R. William Rudolph, Jr., PE
Thomas E. Cundey, PE
Jeriann N. Alexander, PE

HAZMAT
94 OCT 20 PM 4:08

October 18, 1994
SCI 469.009

Mr. Robert Mibach
Director, Physical Plant
Peralta Community College District
333 East 8th Street
Oakland, California 94606

Quarterly Groundwater Monitoring
August 1994 Event
College of Alameda
555 Atlantic Avenue
Alameda, California

Dear Mr. Mibach:

This letter records the results of the August 1994 groundwater monitoring event for the referenced site. Monitoring has been implemented in accordance with Regional Water Quality Control Board and Alameda County Health Care Services Agency (ACHCSA) guidelines due to the presence of petroleum hydrocarbons in the soil beneath previous underground fuel storage tanks.

Groundwater Level Measurements and Sampling

Groundwater level measurements from all five wells were obtained on August 23, 1994. Groundwater elevation contours are presented on the Site Plan, Plate 1.

The sampling event was performed between August 23 and August 25, 1994. Initially, the slow recharging wells, MW-1 and MW-3, were purged by bailing them dry with a disposable bailer. Wells MW-4 and MW-5 were purged by bailing with a disposable bailer until temperature, pH, and conductivity measurements had stabilized. Well MW-2 is being sampled semi-annually and was not sampled during this event. Well sampling forms are attached.

The samples were retained in glass containers pre-cleaned by the supplier in accordance with EPA protocol. The samples were placed in an ice chest and transmitted to Curtis and Tompkins, Ltd., a State of California Department of Health Services certified analytical laboratory. The testing program for this event included analyses for total extractable hydrocarbons (TEH), benzene, toluene,

ethylbenzene, and xylenes (BTEX), and oil and grease. The results of all analytical testing events are presented in Table 1. Analytical test reports and Chain-of-Custody forms are attached.

Conclusions

Groundwater level data indicate that groundwater currently flows in a north-northwest direction at a gradient of about 1 percent. Groundwater elevation data is summarized in Table 2.

Petroleum hydrocarbons reported as diesel were detected during this event in the groundwater at well MW-1 and MW-4, near the previous fuel oil tank. Extractable hydrocarbons reported as diesel were also detected in the groundwater samples obtained from wells MW-3 and MW-5, near the former waste oil tank area The analytical laboratory has indicated that the sample chromatograms resemble a light weight oil but do not resemble diesel. It appears that these wells are being impacted by a seperate release.

E. Future Monitoring

In accordance with the monitoring schedule, the next monitoring event will occur in November 1994. During this event, we propose to obtain water level readings from all the wells and samples from wells MW-1, MW-2, MW-3 and MW-5. The groundwater samples will be analyzed for total extractable hydrocarbons, total oil and grease, and BTXE. If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/96)

MFW:JNA:RWR:sld

2 copies submitted

Attachments: Table 1 - Contaminant Concentrations in Groundwater
Table 2 - Groundwater Elevations
Plate 1 - Site Plan
Plate 2 - Study Area Plan
Analytical Test Report
Chain-of-Custody Record
Well Sampling Forms

cc: √ Ms. Juliet Shin
Alameda County Health Care Services Agency
Hazardous Materials Division
80 Swan Way, Room #200
Oakland, California 94621

Table 2.
Groundwater Elevations

Well	TOC Elevation	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
MW-1	12.16	02/24/92	1.64	10.52
		03/09/92	4.28	7.88
		03/24/92	4.33	7.83
		04/28/92	4.54	7.62
		06/29/92	5.92	6.24
		07/27/92	5.74	6.42
		08/27/92	6.04	6.12
		09/24/92	6.16	6.00
		12/16/92	6.19	5.97
		01/21/93	6.83	5.33
		02/07/94	6.01	6.15
		05/03/94	5.03	7.13
		06/02/94	5.14	7.02
		08/23/94	5.20	6.96
MW-2	11.07	02/24/92	4.45	6.62
		01/21/93	6.83	4.24
		03/24/92	3.73	7.34
		04/28/92	4.25	6.82
		06/29/92	4.40	6.67
		07/27/92	4.00	7.07
		08/27/92	4.33	6.74
		09/24/92	4.36	6.71
		12/16/92	4.08	6.99
		01/21/93	4.40	6.67
		02/07/94	3.60	7.47
		05/03/94	4.04	7.03
		06/02/94	4.17	6.90
		08/23/94	4.28	6.79
MW-3	12.65	02/24/92	13.12	-0.47
		03/09/92	8.75	3.90
		03/24/92	6.87	5.78
		04/28/92	6.31	6.34
		06/04/92	7.10	5.55
		06/29/92	10.78	1.87
		07/27/92	6.88	5.77
		09/24/92	7.38	5.27
		12/16/92	6.50	6.15
		01/21/92	10.25	2.40

plug → discrepancy

Table 2.
Groundwater Elevations
(continued)

Well	TOC Elevation	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
		02/07/94	11.44	1.21
		05/03/94	7.02	5.63
		06/02/94	9.15	3.50
		08/23/94	7.13	5.52
MW-4	12.22	02/07/94	5.92	6.30
		05/03/94	5.50	6.72
		06/02/94	5.17	7.05
		08/23/94	5.73	6.49
MW-5	12.69	02/07/94	4.89	7.80
		05/03/94	4.50	8.19
		06/02/94	4.49	8.20
		08/23/94	4.83	7.86

TOC = Top of Casing
Groundwater depth measured below TOC
TOC elevation surveyed relative to mean sea level

Table 1.
Contaminant Concentrations in Groundwater

Sampling Date / Chemicals	TVH (ug/l)	TEH Kerosene Range (ug/l)	TEH Diesel Range (ug/l)	TOG (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-Benzene (ug/l)	Total Xylenes (ug/l)	EPA 8010
Fuel Oil Tank Area									
MW-1 02/19/92	--	<50	94	--	<0.5	<0.5	<0.5	<0.5	--
06/29/92	--	<50	110	--	<0.5	<0.5	<0.5	<0.5	--
09/29/92	--	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--
12/22/92	--	<50	180	--	<0.5	<0.5	<0.5	<0.5	--
01/26/94	--	60	<50	<5	<0.5	<0.5	<0.5	<0.5	--
05/04/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
08/25/94	--	*	480	<5	<0.5	<0.5	<0.5	<0.5	--
MW-4 01/26/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
08/25/94	--	*	530	<5	<0.5	<0.5	<0.5	<0.5	--
Gasoline Tank Area									
Tank Excavation 08/15/91	800	--	--	--	78	99	10	52	--
MW-2 02/19/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
06/29/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
09/29/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
12/22/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
01/25/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
05/04/94	--	*	50	<5	<0.5	<0.5	<0.5	<0.5	--

Waste Oil Tank Area

Benzene Toluene

MW-3	02/19/92	<5000+	**680**	<50	<5	<50	<50	<50	**84**	ND
	06/29/92	<50	*	**190**	<5	<0.5	<0.5	<0.5	<0.5	ND
	09/29/92	<50	*	**410**	<5	<0.5	<0.5	<0.5	<0.5	ND
	12/21/92	<500	*	**400**	<5	<5	<5	<5	<5	ND
	01/26/94	--	**70**	<50	<5	<0.5	<0.5	<0.5	**0.8**	--
	05/05/94	--	<50	**140**	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**900**	<5	**14.5**	**5.1**	<0.5	<0.5	--
MW-5	01/25/94	--	*	**5,200++**	<5	<0.5	<0.5	<0.5	<0.5	--
	05/04/94	--	*	**3,500++**	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**5,000++**	<5	<0.5	<0.5	<0.5	<0.5	--

TVH = Total volatile hydrocarbons as gasoline, EPA 8015/5030 modified
TEH = Total extractable hydrocarbons, EPA 3550/8015 modified
TOG = Total oil and grease, EPA 3550 and SMWW 17:5520 B&F
ug/l = Micrograms per liter or parts per billion (ppb)
mg/l = Milligrams per liter or parts per million (ppm)
-- = Test not requested
+ = Sample diluted due to foaming during purge and trap extraction
ND = Not detected at or above reporting limits. Reporting limits vary from 1.0 to 20 ug/l. See test reports for individual reporting limits.
* = Quantitated as diesel range
++ = Laboratory indicates that the sample chromatogram resembles hydraulic oil. Verbal or on reports. → lab report just says that it doesn't resemble diesel fuel.

Compared w/ stds. 11/21/94
Will mail copies of chromatograms.

