SCI Subsurface Consultants, Inc.

7/12/99

Note:
Spoke w/ J. Alexander re: SCI's request for modification to sampling schedule. I indicated no change to be affected at this time.

SOS

April 13, 1999
SCI 609.004

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

February 1999
Groundwater Monitoring Event
2250 Telegraph Avenue
Oakland, California

Dear Ms. Robison:

This letter records the results of the February 1999 groundwater monitoring event for the referenced site. The groundwater monitoring program has been implemented in accordance with Regional Water Quality Control Board and the Alameda County Health Care Services Agency (ACHCSA) guidelines due to past releases from underground storage tanks (UST). The USTs were removed from the site in 1990. In accordance with the current plan, the six site wells are monitored on a semi-annual basis. The locations of the wells and former USTs are presented on the Site Plan, Plate 1.

BACKGROUND

In August 1990, two 10,000-gallon underground gasoline storage tanks and one 280-gallon waste oil tank were removed from the site. Approximately 500 cubic yards of gasoline-impacted soil were aerated onsite in 1990 and 1991 and disposed at a Class III sanitary landfill. In February 1994, SCI observed the excavation of contaminated soils near the former waste oil tank and installed four groundwater monitoring wells at the site. SCI has conducted groundwater monitoring at the site since March 1994.

In a letter dated November 8, 1995, ACHCSA indicated that the extent of groundwater impacts had not been sufficiently defined downgradient of monitoring well MW-3. The ACHCSA required an investigation to better define the area of contamination. In May 1996, SCI installed five temporary well points and collected grab groundwater samples as part of a

3736 Mt. Diablo Boulevard • Suite 200 • Lafayette, California 94549-3659 • 925.299.7960 • FAX 925.299.7970
171 – 12th Street • Suite 202 • Oakland, California 94607-4911 • 510.268.0461 • FAX 510.268.0137

supplemental investigation to assist in determining locations for the installation of new permanent groundwater monitoring wells. Results of this investigation were summarized in the Supplemental Groundwater Investigation report that was submitted to ACHCSA on October 4, 1996.

In June 1997, SCI installed two monitoring wells (MW-5 and MW-6) at offsite locations downgradient from the former tank excavations. Results of SCI's well installation and groundwater sampling are contained in SCI's report dated August 8, 1997. **In a June 16, 1998 letter, ACHCSA requested that all groundwater monitoring wells (MW-1 through MW-6) be monitored and sampled on a semi-annual schedule.**

GROUNDWATER SAMPLING

On February 24, 1999, the six existing wells (MW-1 through MW-6) were sampled. In general, the event consisted of (1) measuring groundwater levels using an electric well sounder, (2) checking for free product, (3) purging water from each well until pH, conductivity, and temperature had stabilized, and (4) after the wells had recovered to at least 80 percent of their initial level, sampling the wells with new disposable bailers. The samples were retained in glass containers pre-cleaned by the supplier in accordance with EPA protocol. The containers were placed in an ice filled cooler and remained iced until delivery to the analytical laboratory. Chain-of-custody documents accompanied the samples to the laboratory.

Analytical testing was performed by Curtis & Tompkins, Ltd., a laboratory certified by the State of California Department of Health Services for hazardous waste and water testing. A sample from each well was analyzed for the following:

1. Total volatile hydrocarbons, EPA Methods 5030/8015,
2. Total extractable hydrocarbons, EPA Methods 3550/8015, and
3. Benzene, toluene, ethylbenzene and xylene (BTEX) and methyl tertiary butyl ether (MTBE), EPA Methods 5030/8020/8260.

Well sampling forms, chain-of-custody documents, and the analytical test reports are attached. Groundwater elevation data are summarized in Table 1. A summary of the current and previous analytical test results are presented in Table 2.

CONCLUSIONS

Based on the groundwater data presented in Table 1, the groundwater gradient remains generally consistent with previous measurements. The gradient is relatively flat and tends toward the southeast. The groundwater flow direction for this event is shown on Plate 1.

No free product was observed during this event. The petroleum constituents measured in the water samples for this event are similar in concentration to those measured during previous events. Hence, it appears that the plume is relatively stabilized.

The onsite plume is characteristic of a weathered gasoline release because it contains measurable total volatile hydrocarbons and the volatile constituents of gasoline, i.e., BTEX. The plume near well MW-4 also contains uncategorized heavier range hydrocarbons. No MTBE, a gasoline additive, was detected in the onsite wells during this and the previous event conducted in August 1998.

The plume does not appear to be migrating significantly offsite. The plume appears to have shifted slightly toward the east, as is characteristic during the winter months. Lower concentrations were detected in well MW-3 located at the southern side of the plume, and no petroleum hydrocarbon constituents were detected in water from well MW-5 located downgradient of the site during this event.

Data from well MW-6, located cross gradient from the site, still suggests that this well is impacted by a separate release from another source in the area. The plume which has been detected by well MW-6 does not have the same chemical constituents nor characteristic fingerprint pattern as observed to date by the onsite wells.

RECOMMENDED MODIFICATIONS TO THE MONITORING PROGRAM

Based on a review of the analytical data generated to date, SCI recommends (1) reducing the sampling frequency in some of the wells, and (2) conducting nutrient and bio-parameter testing in selected wells to evaluate biodegradation processes and to evaluate whether the site can benefit from oxygen and/or nutrient enhancement. SCI proposes the following monitoring program changes:

- MW-1 - This is the upgradient well. **Propose to keep the semi-annual sampling** frequency and add analysis for evaluating nutrient and bio-parameter levels as described below.

- MW-2 - This well is up and cross gradient from the plume. Historically, only low or non-detectable levels of contaminants of concern have been measured in this well. Propose to change the monitoring frequency to annual. Groundwater surface monitoring will continue on a semi-annual basis.

- MW-3 and MW-4 - These wells are within the plume boundary. **Propose to keep the semi-annual sampling frequency** and add analysis for evaluating nutrient bio-parameter levels as described below.

- MW-5 - This well is downgradient from the plume. Historically, only low or non-detectable levels of contaminants of concern have been measured in this well. Propose to change the monitoring frequency to annual. Groundwater surface monitoring will continue on a semi-annual basis.

- MW-6 - This well is cross-gradient from the plume, and appears to be showing impacts related to another off-site source. Propose to continue to monitor groundwater surface fluctuation and to cease monitoring.

The proposed nutrient and bio-parameter testing program will include the following:

- pH, Eh, Dissolved Oxygen, Biologic Oxygen Demand
- Temperature, Conductivity, Alkalinity, Total Organic Carbon
- Nitrate, Phosphate, Ferrous Iron, Sulfate
- Carbon Dioxide, Methane

ONGOING MONITORING

Please review the data in this report and prepare a letter commenting on the requested modifications to the monitoring program. **The next monitoring event is scheduled for August 1999.**

If you have any questions, please call the undersigned at (925) 299-7960.

Yours very truly,

Subsurface Consultants, Inc.

Jeriann N. Alexander
Civil Engineer 40469 (exp. 3/31/03)
Registered Environmental Assessor No. 03130 (exp. 6/99)

JNA:TJM:rm\609.004\299gwmon.doc

Attachments: Table 1 - Groundwater Elevation Data
Table 2 - Summary of Contaminants in Groundwater
Plate 1 - Site Plan
Analytical Test Report
Chain-of-Custody Form
Well Sampling Forms

cc: Ms. Marianne Robison
Buttner Properties
600 West Grand Avenue
Oakland, California 94612

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Table 1
Groundwater Elevation Data

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
	8/21/98		11.00	9.55
	10/6/98		11.84	8.71
	2/24/99		9.74	10.81
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
	8/21/98		11.91	8.12
	10/6/98		11.57	8.46
	2/24/99		9.91	10.12
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
	8/21/98		10.36	8.61
	10/6/98		10.64	8.33
	2/24/99		8.58	10.39

Table 1
Groundwater Elevation Data

Monitoring Well	Date	TOC Elevation (feet) MSL	Depth (feet)	Elevation (feet) MSL
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
	8/21/98		11.86	8.02
	10/6/98		12.84	7.04
	2/24/99		10.79	9.09
MW-5	6/26/97	16.02	8.44	7.58
	7/9/97		8.48	7.54
	8/21/98		8.32	7.70
	10/6/98		8.51	7.51
	2/24/99		6.86	9.16
MW-6	6/26/97	18.36	10.89	7.47
	7/9/97		10.98	7.38
	8/21/98		11.00	7.36
	10/6/98		10.79	7.57
	2/24/99		9.32	9.04

