Site cleanup

BASELINE

ENVIRONMENTAL CONSULTING

TRANSMITTAL

TO: Ms. Ann E. Johnston
Coblentz, Patch, Duffy, & Bass, LLP
222 Kearny Street, 7th Floor
S.F. CA 94108-4510

Date: 15 April 1999

Project No.: 98381-00

SUBJECT: Soil and Groundwater Quality Investigation, 6623 San Pablo Avenue, Oakland, CA

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BASELINE

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15 April 1999
98381

Ms. Ann E. Johnston
COBLENTZ, PATCH, DUFFY, & BASS, LLP
222 Kearny Street, 7th Floor
San Francisco, CA 94108-4510

Subject: Soil and Groundwater Quality Investigation, 6623 San Pablo Avenue, Oakland, California

Dear Ann:

Enclosed please find BASELINE's report on a soil and groundwater investigation conducted at 6623 San Pablo Avenue in Oakland (Figure 1). Should you have any comments, or wish to discuss the contents of this report, please contact us at your convenience.

Sincerely,

Bruce Abelli-Amen
Project Manager

Yane Nordhav
Principal
Reg. Geologist No. 4009

BAA:YN:km
Enclosure

cc: Helen Loreto, McDonalds
Larry Seto, Alameda County Environmental Health Services

98381rpt.wpd-4/15/99

SOIL AND GROUNDWATER INVESTIGATION

6623 SAN PABLO AVENUE, OAKLAND

APRIL 1999

For:

Coblentz, Patch, Duffy, & Bass
San Francisco, California

98381

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SOIL AND GROUNDWATER INVESTIGATION
6623 San Pablo Avenue, Oakland

INTRODUCTION

This report documents an additional soil and groundwater quality investigation conducted at 6623 San Pablo Avenue in Oakland (Figure 1). The purpose of the investigation was to further define the extent of soil and groundwater contamination at the site. The investigation was conducted in accordance with a BASELINE work plan dated 9 November 1998. The work plan was conditionally approved in a letter from the Alameda County Health Care Services Agency (County) dated 4 December 1998.

BACKGROUND

In September 1996, a geotechnical investigation[1] (which included limited environmental sampling) was conducted by Kleinfelder, Inc. in preparation for construction of a new building at the site. Four environmental soil samples were collected from four borings (KB-1 through KB-4)[2] in the northern portion of the site (Figure 2) and submitted for analysis of total petroleum hydrocarbons (TPH) (without silica gel cleanup) as gasoline, TPH as diesel, TPH as motor oil, benzene, toluene, ethylbenzene, and xylenes (BTEX). The samples were collected from depths ranging from 7.0 feet to 10.5 feet below ground surface (bgs). Each of the samples contained petroleum hydrocarbons and BTEX above laboratory reporting limits. Soil sample KB-1 contained the highest level of petroleum hydrocarbons, including TPH as gasoline (up to 4,600 mg/kg), TPH as diesel (up to 1,000 mg/kg), benzene (up tp 13 mg/kg), toluene (up to 27 mg/kg), ethylbenzene (up to 49 mg/kg), and xylenes (up to 230 mg/kg). The analytical results are summarized in Table 1. Groundwater was not encountered in any of the borings.

In February 1997, Kleinfelder conducted a subsequent soil and groundwater investigation[3] to further characterize the extent of petroleum hydrocarbon contamination at the site. Five additional borings (KB-8 through KB-12) were installed in the northern portion of the site (Figure 2). Two soil samples were collected from each boring and submitted to a laboratory for analysis. Of the five borings installed, only the samples collected from the KB-11 location did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. At least one sample collected from each of the remaining borings contained petroleum hydrocarbons with the higher concentrations at the shallower depths (about eight to ten feet bgs). None of the deeper soil samples (collected from 13 to 15 feet bgs) contained petroleum hydrocarbons above laboratory reporting levels. Five of the ten

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[1] Kleinfelder, Inc., 1996, *Geotechnical Investigation Report, Proposed McDonald's Store in Oakland, California,* 1 November.

[2] The nomenclature for the borings varies in the Kleinfelder reports. For example sometimes a boring is referred to as B-1 and other times KB-1. For clarity, we refer to all borings as KB-1, KB-2, etc.).

[3] Kleinfelder, Inc., 1997, *Environmental Investigation Report, San Pablo Avenue, Oakland, California,* 17 March.

samples were analyzed for total lead and found to contain concentrations below 10 mg/kg. The analytical results are summarized in Table 1.

Grab groundwater samples were collected from the boreholes through the hollow-stem augers on the drilling rig at borings KB-8 through KB-12, using disposable bailers. Each of the water samples contained petroleum hydrocarbons above laboratory reporting levels. The analytical results are summarized in Table 2.

To further investigate the possible source of contamination, BASELINE reviewed Sanborn fire insurance maps and historic aerial photographs. It was determined that a fuel service station operated at the site between 1962 and 1978 (estimated dates). Records regarding the final disposition of underground storage tanks (USTs) were not available.

On 17 July 1998, a geophysical survey of the northern portion of the site was conducted under the supervision of BASELINE to determine whether underground fuel storage tanks associated with the former gasoline station remained in the subsurface. A magnetometer, metal detector, and a ground penetrating radar (GPR) unit were used to attempt to identify underground metallic objects at the site. The magnetometer identified a magnetic anomaly, indicating a metal object or objects buried within an eight- by five-foot area underneath the former gasoline station building (Figure 2). The metal detectors confirmed the presence of the anomaly; the instrument response was relatively weak, which is not typically associated with USTs, rather this type of reading typically indicates a small amount of scattered metallic debris. The survey results were interpreted to indicate that there was only one location at the site where a tank may remain, and even that indication was tentative.

A BASELINE work plan, dated 9 November 1998, was prepared and submitted to the County. The work plan proposed the installation of monitoring wells at the site and determination of whether a UST was still present in the subsurface. The latter objective was to be achieved by installing two borings in the location of the geophysical anomaly to determine whether a UST was present. The County approved the work plan with the following conditions:

- A minimum of one soil sample should be collected from each boring location and submitted to a laboratory for analysis
- All samples should be analyzed for MTBE
- Monitoring wells should be sampled quarterly for one year, after which time the monitoring schedule could be reevaluated

FIELD ACTIVITIES

On 14 January 1999, two nested monitoring wells and one individual well were installed at the site by Precision Sampling, Inc., under the supervision of a BASELINE geologist in the approximate locations shown on Figure 2. In addition, two exploratory borings were installed in the location of the identified geophysical anomaly; no tank was encountered. Prior to well installation, a drilling permit was acquired from the Alameda County Public Works Agency (Appendix A).

Nested wells (two wells installed in the same boring with screened intervals at different depths) were installed in two of the three borings to evaluate contaminant distribution and hydrogeologic conditions at the site. Previous subsurface investigations at the site, conducted by Kleinfelder, indicated that groundwater was not encountered in on-site borings until a depth of at least 22.5 feet bgs. The BASELINE geologist noted very moist conditions in soils at approximate depths of 7.0 to 10.0 feet bgs at each boring location. Below this shallow moist zone at borings MW-1 and MW-3 (judged by the BASELINE geologist to be a potential water-bearing zone), a fine-grained layer (silt and clay), that could be low-permeability confining zone, was encountered. Below the fine-grained layer, water-bearing zone was encountered (approximately 23 to 25 feet bgs).

Based on the field observations, nested wells were placed in the MW-1 and MW-3 locations to further characterize the vertical extent of contamination. (An "A" denotes the shallow well -- MW-1A and MW-3A-- and "B" denotes deeper wells -- MW-1B and MW-3B.) Location MW-2 was cross-gradient relative to the expected groundwater flow direction and away from the area of the highest TPH concentrations in the soil, as identified by previous on-site investigations. Therefore, only one well screen was placed in that boring to characterize the shallow potential water-bearing zone. The well screens were hydraulically separated in the nested wells by the installation of a bentonite seal between the two screened intervals. Details of geologic materials encountered (boring logs) and well construction summaries are included in Appendix B.

All the borings were advanced using direct-push technology. Each of the borings for the wells was logged (continuous) in accordance with the Unified Soil Classification system. Soil samples were collected at approximately five-foot intervals. All drive casings and associated sampling equipment were decontaminated between borings by pressure washing, and the rinse water was contained and transported off-site.

Soil samples were prepared for submittal to the analytical laboratory by labeling and sealing with teflon film, plastic caps, and silicone tape. Three soil samples were selected from each boring for analyses. All samples were stored in a cooled container and transported under chain-of-custody procedures to Curtis and Tompkins, Ltd., a State-certified analytical laboratory. Each sample was analyzed for TPH as gasoline, TPH as diesel (with silica gel clean-up), BTEX, and MTBE.

The wells were constructed in each boring with 3/4-inch diameter PVC casing and screen (0.010 slot), with the screens wrapped with a pre-fabricated filter pack. The upper portion of each boring was hand-augered (six inches in diameter) to allow for utility clearance and installation of a sanitary seal. The top of casing of the new monitoring wells were surveyed by a licensed surveyor to determine elevations to within 0.01 feet (Appendix C). The wells were developed on 19 January 1999 by surging and pumping one well volume from each well. The wells had very low recharge rates, and therefore a limited amount of water was removed from each well during the development process. The evacuation of the well during development also served as purging prior to sample collection.

On 8 February 1999, groundwater samples were collected from each of the monitoring wells (except MW-1A, a shallow well, which did not contain an adequate volume of water to allow for sample collection). Prior to sampling, groundwater levels were measured (and the presence or absence of

floating product determined; no free product was encountered) in each of the wells using a dual-interface probe. For two weeks, following development (removal of one well volume) the water levels in the wells were checked to determine recharge conditions, water level stabilization and whether sufficient water had accumulated to obtain samples (refer to Table 3 for water level measurements collected on 15, 19, and 20 January and 8 February 1999). On 8 February 1999, groundwater samples were collected using a peristaltic pump and new disposable polyethylene tubing by decanting groundwater into glassware provided by the laboratory.[4] At that time, all wells had sufficient water except the shallow well MW-1A for sample collection. (Groundwater Sampling forms are included in Appendix D.)

All excess soil cores and wastewater associated with well installation were transported to Precision Sampling's yard in San Rafael for temporary storage, batching with other wastes, and disposal (Appendix E). Development/purge water was stored on-site in a sealed drum.

HYDROGEOLOGY

The geologic logs provided in the Kleinfelder reports[5] and the logs generated during drilling conducted by BASELINE in January 1999 provide the basis for describing the geologic conditions underlying the site. The site is underlain by a complex interbedded series of clay, silt, sand and gravel. In general, fine-grained materials (silts and clays) were encountered from the surface to a depth of approximately seven to ten feet bgs underlain by a coarse-grained (sand and gravel) layer which may intermittently contain water. Below about 12 feet, fine-grained materials were encountered which appear to serve as a confining layer for underlying water-bearing coarse-grained materials.

Groundwater was not encountered in Kleinfelder borings KB-1 through KB-4, which were installed to a maximum depth of 16.5 feet bgs. Borings KB-8 through KB-11, which were installed in the vicinity of the former gasoline station, were drilled until first groundwater was encountered to allow collection of grab water samples. According to Kleinfelder, "groundwater was first encountered at depths ranging from 22.5 to 33.5 feet below ground surface and then rose quickly inside the drilling rods."[6] This indicates that groundwater at the site (at least in the vicinity of the former gasoline station) is confined. Under confined conditions, the upper water table surface is not free to move up and down, but is restricted, typically by a low-permeability layer (silt or clay).

During drilling conducted by BASELINE, a low-yield, potentially intermittent, water-bearing zone was encountered at approximately seven to ten feet bgs. Groundwater may not have been present in this zone when Kleinfelder installed borings KB-1 through KB-11, since these borings were installed in 1996 and 1997 (lesser rainfall years than 1998). Water levels were measured in the three

[4] BASELINE uses a peristaltic pump and new disposable tubing on each well. Purge water does not come into contact with the components of the pumping system, only with the disposable tubing, minimizing the potential for cross-contamination between wells.

[5] Kleinfelder, Inc., 1996 and Kleinfelder, Inc., 1997, op. cit.

[6] Kleinfelder, Inc., 1997, op cit..

shallow wells (MW-1A, 2A, 3A), screened to intercept the possible intermittent water-bearing zone, at seven occasions (Table 3). MW-1A remained dry until the last water level measurement on 12 February 1999, at which time less than one foot of water had collected in the well. In the remaining two, wells, water levels did not appear to stabilize following removal of one well volume in the morning of 19 January 1999 until sample collection on 8 February 1999; this suggests that the shallow water-bearing zone may be significantly dependent on precipitation events and only carries water intermittently following rainfall.

A second water-bearing zone was encountered at an approximate depth of 23 to 25 feet bgs. The deeper water-bearing zone was encountered underlying fine-grained sediments. These fine-grained sediments appear to act as a confining layer resulting in water being present in that zone under pressure; this is evidenced by water levels in the two, deeper wells above the screened interval (Table 3). Water levels in the deeper wells recovered very slowly following purging of one well volume on 19 January 1999, suggesting that the second water-bearing zone does not produce a significant amount of water.

The groundwater flow direction in either of the water-bearing zones has not been determined. At the time of the last water level measurements in the three shallow wells, it was uncertain whether the water levels had stabilized; determination of groundwater flow direction cannot be made until the water levels have stabilized. Two deeper wells are present on the site. Groundwater flow direction determination would need to be coordinated with water level measurements from wells on adjacent sites (e.g., Meyer's Drum site). The expected flow direction is to the west, based on regional topography and the location of the Bay.

ANALYTICAL RESULTS AND DISCUSSION

Soil

The analytical results of the soil samples collected at the site are summarized in Table 1. Three soil samples were analyzed from each monitoring well location. The samples from each location were chosen to represent: 1) the possible top of the shallow water-bearing zone (at depths ranging from five to seven feet bgs), 2) the bottom of the shallow water-bearing zone (about ten feet bgs), and 3) the fine-grained sediments separating the shallower from the underlying deeper water-bearing zone (15 to 16 feet bgs).

The highest concentration of diesel, gasoline, BTEX, and MTBE were identified in the soil sample from the top of the shallow water-bearing zone at borehole location MW-1 (diesel - 67 mg/kg, gasoline - 2,800 mg/kg, benzene - 2.9 mg/kg, toluene - 4.2 mg/kg,[7] ethylbenzene - 24 mg/kg, xylenes - 79 mg/kg, and MTBE - 5.4 mg/kg).

The remaining shallow soil samples contained minimal concentrations of TPH and BTEX, if any (Table 1).

[7] Toluene was detected at a higher concentration (5.7 mg/kg) in the 10.0-foot sample collected from MW-3.

The three soil samples from the bottom of the shallow water-bearing zone (from a depth of about ten feet bgs) also contained TPH (up to 340 mg/kg) and BTEX (up to 0.66 mg/kg of benzene, 5.7 mg/kg of toluene, 6.4 mg/kg of ethylbenzene, 29.5 mg/kg of xylenes), and MTBE (up to 2.1 mg/kg).

The deeper soil samples collected from the fine-grained sediments (15.0 to 16.0 feet bgs) contained up to 13 mg/kg of diesel, 0.0056 mg/kg of xylenes, 0.087 mg/kg of MTBE, and no gasoline (Table 1), indicating that the vertical extent of soil contamination at the site may be limited to the shallow, intermittently water-bearing sediments with little, if any, migration of the petroleum[8] and associated compounds into the deeper water-bearing sediments.

The analytical results from the 1996 and 1997 Kleinfelder investigations confirm that the on-site contamination appears concentrated in the shallow intermittently water-bearing zone. The highest concentration of TPH and associated compounds have been identified in the presumed downgradient direction of the geophysical anomaly (KB-1 and MW-1 locations Figure 2) near the western site boundary. Elevated concentrations of TPH and BTEX were also found near the upgradient, eastern site boundary (locations MW-3 and KB-2 on Figure 2) as well as near the site center at locations KB-3 and MW-2 (Figure 2 and Table 1).

