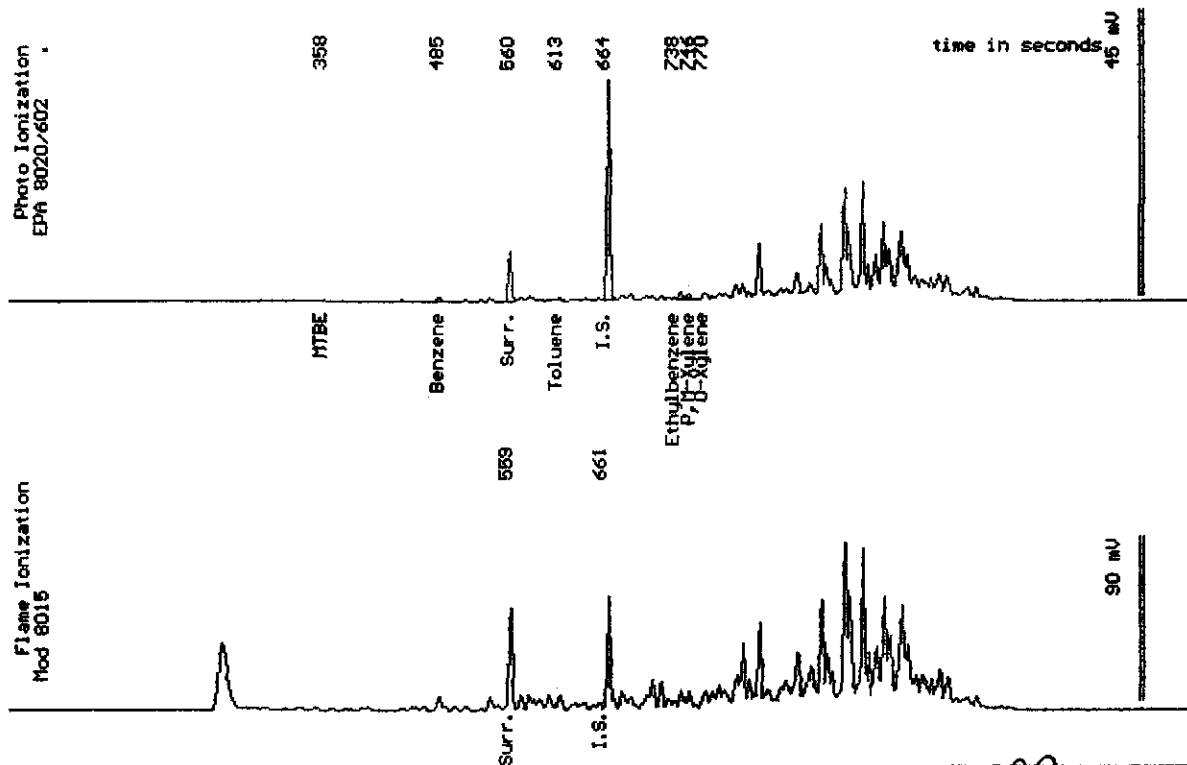
Sampled : 10/06/97

Dilution : 1:10

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.050)	.055
Toluene	(.050)	.053
Ethylbenzene	(.050)	.11
Total Xylenes	(.050)	.11
TPH as Gasoline	(10)	39
Surrogate Recovery		84 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
 Senior Chemist

Sample: SB07-3

From : 444 Hegenberger

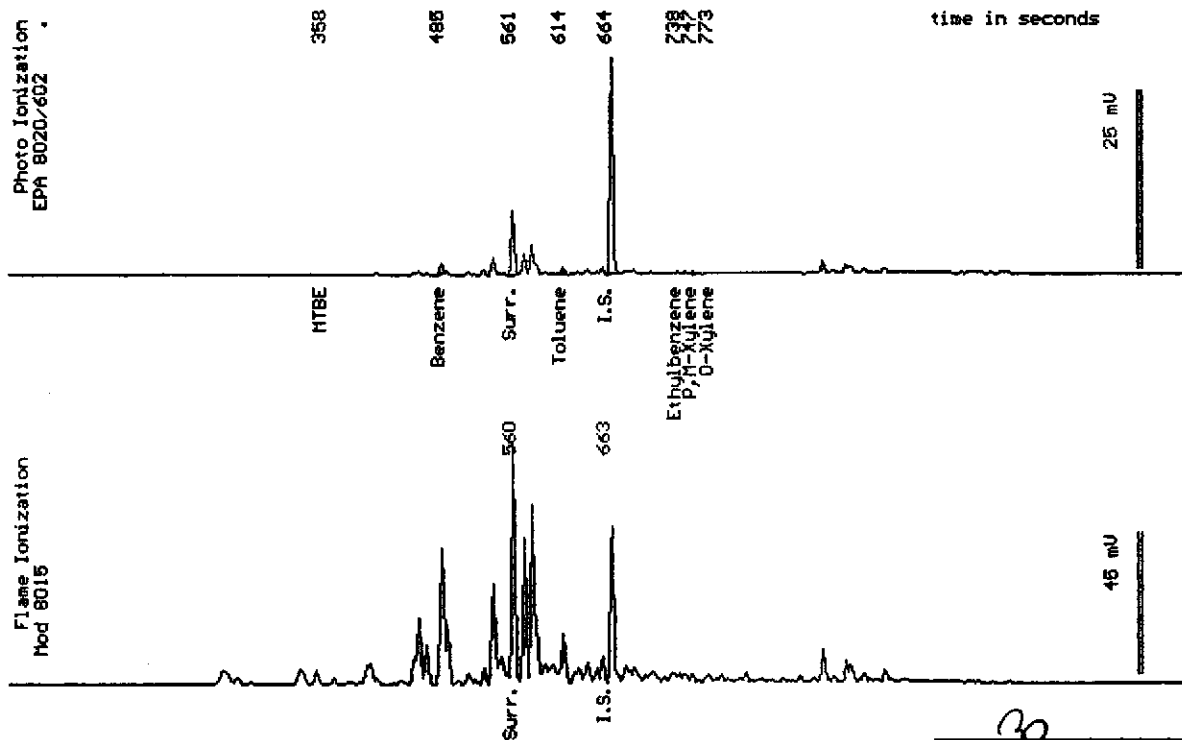
Sampled : 10/06/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	.015
Toluene	(.0050)	.011
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	1.3
Surrogate Recovery		104 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*Sp*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB08-3

From : 444 Hegenberger

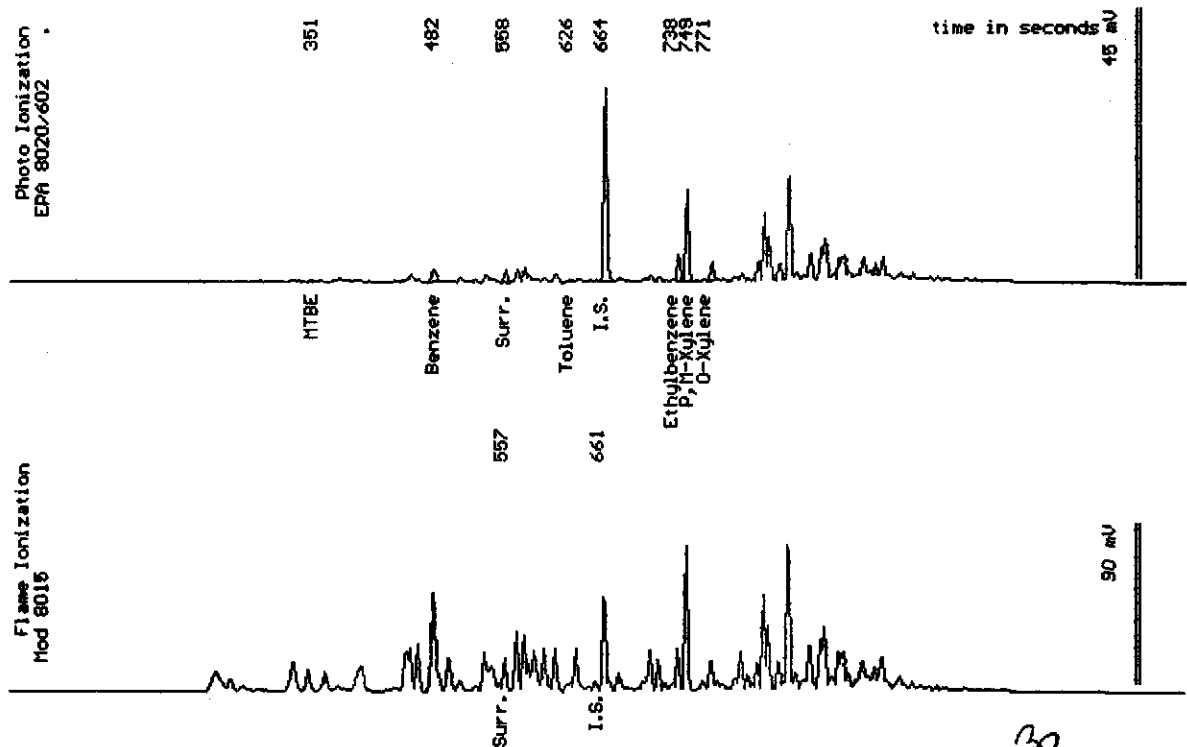
Sampled : 10/07/97

Dilution : 1:50

Matrix : Soil

Run Log : 2165K

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.25)	1.1
Toluene	(.25)	<.25
Ethylbenzene	(.25)	2.2
Total Xylenes	(.25)	7.6
TPH as Gasoline	(50)	160
Surrogate Recovery		*** Diluted Out



Date Analyzed: 10-18-97  
Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB09-3

From : 444 Hegenberger

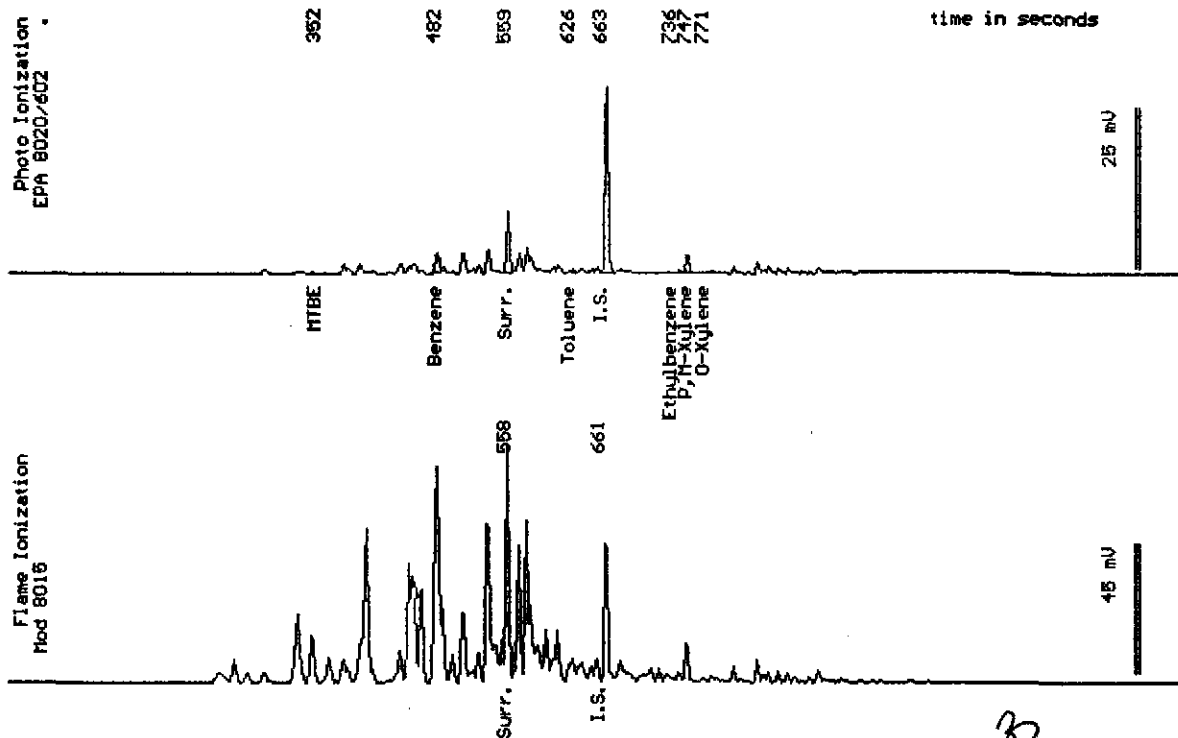
Sampled : 10/07/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) <small>ng/kg</small>	Measured Value <small>ng/kg</small>
Benzene	(.0050)	.017
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.015
TPH as Gasoline	(1.0)	1.1
Surrogate Recovery		103 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*St*  
 Stewart Podolsky  
 Senior Chemist



Sample: SB10-3

From : 444 Hegenberger

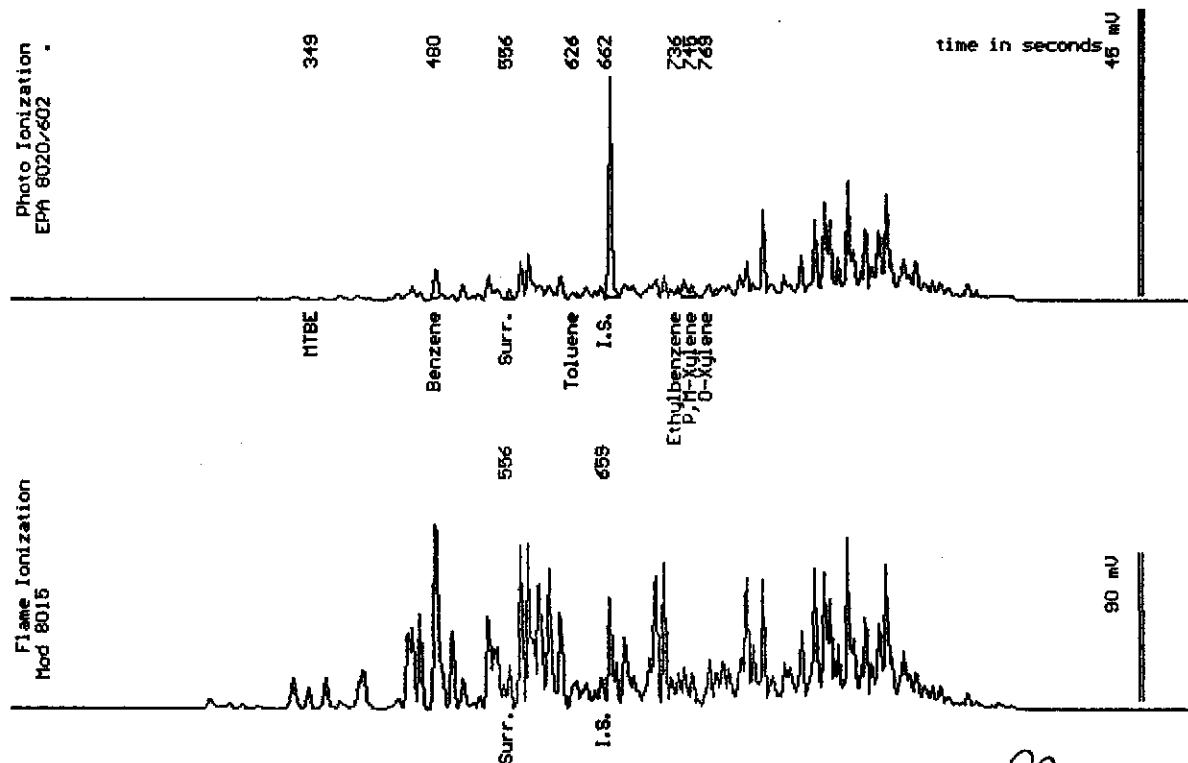
Sampled : 10/06/97

Dilution : 1:100

Matrix : Soil

Run Log : 2165M

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.50)	4.7
Toluene	(.50)	<.50
Ethylbenzene	(.50)	2.8
Total Xylenes	(.50)	2.5
TPH as Gasoline	(100)	750
Surrogate Recovery		*** Diluted Out



Date Analyzed 10-21-97  
Column : 0.53mm X 60m Restek Rtx-1301

  
Stewart Podolsky  
Senior Chemist

Sample: SB11-3

From : 444 Hegenberger

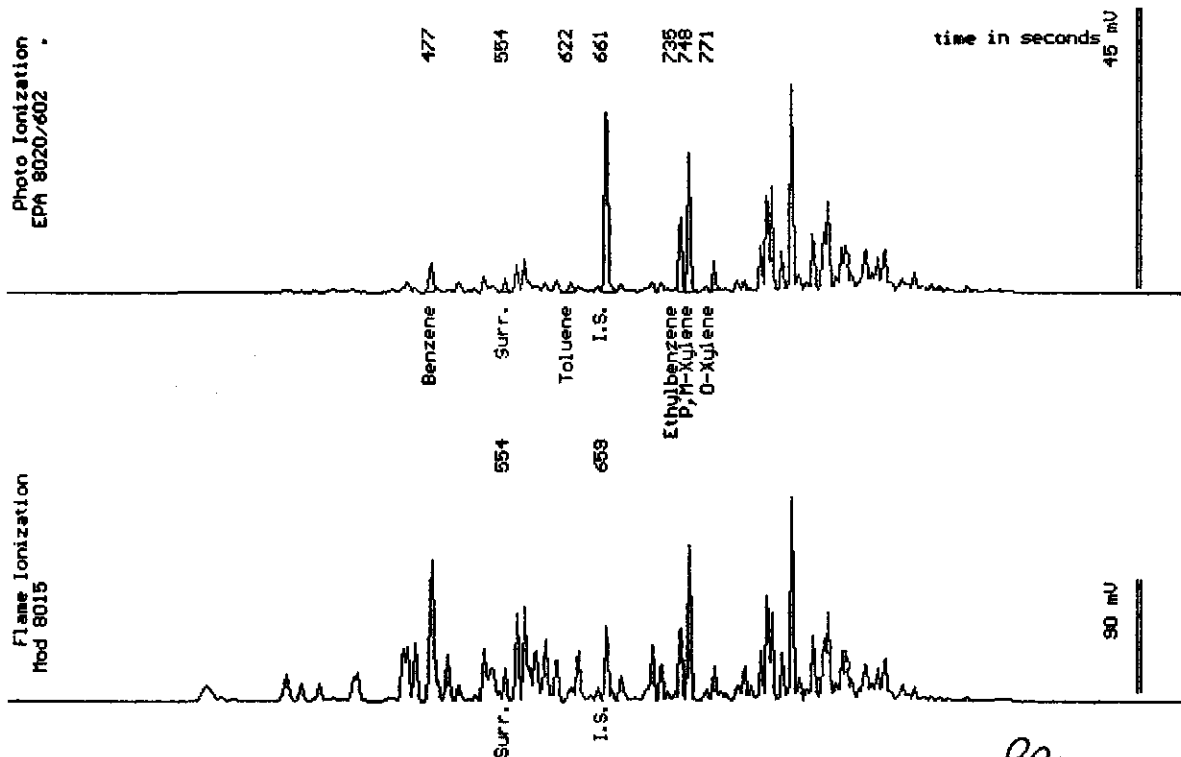
Sampled : 10/07/97

Dilution : 1:50

Matrix : Soil

Run Log : 2165M

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.25)	2.3
Toluene	(.25)	.73
Ethylbenzene	(.25)	6.1
Total Xylenes	(.25)	11
TPH as Gasoline	(50)	260
Surrogate Recovery		*** Diluted Out



Date Analyzed: 10-21-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB12-3

From : 444 Hegenberger

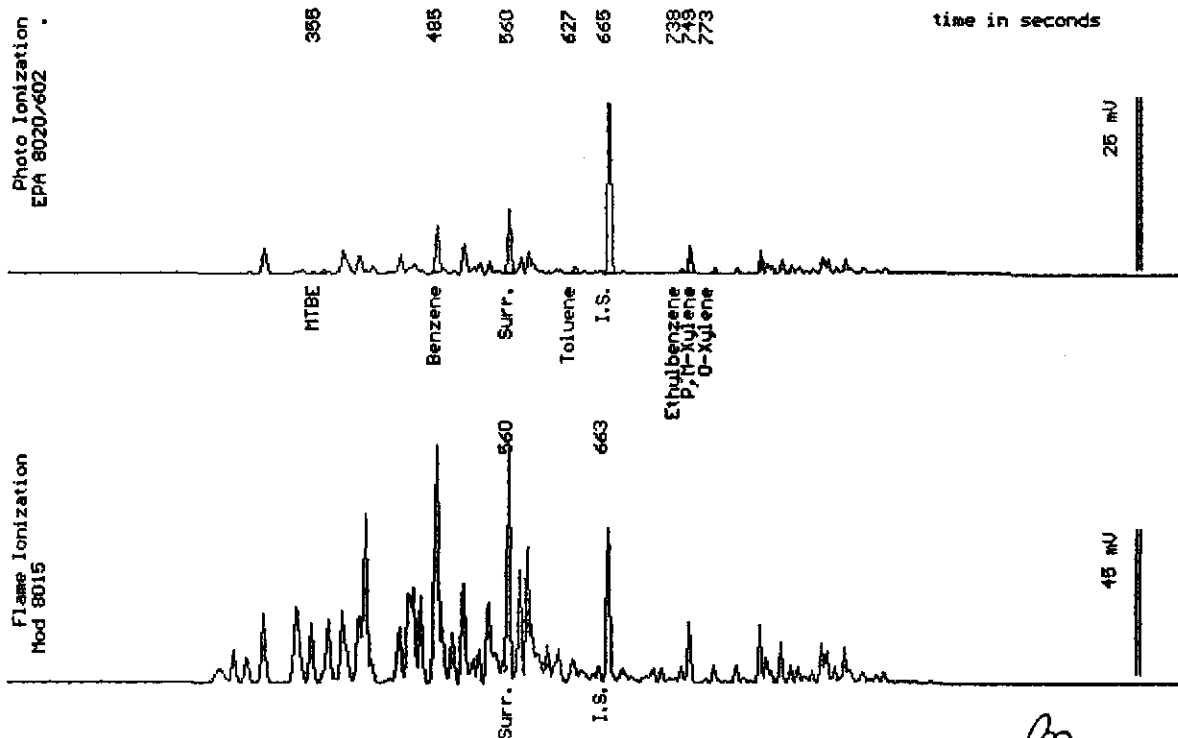
Sampled : 10/07/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	.036
Toluene	(.0050)	.0070
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.025
TPH as Gasoline	(1.0)	1.2
Surrogate Recovery		103 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*Stuart Podolsky*  
 Stuart Podolsky  
 Senior Chemist

