STND 1040
PE

Subsurface Consultants, Inc.

LETTER OF TRANSMITTAL

TO:	Mr. Thomas Peacock Alameda County Health Care Services Agency 1131 Harbor Bay Parkway 2nd Floor Alameda, California 94502	DATE:	May 28, 1998
FROM:	Samuel Won		
PROJECT:	2250 Telegraph Avenue, Oakland		
SCI JOB NUMBER:	609.004		
OFFICE SENT FROM:	Lafayette		

WE ARE SENDING YOU: 1 copy(ies)

- ☒ final report
- ☐ draft report
- ☐ Service Agreement
- ☐ proposed scope of services
- ☐ specifications
- ☐ grading/foundation plans
- ☐ soil samples/groundwater samples
- ☐ executed contract

- ☐ if you have any questions, please call
- ☐ for your review and comment
- ☐ please return an executed copy
- ☐ with our comments
- ☐ for your use
- ☐ as requested
- ☐
- ☐

REMARKS:

cc:

98 JUN -1 PM 4:46

ENVIRONMENTAL PROTECTION

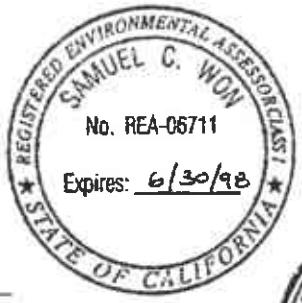
3736 Mt. Diablo Boulevard ■ Suite 200 ■ Lafayette, California 94549 ■ (925) 299-7960 ■ Fax (925) 299-7970
171 12th Street ■ Suite 202 ■ Oakland, California 94607 ■ (510) 268-0461 ■ Fax (510) 268-0137

GROUNDWATER MONITORING WELL INSTALLATION
2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
SCI 609.004

Prepared for:

Ms. Marianne Robison
Buttner Properties
600 W. Grand Avenue
Oakland, California 94612

By:



Samuel C. Won
Registered Environmental Assessor 06711 (exp. 6/30/98)
Civil Engineer 57023 (exp. 6/30/01)

Terence J. McManus
Registered Environmental Assessor 03185 (exp. 6/30/98)

Subsurface Consultants, Inc.
3736 Mt. Diablo Boulevard, Suite 200
Lafayette, California 94549
(510) 299-7960

August 8, 1997

TABLE OF CONTENTS

Subsurface Consultants, Inc.

LETTER OF TRANSMITTAL

TO: Ms. Marianne Robison
Buttner Properties
600 West Grand Avenue
Oakland, CA 94612

DATE: May 28, 1998

FROM: Samuel C. Won

PROJECT: 2250 Telegraph Avenue/Groundwater Monitoring Well Installation

SCI JOB NUMBER: 609.004

OFFICE SENT FROM: Lafayette

WE ARE SENDING YOU: 1 copy(ies)

- ☒ final report
- ☐ draft report
- ☐ Service Agreement
- ☐ proposed scope of services
- ☐ specifications
- ☐ grading/foundation plans
- ☐ soil samples/groundwater samples
- ☐ executed contract

- ☐ if you have any questions, please call
- ☐ for your review and comment
- ☐ please return an executed copy
- ☐ with our comments
- ☒ for your use
- ☐ as requested
- ☐
- ☐

REMARKS:

cc: √ (1) Ms. Jennifer Eberle, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Alameda, CA 94502

3736 Mt. Diablo Boulevard ■ Suite 200 ■ Lafayette, California 94549 ■ (925) 299-7960 ■ Fax (925) 299-7970
171 12th Street ■ Suite 202 ■ Oakland, California 94607 ■ (510) 268-0461 ■ Fax (510) 268-0137

I INTRODUCTION

This report presents the results of monitoring well installations conducted by Subsurface Consultants, Inc. (SCI) to investigate the lateral extent of groundwater contamination downgradient of 2250 Telegraph Avenue, Oakland, California (Site). The scope of services described herein was presented in a revised proposal dated January 27, 1997. This study was performed as a continuation of the Supplemental Groundwater Investigation conducted by SCI in May 1996. A work plan dated February 8, 1996, to perform these investigations was prepared by SCI and approved by Alameda County Health Care Services Agency (ACHCSA) on November 26, 1996. In general, the work performed for this phase of investigation included:

- **Installation of monitoring wells MW-5 and MW-6,**
- Well development,
- Soil and groundwater sampling,
- Analyzing selected soil samples and groundwater samples for the presence of chemical constituents,
- Developing conclusions regarding the significance of our findings, and
- Preparing this report.

II BACKGROUND

As described in the SCI tank removal report dated July 1, 1991, two 10,000-gallon underground gasoline storage tanks and one 280-gallon underground waste oil tank were removed from the site in August 1990. Approximately 500 cubic yards of gasoline-impacted soils were aerated onsite and disposed of at a Class III sanitary landfill. In February 1994, SCI

observed the excavation of additional contaminated soil from the former waste oil tank area and installed four groundwater monitoring wells. The results of these services were presented in SCI's report dated May 5, 1994. The limits of prior soil excavation and existing monitoring wells are shown on the Site Plan, Plate 1.

SCI conducted a quarterly groundwater monitoring program at the site for one year beginning in March 1994. Previous groundwater data indicate that groundwater has been impacted by total petroleum hydrocarbons within the gasoline and diesel ranges, benzene, toluene, ethylbenzene, and total xylenes (BTEX), 1,2-dichloroethane, 1,1,1-trichloroethane, perchloroethene (PCE), and chlorobenzene.

In a letter dated November 8, 1995, ACHCSA indicated that the lateral extent of groundwater impacts had not been sufficiently defined downgradient (southeast) of monitoring well MW-3. ACHCSA required that an investigation be performed to evaluate the extent of groundwater contamination downgradient of the subject site. In May 1996, SCI installed five temporary well points and collected grab groundwater samples as part of a supplemental investigation to assist in determining locations for the installation of new permanent groundwater monitoring wells. Results of the May 1996 investigation were summarized in SCI's Supplemental Groundwater Investigation report dated October 4, 1996. The study suggested that the limits of the plume extended slightly downgradient of the temporary well locations. Based on these results, SCI proposed to install two groundwater monitoring wells along West Grand Avenue near the fringe of the dissolved hydrocarbon plume.

III FIELD INVESTIGATION

The field investigation consisted of drilling two test borings, converting the test borings into monitoring wells, developing the wells, and collecting soil and groundwater samples. Prior to the field exploration, a drilling permit was obtained from the Alameda County Flood Control and Water Conservation District, Zone 7. Excavation and encroachment permits were obtained from the City of Oakland. Copies of the permits are included in Appendix A. Underground Services Alert was notified to perform a utility check for the neighboring streets. Logs of test borings and monitoring well construction details are presented on Plates 2 and 3. Soils were classified in accordance with the Unified Soil Classification System, presented on Plate 4.

On June 23, 1997, monitoring wells MW-5 and MW-6 were installed at locations cross- and downgradient of the former underground tanks, as shown on the Site Plan, Plate 1. Monitoring well MW-5 is located in the parking strip on the north side of West Grand Ave and MW-6 is located in the eastbound lane of West Grand Avenue nearest to the median. Soil borings MW-5 and MW-6 were completed to a depth of approximately 20 feet to 21.5 feet below ground surface (bgs), respectively. A discussion of procedures followed during drilling, soil sampling, well installation, well development, and groundwater sampling is provided in Appendix B.

IV SOIL AND GROUNDWATER CONDITIONS

Soils encountered during installation of the monitoring wells were consistent with soil conditions found during the May 1996 Supplemental Groundwater Investigation. Surficial soils

in the upper 8 feet generally consisted of fill material composed of clayey sand and sandy clay followed by alternating layers of silts and sands. **From 8 feet bgs to the depth of the soil borings at approximately 20 feet bgs, soils consist of silty clays underlain by clayey and sandy silts, with silty sand lenses.** The depth to groundwater ranged between 8.48 feet and 12.08 feet bgs, as measured in wells MW-1 through MW-6. A summary of water level measurements is presented in Table 1. The groundwater flow direction was interpreted towards the southeast at a gradient of 0.01 feet vertical per 1 feet horizontal.

V ANALYTICAL TESTING

A. General

Soil and groundwater samples were analyzed by Curtis & Tompkins, Ltd., an analytical laboratory certified by the State of California for hazardous waste and water testing. Chain-of-custody records accompanied all samples transported to the laboratory. At each boring location, soil samples collected at shallow depths (4 feet to 6 feet bgs) and at the groundwater table (8 feet to 10 feet bgs) were selected for testing (see Table 2). The testing program included the following analyses:

1. Total extractable hydrocarbons (TEH) using EPA Methods 3550/8015 modified,
2. Total volatile hydrocarbons (TVH) using EPA Methods 5030/8015 modified,
3. BTEX using EPA Methods 5030/8020,
4. Volatile organic compounds (VOCs) using EPA Methods 5030/8260, and
5. Total organic carbon (TOC) using EPA Method 9060.

In addition to the above testing program, selected soil samples were analyzed in SCI's geotechnical laboratory for moisture content (ASTM Method D-2216) and dry density (ASTM Method D2937). The purpose of the TOC, moisture content, and dry density analyses was to provide preliminary data for use in any future risk assessment, as requested by ACHCSA. A summary of laboratory results is presented in Tables 1 and 2. Copies of the laboratory analytical test reports and chain-of-custody records are presented in Appendix C.

B. Soil Test Results

As shown in Table 2, **concentrations of TVH, BTEX, TEH, and VOCs were well below method detection limits for the soil samples from MW-5 at 4 feet bgs and MW-6 at 6 feet bgs.** Relatively low concentrations of TVH and TEH (less than 7 milligrams per kilogram [mg/kg]) were detected in the soil samples from MW-5 and MW-6 near the water table, 8 feet and 10 feet bgs, respectively.

The analytical laboratory indicated that the TEH samples contained lighter and heavier hydrocarbons that did not resemble the standard for diesel. In addition, ethylbenzene and/or xylenes were detected in the soil samples from 8 feet to 10 feet bgs at concentrations ranging from 5.7 micrograms per kilogram (µg/kg) to 26 µg/kg.

At depths of 4 feet to 6 feet bgs, the TOC in soil ranged from 4,300 mg/kg to 4,500 mg/kg. Lower TOC concentrations (480 mg/kg to 760 mg/kg) were present in deeper samples taken from 8 feet to 10 feet bgs corresponding to the groundwater table. At well MW-5, the soil sample at 7.5 feet bgs exhibited a moisture content of 30.6 percent and a dry density of 86 pounds per cubic feet.

C. Groundwater Test Results

A summary of the groundwater analytical results for MW-5 and MW-6, data for the temporary wells sampled in May 1996, and the most recent data for wells MW-1 through MW-4 (September 1995), are presented in Table 3. With the exception of ethylbenzene and chlorobenzene in MW-6 at 11 micrograms per liter (µg/L) and 1.7 µg/L, respectively, and PCE in MW-5 at 1.6 µg/L, concentrations of VOCs in MW-5 and MW-6 were below method detection limits. Groundwater samples from MW-5 and MW-6 also contained TVH and/or TEH concentrations ranging from 120 µg/L to 1,500 µg/L. The analytical laboratory indicated that TVH in samples from MW-6 did not resemble the standard for gasoline. In addition, TEH detected in MW-6 contained lighter petroleum hydrocarbons than indicated standards.

VI DISCUSSION AND CONCLUSIONS

Results of the investigation indicated detectable concentrations of TVH and/or TEH in groundwater samples from MW-5 and MW-6. The concentrations of BTEX and VOCs were below method detection limits, with the exception of ethylbenzene, chlorobenzene, and PCE, which were detected at concentrations below the maximum contaminant levels (MCLs) established by the State of California and/or USEPA (Table 3). On the basis of the recent groundwater data presented in Table 3, SCI's interpretation of the approximate limits of benzene concentrations in groundwater above the MCL of 1 µg/L is shown on Plate 1. Data suggest that groundwater containing benzene concentrations above 1 µg/L does not extend far offsite.

The source of the low PCE and chlorobenzene concentrations in MW-5 and MW-6, respectively, is unclear. **Data for well MW-4 suggest that the former onsite waste oil tank may have been a source of the solvent compounds detected in groundwater.** However, the distribution of solvent concentrations in groundwater beneath and near the site suggest that other potential sources of solvents may be present in the site vicinity.

SCI concludes that the site should be considered a low-risk groundwater case by ACHCSA for the following reasons:

- The source of the hydrocarbon release (i.e., the underground tanks) was removed in 1990,
- Soil remediation activities were performed in 1990 and 1994 to further reduce the potential for future groundwater impacts,
- The onsite and offsite extent of the petroleum hydrocarbon plume has been adequately characterized, and
- The limits of the dissolved hydrocarbon plume, on the basis of benzene concentrations above 1 μg/L, do not appear to extend far offsite.