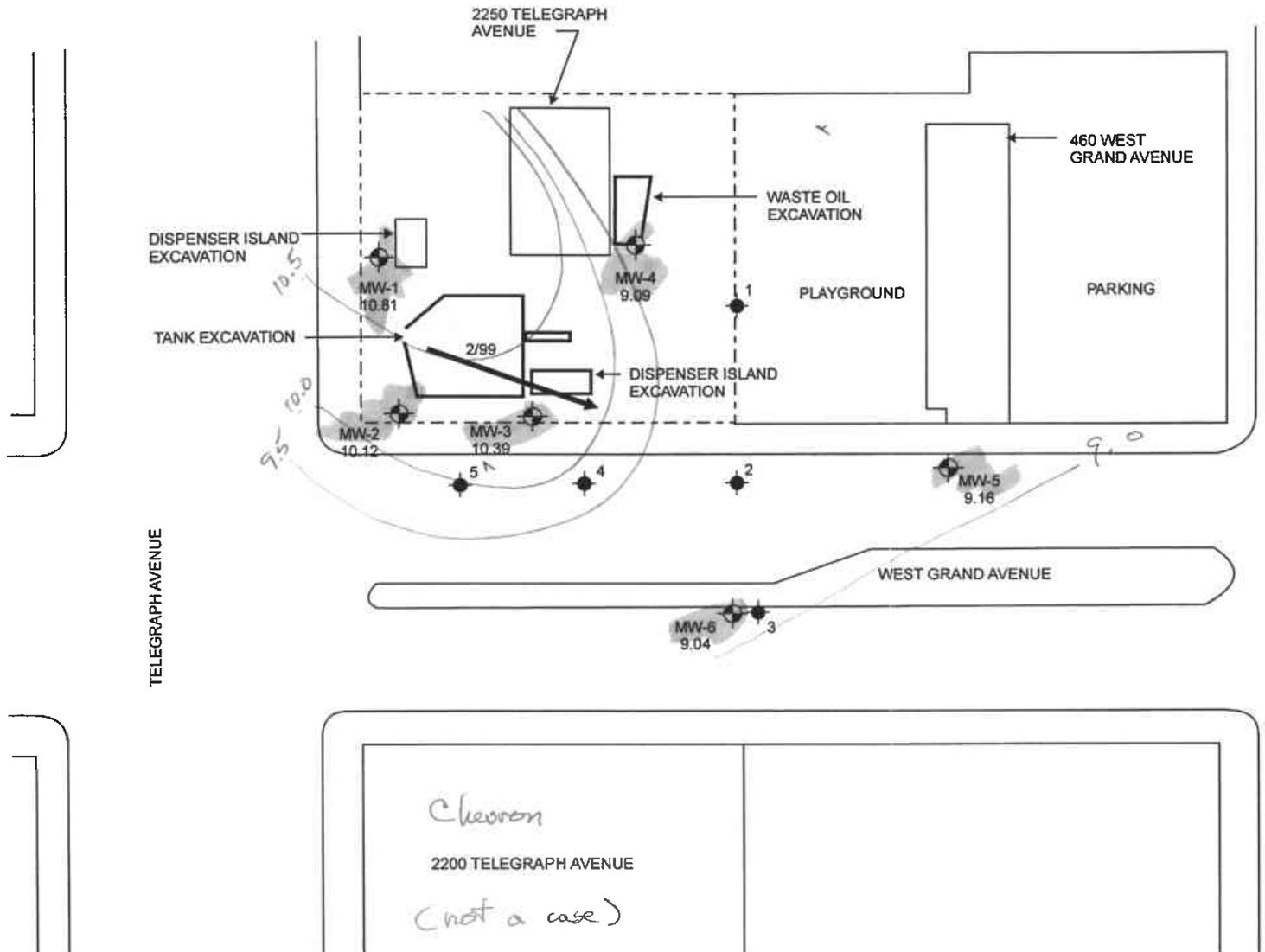
TOC = Top of Casing
Elevation Reference: USGS benchmark W1197, 1969 with a reported elevation of +21.06 feet MSL datum.

Table 2
Chemical Concentrations in Groundwater

Well	Date	Groundwater Elevation MSL (feet)	Petroleum Hydrocarbons: TVH as Gasoline µg/l	TEH as Kerosene µg/l	TEH as Diesel µg/l	TEH as Motor Oil mg/l	Oil & Grease mg/l	Volatile Organics: Benzene µg/l	Toluene µg/l	Ethyl-benzene µg/l	Xylenes µg/l	MTBE µg/l	1,1,1-TCA µg/l	1,2-DCA µg/l	PCE µg/l	Chloro-Benzene µg/l	Metals: Lead mg/l
MW-1	3/3/94	10.16	300	<50	<50	<0.5	<1	1.3	<0.5	2.7	3.1	-	<0.5	5.5	<0.5	<0.5	<0.01
	6/6/94	9.19	430	180+	<50	0.5	-	10	2.2	6.1	7.6	-	<0.5	<0.5	<0.5	<0.5	-
	9/7/94	8.63	410	<50	<50	<0.5	-	6.4	0.8	2.6	3.8	-	<0.5	3.8	<0.5	<0.5	-
	12/22/94	9.72	130	<50	<50	<0.5	-	0.7	<0.5	0.6	0.8	-	<0.5	3.4	<0.5	<0.5	-
	3/17/95	10.82	1,600	170	<50	<0.5	-	29	<0.5	9.1	6.9	-	<0.5	<0.5	<0.5	<0.5	-
	6/27/95	10.04	1,100	<50	<50	<0.5	-	14	<0.5	7.1	5	-	<0.5	3.3	<0.5	<0.5	-
	9/18/95	9.43	370	NR	110+	NR	-	4.4	0.6	2	1.4	-	<0.5	2.4	<0.5	<0.5	-
	8/21/98	9.55	170	NR	62+	NR	-	<0.5	0.76	0.79	<0.5	<2	-	-	-	-	-
	12/24/98	10.81	20	NR	280+	NR	-	<0.5	<0.5	<0.5	<0.5	<2	-	-	-	-	-
MW-2	3/3/94	9.66	110	<50	<50	<0.5	<1	<0.5	1.7	0.58	2.7	-	<0.5	<0.5	<0.5	<0.5	<0.01
	6/6/94	8.88	100	<50	<50	<0.5	-	11	<0.5	0.7	1.1	-	<0.5	<0.5	<0.5	<0.5	-
	9/7/94	8.31	<50	<50	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
	12/22/94	8.76	<50	<50	<50	<0.5	-	0.8	<0.5	<0.5	0.8	-	<0.5	<0.5	<0.5	<0.5	-
	3/17/95	10.18	180	100	<50	<0.5	-	31	<0.5	1	1.8	-	<0.5	<0.5	<0.5	<0.5	-
	6/27/95	9.33	80	<50	<50	<0.5	-	6	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
	9/18/95	8.36	<50	NR	<50	NR	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
	8/21/98	8.12	<50	NR	<50	NR	-	<0.5	<0.5	<0.5	<0.5	<2	-	-	-	-	-
	12/24/98	10.12	<50	NR	540+	NR	-	<0.5	<0.5	<0.5	<0.5	<2	-	-	-	-	-
MW-3	3/3/94	9.47	85	<50	<50	<0.5	<1	<0.5	0.77	<0.5	3.7	-	<0.5	<0.5	<0.5	<0.5	<0.01
	6/6/94	8.69	100	110+	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	2.5	0.8	2.1	<0.5	-
	9/7/94	8.22	220	<50	<50	<0.5	-	11	1.8	2.6	3.5	-	<0.5	<0.5	0.6	<0.5	-
	12/22/94	9.23	130	95+	<50	<0.5	-	3.8	0.5	0.6	1.2	-	<0.5	<0.5	<0.5	<0.5	-
	3/17/95	10.12	1,500	270	<50	<0.5	-	83	6	10	15	-	<0.5	<0.5	<0.5	<0.5	-
	6/27/95	9.03	2,500	<50	<50	<0.5	-	330	8.9	8.1	20	-	<0.5	<0.5	<0.5	<0.5	-
	9/18/95	8.43	1,500	NR	770+	NR	-	400	11	2.2	3.3	-	<0.5	<0.5	<0.5	<0.5	-
	8/21/98	8.61	2,300	NR	600+	NR	-	410	9.3	36	25	<10	-	-	-	-	-
	12/24/98	10.39	[illegible]	NR	110+	NR	-	[illegible]	<0.5	<0.5	<0.5	<2	-	-	-	-	-
MW-4	3/3/94	8.99	4,300	<50	240	<0.5	1.3	220	20	7.5	17	-	<0.5	5.9	<0.5	4.4	<0.01
	6/6/94	8.03	4,400	<50	800+	<0.5	1.7	140	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
	9/7/94	7.02	10,000	490+	280+	<0.5	<1	84	<0.5	42	69	-	<0.5	4.4	0.5	4.3	-
	12/22/94	7.62	2,400	450+	54+	<0.5	<1	11	<0.5	7.1	11	-	<0.5	3.6	3.6	<0.5	-
	3/17/95	9.78	2,200	380	160+	<0.5	<1	<0.5	<0.5	7.9	10	-	<0.5	1.7	<0.5	4.5	-
	6/27/95	8.83	3,100	<50	82	<0.5	<1	<0.5	<0.5	13	19	-	<0.5	2.3	<0.5	4.8	-
	9/18/95	8.04	3,000	NR	1,231+	NR	-	12	<0.7	6.9	8.3	-	<0.5	1.9	<0.5	4.0	-
	8/21/98	8.02	1,700	NR	600+	NR	-	[illegible]	12	13	5.2	<2	-	-	-	-	-
	12/24/98	9.09	2,700	NR	2,100	NR	-	[illegible]	<0.5	<0.5	<0.5	<2	-	-	-	-	-
MW-5	6/26/97	7.58	120	NR	<50	NR	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	1.6	<0.5	-
	8/21/98	7.70	<50	NR	<50	NR	-	<0.5	<0.5	<0.5	<0.5	<2	-	-	-	-	-
	12/24/98	9.16	<50	NR	<50	NR	-	<0.5	<0.5	<0.5	<0.5	<2	-	-	-	-	-
MW-6	6/26/97	7.47	1,500+	NR	450+	NR	-	<0.5	<0.5	11	<0.5	-	<0.5	<0.5	<0.5	1.7	-
	8/21/98	7.36	1,400	NR	540+	NR	-	<0.5	3.6	5.6	0.4	[illegible]*	-	-	-	-	-
	12/24/98	9.04	1,600	NR	600+	NR	-	<0.5	<0.5	<0.5	<0.5	[illegible]*	-	-	-	-	-

DCA = Dichloroethane
TCA = Trichloroethane
PCE = Tetrachloroethene
- = Chemical not tested for
NR = Hydrocarbon range not reported by laboratory

+ = Uncategorized hydrocarbons quantified in ranges specified
mg/l = milligrams per liter = parts per million
µg/l = micrograms per liter = parts per billion
<1 = Chemical not present at a concentration greater than the laboratory detection limit shown or stated on test reports.
* = Water sample analyzed for MTBE using EPA Methods 5030/8020 and 5030/8260