Sample: SB13-3

From : 444 Hegenberger

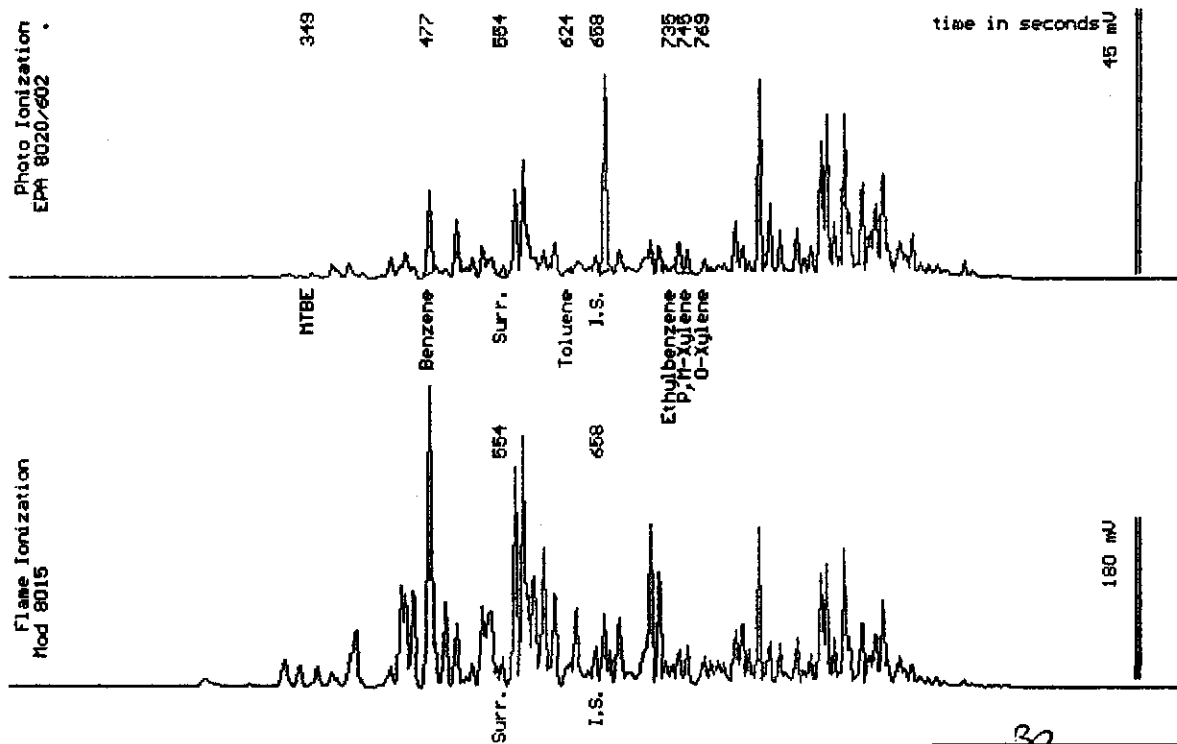
Sampled : 10/07/97

Dilution : 1:100

Matrix : Soil

Run Log : 2165M

Parameter	(MRL) <small>mg/kg</small>	Measured Value <small>mg/kg</small>
Benzene	(.50)	13
Toluene	(.50)	.85
Ethylbenzene	(.50)	5.8
Total Xylenes	(.50)	4.2
TPH as Gasoline	(100)	930
Surrogate Recovery		*** Diluted Out



Date Analyzed: 10-21-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB14-3

From : 444 Hegenberger

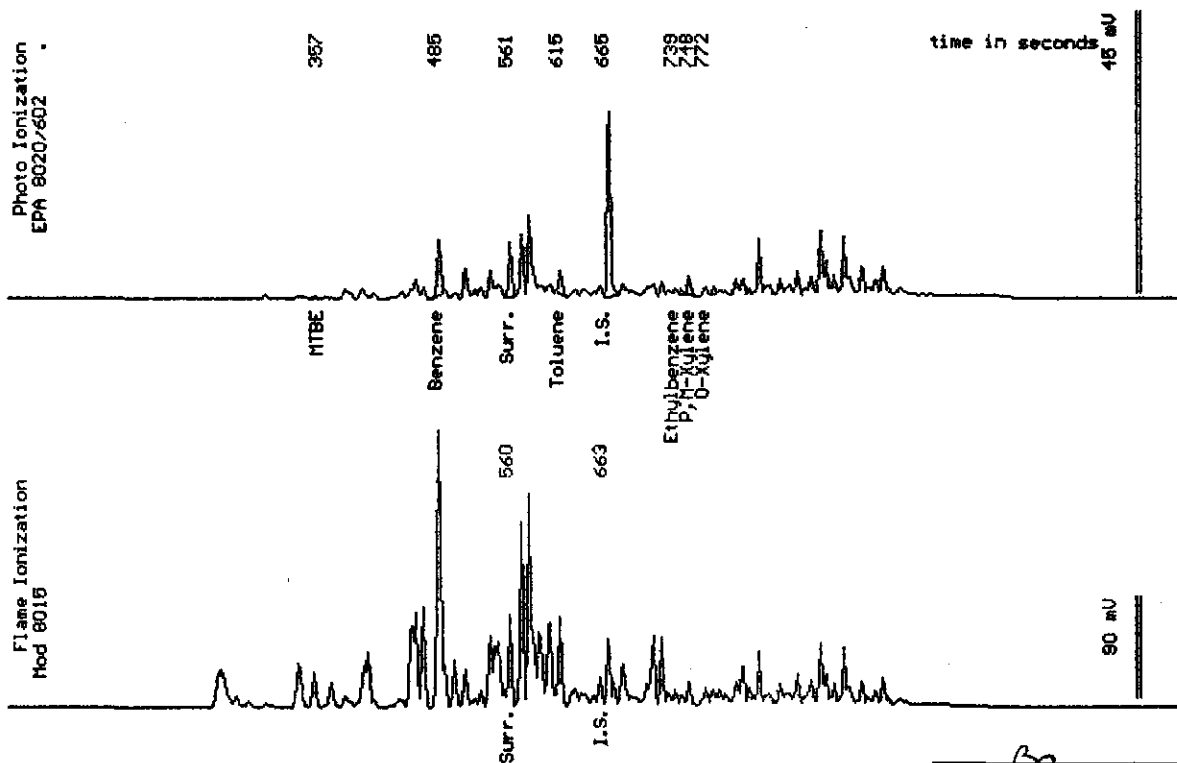
Sampled : 10/07/97

Dilution : 1:10

Matrix : Soil

Run Log : 2165L

Parameter	(MRL) mg/kg	Measured Value mg/kg
Benzene	(.050)	.81
Toluene	(.050)	.36
Ethylbenzene	(.050)	.087
Total Xylenes	(.050)	.38
TPH as Gasoline	(10)	62
Surrogate Recovery		89 %



Date Analyzed: 10-20-97  
 Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB15-3

From : 444 Hegenberger

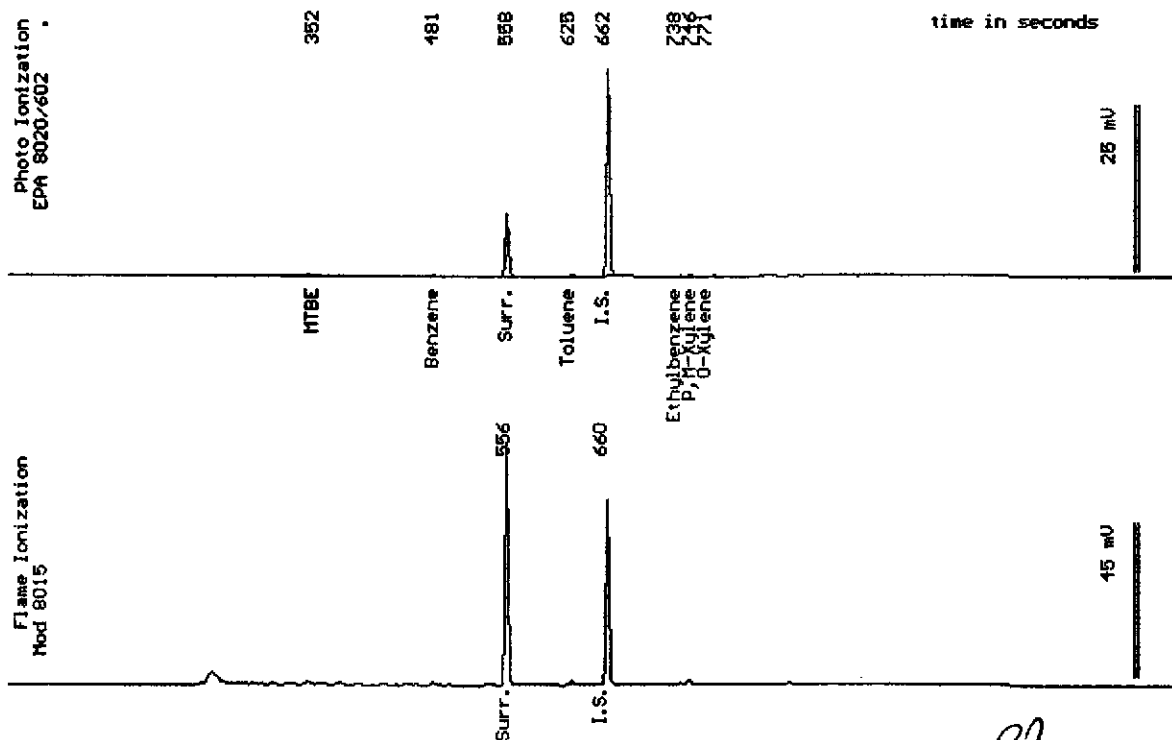
Sampled : 10/08/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165K

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		100 %



Date Analyzed: 10-18-97  
Column : 0.53mm X 60m Restek Rtx-1301

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB15-6

From : 444 Hegenberger

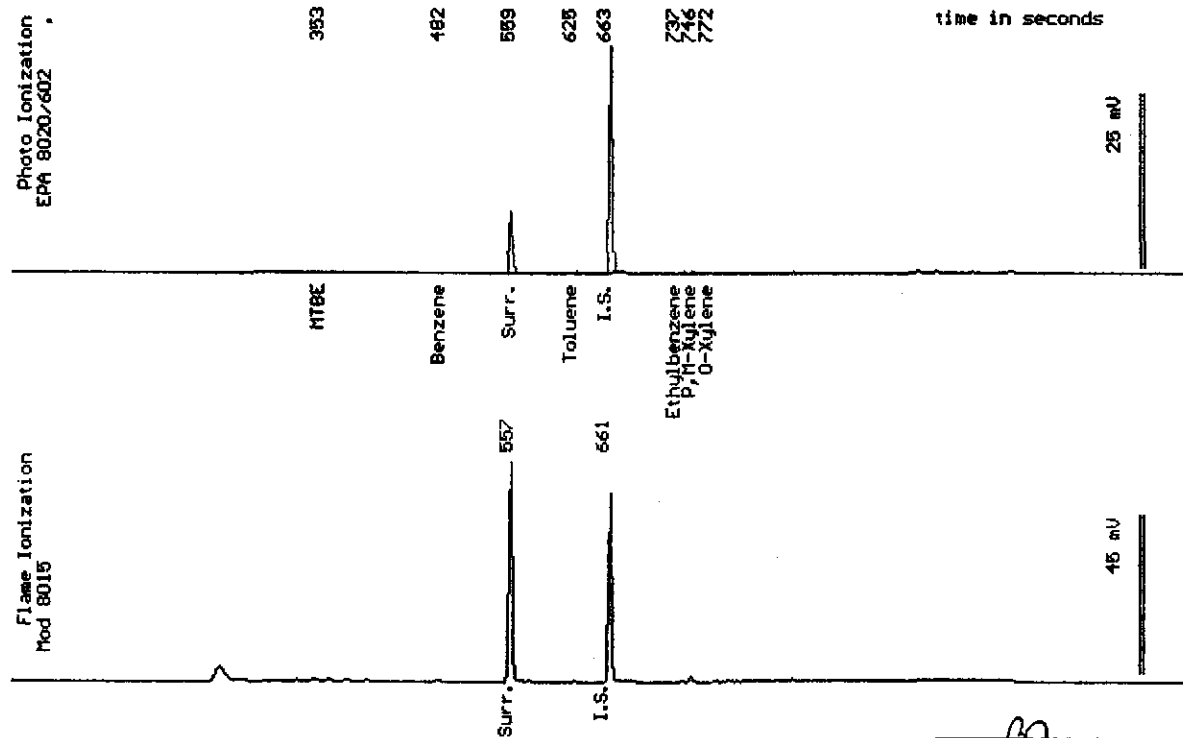
Sampled : 10/08/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165K

Parameter	(MRL) <small>mg/kg</small>	Measured Value <small>mg/kg</small>
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		101 %



Date Analyzed: 10-18-97  
 Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
 Senior Chemist

Sample: SB16-3

From : 444 Hegenberger

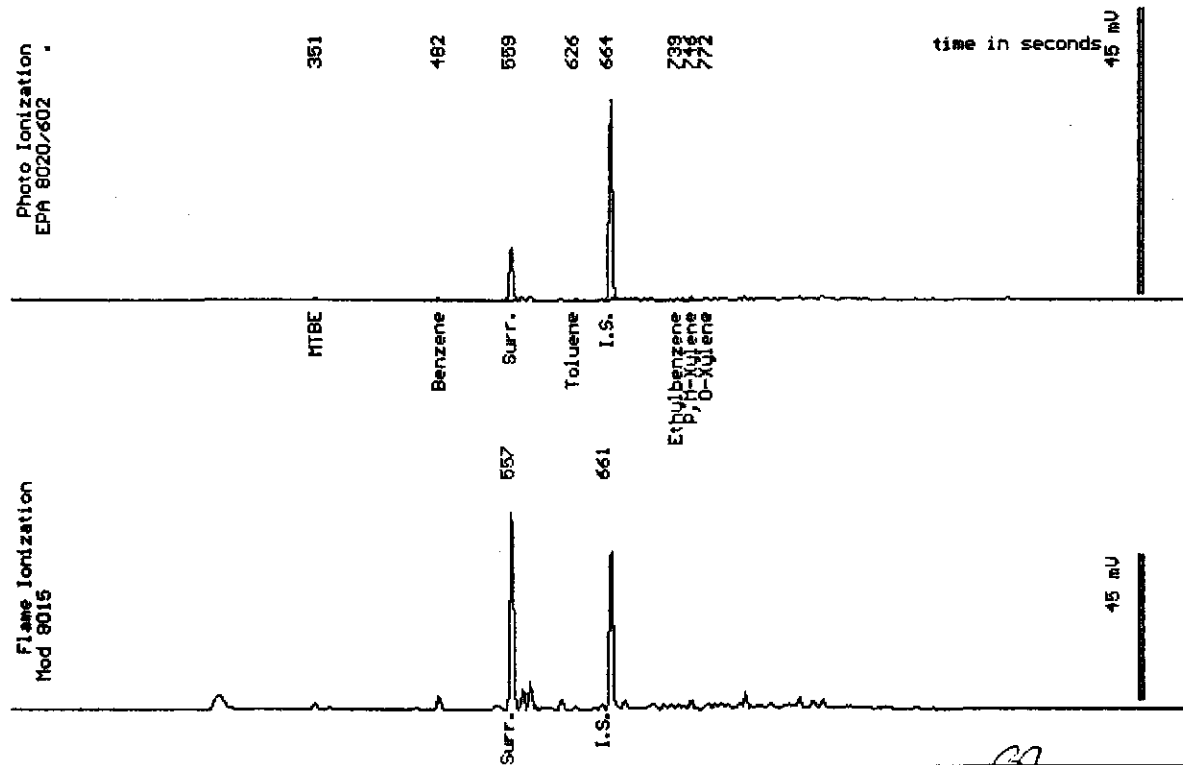
Sampled : 10/08/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165K

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		101 %



Date Analyzed: 10-18-97  
 Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
 Senior Chemist



Sample: SB16-6

From : 444 Hegenberger

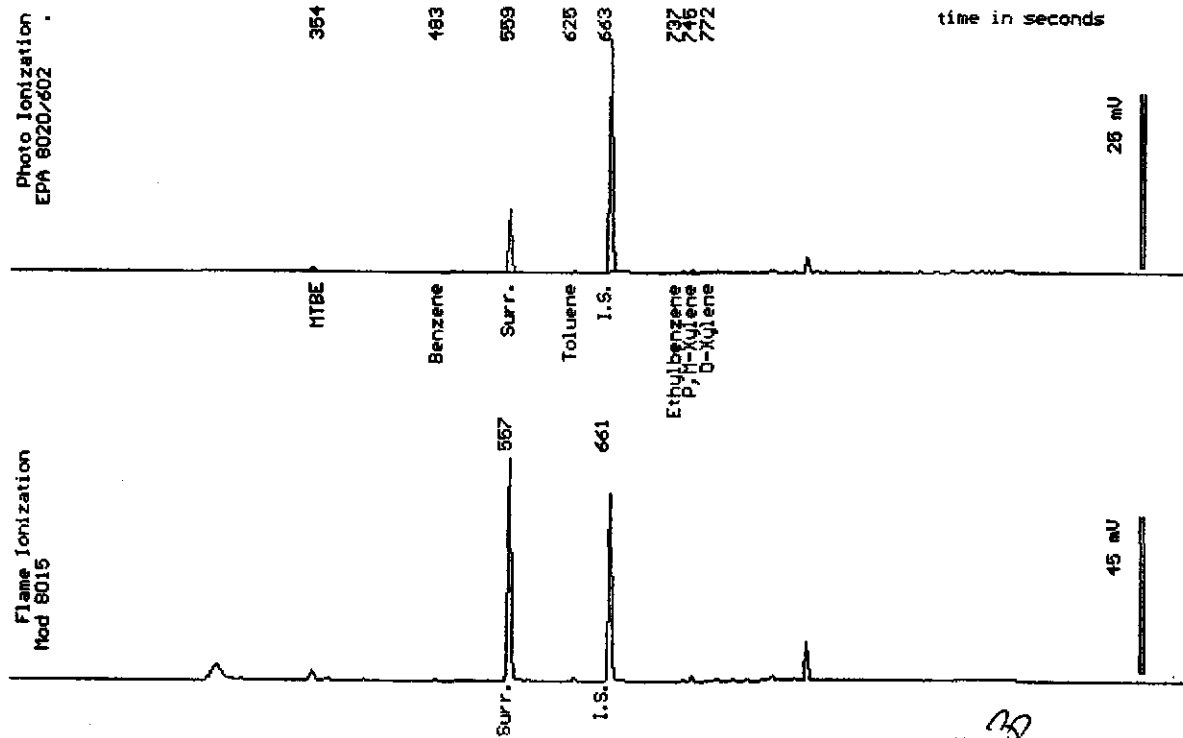
Sampled : 10/08/97

Dilution : 1:1

Matrix : Soil

Run Log : 2165K

Parameter	(MRL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0
Surrogate Recovery		102 %



Date Analyzed: 10-18-97  
 Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky  
 Senior Chemist

Sample Log 17482

17482-01

Sample: SB05-3

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

Dilution : 1:1

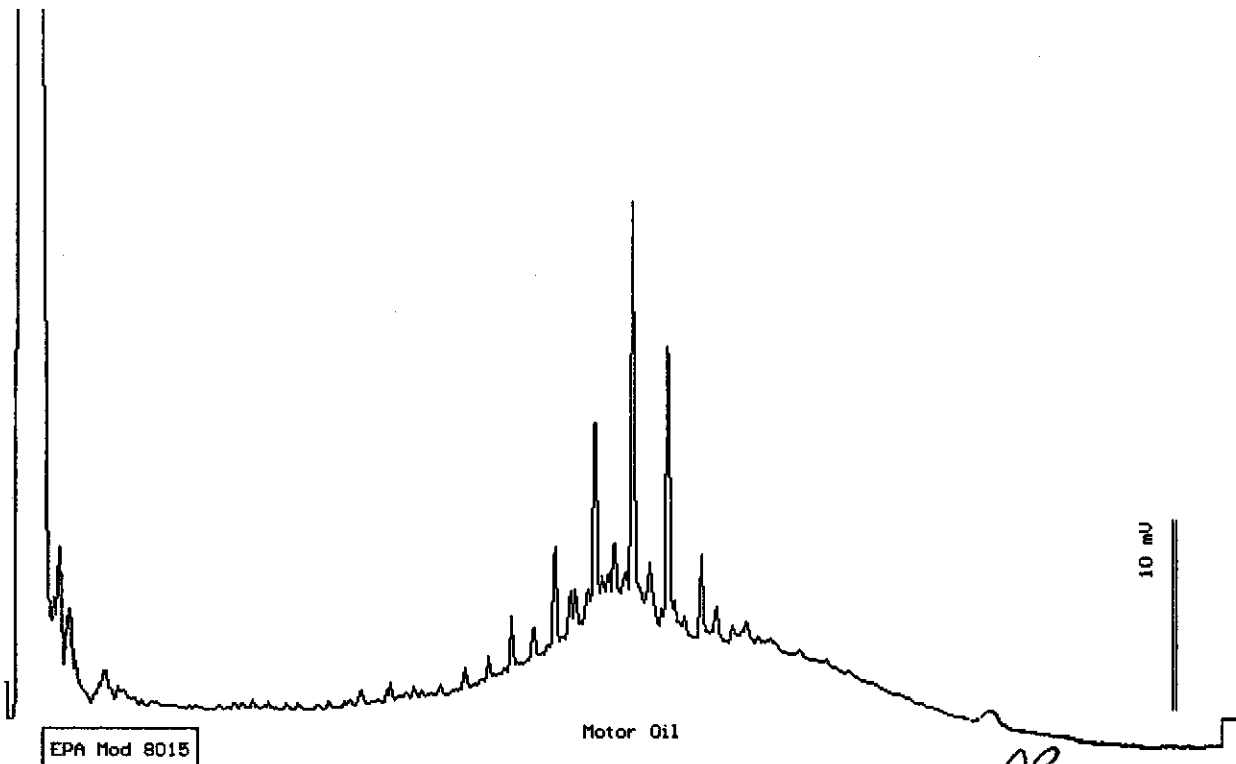
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(2.0)	<2.0
TPH as Motor Oil	(10)	<10

\* Increased reporting limit due to oil range interference.