To demonstrate that the dissolved hydrocarbon plume is stable, SCI recommends that groundwater monitoring be performed on a semi-annual basis for one year. **We recommend that wells MW-5 and MW-6 be resampled in six months (December 1997), and that all six site wells be sampled in June 1998.** In addition to monitoring for petroleum hydrocarbons and solvents, the following parameters should also be checked to evaluate the potential for natural attenuation of hydrocarbons in groundwater:

- Presence of hydrocarbon-degrading bacterial colonies,
- Dissolved oxygen levels, pH, and temperature, and
- Nutrient concentrations.

Upon completion of the additional groundwater monitoring, SCI recommends that a risk-based corrective action assessment be performed in accordance with ASTM guidance E1739, if appropriate at that time.

VII LIMITATIONS

The conclusions drawn from this investigation are an expression of our professional opinion, and do not constitute a warranty or guaranty, either expressed or implied. SCI has performed this study in accordance with generally accepted standards of care which exist in northern California at the time of this study. The definition and evaluation of environmental conditions are difficult and inexact. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and/or historic conditions applicable to the site. In addition, the conclusions expressed herein reflect site conditions at the time of the assessment. These conditions may change with time, and as such, our conclusions may also change.

This report has been prepared for the benefit of Buttner Properties and its assigns. The information contained in the report, including all exhibits and attachments, may not be used by any other private parties without express written consent of SCI.

List of Attached Tables:

Table 1	Groundwater Elevation Data
Table 2	Summary of Soil Analytical Results
Table 3	Summary of Groundwater Analytical Results

Plates:

Plate 1	Site Plan
Plate 2 and 3	Logs of Monitoring Wells MW-5 and MW-6
Plate 4	Unified Soil Classification System

Appendices:

A	Zone 7 Drilling Permit and City of Oakland Excavation and Encroachment Permits
B	Field Investigation Protocol and Well Development and Sampling Forms
C	Laboratory Analytical Reports and Chain-of-Custody Records

Distribution:

1 copy

Ms. Marianne Robison
Buttner Properties
600 W. Grand Avenue
Oakland, California 94612

1 copy

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

SCW:TJM:ly 609.004\wellrpt.doc

Table 1
Groundwater Elevation Data
2250 Telegraph Avenue
Oakland, California

Monitoring Well	Date	TOC Elevation (feet) MSL	Depth (feet)	Elevation (feet) MSL
MW-1	3/3/94	20.55	10.39	10.16
	3/10/94		10.54	10.01
	6/6/94		11.36	9.19
	9/7/94		11.92	8.63
	12/22/94		10.83	9.72
	3/17/95		9.73	10.82
	6/27/95		10.51	10.04
	9/18/95		11.12	9.43
	5/30/96		10.49	10.06
	7/9/97		**11.79**	**8.76**
MW-2	3/3/94	20.03	10.37	9.66
	3/10/94		10.53	9.50
	6/6/94		11.15	8.88
	9/7/94		11.72	8.31
	12/22/94		11.27	8.76
	3/17/95		9.85	10.18
	6/27/95		10.70	9.33
	9/18/95		11.67	8.36
	5/30/96		11.56	8.47
	7/9/97		**11.52**	**8.51**
MW-3	3/3/94	18.97	9.50	9.47
	3/10/94		9.51	9.46
	6/6/94		10.28	8.69
	9/7/94		10.75	8.22
	12/22/94		9.74	9.23
	3/17/95		8.85	10.12
	6/27/95		9.94	9.03
	9/18/95		10.54	8.43
	5/30/96		9.69	9.28
	7/9/97		**10.60**	**8.37**
MW-4	3/3/94	19.88	10.89	8.99
	3/10/94		11.19	8.69
	6/6/94		11.85	8.03
	9/7/94		12.86	7.02
	12/22/94		12.26	7.62
	3/17/95		10.10	9.78
	6/27/95		11.05	8.83
	9/18/95		11.84	8.04
	5/30/96		10.97	8.91
	7/9/97		**12.08**	**7.80**
MW-5	6/26/97	16.02	8.44	7.58

Table 1
Groundwater Elevation Data
2250 Telegraph Avenue
Oakland, California

Monitoring Well	Date	TOC Elevation (feet) MSL	Depth (feet)	Elevation (feet) MSL
	7/9/97		**8.48**	**7.54**
MW-6	6/26/97	18.36	10.89	7.47
	7/9/97		**10.98**	**7.38**

TOC = Top of Casing
Elevation Reference: USCGS benchmark W1197, 1969 with a reported elevation of +21.06 feet MSL datum.

Table 2
Summary of Soil Analytical Results
2250 Telegraph Avenue
Oakland, California
June 1997

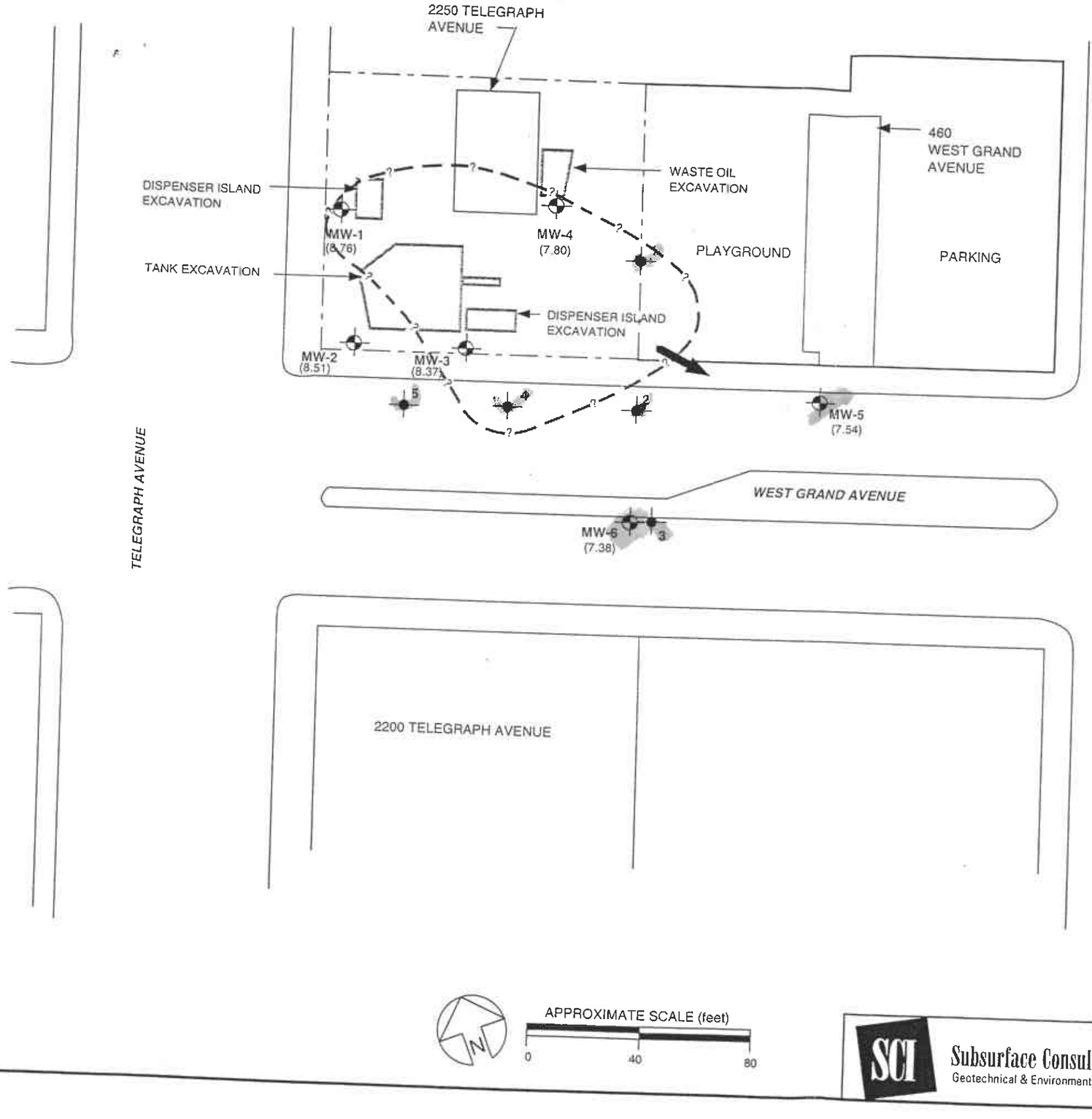
Sample Designation	Depth (feet)	Date Sampled	TEH as Diesel (mg/kg)	TVH as Gasoline (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl-benzene (µg/kg)	Total Xylenes (µg/kg)	EPA 8260 Compounds	TOC (mg/kg)	Moisture Content (%)	Dry Density (lb/ft^3)
MW-5	4	6/23/97	<1	<1	<5	<5	<5	<5	ND	4,500	--	--
MW-5	7.5	6/23/97	--	--	--	--	--	--	--	--	30.6	86
MW-5	8	6/23/97	5.1 [1,2]	3.1	<5	<5	5.7	17	ND	760	--	--
MW-6	6	6/23/97	<1	<1	<5	<5	<5	<5	ND	4,300	--	--
MW-6	10	6/23/97	6.5 [1,2,3]	4.4	<5	<5	26 [4]	<5	ND	480	--	--

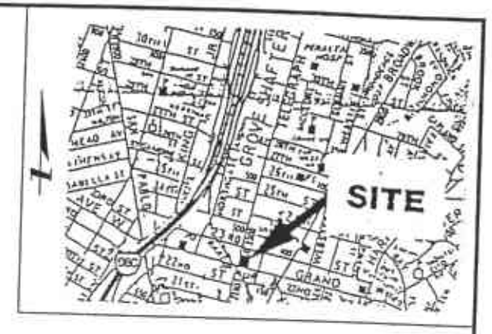
TEH Total Extractable Hydrocarbons
TVH Total Volatile Hydrocarbons
TOC Total Organic Carbon
mg/kg Milligrams per kilogram
µg/kg Micrograms per kilogram
<1 Not detected at concentrations greater than the indicated reporting limit
-- Not tested
ND Not detected at concentrations greater than reporting limit
1 Sample exhibits fuel pattern which does not resemble standard
2 Lighter hydrocarbons than indicated standard
3 Heavier hydrocarbons than indicated standard
4 Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two

Table 3
Summary of Groundwater Analytical Results*
2250 Telegraph Avenue
Oakland, California

Sample Designation	Description	Date Sampled	TEH as Diesel (µg/L)	TVH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	VOCs (µg/L)
1	Temp. Well	5/31/96	37,000 [2,3]	13,000 [1]	<50	<50	<50	380	ND
2	Temp. Well	5/30/96	<50	250	<0.5	<0.5	13	3.4	ND
3	Temp. Well	5/30/96	83 [1,2]	<50	<0.5	<0.5	<0.5	<0.5	Freon (20)
4	Temp. Well	5/31/96	1,900 [1,2]	11,000	[redacted]	66	340	260	ND
5	Temp. Well	5/30/96	180 [1,2]	70 [1]	<0.5	<0.5	<0.5	<0.5	ND
MW-1	Monitoring Well	9/18/95	110	370	4.4	0.6	2	1.4	1,2-DCA (2.4)
MW-2	Monitoring Well	9/18/95	<50	<50	<0.5	<0.5	<0.5	<0.5	ND
MW-3	Monitoring Well	9/18/95	770 [1]	1,500	[redacted]	11	2.2	33	ND
MW-4	Monitoring Well	9/18/95	1,231 [1]	3,000	12	<0.7	6.9	8.3	1,2-DCA (1.9) chlorobenzene (4)
MW-5	Monitoring Well	6/26/97	<50	120	<0.5	<0.5	<0.5	<0.5	PCE (1.6)
MW-6	Monitoring Well	6/26/97	450 [2]	1,500 [1]	<0.5	<0.5	11	<0.5	chlorobenzene (1.7)
MCL			NE	NE	1	150	700	1,750	1,2-DCA (0.5) chlorobenzene (70) PCE (5) freon (NE)

* Includes analytical data generated for this site over the past two years
TEH Total Extractable Hydrocarbons
TVH Total Volatile Hydrocarbons
VOCs Volatile Organic Compounds
MCL Maximum Contaminant Level, U.S. Environmental Protection Agency and/or State of California
µg/L Micrograms per liter
<50 Not detected at concentrations greater than reporting limit
ND Not detected at concentrations greater than reporting limit
1,1-DCE 1,1-dichloroethene
1,2-DCA 1,2-dichloroethene
PCE Perchloroethene
PCE (1.6) Perchloroethene at 1.6 µg/L
[1] Sample exhibits fuel pattern which does not resemble standard
[2] Lighter hydrocarbons than indicated standard
[3] Heavier hydrocarbons than indicated standard
[4] Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two
NE Not established