VICINITY MAP

EXPLANATION

- STRUCTURE
- LIMITS OF EXCAVATION
- MONITORING WELL LOCATION
- (10.81) GROUNDWATER ELEVATION (FT. MSL) MEASURED 2/24/99
- TEMPORARY WELL INSTALLATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION

SITE PLAN

SCI Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	APPROVED
609.004	4/9/99	

PLATE 1

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

ANALYTICAL REPORT

Prepared for:

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

Date: 15-MAR-99
Lab Job Number: 138160
Project ID: 609.004
Location: 2250 Telgraph Av. Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138160-001	MW-1	46566	02/24/99	03/02/99	03/06/99	
138160-002	MW-2	46566	02/24/99	03/02/99	03/06/99	
138160-003	MW-3	46566	02/24/99	03/02/99	03/06/99	
138160-004	MW-4	46566	02/24/99	03/02/99	03/06/99	

Matrix: Water

Analyte Diln Fac:	Units	138160-001 1	138160-002 1	138160-003 1	138160-004 1
Diesel C10-C24	ug/L	280 YL	<50	110 YH	2100 YLH
Surrogate					
Hexacosane	%REC	79	77	89	83

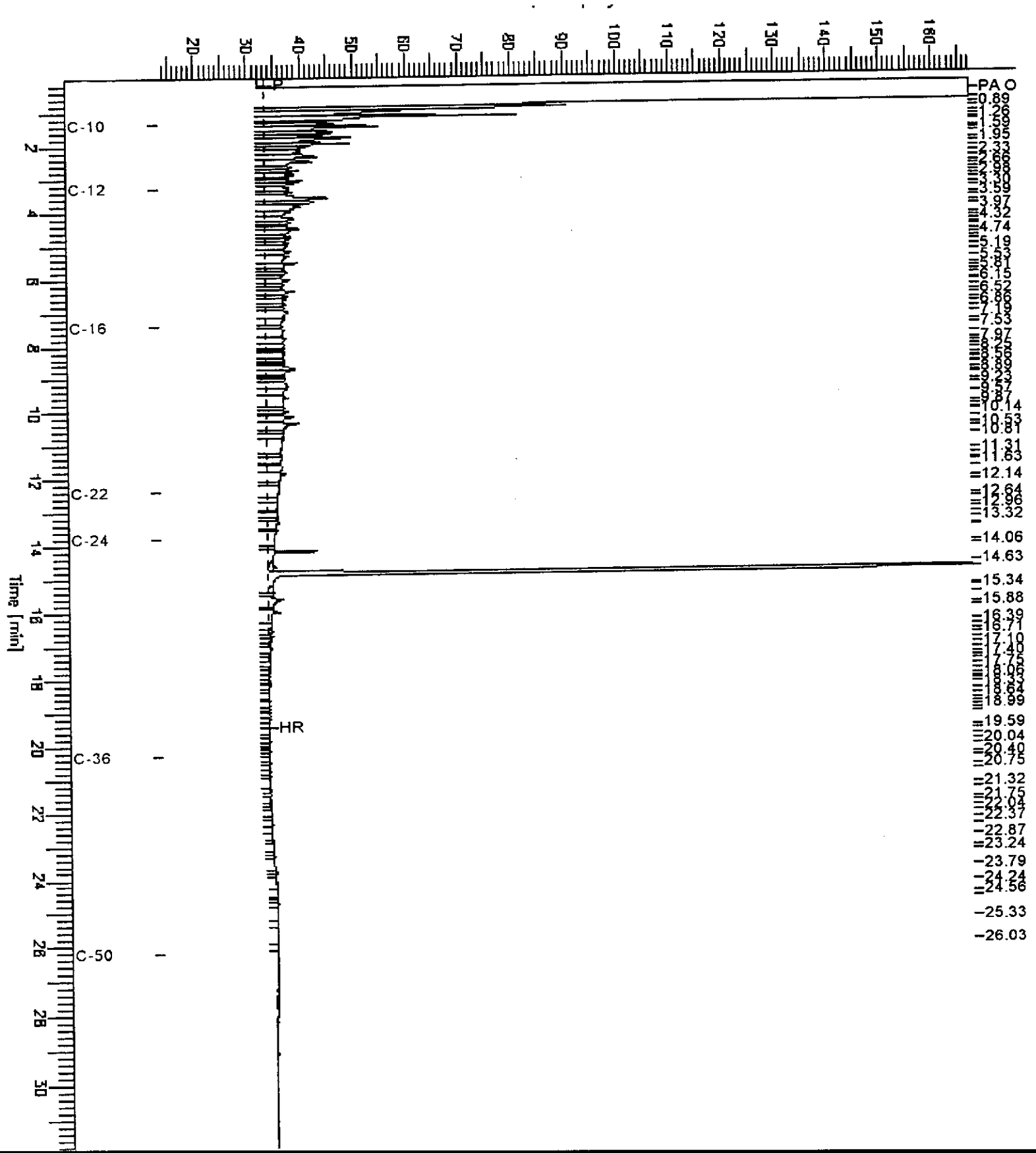
Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

Chromatogram

MW-1

Sample Nam : 138160-001,46566
FileName : G:\GC13\CHB\063B041.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Fact : 0.0 Plot Offset: 13 mV

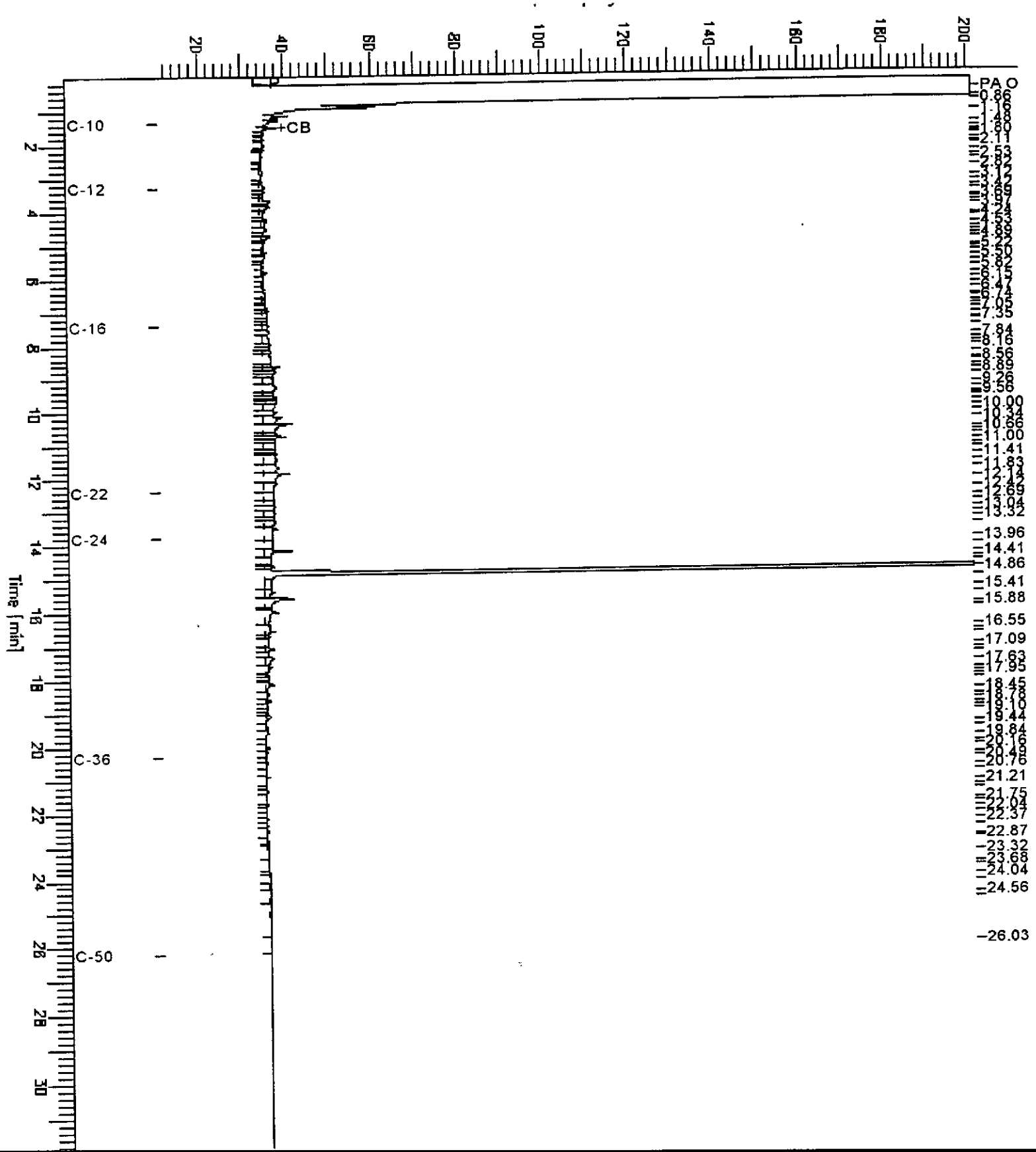
Sample #: 46566
Date : 3/9/99 09:29 AM
Time of Injection: 3/6/99 01:15 AM
Low Point : 13.04 mV High Point : 167.47 mV
Plot Scale: 154.4 mV



Chromatogram MW-3

Sample Name : 138160-003,46566
FileName : G:\GC13\CHB\063B043.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor : 0.0 Plot Offset: 10 mV

Sample #: 46566 Page 1 of 1
Date : 3/9/99 09:31 AM
Time of Injection: 3/6/99 02:39 AM
Low Point : 10.33 mV High Point : 201.34 mV
Plot Scale: 191.0 mV