Groundwater

No free product was detected in the wells. The analytical results of the groundwater samples collected at the site are summarized in Table 2. **Petroleum hydrocarbons as either diesel and/or gasoline[9] were detected in each of the monitoring wells sampled.**[10] Samples collected from the upper water-bearing zone (MW-2A, and MW-3A) contained orders of magnitude greater concentrations of petroleum, BTEX, and MTBE compared to the samples from the lower water-bearing zone.

The highest concentration of benzene was identified in the shallow, intermittently water-bearing zone along the eastern site boundary (MW-3A) (Figure 2 and Table 2), in the presumed upgradient location from former tank locations.

The groundwater samples from the deeper wells (MW-1B, MW-3B) contained relatively low concentrations of gasoline (up to 0.08 mg/L), benzene (up to 0.0015 mg/L), toluene (up to 0.079 mg/L), ethylbenzene (up to 0.0055 mg/L), xylenes (up to 0.14 mg/L), and MTBE (up to 0.033

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[8] The laboratory indicated that the detected petroleum hydrocarbons in the diesel range for all the soil samples did not match the diesel standard and that the chromatograms contained unknown peaks, suggesting that these compounds may not be diesel but rather associated with gasoline. The laboratory report for the January 1999 soil sampling is included in Attachment F.

[9] The chromatograms for the diesel analysis indicated that the petroleum quantified as diesel did not match the diesel standard, and is more likely associated with gasoline.

[10] The groundwater quality data from the Kleinfelder investigations are not comparable to the data collected by BASELINE; since the Kleinfelder water samples were collected from the entire borehole, without differentiation between shallow and deeper water-bearing zones, the data may be affected by turbidity (soil particles) from the walls of the entire borehole.

mg/L); no diesel was identified above the laboratory reporting limit. The laboratory report for the February 1999 sampling event is included in Attachment F.

CONCLUSIONS

- Based on the results of the geophysical survey conducted at the site and the installation of two borings in the only area where a geophysical anomaly was identified, there does not appear to be any USTs remaining in the subsurface at the site.

- The site is underlain by two water-bearing units separated by fine-grained (silt and clay) materials. The shallow water-bearing unit (at seven to ten feet bgs) appears only to contain water following periods of heavy precipitation. The groundwater in the shallow unit appears to occur under non-confined conditions. Water in the deeper water-bearing unit (about 25 feet bgs) appears to be present under confined conditions. The confining layer consists of silt and clay.

- The shallow subsurface soils at the site have been impacted by petroleum hydrocarbons, and associated compounds. The compounds appear to be dominant in and near the shallow, intermittently water-bearing unit.

- The soils in the fine-grained confining layer between the water-bearing units have been minimally affected by releases (up to 13 mg/kg of diesel, 0.0056 mg/kg of xylenes, and 0.087 mg/kg of MTBE). The analytical work performed on samples collected by Kleinfelder (KB-8 through KB-12) from depths of 13 to 15 feet bgs (Table 2) did not identify analytes above laboratory reporting limits.

- The shallow intermittent groundwater contains up to 24 mg/L of gasoline (diesel was also quantified, but may be hydrocarbons in the gasoline range), up to 2.1 mg/L of benzene, up to 3.4 mg/L of toluene, up to 1.5 mg/L of ethylbenzene, up to 6.1 mg/L of xylenes, and 5.1 mg/L of MTBE.

- The deeper groundwater contains up to 0.08 mg/L of gasoline, no diesel, up to 0.0015 mg/L of benzene, up to 0.0048 mg/L of toluene, up to 0.0055 mg/L of ethylbenzene, up to 0.14 mg/L of xylenes, and up to 0.033 mg/L of MTBE.

- The groundwater flow direction in the water bearing zones are presumed to be westward. The shallow zone may be temporary, only yielding water to wells after particularly rainy periods.

RECOMMENDATIONS

- As required by the County, the on-site wells should be monitored on a quarterly basis for one year (three more monitoring events). We propose discontinuing the analysis of diesel, since the data indicate that the site subsurface has been affected by a gasoline release. If this recommendation is acceptable to the County, the next sampling event would occur in May 1999, and the groundwater samples would be analyzed for gasoline, BTEX, and MTBE. Each

quarter, groundwater levels measurements should be coordinated, if possible, with investigations being undertaken on adjacent site (e.g., Myer's Drum). A summary report should be prepared and submitted to the County after each monitoring event.

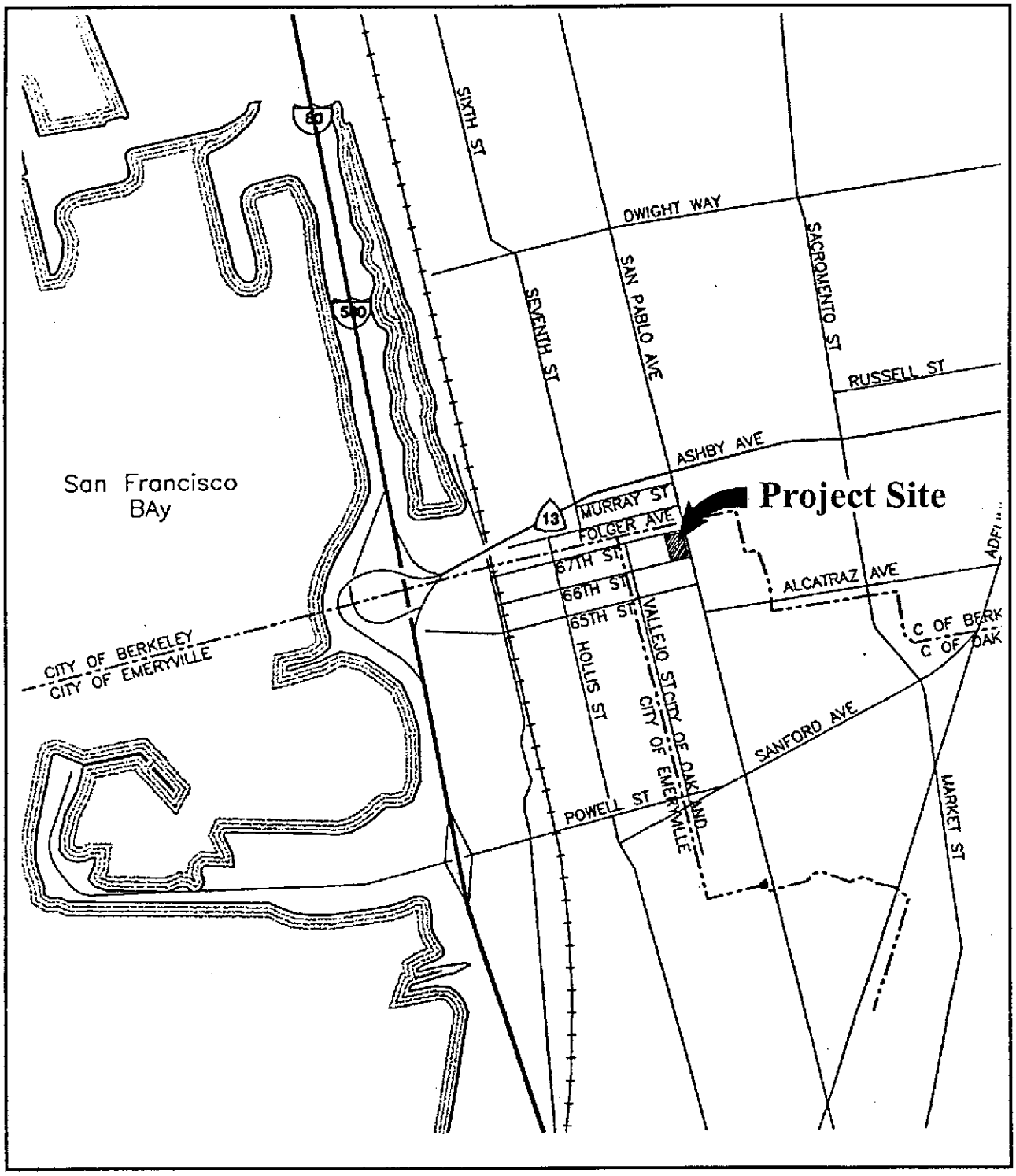
- Upon completion of one year of quarterly monitoring, the data should be evaluated to determine whether additional investigation and/or remediation would be appropriate, or whether the site should be considered for case closure.

LIMITATIONS

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

REGIONAL LOCATION

Figure 1



6623 San Pablo Avenue
Oakland, California

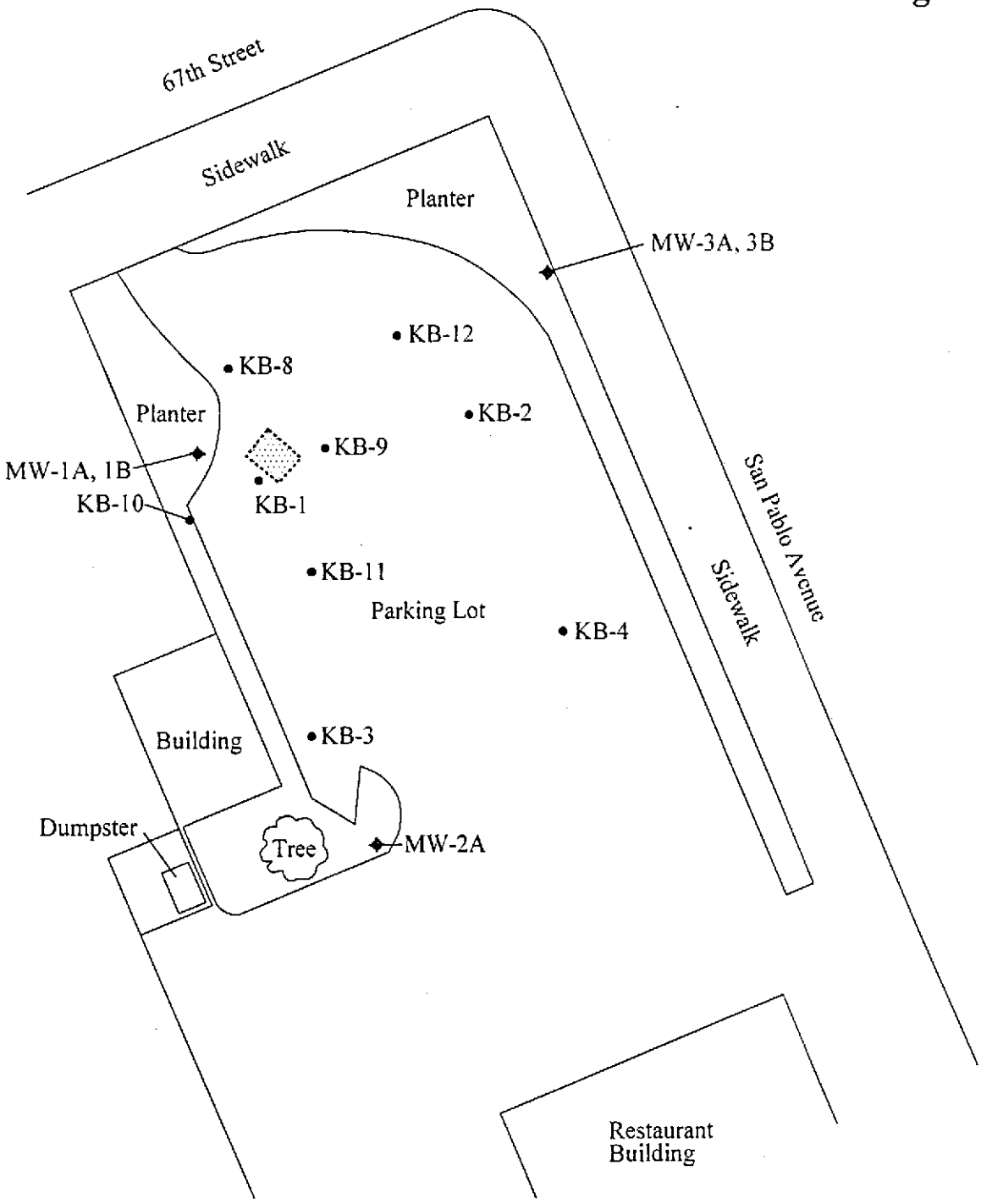
0 2000 Feet

BASELINE

98381RL 6/24/98

SITE PLAN

Figure 2



Legend

Location of Geophysical Anomally (two borings installed within the bounds of mapped anomally to confirm that no UST is present)

B-1 • Soil Boring Location (Kleinfelder)

MW-2A ✦ Monitoring Well Location (BASELINE)

6623 San Pablo Avenue
Oakland, California

0 30 Feet

BASELINE

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TABLE 1
SUMMARY OF ANALYTICAL RESULTS, SOIL
6623 San Pablo Avenue, Oakland
(mg/kg)

Sample ID	Sample Depth (feet)	Date	Diesel[1,2]	Gasoline[4]	Total Lead[3]	Benzene[4]	Toluene[4]	Ethyl-benzene[4]	Xylenes[4]	MTBE[4]
KB-1[5]	8.5	9/23/96	1,000	4,600	--	13	27	49	230	--
KB-2[5]	10.5	9/23/96	160	220	--	2.1	0.4	2.1	8	--
KB-3[5]	7.0	9/23/96	160	370	--	0.91	0.87	2.8	6.8	--
KB-4[5]	10.5	9/23/96	1.3	5.2	--	1.1	0.009	0.31	0.099	--
KB-8[5]	8-10	2/5/97	6.4[6,7]	<1	5.7	<0.005	<0.005	<0.005	<0.005	--
	13-15	2/5/97	<1	<1	--	<0.005	<0.005	<0.005	<0.005	--
KB-9[5]	8.0-8.5	2/5/97	27[6,7]	380	6.5	<0.5	1.2	3.6	8.9	--
KB-9[5]	14-14.5	2/5/97	<1	<1	--	<0.005	<0.005	<0.005	<0.005	--
KB-10[5]	8-9	2/5/97	76[6,7]	1,900[6,8]	7.4	<0.5	3.8	16	56	--
KB-10[5]	14-16	2/5/97	<1	<1	--	<0.005	<0.005	<0.005	<0.005	--
KB-11[5]	8-10	2/5/97	<1	<1	4.3	<0.005	<0.005	<0.005	<0.005	--
KB-11[5]	13-15	2/5/97	<1	<1	--	<0.005	<0.005	<0.005	<0.005	--
KB-12[5]	8-10	2/5/97	5[6,9]	69[6,8]	5.3	<0.13	<0.13	0.34	0.28[12]	--
KB-12[5]	13-15	2/5/97	<1	<1	--	<0.005	<0.005	<0.005	<0.005	--
MW-1[11]	7.0-7.5	1/14/99	67[6,9]	2,800	--	2.9[10]	4.2	24	79	5.4
	10.0-10.5		3.1[6,9]	170	--	<0.025	<0.025	1.4	29.5	1.1
	15.0-15.5		13[6,9]	<1	--	<0.005	<0.005	<0.005	<0.005	0.022
MW-2[11]	5.5-6.0	1/14/99	9[6,9]	<1	--	<0.005	<0.005	<0.005	<0.005	<0.02
	10.0-10.5		12[6,7]	340	--	0.37	0.44[10]	4.7	20.1	0.41
	16.0-16.5		2.5[6,9]	<1	--	<0.005	<0.005	<0.005	0.0056	0.087
MW-3[11]	5.0-5.5	1/14/99	1.6[6,9]	<1	--	<0.005	<0.005	<0.005	<0.005	<0.02
	10.0-10.5		23[6,7,8]	340	--	0.66	5.7	6.4	26.6	2.1
	15.0-15.5		5.3[6,9]	<1	--	<0.005	<0.005	<0.005	<0.005	<0.02

(continued)

TABLE 1 - *continued*

Notes: <x.x = Compound not detected above laboratory reporting limit of x.x. (e.g. <1.0 indicates that the constituent was not present in the sample above 1.0 mg/kg)
x.x = Compound reported at indicated concentration.
-- = Not analyzed.
Soil sampling locations are shown on Figure 2.
Laboratory reports for 1999 analytical results are included in Appendix F