VICINITY MAP

EXPLANATION

- STRUCTURE
- LIMITS OF EXCAVATION
- MONITORING WELL LOCATION
- (10.06) GROUNDWATER ELEVATION (FT. MSL) MEASURED 7/9/97
- TEMPORARY WELL INSTALLATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- APPROXIMATE BOUNDARY OF 1 ug/L BENZENE PLUME

SITE PLAN

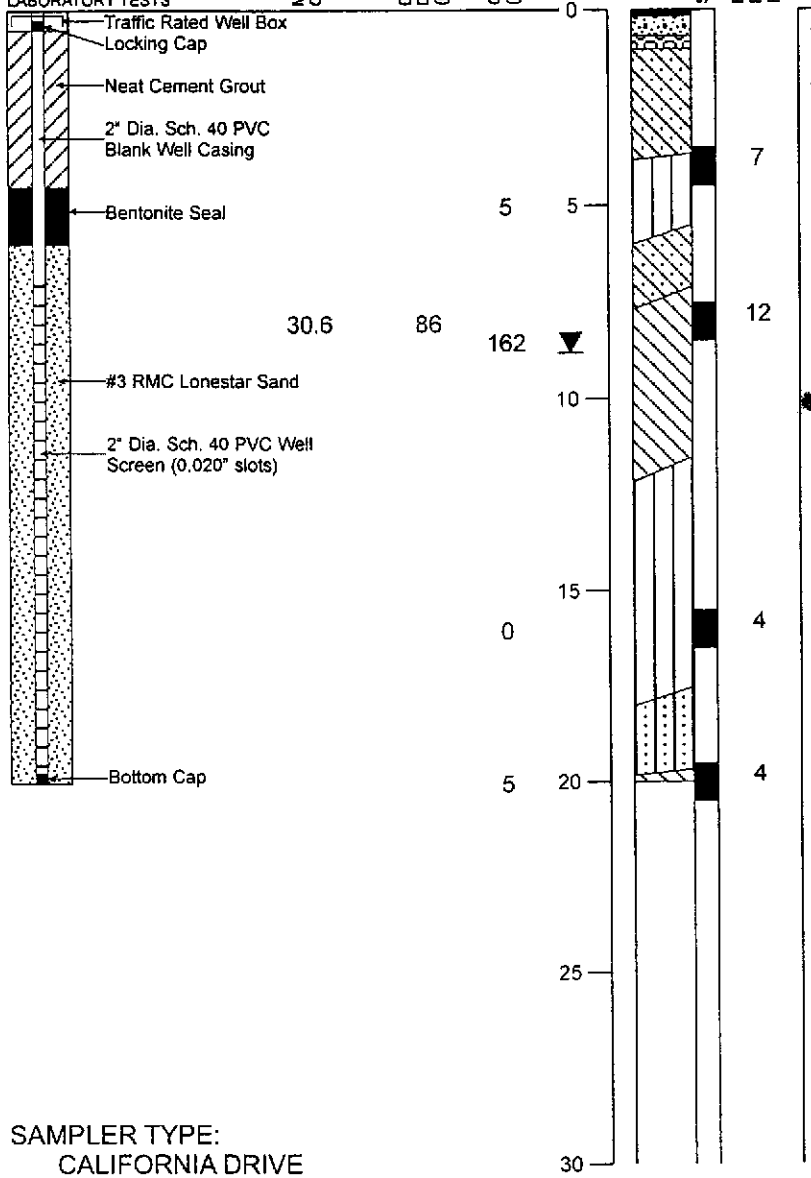
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	APPROVED	PLATE
609.004	7/14/97	SW	1

LOG OF MONITORING WELL MW-5

EQUIPMENT 8" Dia. Hollow-Stem Auger
DATE DRILLED 6/23/97
ELEVATION 16.02 feet



ASPHALTIC CONCRETE - 2" thick
CONCRETE - 6" thick
AGGREGATE BASE - 4" thick
DARK BROWN CLAYEY SAND (SC)
medium dense, moist (fill)
DARK BROWN-BLACK CLAYEY SILT (ML)
medium stiff, moist, with gravel

ORANGE-BROWN CLAYEY SAND (SC)
medium dense, moist
GRAY-BROWN SILTY CLAY (CL)
stiff, moist
GROUNDWATER LEVEL MEASURED ON 7/9/97
Hydrocarbon odor at 8.5 feet

GRAY AND BROWN SANDY SILT (ML)
soft, moist

GRAY-BROWN SILTY SAND (SM)
loose, wet
BROWN-GRAY SILTY CLAY (CL)
soft, wet

SAMPLER TYPE:
CALIFORNIA DRIVE
O.D.: 2.5 inches
I.D.: 2.0 inches

Hammer Weight: 140 pounds
Hammer Drop: 30 inches

☒ = Bag Sample

Elevation Reference: Mean Sea Level

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

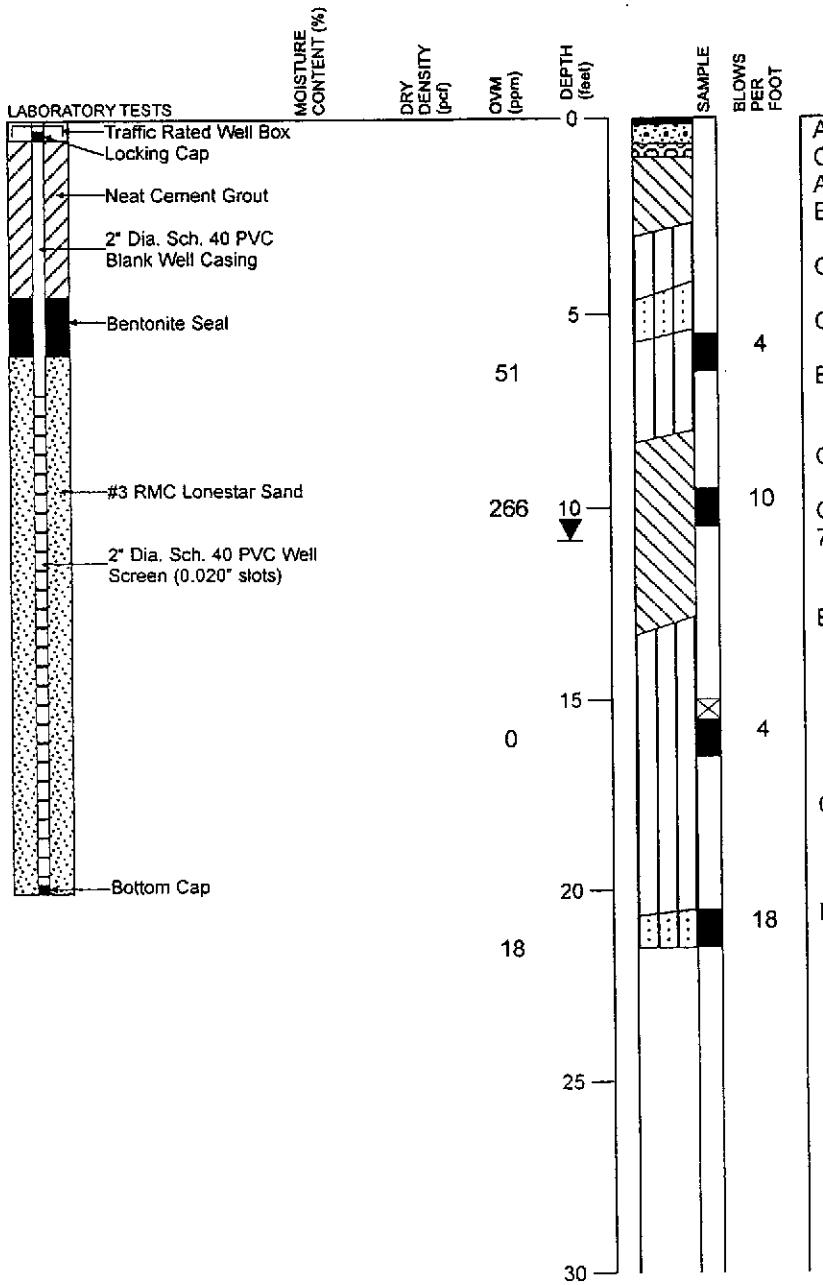
2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	APPROVED
609.004	6/30/97	SW

PLATE 2

LOG OF MONITORING WELL MW-6

EQUIPMENT 8" Dia. Hollow-Stem Auger
DATE DRILLED 6/23/97
ELEVATION 18.36 feet



ASPHALTIC CONCRETE - 2" thick
CONCRETE - 5" thick
AGGREGATE BASE - 4" thick
BROWN SANDY CLAY (CL)
medium stiff, moist (fill)
GRAY SANDY SILT (ML)
soft, moist
GRAY SILTY SAND (SM)
loose, moist
BLACK CLAYEY SILT (ML)
medium stiff, moist, with sand

GRAY SILTY CLAY (CL)
stiff, moist
GROUNDWATER LEVEL MEASURED ON 7/9/97

BROWN AND GRAY CLAYEY SILT (ML)
soft, wet, with sand

Color changes to brown at 18 feet

BROWN SILTY SAND (SM)
dense, moist

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	APPROVED
609.004	6/30/97	SW

PLATE 3

GENERAL SOIL CATEGORIES			SYMBOLS	TYPICAL SOIL TYPES
COARSE GRAINED SOILS More than half is larger than No. 200 sieve	GRAVEL More than half coarse fraction is larger than No. 4 sieve size	Clean Gravel with little or no fines	GW	Well Graded Gravel, Gravel-Sand Mixtures
			GP	Poorly Graded Gravel, Gravel-Sand Mixtures
		Gravel with more than 12% fines	GM	Silty Gravel, Poorly Graded Gravel-Sand-Silt Mixtures
			GC	Clayey Gravel, Poorly Graded Gravel-Sand-Clay Mixtures
	SAND More than half coarse fraction is smaller than No. 4 sieve size	Clean Sand with little or no fines	SW	Well Graded Sand, Gravelly Sand
			SP	Poorly Graded Sand, Gravelly Sand
		Sand with more than 12% fines	SM	Silty Sand, Poorly Graded Sand-Silt Mixtures
			SC	Clayey Sand, Poorly Graded Sand-Clay Mixtures
FINE GRAINED SOILS More than half is smaller than No. 200 sieve	SILT AND CLAY Liquid Limit Less than 50%		ML	Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayey Fine Sand, or Clayey Silt with Slight Plasticity
			CL	Inorganic Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Silty Clay, Lean Clay
			OL	Organic Clay and Organic Silty Clay of Low Plasticity
	SILT AND CLAY Liquid Limit Greater than 50%		MH	Inorganic Silt, Micaceous or Diatomaceous Fine Sandy or Silty Soils, Elastic Silt
			CH	Inorganic Clay of High Plasticity, Fat Clay
			OH	Organic Clay of Medium to High Plasticity, Organic Silt
HIGHLY ORGANIC SOILS			PT	Peat and Other Highly Organic Soils

UNIFIED SOIL CLASSIFICATION SYSTEM

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	APPROVED
609.004	7/10/97	SW

PLATE 4

APPENDIX A

ZONE 7 DRILLING PERMIT AND CITY OF OAKLAND EXCAVATION AND ENCROACHMENT PERMITS

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2250 Telegraph Ave.
Oakland, CA 94612

CLIENT
Name Marianne Robison
Address 600 West Grand Ave Voice 832-3456
City Oakland CA Zip 94612

APPLICANT
Name Samuel Won / Subsurface Consultants Fax 510-299-7970
Address 3736 Mt. Diablo Blvd. Voice 200 510-299-7960
City Lafayette CA Zip 94549

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

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 - 522125

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum Depth 20 ft.
Casing Diameter 2 in. Number 2
Surface Seal Depth 9.5 ft.

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

ESTIMATED STARTING DATE 3/19/97
ESTIMATED COMPLETION DATE 3/19/97

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

APPLICANT'S SIGNATURE [signature] Date 3/9/97

FOR OFFICE USE

PERMIT NUMBER 97166
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 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.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
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. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 14 Mar 97
Wyman Hong

91992

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

ON WEST GRAND

PERMIT NUMBER	SITE ADDRESS/LOCATION
X9700709	2250 TELEGRAPH AVE
APPROX. START DATE / APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)
CONTRACTOR'S LICENSE # AND CLASS	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) #: _____

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.

Signature of Permittee ☐ Agent for ☐ Contractor ☒ Owner — Date 6/10/97

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED?	HOLIDAY RESTRICTION? (NOV 1 - JAN 1)	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM)
6-25-92 / 1-92	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO

ISSUED BY	DATE ISSUED
K. Curtis	6-10-97

CITY OF OAKLAND

Community and Economic Development Agency

OFFICE OF PLANNING & BUILDING • 1330 BROADWAY • OAKLAND, CALIFORNIA 94612

Administration	238-7200	Building Services	238-3587	Planning	238-3941
Engineering Services	238-2110	Operations	238-3443	Zoning	238-7206

May 27, 1997

Marianne B. Robison
Buttner Properties, Inc.
600 W. Grand Ave.
Oakland, CA 94612

Dear Ms. Robison:

RE: MINOR ENCROACHMENT PERMIT FOR MONITORING WELLS IN WEST GRAND AVENUE, OAKLAND

Enclosed are the Minor Encroachment Permit and Agreement and the Conditions For Granting a Minor Encroachment Permit allowing you to place two monitoring wells within the public right-of-way of West Grand Avenue.