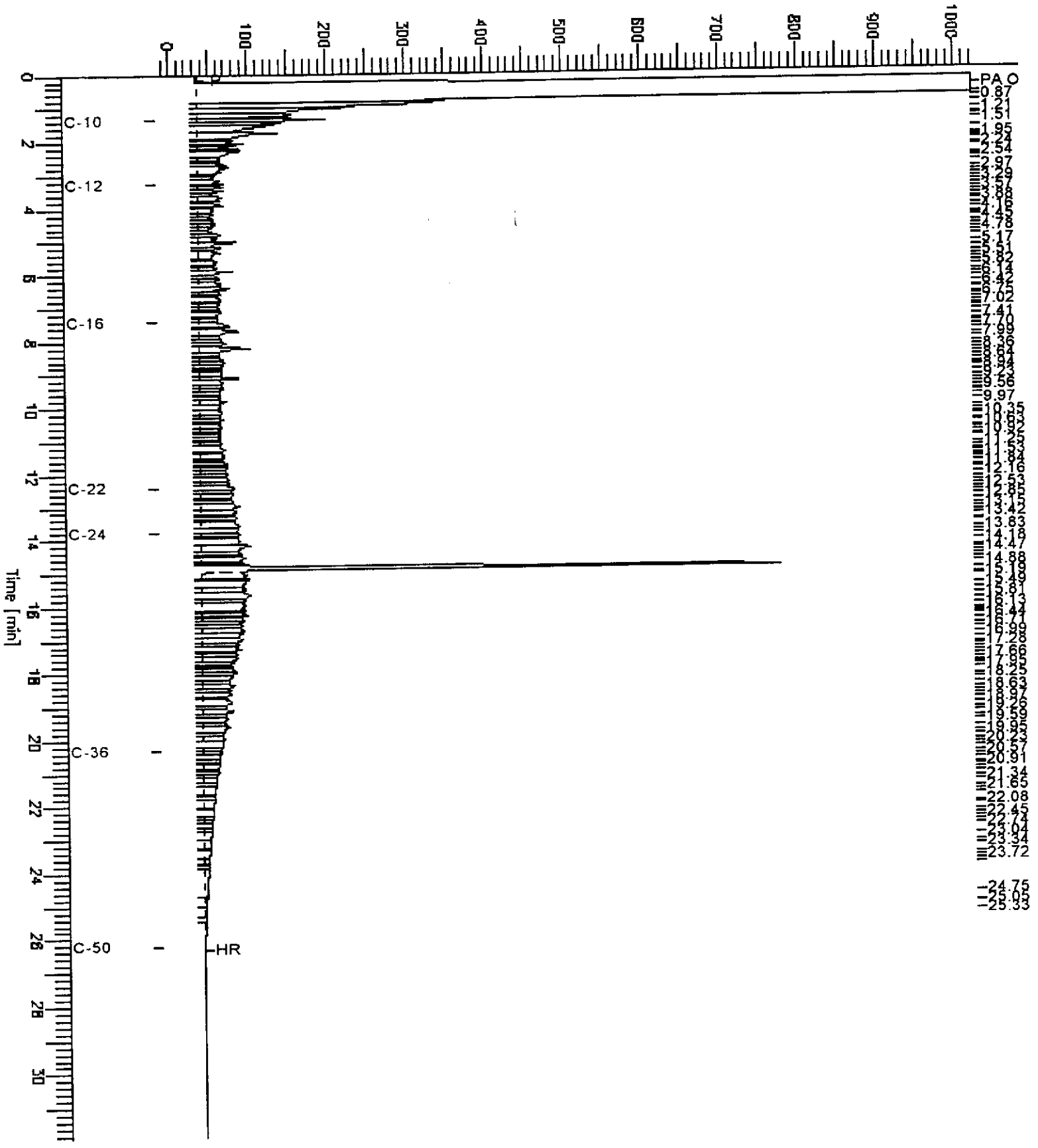


Chromatogram

mw-4

Sample Name : 139160-004,46566
FileName : G:\GC13\CHB\063B044.RAW
Method : BTEH015.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -18 mV

Sample #: 46566
Date : 3/9/99 09:31 AM
Time of Injection: 3/6/99 03:20 AM
Low Point : -18.41 mV High Point : 1024.00 mV
Plot Scale: 1042.4 mV



Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138160-005	MW-5	46566	02/24/99	03/02/99	03/06/99	
138160-006	MW-6	46566	02/24/99	03/02/99	03/06/99	

Matrix: Water

Analyte	Units	138160-005	138160-006	
Diln Fac:		1	1	
Diesel C10-C24	ug/L	<50	600	YL
Surrogate				
Hexacosane	%REC	67	82	

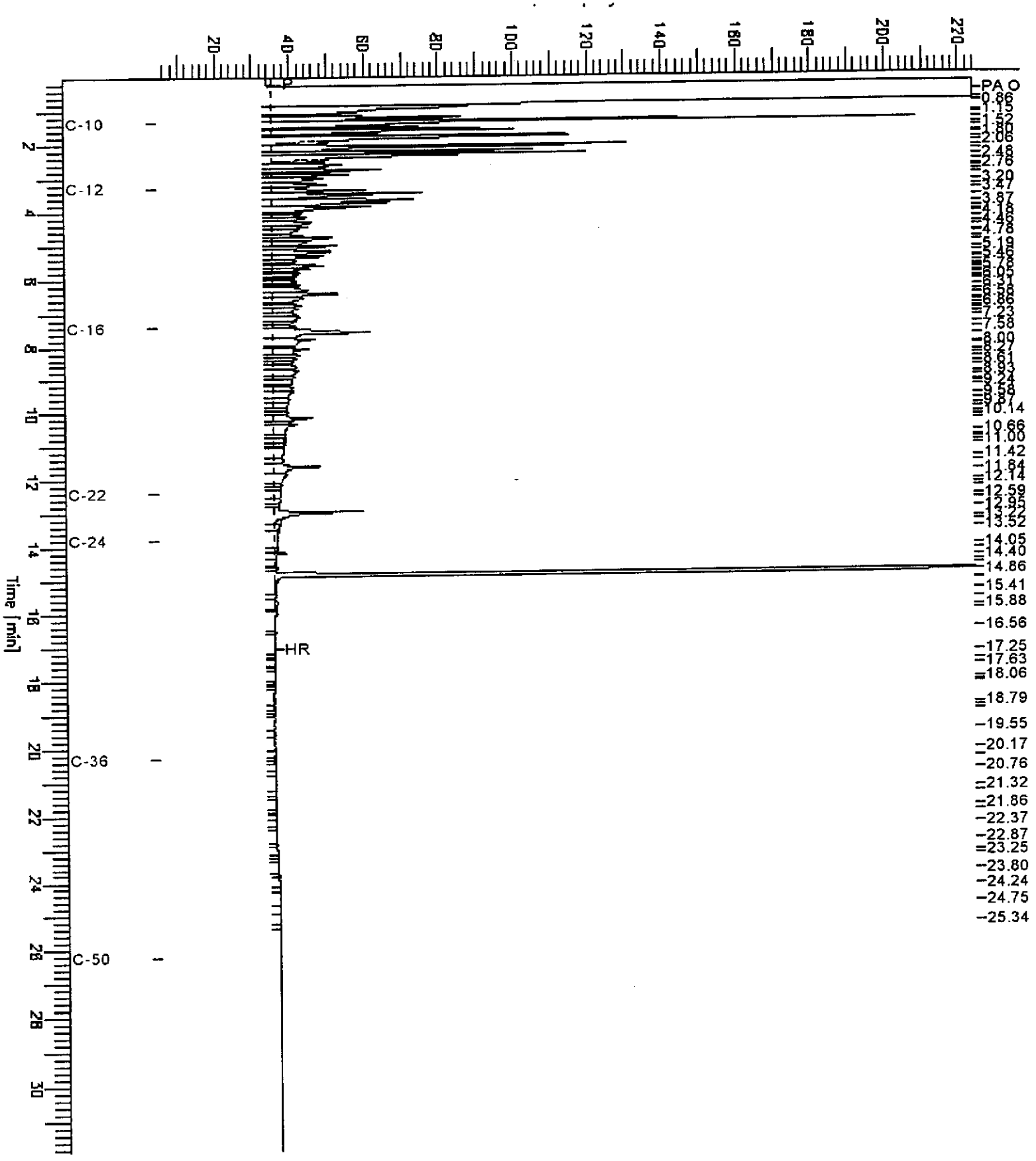
Y: Sample exhibits fuel pattern which does not resemble standard
L: Lighter hydrocarbons than indicated standard

Chromatogram

mw-6

Sample Name : 138160-006,46566
FileName : G:\GC13\CHB\063B046.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor : 0.0 Plot Offset: 4 mV

Sample #: 46566
Date : 3/9/99 09:33 AM
Time of Injection: 3/6/99 04:44 AM
Low Point : 4.01 mV High Point : 224.07 mV
Plot Scale: 220.1 mV