[1] Analyzed using EPA Method 8015M.
[2] Samples analyzed in 1999 for TPH as diesel were subjected to a silica gel cleanup prior to analysis.
[3] Analyzed using EPA Method 6010A.
[4] Samples collected in 1996 and 1997 were analyzed by EPA Method 8020; samples collected in 1999 were analyzed by EPA Method 8021 B.
[5] Samples collected by Kleinfelder, Inc.
[6] The laboratory indicated that the sample chromatogram exhibited a fuel pattern which does not resemble the standard.
[7] The laboratory indicated that the sample chromatogram contained hydrocarbons that were lighter than the standard.
[8] The laboratory indicated that the sample chromatogram contained heavier hydrocarbons than the indicated standard.
[9] The laboratory indicated that the sample chromatogram contained unknown single peak or peaks.
[10] Laboratory indicated that presence of this compound was confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two.
[11] Samples collected by BASELINE.
[12] The sample contained 0.28mg/kg of m,p-xylenes; o-xylene was not identified in the sample at concentrations above 0.13mg/kg.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS, WATER
6623 San Pablo Avenue, Oakland
(mg/L)

Sample ID	Date	Diesel[1]	Gasoline[1]	Total Lead[2]	Benzene[3]	Toluene[3]	Ethyl-benzene[3]	Xylenes[3]	MTBE
Grab Groundwater Samples from Borings:									
KB-8	2/5/97	0.86	0.12	<0.003	0.0013	<0.0005	0.0021	0.001	--
KB-9	2/5/97	<0.05	0.47	<0.003	0.0048	<0.0005	0.011	0.0183	--
KB-10	2/5/97	3.1	0.45	<0.003	0.03	0.0036	0.013	0.071	--
KB-11	2/5/97	0.97	0.82	<0.003	0.1	0.0022	0.028	0.129	--
KB-12	2/5/97	0.20	0.096	<0.003	0.02	<0.0005	0.005	0.0122	--
Groundwater Samples From Monitoring Wells									
MW-1A[4]	2/8/99	--	--	--	--	--	--	--	--
MW-1B	2/8/99	<0.049	0.059	--	0.0013	<0.0005	0.0055	0.14	0.033
MW-2A	2/8/99	0.53[6]	3.6	--	0.87	0.079	0.14	0.58	5.1
MW-3A	2/8/99	0.21[6]	24	--	2.1	3.4	1.5	6.1	<0.05
MW-3B	2/8/99	<0.047	0.08	--	0.0015	0.0048	0.0025	0.0061	0.0045

Notes: <x.x = Compound not detected above laboratory reporting limit of x.x.(e.g. <0.05 indicates that the constituent was not present in the sample above 0.05 mg/L)
x.x = Compound detected at indicated concentration.
NA = Not applicable.
Soil sampling locations are shown on Figure 2.
Laboratory reports for the 1999 sampling event are included in Appendix F.

[1] Analyzed using EPA Method 8015M.
[2] Analyzed using EPA Method 8020.
[3] Analyzed using EPA Method 6010A.
[4] Insufficient groundwater in well to allow sample collection.
[5] Presence of the compound confirmed by second column, however, the confirmation concentration differed from the reported.
[6] The chromatograms (Appendix F) for these samples suggest that the concentrations quantified as diesel may be in the gasoline range of hydrocarbons; the laboratory also indicates that the samples exhibit higher than diesel patterns (Appendix F).

TABLE 3

GROUNDWATER ELEVATIONS AND GRADIENT MAGNITUDES

6623 San Pablo Avenue, Oakland

	MW-1A[1]			MW-1B[2]			MW-2A[3]			MW-3A[4]			MW-3B[5]		
Date	Time	Depth to Ground-water[6]	Ground-water Elevation[7]	Time	Depth to Ground-water[6]	Ground-water Elevation[7]	Time	Depth to Ground-water[6]	Ground-water Elevation7[6]	Time	Depth to Ground-water[6]	Ground-water Elevation[7]	Time	Depth to Ground-water[6]	Ground-water Elevation[7]
1-15-99	12:44	Dry	--	12:44	21.60	18.35	12:52	7.15	31.77	12:50	7.0	32.76	12:50	22.50	17.29
1-19-99	8:11	Dry	--	8:11	9.10	30.85	8:17	7.32	31.60	8:13	7.27	32.49	8:14	8.77	31.02
1-19-99	16:58	Dry	--	16:55	26.81	13.14	17:82	7.05	31.87	17:08	7.79	31.97	17:11	26.71	13.08
1-20-99	8:46	Dry	--	8:43	16.76	23.19	8:50	6.94	31.98	8:55	7.18	32.58	8:58	15.40	24.39
1-20-99	17:48	Dry	--	17:44	13.48	26.47	17:51	6.89	32.03	17:56	7.04	32.72	17:58	12.50	27.29
2-8-99	7:45	Dry	--	7:42	10.74	29.21	7:50	6.80	32.12	6:48	5.45	34.31	6:45	6.82	32.97
2-12-99	6:54	9.10	30.86	--	--	--	6:58	6.90	32.02	7:04	5.94	33.82	--	--	--

Note: Monitoring well locations are shown on Figure 2.
-- = Not collected / Not determined.
Water level measurements were collected after removal of one well volume on 19 January 1999.
The water level data collected on 20 January and 8 and 12 February 1999 indicate that the water levels had not stabilized in either the shallow or deeper wells on the site.

[1] Top of well casing elevation = 39.96 feet above City of Oakland datum.
[2] Top of well casing elevation = 39.95 feet above City of Oakland datum.
[3] Top of well casing elevation = 38.92 feet above City of Oakland datum.
[4] Top of well casing elevation = 39.76 feet above City of Oakland datum.
[5] Top of well casing elevation = 39.79 feet above City of Oakland datum.
[6] Depths are in feet below top of casing.
[7] Elevations are in feet above City of Oakland datum.

APPENDIX A

DRILLING PERMIT

Lic# 339489 through 1-13-1

ALAMEDA COUNTY PUBLIC WORKS AGENCY

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 6623 San Pablo Ave. Oakland CA

California Coordinates Source _____ ft. Accuracy ± ____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Mc Donald's Corp.
Address 2527 Camino Ramon #300 Phone _____
City San Ramon CA Zip 94583

APPLICANT
Name Baseline Environmental Consl.
Fax 420 1707
Address 5900 Hollis ST. Suite D Phone 420 8686
City Emeryville CA Zip 94608

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☒	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒	Direct push Tech.	

DRILLER'S LICENSE NO. Precision Sampling Inc. 636387

WELL PROJECTS
Drill Hole Diameter 2.5 in. Maximum
Casing Diameter 3/4 in. Depth 35 ft.
Surface Seal Depth 5 ft. Number 3

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

ESTIMATED STARTING DATE 1-9-99
ESTIMATED COMPLETION DATE 1-9-99

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

APPLICANT'S SIGNATURE William K Scott DATE 12-21-98

FOR OFFICE USE

PERMIT NUMBER 98WR541
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2.) Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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

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

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED A. Kan DATE 12/22/98

APPENDIX B

BORING LOGS,
WELL CONSTRUCTION SUMMARIES,
AND DWR WELL COMPLETION REPORT

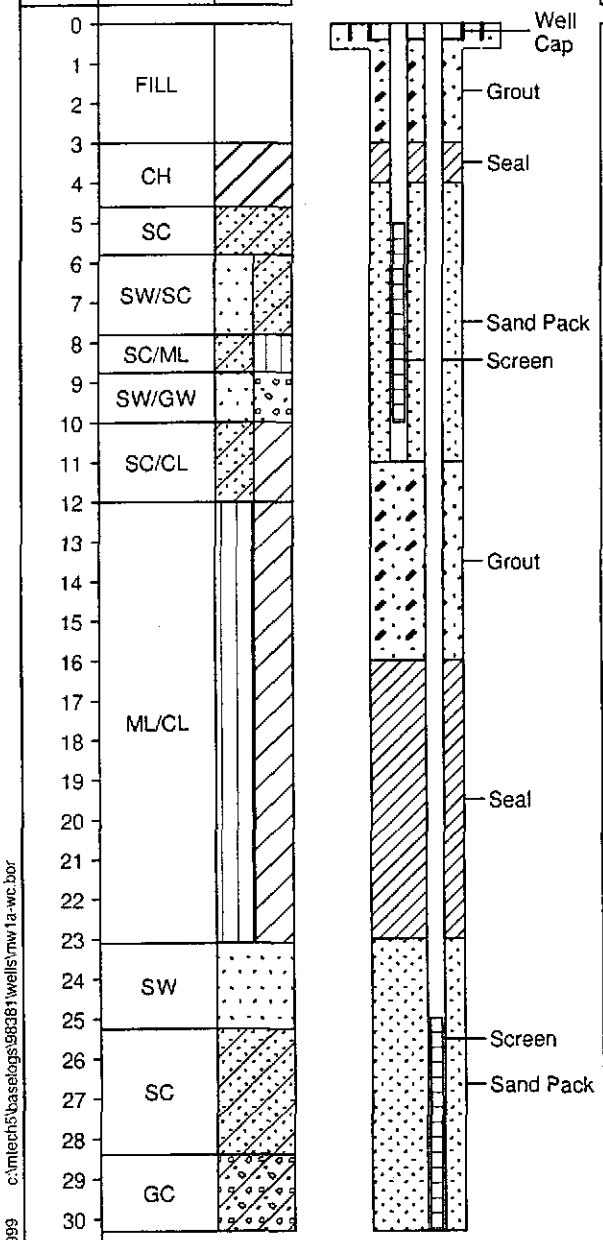
BASELINE

WELL CONSTRUCTION LOG MW-1A & MW-1B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Project Number	: 98381	Date	: 1/14/99
Project Name	: McDonalds	Driller	: Precision
Location	: 6623 San Pablo Ave.	*Drill Rig*	: *Direct push*
	: Oakland	Auger/Bits	: Direct push
Personnel	: WKS	Drilling Fluid	: None

Well1: MW-1A
Well2: MW-1B
TOC Elev.: 39.95A/39.95B



Material	Well Construction Information
Cement, neat with bentonite (grout) (0-3.0')	Boring diameter : 4 inch Surface completion : Christy box Ground surface elevation : 40.16 feet Screen : 0.01 inch slot MW-1A screen : 5.0-10.0 feet MW-1B screen : 25.0-30.3 feet Casing diameter : 0.75 inch
Bentonite pellets (seal) (3.0-4.0')	
Lonestar #2/16 (sand pack) (4.0-11.0')	WELL DEVELOPMENT MW-1A Development date: 1/19/99 Development method: Peristaltic pump Well was dry
Cement, neat with bentonite (grout) (11.0-16.0')	MW-1B Development date: 1/19/99 Development method: Peristaltic pump 8:25 0.2 gal - slightly turbid 8:36 1.2 gal - very slightly turbid to clear 8:45 1.4 gal - well pumped dry
Bentonite pellets (seal) (16.0-23.0')	
Lonestar #2/16 (sand pack) (23.0-30.3')	COMMENTS: Signature: _____

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BASELINE

DRILL LOG NO.: MW-1A & 1B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-1A & 1B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:	Casing Size	:

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
0						Dark gray sandy CLAY with brick pieces and wood pieces, moist (Fill)	Hand auger to 4.0 feet
1				FILL			
2							
3			0			Very dark gray to black silty CLAY, red oxide staining, rootlets, high plasticity, moist	
4				CH			
5			50	SC		Greenish gray sandy CLAY, trace gravel, fine grained, high plasticity, moist	0 ppm PID in breathing zone Sample not analyzed
6			521	SW/SC		Greenish gray gravelly SAND-clayey SAND with gravel, fine to medium grained, 1/3 to 3/4 inch subangular to subrounded clasts of chert and sandstone, very moist	
7							
8				SC/ML		Greenish gray sandy CLAY-clayey SILT, trace gravel, fine grained, moist	
9				SW/GW		Greenish gray sandy GRAVEL-gravelly SAND with clay, 1/3 to 1 inch subangular to subrounded clasts of chert and sandstone, fine grained, moist	
10							

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BASELINE

DRILL LOG NO.: MW-1A & 1B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-1A & 1B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:	Casing Size	:

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
10		X	15	SC/CL		Mottled greenish gray yellowish brown clayey SAND - sandy CLAY with gravel, fine grained, 1/3-3/4 inch subangular to subrounded clasts, moist	0 ppm PID in breathing zone
11							
12				CL/ML		Mottled greenish gray to yellowish brown silty CLAY-clayey SILT with sand, trace gravel, fine grained, 1/3 to 1/2 inch subangular to subrounded clasts, red oxide stained, moist	
13							
14							
15		X	0			Decrease in mottling becoming pale olive	0 ppm PID in breathing zone
16							
17							
18						Increase in sand content, some veinlets	
19							
20							

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BASELINE

DRILL LOG NO.: MW-1A & 1B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-1A & 1B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:	Casing Size	:

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
20			0				0 ppm PID in breathing zone
21				CL/ML			
22							
23			0			Dark yellowish brown gravelly SAND with clay and silt, very fine to fine grained, 1/3 to 2 inch subangular to angular clasts of chert and sandstone, moist	0 ppm PID in breathing zone
24				SW			
25	▼		0			4-inch thick sandy GRAVEL lense	0 ppm PID in breathing zone
26						Mottled yellowish brown to light gray clayey SAND with gravel, 1/3 to 2 inch subangular to angular clasts of chert and sandstone, moist	
27				SC		Becoming light gray	
28							
29				GC		Yellowish brown clayey GRAVEL with sand, 1/3 to 1 inch subangular to subrounded clasts, very moist	
30			0			Total depth = 30.0 feet	0 ppm PID in breathing zone

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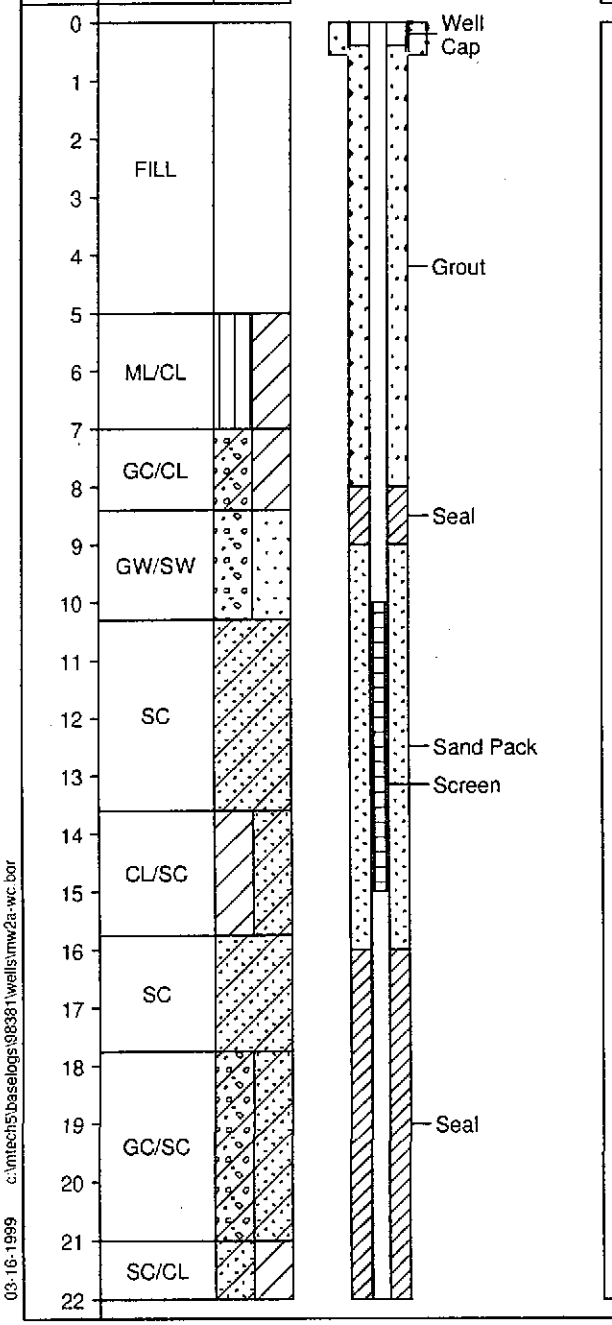
BASELINE