Before the permit will become effective, however, it must be signed by the person(s) having the legal authority to do so, properly notarized with notary acknowledgement slip(s) attached, and returned to this office to the attention of Roger Tam for recordation with the appropriate insurance certificate.

You must also obtain a street excavation permit from the Engineering Information Counter, 2nd Floor, 1330 Broadway, prior to the start of the proposed work in the City right-of-way. For questions regarding the street excavation permit, call the Engineering Information Counter at (510) 238-4777 between 8 a.m. and 4 p.m., Monday through Friday.

If you have any other questions regarding this minor encroachment permit, please call Roger Tam at (510) 238-6314.

Very truly yours,

CALVIN N. WONG
Chief of Building Services

By Philip A. Grubstick
PHILIP A. GRUBSTICK
Engineering Services Manager

Enclosures

:rt

file: telegraph2250.mw\covr-let.rev(11)

Facsimile: Administration 238-3586 Planning 238-6538 Building Services 238-7287 Plan Check 238-6445 TDD: (510) 238-6332

Recording requested by
City of Oakland

When Recorded Mail to:
City of Oakland
Community & Econ. Develop. Agency
Building Services, Eng. info.
1330 Broadway, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

008	0658	006	02
MAP	BLOCK	PARCEL	SUB

SPACE ABOVE FOR RECORDER'S USE-ONLY

Address: 2250 Telegraph Avenue, Oakland

MINOR ENCROACHMENT PERMIT AND AGREEMENT

Buttner Properties, Inc., owner of that certain property described in the Grant Deed recorded August 31, 1962, Series No. AT119352, in the Office of the Recorder, Alameda County, California and commonly known as 2250 Telegraph Avenue, is hereby granted a Conditional Revocable Permit to encroach into the public right-of-way of West Grand Avenue with two monitoring wells. The location of said encroachments shall be as delineated in Exhibit 'A' attached hereto and made a part hereof.

The permittee agrees to comply with and be bound by the conditions for granting an Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the undersigned, the present owner of the property described above, and their successors in interest thereof.

In witness whereof, we have set our signature this 5th day of June, 1997.

BUTTNER PROPERTIES, INC.

By: Marianne B. Robinson
Name:
Title: President

-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --

BELOW FOR OFFICIAL USE ONLY

CITY OF OAKLAND

Dated_____

By:_____
CALVIN N. WONG
Chief of Building Services
For
KOFI BONNER
Director of Community &
Economic Development Agency

:rt

file: telegraph2250.mw\permit&agreat(11)

APPENDIX B

FIELD INVESTIGATION PROTOCOL
WELL DEVELOPMENT AND SAMPLING FORMS

FIELD INVESTIGATION PROTOCOL

A. Test Borings

Prior to beginning field activities, excavation and encroachment permits were obtained from the City of Oakland and drilling permits were obtained from the Alameda County Flood Control and Water Conservation District, Zone 7. Copies of the permits are attached. In addition, Underground Service Alert was contacted to notify their subscribers as to the planned well locations.

Subsurface conditions were explored by drilling two soil borings (MW-5 and MW-6) using a CME-75 drill rig equipped with 8-inch diameter hollow stem auger equipment. The soil borings were completed to a depth of approximately 20 to 21.5 feet below ground surface (bgs), respectively using. An SCI field engineer observed drilling operations, prepared logs of the test borings, and obtained samples of the materials encountered. Logs of test borings and monitoring well construction details are presented on Plates 2 and 3. Soils were classified in accordance with the Unified Soil Classification System, presented on Plate 4.

Drilling and sampling equipment were thoroughly steam-cleaned prior to each use to reduce the likelihood of cross-contamination between samples and/or borings. Soil samples were obtained using a California Sampler (outside diameter of 2.5 inches and inside diameter of 2.0 inches). The sampler was driven by a 140-pound hammer falling 30 inches. The number of blows required to drive the samplers the final 12 inches (or lesser distances as noted) of each 18-inch penetration is presented on the boring logs. Upon completion of the field exploration, the boreholes were backfilled with neat cement grout

Soil samples were retained in 2.5-inch brass tubes lined within the sampler. Teflon sheeting was placed over the ends of the tubes and the tubes were subsequently capped and placed into sealable plastic bags. Shoe samples from each drive were retained in a sealable plastic bag and screened for volatile organic compounds using an Organic

Vapor Meter (OVM). OVM measurements are recorded on the test boring logs. The sealed brass tubes were placed in ice-filled coolers and remained iced until delivery to Curtis & Thompkins, Ltd., an analytical laboratory certified by the State of California for hazardous waste and water testing. Chain-of-Custody records accompanied the samples to the laboratory.

B. Monitoring Well Installation

Upon completion of drilling, the soil borings were converted to groundwater monitoring wells. The shallow wells consist of 2-inch-diameter, flush-mounted Schedule 40 PVC casing and well screen with threaded joints. The lower 13 feet of the wells consist of machine-slotted well screen having 0.020-inch slot widths. The bottom of the well was capped with a 2-inch diameter flush-threaded end cap. The annular space between the casing and the boring was backfilled with Lonestar No. 3 washed sand to about 1 foot above the screened section of the well. A 1.5 feet thick bentonite pellet seal was placed above the sand filter and the remainder of the annular space was backfilled with a cement sanitary seal. The top of the wells was secured with a water tight cap and housed within a flush-mounted traffic-rated well box.

C. Well Development

After allowing the grout seal to set (at least 24 hours following placement), each new monitoring well was developed by withdrawing 10 well volumes using a disposable plastic bailer. Purged groundwater was transferred into a 55-gallon drum left on site for later removal. During purging, conductivity, pH, and temperature parameters were recorded at regular intervals. Well development forms are included as an attachment.

D. Well Sampling

Each new monitoring well was sampled at least 48 hours following well development. SCI purged a minimum of three well volumes of groundwater from each well using a disposable bailer prior to sampling. The wells were not sampled until groundwater

had recharged to within at least 80% of its initial level and groundwater pH, temperature, and electrical conductivity readings had stabilized. Well sampling forms are included as an attachment.

The wells were checked for free floating hydrocarbon product using a steel tape coated with petroleum sensitive paste prior to well development and sampling. To determine the direction of groundwater flow at the site, the depth to groundwater from the top of casing (TOC) was also measured in all wells at the site (MW-1 through MW-6) using an electric well sounder. To determine the actual elevation of the groundwater, SCI performed a level survey of the TOC elevations of the new wells. The elevations were referenced to USCGS benchmark W1197 with a reported elevation of 21.06 feet above mean sea level.

Groundwater samples were retained in glass containers pre-cleaned by the supplier in accordance with EPA protocol. The samples were placed in ice chests and remained refrigerated until transmitted to the analytical laboratory. Chain-of-custody records accompanied the samples to the laboratory.

E. Disposal of Investigation Derived Wastes

Soil and groundwater generated during drilling and sampling activities were collected and placed in DOT approved drums. The drums were labeled as to their contents and date of collection and stored on-site for disposal at a later date.

GROUNDWATER DEPTHS

Project Name: 2250 Telegraph

Job No.: 609.004

Measured by: SD

Well	Date	Time	Groundwater Depth (feet)	Comments (below TOC)
MW-1	7/9/97	1145	11.79	no F.P. or odor encountered
MW-2	"	1135	11.52	"
MW-3	"	1125	10.60	"
MW-4	"	1150	12.08	"
MW-5	"	1200	8.48	"
MW-6	✓	1210	10.98	"

WELL DEVELOPMENT FORM

Project Name: 2250 Telegraph
Well Number: mw-6
Job No.: 609.004
Well Casing Diameter: 2 inches
Developed By: JD
Date: 6/24/97 @ 1:20pm
TOC Elevation: yet to be determined
Weather: Sunny & hot / slight breeze

Depth to Casing Bottom (below TOC) 19.80 feet
Depth to Groundwater (below TOC) 10.89 feet
Feet of Water in Well 8.9 feet
Casing Volume (feet of water x Casing DIA ² x 0.0408) 1.45 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Development Method bailing & purging no f.p.

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	7.00	90.4	2,430		turbid / no odor
3	6.50	81.0	1,850		slight odor
6	6.75	76.3	1,950		
9	5.78	79.8	1,690		
12	5.74	78.9	2,050		
15	5.77	79.4	2,110		

Total Gallons Removed 15 gallons
Depth to Groundwater After Development (below TOC) 10.93 feet

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL DEVELOPMENT FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-5
Job No.: 609.004
Well Casing Diameter: 2 inches
Developed By: JD
Date: 6/24/97
TOC Elevation: Yet to be determined
Weather: Sunny / Hot

Depth to Casing Bottom (below TOC) 19.5 feet
Depth to Groundwater (below TOC) 7.43 feet
Feet of Water in Well 11.1 feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.8 gallons
Depth Measurement Method (Tape & Paste) / (Electronic Sounder) / Other
Development Method bailing, surging no F.P.

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	7.46	81.1	1029		
3	7.46	81.0	738		brown & turbid
7	7.89	82.4	3800		
10	6.84	80.5	827		
13	7.02	82.3	784		
16	7.08	77.3	858		
18	6.94	78.9	753		

Total Gallons Removed 18 gallons
Depth to Groundwater After Development (below TOC) 8.53 feet

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph
Well Number: MW-6
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JD
Date: 6/26/97
TOC Elevation: to be determined
Weather: sunny/hot

Depth to Casing Bottom (below TOC) 19.8' feet
Depth to Groundwater (below TOC) 10.89 feet
Feet of Water in Well 8.91 feet
Depth to Groundwater When 80% Recovered 12.67 feet
Casing Volume (feet of water x Casing DIA ² x 0.0408) 1.45 gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product None
Purge Method bailing
no F.P. / fast recharge

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
1	5.67	79.5	2,080		h.c. odor/humid
3	*	76.7	1,810		
5	*	77.3	1,770		

Total Gallons Purged 5 gallons
Depth to Groundwater Before Sampling (below TOC) 11.11 feet
Sampling Method Bailing
Containers Used 4 (40 ml) 1 (liter) (pint)

* pH meter malfunctioning

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Well Number: MW-5

Job No.: 609.004 Well Casing Diameter: 2 inch

Sampled By: JD Date: 6/26/97

TOC Elevation: to be determined Weather: Sunny / hot

Depth to Casing Bottom (below TOC) 19.5 feet

Depth to Groundwater (below TOC) 8.44 feet

Feet of Water in Well 11.06 feet

Depth to Groundwater When 80% Recovered 10.65 feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.80 gallons

Depth Measurement Method Tape & Paste / Electronic Sounder / Other

Free Product None

Purge Method bailing

Fast recharge
no f.p.