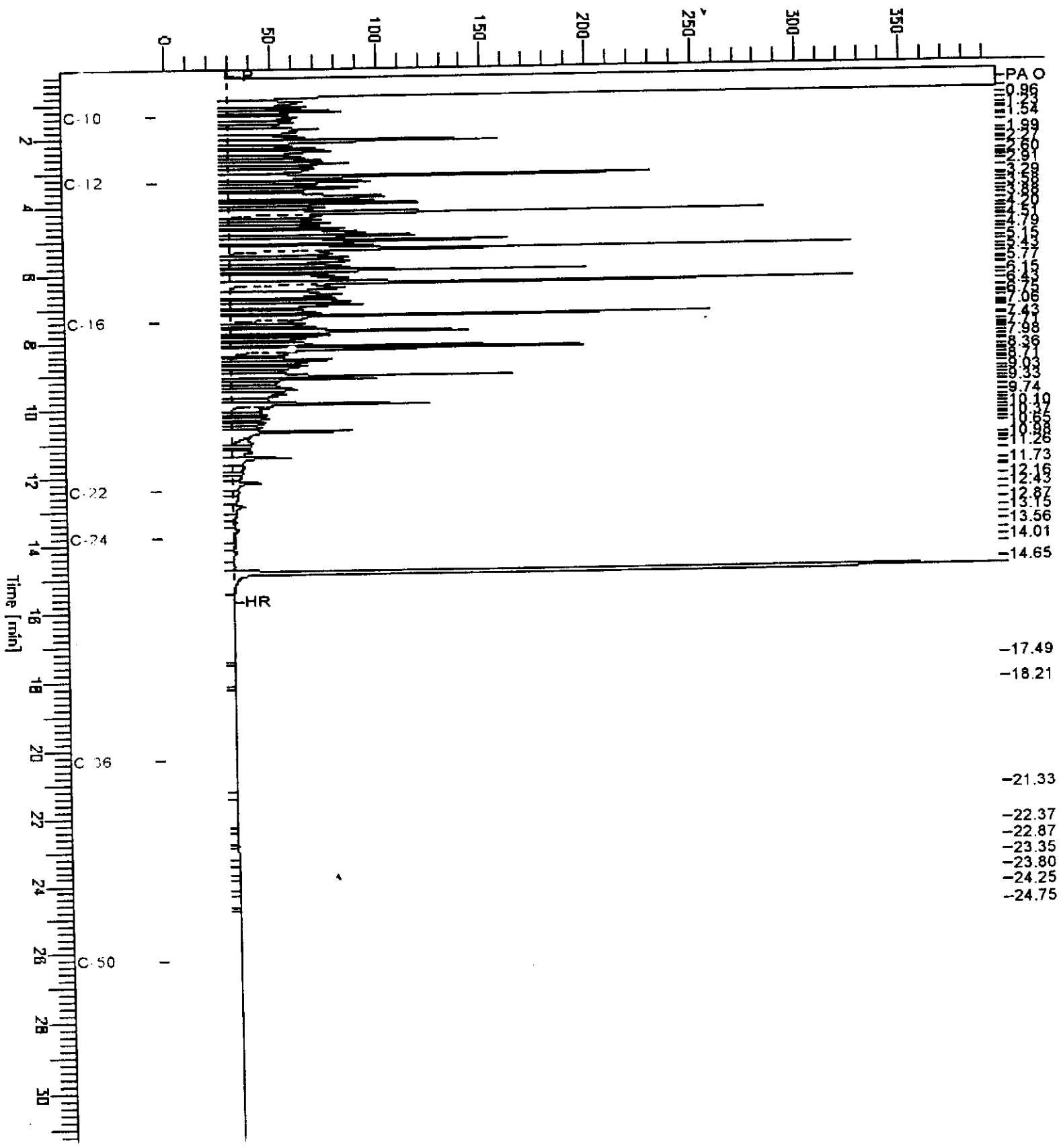


mw-?

Chromatogram

Sample Nam : [illegible],99ws7121,dsl
FileName : G:\GC13\CHB\068B002.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Fact : 0.0 Plot Offset: -5 mV

Sample #: 500mg/l
Date : 3/10/99 08:17 AM
Time of Injection: 3/9/99 08:25 PM
Low Point : -4.71 mV High Point : 397.24 mV
Plot Scale: 402.0 mV



TEH-Tot Ext Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 46566
Units: ug/L
Diln Fac: 1

Prep Date: 03/02/99
Analysis Date: 03/06/99

MB Lab ID: QC91995

Analyte	Result	
Diesel C10-C24	<50	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	79	58-128

Lab #: 138160 BATCH QC REPORT Curtis & Tompkins, Ltd. Page 1

TEH-Tot Ext Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 3520

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 46566
Units: ug/L
Diln Fac: 1

Prep Date: 03/02/99
Analysis Date: 03/10/99

LCS Lab ID: QC91996

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C10-C24	1705	2475	69	50-114
Surrogate	**%Rec**	**Limits**		
Hexacosane	83	58-128		

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 #: 138160 BATCH QC REPORT Curtis & Tompkins, Ltd. Page 1 of 1

TEH-Tot Ext Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 3520

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 138202-001
Matrix: Water
Batch#: 46566
Units: ug/L
Diln Fac: 1

Sample Date: 02/24/99
Received Date: 02/26/99
Prep Date: 03/02/99
Analysis Date: 03/10/99

MS Lab ID: QC91997

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C10-C24	2475	<50	1475	59	51-104
Surrogate	**%Rec**	**Limits**			
Hexacosane	76	58-128			

MSD Lab ID: QC91998

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C10-C24	2475	1419	57	51-104	4	33
Surrogate	**%Rec**	**Limits**				
Hexacosane	69	58-128				

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

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138160-001	MW-1	46516	02/24/99	02/28/99	02/28/99	
138160-002	MW-2	46516	02/24/99	02/28/99	02/28/99	
138160-003	MW-3	46516	02/24/99	02/28/99	02/28/99	
138160-004	MW-4	46516	02/24/99	02/28/99	02/28/99	

Matrix: Water

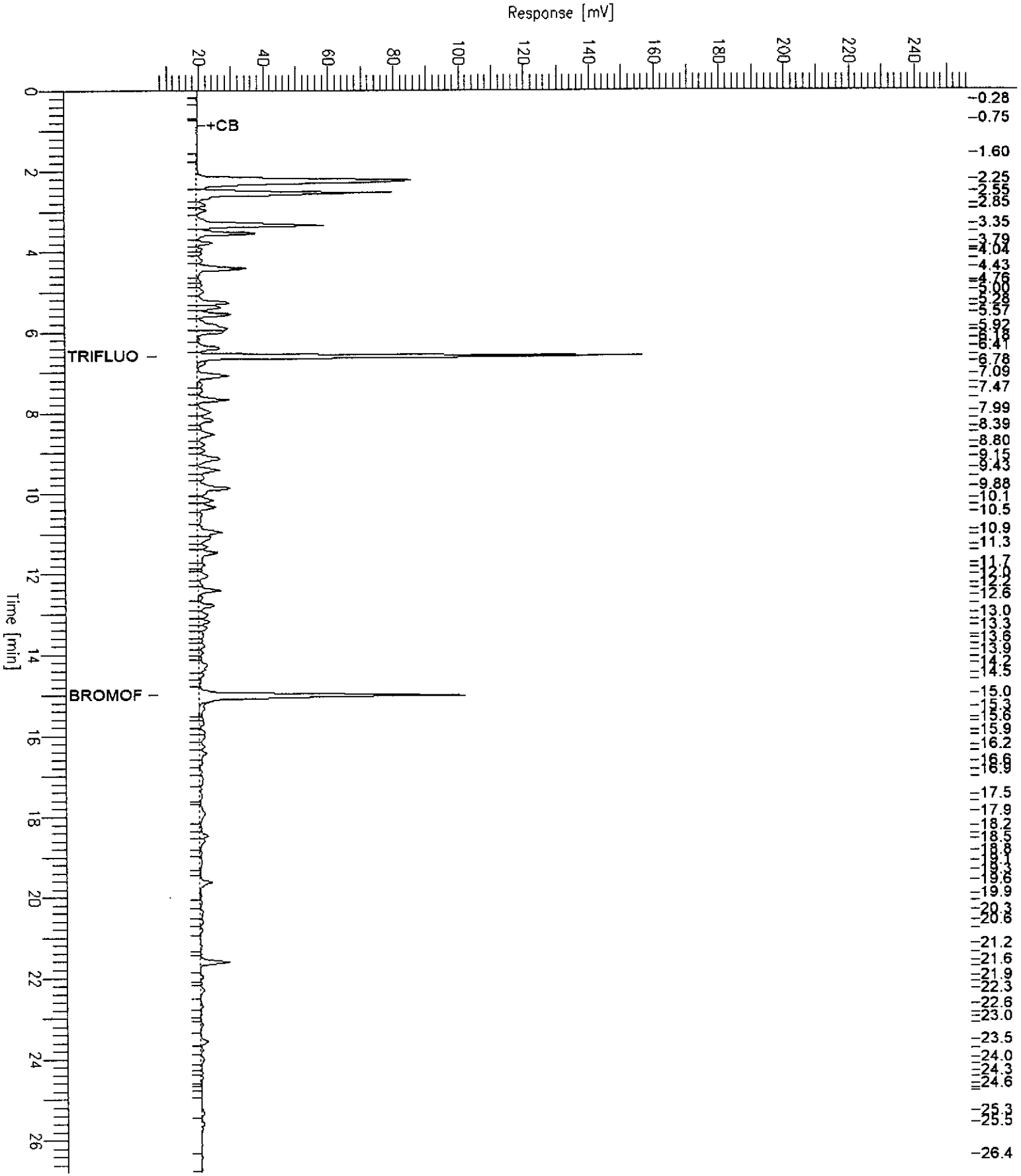
Analyte Diln Fac:	Units	138160-001 1	138160-002 1	138160-003 1	138160-004 1	
Gasoline C7-C12	ug/L	200	<50	55	2700	
Surrogate						
Trifluorotoluene	%REC	85	92	95	105	
Bromofluorobenzene	%REC	99	92	93	159	*

* Values outside of QC limits

GC19 TVH 'X' Data File (FID)

Sample Name : mss,138160-001b,46516,tvh only
FileName : G:\GC19\DATA\057X044.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 7 mV