Table 2.
Groundwater Elevations

Well	TOC Elevation	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
MW-1	12.16	02/24/92	1.64	10.52
		03/09/92	4.28	7.88
		03/24/92	4.33	7.83
		04/28/92	4.54	7.62
		06/29/92	5.92	6.24
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		08/27/92	6.04	6.12
		09/24/92	6.16	6.00
		12/16/92	6.19	5.97
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		03/24/92	3.73	7.34
		04/28/92	4.25	6.82
		06/29/92	4.40	6.67
		07/27/92	4.00	7.07
		08/27/92	4.33	6.74
		09/24/92	4.36	6.71
		12/16/92	4.08	6.99
		01/21/93	4.40	6.67
		02/07/94	3.60	7.47
		05/03/94	4.04	7.03
		06/02/94	4.17	6.90
		08/23/94	4.28	6.79
MW-3	12.65	02/24/92	13.12	-0.47
		03/09/92	8.75	3.90
		03/24/92	6.87	5.78
		04/28/92	6.31	6.34
		06/04/92	7.10	5.55
		06/29/92	10.78	1.87
		07/27/92	6.88	5.77
		09/24/92	7.38	5.27
		12/16/92	6.50	6.15
		01/21/92	10.25	2.40

Table 2.
Groundwater Elevations
(continued)

Well	TOC Elevation	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
		02/07/94	11.44	1.21
		05/03/94	7.02	5.63
		06/02/94	9.15	3.50
		08/23/94	7.13	5.52
MW-4	12.22	02/07/94	5.92	6.30
		05/03/94	5.50	6.72
		06/02/94	5.17	7.05
		08/23/94	5.73	6.49
MW-5	12.69	02/07/94	4.89	7.80
		05/03/94	4.50	8.19
		06/02/94	4.49	8.20
		08/23/94	4.83	7.86

TOC = Top of Casing
Groundwater depth measured below TOC
TOC elevation surveyed relative to mean sea level

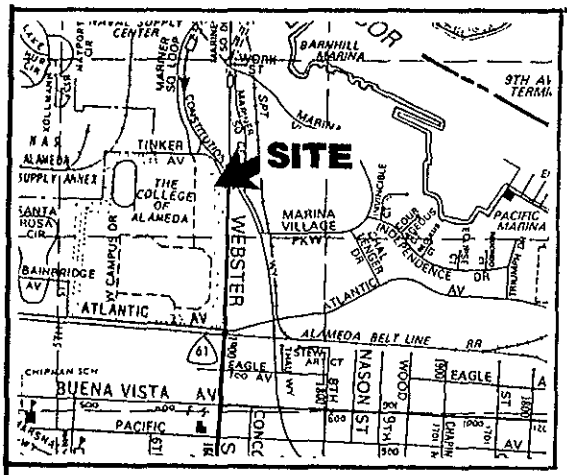
Table 1.
Contaminant Concentrations in Groundwater

8010 Sampling Date / Chemicals		TVH (ug/l)	TEH Kerosene Range (ug/l)	TEH Diesel Range (ug/l)	TOG (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-Benzene (ug/l)	Total Xylenes (ug/l)	EPA
Fuel Oil Tank Area										
MW-1	02/19/92	--	<50	**94**	--	<0.5	<0.5	<0.5	<0.5	--
	06/29/92	--	<50	**110**	--	<0.5	<0.5	<0.5	<0.5	--
	09/29/92	--	<50	<50	--	<0.5	<0.5	<0.5	<0.5	--
	12/22/92	--	<50	**180**	--	<0.5	<0.5	<0.5	<0.5	--
	01/26/94	--	**60**	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	05/04/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**480**	<5	<0.5	<0.5	<0.5	<0.5	--
MW-4	01/26/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**530**	<5	<0.5	<0.5	<0.5	<0.5	--
Gasoline Tank Area										
Tank Excavation	08/15/91	**800**	--	--	--	**78**	**99**	**10**	**52**	--
MW-2	02/19/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
	06/29/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
	09/29/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
	12/22/92	<50	--	--	--	<0.5	<0.5	<0.5	<0.5	--
	01/25/94	--	<50	<50	<5	<0.5	<0.5	<0.5	<0.5	--
	05/04/94	--	*	**50**	<5	<0.5	<0.5	<0.5	<0.5	--

Waste Oil Tank Area

MW-3	02/19/92	<5000+	**680**	<50	<5	<50	<50	<50	**84**	ND
	06/29/92	<50	*	**190**	<5	<0.5	<0.5	<0.5	<0.5	ND
	09/29/92	<50	*	**410**	<5	<0.5	<0.5	<0.5	<0.5	ND
	12/21/92	<500	*	**400**	<5	<5	<5	<5	<5	ND
	01/26/94	--	**70**	<50	<5	<0.5	<0.5	<0.5	**0.8**	--
	05/05/94	--	<50	**140**	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**900**	<5	**14.5**	**5.1**	<0.5	<0.5	--
MW-5	01/25/94	--	*	**5,200++**	<5	<0.5	<0.5	<0.5	<0.5	--
	05/04/94	--	*	**3,500++**	<5	<0.5	<0.5	<0.5	<0.5	--
	08/25/94	--	*	**5,000++**	<5	<0.5	<0.5	<0.5	<0.5	--

TVH = Total volatile hydrocarbons as gasoline, EPA 8015/5030 modified
TEH = Total extractable hydrocarbons, EPA 3550/8015 modified
TOG = Total oil and grease, EPA 3550 and SMWW 17:5520 B&F
ug/l = Micrograms per liter or parts per billion (ppb)
mg/l = Milligrams per liter or parts per million (ppm)
-- = Test not requested
+ = Sample diluted due to foaming during purge and trap extraction
ND = Not detected at or above reporting limits. Reporting limits vary from 1.0 to 20 ug/l. See test reports for individual reporting limits.
* = Quantitated as diesel range
++ = Laboratory indicates that the sample chromatogram resembles hydraulic oil. Verbal or on reports.



VICINITY MAP

APPROXIMATE SCALE (feet)