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	6.16	74.1	1,040		turbid/no odor
2	6.18	70.6	770		↓
4	7.20	70.1	660		
6	6.76	70.6	640		

Total Gallons Purged 6 gallons

Depth to Groundwater Before Sampling (below TOC) 8.51 feet

Sampling Method Bailing

Containers Used 4 (40 ml) 1 (liter) (pint)

Subsurface Consultants

JOB NUMBER	DATE	APPROVED	PLATE

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

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 26-JUN-97
Lab Job Number: 129737
Project ID: 609.004
Location: 2250 Telgraph Av. Oakland

Reviewed by: _____

Reviewed by: _____

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129737-001	MW-5 @ 4.0	34662	06/23/97	06/26/97	06/26/97	
129737-002	MW-5 @ 8.0	34662	06/23/97	06/26/97	06/26/97	
129737-003	MW-6 @ 6.0	34662	06/23/97	06/26/97	06/26/97	
129737-004	MW-6 @ 10.0	34662	06/23/97	06/26/97	06/26/97	

Matrix: Soil

Analyte	Units	129737-001	129737-002	129737-003	129737-004
Diln Fac:		1	1	1	1
Gasoline	mg/Kg	<1	3.1	<1	4.4
Surrogate					
Trifluorotoluene	%REC	86	93	83	91
Bromobenzene	%REC	68	85	73	97

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129737-001	MW-5 @ 4.0	34662	06/23/97	06/26/97	06/26/97	
129737-002	MW-5 @ 8.0	34662	06/23/97	06/26/97	06/26/97	
129737-003	MW-6 @ 6.0	34662	06/23/97	06/26/97	06/26/97	
129737-004	MW-6 @ 10.0	34662	06/23/97	06/26/97	06/26/97	

Matrix: Soil

Analyte	Units	129737-001	129737-002	129737-003	129737-004	
Diln Fac:		1	1	1	1	
Benzene	ug/Kg	<5	<5	<5	<5	
Toluene	ug/Kg	<5	<5	<5	<5	
Ethylbenzene	ug/Kg	<5	5.7	<5	26	C
m,p-Xylenes	ug/Kg	<5	17	<5	<5	
o-Xylene	ug/Kg	<5	<5	<5	<5	
Surrogate						
Trifluorotoluene	%REC	102	110	98	105	
Bromobenzene	%REC	85	95	89	99	

C: Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two

Lab #: 129737 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 34662
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

MB Lab ID: QC48715

Analyte	Result	
Gasoline	<1.0	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	85	52-127
Bromobenzene	74	45-140

Lab #: 129737 BATCH QC REPORT Page 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 34662
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

LCS Lab ID: QC48713

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.56	10	96	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	140*	52-127
Bromobenzene	104	45-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 34662
Units: ug/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

MB Lab ID: QC48715

Analyte	Result
Benzene	<5.0
Toluene	<5.0
Ethylbenzene	<5.0
m,p-Xylenes	<5.0
o-Xylene	<5.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	101	52-127
Bromobenzene	89	45-140

Lab #: 129737 BATCH QC REPORT Page 1

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 34662
Units: ug/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

LCS Lab ID: QC48714

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	95.56	100	96	80-120
Toluene	93.11	100	93	80-120
Ethylbenzene	94.18	100	94	80-120
m,p-Xylenes	162.7	200	81	80-120
o-Xylene	89.86	100	90	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	101	52-127
Bromobenzene	92	45-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 129715-005
Matrix: Soil
Batch#: 34662
Units: mg/Kg
Diln Fac: 1

Sample Date: 06/18/97
Received Date: 06/20/97
Prep Date: 06/25/97
Analysis Date: 06/25/97

MS Lab ID: QC48716

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	10	<1	7.03	70	65-135
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	175*	52-127			
Bromobenzene	97	45-140			

MSD Lab ID: QC48717

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	10	6.55	66	65-135	7	30
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	168*	52-127				
Bromobenzene	98	45-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129737-001	MW-5 @ 4.0	34700	06/23/97	06/26/97	06/27/97	
129737-002	MW-5 @ 8.0	34739	06/23/97	06/27/97	06/30/97	
129737-003	MW-6 @ 6.0	34739	06/23/97	06/27/97	06/30/97	
129737-004	MW-6 @ 10.0	34700	06/23/97	06/26/97	06/27/97	

Matrix: Soil

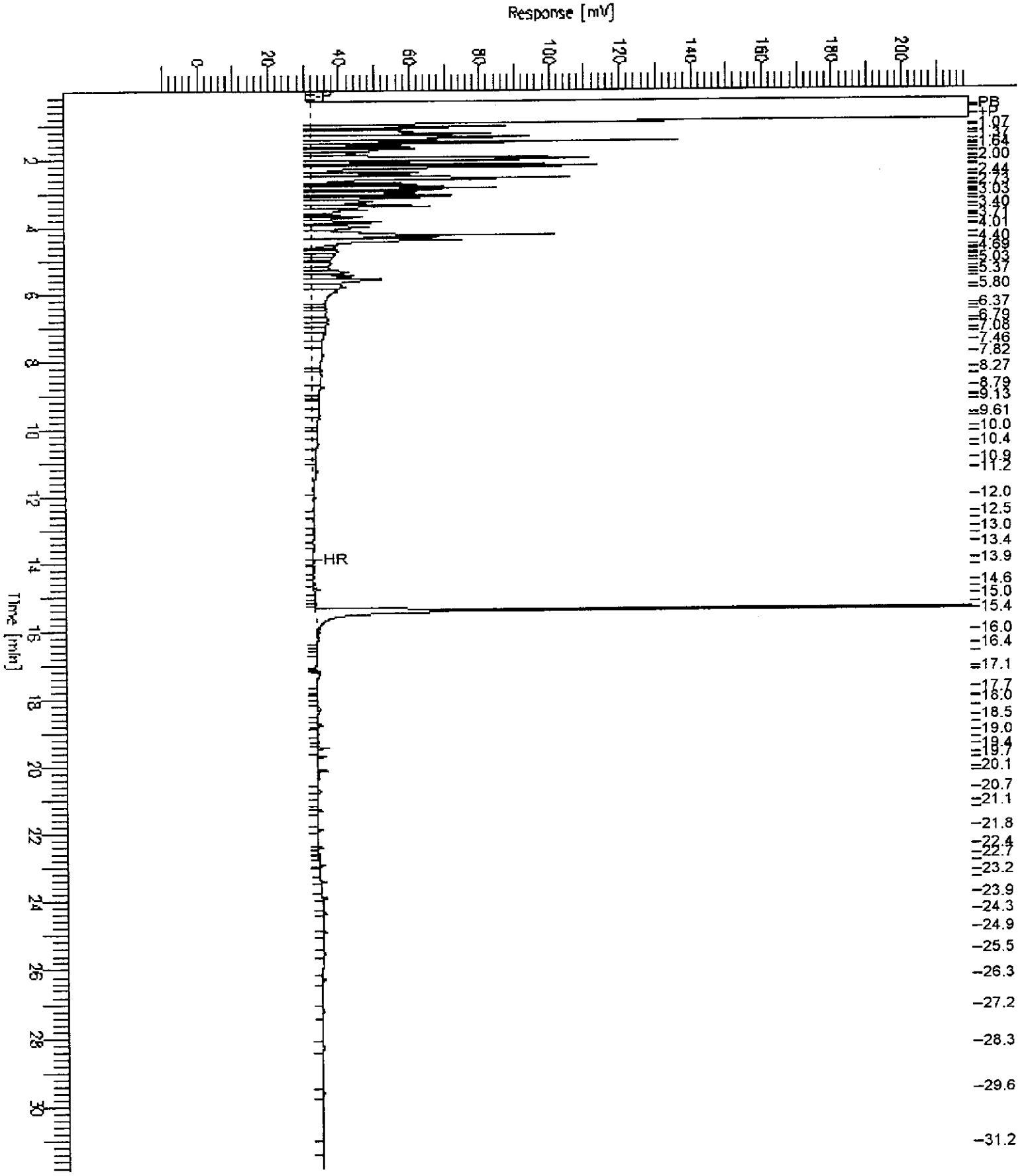
Analyte	Units	129737-001	129737-002	129737-003	129737-004
Diln Fac:		1	1	1	1
Diesel C12-C22	mg/Kg	<1	5.1YL	<1	6.5YLH
Surrogate					
Hexacosane	%REC	72	79	84	62

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 129737-002,34739
FileName : G:\GC11\CHB\181B008.RAW
Method : BTEH140.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -12 mV

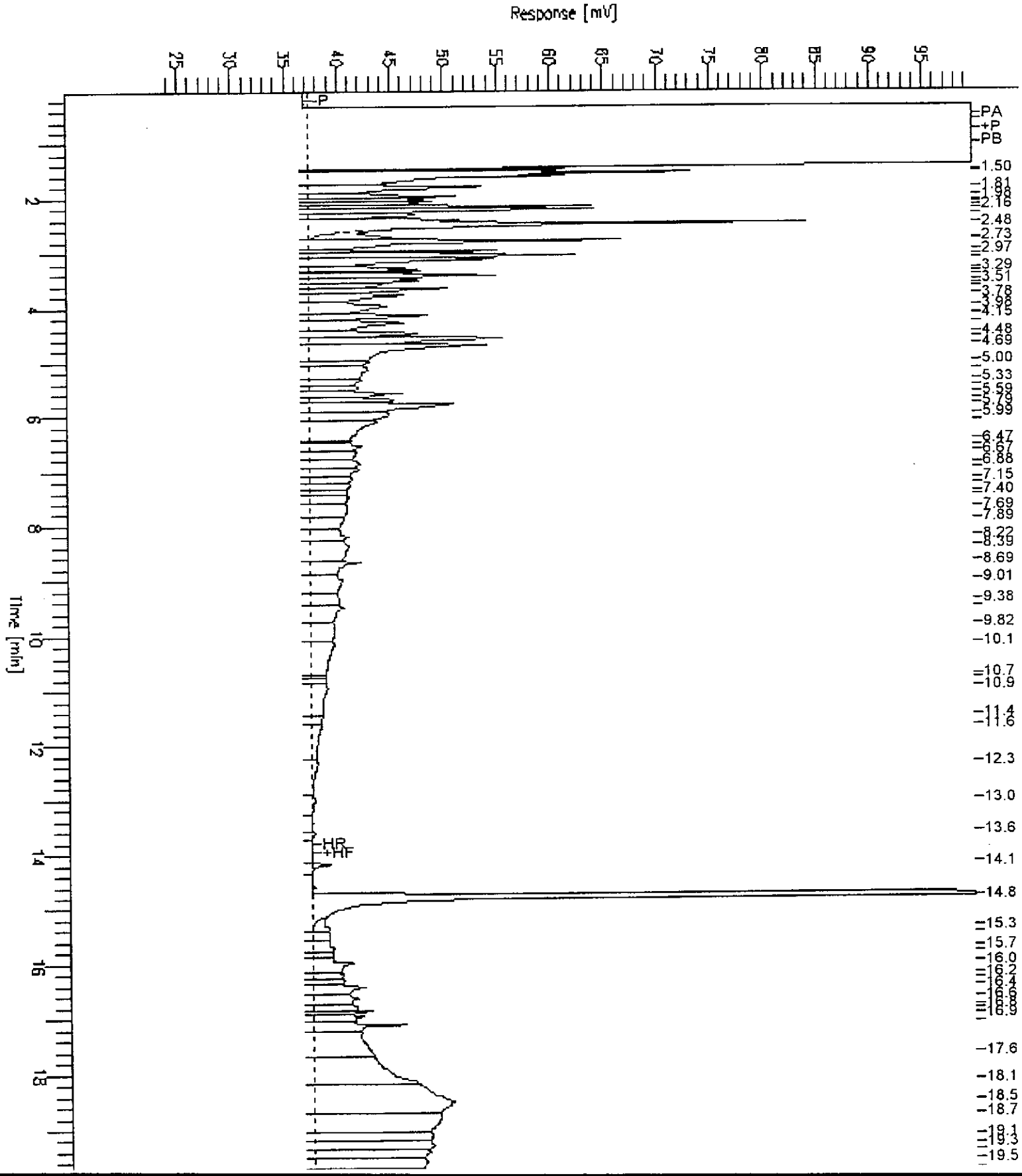
Sample #: 34739 Page 1 of 1
Date : 7/1/97 03:06 PM
Time of Injection: 6/30/97 05:55 PM
Low Point : -11.91 mV High Point : 219.43 mV
Plot Scale: 231.3 mV



GC15 Channel B TEH

Sample Name : 129737-004,34700
FileName : G:\GC15\CHB\177B020.RAW
Method : B174TEH.MTH
Start Time : 0.05 min End Time : 19.80 min
Scale Factor: 0.0 Plot Offset: 23 mV