EPA Mod 8015

Date: 10-18-97 Time: 03:59:10  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB06-3

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

Dilution : 1:5

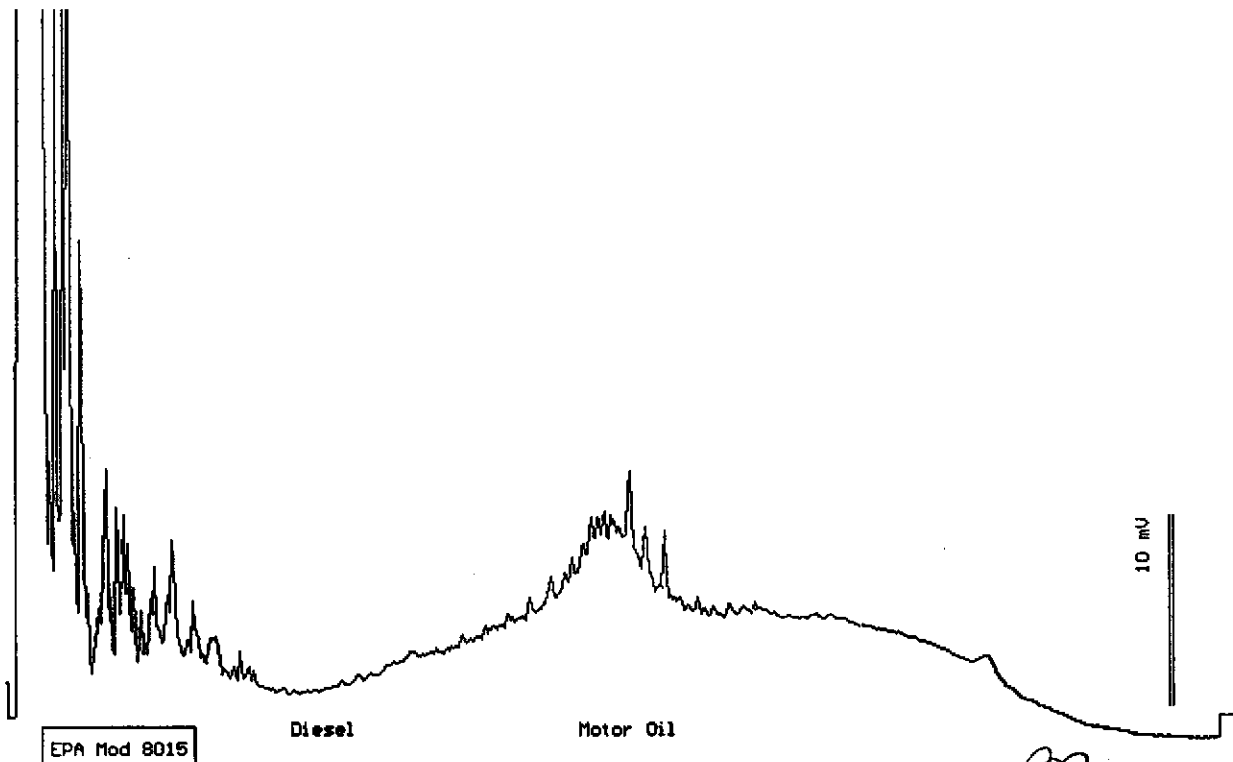
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(25)	<25 *
TPH as Motor Oil	(10)	61

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 07:22:52  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stuart Podolsky*  
Stuart Podolsky  
Senior Chemist

Sample Log 17482  
17482-05

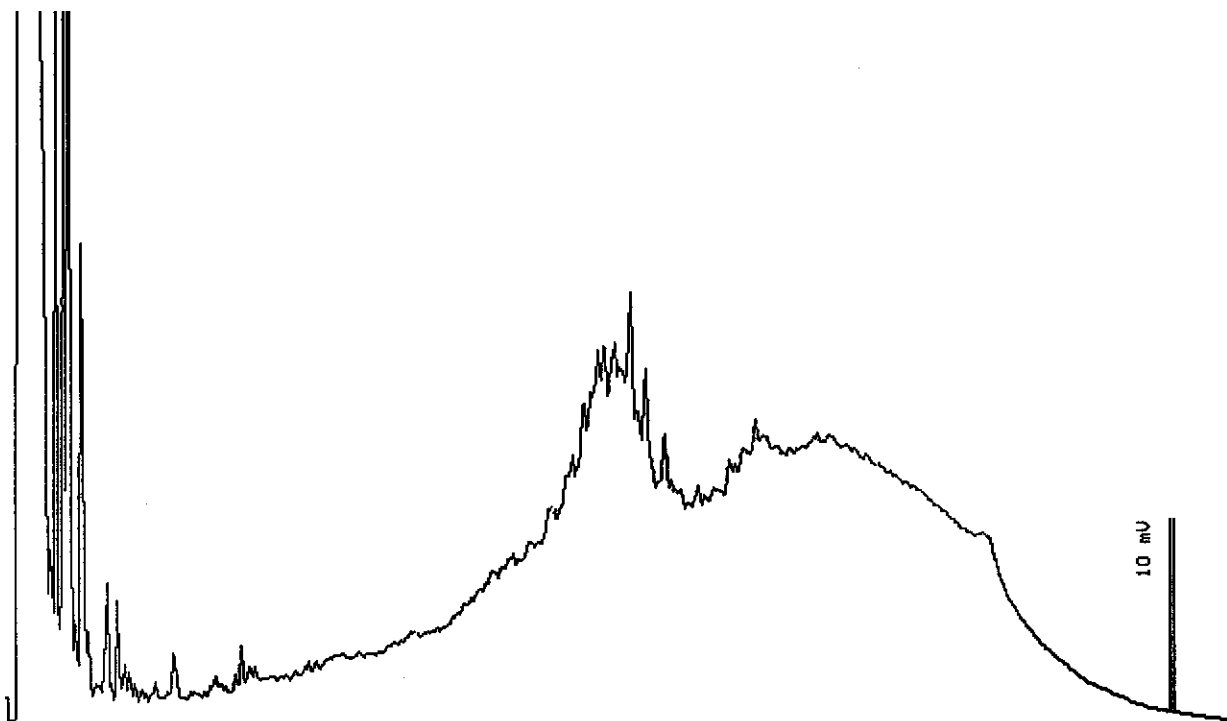
Sample: SB07-3

From : 444 Hegenberger  
Sampled : 10/06/97  
Extracted: 10/17/97  
Dilution : 1:5  
Matrix : Soil

QC Batch : DS971004  
Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(25)	<25
TPH as Motor Oil	(10)	130


\* Increased reporting limit due to oil range interference.



EPA Mod 8015

Motor Oil

Date: 10-18-97 Time: 07:56:38  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

  
Stewart Podolsky  
Senior Chemist

Sample: SB08-3

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:1

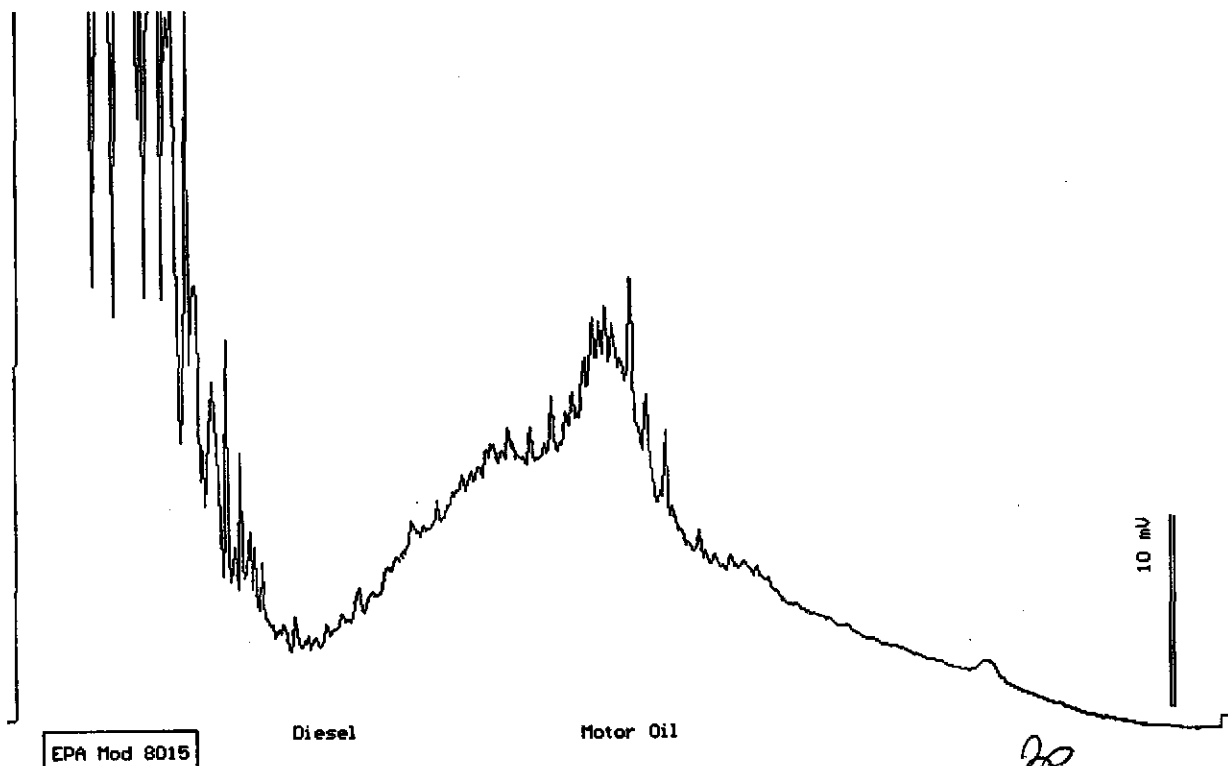
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(30)	<30 *
TPH as Motor Oil	(10)	20

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 08:30:59  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB09-3

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:5

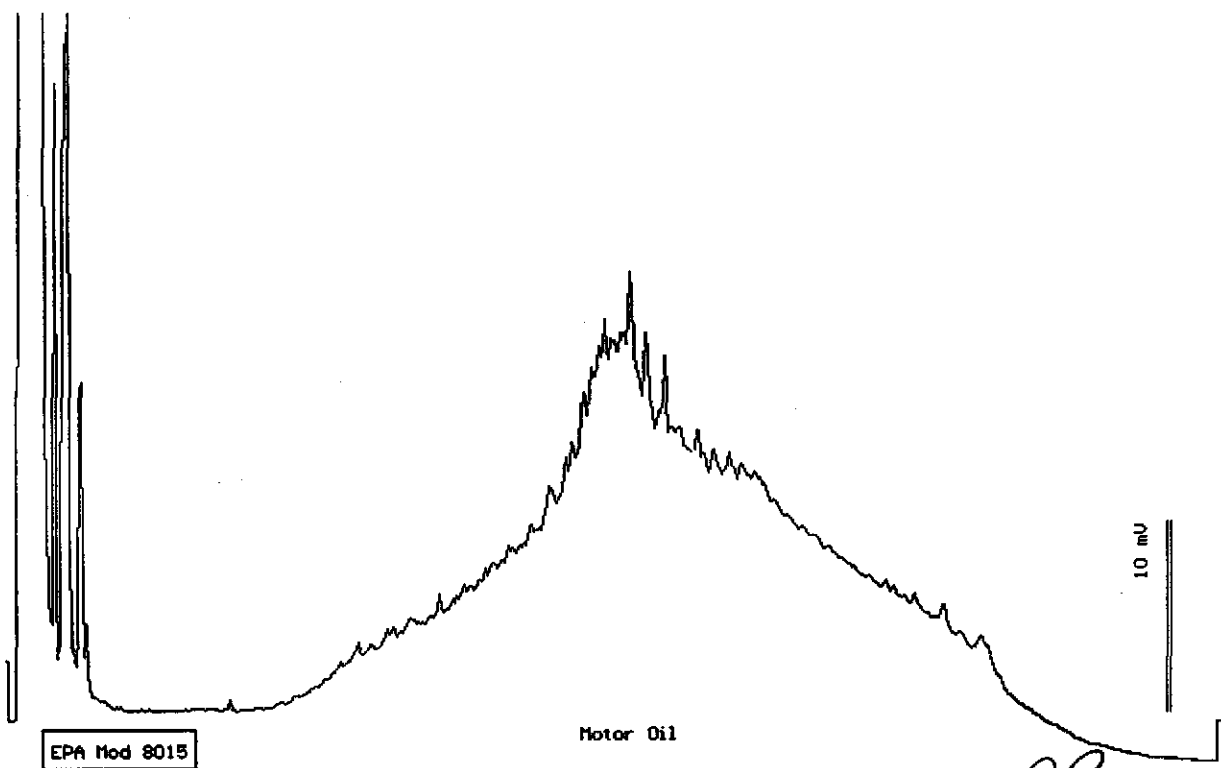
Matrix : Soil

QC Batch : DS971004

Run Log : 7389A

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(20)	<20
TPH as Motor Oil	(10)	120

\* Increased reporting limit due to oil range interference.



Date: 10-20-97 Time: 15:19:33  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB10-3

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

Dilution : 1:1

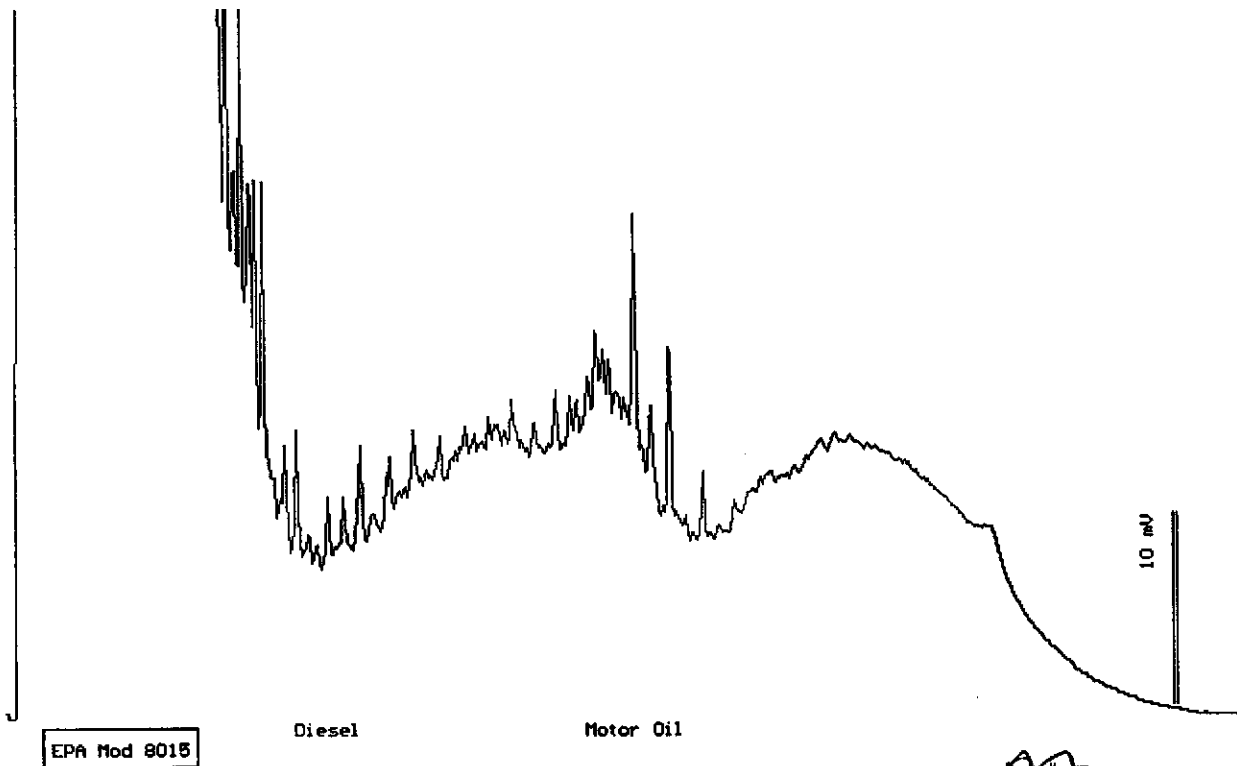
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(100)	<100 *
TPH as Motor Oil	(10)	25

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 09:39:58  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

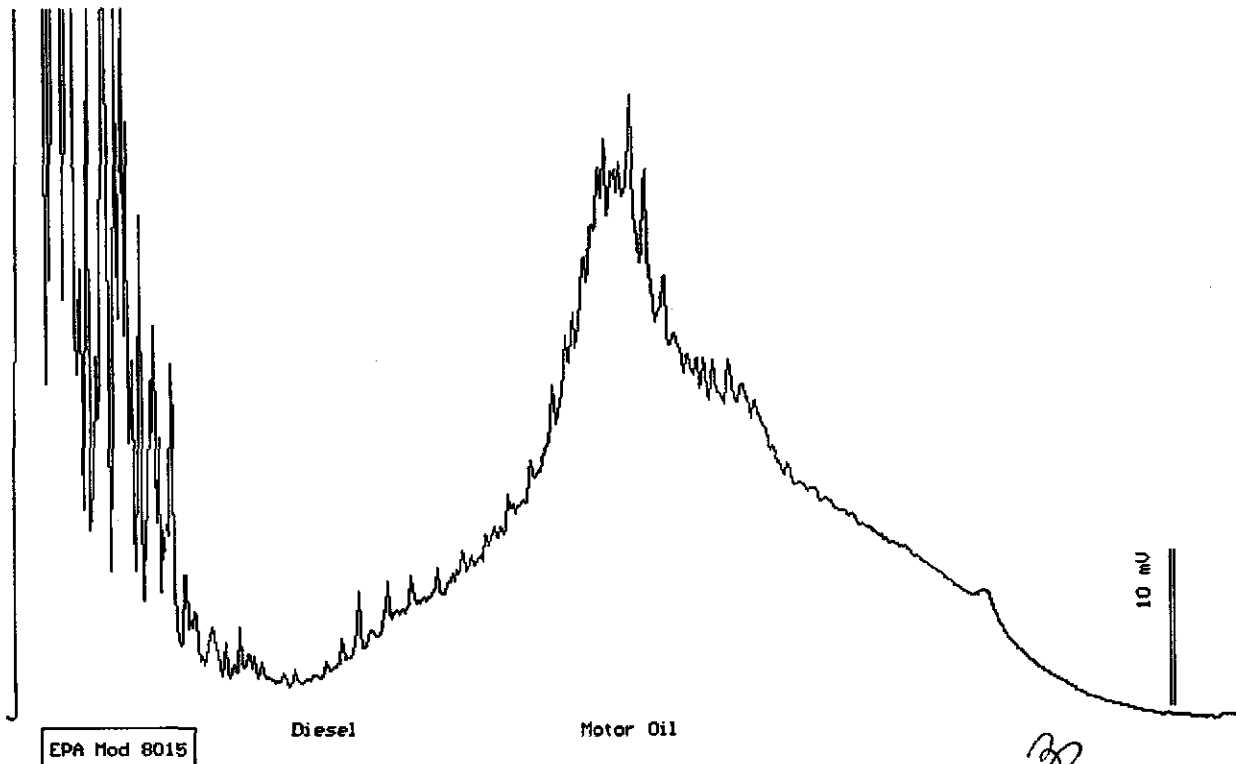
Sample: SB11-3

From : 444 Hegenberger  
Sampled : 10/07/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Soil

QC Batch : DS971004  
Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(15)	<15 *
TPH as Motor Oil	(10)	37

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 10:14:03  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist



Sample Log 17482  
17482-15

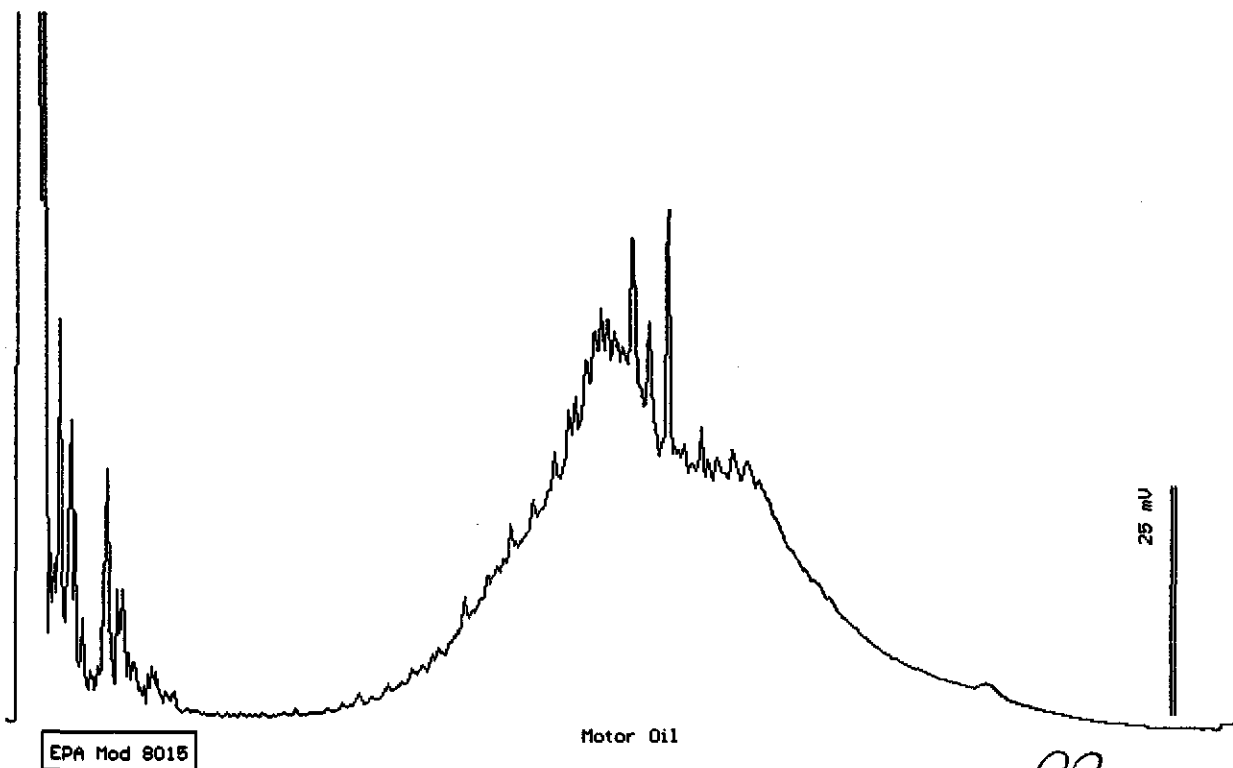
Sample: SB12-3

From : 444 Hegenberger  
Sampled : 10/07/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Soil

QC Batch : DS971004  
Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(10)	<10
TPH as Motor Oil	(10)	42

\* Increased reporting limit due to oil range interference.



Date: 10-18-97 Time: 10:48:39  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*30*  
Stewart Podolsky  
Senior Chemist

Sample: SB13-3

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:25

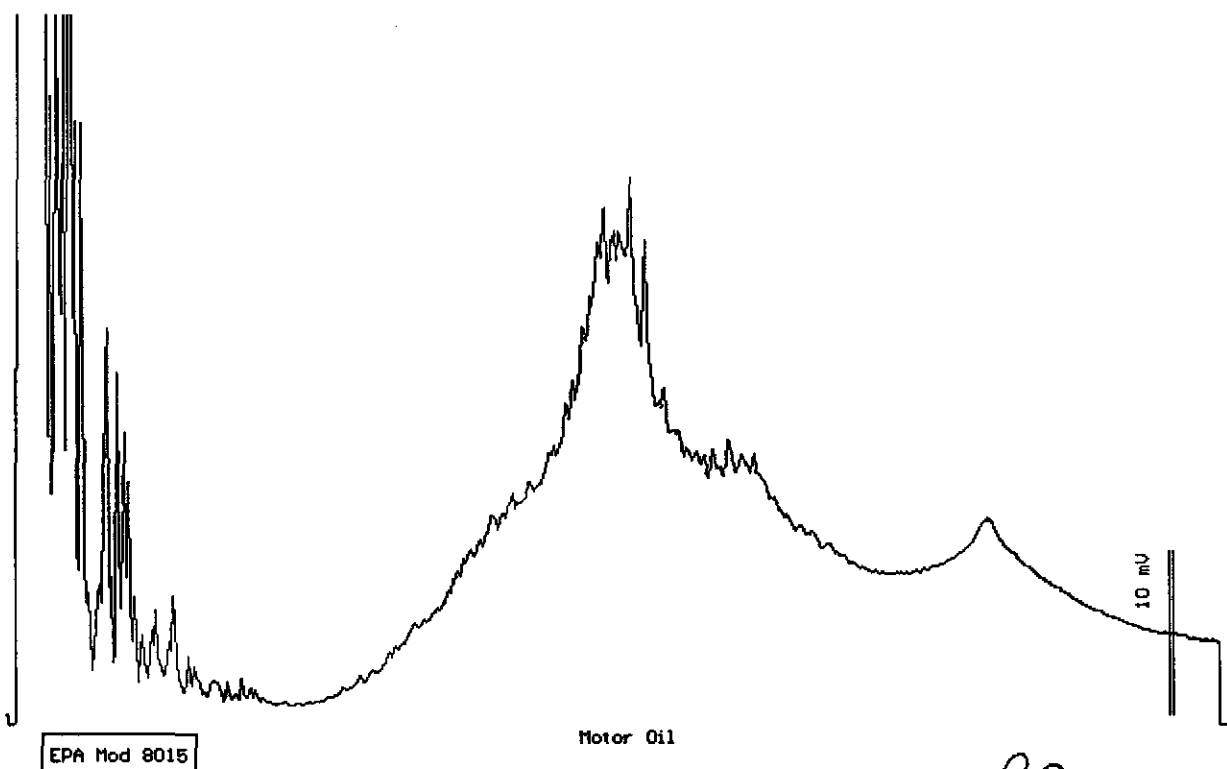
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(150)	<150
TPH as Motor Oil	(50)	780

\* Increased reporting limit due to oil range interference.