WELL CONSTRUCTION LOG MW-2A

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Project Number	: 98381	Date	: 1/14/99
Project Name	: McDonalds	Driller	: Precision
Location	: 6623 San Pablo Ave.	Drill Rig	: Direct push
	: Oakland	Auger/Bits	: Direct push
Personnel	: WKS	Drilling Fluid	: None



Material	Well Construction Information
	Boring diameter : 4 inch Surface completion : Christy box Ground surface elevation : 39.13 feet Screen : 0.01 inch slot MW-2A screen : 10.0-15.0 feet Casing diameter : 1.0 inch
Cement, neat (grout) (0-8.0')	WELL DEVELOPMENT MW-2A Development date: 1/19/99 Development method: Peristaltic pump 09:50 0.25 gal - turbid and very turbid 10:06 2.0 gal - slightly turbid 10:21 2.0 gal - clear 10:30 2.5 gal - clear
Bentonite pellets (seal) (8.0-9.0')	
Lonestar #2/16 (sand pack) (9.0-16.0')	
Bentonite pellets (seal) (16.0-22.0')	COMMENTS: Signature: _____

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BASELINE

DRILL LOG NO.: MW-2A

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-2A
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
0						Very dark brown- black sandy gravelly CLAY, some sand, low plasticity, wood pieces, very moist (Fill)	Hand auger to 2.0 feet
1							
2			0	FILL			No recovery 2 ft. - 4 ft.
3							
4							
5						Greenish gray, silty CLAY- CLAYEY SILT, with trace of sand and gravel, 1/3 - 3/4 subangular-subrounded, fine-grained, red oxide stained, very moist	0 ppm PID in breathing zone
6			0.9	ML/CL			
7						Greenish gray gravelly CLAY/ sandy CLAY with silt, 1/3-3/4 subangular to subrounded clasts, very moist	
8				GC/CL			Petroleum oder 0 ppm PID in breathing zone
9			90	SC/CL		Mottled greenish gray, reddish brown, sandy CLAY, clayey SAND, fine-grained, low plasticity, very moist	
10							

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BASELINE

DRILL LOG NO.: MW-2A

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-2A
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
10	▼		170	SC/CL			0 ppm PID in breathing zone
11				GW/SW		Greenish gray sandy GRAVEL-gravelly sand, trace of clay, 1/3-3/4 subangular to subrounded clasts of chert, sandstone, claystone, fine- to medium grained, very moist to wet	0 pm in breathing zone
12			780				
13				SC		Greenish gray sandy CLAY with gravel,fine grained, 1/3-3/4 subangular clasts, very moist	
14				SW/SC		Greenish gray, sandy CLAY-clayey SAND with gravel, fine-grained, 1/3-3/4 subangular to subrounded clasts, very moist	
15							
16			0	SC		Yellowish brown, sandy CLAY, trace of gravel, fine-grained	0 ppm PID in breathing zone
17							
18				GC/SC		Yellowish brown clayey GRAVEL, clayey SAND, 1/3-1 inch subangular to subrounded clasts, fine-grained	
19							
20							

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BASELINE

DRILL LOG NO.: MW-2A

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-2A
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
20				GC/SC			
21				SC/CL		Pale olive, sandy CLAY-clayey SAND, fine grained, red oxide staining, very moist	
22						Total depth 22.0 feet	
23							
24							
25							
26							
27							
28							
29							
30							

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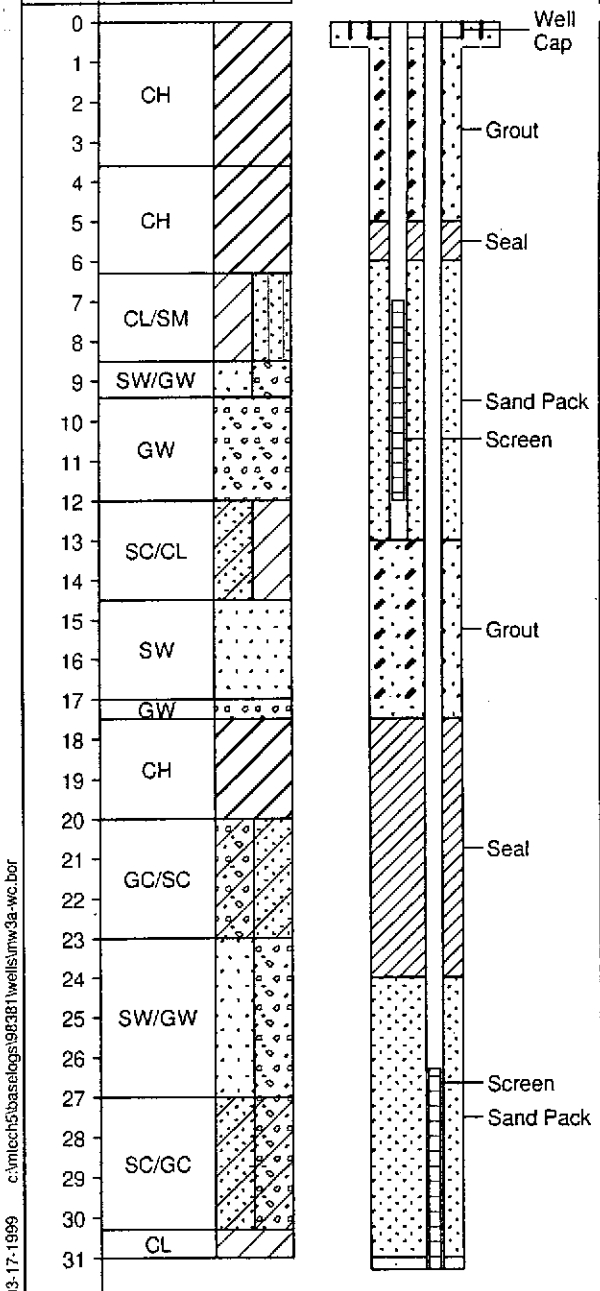
BASELINE

WELL CONSTRUCTION LOG MW-3A & MW-3B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Project Number	: 98381	Date	: 1/14/99
Project Name	: McDonalds	Driller	: Precision
Location	: 6623 San Pablo Ave.	Drill Rig	: Direct push
	: Oakland	Auger/Bits	: Direct push
Personnel	: WKS	Drilling Fluid	: None

Well1: MW-3A
Well2: MW-3B
TOC Elev.: 38.92A/39.79B



Material	Well Construction Information
Cement, neat with bentonite (grout) (0-5.0')	Boring diameter : 4 inch Surface completion : Christy box Ground surface elevation : 39.96 feet Screen : 0.01 inch slot MW-3A screen : 7.0-12.0 feet MW-3B screen : 26.3-31.3 feet Casing diameter : 0.75 inch
Bentonite pellets (seal) (5.0-6.0')	WELL DEVELOPMENT MW-3A Development date: 1/19/99 Development method: Peristaltic pump 9:02 0 gal - slightly turbid 9:04 0.3 gal - very slightly turbid Well ran dry MW-3B Development date: 1/19/99 Development method: Peristaltic pump 9:10 0.1 gal - very slightly turbid 9:13 1.0 gal - clear 9:19 1.5 gal - clear
Lonestar #2/12 (sand pack) (6.0-13.0')	
Cement, neat with bentonite (grout) (13.0-17.5')	
Bentonite pellets (seal) (17.5-24.0')	
Lonestar #2/12 (sand pack) (24.0-31.0')	COMMENTS: Neat cement filled bottom 2 feet of casing of MW-3A to depth of 10.02 feet bgs. Signature:

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BASELINE

DRILL LOG NO.: MW-3A&3B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-3A&3B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
0				CH		Very dark gray-black, silty CLAY, trace of gravel, 1/3 inch subangular clasts, high plasticity, red oxide stained, rootlets, very moist	Hand auger to 4.0 feet
4			0	CH		Pale olive, silty CLAY, trace of sand, very fine-grained, high plasticity, some well-rounded, caliche nodules, very moist Increase in silt content at 6.0	0 ppm PID in breathing zone
6				CL/ML		Dark blue gray clayey SILT/ silty CLAY, red oxide staining, moderate plasticity, very moist	
8			897	SW/GW		Dark blue gray gravelly SAND/sandy GRAVEL with silt and clay, 1/3-1 1/2 inch subangular to subrounded clasts of sandstone, chert, very fine- to fine-grained, very moist	
10				GW			

BASELINE

DRILL LOG NO.: MW-3A&3B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-3A&3B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
10			170	GW		*Olive, sandy* GRAVEL, trace of clay, fine- to medium-grained, 1/3-1 1/2 inch subangular to subrounded clasts, of chert and sandstone, very moist	
11	▽		780				
12			0	SC/CL		Pale olive, mottled greenish gray sandy CLAY/clayey SAND with some gravel, 1/3-3/4 inch subangular clasts, firm to very firm, very moist	
13							
14						Decrease in SAND content at 13.5 feet	
15			0	SW		Pale yellow, clayey, gravelly SAND, 1/3-3/4 inch subangular to subrounded clasts, fine- to very fine-grained sand, pervasive red oxide staining, moist	
16			0				
17				GW		Pale yellow, sandy GRAVEL, 1/3-3/4 inch subangular to subrounded clasts, fine- to very fine-grained sand, moist	
18				CH		Decrease in CLAY, increase in gravel content	
19							
20							

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BASELINE

DRILL LOG NO.: MW-3A&3B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-3A&3B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
20			0	GC/SC		Light gray mottled with dark yellowish brown clayey GRAVEL/clayey SAND, 1/3-1 1/2 subangular to subrounded clasts of chert and sandstone, fine- to very-fine grained sand, very moist	0 ppm PID in breathing zone
21							
22							
23				SW/GW		Dark yellowish brown, gravelly SAND-sandy GRAVEL, 1/3 to 1 1/2 inch subangular to subrounded clasts of chert sandstone, fine- to very fine-grained sand, very moist	
24							
25			0				0 ppm PID in breathing zone Sample not analyzed
26							
27			0	SC/GC		Increase in moisture at 27 feet, very moist to wet Light gray mottled with dark yellowish brown clayey SAND-clayey GRAVEL,1/3-1 1/2 subangular to subrounded clasts of chert and sandstone, fine- to very fine-grained sand, very moist to wet	
28							
29							
30							

03-16-1999 c:\intech5\baselogs\98381\mw-3a&b.bor

BASELINE

DRILL LOG NO.: MW-3A&3B

BASELINE Environmental Consulting
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686
(510) 420-1707 fax

Location	: 6623 San Pablo, Oakland	Boring No.	: MW-3A&3B
Driller	: Precision	Project No.	: 98381
Method	: Direct Push	Date	: 1/14/99
Logger	: WKS	Bore Size	: 3.5"
Datum	:		

Water Levels
▼ Water level observed during drilling
▽ Water level measured with dual-interface probe

Depth in	Water Levels	Samples	PID in Soil (ppm)	USCS	GRAPHIC	DESCRIPTION	NOTES
30				SC/GC			
31				CL		Yellowish brown CLAY with silt, firm, moderate plasticity, very moist	

Total depth 31.0 feet

32
33
34
35
36
37
38
39
40

03-17-1999 c:\mtech5\baselogs\98381\mw-3a&b.bor

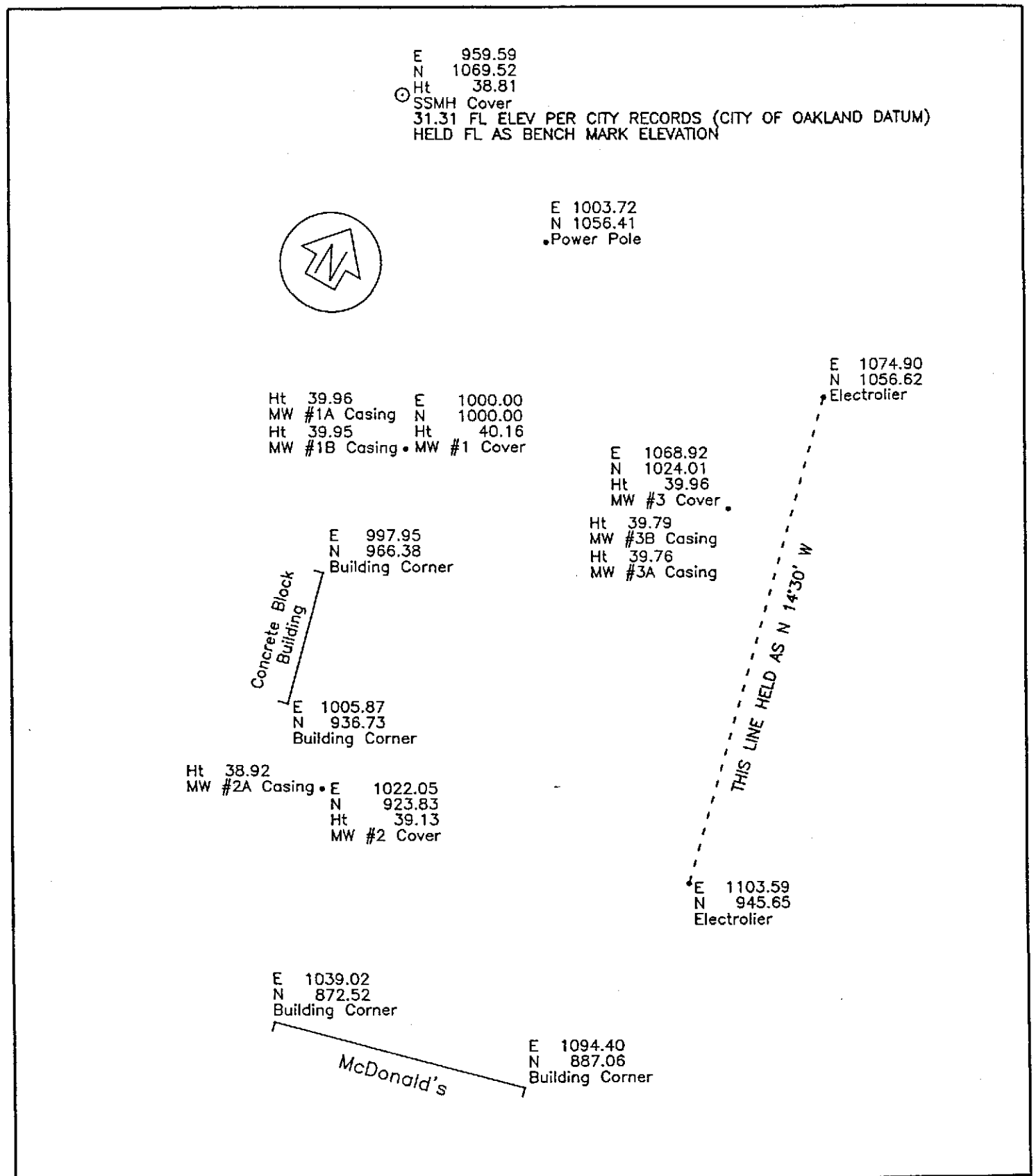
CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