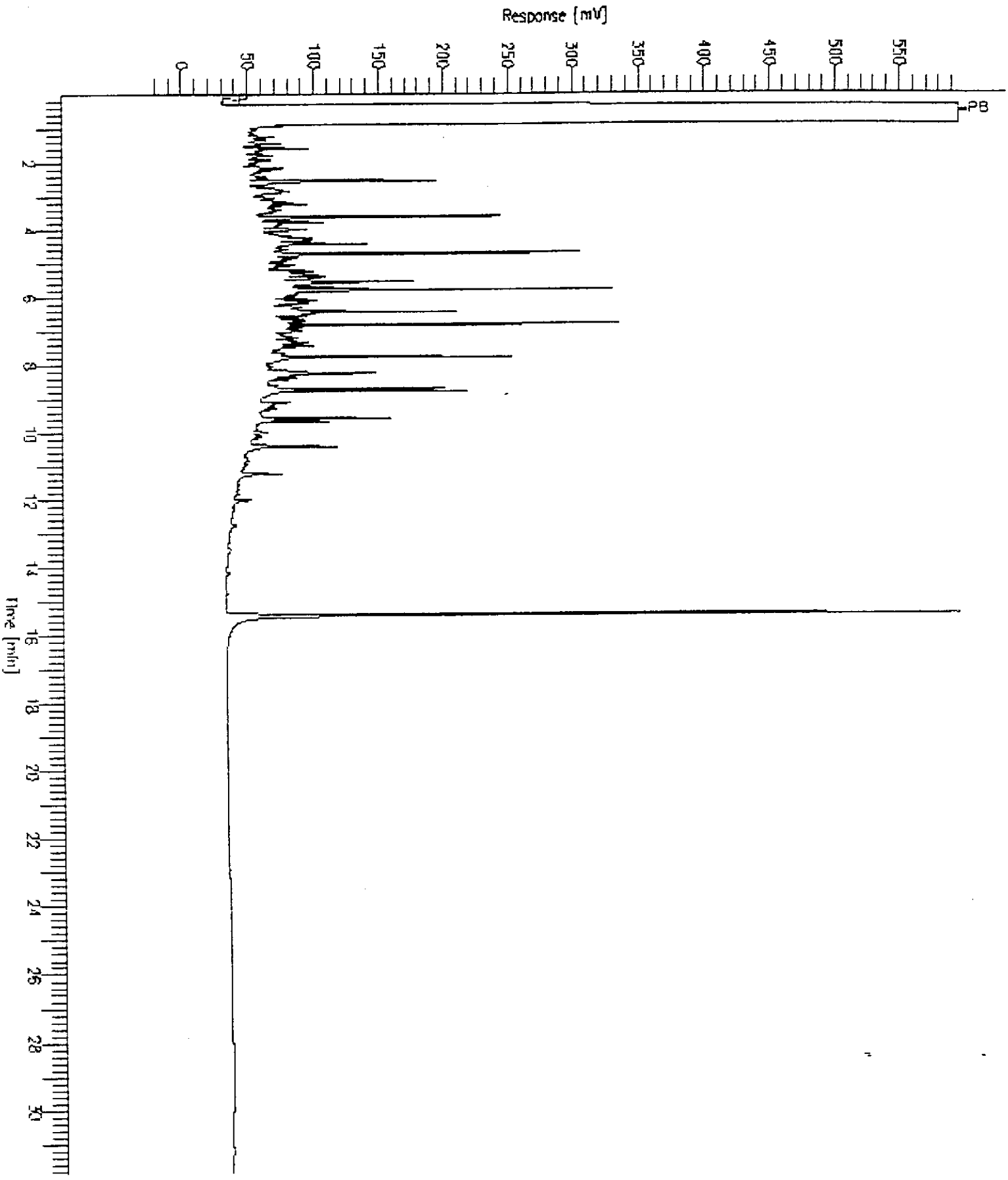
Sample #: 34700 Page 1 of 1
Date : 6/27/97 11:03 AM
Time of Injection: 6/27/97 04:35 AM
Low Point : 23.22 mV High Point : 99.79 mV
Plot Scale: 76.6 mV



Chromatogram

Sample Name : CCV,97WS4141,DS
FileName : G:\GC11\CHB\181B017.RAW
Method : BTEH140.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -21 mV

Sample #: 500MG/L
Date : 7/1/97 02:19 PM
Time of Injection: 7/1/97 12:22 AM
Low Point : -21.31 mV High Point : 595.13 mV
Plot Scale: 616.4 mV



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 34700
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/26/97
Analysis Date: 06/27/97

MB Lab ID: QC48843

Analyte	Result	
Diesel C12-C22	<1.0	
Surrogate	%Rec	Recovery Limits
Hexacosane	65	60-140

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 34739
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 07/01/97

MB Lab ID: QC48978

Analyte	Result	
Diesel C12-C22	<1.0	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	77	60-140

Lab #: 129737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 34700
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/26/97
Analysis Date: 06/27/97

LCS Lab ID: QC48844

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	36	49.5	73	60-140
Surrogate	**%Rec**	**Limits**		
Hexacosane	87	60-140		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 129737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 34739
Units: mg/Kg
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 06/30/97

LCS Lab ID: QC48979

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	38	49.5	77	60-140
Surrogate	**%Rec**	**Limits**		
Hexacosane	94	60-140		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 129764-001
Matrix: Soil
Batch#: 34739
Units: mg/Kg
Diln Fac: 1

Sample Date: 06/17/97
Received Date: 06/25/97
Prep Date: 06/27/97
Analysis Date: 07/01/97

MS Lab ID: QC48980

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C12-C22	49.5	<1	38.8	78	60-140
Surrogate	%Rec	Limits			
Hexacosane	93	60-140			

MSD Lab ID: QC48981

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	49.5	39.2	79	60-140	1	30
Surrogate	%Rec	Limits				
Hexacosane	96	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	Subsurface Consultants	Analysis Method:	EPA 8260
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		

Field ID:	MW-5 @ 4.0	Sampled:	06/23/97
Lab ID:	129737-001	Received:	06/23/97
Matrix:	Soil	Extracted:	06/25/97
Batch#:	34666	Analyzed:	06/25/97
Units:	ug/Kg		
Diln Fac:	1		

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

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	104	79-122

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	Subsurface Consultants	Analysis Method:	EPA 8260
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		

Field ID:	MW-5 @ 8.0	Sampled:	06/23/97
Lab ID:	129737-002	Received:	06/23/97
Matrix:	Soil	Extracted:	06/25/97
Batch#:	34666	Analyzed:	06/25/97
Units:	ug/Kg		
Diln Fac:	1		

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

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: MW-6 @ 6.0
Lab ID: 129737-003
Matrix: Soil
Batch#: 34666
Units: ug/Kg
Diln Fac: 1

Sampled: 06/23/97
Received: 06/23/97
Extracted: 06/25/97
Analyzed: 06/25/97

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

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	100	79-122

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	Subsurface Consultants	Analysis Method:	EPA 8260
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		

Field ID:	MW-6 @ 10.0	Sampled:	06/23/97
Lab ID:	129737-004	Received:	06/23/97
Matrix:	Soil	Extracted:	06/25/97
Batch#:	34666	Analyzed:	06/25/97
Units:	ug/Kg		
Diln Fac:	1		

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

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	103	79-122

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 34666
Units: ug/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

MB Lab ID: QC48731

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

Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	109	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	103	79-122

Halogenated Volatile Organics

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 34666
Units: ug/Kg
Diln Fac: 1

Prep Date: 06/25/97
Analysis Date: 06/25/97

LCS Lab ID: QC48730

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	45.95	50	92	51-180
Trichloroethene	49.19	50	98	73-141
Chlorobenzene	48.88	50	98	83-129

Surrogate	%Rec	Limits
1,2-Dichloroethane-d4	106	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	104	79-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 3 outside limits

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 129737
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 609.004
LOCATION: 2250 TELEGRAPH AVE. OAKLAND

DATE SAMPLED: 06/23/97
DATE RECEIVED: 06/23/97
DATE ANALYZED: 06/30/97
QC BATCH#: 34768

ANALYSIS: TOTAL ORGANIC CARBON
METHOD REFERENCE: EPA 9060

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
129737-001	MW-5 @ 4.0	4,500	mg/Kg	500
129737-002	MW-5 @ 8.0	760	mg/Kg	250
129737-003	MW-6 @ 6.0	4,300	mg/Kg	500
129737-004	MW-6 @ 10.0	480	mg/Kg	250
METHOD BLANK	N/A	ND	mg/Kg	50

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: LCS

RECOVERY,%	100

CURTIS & TOMPKINS, LTD. BERKELEY — LOGIN CHANGE FORM

Reason for change: ✓ Client Request: By: Jerome Date/Time: 6/25/92 Initials: [illegible]

____ Login Review

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Duedate
129737-001		MW-5 @ 4.0	Soil	Add	TOC	6/30
-002		MW-5 at 8.0	↓	↓	↓	
-003		MW-6 @ 6.0	↓	↓		
-004		MW-6 @ 10.0	Soil	Add	TOC	

Curtis & Tompkins, Ltd.

129737

CHAIN OF CUSTODY FORM

PAGE ____ OF ____

PROJECT NAME: 2250 Telegraph Ave

JOB NUMBER: 609.004

PROJECT CONTACT: Sam Wen

SAMPLED BY: Jemme de Lemie

LAB: C&T

TURNAROUND: standard

REQUESTED BY: Jemme de Lemie

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR	CONTAINERS: VOA	LITER	PINT	TUBE	METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TEH	TPH/BTEX	SCIC
-1	MW-5@4.0		X						X				X		06	23	97			X	X	X
-2	MW-5@7.0		↓						↓				↓		06	23	97			X	X	X
-3	MW-6@1.0		↓						↓				↓		↓					X	X	X
-4	MW-6@11.0		↓						↓				↓		↓					X	X	X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
[signature]	6/23/97 4:30pm	JERRY GUERRERO	6-23-97 4:30pm
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Please bill:

Marianne B. Robison
Rutherford Properties, Inc.
600 W. Grand Ave
Oakland, CA 94612

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 • FAX: 510-268-0137

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

ANALYTICAL REPORT

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 03-JUL-97
Lab Job Number: 129780
Project ID: 609.004
Location: 2250 Telgraph Av. Oakland

Reviewed by: Damara Moore

Reviewed by: Tracy Bibiq

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129780-001	MW-5	34725	06/26/97	06/27/97	06/27/97	
129780-002	MW-6	34725	06/26/97	06/27/97	06/27/97	

Matrix: Water

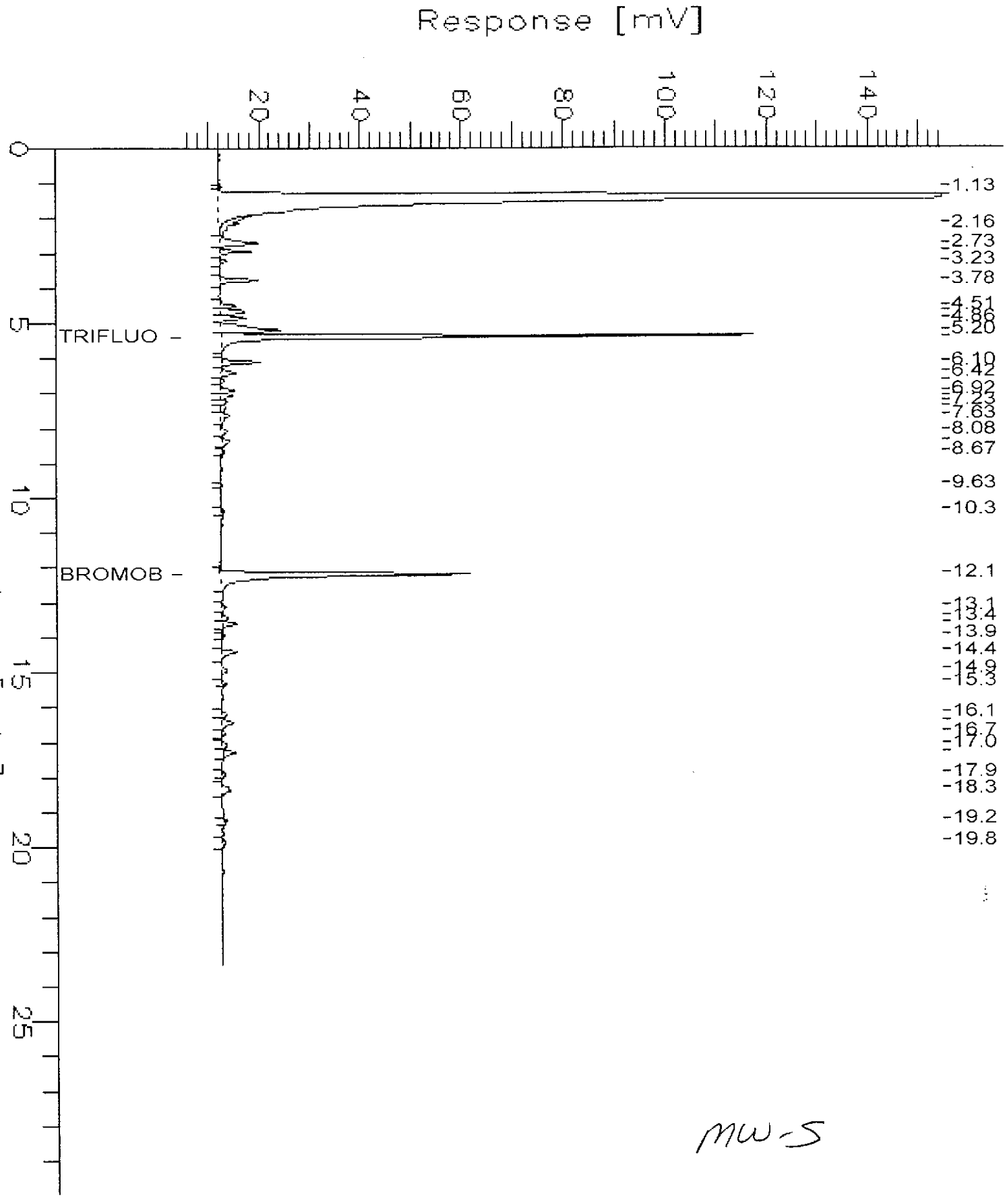
Analyte	Units	129780-001	129780-002
Diln Fac:		1	1
Gasoline	ug/L	120	1500 Y
Surrogate			
Trifluorotoluene	%REC	95	95
Bromobenzene	%REC	84	100