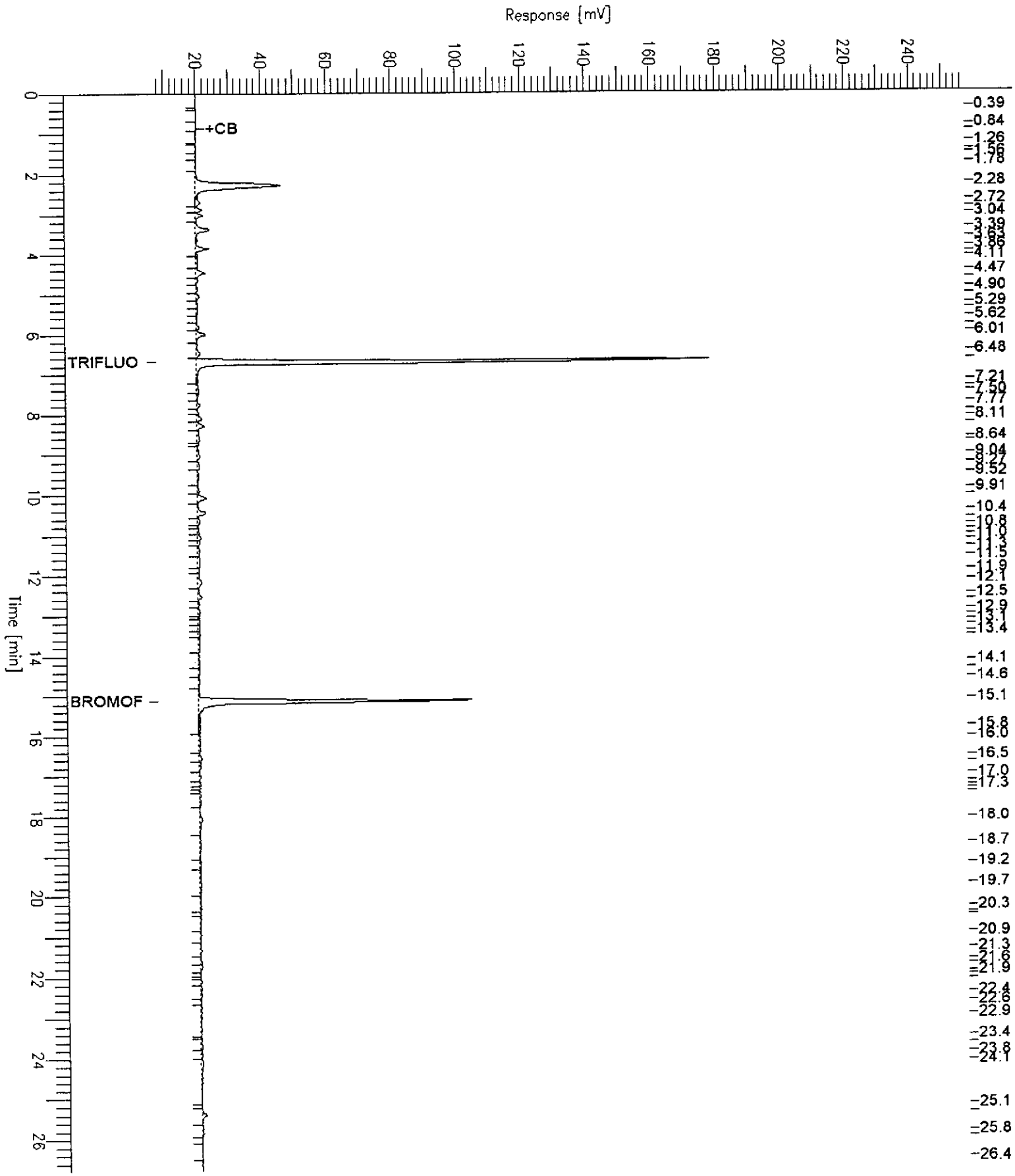
Sample #: ph<2 Page 1 of 1
Date : 3/1/99 05:50 PM
Time of Injection: 2/28/99 12:58 AM
Low Point : 6.74 mV High Point : 256.74 mV
Plot Scale: 250.0 mV



GC19 TVH 'X' Data File (FID)

Sample Name : 138160-003b,46516,tvh only
FileName : G:\GC19\DATA\057X056.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 7 mV

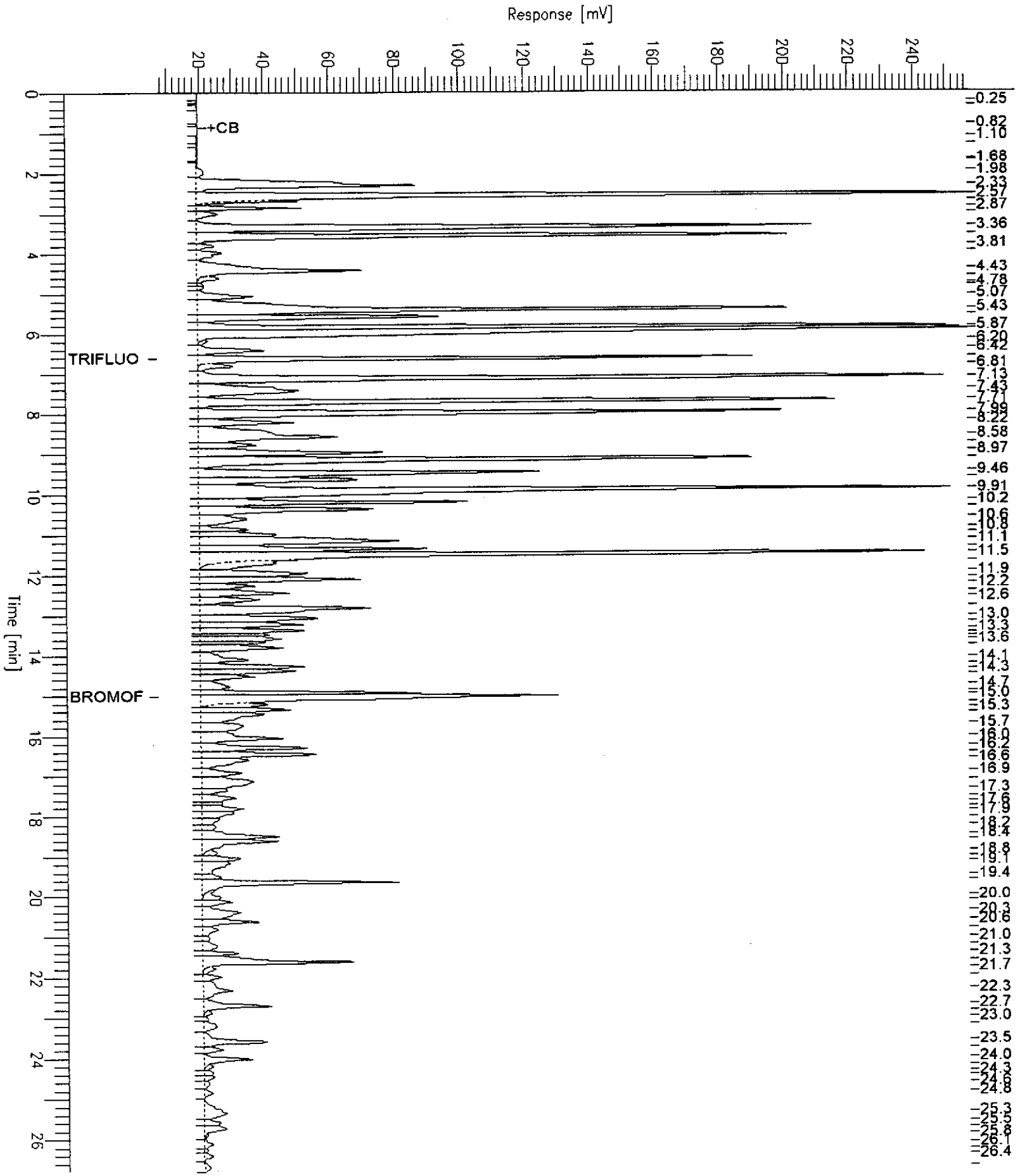
Sample #: ph<2 Page 1 of 1
Date : 2/28/99 09:26 AM
Time of Injection: 2/28/99 08:59 AM
Low Point : 7.47 mV High Point : 257.47 mV
Plot Scale: 250.0 mV



GC19 TVH 'X' Data File (FID)

Sample Name : 138160-004b,46516,tvh only
FileName : G:\GC19\DATA\057X064.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 7 mV

Sample #: ph<2 Page 1 of 1
Date : 3/1/99 06:02 PM
Time of Injection: 2/28/99 02:20 PM
Low Point : 6.86 mV High Point : 256.86 mV
Plot Scale: 250.0 mV



Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138160-005	MW-5	46516	02/24/99	02/28/99	02/28/99	
138160-006	MW-6	46516	02/24/99	02/28/99	02/28/99	