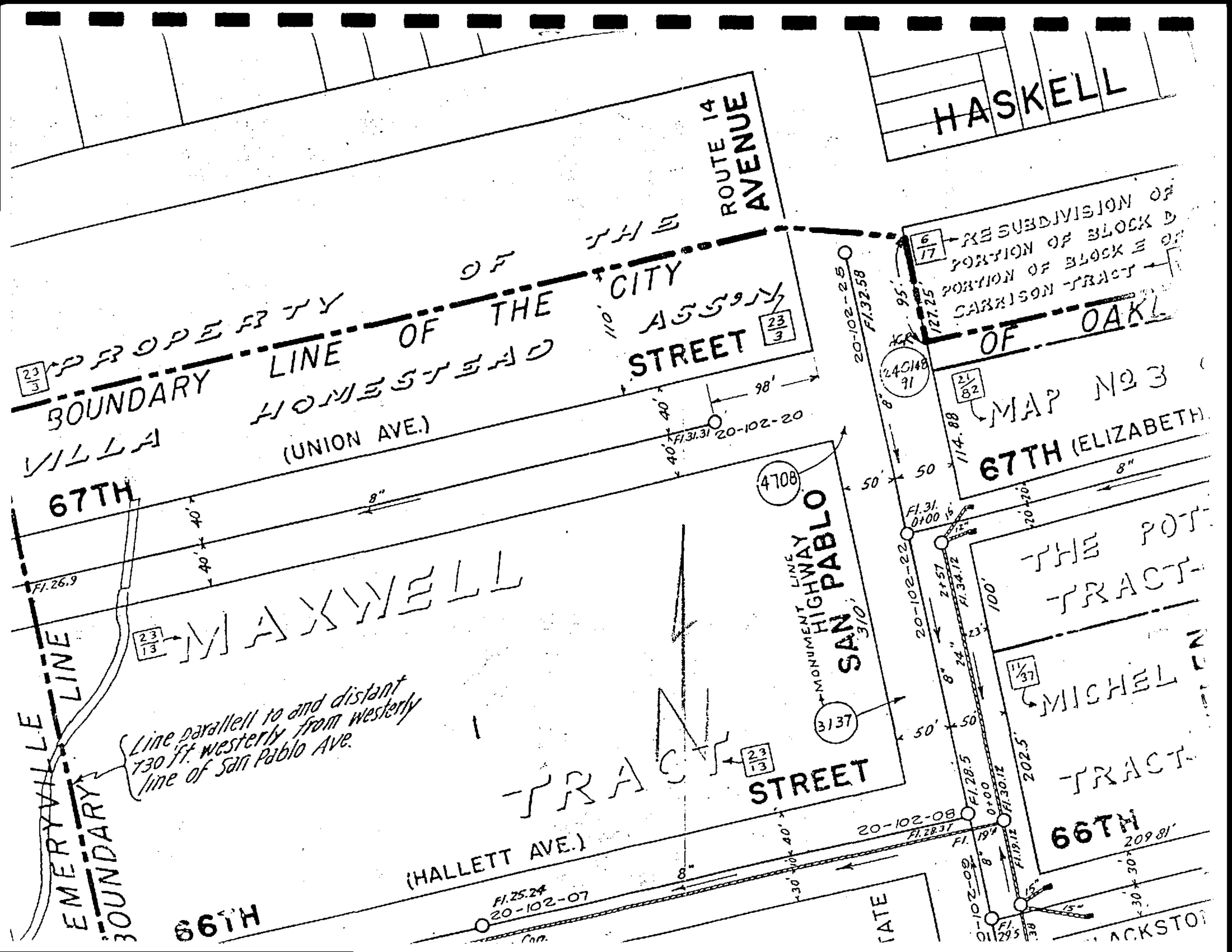
REMOVED

APPENDIX C

SURVEYOR'S REPORT



For: BASELINE Survey of: 3 Monitor Wells @ 6623 San Pablo Ave., Oakland	Scale: 1" = 30' Date: 2-17-99	Job #: 14968	**BATES AND BAILEY** LAND SURVEYORS 15 SHATTUCK SQ., BERKELEY, CA 94704 (510) 843-2007


HASKELL
ROUTE 14
AVENUE
PROPERTY OF THE
BOUNDARY LINE OF THE CITY
VILLA HOMESTEAD ASS'N
STREET
(UNION AVE.)
67TH
MAXWELL
TRACT
STREET
(HALLETT AVE.)
66TH
EMERYVILLE
BOUNDARY LINE
Line parallell to and distant 730 ft. westerly from westerly line of San Pablo Ave.
SAN PABLO
HIGHWAY
MONUMENT LINE
4708
3137
RESUBDIVISION OF
PORTION OF BLOCK D
PORTION OF BLOCK E OF
CARRISON TRACT
OF OAKL
MAP No 3
67TH (ELIZABETH
THE POT
TRACT
MICHEL
TRACT
66TH
20-102-25
20-102-20
20-102-22
20-102-08
20-102-07
F1.32.58
F1.31.31
F1.26.9
F1.28.5
F1.30.12
F1.34.12
F1.25.24
98'
95'
127.25'
114.88
310'
100'
202.5'
209.81'
110'
24"
8"

APPENDIX D

GROUNDWATER SAMPLING FORMS

GROUNDWATER SAMPLING

Project no.:	98381	Well no.: MW-1A	Date: 2/8/99
Project name:	McDonald's	Depth of well from TOC (feet):	9.95
Location:	6623 San Pablo Ave.	Well diameter (inch):	3/4
	Oakland	Screened interval from TOC (feet):	5-10
Recorded by:	WKS	TOC elevation (feet):	39.96
Weather:	Rain	Water level from TOC (feet):	Dry Time: 7:45
Precip in past		Product level from TOC (feet):	None Time: 7:45
5 days (inch):	≈ 2.0	Water level measurement:	Dual interface probe

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(9.95 ft) - (0.00 ft)] × (0.03 ft)² × 3.14 × 7.48 =

Well depth Water level Well radius

____ gallons in one well volume
____ gallons in 5 well volumes
____ total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)	D.O.
Calibration Standard:	--	--			
Before Purging:					NA
After Purging:					Mg/L
D.O.					

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
		Dry well, no groundwater at time of sampling			

DO measurement (ppm) (Note: DO meter is calibrated prior to sampling event): Mg/L Time:
Water level after purging prior to sampling (feet): NA Time:
Appearance of sample: Time:
Duplicate/blank number: Time:
Purge method: Peristaltic pump and disposable polyethylene tubing
Sampling equipment: Disposable polyethylene bailer VOC attachment: NA
Sample containers:
Sample analyses: Laboratory:
Decontamination method: TSP and water, DI water rinse Rinsate disposal:

GRNDWATR.XLS (3/13/96)

GROUNDWATER SAMPLING

Project no.:	98381	Well no.: MW-1B	Date: 2/8/99
Project name:	McDonald's	Depth of well from TOC (feet):	30.32
Location:	6623 San Pablo Ave.	Well diameter (inch):	3/4
	Oakland	Screened interval from TOC (feet):	25-30
Recorded by:	WKS	TOC elevation (feet):	39.95
Weather:	Rain	Water level from TOC (feet):	10.74 (rising) Time: 7:42
Precip in past		Product level from TOC (feet):	None Time: 7:42
5 days (inch):	≈ 2.0	Water level measurement:	Dual interface probe

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(30.32 ft) - (10.74 ft)] × (0.03 ft)² × 3.14 × 7.48 =

Well depth Water level Well radius

0.4 gallons in one well volume
1.2 gallons in 5 well volumes
1.4 total gallons removed

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	--	--		
Before Purging:				
After Purging:				

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
Purged on 1-19-99					

Water level after purging prior to sampling (feet):	10.74		Time: 7:42
Appearance of sample:	Clear		Time: 7:45
Duplicate/blank number:	Peristaltic pump		Time:
Purge method:	Disposable polyethylene bailer		
Sampling equipment:	1 liter Amber glass, 3-40ml VOAs	VOC attachment:	None required
Sample containers:	TEH diesel w/silica gel clean up,		
Sample analyses:	TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
	TSP and water, DI water rinse		
Decontamination method:		Rinsate disposal:	On-Site Drum

GRNDWATR.XLS (3/13/96)

GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-2A	Date:	2/8/99
Project name:	McDonald's	Depth of well from TOC (feet):	14.72		
Location:	6623 San Pablo Ave.	Well diameter (inch):	1 inch		
	Oakland	Screened interval from TOC (feet):	10-15		
Recorded by:	WKS	TOC elevation (feet):	38.92		
Weather:	Rain	Water level from TOC (feet):	6.80	Time:	7:50
Precip in past		Product level from TOC (feet):	None	Time:	7:50
5 days (inch):	≈ 2.0	Water level measurement:	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(14.72 ft) - (6.8 ft)] × (0.042 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

0.3 gallons in one well volume
0.9 gallons in 5 well volumes
2.5 total gallons removed on 1-19-99

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	--	--		
Before Purging:				
After Purging:				

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance
		Purged on 1-19-99			

Water level after purging prior to sampling (feet):	6.80		Time: 7:50
Appearance of sample:	Clear - VST		Time: 8:10
Duplicate/blank number:			Time:
Purge method:	Peristaltic pump		
Sampling equipment:	Disposable polyethylene bailer	VOC attachment:	None required
Sample containers:	1 liter Amber glass, 3-40ml VOAs		
Sample analyses:	TEH diesel w/silica gel clean up, TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-Site Drum

GRNDWATR.XLS (3/13/96)

GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-3A	Date:	2/8/99
Project name:	McDonald's	Depth of well from TOC (feet):	10.02		
Location:	6623 San Pablo Ave.	Well diameter (inch):	3/4		
	Oakland	Screened interval from TOC (feet):	7-10.02		
Recorded by:	WKS	TOC elevation (feet):	39.76		
Weather:	Rain	Water level from TOC (feet):	5.45	Time:	6:48
Precip in past		Product level from TOC (feet):	None	Time:	6:48
5 days (inch):	≈ 2.0	Water level measurement:	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(10.02 ft) - (5.45 ft)] × (0.03 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

0.1 gallons in one well volume
0.3 gallons in 5 well volumes
0.3 total gallons removed on 1-19-99

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	--	--		
Before Purging:				
After Purging:				

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance

Purged on 1-19-99

Water level after purging prior to sampling (feet):	5.75		Time: 6:48
Appearance of sample:	Clear - Very Slightly Turbid		Time: 7:20
Duplicate/blank number:			Time:
Purge method:	Peristaltic pump		
Sampling equipment:	Disposable polyethylene bailer	VOC attachment:	None required
Sample containers:	1 liter Amber glass, 3-40ml VOAs		
Sample analyses:	TEH diesel w/silica gel clean up, TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-Site Drum

GRNDWATR.XLS (3/13/96)

GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-3B	Date:	2/8/99
Project name:	McDonald's	Depth of well from TOC (feet):	31.31		
Location:	6623 San Pablo Ave.	Well diameter (inch):	3/4		
	Oakland	Screened interval from TOC (feet):	26.3-31.3		
Recorded by:	WKS	TOC elevation (feet):	39.79		
Weather:	Rain	Water level from TOC (feet):	6.82	Time:	6:45
Precip in past		Product level from TOC (feet):	None	Time:	6:45
5 days (inch):	≈ 2.0	Water level measurement:	Dual interface probe		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING:

[(31.31 ft) - (6.82 ft)] × (0.03 ft)² × 3.14 × 7.48 =
Well depth Water level Well radius

0.5 gallons in one well volume
1.5 gallons in 5 well volumes
1.5 total gallons removed on 1-19-99

CALIBRATION:

	Time	Temp (° C)	pH	EC (µmho/cm)
Calibration Standard:	--	--		
Before Purging:				
After Purging:				

FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance

Purged on 1-19-99

Water level after purging prior to sampling (feet):	6.82		Time: 6:45
Appearance of sample:	Clear		Time: 7:00
Duplicate/blank number:			Time:
Purge method:	Peristaltic pump		
Sampling equipment:	Disposable polyethylene bailer	VOC attachment:	None required
Sample containers:	1 liter Amber glass, 3-40ml VOAs		
Sample analyses:	TEH diesel w/silica gel clean up, TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-Site Drum

GRNDWATR.XLS (3/13/96)

APPENDIX E

WASTE DISPOSAL DOCUMENTATION

NON-HAZARDOUS SOIL SAMPLE/RINSATE DATA FORM

GENERATOR

NAME Mc Donald's Corporation PHONE (925) 904-3000

ADDRESS 2527 Camino Ramon Suite 300 FAX

CITY San Ramon STATE CA ZIP 94583

SITE INFORMATION

NAME Mc Donald's PHONE

ADDRESS 6623 San Pablo Ave

CITY Oakland STATE CA ZIP 94608

COMPONENTS OF WASTE	PPM	# PAILS 5 GAL	# DRUMS 55 GAL	WATER	SOIL
1 Steam cleaning water MW-1, 2, 3			1	✓	
2 Drill cuttings from MW-1, 2, 3			1		✓
3					
4					

By signing below, the generator or agent for generator certifies that the above information is correct and the material considered for disposal is NON-HAZARDOUS.

PRINT NAME Mc Donald's Corp. SIGNATURE For Mc Donald's Corp William K Sieg DATE 1-14-99

TRANSPORTER

Precision Sampling Inc.
47 Louise Street
San Rafael, Calif. 94901

PHONE 415-456-9875
FAX 415-456-9897

SAMPLING RIG SD-1 RIG OPERATOR

DATE 1-14-99 SIGNATURE

PROCESSING FACILITY

Waster e Precision Facility Pending Disposal

WATER

Seaport Environmental
675 Seaport Blvd.
Redwood City, CA 94063 Ph: 415-364-8154

RECIPIENTS SIGNATURE

DATE

SOIL

TPS Technologies
20 Recycling Lane
Richmond, CA 94801 Ph: 510-235-8778

RECIPIENTS SIGNATURE

DATE

This material has not been accepted for disposal by a facility. The quoted prices are contingent upon acceptance of the waste material by the disposal facility. The disposal facility may require additional analytical tests.

DATA FORM NUMBER No.: 00234

APPENDIX F

LABORATORY REPORTS

Quality Control Checklist
for Review of Laboratory Report

Job No.: CBBC 98381 Site: McDonalds

Laboratory: C&T Laboratory Report No: 137549

Report Date: 1/29/99 BASELINE Review By: Gypol

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

	Yes	No	NA
Batch Quality Control 45776, 45814, 45903, 45923 *(Samples are batched together by matrix [soil or water] and analyses requested. A batch generally contains 20 or fewer samples of the same matrix type, and is prepared using the same reagents, standards, procedures, and time frame. QC samples are run with each batch to assess performance of the entire measurement process.*			
11a. Are all sample QA/QC limits within laboratory control limits?	✓		
11b. If exceedances of lab QC goals were identified, were they flagged in the report?	✓		✓
11c. If exceedances of lab QC goals were identified, were any corrective actions made by the laboratory? (*Call lab to verify*)	✓		✓
12. Are method blanks for the analytical method(s) below laboratory reporting limits? *A method blank is run for each analytical batch. Used to assess laboratory contamination and prevent false positive results. Method blanks should be "ND." However, common laboratory contaminants include acetone, methylene chloride, diethylhexyl phthalate, and di-n-octyl phthalate.*	✓ TVH		
13. Are laboratory control samples (LCS) and LCS duplicate (LCSD) within laboratory limits? Limits should be provided on the report. *LCS is a reagent blank spiked with a representative selection of target analyte(s) and prepared in same manner as samples analyzed. The LCS should be spiked with the same analytes at the same concentrations as the matrix spike (below). The LCS is free of interferences from the sample matrix and demonstrates the ability of the laboratory instruments to recover the target analytes, especially if the MS/MSD fails QC goals. Accuracy (recovery information) is generally reported as % spike recovery; precision (reproducibility of results) between LCS and LCSD is generally reported as relative percent difference (RPD). LCS/LCSD can be run in addition to, or in lieu of, matrix QC data (if insufficient sample material is available).* Used BS/BSD also	✓		
14. Are the Matrix QC data (e.g., MS/MSD) within laboratory limits? Limits should be provided on laboratory report. *The lab selects a sample and analyses a spike and spike duplicate of that sample. Alternatively, the lab can analyze a duplicate, and spike of a sample, if the sample is expected to contain target analytes. Matrix QC data is used to obtain precision and accuracy information; this information is reported in the same manner as LCS/LCSD.*	✓ MS not performed for batch	45814	
Sample Quality Control			
15. Are the surrogate spikes reported within the laboratory's acceptable recovery limits? *A surrogate is a non-target analyte, which is similar in chemical structure as the analyte(s) being analyzed for. The surrogate is not commonly found in environmental samples. A known concentration of the surrogate is spiked into the sample or QA "sample" prior to extraction or sample preparation. Results are usually reported as % recovery of the spike. Used to evaluate the lab's accuracy of individual samples for volatiles including EPA Methods 8240, 8260, 8270, 8220, 8080, 8010, and 8015M. Failure to meet lab's acceptance limits results in rebatching and reanalysis of the sample. Repeated failure indicates that the sample result may be biased or is not amenable to analysis by the method used.*		✓ TVH see Ⓐ below	

Comments: _____

_____

_____

_____

Ⓐ High surrogate recovery for Gasoline, bromofluorobenzene outside limits; case narrative discusses it, & trifluorotoluene " " " " "

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:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 29-JAN-99
Lab Job Number: 137549
Project ID: 98381
Location: McDonalds,6623 San Pablo

Reviewed by: Anna Lafferty

Reviewed by: Teresa Morris

Curtis & Tompkins, Ltd.