Date: 10-18-97 Time: 11:22:40  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample: SB14-3

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:1

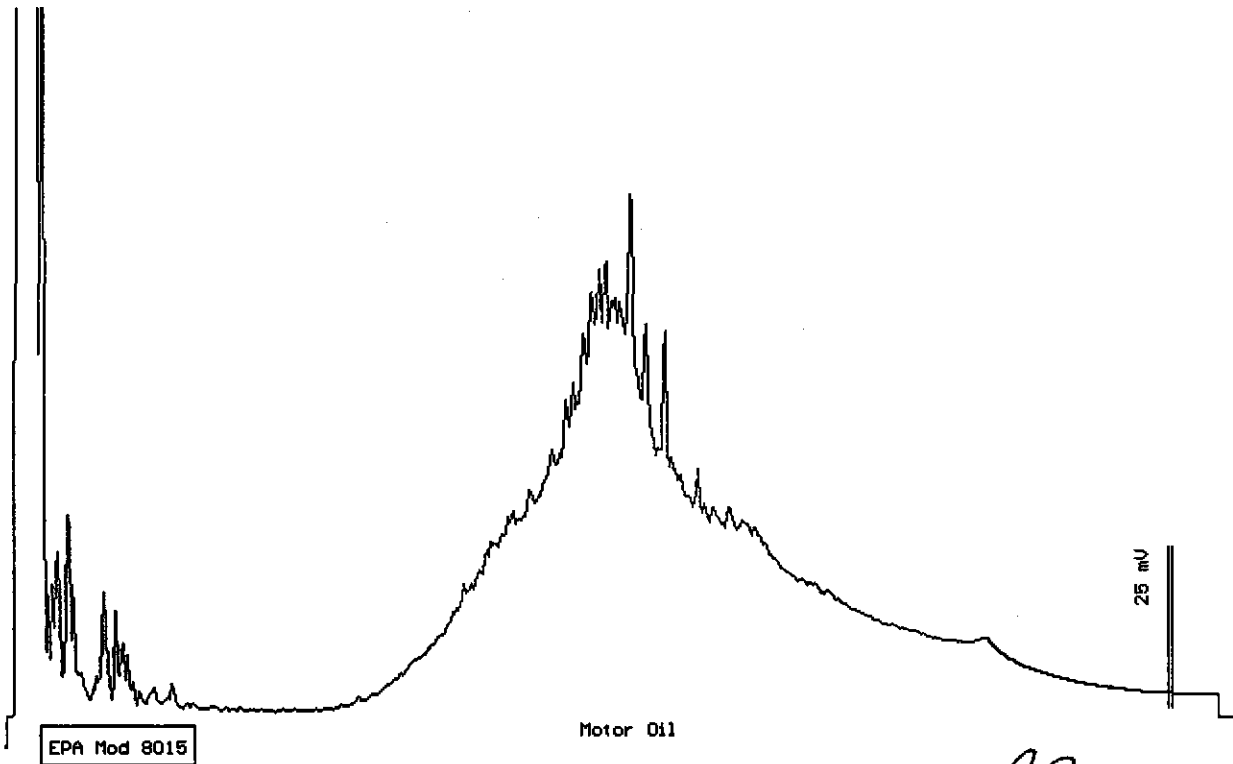
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(10)	<10
TPH as Motor Oil	(10)	61

\* Increased reporting limit due to oil range interference.



Date: 10-18-97 Time: 11:56:48  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample Log 17482

17482-21

Sample: SB15-3

From : 444 Hegenberger

Sampled : 10/08/97

Extracted: 10/17/97

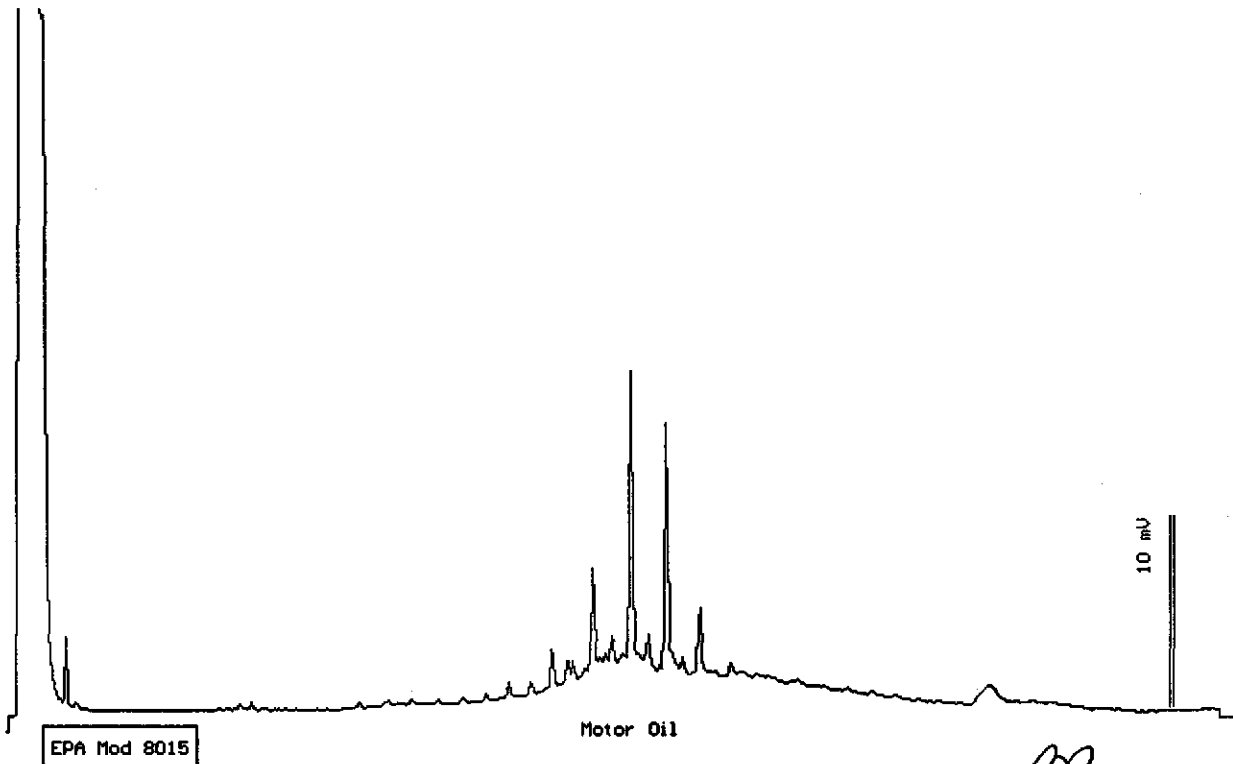
Dilution : 1:1

Matrix : Soil


QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



Date: 10-18-97 Time: 13:40:26  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

  
Stewart Podolsky  
Senior Chemist

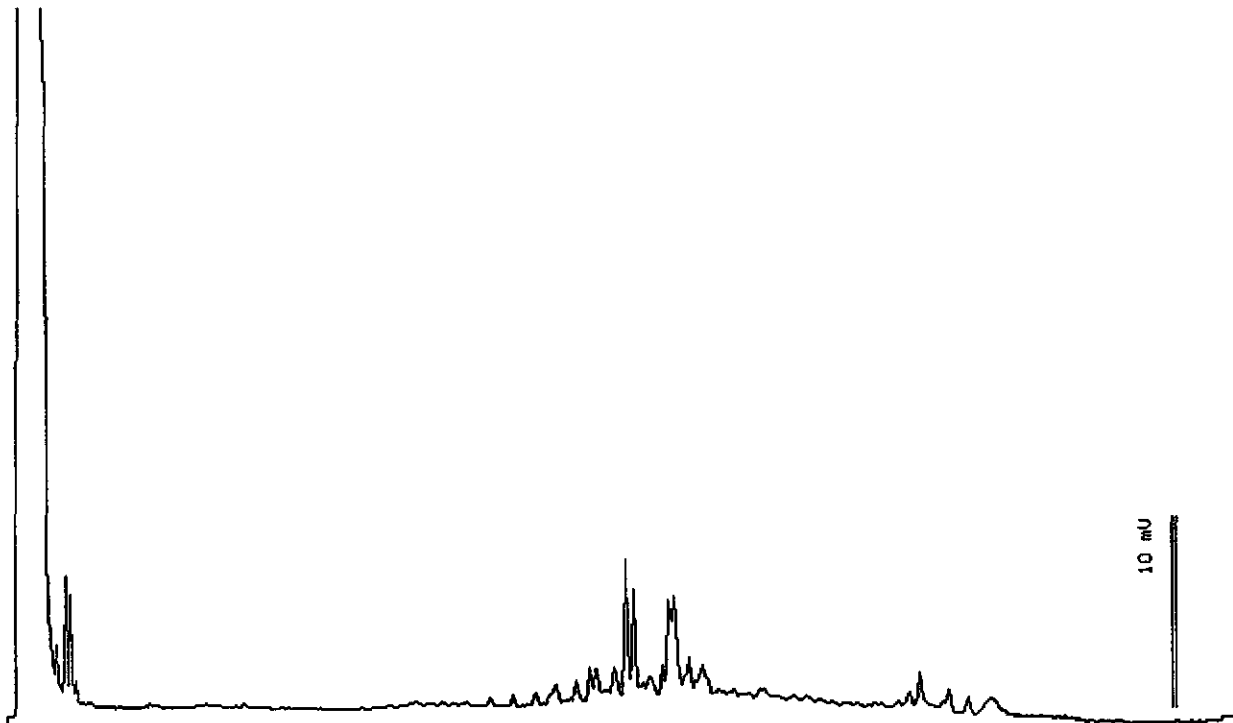
Sample Log 17482  
17482-22

Sample: SB15-6

From : 444 Hegenberger  
Sampled : 10/08/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Soil

QC Batch : DS971004  
Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



EPA Mod 8015

Date: 10-18-97 Time: 14:15:08  
Column: 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Sp*  
Stewart Podolsky  
Senior Chemist

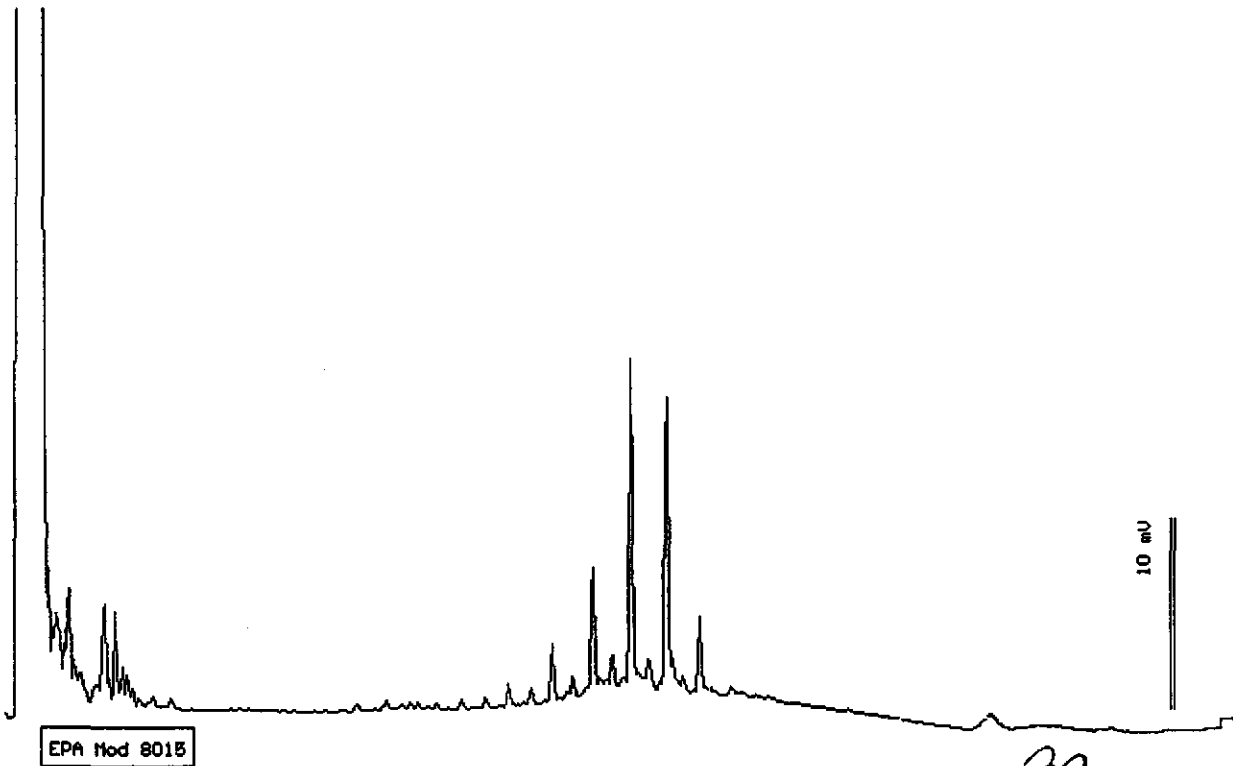
Sample Log 17482  
17482-23

Sample: SB16-3

From : 444 Hegenberger  
Sampled : 10/08/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Soil

QC Batch : DS971004  
Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(1.0)	<1.0
TPH as Motor Oil	(10)	<10



Date: 10-18-97 Time: 14:49:52  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist

Sample: SB16-6

From : 444 Hegenberger

Sampled : 10/08/97

Extracted: 10/17/97

Dilution : 1:1

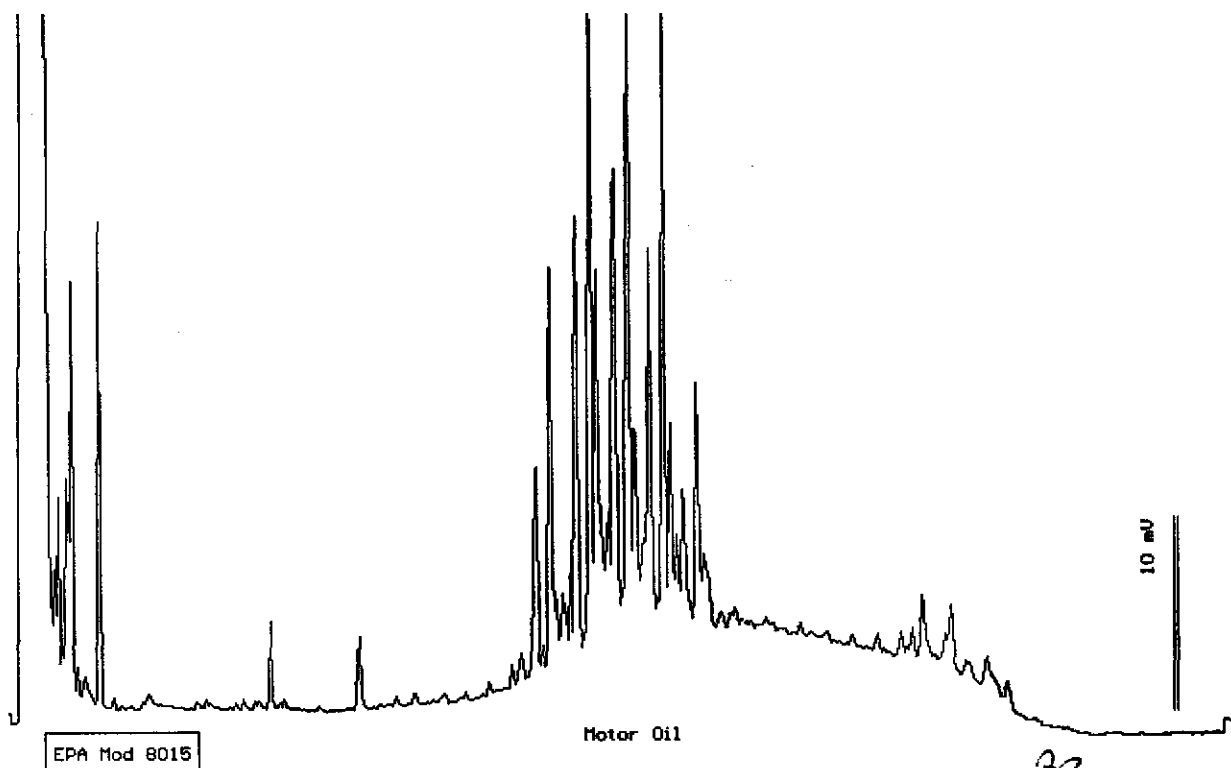
Matrix : Soil

QC Batch : DS971004

Run Log : 7388H

Parameter	(MRL) mg/kg	Measured Value mg/kg
TPH as Diesel	(2.0)	<2.0 *
TPH as Motor Oil	(10)	13

\* Increased reporting limit due to oil range interference.



EPA Mod 8015

Motor Oil

Date: 10-18-97 Time: 15:24:41  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist

# West Analytical Labs

Phone#: 916-757-0920  
Fax#: 916-753-6091


1046 Olive Drive, Suite 2, Davis, CA 95616 Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: **DALE VAN DAM** Phone #: **916 649-3570**

Company/Address: **NORTHWEST ENVIROCON 1828 TRIBUTE RD., STE. A** FAX #:


Project Number: P.O.#: Project Name:

Project Location: **444 HEDENBERGER** Sampler Signature: 

### ANALYSIS REQUEST

TAT  
For Lab Use ONLY

Sample ID	Sampling		Container (Type/Amount)				Method Preserved				Matrix		BTEX (602/8020) BTEX/TPH as Gasoline (602/8020/M8015) <i>MIBK</i> TPH as Diesel (M8015) TPH as Motor Oil (M8015) EPA 601/8010 EPA 608/8080 - Pesticides EPA 609/8080 - PCB's EPA 624/8240 EPA 625/8270 CAM - 17 Metals LEAD(60107421/239.2) Cd, Cr, Pb, Zn, Ni	W.E.T. (✓) TOTAL (✓)	12 hour / 24 hour / 48 hour / 1 week / 2 weeks	WEST Lab Number		
	DATE	TIME	VOL	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL						
SB05-3				✓													17482	01
SB05-6																		02
SB06-3																		03
" -6																		04
SB07-3																		05
" -6																		06
SB08-3																		07
" -6																		08
SB09-3																		09
" -6																		10
SB10-3																		11

Relinquished by:  Date: **10/8** Time: **18:55** Received by: **Joy L. Surgen**

Relinquished by: Date: Time: Received by:

Relinquished by: Date: Time: Received by Laboratory:

Remarks:  
  
Bill To:





# West Analytical Labs

Phone#: 916-757-0920

Fax#: 916-753-6091

1046 Olive Drive, Suite 2, Davis, CA 95616

Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: \_\_\_\_\_ Phone #: \_\_\_\_\_

Company/Address: \_\_\_\_\_ FAX #: \_\_\_\_\_

*NWE*

Project Number: \_\_\_\_\_ P.O.#: \_\_\_\_\_ Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_ Sampler Signature: \_\_\_\_\_

*[Signature]*

### ANALYSIS REQUEST

For Lab Use ONLY

TAT  
12 hour / 24 hour / 48 hour / 1 week / 2 weeks

17482  
WEST Lab Number

W.E.T. (✓)  
TOTAL (✓)

Sample ID	Sampling		Container (Type/Amount)			Method Preserved				Matrix		BTEX (602/8020)	BTX/TPH as Gasoline (602/8020/M8015) <i>NTBE</i>	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	EPA 601/8010	EPA 608/8080 - Pesticides	EPA 608/8080 - PCBs	EPA 624/8240 <i>VOCs</i>	EPA 625/8270	CAM - 17 Metals	LEAD (6010742/2362)	Cd, Cr, Pb, Zn, Ni	TAT	WEST Lab Number			
	DATE	TIME	VOA	SLEEVE	1L GLASS	1L PLASTIC	500 mL	HCl	HNO <sub>3</sub>	ICE	NONE															WATER	SOIL	
SB16-3				✓									✓	✓	✓											17482	23	
SB16-6				✓									✓	✓	✓													24
SB05-W			6		2								✓	✓	✓				✓									25
SB06-W			3		2								✓	✓	✓													26
SB07-W			3		2								✓	✓	✓													27
SB08-W			8		2	2							✓	✓	✓				✓									28
SB09-W			3		2								✓	✓	✓				✓									29
SB10-W			3			4							✓	✓	✓													30
SB11-W			3		2								✓	✓	✓													31
SB12-W			4		2								✓	✓	✓													32
SB13-W			4		2	2							✓	✓	✓													33

Relinquished by: *[Signature]* Date: 1/18/07 Time: 12:00  
 Received by: *[Signature]*  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by Laboratory: \_\_\_\_\_

Remarks:  
 Sample SB08-W → all VOA's have headspace.  
 SB05-W → all HCl VOA's " "  
 SB06-W → " VOA's " "

Bill To: \_\_\_\_\_



**ATTACHMENT D**


**GROUNDWATER SAMPLE LABORATORY REPORT AND  
CHAIN OF CUSTODY DOCUMENTATION,**

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : 444 Hegenberger  
Sampled : 10/06/97, 10/08/97  
Received : 10/08/97  
Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
SB05-W	10/17/97	(5.0)	<5.0
SB06-W	10/17/97	(250)	<250
SB07-W	10/17/97	(5.0)	<5.0
SB08-W	10/17/97	(500)	<500
SB09-W	10/17/97	(5.0)	<5.0
SB10-W	10/17/97	(5.0)	<5.0
SB11-W	10/17/97	(100)	<100
SB12-W	10/18/97	(100)	<100
SB13-W	10/18/97	(250)	<250
SB14-W	10/18/97	(5.0)	<5.0
SB15-W	10/18/97	(5.0)	<5.0
SB16-W	10/18/97	(5.0)	<5.0

Approved By:

  
\_\_\_\_\_  
Stewart Podolsky  
Senior Chemist

Sample: SB05-W

From : 444 Hegenberger

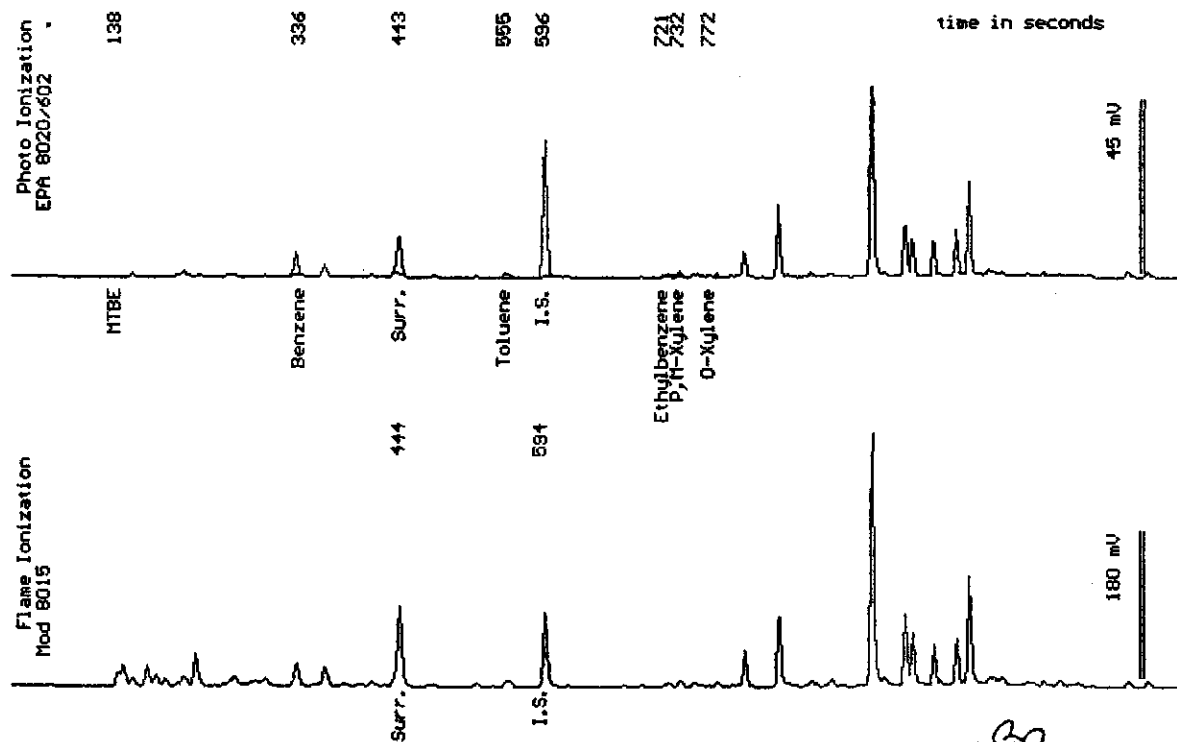
Sampled : 10/06/97

Dilution : 1:1

Matrix : Water

Run Log : 4166Q

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	4.5
Toluene	(.50)	1.1
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	1.4
TPH as Gasoline	(50)	190
Surrogate Recovery		107 %