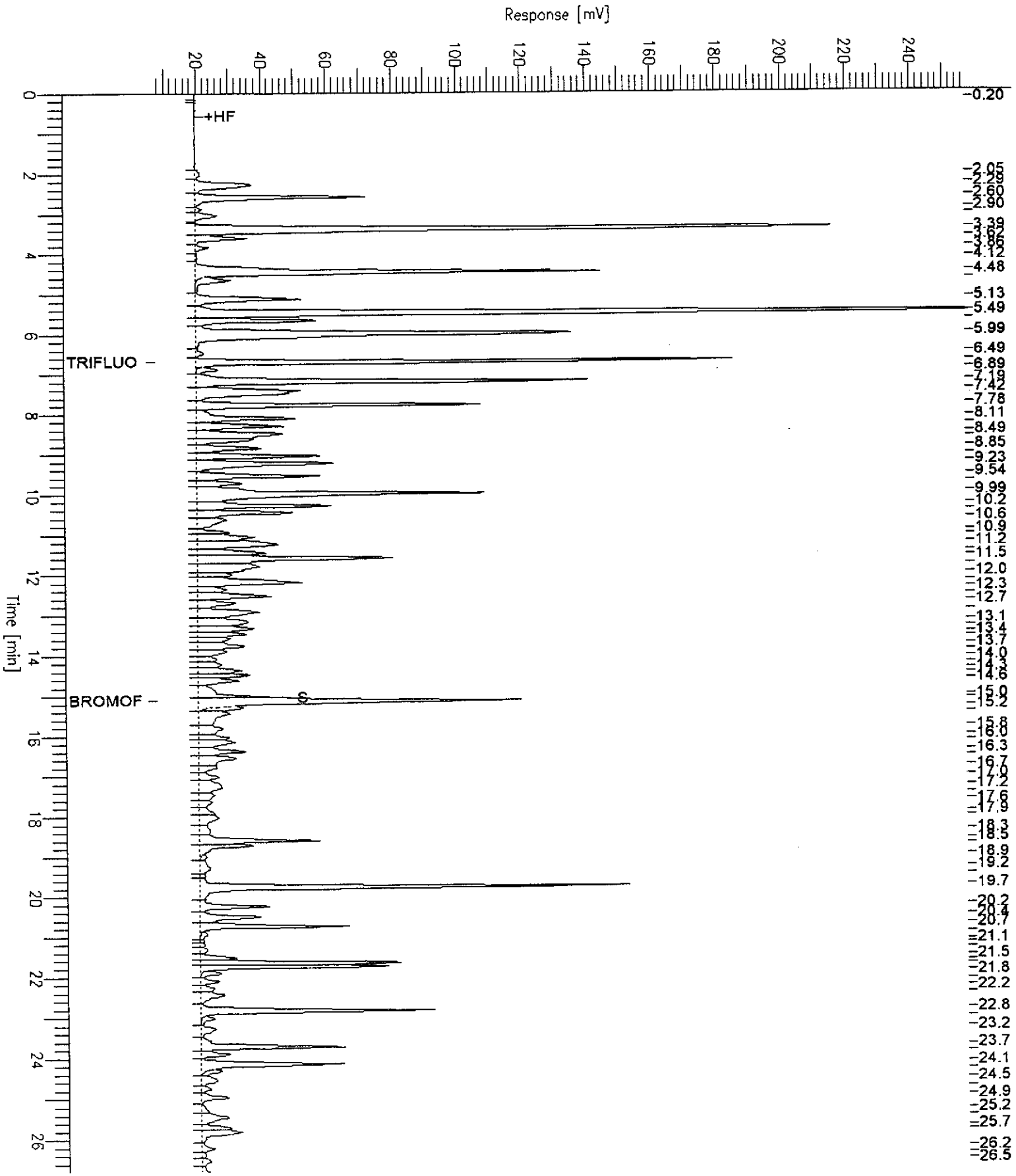
Matrix: Water

Analyte	Units	138160-005	138160-006
Diln Fac:		1	1
Gasoline C7-C12	ug/L	<50	1600
Surrogate			
Trifluorotoluene	%REC	99	98
Bromofluorobenzene	%REC	98	131

GC19 TVH 'X' Data File (FID)

Sample Name : 138160-006b,46516,tvh only
FileName : G:\GC19\DATA\057X058.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 7 mV

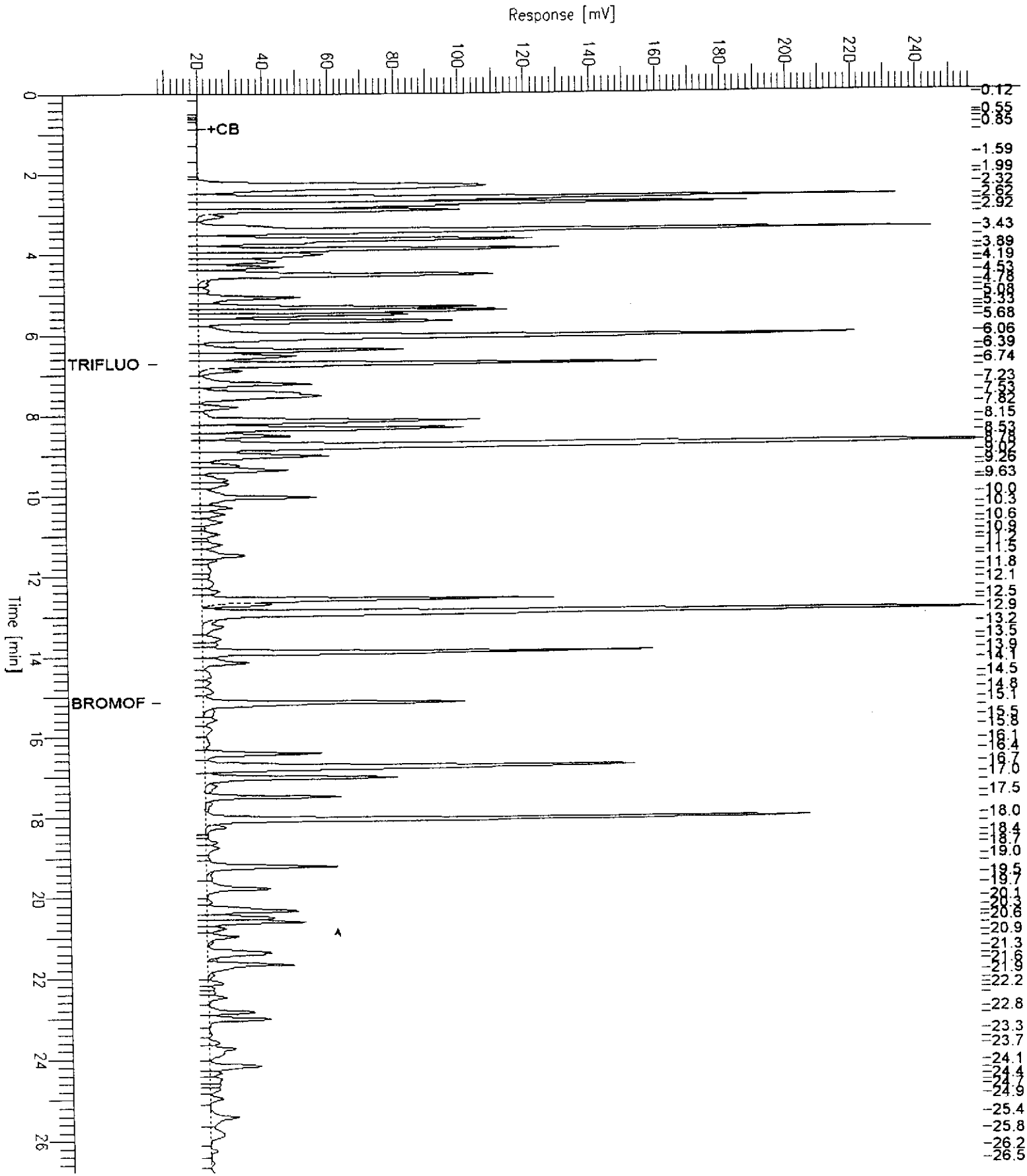
Sample #: ph<2 Page 1 of 1
Date : 3/1/99 05:50 PM
Time of Injection: 2/28/99 10:19 AM
Low Point : 7.00 mV High Point : 257.00 mV
Plot Scale: 250.0 mV



GC19 TVH 'X' Data File (FID)

Sample Name : ccv,99ws7126,46516
FileName : G:\GC19\DATA\057X052.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 7 mV

Sample #: gas
Date : 2/28/99 06:45 AM
Time of Injection: 2/28/99 06:19 AM
Low Point : 7.34 mV High Point : 257.34 mV
Plot Scale: 250.0 mV



Lab #: 138160

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

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

METHOD BLANK

Matrix:	Water	Prep Date:	02/27/99
Batch#:	46516	Analysis Date:	02/27/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC91818

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	93	53-150
Bromofluorobenzene	91	53-149

Lab #: 138160 BATCH QC REPORT Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 46516
Units: ug/L
Diln Fac: 1

Prep Date: 02/28/99
Analysis Date: 02/28/99

LCS Lab ID: QC91815

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1889	2000	94	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	90	53-150
Bromofluorobenzene	98	53-149

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 #: 138160

BATCH QC REPORT

Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

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

Analysis Method: EPA 8015M
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: MW-1
Lab ID: 138160-001
Matrix: Water
Batch#: 46516
Units: ug/L
Diln Fac: 1

Sample Date: 02/24/99
Received Date: 02/25/99
Prep Date: 02/28/99
Analysis Date: 02/28/99

MS Lab ID: QC91819

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	201.4	2294	105	69-131

Surrogate	%Rec	Limits
Trifluorotoluene	96	53-150
Bromofluorobenzene	128	53-149

MSD Lab ID: QC91820

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	2199	100	69-131	4	13

Surrogate	%Rec	Limits
Trifluorotoluene	98	53-150
Bromofluorobenzene	122	53-149

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

Curtis & Tompkins, Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

Client:	Subsurface Consultants	Analysis Method:	EPA 8260A
Project#:	609.004	Prep Method:	EPA 5030
Location:	2250 Telgraph Av. Oakland		
Field ID:	MW-1	Sampled:	02/24/99
Lab ID:	138160-001	Received:	02/25/99
Matrix:	Water	Extracted:	03/01/99
Batch#:	46522	Analyzed:	03/01/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	101	90-109
Bromofluorobenzene	96	82-118

Curtis & Tompkins Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

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

Analysis Method: EPA 8260A
Prep Method: EPA 5030

Field ID: MW-2
Lab ID: 138160-002
Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Sampled: 02/24/99
Received: 02/25/99
Extracted: 03/02/99
Analyzed: 03/02/99

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	102	90-109
Bromofluorobenzene	97	82-118

Curtis & Tompkins, Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2260 Telgraph Av. Oakland

Analysis Method: EPA 8260A
Prep Method: EPA 5030

Field ID: MW-3
Lab ID: 138160-003
Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Sampled: 02/24/99
Received: 02/25/99
Extracted: 03/02/99
Analyzed: 03/02/99

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	102	90-109
Bromofluorobenzene	98	82-118

Curtis & Tompkins, Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

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

Analysis Method: EPA 8260A
Prep Method: EPA 5030

Field ID: MW-4
Lab ID: 138160-004
Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Sampled: 02/24/99
Received: 02/25/99
Extracted: 03/02/99
Analyzed: 03/02/99

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	4.3	0.5
Toluene	0.64	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.54	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	101	90-109
Bromofluorobenzene	99	82-118

Curtis & Tompkins, Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

Client: Subsurface Consultants
Project#: 609.004
Location: 2350 Telgraph Av. Oakland

Analysis Method: EPA 8260A
Prep Method: EPA 5030

Field ID: MW-5
Lab ID: 138160-005
Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Sampled: 02/24/99
Received: 02/25/99
Extracted: 03/02/99
Analyzed: 03/02/99

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	100	90-109
Bromofluorobenzene	99	82-118

Curtis & Tompkins, Ltd.