Laboratory Number: **137549** Receipt Date: **1/15/99**
Client: **Baseline Environmental**
Project#: **98381**
Location: **McDonalds, 6623 San Pablo**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for nine soil samples that were received on January 15, 1999. All samples were received cold and intact.

Total Volatile Hydrocarbons/BTXE by EPA Method 8015Modified: Many samples have high surrogate recoveries due to hydrocarbons interfering with the surrogate peaks. No other analytical problems were encountered.

Total Extractable Hydrocarbons by EPA Method 8015Modified: See Corrective Action Report #4069. All extracts were treated with silica gel prior to analysis. No other analytical problems were encountered.

Corrective Action Report

Curtis & Tompkins, Ltd.

Analysis: TEH **Job#:** 137549

Batch#: 45767 **Client:** Baseline Environmental

Problem/ Nonconformance:

__ Hold Time	MB, QE 8897~~4~~ has a positive hit @ 1.6 ng/kg peaks @ ~1.5 mn.	Initial & Date: 1/24/99
__ QC Limits		Analyst MLE
__ Contamination		GL ~~KAH~~ 1/29/99
__ Other		

Impact:

X Data Quality	R	Initial & Date:
__ Cost		GL KAH 1/29/99
X TAT		PM R 1/22
X # of redo's 9		QA
__ Other		

Immediate Solution:

__ Reanalyze	Called Client, provided chromatograms and	Initial & Date:
X Re-extract:	get authorization to report data. Minimal	GL 1/29/99 KAH
new login:	impact on data quality, but will	PM R 1/22
	re-extract upon request.	QA TKM 1/22
new batch#: 45923	Hold Date 1/28/99.	
__ Narrate		
X Educate Client		

Resolution:

__ Train Analyst	1/25/99 Client wants all samples	Initial & Date:
__ Revise SOP	re extracted! Added silica gel clean-	Analyst
(attach revision)	up, per request.	GL KAH 1/29/99
X Single Incident		PM A 1/25/99
__ Educate Client		QA
__ None Required		OpM

CAR#: _____

4060

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

137549

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal (5 Day)
Lab: Curtis / Tompkins
BASELINE Contact Person: Bruce Abelli Ama

Project No.	Project Name and Location
98381	McDonald's, 6623 San Pablo Ave Oak

Samplers: (Signature) William K Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	Analysis: TEH as diesel	Analysis: TPH as gasoline (TPH with BTX&E)	Analysis: Oil & Grease	Analysis: Motor Oil	Analysis: PNAs	Analysis: Title 22 Metals	Analysis: Total Lead	Remarks/ Composite	Detection Limits
1	MW-3;5.0-5.5	1-14-98	8:46	Soil	5-5.5	1	X	X							
2	MW-3;10.0-10.5		8:50		10-10.5	1	X	X							
3	MW-3;15-15.5		9:10		15-15.5	1	X	X							
4	MW-3;20-20.5		9:39		20-20.5	1								Hold	
5	MW-3;25-25.5		10:04		25-25.5	1								Hold	
6	MW-3;30-30.5		10:23		30-30.5	1								Hold	
7	MW-1 5.0-5.5		12:42		5-5.5	1								Hold	
8	MW-1 7.0-7.5		12:54		7-7.5	1	X	X							
9	MW-1 10.0-10.5		13:00		10-10.5	1	X	X							
10	MW-1 15.0-15.5		13:10		15-15.5	1	X	X							
11	MW-1 20.0-20.5		13:34		20-20.5	1								Hold	
12	MW-1 25.0-25.5		13:45		25-25.5	1								Hold	
13	MW-1 29.5-30.0		14:12		29.5-30	1								Hold	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	1-15-98 / 10:00		1/15 1000	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal (5 Day)
Lab: Curtis + Tompkins
BASELINE Contact Person: Bruce Abelli-Amen

Project No.	Project Name and Location
98381	McDonald's, 6623 San Pablo Ave Oak.

Samplers: (Signature) William K Scott

	Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH as diesel	TPH as Gasoline (with BTX&E)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead						Remarks/ Composite	Detection Limits
4	MW-2; 5.5-6.0	1-14-99	15:41	Soil	5.5-6.0	1	X	X												
5	MW-2; 10.0-10.5	↓	15:56	↓	10-10.5	1	X	X												
6	MW-2; 16-16.5	↓	16:20	↓	16-16.5	1	X	X												

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	1-15-99 / 1000	[signature]	1/15 1000	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	

CCSTRCDE.FM2

ADMIN:AD4:5.27.99

CURTIS & TOMPKINS, LTD. BERKELEY — LOGIN CHANGE FORM

Reason for change: X Client Request: By: Bruce Date/Time: 1/25/99 Initials: AP
_____ Login Review

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Duedate
137549-001		MW-3, 5.0-5.5	Soil	add	Silica Gel	1
-002		MW-3, 10.0-10.5			Cleanup	
-003		MW-3, 15-15.5				
-008		MW-1, 7.0-7.5				
-009		MW-1, 10.0-10.5				
-010		MW-1, 15.0-15.5				
-014		MW-2, 5.5-6.0				17
-015		MW-2, 10.0-10.5				
-016		MW-2, 16.0-16.5				

Curtis & Tompkins, Ltd.

CURTIS & TOMPKINS, LTD. BERKELEY LOGIN CHANGE FORM

Reason for change: X Client Request: By: Bruce Ahmen Date/Time: 27Jan99 Initials: R

_____ Login Review

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Duedate
137549-001		MW-3; 5.0-5.5	Soil	ADD	MTBE	1
-002		MW-3; 10.0-10.5				
-003		MW-3; 15-15.5				
-008		MW-1; 7.0-7.5				
-009		MW-1; 10.0-10.5				
-010		MW-1; 15.0-15.5				
-014		MW-2 5.5-6.0				2
-015		MW-2; 10.0-10.5				
-016		MW-2; 16.0-16.5				

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-001	MW-3;5.0-5.5	45776	01/14/99	01/17/99	01/17/99	
137549-002	MW-3;10.0-10.5	45814	01/14/99	01/20/99	01/20/99	
137549-003	MW-3;15-15.5	45776	01/14/99	01/17/99	01/17/99	
137549-008	MW-1;7.0-7.5	45814	01/14/99	01/19/99	01/19/99	

Matrix: Soil

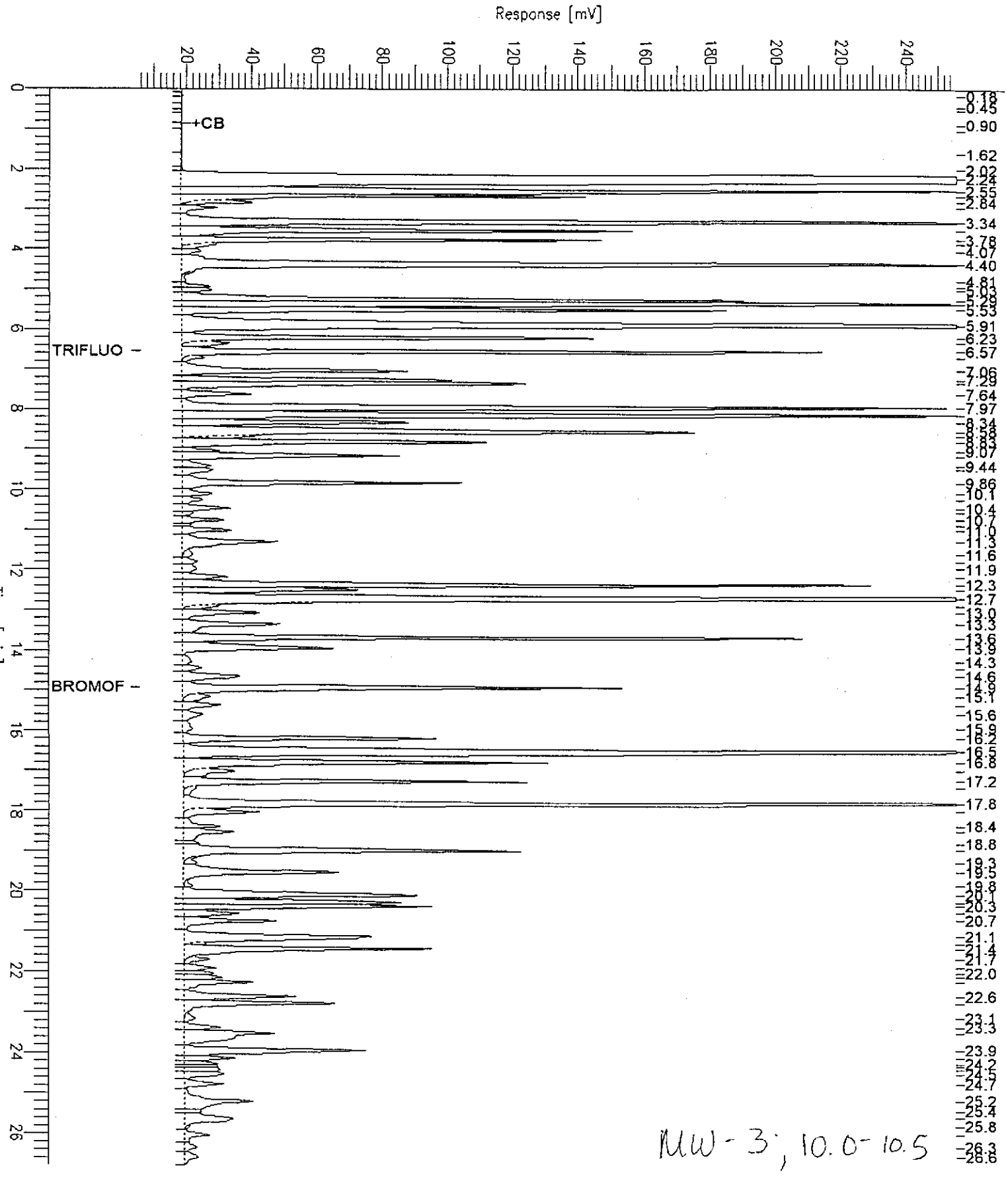
Analyte	Units	137549-001	137549-002	137549-003	137549-008	
Diln Fac:		1	20	1	80	
Gasoline C7-C12	mg/Kg	<1	340	<1	2800	
Surrogate						
Trifluorotoluene	%REC	106	113	106	123	
Bromofluorobenzene	%REC	108	146	104	254	*

* Values outside of QC limits

GC19 TVH 'X' Data File (FID)

Sample Name : R,D,137549-002,45814
FileName : G:\GC19\DATA\019X024.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 6 mV

Sample #: 1:20 Page 1 of 1
Date : 1/20/99 03:52 AM
Time of Injection: 1/20/99 03:25 AM
Low Point : 5.88 mV High Point : 255.88 mV
Plot Scale: 250.0 mV

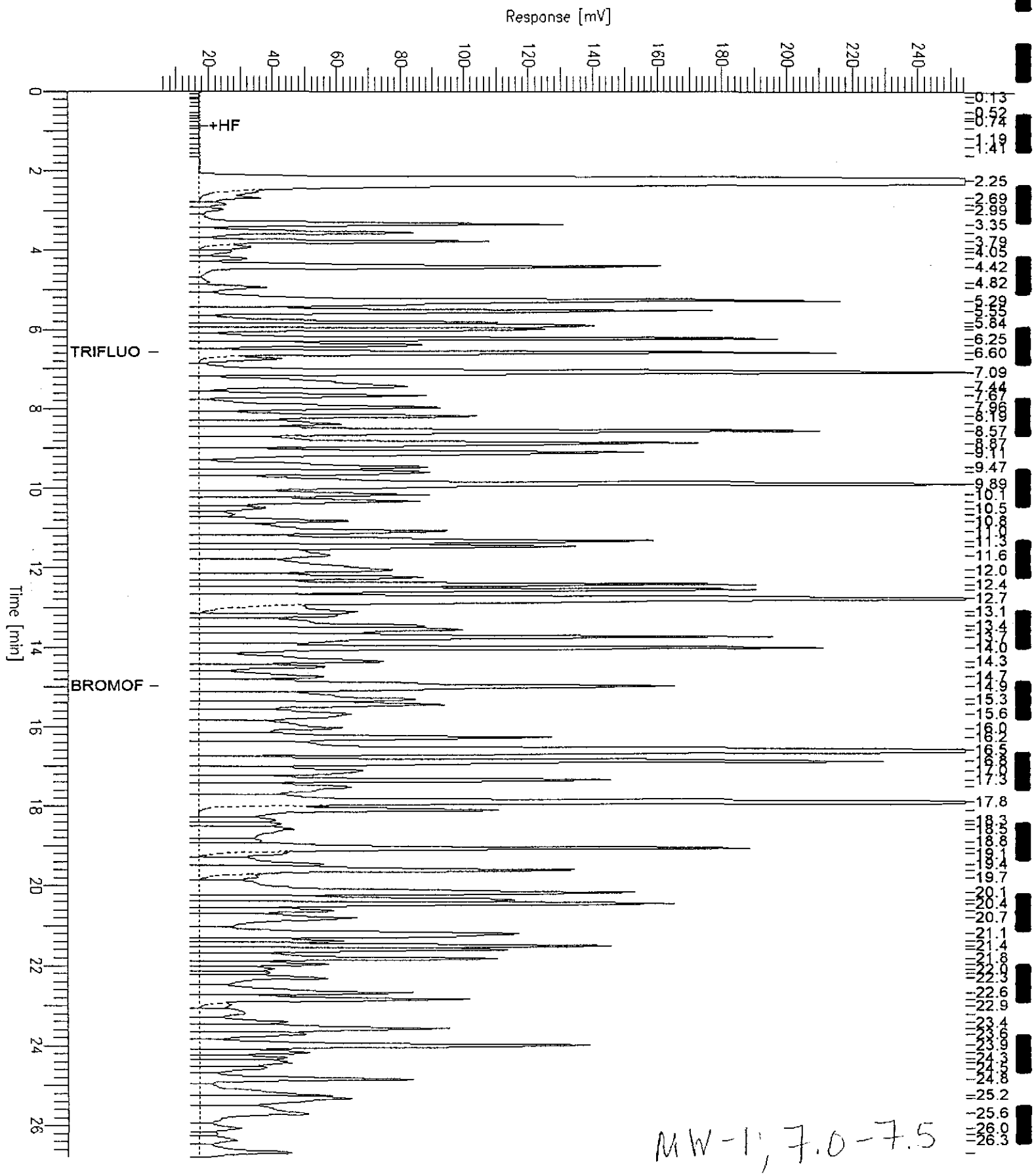


MW-3; 10.0-10.5

GC19 TVH 'X' Data File (FID)

Sample Name : D,137549-008,
FileName : G:\GC19\DATA\019X007.RAW
Method :
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 4 mV

Sample #: 1:80 Page 1 of 1
Date : 1/20/99 10:58 AM
Time of Injection: 1/19/99 02:58 PM
Low Point : 4.45 mV High Point : 254.45 mV
Plot Scale: 250.0 mV