0 300 600

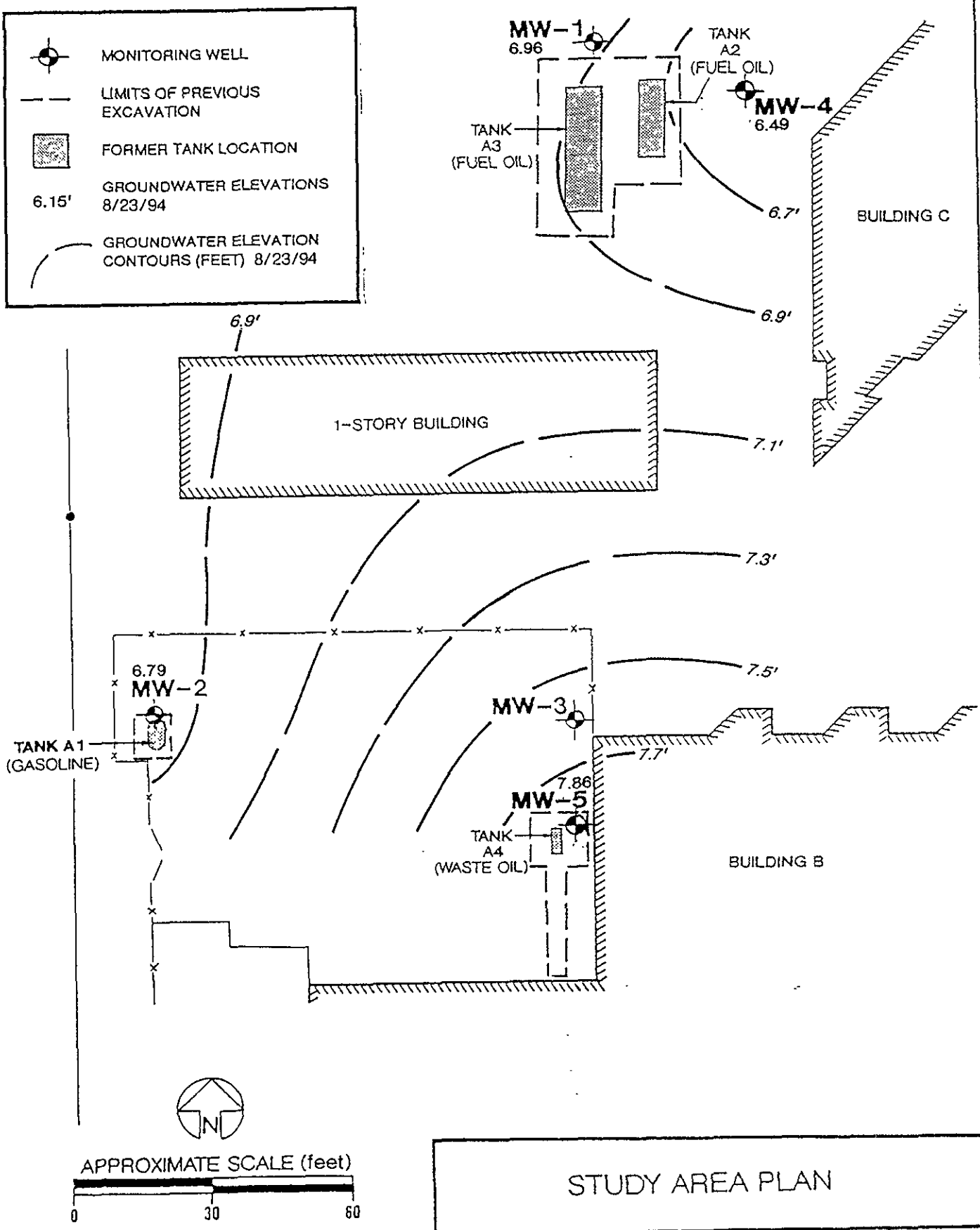
SITE PLAN

Subsurface Consultants

COLLEGE OF ALAMEDA – ALAMEDA, CA

JOB NUMBER	DATE	APPROVED
469.006	3/12/92	MW

PLATE 1



STUDY AREA PLAN

Subsurface Consultants

COLLEGE OF ALAMEDA – ALAMEDA, CA

JOB NUMBER	DATE	APPROVED	PLATE
469.009	9/21/94	MW	2

WELL SAMPLING FORM

Project Name: College of Alameda Well Number: MW-1

Job No.: 469.009 Well Casing Diameter: 2 inch

Sampled By: Chris O'Dea Date: 8/23/94

TOC Elevation: _____ Weather: _____

Depth to Casing Bottom (below TOC) _____ feet

Depth to Groundwater (below TOC) 5.20 feet

Feet of Water in Well _____ feet

Depth to Groundwater When 80% Recovered _____ feet

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

Depth Measurement Method Tape & Paste / Electronic Sounder / Other

Free Product _____

Purge Method _____

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments

Total Gallons Purged Dry @ 2 gallons gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method _____

Containers Used _____ 40 ml _____ liter _____ pint

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE

WELL SAMPLING FORM

Project Name: College of Alameda Well Number: MW-3

Job No.: 469.009 Well Casing Diameter: 2 inch

Sampled By: Chris O'Dea Date: 8/23/94

TOC Elevation: _____ Weather: _____

Depth to Casing Bottom (below TOC) _____ feet

Depth to Groundwater (below TOC) 7.13 feet

Feet of Water in Well _____ feet

Depth to Groundwater When 80% Recovered _____ feet

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

Depth Measurement Method Tape & Paste / Electronic Sounder / Other

Free Product _____

Purge Method _____

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments

Total Gallons Purged Dry @ 2 gallons gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method _____

Containers Used _____ 40 ml _____ liter _____ pint

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE

WELL SAMPLING FORM

Project Name: COLLEGE OF ALAMEDA Well Number: MW-4

Job No.: 469.009 Well Casing Diameter: 2 inch

Sampled By: Dennis Alexander Date: 8/25/94

TOC Elevation: _____ Weather: sunny

Depth to Casing Bottom (below TOC) 13.00 feet

Depth to Groundwater (below TOC) 5.78 feet

Feet of Water in Well 7.22 feet

Depth to Groundwater When 80% Recovered 7.22 feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.18 gallons

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

Free Product none

Purge Method disposable bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	6.85	20.0	23,000		Semi-Clear/Rotten egg odo
1	6.84	20.0	23,500		murky - same odo
3	7.00	19.5	21,750		increasing turbidity
					dry @ 4 gals.

Total Gallons Purged 4 gallons

Depth to Groundwater Before Sampling (below TOC) _____ feet

Sampling Method teflon bailer

Containers Used 3 (40 ml) 2 (liter) _____ (pint)

Subsurface Consultants	COLLEGE OF ALAMEDA - ALAMEDA CA			PLATE
	JOB NUMBER	DATE	APPROVED	
	469.009			

WELL SAMPLING FORM

Project Name: COLLEGE OF ALAMEDA — Well Number: MW-5

Job No.: 469.009 — Well Casing Diameter: 2 inch

Sampled By: Dennis Alexander — Date: 8/25/94

TOC Elevation: _____ — Weather: Foggy

Depth to Casing Bottom (below TOC) 13.00 feet

Depth to Groundwater (below TOC) 4.82 feet

Feet of Water in Well 8.18 feet

Depth to Groundwater When 80% Recovered 6.46 feet

Casing Volume (feet of water x Casing DIA ^{2} x 0.0408) 1.34 gallons

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

Free Product none

Purge Method disposable bailer

FIELD MEASUREMENTS

Gallons Removed	pH	Temp (°c)	Conductivity (micromhos/cm)	Salinity S%	Comments
0	7.12	22.0	8000		clear/no odor
1	7.05	22.0	11,500		semi-clear
3	7.05	21.5	12,000		↓
5	7.02	21.5	12,250		↓

Total Gallons Purged 5 gallons

Depth to Groundwater Before Sampling (below TOC) 4.83 feet

Sampling Method teflon bailer

Containers Used 3 (40 ml) — 2 (liter) — _____ (pint)

Subsurface Consultants	COLLEGE OF ALAMEDA - ALAMEDA CA			PLATE
	JOB NUMBER	DATE	APPROVED	
	469.009			

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

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
171 12th Street
Suite 201
Oakland, CA 94608

Date: 09-SEP-94
Lab Job Number: 117080
Project ID: 469.009
Location: College of Alameda

Reviewed by: Mary Plissar

Reviewed by: Cynthia E. Schlosser

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 117080
CLIENT: SUBSURFACE CONSULTANTS, INC.
PROJECT ID: 469.009
LOCATION: COLLEGE OF ALAMEDA

DATE SAMPLED: 08/25/94
DATE RECEIVED: 08/25/94
DATE EXTRACTED: 08/30/94
DATE ANALYZED: 09/07/94
DATE REPORTED: 09/09/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
117080-1	MW-1	**	480 *	50
117080-2	MW-3	**	900 *	50
117080-3	MW-4	**	530 *	50
117080-4	MW-5	**	5,000 *	50
117080	METHOD BLANK	ND	ND	50

** Kerosene range not reported due to overlap of hydrocarbon ranges.

* Sample chromatogram does not resemble diesel standard.

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

QA/QC SUMMARY:

RPD, %	6
RECOVERY, %	109

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 117080

Project Name: College of Alameda
Project Number: 469.009

Report Date: 09 September 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
117080-001	MW-1	Water	25-AUG-94	25-AUG-94	31-AUG-94	ND	mg/L	5	TR	16041
117080-002	MW-3	Water	25-AUG-94	25-AUG-94	31-AUG-94	ND	mg/L	5	TR	16041
117080-003	MW-4	Water	25-AUG-94	25-AUG-94	31-AUG-94	ND	mg/L	5	TR	16041
117080-004	MW-5	Water	25-AUG-94	25-AUG-94	31-AUG-94	ND	mg/L	5	TR	16041

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: College of Alameda
Project Number: 469.009

Laboratory Login Number: 117080
Report Date: 09 September 94

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 16041**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	31-AUG-94

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	84%	SMWW 17:5520BF	31-AUG-94
BSD	88%	SMWW 17:5520BF	31-AUG-94

		Control Limits
Average Spike Recovery	86%	80% - 120%
Relative Percent Difference	4.6%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 117080
CLIENT: SUBSURFACE CONSULTANTS, INC.
PROJECT ID: 469.009
LOCATION: COLLEGE OF ALAMEDA

DATE SAMPLED: 08/25/94
DATE RECEIVED: 08/25/94
DATE ANALYZED: 09/01/94
DATE REPORTED: 09/09/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8240
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
117080-1	MW-1	ND	ND	ND	ND	0.5
117080-3	MW-4	ND	ND	ND	ND	0.5
117080-4	MW-5	ND	ND	ND	ND	0.5
117080	METHOD BLANK	ND	ND	ND	ND	0.5

ND = Not detected at or above reporting limit.

Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	79

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 117080
CLIENT: SUBSURFACE CONSULTANTS, INC.
PROJECT ID: 469.009
LOCATION: COLLEGE OF ALAMEDA

DATE SAMPLED: 08/25/94
DATE RECEIVED: 08/25/94
DATE ANALYZED: 09/02/94
DATE REPORTED: 09/09/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8240
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
117080-2	MW-3	14	5.1	ND	ND	0.5
117080	METHOD BLANK	ND	ND	ND	ND	0.5

ND = Not detected at or above reporting limit.

Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	79

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

PROJECT NAME: College of Alameda

JOB NUMBER: 469.009 LAB: Curtis & Tompkins

PROJECT CONTACT: Marianne Watada TURNAROUND: normal

SAMPLED BY: Dennis Alexander REQUESTED BY: M. Watada

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	MATRIX: SOIL	MATRIX: WASTE	MATRIX: AIR	CONTAINERS: VOA	CONTAINERS: LITER	CONTAINERS: PINT	CONTAINERS: TUBE	METHOD PRESERVED: HCL	METHOD PRESERVED: H_2SO_4	METHOD PRESERVED: HNO_3	METHOD PRESERVED: ICE	METHOD PRESERVED: NONE	SAMPLING DATE: MONTH	SAMPLING DATE: DAY	SAMPLING DATE: YEAR	SAMPLING DATE: TIME	NOTES	ANALYSIS REQUESTED: TPH-G	ANALYSIS REQUESTED: 8260	ANALYSIS REQUESTED: BTXE
117080-001	MW-1	X				3	2			X			X		08	25	94	1345		X	X	X
-002	MW-3	X				3	2			X			X					1415		X	X	X
-003	MW-4	X				3	2			X			X					1300		X	X	X
-004	MW-5	X				3	2			X			X		08	25	94	1030		X	X	X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Dennis Alexander	8/25/94 2:45 p.m.	Mary Pleasant	8/25/94 2:45pm

COMMENTS & NOTES:

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

LETTER OF TRANSMITTAL

TO: Juliette Shin
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

DATE: November 23, 1994
PROJECT
SCI JOB NUMBER:

WE ARE SENDING YOU:

1 copies

- [ ] of our final report
- [ ] a draft of our report
- [ ] a Service Agreement
- [ ] a proposed scope of services
- [ ] specifications
- [ ] grading/foundation plans
- [ ] soil samples/groundwater samples
- [ ] an executed contract
- [x] see below

- [x] if you have any questions, please call
- [ ] for your review and comment
- [ ] please return an executed copy
- [ ] for geotechnical services
- [ ] with our comments
- [ ] with Chain of Custody documents
- [x] for your use
- [x] As Requested
- [ ]

REMARKS: Attached TEH Chromatograms:

1. Diesel Standard
2. Hydraulic Oil Standard
3. MW-1, MW-2, MW-3, MW-4, MW-5 dated 2/2/94
4. MW-5 dated 5/10/94
5. MW-5 dated 9/7/94
6. MW-5 dated 11/11/94

COPIES TO:

BY: Marianne Watada
Marianne Watada

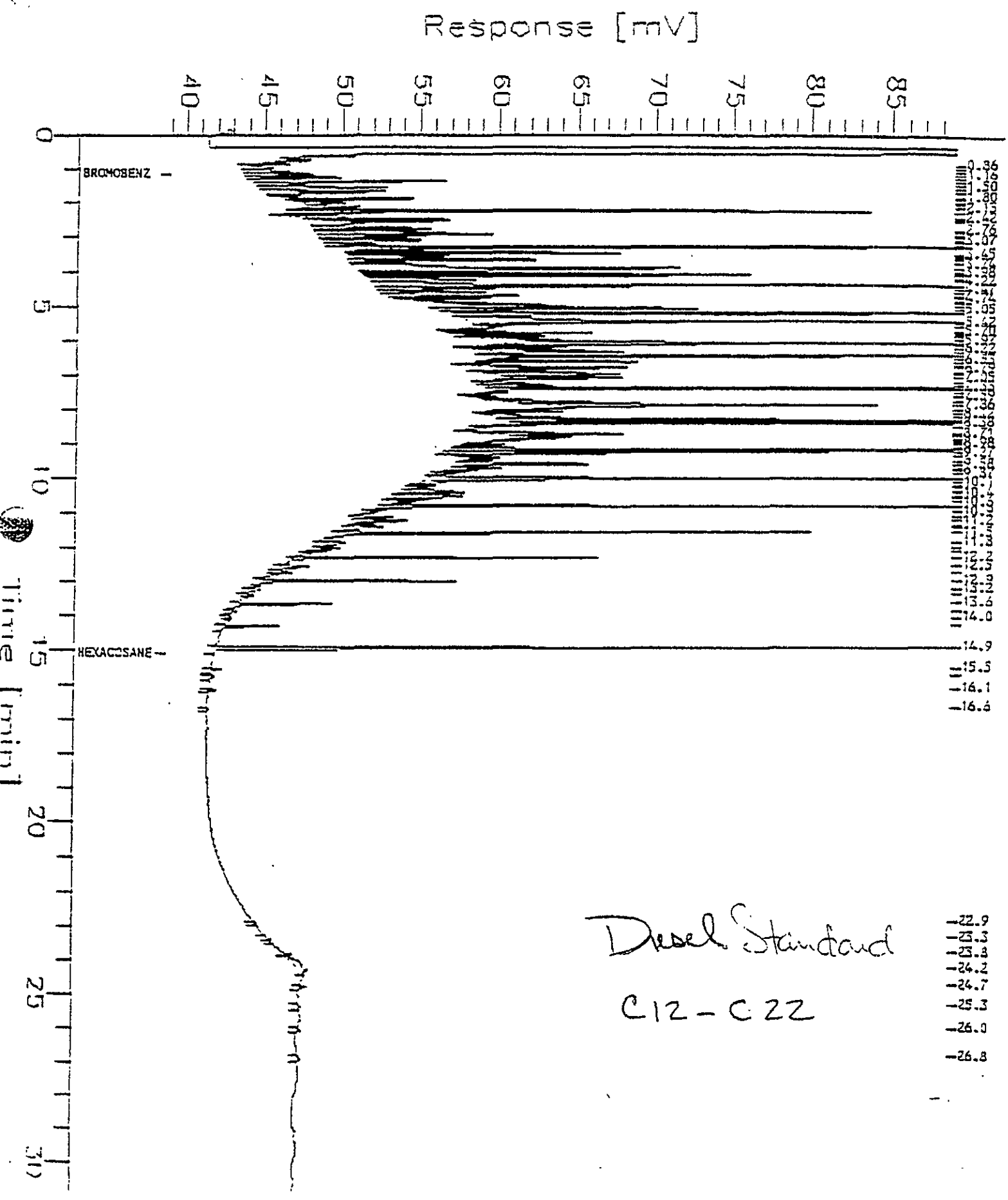
■ Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

Sample Name : diesel S15 mg/L
FileName : f:\gc11\cnb\297b004.raw
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 39 mV

Sample #: ms3577
Date : 10/23/92 10:10 PM
Low Point : 38.85 mV Plot Scale: 50 mV

High Point : 88.35 mV

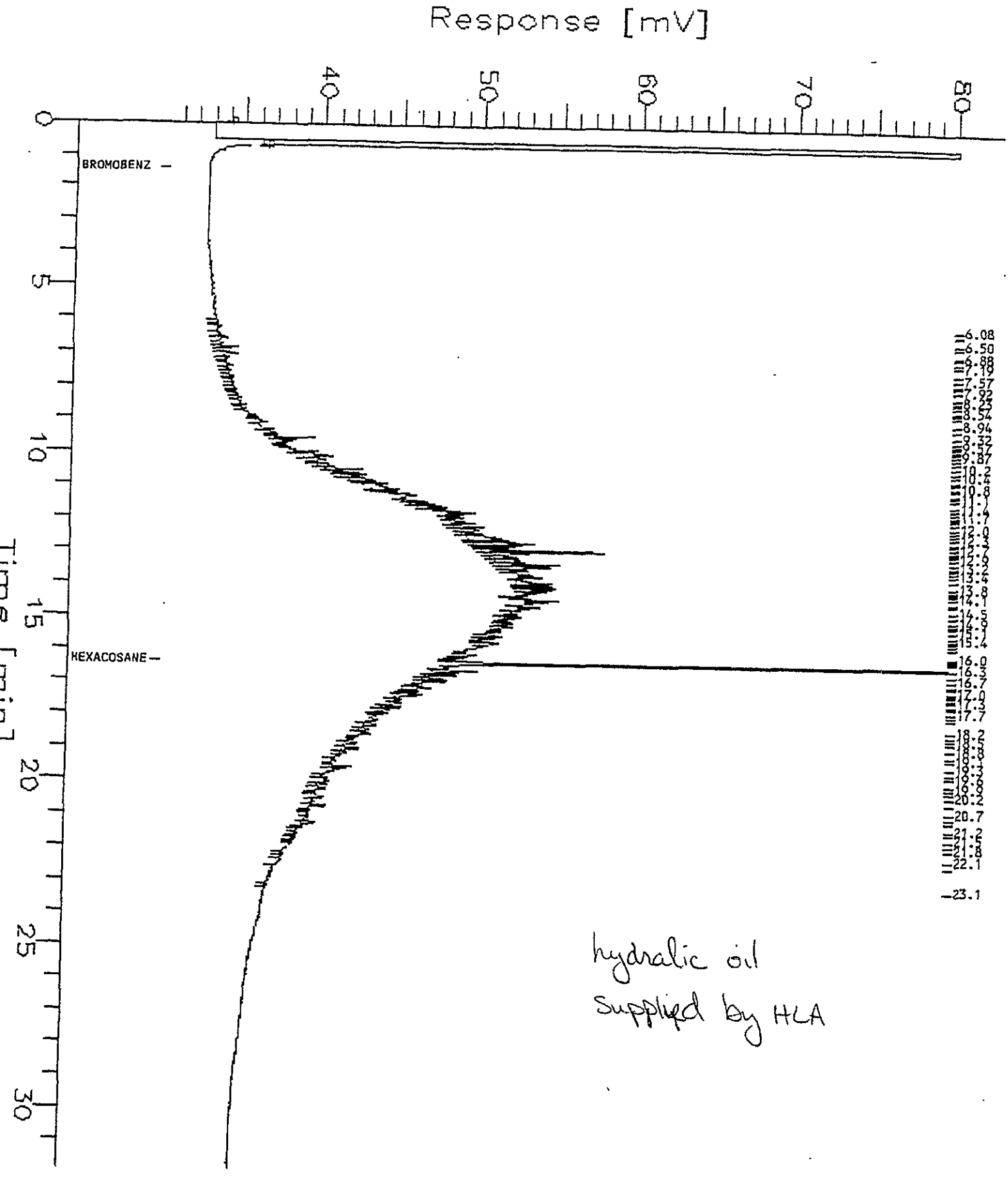


Diesel Standard

C12 - C22

Sample Name : Hyraulic oil 909mg/L
FileName : G:\GC11\CHA\026a027.raw
Method : GC11CHA.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 30 mV