Date Analyzed: 10-17-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*St*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB06-W

From : 444 Hegenberger

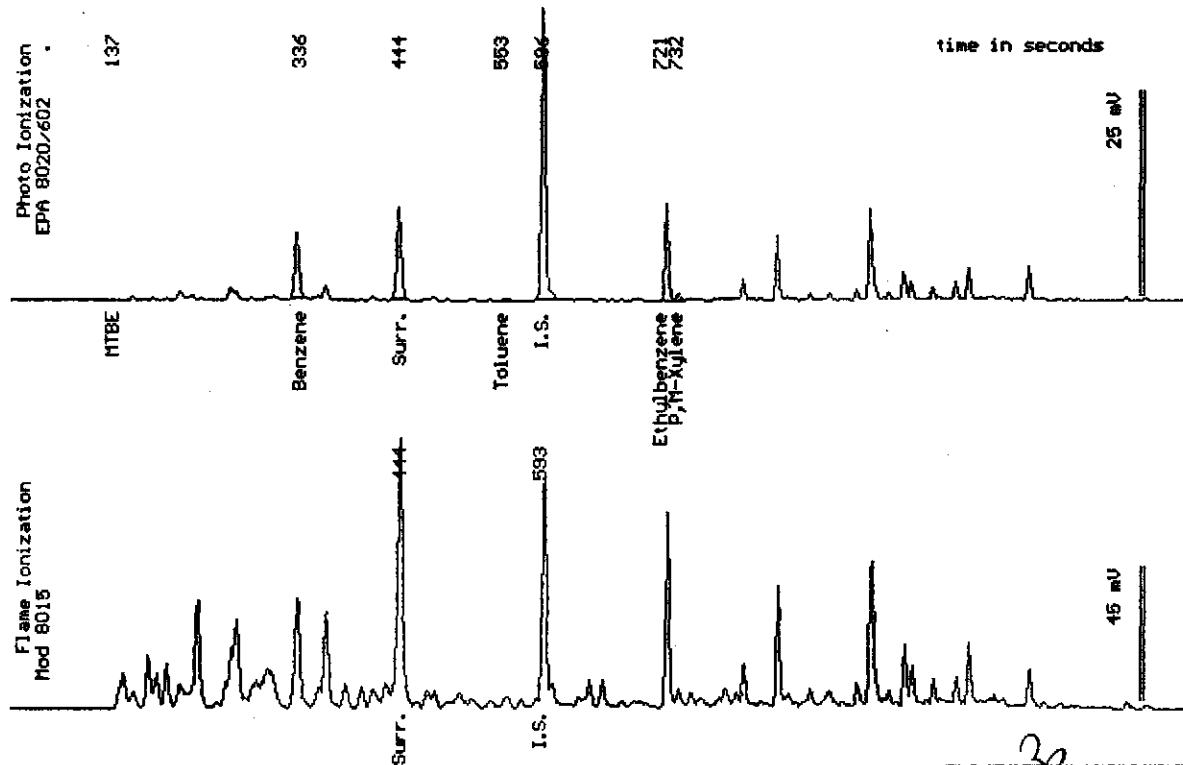
Sampled : 10/06/97

Dilution : 1:100

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(50)	620
Toluene	(50)	<50
Ethylbenzene	(50)	800
Total Xylenes	(50)	<50
TPH as Gasoline	(5000)	15000
Surrogate Recovery		118 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*Sp*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB07-W

From : 444 Hegenberger

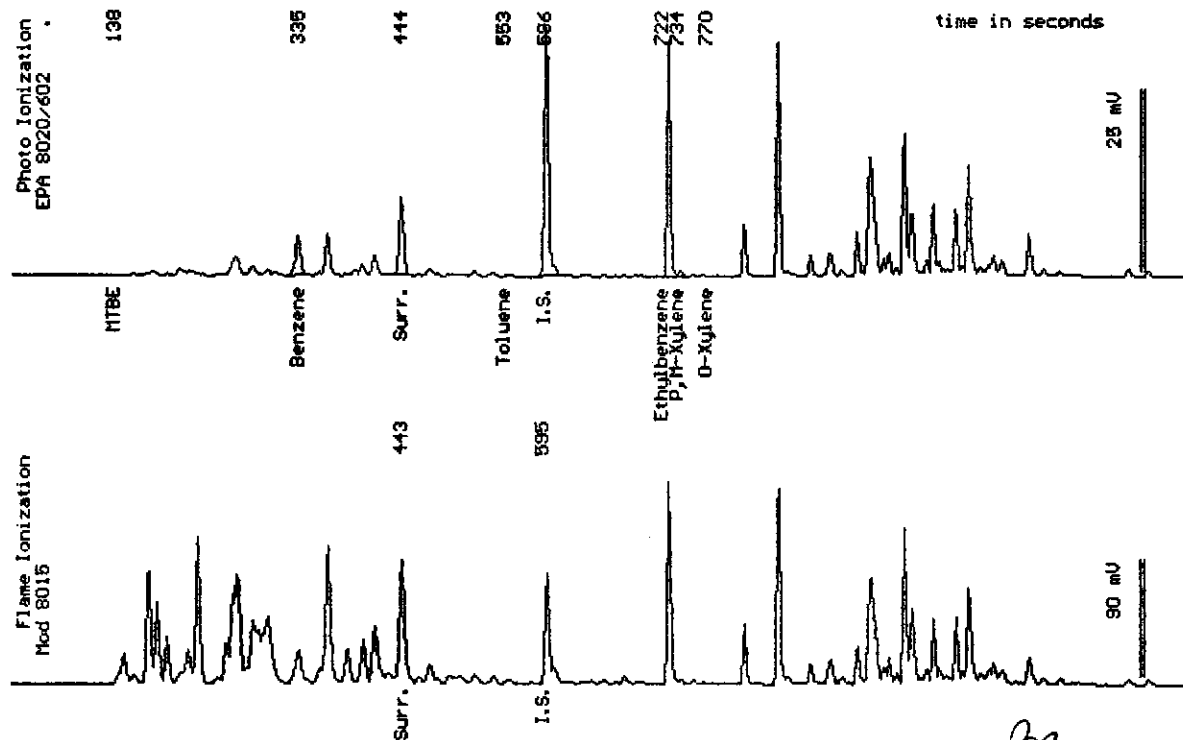
Sampled : 10/06/97

Dilution : 1:10

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	45
Toluene	(5.0)	<5.0
Ethylbenzene	(5.0)	210
Total Xylenes	(5.0)	<5.0
TPH as Gasoline	(500)	3900
Surrogate Recovery		115 %



Date Analyzed: 10-20-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*Stuart Podolsky*  
 Stuart Podolsky  
 Senior Chemist



Sample: SB08-W

From : 444 Hegenberger

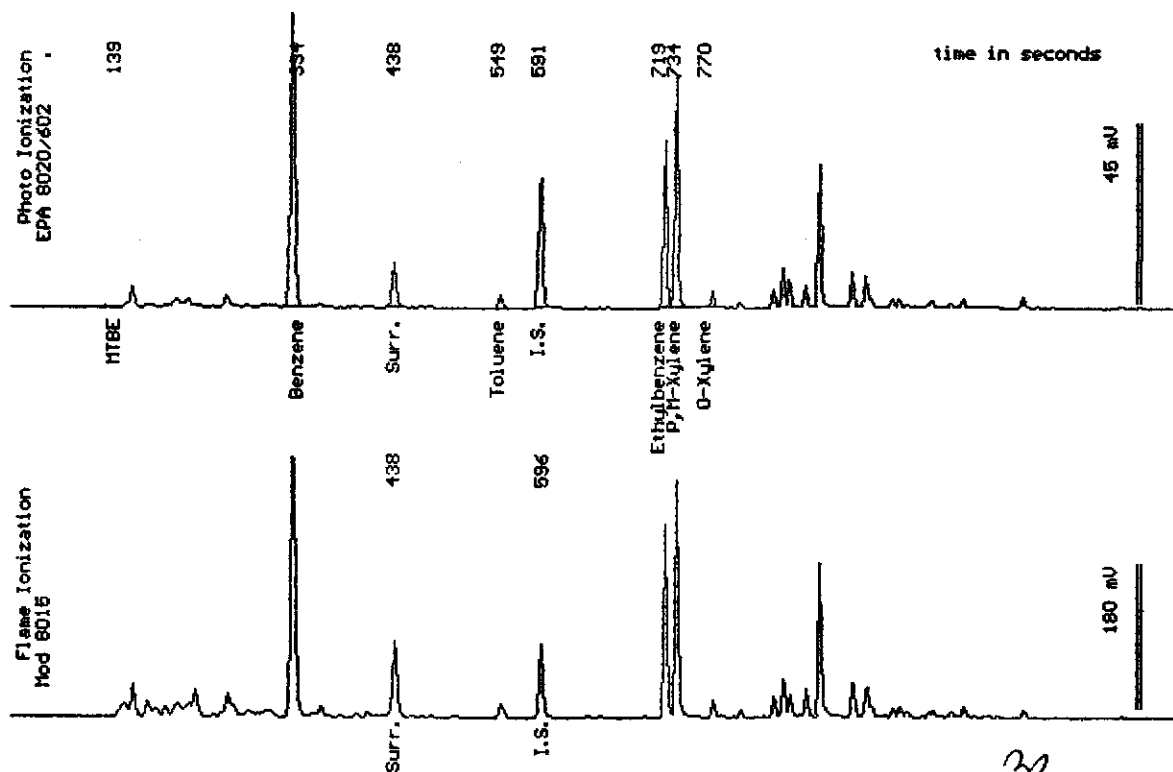
Sampled : 10/08/97

Dilution : 1:200

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(100)	12000
Toluene	(100)	540
Ethylbenzene	(100)	6000
Total Xylenes	(100)	7400
TPH as Gasoline	(10000)	52000
Surrogate Recovery		117 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*St*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB09-W

From : 444 Hegenberger

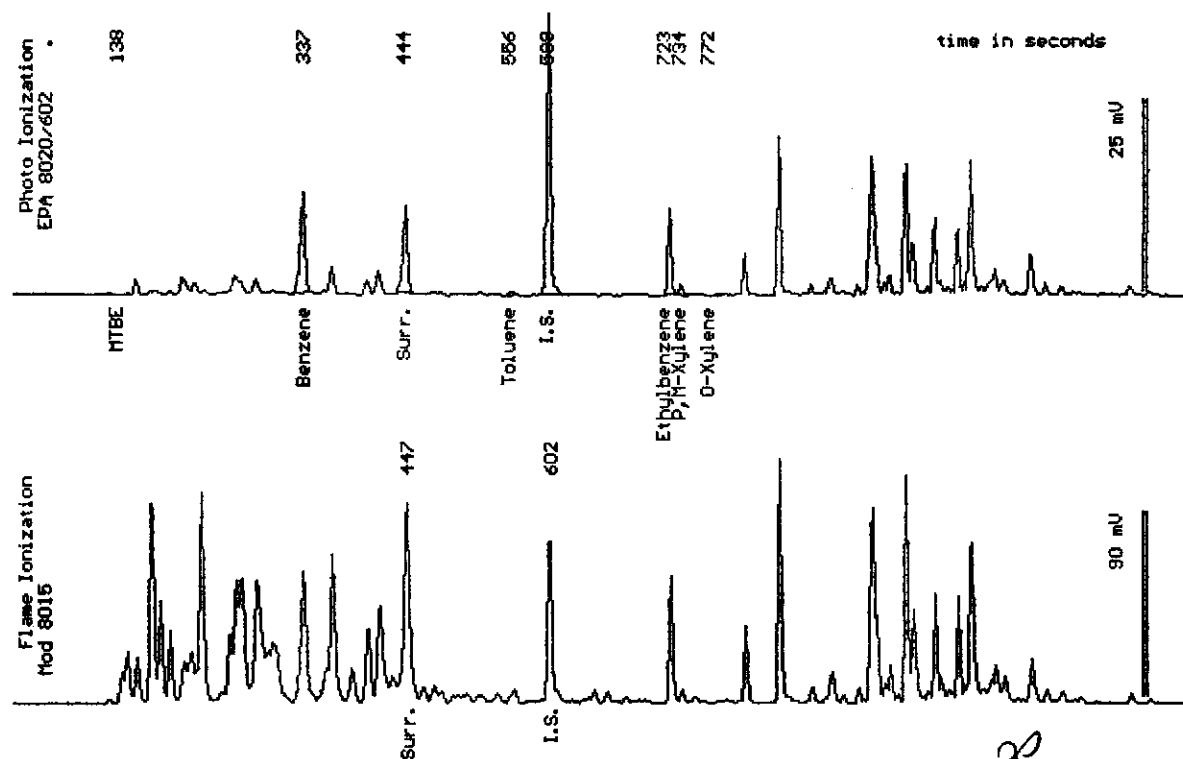
Sampled : 10/08/97

Dilution : 1:5

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(2.5)	55
Toluene	(2.5)	3.5
Ethylbenzene	(2.5)	40
Total Xylenes	(2.5)	4.5
TPH as Gasoline	(250)	1600
Surrogate Recovery		125 %



Date Analyzed: 10-20-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*[Signature]*  
 Stuart Podolsky  
 Senior Chemist

Sample: SB10-W

From : 444 Hegenberger

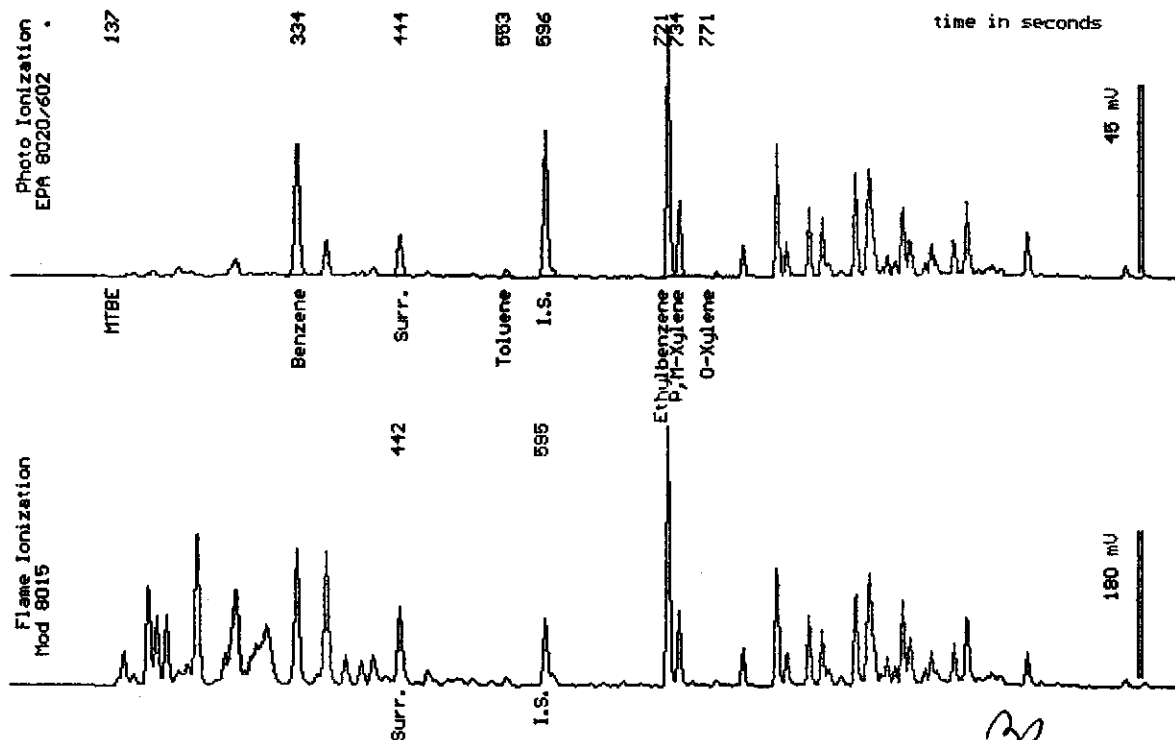
Sampled : 10/06/97

Dilution : 1:10

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	280
Toluene	(5.0)	15
Ethylbenzene	(5.0)	400
Total Xylenes	(5.0)	120
TPH as Gasoline	(500)	5400
Surrogate Recovery		107 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*St*  
 Stewart Podolsky  
 Senior Chemist

Sample Log 17482

17482-31

Sample: SB11-W

From : 444 Hegenberger

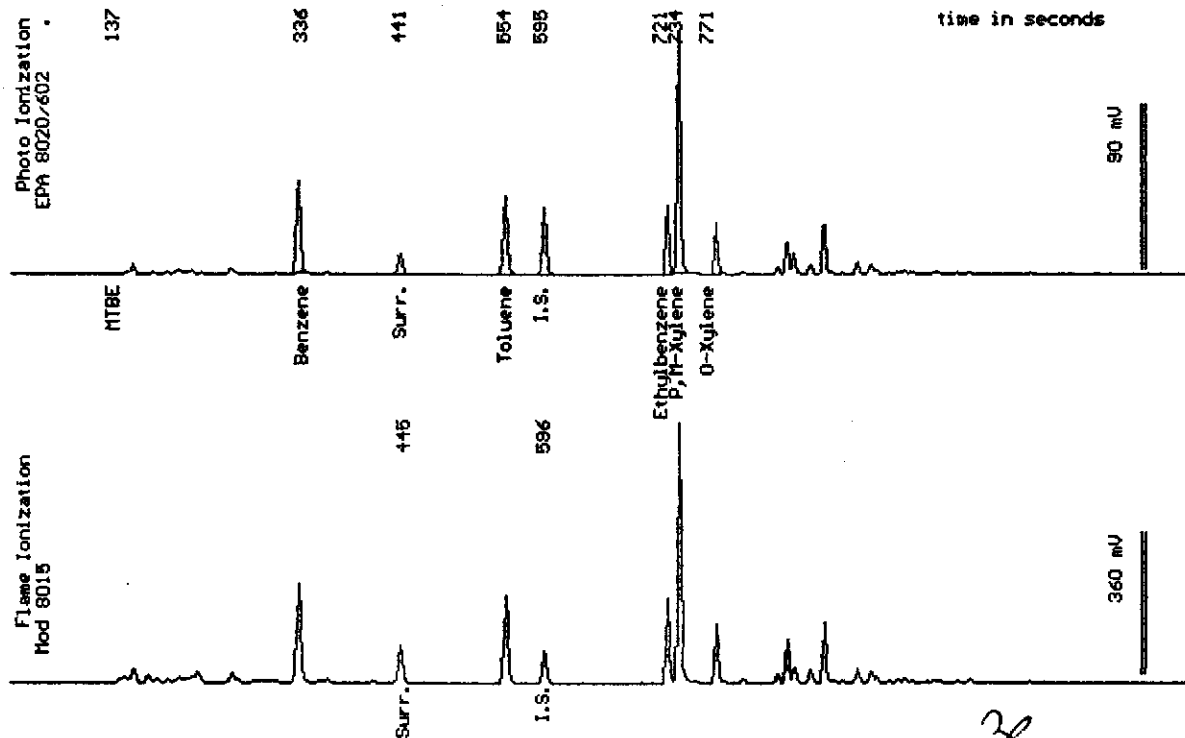
Sampled : 10/07/97

Dilution : 1:50


Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	2100
Toluene	(25)	1800
Ethylbenzene	(25)	1300
Total Xylenes	(25)	4800
TPH as Gasoline	(2500)	16000
Surrogate Recovery		113 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

  
 Stuart Podolsky  
 Senior Chemist

Sample: SB12-W

From : 444 Hegenberger

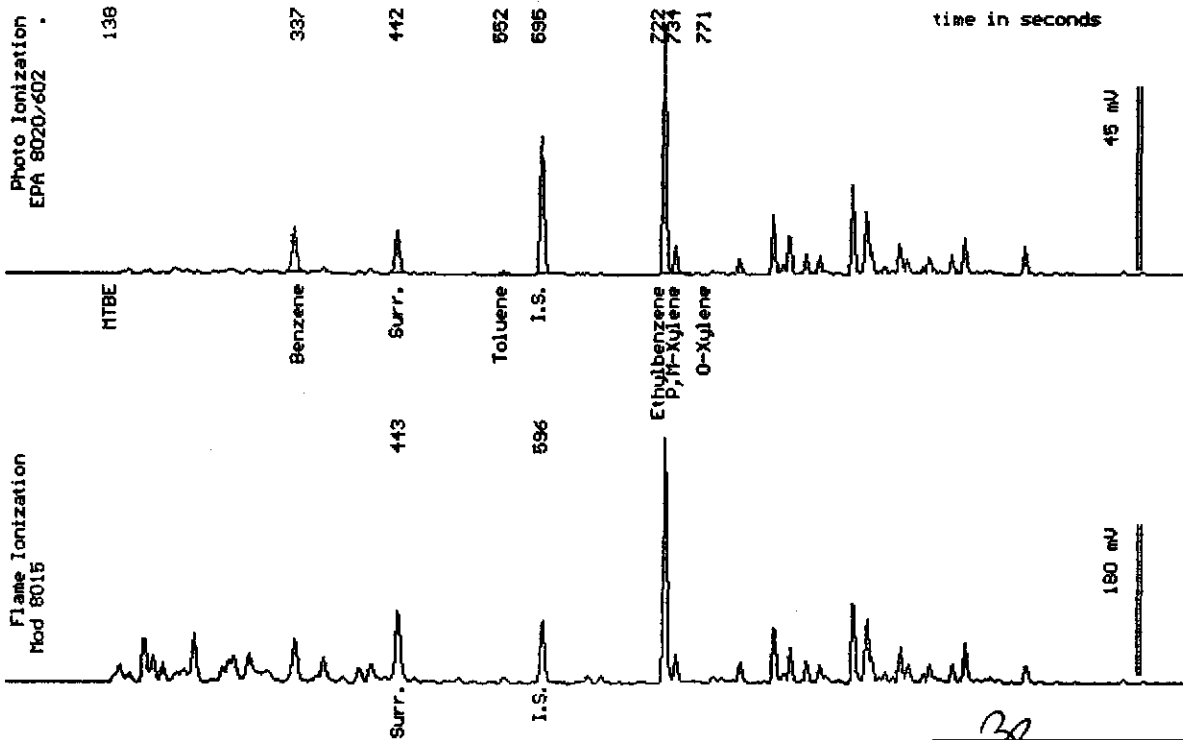
Sampled : 10/07/97

Dilution : 1:50

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	460
Toluene	(25)	42
Ethylbenzene	(25)	2100
Total Xylenes	(25)	230
TPH as Gasoline	(2500)	13000
Surrogate Recovery		117 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*St*  
 Stewart Podolsky  
 Senior Chemist