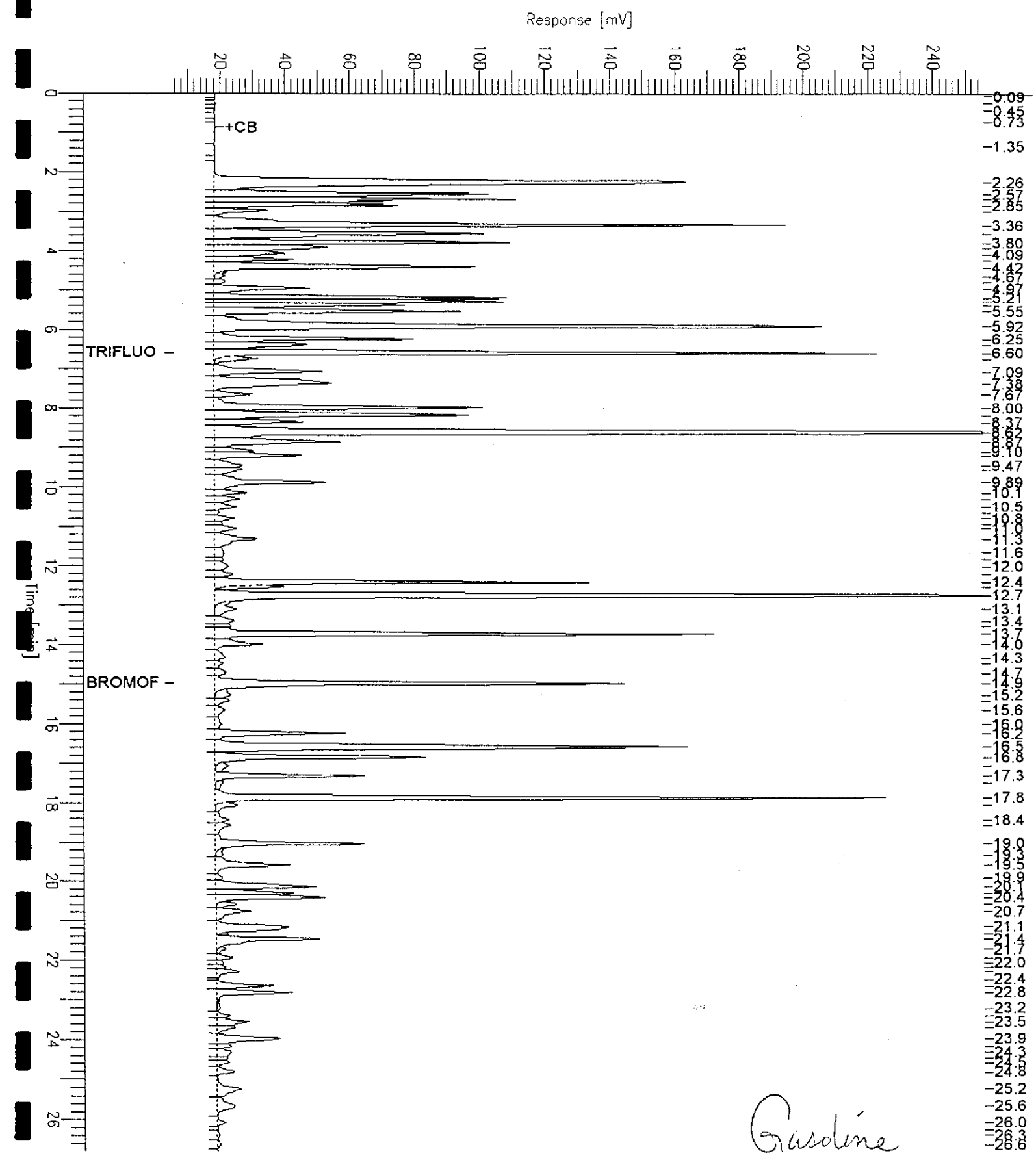


MW-1, 7.0-7.5

GC19 TVH 'X' Data File (FID)

ample Name : CCV/BS,QC89190,98WS6813,45814
leName : G:\GC19\DATA\019X001.raw
ethod : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 6 mV

Sample #: GAS Page 1 of 1
Date : 1/20/99 08:33 AM
Time of Injection: 1/19/99 09:53 AM
Low Point : 5.76 mV High Point : 255.76 mV
Plot Scale: 250.0 mV



Gasoline

Curtis & Tompkins, Ltd.

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-001	MW-3;5.0-5.5	45776	01/14/99	01/17/99	01/17/99	
137549-002	MW-3;10.0-10.5	45814	01/14/99	01/20/99	01/20/99	
137549-003	MW-3;15-15.5	45776	01/14/99	01/17/99	01/17/99	
137549-008	MW-1;7.0-7.5	45814	01/14/99	01/19/99	01/19/99	

Matrix: Soil

Analyte	Units	137549-001	137549-002	137549-003	137549-008	
Diln Fac:		1	20	1	80	
MTBE	ug/Kg	<20	2100	<20	5400	
Benzene	ug/Kg	<5	660	<5	2900	C
Toluene	ug/Kg	<5	5700	<5	4200	
Ethylbenzene	ug/Kg	<5	6400	<5	24000	
m,p-Xylenes	ug/Kg	<5	20000	<5	49000	
o-Xylene	ug/Kg	<5	6600	<5	30000	
Surrogate						
Trifluorotoluene	%REC	101	137 *	101	139 *	
Bromofluorobenzene	%REC	105	128	104	142	

* Values outside of QC limits
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

Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-009	MW-1;10.0-10.5	45903	01/14/99	01/25/99	01/25/99	
137549-010	MW-1;15.0-15.5	45776	01/14/99	01/17/99	01/17/99	
137549-014	MW-2;5.5-6.0	45776	01/14/99	01/17/99	01/17/99	
137549-015	MW-2;10.0-10.5	45903	01/14/99	01/25/99	01/25/99	

Matrix: Soil

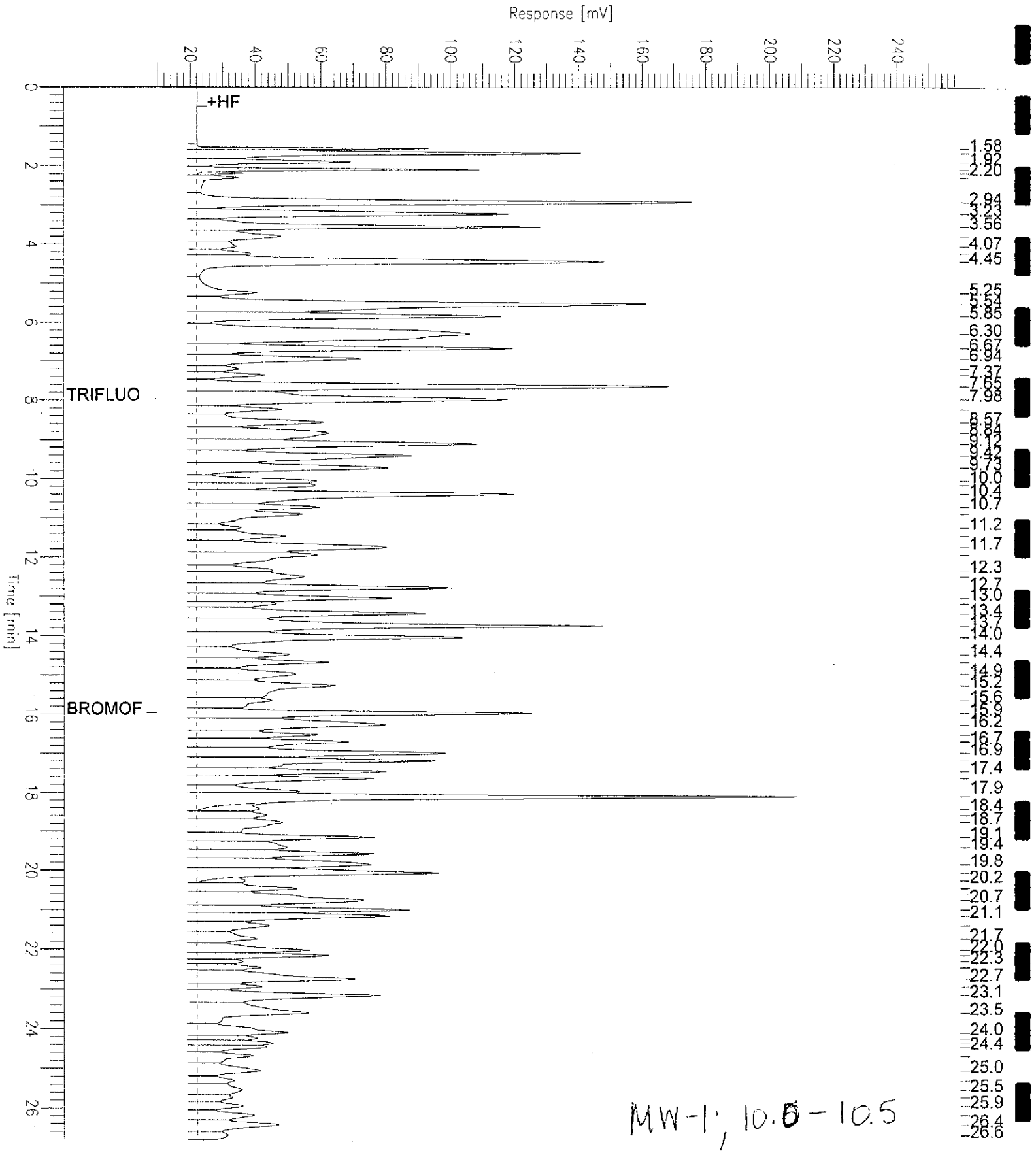
Analyte	Units	137549-009		137549-010	137549-014	137549-015	
Diln Fac:		5		1	1	10	
Gasoline C7-C12	mg/Kg	170		<1	<1	340	
Surrogate							
Trifluorotoluene	%REC	159	*	106	109	206	*
Bromofluorobenzene	%REC	175	*	105	112	124	

* Values outside of QC limits

GC05 'G' File TVH

Sample Name : 137549-009,45903
FileName : G:\GC05\DATA\025G012.RAW
Method :
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 10 mV

Sample #: Page 1 of 1
Date : 1/26/99 02:31 PM
Time of Injection: 1/25/99 09:58 PM
Low Point : 9.55 mV High Point : 259.55 mV
Plot Scale: 250.0 mV

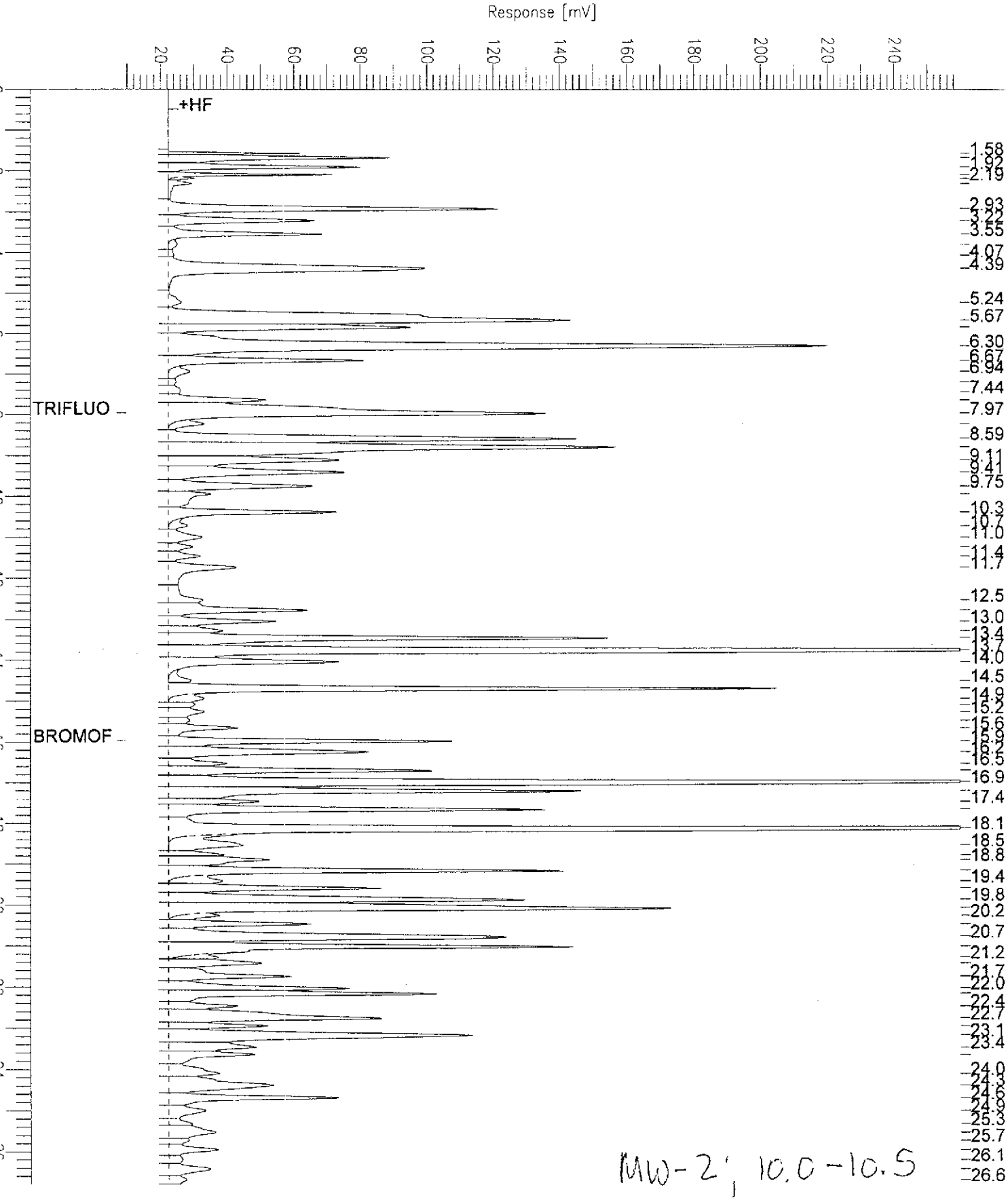


MW-1, 10.0 - 10.5

GC05 'G' File TVH

Sample Name : 137549-015,45903
FileName : G:\GC05\DATA\025G013.RAW
Method :
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 10 mV

Sample #: Page 1 of 1
Date : 1/26/99 02:33 PM
Time of Injection: 1/25/99 10:38 PM
Low Point : 9.79 mV High Point : 259.79 mV
Plot Scale: 250.0 mV

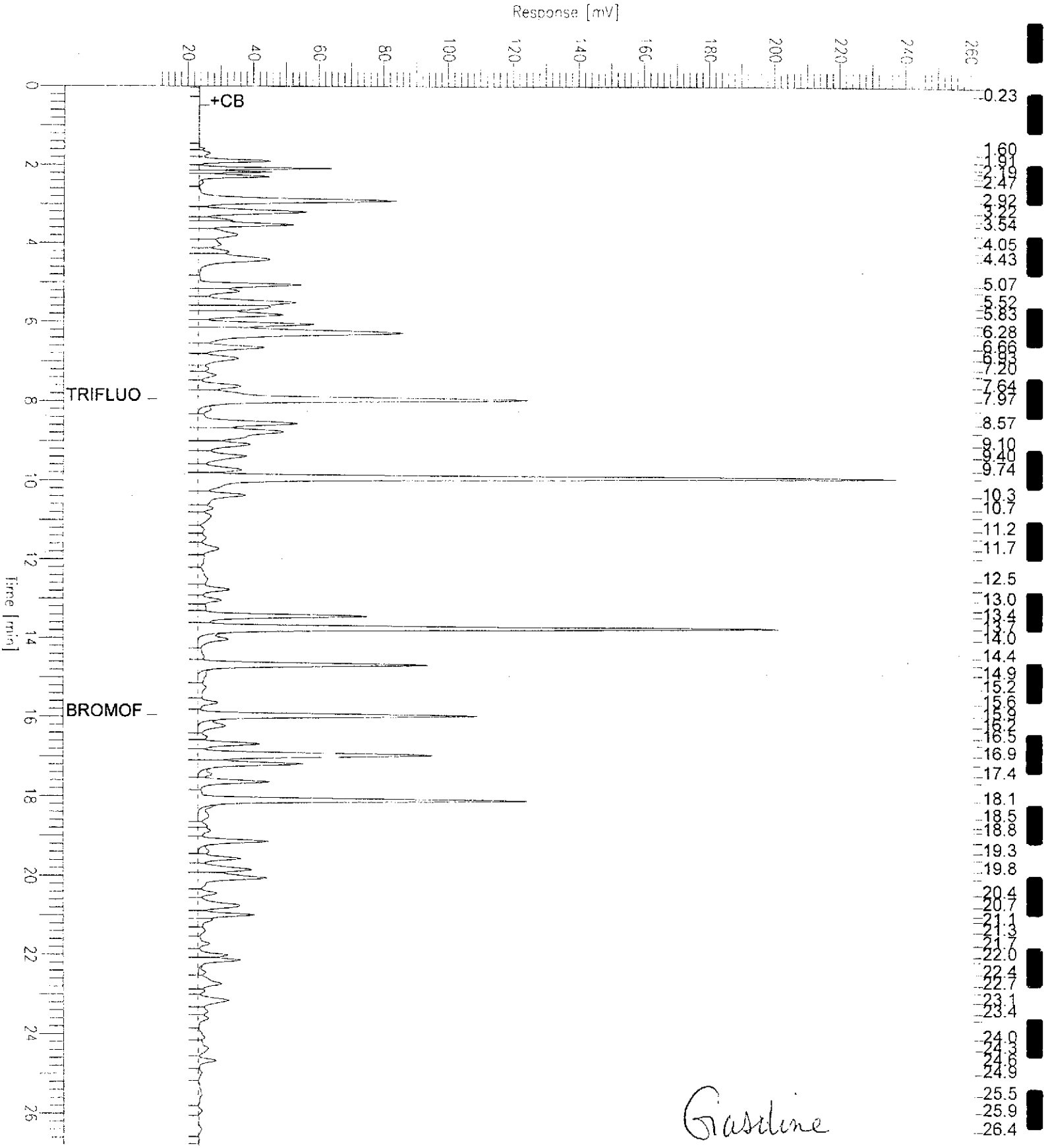


MW-2', 10.0 - 10.5

GC05 'G' File TVH

Sample Name : CCV/LCS,QC89522,98WS6813,45903,
FileName : G:\GC05\DATA\025G002.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 11 mV