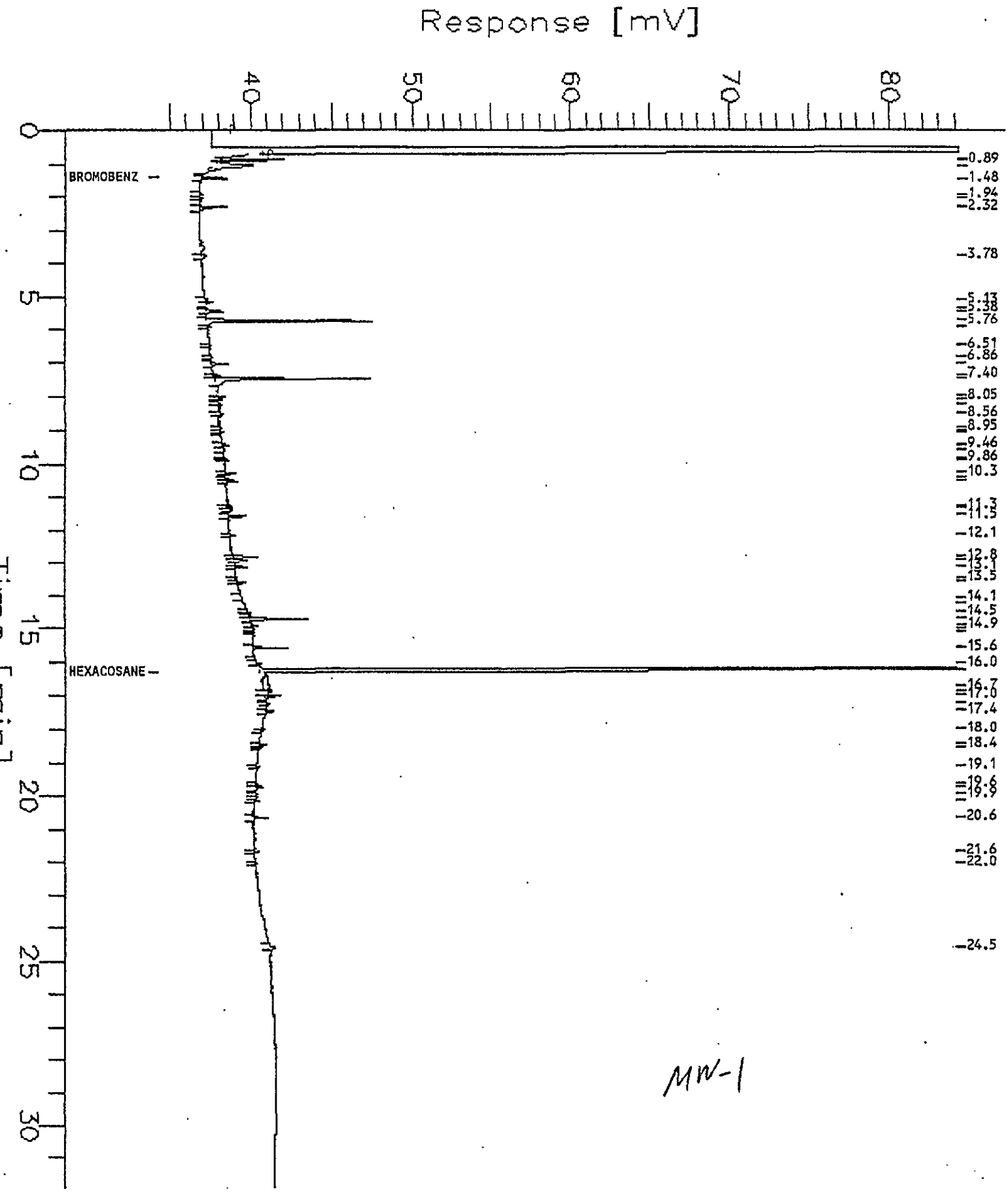
Sample #: 94ws6652
Date : 1/27/94 02:37 PM
Time of Injection: 1/27/94 09:06 AM
Low Point : 30.07 mV High Point : 80.07 mV
Plot Scale: 50 mV



hydralic oil
supplied by HLA

mple Name : 114111-001 500:2.5
leName : g:\gc11\chb\032b009.raw
thod : GC11DUAL.ins
art Time : 0.00 min End Time : 31.92 min
ale Factor: -1 Plot Offset: 34 mV

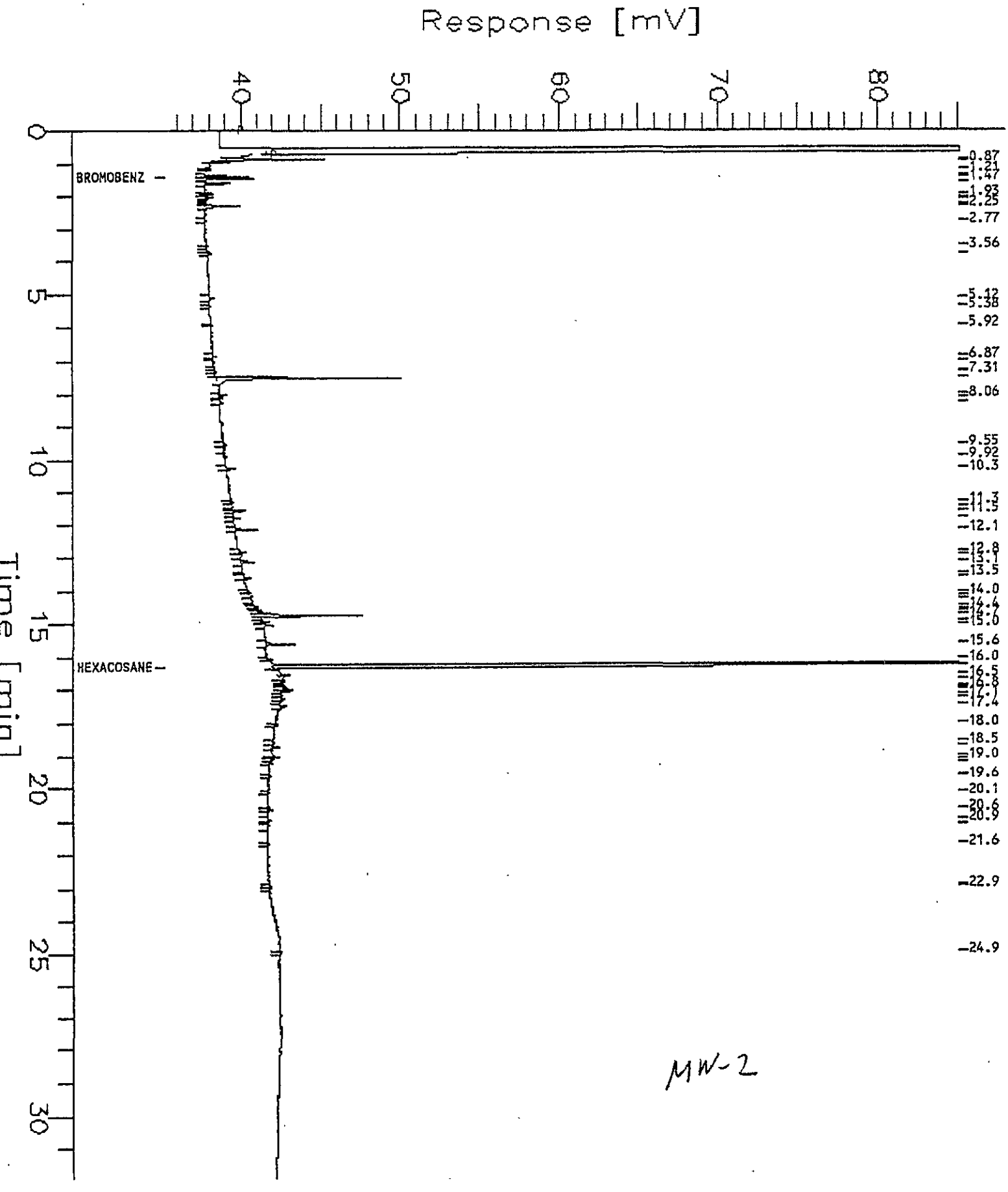
Sample #: 12565 Page 1 of 1
Date : 2/2/94 12:17 AM
Time of Injection: 2/1/94 11:40 PM
Low Point : 34.29 mV High Point : 84.29 mV
Plot Scale: 50 mV