Sample: SB13-W

From : 444 Hegenberger

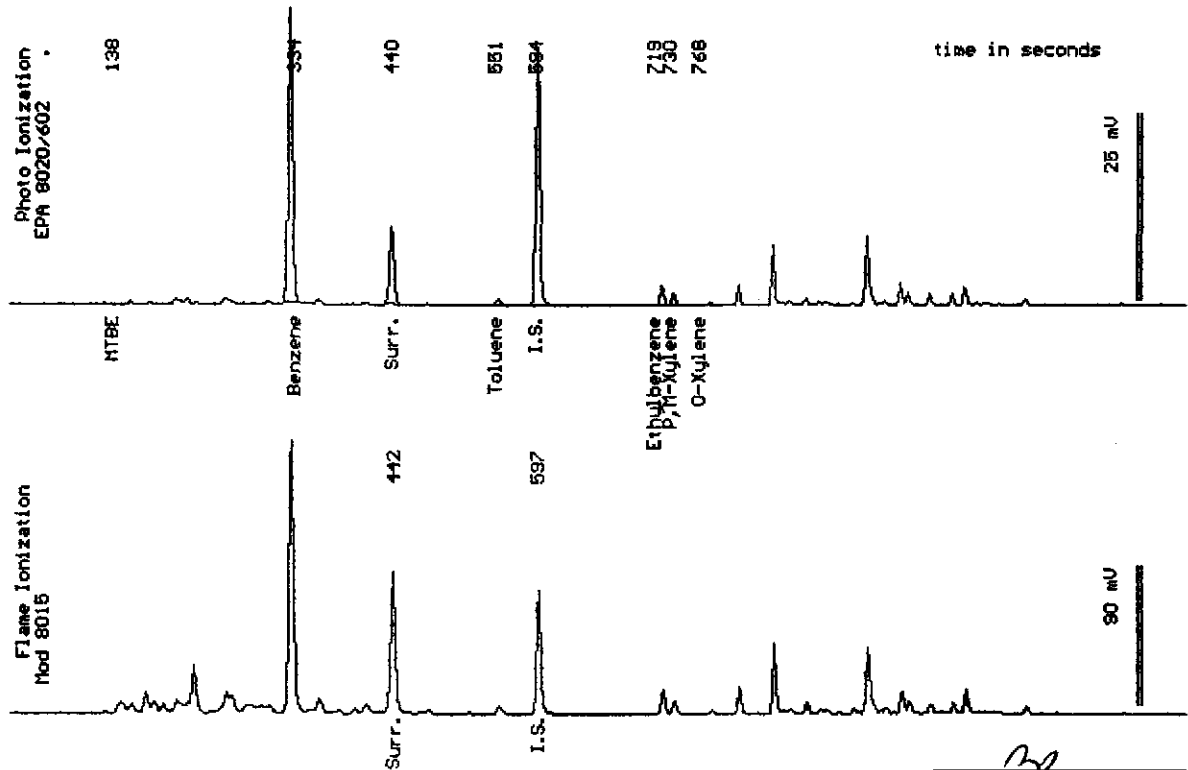
Sampled : 10/07/97

Dilution : 1:100

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(50)	3200
Toluene	(50)	67
Ethylbenzene	(50)	180
Total Xylenes	(50)	100
TPH as Gasoline	(5000)	11000
Surrogate Recovery		115 %



Date Analyzed: 10-21-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

  
 Stewart Podolsky  
 Senior Chemist

Sample: SB14-W

From : 444 Hegenberger

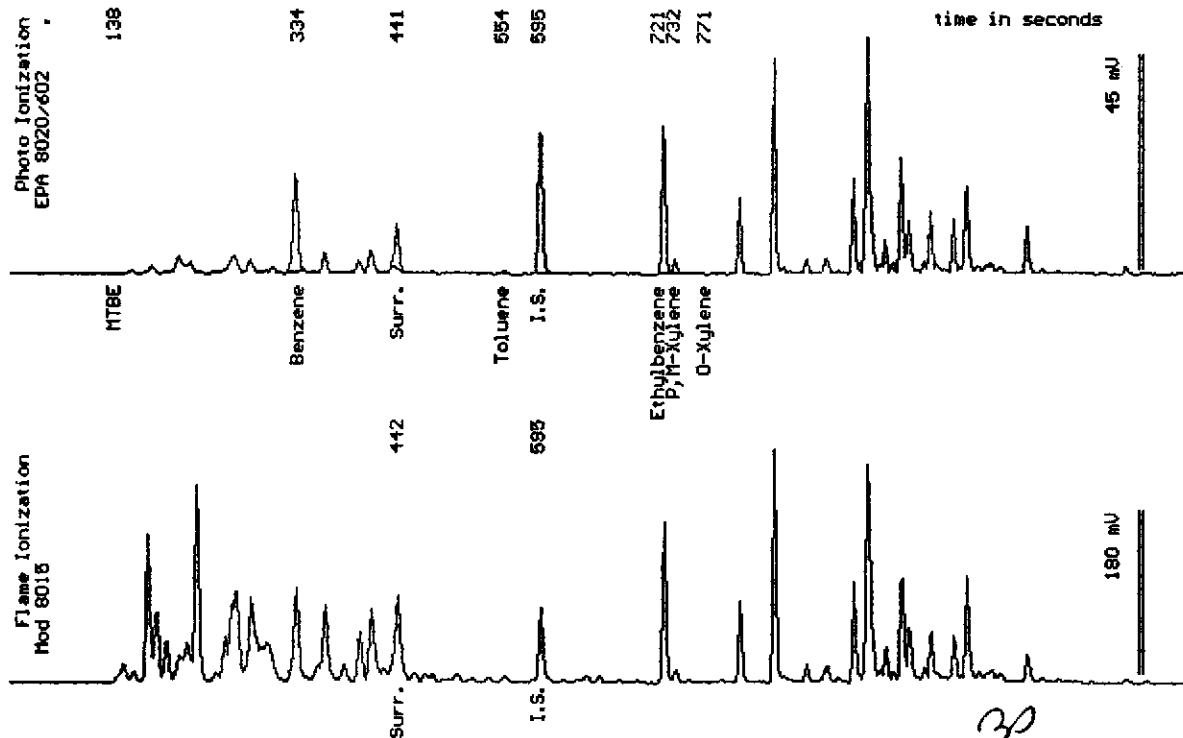
Sampled : 10/08/97

Dilution : 1:5

Matrix : Water

Run Log : 4166R

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(2.5)	95
Toluene	(2.5)	3.0
Ethylbenzene	(2.5)	120
Total Xylenes	(2.5)	8.9
TPH as Gasoline	(250)	2700
Surrogate Recovery		109 %



Date Analyzed: 10-20-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
 Senior Chemist

Sample: SB15-W

From : 444 Hegenberger

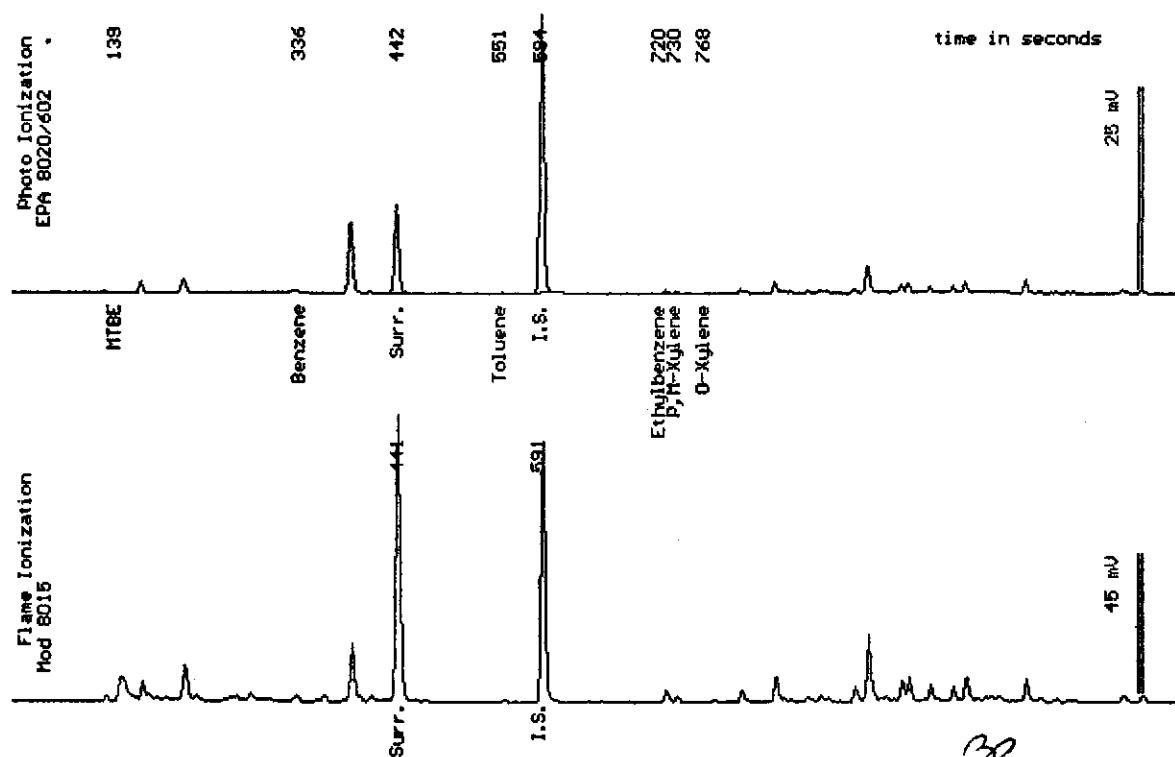
Sampled : 10/08/97

Dilution : 1:1

Matrix : Water

Run Log : 4166Q

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		110 %



Date Analyzed: 10-18-97  
 Column : 0.53mm ID X 60m Restek Rtx-1701

*SP*  
 Stewart Podolsky  
 Senior Chemist



Sample: SB16-W

From : 444 Hegenberger

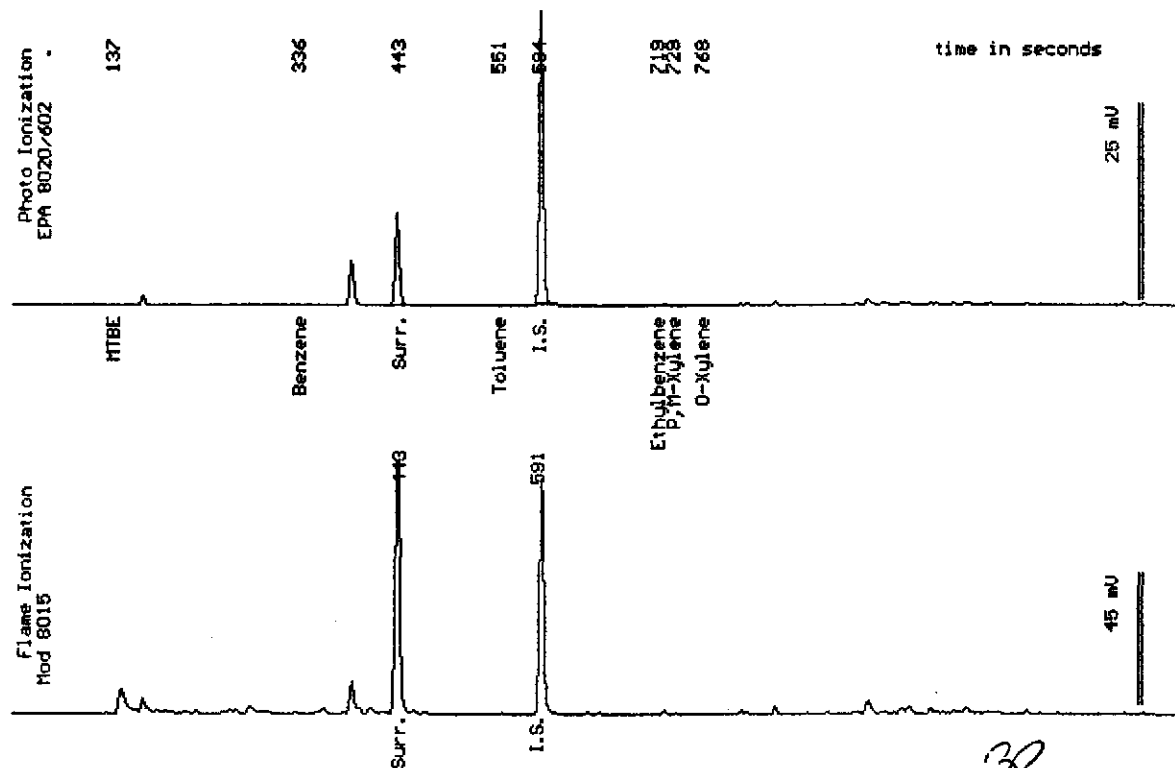
Sampled : 10/08/97

Dilution : 1:1

Matrix : Water

Run Log : 4166Q

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery		110 %



Date Analyzed: 10-18-97  
 Column : 0.83mm ID X 60m Restek Rtx-1701

Stewart Podolsky  
 Senior Chemist

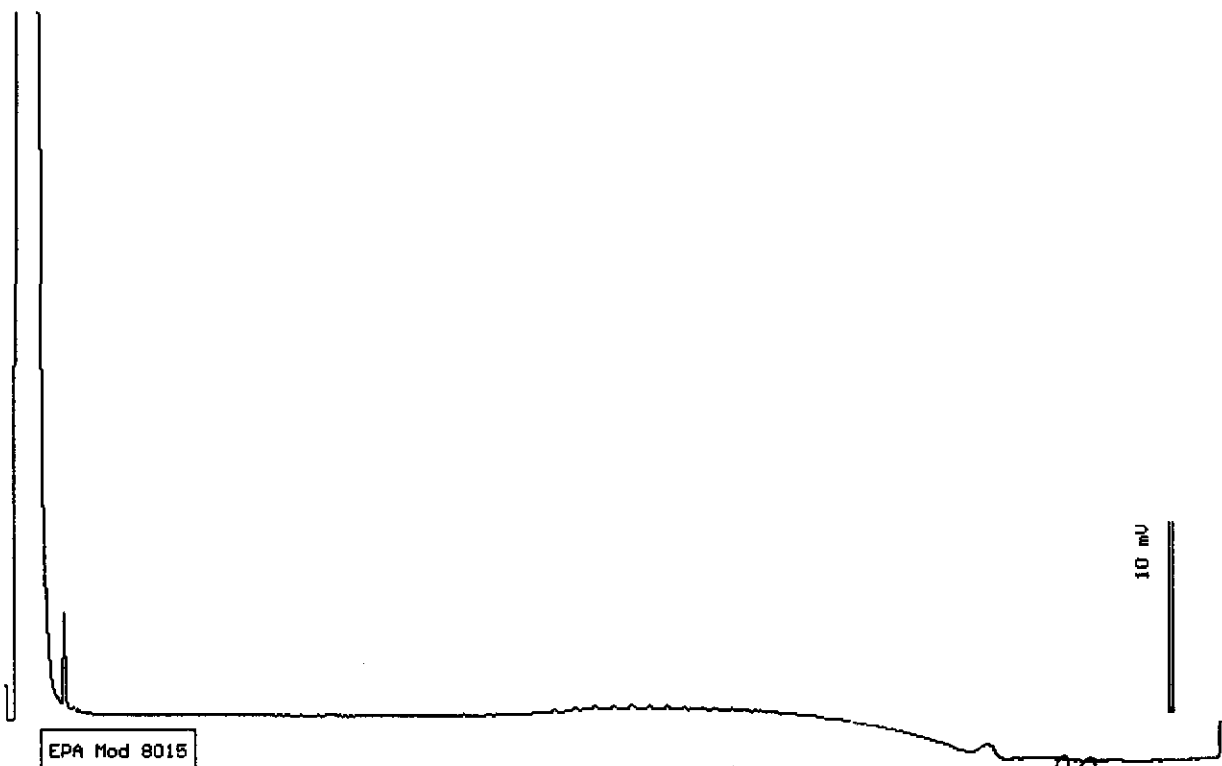
Sample Log 17482  
17482-25

Sample: SB05-W

From : 444 Hegenberger  
Sampled : 10/06/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Water

QC Batch : DW971001  
Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 10-17-97 Time: 19:23:54  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

Sample Log 17482

17482-26

Sample: SB06-W

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

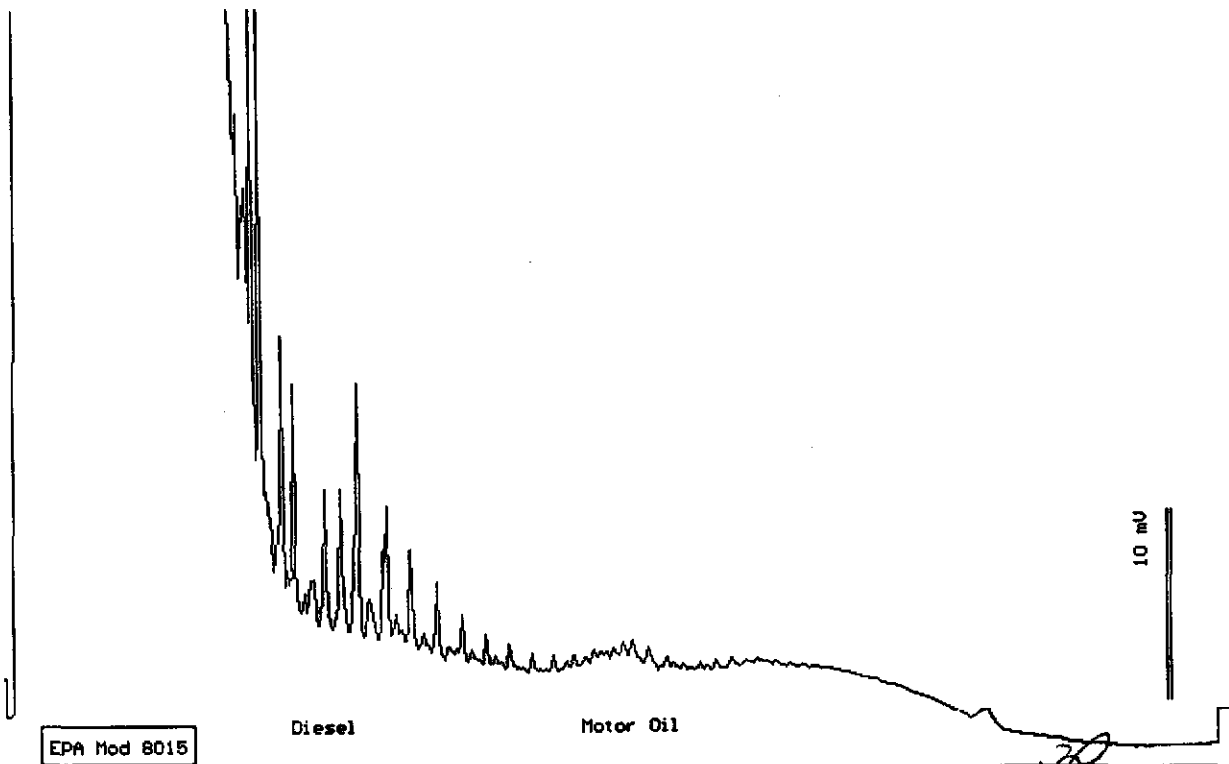
Dilution : 1:1

Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	180
TPH as Motor Oil	(100)	130



Date: 10-17-97 Time: 19:58:40  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

Sample Log 17482

17482-27

Sample: SB07-W

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

Dilution : 1:1

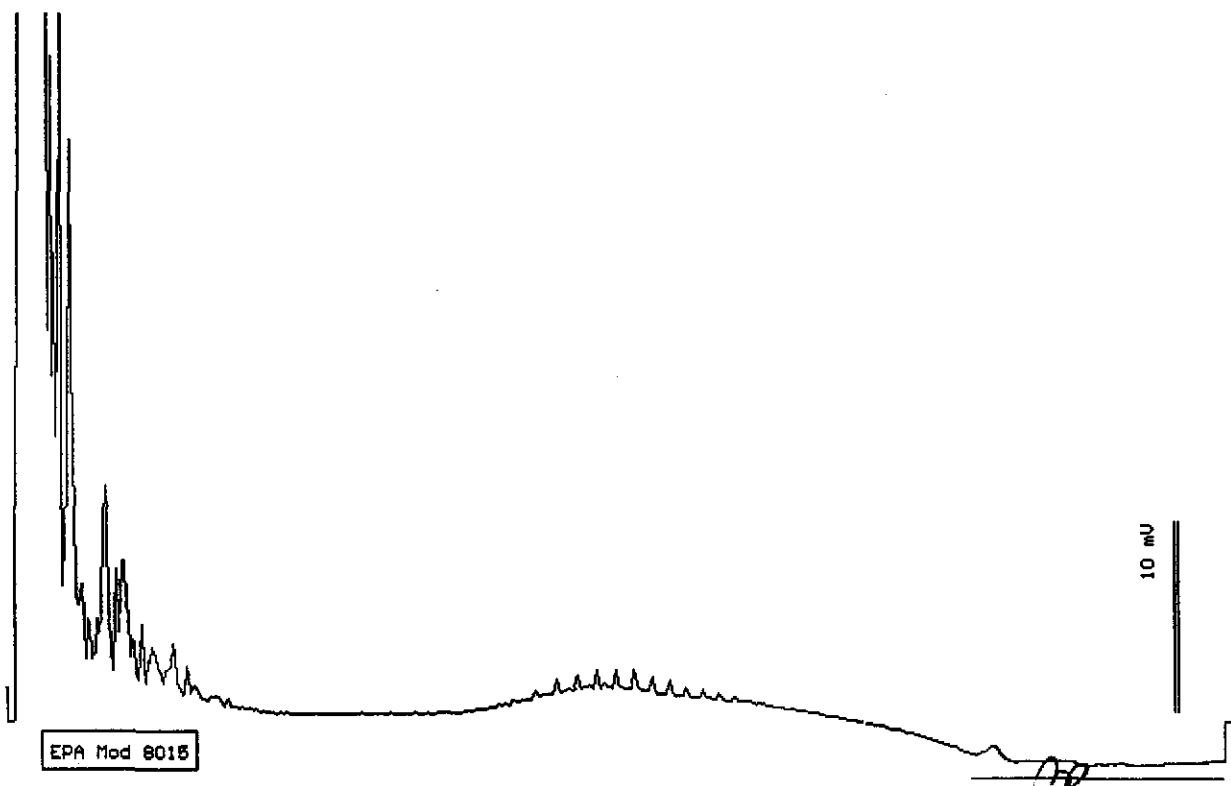
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(100)	<100 *
TPH as Motor Oil	(100)	<100

\* Increased reporting limit due to gasoline range interference.



Date: 10-17-97 Time: 20:32:29  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

Sample: SB08-W

From : 444 Hegenberger

Sampled : 10/08/97

Extracted: 10/17/97

Dilution : 1:1

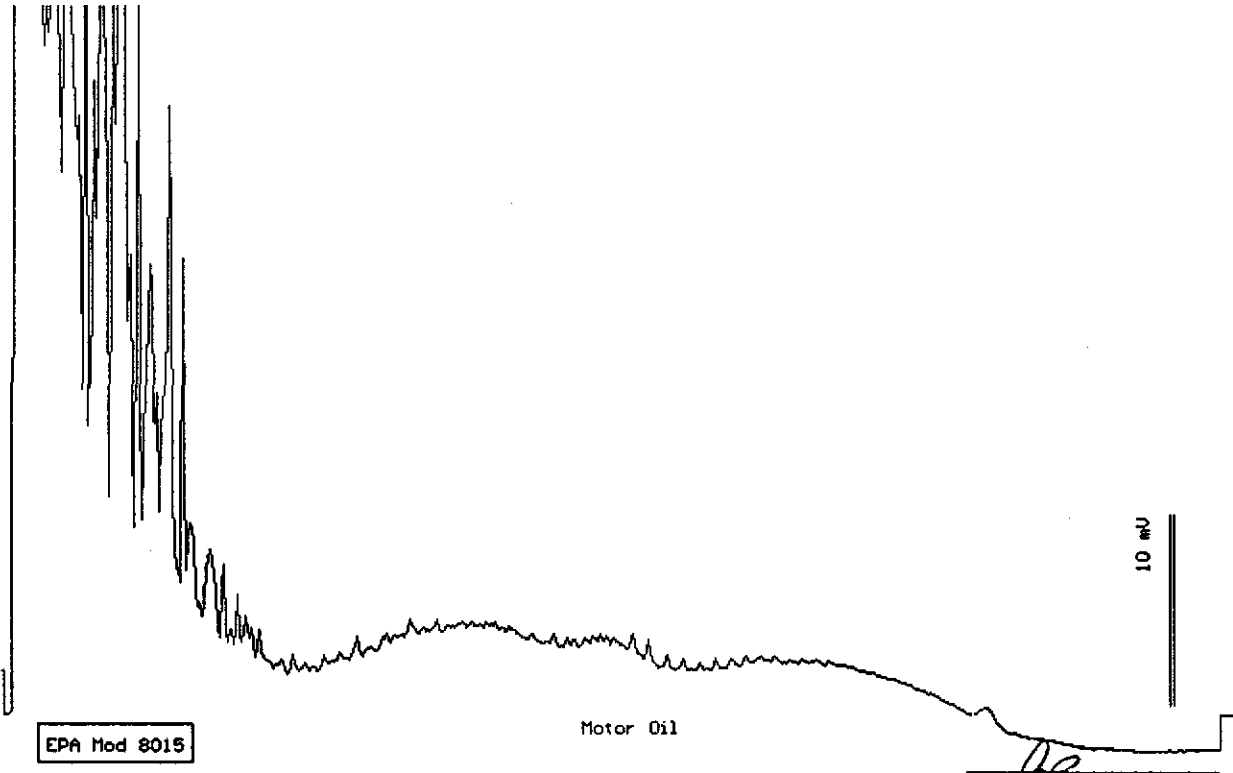
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(200)	<200 *
TPH as Motor Oil	(100)	360

\* Increased reporting limit due to gasoline and oil range interference.