Aromatic Volatile Organics
EPA 8020 Analyte List

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

Field ID:	MW-6	Sampled:	02/24/99
Lab ID:	138160-006	Received:	02/25/99
Matrix:	Water	Extracted:	03/02/99
Batch#:	46522	Analyzed:	03/02/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
MTBE	2.3	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	0.56	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Recovery	Recovery Limits
Toluene-d8	100	90-109
Bromofluorobenzene	97	82-118

Curtis & Tompkins Ltd.

Lab #: 138160

BATCH QC REPORT

Purgeable Aromatics by GC/MS
EPA 8020 Analyte List

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

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Prep Date: 03/01/99
Analysis Date: 03/01/99

MB Lab ID: QC91847

Analyte	Result	Reporting Limit
MTBE	ND	2.0
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%Rec	Recovery Limits
Toluene-d8	100	90-109
Bromofluorobenzene	98	82-118

Lab #: 138160 BATCH QC REPORT Curtis & Tompkins Ltd.

Purgeable Aromatics by GC/MS
EPA 8020 Analyte List

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

Analysis Method: EPA 8260A
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 46522
Units: ug/L
Diln Fac: 1

Prep Date: 03/01/99
Analysis Date: 03/01/99

BS Lab ID: QC91844

Analyte	Spike Added	BS	%Rec #	Limits
Benzene	50	49.78	100	71-127
Toluene	50	51.83	104	73-129

Surrogate	%Rec	Limits
Toluene-d8	100	90-109
Bromofluorobenzene	100	82-118

BSD Lab ID: QC91845

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Benzene	50	50.19	100	71-127	1	10
Toluene	50	53.57	107	73-129	3	10

Surrogate	%Rec	Limits
Toluene-d8	102	90-109
Bromofluorobenzene	101	82-118

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

CHAIN OF CUSTODY FORM

138160

PAGE 1 OF 1

PROJECT NAME: 2250 Telegraph Ave

JOB NUMBER: 609.004 LAB: CET

PROJECT CONTACT: Jerian alexander TURNAROUND: Standard

SAMPLED BY: John R Rasmussen REQUESTED BY: JRR

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR	CONTAINERS: VOA	LITER	PINT	TUBE	METHOD PRESERVED: HCL VOA	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: EPA 8015 TPH	EPA 8015 TVHg	EPA 8021 BTEX/MTBE
1	mw-1	X				6	1			X			X		02	24	99	1115		X	X	X
2	mw-2	X				6	1			X			X					1215		X	X	X
3	mw-3	X				6	1			X			X					1245		X	X	X
4	mw-4	X				6	1			X			X					1330		X	X	X
5	mw-5	X				6	1			X			X					1415		X	X	X
6	mw-6	X				6	1			X			X					1500		X	X	X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
John R Rasmussen	2/24/99 0900	[signature]	2/25/99 1110
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:

Subsurface Consultants, Inc.
171 - 12th Street, Suite 202, Oakland, CA 94607
(510) 268-0461 - FAX: (510) 268-0137
3736 Mt. Diablo Blvd., Ste. 200, Lafayette, CA 94549
(925) 299-7960 - (925) 299-7970

GROUNDWATER DEPTHS

Project Name: 2250 Telegraph Ave

Job No.: 609.004

Measured by: JRL

Well	Date	Time	Groundwater Depth (feet)	Comments
mw-1	2/24/99	1015	9.74	
2			9.91	
3			8.58	
4			10.79	
5			6.86	
6	↓	1030	9.32	

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-1
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JRR
Date: 2/24/99
TOC Elevation: _____
Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 18.50 feet
Depth to Groundwater (below TOC) 9.74 feet
Feet of Water in Well 8.76 feet
Depth to Groundwater When 80% Recovered _____ feet
Casing Volume (feet of water x Casing DIA ² x 0.0408) 5.5 L or 1.4 gal gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none observed in bailer
Purge Method disp bailer

FIELD MEASUREMENTS

~~Gallons~~ Liters Removed	pH	Temp (°c)	Conductivity mS ~~(micromhos/cm)~~	Salinity S%	Comments
0	7.30	18.5	17.00		
5.5	7.32	18.0	13.90		
11.0	7.35	18.0	13.07		
16.5	7.35	18.0	13.1		
					H2O VL grey, no odor

Total Gallons Purged 4.25 gallons
Depth to Groundwater Before Sampling (below TOC) _____ feet
Sampling Method disp bailer
Containers Used 6 (40 ml) / 1 (liter) / _____ (pint)

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-2
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JRR
Date: 2/24/99
TOC Elevation:
Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 17.00 feet
Depth to Groundwater (below TOC) 9.91 feet
Feet of Water in Well 7.09 feet
Depth to Groundwater When 80% Recovered feet
Casing Volume (feet of water x Casing DIA ² x 0.0408) 4.5 L or 1.2 gal gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none observed in bailer
Purge Method disp bailer

FIELD MEASUREMENTS

~~Gallons~~ Liters Removed	pH	Temp (°C)	Conductivity mS ~~(micromhos/cm)~~	Salinity S‰	Comments
0	7.66	18.8	10.2		
4.5	7.35	18.0	10.2		
9.0	7.40	18.0	10.4		
13.5	7.40	18.0	10.4		turbid, no apparent odor

Total Gallons Purged 4 gallons
Depth to Groundwater Before Sampling (below TOC) feet
Sampling Method disp bailer
Containers Used 6 (40 ml) / 1 (liter) / (pint)

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-3
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JRR
Date: 2/24/99
TOC Elevation:
Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 18.5 feet
Depth to Groundwater (below TOC) 8.58 feet
Feet of Water in Well 9.92 feet
Depth to Groundwater When 80% Recovered feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 6 L or 1.6 gal gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none observed in bailer
Purge Method disp bailer

FIELD MEASUREMENTS

~~Gallons~~ Liters Removed	pH	Temp (°C)	Conductivity mS (~~micromhos/cm~~)	Salinity S%	Comments
0	7.53	18.7	7.0		
4	7.54	18.6	6.8		
12	7.50	18.0	6.8		
18	7.5	18.0	6.8		Wtr clear, no odor

Total Gallons Purged 5.0 gallons
Depth to Groundwater Before Sampling (below TOC) feet
Sampling Method disp bailer
Containers Used 6 (40 ml) / 1 (liter) / (pint)

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-4
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JRR
Date: 2/24/99
TOC Elevation:
Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 18.5 feet
Depth to Groundwater (below TOC) 10.79 feet
Feet of Water in Well 7.71 feet
Depth to Groundwater When 80% Recovered feet
Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 4.75 L or 1.25 gal gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none observed in bailer
Purge Method disp bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°C)	Conductivity ~~(micromhos/cm)~~ mS	Salinity S%	Comments
0	7.45	18.5	13.1		
1.25	7.48	18.0	13.75		
2.5	7.45	18.0	13.5		
3.75	7.44	18.0	13.45		HC odor

Total Gallons Purged 3.75 gallons
Depth to Groundwater Before Sampling (below TOC) feet
Sampling Method disp bailer
Containers Used 6 (40 ml) / 1 (liter) / (pint)

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave
Well Number: MW-5
Job No.: 609.004
Well Casing Diameter: 2 inch
Sampled By: JRL
Date: 2/24/99
TOC Elevation:
Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 18.0 feet
Depth to Groundwater (below TOC) 6.86 feet
Feet of Water in Well 11.14 feet
Depth to Groundwater When 80% Recovered feet
Casing Volume (feet of water x Casing DIA ² x 0.0408) 7L or 1.8 gal gallons
Depth Measurement Method Tape & Paste / (Electronic Sounder) / Other
Free Product none observed in bailer
Purge Method disp bailer

FIELD MEASUREMENTS

~~Gallons~~ Liters Removed	pH	Temp (°C)	Conductivity ~~(micromhos/cm)~~ mS	Salinity S%	Comments
0	~~Before~~ 7.50	17.0	5.9		
7	7.50	17.0	6.09		
14	7.37	17.0	6.15		
21	7.35	17.0	6.0		lt brn, sed, no odor

Total Gallons Purged 6 gallons
Depth to Groundwater Before Sampling (below TOC) feet
Sampling Method disp bailer
Containers Used 6 (40 ml) / 1 (liter) / (pint)

Subsurface Consultants

JOB NUMBER | DATE | APPROVED | PLATE

WELL SAMPLING FORM

Project Name: 2250 Telegraph Ave

Job No.: 609.004

Sampled By: JRR

TOC Elevation:

Well Number: MW-6

Well Casing Diameter: 2 inch

Date: 2/24/99

Weather: Cool, Sunny

Depth to Casing Bottom (below TOC) 19.0 feet

Depth to Groundwater (below TOC) 9.32 feet

Feet of Water in Well 9.68 feet

Depth to Groundwater When 80% Recovered feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 6 L or 1.6 gal gallons

Depth Measurement Method Tape & Paste / **Electronic Sounder** (circled) / Other

Free Product none observed in bailer

Purge Method disp bailer

FIELD MEASUREMENTS

~~Gallons~~ Liters Removed	pH	Temp (°c)	Conductivity ~~(micromhos/cm)~~ mS	Salinity S%	Comments
0	7.10	18.0	14.70		
6	7.05	18.0	15.05		
12	7.05	18.0	14.70		
18	7.05	18.0	14.75		[illegible] petro odor

Total Gallons Purged 5 gallons

Depth to Groundwater Before Sampling (below TOC) feet

Sampling Method disp bailer

Containers Used 6 40 ml 1 liter pint

Subsurface Consultants

JOB NUMBER	DATE	APPROVED	PLATE