Y: Sample exhibits fuel pattern which does not resemble standard

GC05 RTX1 TVH Chromatogram

Sample Name : S,129780-001,34725,
FileName : G:\GC05\DATA\178H015.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 30.00 min
Scale Factor: -1.0 Plot Offset: 5 mV

Sample #: Page 1 of 1
Date : 6/27/97 08:43 PM
Time of Injection: 6/27/97 08:08 PM
Low Point : 4.54 mV High Point : 734.08 mV
Plot Scale: 166.0 mV

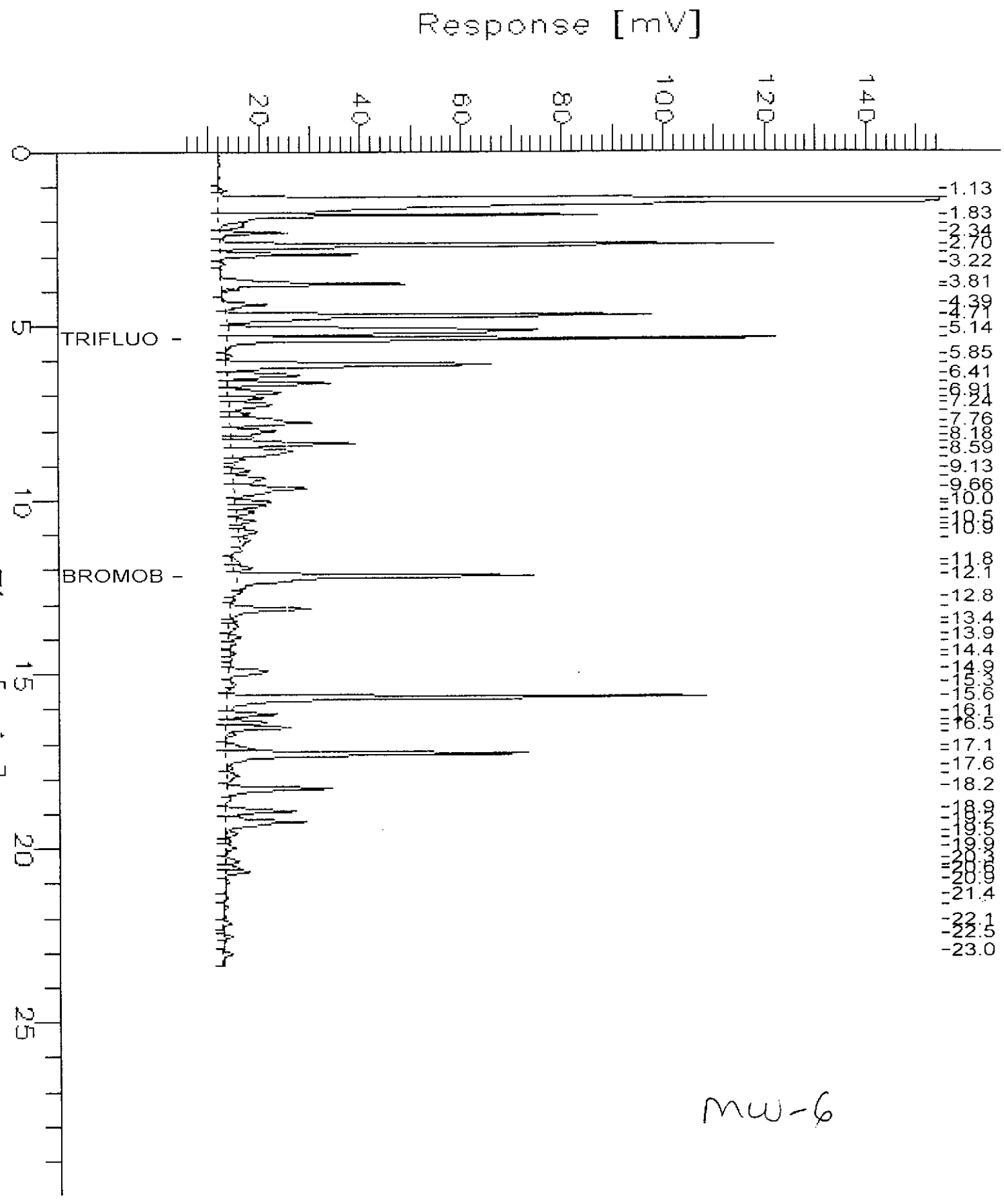


MW-5

GC05 RTX1 TVH Chromatogram

Sample Name : S,129780-002,34725,
FileName : G:\GC05\DATA\178BC16.raw
Method : TVHRTX1
Start Time : 0.00 min End Time : 30.00 min
Scale Factor: -1.0 Plot Offset: 5 mV

Sample #:
Date :
Time of Injection:
Low Point : 4.56 mV High Point : 154.56 mV
Plot Scale: 150.0 mV



MW-6

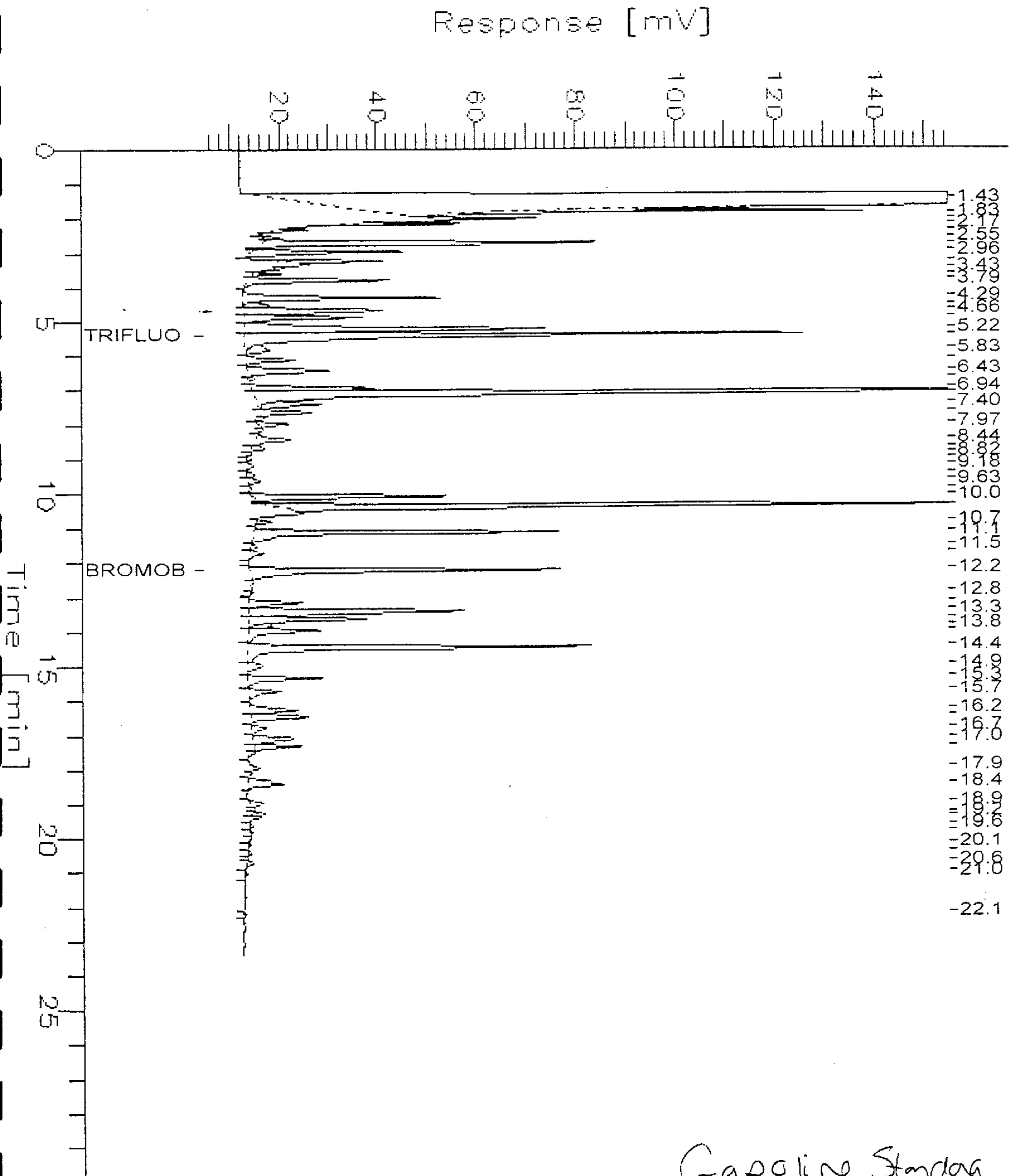
GC05 [illegible] TVH Chromatogram

Sample Name : [illegible]/LCS,QC48937,[illegible]WS4274,34725,
FileName : [illegible]\GC05\DATA\[illegible].raw
Method : TVHBTXE
Start Time : [illegible] min
Scale Factor: [illegible]

End Time : [illegible] min
Plot Offset: [illegible] mV

Sample #: GAS
Date : [illegible]/27/97 12:51 PM
Time of Injection: [illegible] 12:27 PM
Low Point : [illegible] mV
Plot Scale: [illegible] mV

High Point : [illegible] mV



Gasoline Standard

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129780-001	MW-5	34725	06/26/97	06/27/97	06/27/97	
129780-002	MW-6	34725	06/26/97	06/27/97	06/27/97	

Matrix: Water

Analyte	Units	129780-001	129780-002
Diln Fac:		1	1
Benzene	ug/L	<0.5	<0.5
Toluene	ug/L	<0.5	<0.5
Ethylbenzene	ug/L	<0.5	11
m,p-Xylenes	ug/L	<0.5	<0.5
o-Xylene	ug/L	<0.5	<0.5
Surrogate			
Trifluorotoluene	%REC	82	87
Bromobenzene	%REC	79	93

TVH-Total Volatile Hydrocarbons

Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		

METHOD BLANK

Matrix:	Water	Prep Date:	06/27/97
Batch#:	34725	Analysis Date:	06/27/97
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC48929

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	91	65-135
Bromobenzene	77	65-135

Lab #: 129780

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 34725
Units: ug/L
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 06/27/97

MB Lab ID: QC48929

Analyte	Result
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	85	58-130
Bromobenzene	80	62-131

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 34725
Units: ug/L
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 06/27/97

LCS Lab ID: QC48927

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1986	2000	99	75-125

Surrogate	%Rec	Limits
Trifluorotoluene	124	65-135
Bromobenzene	95	65-135

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 34725
Units: ug/Kg
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 06/27/97

LCS Lab ID: QC48928

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	16.98	20	85	80-120
Toluene	19.96	20	100	80-120
Ethylbenzene	17.06	20	85	80-120
m,p-Xylenes	36.38	40	91	80-120
o-Xylene	19.96	20	100	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	85	58-130
Bromobenzene	87	62-131

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

BTXE

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8020
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 129771-003
Matrix: Water
Batch#: 34725
Units: ug/L
Diln Fac: 1

Sample Date: 06/25/97
Received Date: 06/26/97
Prep Date: 06/27/97
Analysis Date: 06/27/97

MS Lab ID: QC48930

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	20	<0.5	17.37	87	75-125
Toluene	20	<0.5	21.17	106	75-125
Ethylbenzene	20	<0.5	17.3	87	75-125
m,p-Xylenes	40	<0.5	36.72	92	75-125
o-Xylene	20	<0.5	20.03	100	75-125

Surrogate	%Rec	Limits
Trifluorotoluene	86	58-130
Bromobenzene	85	62-131

MSD Lab ID: QC48931

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	20	17.9	90	75-125	3	20
Toluene	20	21.81	109	75-125	3	20
Ethylbenzene	20	17.86	89	75-125	3	20
m,p-Xylenes	40	37.41	94	75-125	2	20
o-Xylene	20	20.43	102	75-125	2	20

Surrogate	%Rec	Limits
Trifluorotoluene	87	58-130
Bromobenzene	86	62-131

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
129780-001	MW-5	34745	06/26/97	06/27/97	06/30/97	
129780-002	MW-6	34745	06/26/97	06/27/97	06/30/97	