EPA Mod 8015

Date: 10-17-97 Time: 21:07:12  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Sp*  
Stewart Podolsky  
Senior Chemist

Sample: SB09-W

From : 444 Hegenberger

Sampled : 10/08/97

Extracted: 10/17/97

Dilution : 1:1

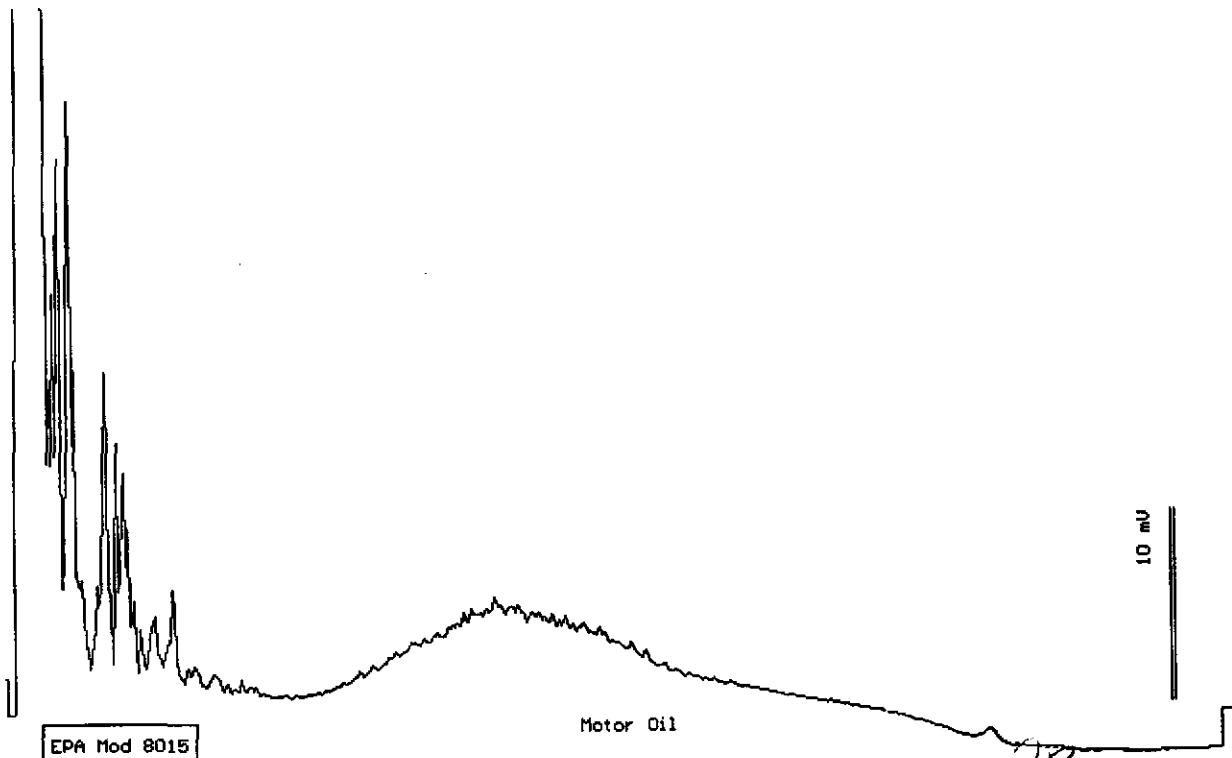
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(100)	<100 *
TPH as Motor Oil	(100)	130

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-17-97 Time: 21:41:31  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

Sample: SB10-W

From : 444 Hegenberger

Sampled : 10/06/97

Extracted: 10/17/97

Dilution : 1:1

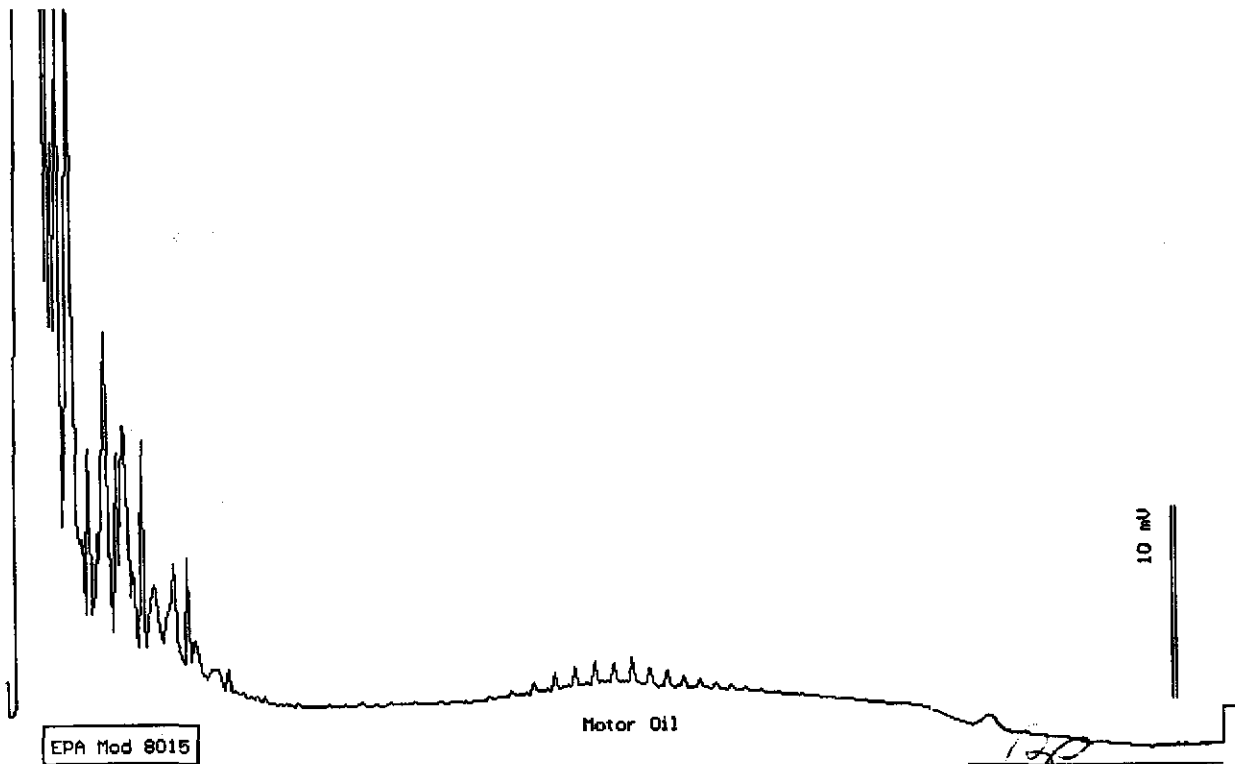
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(100)	<100 *
TPH as Motor Oil	(100)	110

\* Increased reporting limit due to gasoline range interference.



EPA Mod 8015

Date: 10-17-97 Time: 23:23:35  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

Sample Log 17482

17482-31

Sample: SB11-W

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

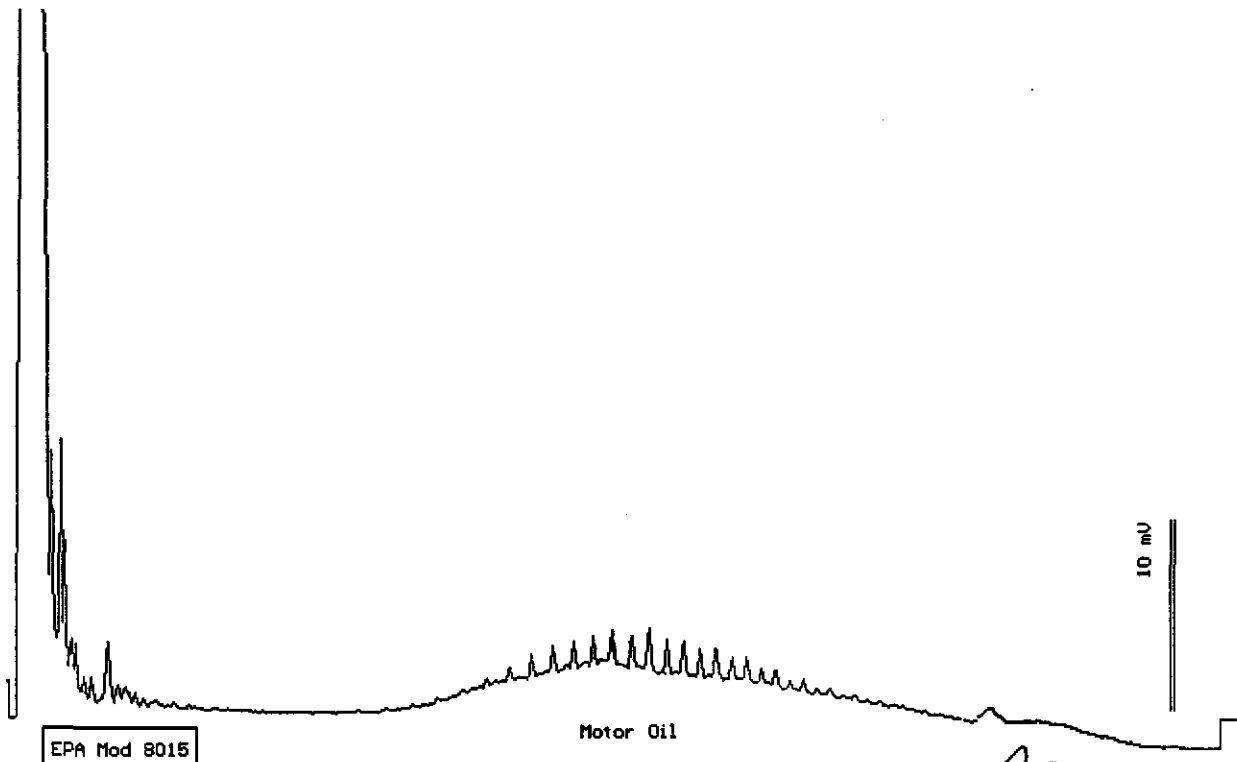
Dilution : 1:1

Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



EPA Mod 8015

Motor Oil

Date: 10-17-97 Time: 23:57:51  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist



Sample Log 17482

17482-32

Sample: SB12-W

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:1

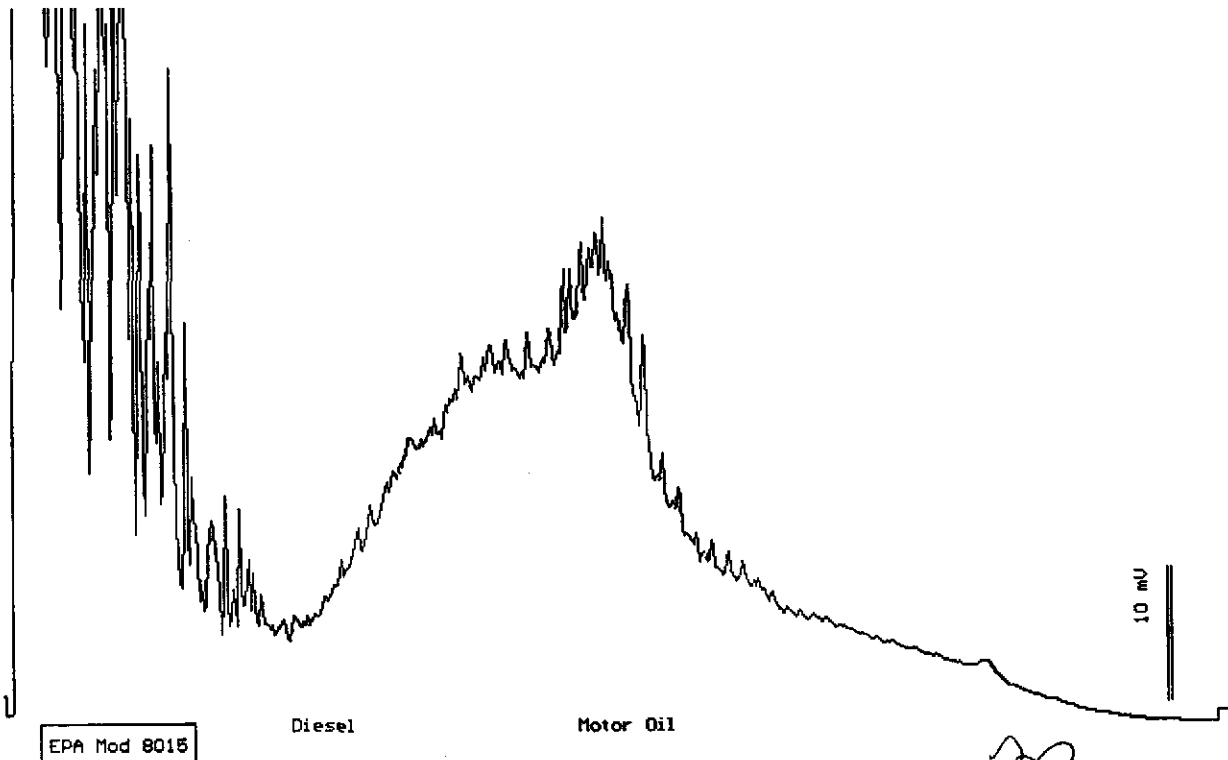
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(700)	<700
TPH as Motor Oil	(100)	890

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 00:32:30  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist

Sample Log 17482

17482-33

Sample: SB13-W

From : 444 Hegenberger

Sampled : 10/07/97

Extracted: 10/17/97

Dilution : 1:1

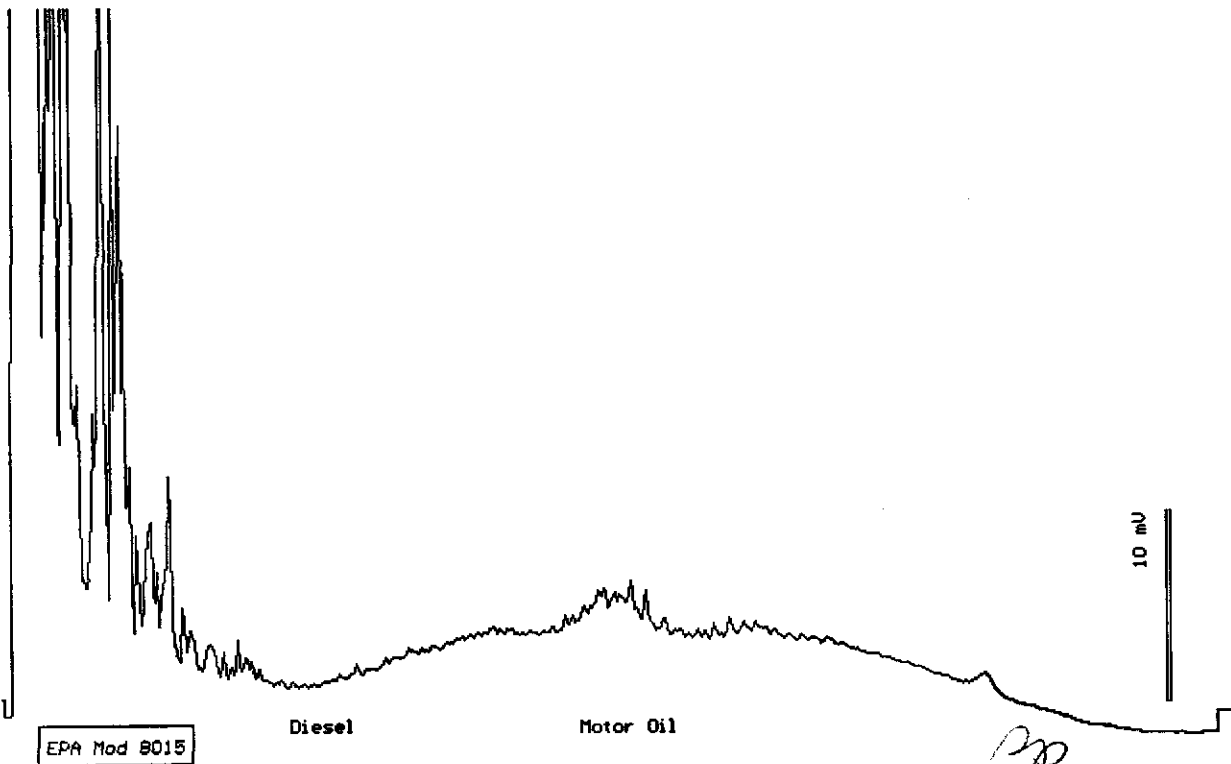
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(350)	<350
TPH as Motor Oil	(100)	440

\* Increased reporting limit due to gasoline and oil range interference.



Date: 10-18-97 Time: 01:07:09  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stp*  
Stewart Podolsky  
Senior Chemist

Sample: SB14-W

From : 444 Hegenberger

Sampled : 10/08/97

Extracted: 10/17/97

Dilution : 1:1

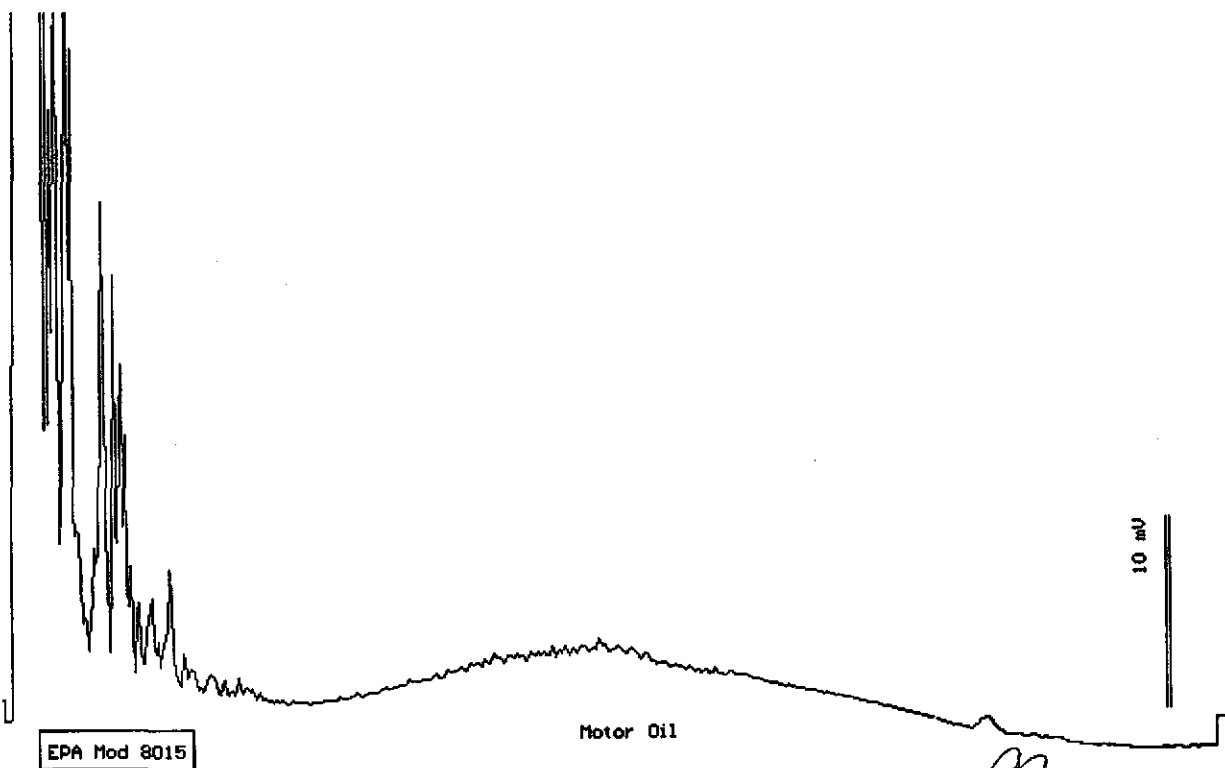
Matrix : Water

QC Batch : DW971001

Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(100)	<100
TPH as Motor Oil	(100)	110

\* Increased reporting limit due to gasoilne and oil range interference.