MW-1

ample Name : 114111-002 500:2.5
ileName : g:\gc11\chb\032b011.raw
ethod : GC11DUAL.ins
tart Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 35 mV

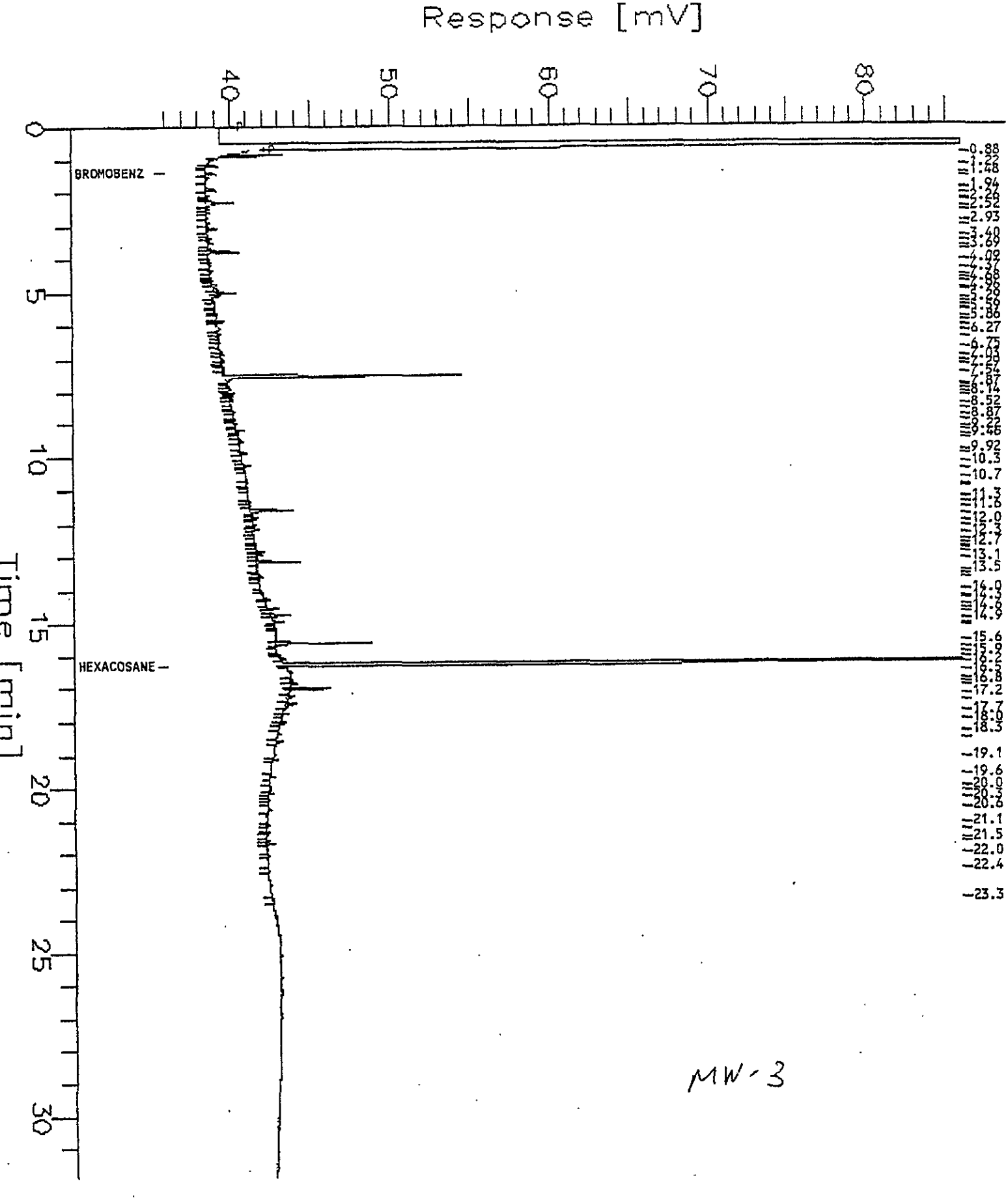
Sample #: 12565 Page 1 of 1
Date : 2/2/94 01:42 AM
Time of Injection: 2/2/94 01:08 AM
Low Point : 35.16 mV High Point : 85.16 mV
Plot Scale: 50 mV



MW-2

mple Name : 114111-003 500:2.5
leName : g:\gc11\chb\032b012.raw
ethod : GC11DUAL.ins
tart Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 36 mV

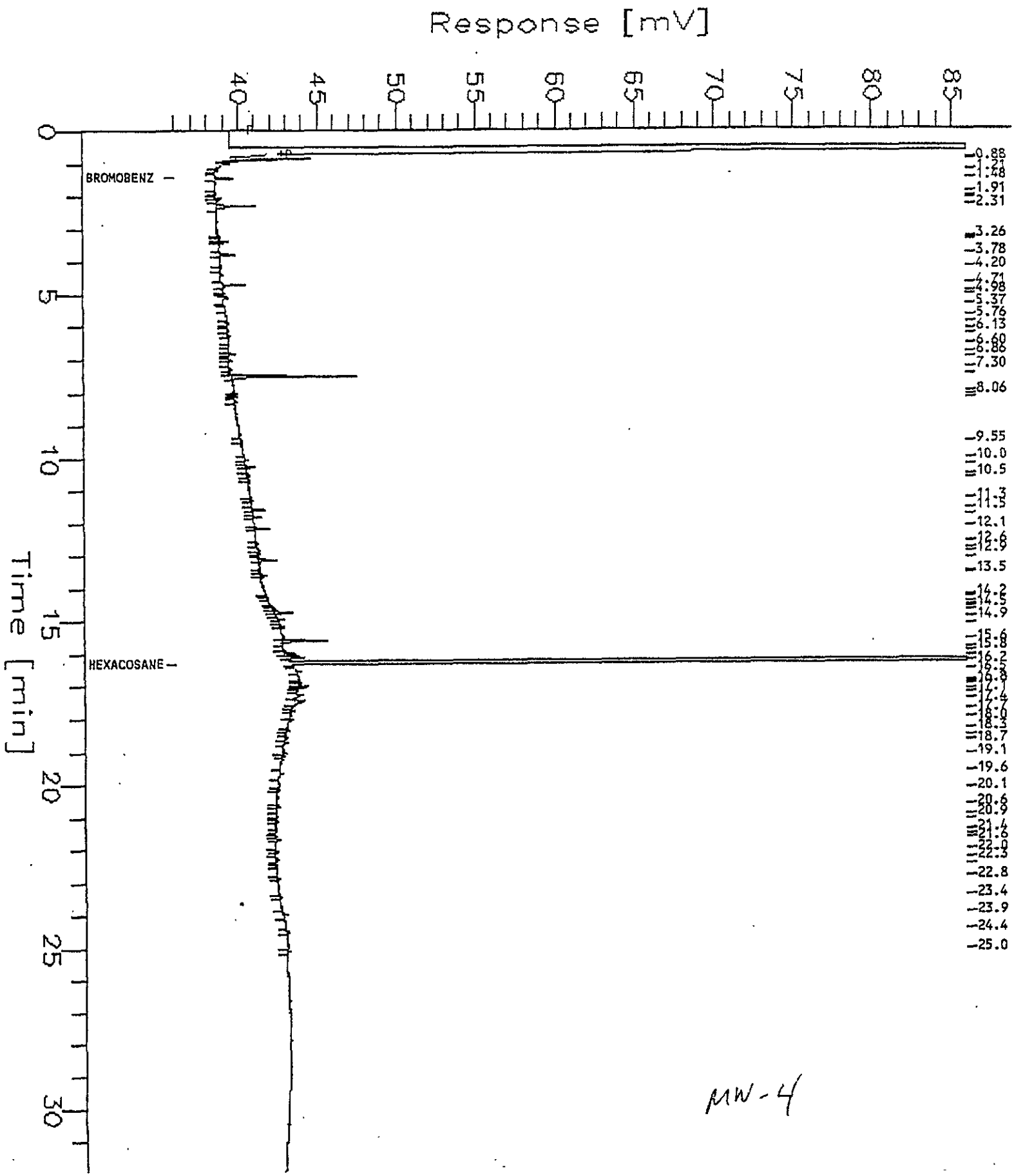
Sample #: 12565 Page 1 of 1
Date : 2/2/94 02:27 AM
Time of Injection: 2/2/94 01:51 AM
Low Point : 35.97 mV High Point : 85.97 mV
Plot Scale: 50 mV