Matrix: Water

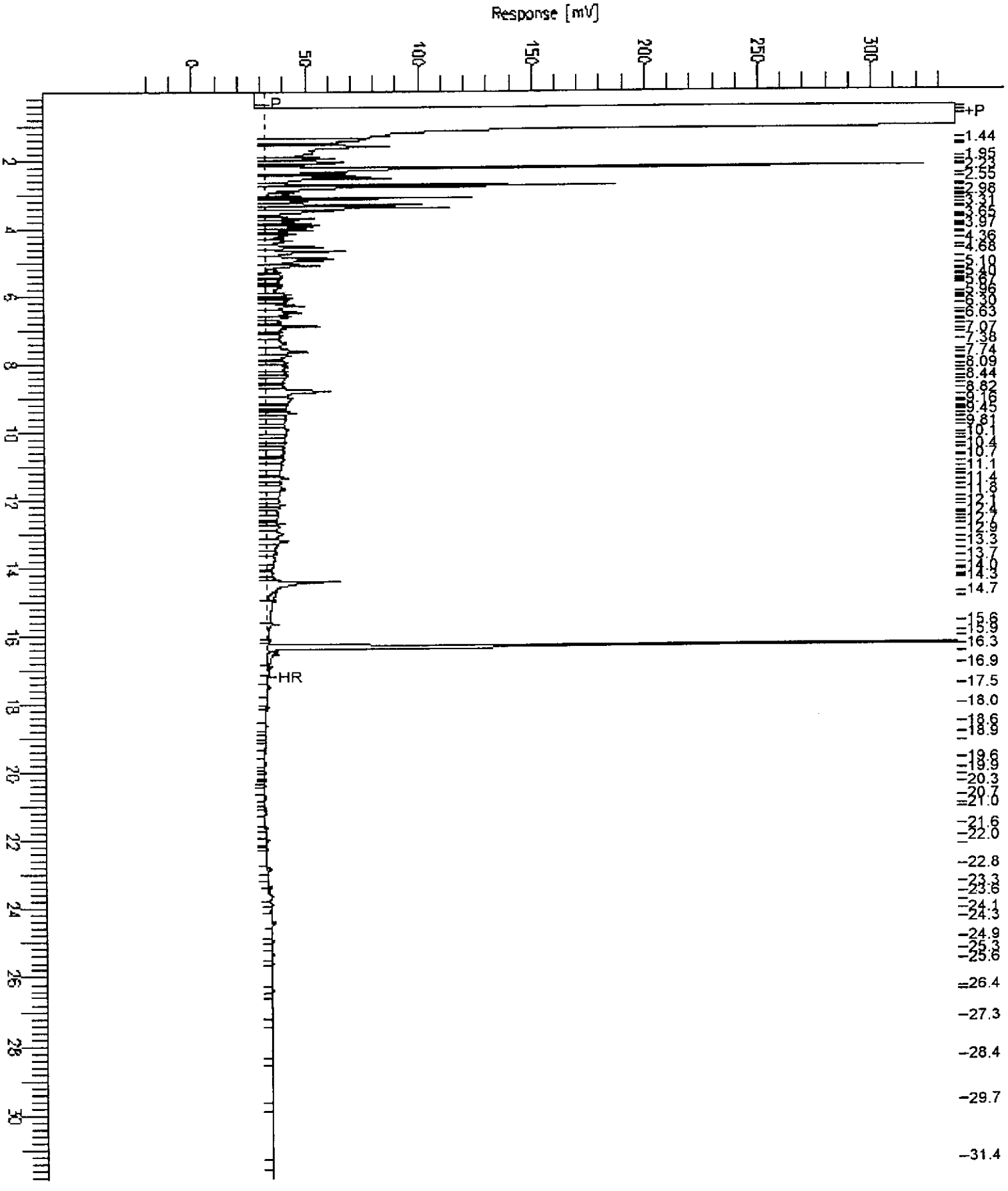
Analyte	Units	129780-001	129780-002
Diln Fac:		1	1
Diesel C12-C22	ug/L	<50	450 L
Surrogate			
Hexacosane	%REC	103	105

L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 129780-002,34745
FileName : G:\GC13\CHA\181A012.RAW
Method : ATEH175.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -25 mV

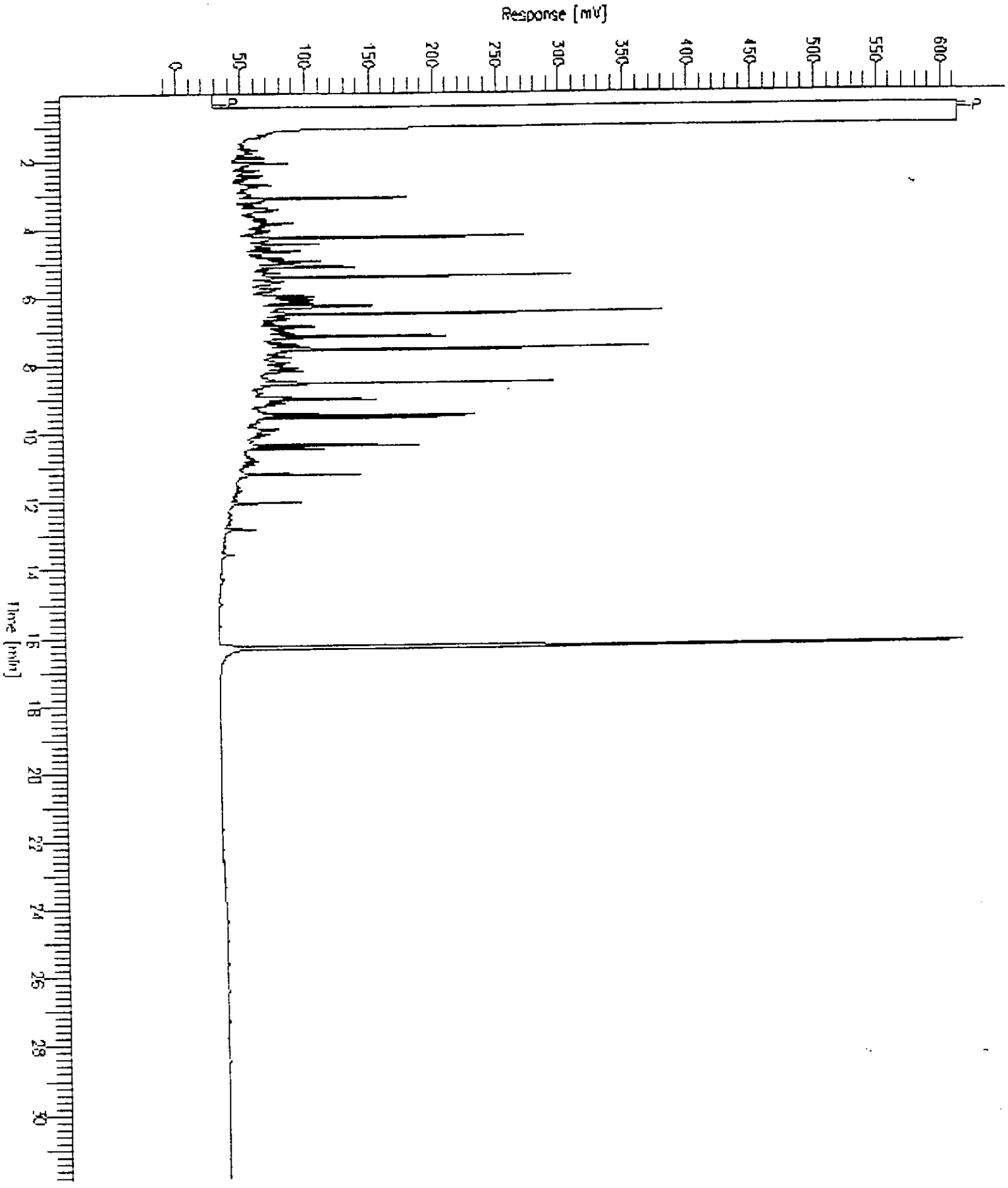
Sample #: 34745
Date : 7/3/97 12:02 PM
Time of Injection: 6/30/97 09:21 PM
Low Point : -24.66 mV High Point : 337.79 mV
Plot Scale: 362.5 mV



Chromatogram

Sample Name : CCV,97WS4141,DS
FileName : G:\GC13\CHA\181A017.RAW
Method : ATEH175.MTH
Start Time : 0.07 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -19 mV

Sample #: 500MG/L
Date : 7/1/97 12:55 PM
Time of Injection: 7/1/97 12:52 AM
Low Point : -18.96 mV High Point : 613.61 mV
Plot Scale: 632.6 mV



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 34745
Units: ug/L
Diln Fac: 1

Prep Date: 06/27/97
Analysis Date: 06/30/97

MB Lab ID: QC49003

Analyte	Result	
Diesel C12-C22	<50	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	100	60-140

Lab #: 129780 BATCH QC REPORT Page 1

TEH-Tot Ext Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 609.004	Prep Method: EPA 3520
Location: 2250 Telgraph Av. Oakland	

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water	Prep Date: 06/27/97
Batch#: 34745	Analysis Date: 07/01/97
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC49004

Analyte	Spike Added	BS	%Rec	#	Limits
Diesel C12-C22	2475	1815	73		60-140
Surrogate	%Rec	Limits			
Hexacosane	114	60-140			

BSD Lab ID: QC49005

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Diesel C12-C22	2475	2030	82		60-140	11		35
Surrogate	%Rec	Limits						
Hexacosane	125	60-140						

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Halogenated Volatile Organics
EPA 8010 Analyte List

Client:	Subsurface Consultants	Analysis Method:	EPA 8260
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		

Field ID:	MW-5	Sampled:	06/26/97
Lab ID:	129780-001	Received:	06/26/97
Matrix:	Water	Extracted:	06/27/97
Batch#:	34695	Analyzed:	06/27/97
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl Chloride	ND	2.0
Chloroethane	ND	2.0
Methylene Chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	1.6	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

MtBE?

Surrogate	%Recovery	Recovery Limits
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122
1,2-Dichloroethane-d4	111	68-126

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: [redacted]-6
Lab ID: 129780-002
Matrix: Water
Batch#: 34695
Units: ug/L
Diln Fac: 1

Sampled: 06/26/97
Received: 06/26/97
Extracted: 06/27/97
Analyzed: 06/27/97

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl Chloride	ND	2.0
Chloroethane	ND	2.0
Methylene Chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	1.7	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

MTBE ?

Surrogate	%Recovery	Recovery Limits
Toluene-d8	101	87-125
Bromofluorobenzene	103	79-122
1,2-Dichloroethane-d4	109	68-126

Halogenated Volatile Organics
EPA 8010 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 34695
Units: ug/L
Diln Fac: 1

Prep Date: 06/26/97
Analysis Date: 06/26/97

MB Lab ID: QC48826

Analyte	Result	Reporting Limit
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl Chloride	ND	2.0
Chloroethane	ND	2.0
Methylene Chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon Tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

Surrogate	%Rec	Recovery Limits
Toluene-d8	99	87-125
Bromofluorobenzene	103	79-122
1,2-Dichloroethane-d4	102	68-126

Halogenated Volatile Organics

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 34695
Units: ug/L
Diln Fac: 1

Prep Date: 06/26/97
Analysis Date: 06/26/97

LCS Lab ID: QC48825

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	46.95	50	94	51-180
Trichloroethene	47.91	50	96	73-141
Chlorobenzene	49.07	50	98	83-129

Surrogate	%Rec	Limits
Toluene-d8	99	87-125
Bromofluorobenzene	102	79-122
1,2-Dichloroethane-d4	102	68-126

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 3 outside limits

Halogenated Volatile Organics

Client: Subsurface Consultants
Project#: 609.004
Location: 2250 Telgraph Av. Oakland

Analysis Method: EPA 8260
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 129772-001
Matrix: Water
Batch#: 34695
Units: ug/L
Diln Fac: 1

Sample Date: 06/26/97
Received Date: 06/26/97
Prep Date: 06/26/97
Analysis Date: 06/26/97

MS Lab ID: QC48866

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<1	45.03	90	51-180
Trichloroethene	50	15.03	59.07	88	73-141
Chlorobenzene	50	<1	46.65	93	83-129

Surrogate	%Rec	Limits
Toluene-d8	100	87-125
Bromofluorobenzene	101	79-122
1,2-Dichloroethane-d4	107	68-126

MSD Lab ID: QC48867

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	44.06	88	51-180	2	14
Trichloroethene	50	57.74	85	73-141	2	14
Chlorobenzene	50	46.81	94	83-129	0	13

Surrogate	%Rec	Limits
Toluene-d8	100	87-125
Bromofluorobenzene	102	79-122
1,2-Dichloroethane-d4	105	68-126

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 6 outside limits

129780

CHAIN OF CUSTODY FORM

PAGE ____ OF ____

PROJECT NAME: 2250 Telegraph

JOB NUMBER: 609.004

LAB: C&T

PROJECT CONTACT: Samuel Weir

TURNAROUND: standard

SAMPLED BY: Jerome de Vries

REQUESTED BY: Jerome de Vries

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR	CONTAINERS: VOA	LITER	PINT	TUBE	METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TEH	TVH/BTEX	8010
1	MW-5	X				4				X			X		06	26	97	1000			X	X
							1						X	X				1000		X		
2	MW-6	X				4				X			X					1100			X	X
							1						X	X				1100		X		

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
[signature]	6/26/97 2:50pm	[signature] JERRY GUERRERO	6/26/97
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Please bill our client.

Marianne B. Robison
Buttner Properties, Inc.
600 W. Grand Ave.
Oakland, CA 94612

Subsurface Consultants, Inc.
171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
(510) 268-0461 • FAX: 510-268-0137