Date: 10-18-97 Time: 01:41:47  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

*Stewart Podolsky*  
Stewart Podolsky  
Senior Chemist

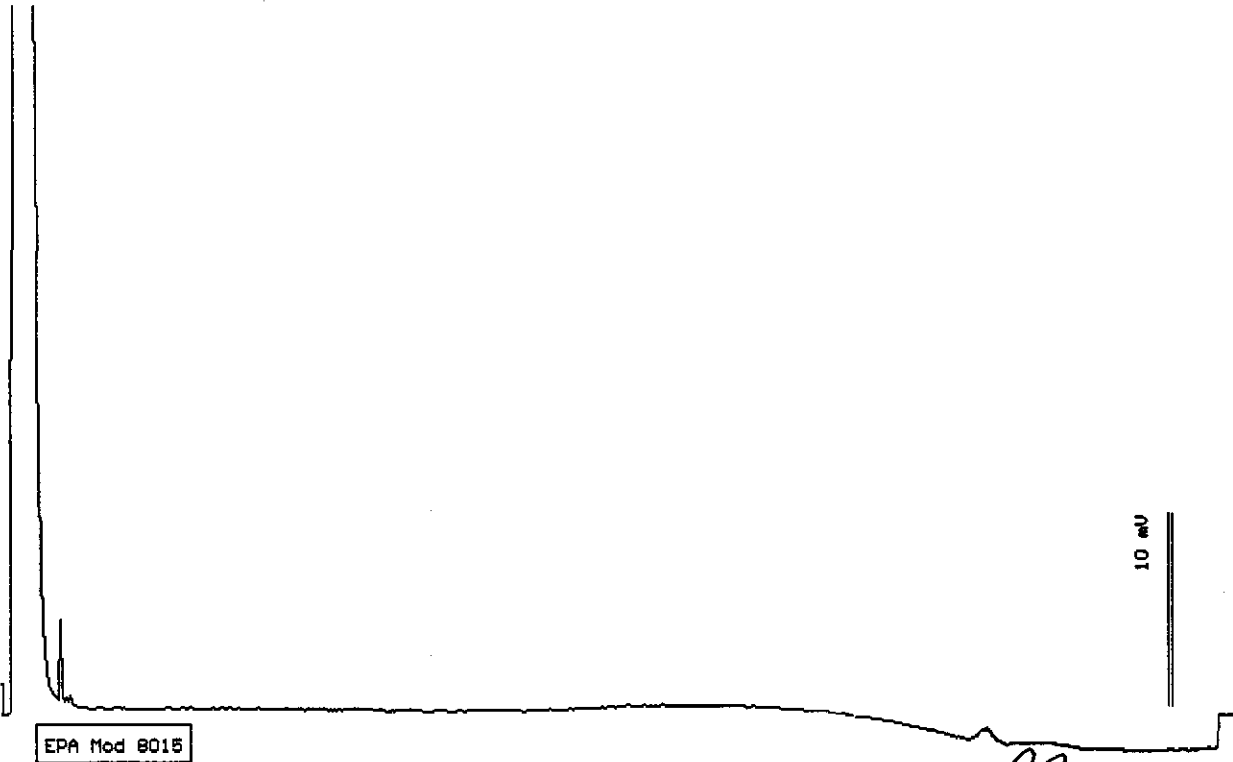
Sample Log 17482  
17482-35

Sample: SB15-W

From : 444 Hegenberger  
Sampled : 10/08/97  
Extracted: 10/17/97  
Dilution : 1:1  
Matrix : Water

QC Batch : DW971001  
Run Log : 7388H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 10-18-97 Time: 02:16:10  
Column : 0.63mm ID X 15m Rtx-1 (Restek Corporation)

*SP*  
Stewart Podolsky  
Senior Chemist

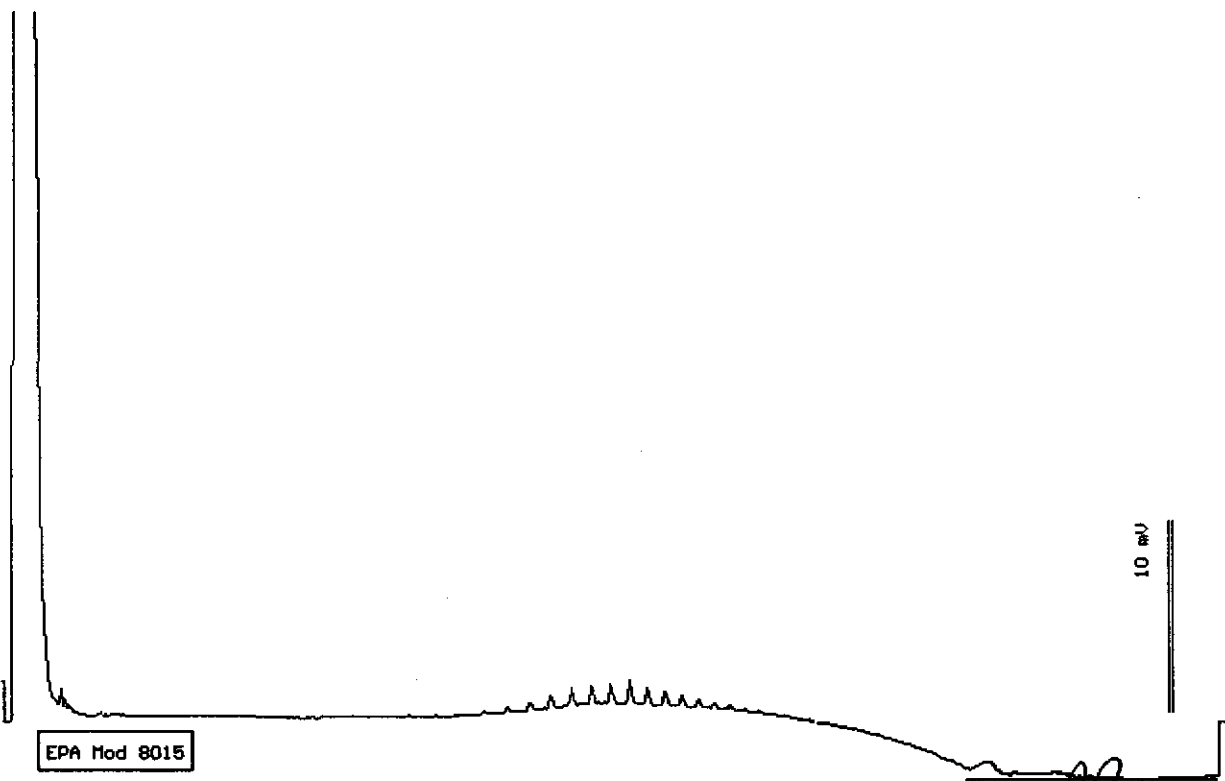
Sample Log 17482  
17482-36

Sample: SB16-W

From : 444 Hegenberger  
Sampled : 10/08/97  
Extracted: 10/20/97  
Dilution : 1:1  
Matrix : Water

QC Batch : DW971002  
Run Log : 7389A

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 10-20-97 Time: 16:37:48  
Column : 0.53mm ID X 15m Rtx-1 (Restek Corporation)

Stewart Podolsky  
Senior Chemist

**EPA 624**Sample Name : **SB05-W**

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/06/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:1

Sample Matrix : Water

Lab Number : 17482-25

Parameter	MRL	Measured Conc.	Units
Chloromethane	10	<10	ug/L
Vinyl Chloride	10	<10	ug/L
Bromomethane	10	<10	ug/L
Chloroethane	10	<10	ug/L
Acetone	20	<20	ug/L
1,1-Dichloroethene	5.0	<5.0	ug/L
Carbon Disulfide	5.0	<5.0	ug/L
Methylene Chloride	5.0	<5.0	ug/L
trans-1,2-Dichloroethene	5.0	<5.0	ug/L
1,1-Dichloroethane	5.0	<5.0	ug/L
2-Butanone	20	<20	ug/L
cis-1,2-Dichloroethene	5.0	<5.0	ug/L
Chloroform	5.0	<5.0	ug/L
1,1,1-Trichloroethane	5.0	<5.0	ug/L
1,2-Dichloroethane	5.0	<5.0	ug/L
Benzene	5.0	<5.0	ug/L
Carbon Tetrachloride	5.0	<5.0	ug/L
Trichloroethene	5.0	<5.0	ug/L
1,2-Dichloropropane	5.0	<5.0	ug/L
Bromodichloromethane	5.0	<5.0	ug/L
4-Methyl-2-Pentanone	10	<10	ug/L
cis-1,3-Dichloropropene	5.0	<5.0	ug/L
trans-1,3-Dichloropropene	5.0	<5.0	ug/L
Toluene	5.0	<5.0	ug/L
1,1,2-Trichloroethane	5.0	<5.0	ug/L
2-Hexanone	10	<10	ug/L
Dibromochloromethane	5.0	<5.0	ug/L
Tetrachloroethene	5.0	<5.0	ug/L
1,2-Dibromoethane	5.0	<5.0	ug/L
Chlorobenzene	5.0	<5.0	ug/L
Ethylbenzene	5.0	<5.0	ug/L
P- & M-Xylene	5.0	<5.0	ug/L
Styrene	5.0	<5.0	ug/L

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

  
John Medina

## EPA 624

Sample Name : **SB05-W**

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/06/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:1

Sample Matrix : Water

Lab Number : 17482-25

Parameter	MRL	Measured Conc.	Units
O-Xylene	5.0	<5.0	ug/L
Bromoform	5.0	<5.0	ug/L
1,1,2,2-Tetrachloroethane	5.0	<5.0	ug/L
1,3-Dichlorobenzene	5.0	<5.0	ug/L
1,4-Dichlorobenzene	5.0	<5.0	ug/L
1,2-Dichlorobenzene	5.0	<5.0	ug/L
1,2-Dichloroethane - d4		101	% Recovery
Toluene-d8		105	% Recovery
4-Bromofluorobenzene		108	% Recovery

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

  
John Medina

## EPA 624

Sample Name : **SB08-W**

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:5

Sample Matrix : Water

Lab Number : 17482-28

Parameter	MRL	Measured Conc.	Units
Chloromethane	50	<50	ug/L
Vinyl Chloride	50	<50	ug/L
Bromomethane	50	<50	ug/L
Chloroethane	50	<50	ug/L
Acetone	100	<100	ug/L
1,1-Dichloroethene	25	<25	ug/L
Carbon Disulfide	25	<25	ug/L
Methylene Chloride	25	<25	ug/L
trans-1,2-Dichloroethene	25	<25	ug/L
1,1-Dichloroethane	25	<25	ug/L
2-Butanone	100	<100	ug/L
cis-1,2-Dichloroethene	25	<25	ug/L
Chloroform	25	<25	ug/L
1,1,1-Trichloroethane	25	<25	ug/L
1,2-Dichloroethane	25	<25	ug/L
<b>Benzene</b>	<b>25</b>	<b>2500 E</b>	ug/L
Carbon Tetrachloride	25	<25	ug/L
Trichloroethene	25	<25	ug/L
1,2-Dichloropropane	25	<25	ug/L
Bromodichloromethane	25	<25	ug/L
4-Methyl-2-Pentanone	50	<50	ug/L
cis-1,3-Dichloropropene	25	<25	ug/L
trans-1,3-Dichloropropene	25	<25	ug/L
<b>Toluene</b>	<b>25</b>	<b>510</b>	ug/L
1,1,2-Trichloroethane	25	<25	ug/L
2-Hexanone	50	<50	ug/L
Dibromochloromethane	25	<25	ug/L
Tetrachloroethene	25	<25	ug/L
1,2-Dibromoethane	25	<25	ug/L
Chlorobenzene	25	<25	ug/L
<b>Ethylbenzene</b>	<b>25</b>	<b>1600 E</b>	ug/L
<b>P- &amp; M-Xylene</b>	<b>25</b>	<b>2100 E</b>	ug/L
Styrene	25	<25	ug/L

1600  
 2100  
 520  


---

 Σ 4220 US 7200 (8020)

MRL = Method Reporting Limit    Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By : \_\_\_\_\_

  
 John Medina



## EPA 624

Sample Name : **SB08-W**

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:5

Sample Matrix : Water

Lab Number : 17482-28


Parameter	MRL	Measured Conc.	Units
O-Xylene	25	520	ug/L
Bromoform	25	<25	ug/L
1,1,2,2-Tetrachloroethane	25	<25	ug/L
1,3-Dichlorobenzene	25	<25	ug/L
1,4-Dichlorobenzene	25	<25	ug/L
1,2-Dichlorobenzene	25	<25	ug/L
1,2-Dichloroethane - d4		165	% Recovery
Toluene-d8		113	% Recovery
4-Bromofluorobenzene		111	% Recovery

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

  
John Medina

## EPA 624

Sample Name : **SB08-W**

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/23/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:250

Sample Matrix : Water

Lab Number : 17482-28

Parameter	MRL	Measured Conc.	Units
Chloromethane	2500	<2500	ug/L
Vinyl Chloride	2500	<2500	ug/L
Bromomethane	2500	<2500	ug/L
Chloroethane	2500	<2500	ug/L
Acetone	5000	<5000	ug/L
1,1-Dichloroethene	1200	<1200	ug/L
Carbon Disulfide	1200	<1200	ug/L
Methylene Chloride	1200	<1200	ug/L
trans-1,2-Dichloroethene	1200	<1200	ug/L
1,1-Dichloroethane	1200	<1200	ug/L
2-Butanone	5000	<5000	ug/L
cis-1,2-Dichloroethene	1200	<1200	ug/L
Chloroform	1200	<1200	ug/L
1,1,1-Trichloroethane	1200	<1200	ug/L
1,2-Dichloroethane	1200	<1200	ug/L
<b>Benzene</b>	<b>1200</b>	<b>13000</b>	ug/L
Carbon Tetrachloride	1200	<1200	ug/L
Trichloroethene	1200	<1200	ug/L
1,2-Dichloropropane	1200	<1200	ug/L
Bromodichloromethane	1200	<1200	ug/L
4-Methyl-2-Pentanone	2500	<2500	ug/L
cis-1,3-Dichloropropene	1200	<1200	ug/L
trans-1,3-Dichloropropene	1200	<1200	ug/L
Toluene	1200	<1200	ug/L
1,1,2-Trichloroethane	1200	<1200	ug/L
2-Hexanone	2500	<2500	ug/L
Dibromochloromethane	1200	<1200	ug/L
Tetrachloroethene	1200	<1200	ug/L
1,2-Dibromoethane	1200	<1200	ug/L
Chlorobenzene	1200	<1200	ug/L
<b>Ethylbenzene</b>	<b>1200</b>	<b>5900</b>	ug/L
<b>P- &amp; M-Xylene</b>	<b>1200</b>	<b>7100</b>	ug/L
Styrene	1200	<1200	ug/L

5900  
7100  
13000 vs. 7200

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

John Medina

## EPA 624

Sample Name : SB08-W

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/23/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:250

Sample Matrix : Water

Lab Number : 17482-28

<u>Parameter</u>	<u>MRL</u>	<u>Measured Conc.</u>	<u>Units</u>
O-Xylene	1200	<1200	ug/L
Bromoform	1200	<1200	ug/L
1,1,2,2-Tetrachloroethane	1200	<1200	ug/L
1,3-Dichlorobenzene	1200	<1200	ug/L
1,4-Dichlorobenzene	1200	<1200	ug/L
1,2-Dichlorobenzene	1200	<1200	ug/L
1,2-Dichloroethane - d4		104	% Recovery
Toluene-d8		106	% Recovery
4-Bromofluorobenzene		97	% Recovery

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

John Medina <sup>37</sup>

## EPA 624

Sample Name : SB09-W

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:1

Sample Matrix : Water

Lab Number : 17482-29


Parameter	MRL	Measured Conc.	Units
Chloromethane	10	<10	ug/L
Vinyl Chloride	10	<10	ug/L
Bromomethane	10	<10	ug/L
Chloroethane	10	<10	ug/L
Acetone	20	<20	ug/L
1,1-Dichloroethene	5.0	<5.0	ug/L
Carbon Disulfide	5.0	<5.0	ug/L
Methylene Chloride	5.0	<5.0	ug/L
trans-1,2-Dichloroethene	5.0	<5.0	ug/L
1,1-Dichloroethane	5.0	<5.0	ug/L
2-Butanone	20	<20	ug/L
cis-1,2-Dichloroethene	5.0	<5.0	ug/L
Chloroform	5.0	<5.0	ug/L
1,1,1-Trichloroethane	5.0	<5.0	ug/L
1,2-Dichloroethane	5.0	<5.0	ug/L
<b>Benzene</b>	<b>5.0</b>	<b>50</b>	ug/L
Carbon Tetrachloride	5.0	<5.0	ug/L
Trichloroethene	5.0	<5.0	ug/L
1,2-Dichloropropane	5.0	<5.0	ug/L
Bromodichloromethane	5.0	<5.0	ug/L
4-Methyl-2-Pentanone	10	<10	ug/L
cis-1,3-Dichloropropene	5.0	<5.0	ug/L
trans-1,3-Dichloropropene	5.0	<5.0	ug/L
Toluene	5.0	<5.0	ug/L
1,1,2-Trichloroethane	5.0	<5.0	ug/L
2-Hexanone	10	<10	ug/L
Dibromochloromethane	5.0	<5.0	ug/L
Tetrachloroethene	5.0	<5.0	ug/L
1,2-Dibromoethane	5.0	<5.0	ug/L
Chlorobenzene	5.0	<5.0	ug/L
<b>Ethylbenzene</b>	<b>5.0</b>	<b>35</b>	ug/L
P- & M-Xylene	5.0	<5.0	ug/L
Styrene	5.0	<5.0	ug/L

MRL = Method Reporting Limit Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

John Medina 

## EPA 624

Sample Name : SB09-W

Project Name : 444 Hegenberger

Project Number :

Sample Date : 10/08/97

Date Analyzed : 10/20/97

Analysis Method : EPA 8240

Date Received : 10/08/97

Dilution : 1:1

Sample Matrix : Water

Lab Number : 17482-29

<u>Parameter</u>	<u>MRL</u>	<u>Measured Conc.</u>	<u>Units</u>
O-Xylene	5.0	<5.0	ug/L
Bromoform	5.0	<5.0	ug/L
1,1,2,2-Tetrachloroethane	5.0	<5.0	ug/L
1,3-Dichlorobenzene	5.0	<5.0	ug/L
1,4-Dichlorobenzene	5.0	<5.0	ug/L
1,2-Dichlorobenzene	5.0	<5.0	ug/L
1,2-Dichloroethane - d4		107	% Recovery
Toluene-d8		110	% Recovery
4-Bromofluorobenzene		100	% Recovery

MRL = Method Reporting Limit    Conc. = Concentration

B = Analyte was detected in Method Blank.

E = Concentration exceeded calibration range.

Approved By :

John Medina 

# Analytical Labs

1000 Drive, Suite 2, Davis, CA 95616

Phone#: 916-757-0920

Fax#: 916-753-6091

Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Manager:

Phone #:

DALE VAN DAM

916 649-3570

Company/Address:

FAX #:

NORTHWEST ENVIRON 1928 TRIBUTE RD., STE. A

Project Number:

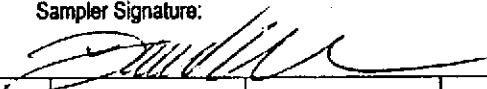
P.O.#:

Project Name:

Project Location:

Sampler Signature:

444 HEIDENBERGER



### ANALYSIS REQUEST

TAT

For Lab Use ONLY

W.E.T. (✓)

TOTAL (✓)

Sample ID	Sampling		Container (Type/Amount)			Method Preserved				Matrix		
	DATE	TIME	VOL	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL
5B05-3	10-6			✓							✓	
5B05-6												
5B06-3												
" -6												
5B07-3												
" -6												
5B08-3	10-7											
" -6												
5B09-3												
" -6												
5B10-3	10-6											

- BTEX (602/8020)
- BTEX/TPH as Gasoline (602/8020/M8015)
- TPH as Diesel (M8015)
- TPH as Motor Oil (M8015)
- EPA 801/8010
- EPA 508/8080 - Pesticides
- EPA 508/8080 - PCB's
- EPA 524/8240
- EPA 625/8270
- CAM - 17 Metals
- LEAD(6010/7421/239.2)
- Cd, Cr, Pb, Zn, Ni

12 hour / 24 hour / 48 hour / 1 week / 2 weeks

WEST Lab Number

Relinquished by:

Date Time

Received by:

Remarks:

Relinquished by:

Date Time

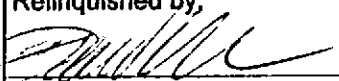
Received by:

Relinquished by:

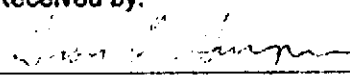
Date Time

Received by Laboratory:

Bill To:



10/8 10:55



# West Analytical Labs

1046 Olive Drive, Suite 2, Davis, CA 95616

Phone#: 916-757-0920

Fax#: 916-753-6091

Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: \_\_\_\_\_ Phone #: \_\_\_\_\_

Company/Address: \_\_\_\_\_ FAX #: \_\_\_\_\_

Project Number: \_\_\_\_\_ P.O.#: \_\_\_\_\_ Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_ Sampler Signature: \_\_\_\_\_

Sample ID	Sampling		Container (Type/Amount)			Method Preserved				Matrix		
	DATE	TIME	VOA	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL
SB10-6	10-6			✓							✓	
SB11-3	10-7			✓								
"-6				✓								
SB12-3				✓								
"-6				✓								
SB13-3				✓								
"-6				✓								
SB14-3				✓								
"-6				✓								
SB15-3	10-8			✓								
"-6	"			✓								

ANALYSIS REQUEST										TAT	For Lab Use ONLY		
BTEX (602/8027)	BTEX/TPH as Gasoline (602/8020/M8015) <i>ATBE</i>	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	EPA 601/8010	EPA 608/8080 - Pesticides	EPA 608/8080 - PCB's	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	LEAD(6010742/239.2)		Cd, Cr, Pb, Zn, Ni	12 hour / 24 hour / 48 hour / 1 week / 2 weeks

Relinquished by: _____	Date: 10/8	Time: 18:55	Received by: _____
Relinquished by: _____	Date:	Time:	Received by:
Relinquished by: _____	Date:	Time:	Received by Laboratory:

Remarks: \_\_\_\_\_

Bill To: \_\_\_\_\_

# West Analytical Labs

1046 Olive Drive, Suite 2, Davis, CA 95616

Phone#: 916-757-0920

Fax#: 916-753-6091

Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: \_\_\_\_\_ Phone #: \_\_\_\_\_

Company/Address: NWE FAX #: \_\_\_\_\_

Project Number: \_\_\_\_\_ P.O.#: \_\_\_\_\_ Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_ Sampler Signature: 

### ANALYSIS REQUEST

TAT

For Lab Use ONLY

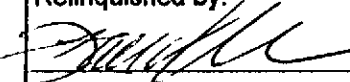
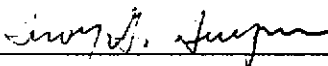
Sample ID	Sampling		Container (Type/Amount)				Method Preserved				Matrix	
	DATE	TIME	VOA	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO <sub>3</sub>	ICE	NONE	WATER	SOIL
SB16-3	10-8			✓							✓	
"-6	"			✓							✓	
SB05-W	10-6		6		2					✓		
SB06-W	✓		3		2							
SB07-W	✓		3		2							
SB08-W	10-8		8		2	2						
SB09-W	✓		3		2							
SB10-W	10-6		3			4						
SB11-W	10-7		3		2							
SB12-W	✓		4		2							
SB13-W	✓		4		2							

BTEX (602/8020)  
 BTEX/TPH as Gasoline (602/8020/MS015) NTBE  
 TPH as Diesel (MS015)  
 TPH as Motor Oil (MS015)  
 EPA 601/8010  
 EPA 608/8080 - Pesticides  
 EPA 608/8080 - PCBs  
 EPA 624/8240 VCS  
 EPA 625/8270

W.E.T.   
 TOTAL   
 CAM - 17 Metals  
 LEAD(60107421/235.2)  
 Cd, Cr, Pb, Zn, Ni

12 hour / 24 hour / 48 hour / 1 week / 2 weeks

WEST Lab Number

Relinquished by: 	Date: 10/5/07	Time: 19:00	Received by: 
Relinquished by: _____	Date: _____	Time: _____	Received by: _____
Relinquished by: _____	Date: _____	Time: _____	Received by Laboratory: _____

Remarks: \_\_\_\_\_

Bill To: \_\_\_\_\_



# West Analytical Labs

1046 Olive Drive, Suite 2, Davis, CA 95616

Phone#: 916-757-0920

Fax#: 916-753-6091

Sample Receiving#: 916-757-4608

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: \_\_\_\_\_ Phone #: \_\_\_\_\_

Company/Address: NWE FAX #: \_\_\_\_\_

Project Number: \_\_\_\_\_ P.O.#: \_\_\_\_\_ Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_ Sampler Signature: 

### ANALYSIS REQUEST


TAT

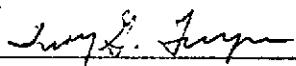
For Lab Use ONLY

12 hour / 24 hour / 48 hour / 1 week / 2 weeks

WEST Lab Number

Sample ID	Sampling		Container (Type/Amount)			Method Preserved				Matrix		BTEX (602/6020)	BTEX/TPH as Gasoline (602/6020/M8015) <u>MPRE</u>	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	EPA 601/6010	EPA 608/6080 - Pesticides	EPA 608/6080 - PCB's	EPA 624/6240	EPA 625/6270	CAM - 17 Metals	LEAD(60107421/239.2)	Cd, Cr, Pb, Zn, Ni	W.E.T. (✓)	TOTAL (✓)				
	DATE	TIME	VOA	SLEEVE	1L GLASS	1L PLASTIC	HCl	HNO <sub>3</sub>	ICE	NONE	WATER															SOIL			
SBI4-W	10-8		F		2							✓	✓	✓															
SBI5-W	10-8		F		2																								
SBI6-W	"		F		2																								

Relinquished by:  Date: 10/8 Time: 10:55

Received by: 

Remarks:

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by Laboratory: \_\_\_\_\_

Bill To: \_\_\_\_\_