MW-3

Sample Name : 114111-004 500:2.5
FileName : g:\gc11\chb\032b013.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 36 mV

Sample #: 12565
Date : 2/2/94 03:10 AM
Time of Injection: 2/2/94 02:35 AM
Low Point : 35.97 mV High Point : 85.97 mV
Plot Scale: 50 mV

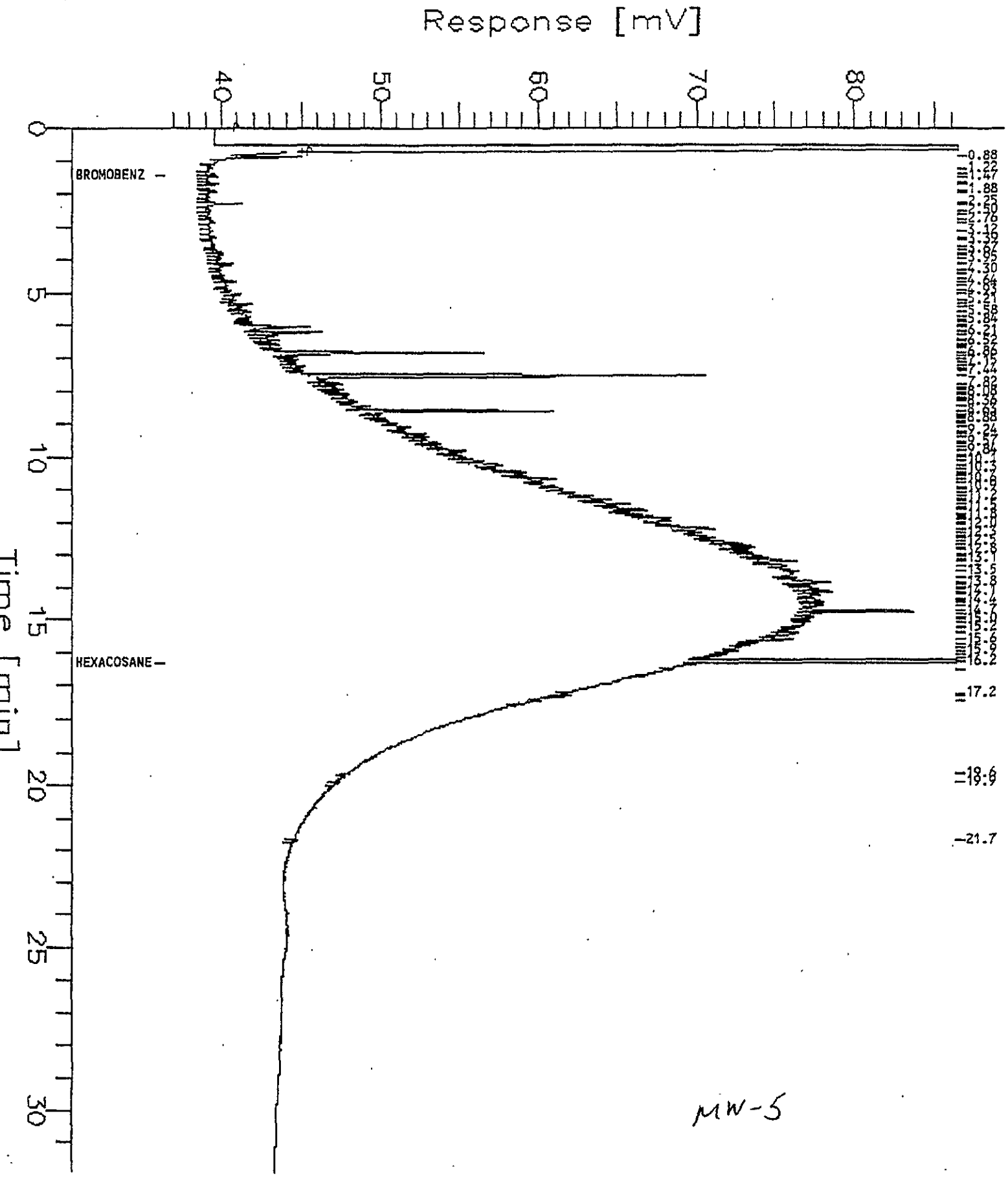


MW-4

TEH Chromatogram Set CH-2

ample Name : 114111-005 500:2.5
ileName : g:\gc11\chb\032b014.raw
ethod : GC11DUAL.ins
tart Time : 0.00 min End Time : 31.92 min
cale Factor: -1 Plot Offset: 37 mV

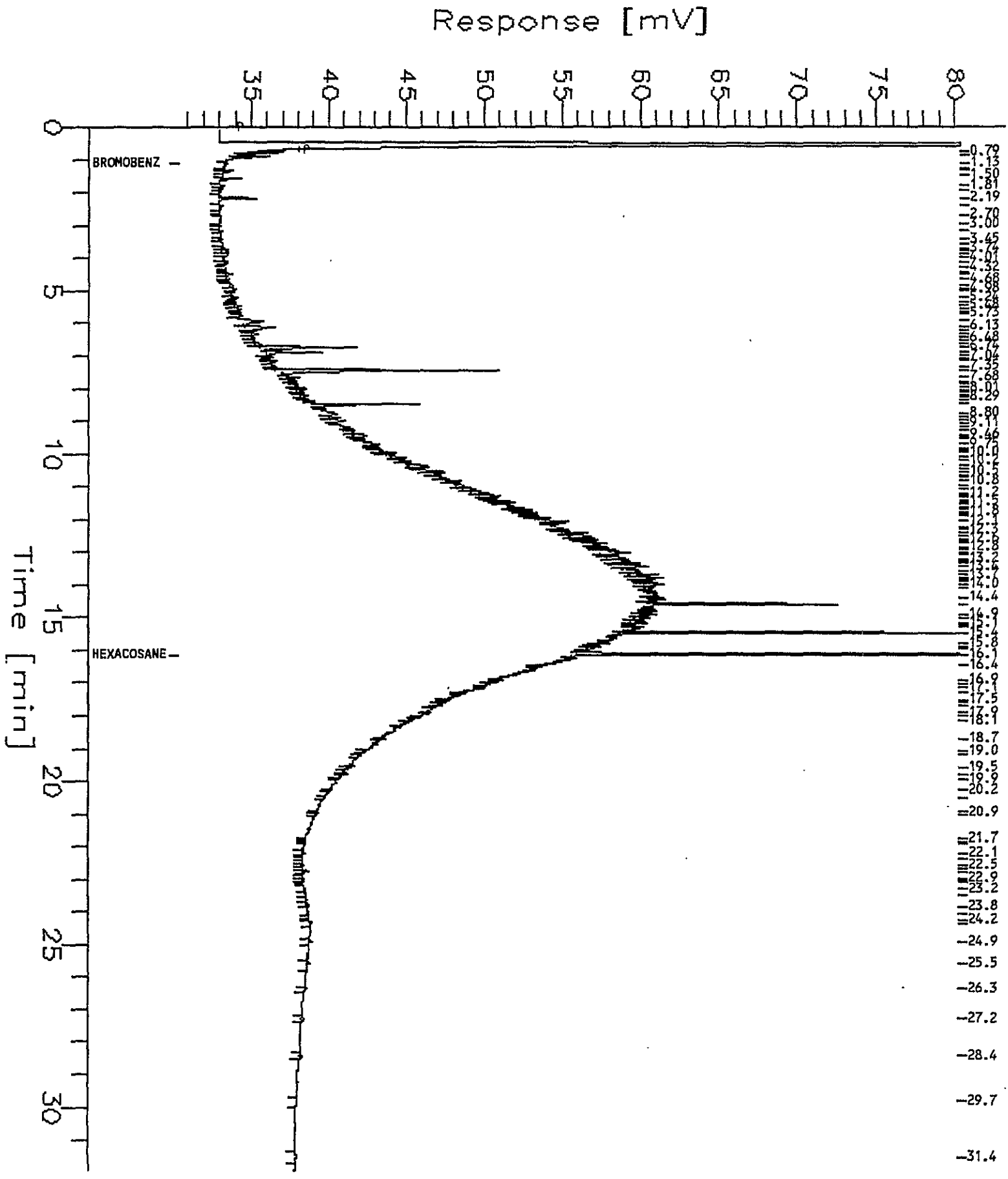
Sample #: 12565 Page 1 of 1
Date : 2/2/94 03:54 AM
Time of Injection: 2/2/94 03:19 AM
Low Point : 36.50 mV High Point : 86.50 mV
Plot Scale: 50 mV



MW-5

Sample Name : 115517-004 500:2.5
FileName : g:\gc11\cha\130a009.raw
Method : GC11DUAL.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 30 mV

Sample #: 14096
Date : 5/10/94 10:27 PM
Time of Injection: 5/10/94 09:53 PM
Low Point : 30.44 mV High Point : 80.44 mV
Plot Scale: 50 mV

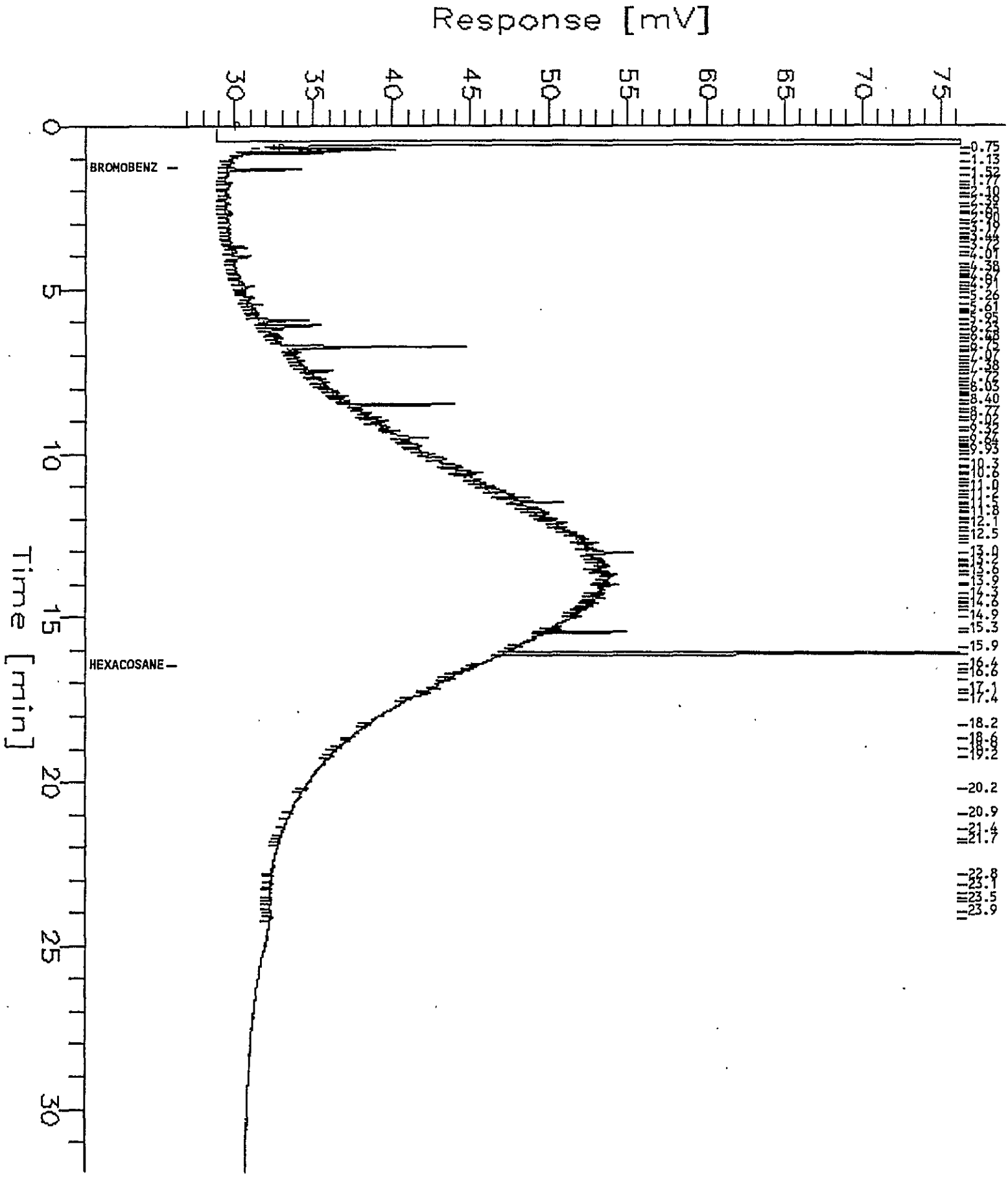


MW-5

TEH Chromatogram GC13 CH A

Sample Name : 117080-004 500:2.5
FileName : g:\gc13\cha\249A028.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 26 mV

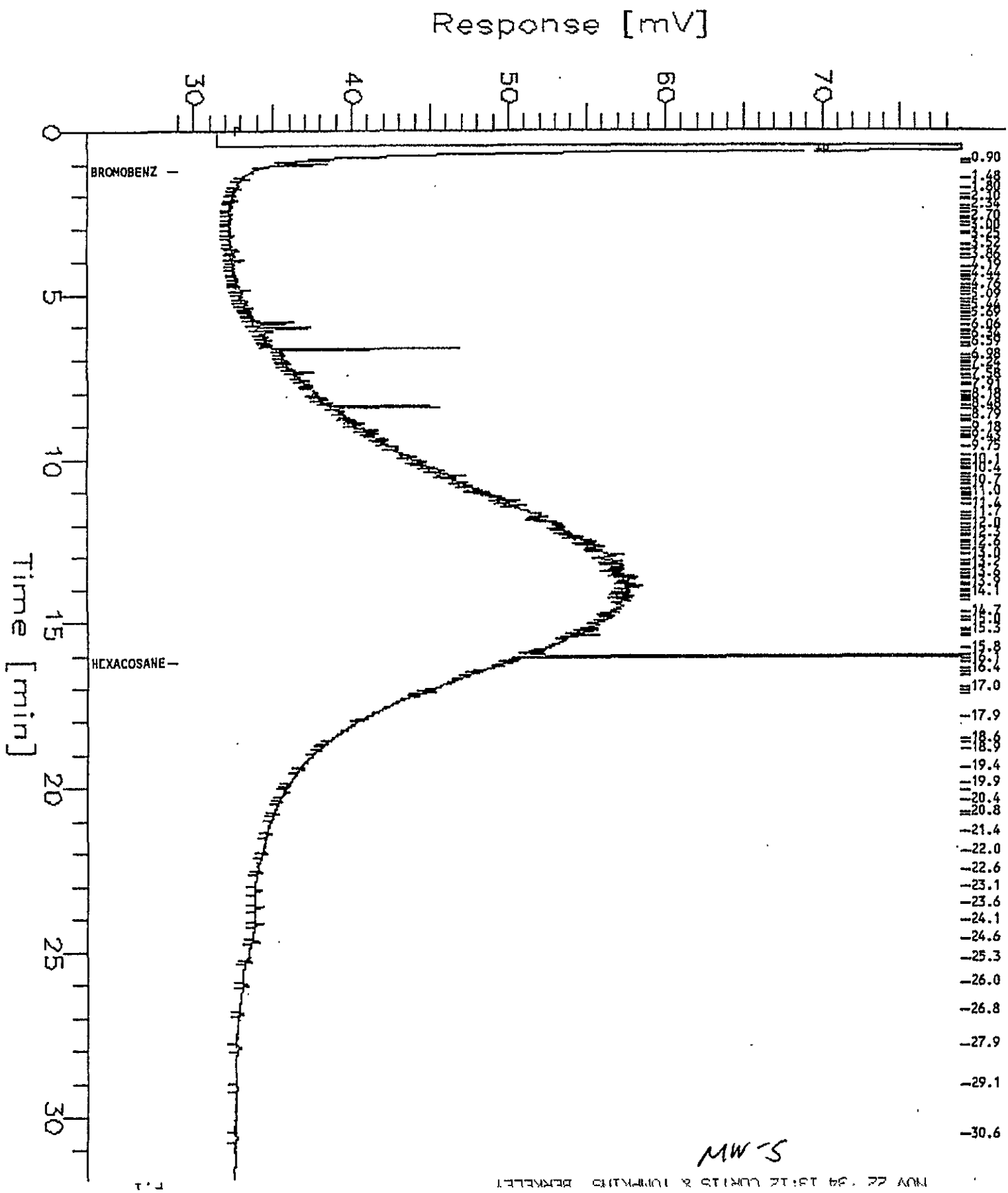
Sample #: 15983 Page 1 of 1
Date : 9/7/94 09:26 AM
Time of Injection: 9/7/94 08:51 AM
Low Point : 26.35 mV High Point : 76.35 mV
Plot Scale: 50 mV



TEH Chromatogram GC13 CH A

Sample Name : 118344-004 500:2.5
FileName : g:\gc13\cha\314a018.raw
Method : TEH.ins
Start Time : 0.00 min End Time : 31.92 min
Scale Factor: -1 Plot Offset: 29 mV

Sample #: 17447 Page 1 of 1
Date : 11/11/94 04:05 AM
Time of Injection: 11/11/94 03:32 AM
Low Point : 28.92 mV High Point : 78.92 mV
Plot Scale: 50 mV



MW-5