Sample #: GAS Page 1 of 1
Date : 1/26/99 10:34 AM
Time of Injection: 1/25/99 02:14 PM
Low Point : 10.89 mV High Point : 260.89 mV
Plot Scale: 250.0 mV



Gasoline

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-009	MW-1;10.0-10.5	45903	01/14/99	01/25/99	01/25/99	
137549-010	MW-1;15.0-15.5	45776	01/14/99	01/17/99	01/17/99	
137549-014	MW-2;5.5-6.0	45776	01/14/99	01/17/99	01/17/99	
137549-015	MW-2;10.0-10.5	45903	01/14/99	01/25/99	01/25/99	

Matrix: Soil

Analyte	Units	137549-009	137549-010	137549-014	137549-015	
Diln Fac:		5	1	1	10	
MTBE	ug/Kg	1100	22	<20	410	
Benzene	ug/Kg	<25	<5	<5	370	
Toluene	ug/Kg	<25	<5	<5	440	C
Ethylbenzene	ug/Kg	1400	<5	<5	4700	
m,p-Xylenes	ug/Kg	2200	<5	<5	14000	
o-Xylene	ug/Kg	750	<5	<5	6100	
Surrogate						
Trifluorotoluene	%REC	101	100	106	121	
Bromofluorobenzene	%REC	129	104	108	109	

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

Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-016	MW-2;16.0-16.5	45776	01/14/99	01/17/99	01/17/99	

Matrix: Soil

Analyte	Units	137549-016
Diln Fac:		1
Gasoline C7-C12	mg/Kg	<1
Surrogate		
Trifluorotoluene	%REC	104
Bromofluorobenzene	%REC	105

Curtis & Tompkins, Ltd.

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-016	MW-2;16.0-16.5	45776	01/14/99	01/17/99	01/17/99	

Matrix: Soil

Analyte	Units	137549-016
Diln Fac:		1
MTBE	ug/Kg	87
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethylbenzene	ug/Kg	<5
m,p-Xylenes	ug/Kg	5.6
o-Xylene	ug/Kg	<5
Surrogate		
Trifluorotoluene	%REC	100
Bromofluorobenzene	%REC	103

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/16/99
Batch#:	45776	Analysis Date:	01/16/99
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC89012

Analyte	Result
Gasoline C7-C12	<1.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	105	53-157
Bromofluorobenzene	106	53-157

BTXE

Client:	Baseline Environmental	Analysis Method:	EPA 8021B
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/16/99
Batch#:	45776	Analysis Date:	01/16/99
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC89012

Analyte	Result
MTBE	<20
Benzene	<5.0
Toluene	<5.0
Ethylbenzene	<5.0
m,p-Xylenes	<5.0
o-Xylene	<5.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	102	53-126
Bromofluorobenzene	104	35-144

Lab #: 137549

BATCH QC REPORT

Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/19/99
Batch#:	45814	Analysis Date:	01/19/99
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC89149

Analyte	Result
Gasoline C7-C12	<1.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	108	53-157
Bromofluorobenzene	99	53-157

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 45814
Units: ug/Kg
Diln Fac: 1

Prep Date: 01/19/99
Analysis Date: 01/19/99

MB Lab ID: QC89149

Analyte	Result
MTBE	<20
Benzene	<5.0
Toluene	<5.0
Ethylbenzene	<5.0
m,p-Xylenes	<5.0
o-Xylene	<5.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	110	53-126
Bromofluorobenzene	101	35-144

Lab #: 137549 BATCH QC REPORT Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45903	Analysis Date:	01/25/99
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC89524

Analyte	Result
Gasoline C7-C12	<1.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	102	53-157
Bromofluorobenzene	116	53-157

BTXE

Client:	Baseline Environmental	Analysis Method:	EPA 8021B
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45903	Analysis Date:	01/25/99
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC89524

Analyte	Result
MTBE	<20
Benzene	<5.0
Toluene	<5.0
Ethylbenzene	<5.0
m,p-Xylenes	<5.0
o-Xylene	<5.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	99	53-126
Bromofluorobenzene	110	35-144

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Soil
Batch#: 45776
Units: ug/Kg
Diln Fac: 1

Prep Date: 01/16/99
Analysis Date: 01/16/99

BS Lab ID: QC89010

Analyte	Spike Added	BS	%Rec #	Limits
MTBE	100	84.78	85	65-135
Benzene	100	89.19	89	69-118
Toluene	100	85.13	85	73-118
Ethylbenzene	100	92.2	92	68-124
m,p-Xylenes	200	184.6	92	67-124
o-Xylene	100	90.7	91	73-127

Surrogate	%Rec	Limits
Trifluorotoluene	105	53-126
Bromofluorobenzene	108	35-144

BSD Lab ID: QC89011

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
MTBE	100	87.69	88	65-135	3	20
Benzene	100	89.86	90	69-118	1	14
Toluene	100	86.1	86	73-118	1	21
Ethylbenzene	100	92.9	93	68-124	1	22
m,p-Xylenes	200	186.5	93	67-124	1	22
o-Xylene	100	91.35	91	73-127	1	26

Surrogate	%Rec	Limits
Trifluorotoluene	105	53-126
Bromofluorobenzene	110	35-144

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

Lab #: 137549 BATCH QC REPORT Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Soil	Prep Date:	01/16/99
Batch#:	45776	Analysis Date:	01/16/99
Units:	mg/Kg		
Diln Fac:	1		

LCS Lab ID: QC89009

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	8.92	10	89	78-120

Surrogate	%Rec	Limits
Trifluorotoluene	112	53-157
Bromofluorobenzene	123	53-157

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 #: 137549 BATCH QC REPORT Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Soil
Batch#: 45814
Units: mg/Kg
Diln Fac: 1

Prep Date: 01/19/99
Analysis Date: 01/19/99

BS Lab ID: QC89190

Analyte	Spike Added	BS	%Rec #	Limits
Gasoline C7-C12	10	9.38	94	78-120

Surrogate	%Rec	Limits
Trifluorotoluene	116	53-157
Bromofluorobenzene	126	53-157

BSD Lab ID: QC89191

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	10	10.3	103	78-120	9	26

Surrogate	%Rec	Limits
Trifluorotoluene	115	53-157
Bromofluorobenzene	125	53-157

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

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 45814
Units: ug/Kg
Diln Fac: 1

Prep Date: 01/19/99
Analysis Date: 01/19/99

LCS Lab ID: QC89148

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	93.13	100	93	65-135
Benzene	94.9	100	95	69-118
Toluene	90.62	100	91	73-118
Ethylbenzene	97.66	100	98	68-124
m,p-Xylenes	195.7	200	98	67-124
o-Xylene	96.52	100	97	73-127

Surrogate	%Rec	Limits
Trifluorotoluene	113	53-126
Bromofluorobenzene	114	35-144

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

Lab #: 137549 BATCH QC REPORT Curtis & Tompkins Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45903	Analysis Date:	01/25/99
Units:	mg/Kg		
Diln Fac:	1		

LCS Lab ID: QC89522

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	9.81	10	98	78-120

Surrogate	%Rec	Limits
Trifluorotoluene	130	53-157
Bromofluorobenzene	119	53-157

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
NM: Not meaningful

BTXE	
Client: Baseline Environmental	Analysis Method: EPA 8021B
Project#: 98381	Prep Method: EPA 5030
Location: McDonalds,6623 San Pablo	

LABORATORY CONTROL SAMPLE	
Matrix: Soil	Prep Date: 01/25/99
Batch#: 45903	Analysis Date: 01/25/99
Units: ug/Kg	
Diln Fac: 1	

LCS Lab ID: QC89523

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	92.37	100	92	65-135
Benzene	94.16	100	94	69-118
Toluene	97.96	100	98	73-118
Ethylbenzene	102.1	100	102	68-124
m,p-Xylenes	203.1	200	102	67-124
o-Xylene	104.7	100	105	73-127

Surrogate	%Rec	Limits
Trifluorotoluene	101	53-126
Bromofluorobenzene	113	35-144

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

Lab #: 137549 BATCH QC REPORT Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	01/13/99
Lab ID:	137533-001	Received Date:	01/14/99
Matrix:	Soil	Prep Date:	01/16/99
Batch#:	45776	Analysis Date:	01/16/99
Units:	mg/Kg dry weight	Moisture:	10%
Diln Fac:	1		

MS Lab ID: QC89013

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	11.11	<1.111	9.211	83	38-132

Surrogate	%Rec	Limits
Trifluorotoluene	116	53-157
Bromofluorobenzene	129	53-157

MSD Lab ID: QC89014

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	11.11	9.711	87	38-132	5	26

Surrogate	%Rec	Limits
Trifluorotoluene	116	53-157
Bromofluorobenzene	130	53-157

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

Lab #: 137549 BATCH QC REPORT Curtis & Tompkins Ltd.

BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 137636-007
Matrix: Soil
Batch#: 45903
Units: ug/Kg dry weight
Diln Fac: 1

Sample Date: 01/21/99
Received Date: 01/22/99
Prep Date: 01/25/99
Analysis Date: 01/25/99
Moisture: 11%

MS Lab ID: QC89583

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	112.4	<5.618	100.4	89	46-128
Toluene	112.4	<5.618	109.6	98	43-135
Ethylbenzene	112.4	<5.618	131.3	117	27-146
m,p-Xylenes	224.7	146.9	289.8	64	31-136
o-Xylene	112.4	<5.618	137.3	122	36-144

Surrogate	%Rec	Limits
Trifluorotoluene	67	53-126
Bromofluorobenzene	118	35-144

MSD Lab ID: QC89584

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	112.4	100.6	90	46-128	0	14
Toluene	112.4	107.4	96	43-135	2	21
Ethylbenzene	112.4	116.4	104	27-146	12	22
m,p-Xylenes	224.7	247.4	45	31-136	16	22
o-Xylene	112.4	128.7	115	36-144	6	26

Surrogate	%Rec	Limits
Trifluorotoluene	54	53-126
Bromofluorobenzene	111	35-144

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: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-001	MW-3;5.0-5.5	45923	01/14/99	01/25/99	01/26/99	
137549-002	MW-3;10.0-10.5	45923	01/14/99	01/25/99	01/26/99	
137549-003	MW-3;15-15.5	45923	01/14/99	01/25/99	01/26/99	
137549-008	MW-1;7.0-7.5	45923	01/14/99	01/25/99	01/26/99	

Matrix: Soil

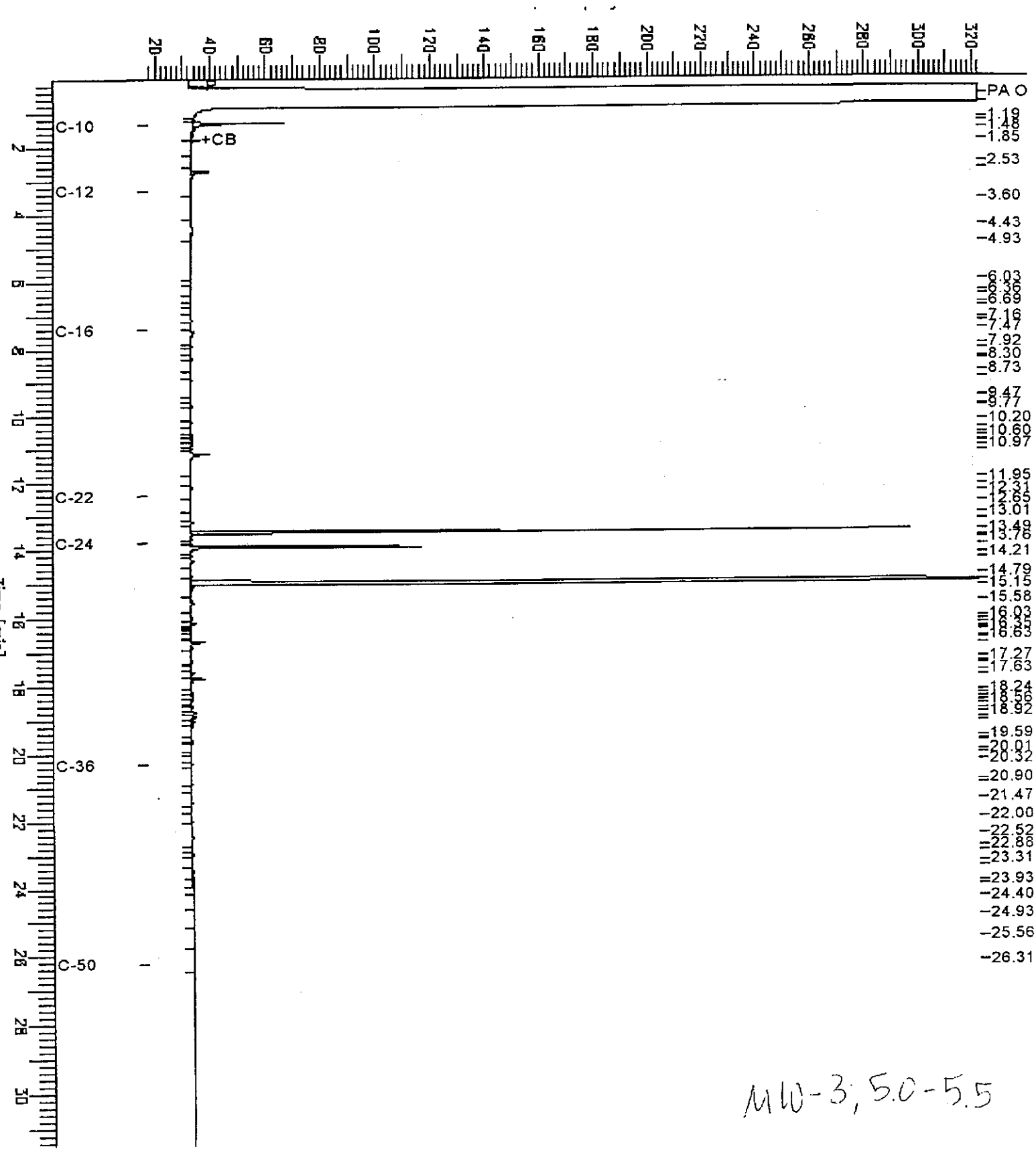
Analyte	Units	137549-001	137549-002	137549-003	137549-008
Diln Fac:		1	1	1	1
Diesel C10-C24	mg/Kg	1.6YZ	23 YLZ	5.3YZ	67 YLZ
Surrogate					
Hexacosane	%REC	92	102	93	106

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks
L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 137549-001,45923,SG
FileName : G:\GC13\CHB\026B005.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 17 mV

Sample #: 45923 Page 1 of 1
Date : 1/26/99 01:59 PM
Time of Injection: 1/26/99 12:27 PM
Low Point : 16.96 mV High Point : 322.06 mV
Plot Scale: 305.1 mV

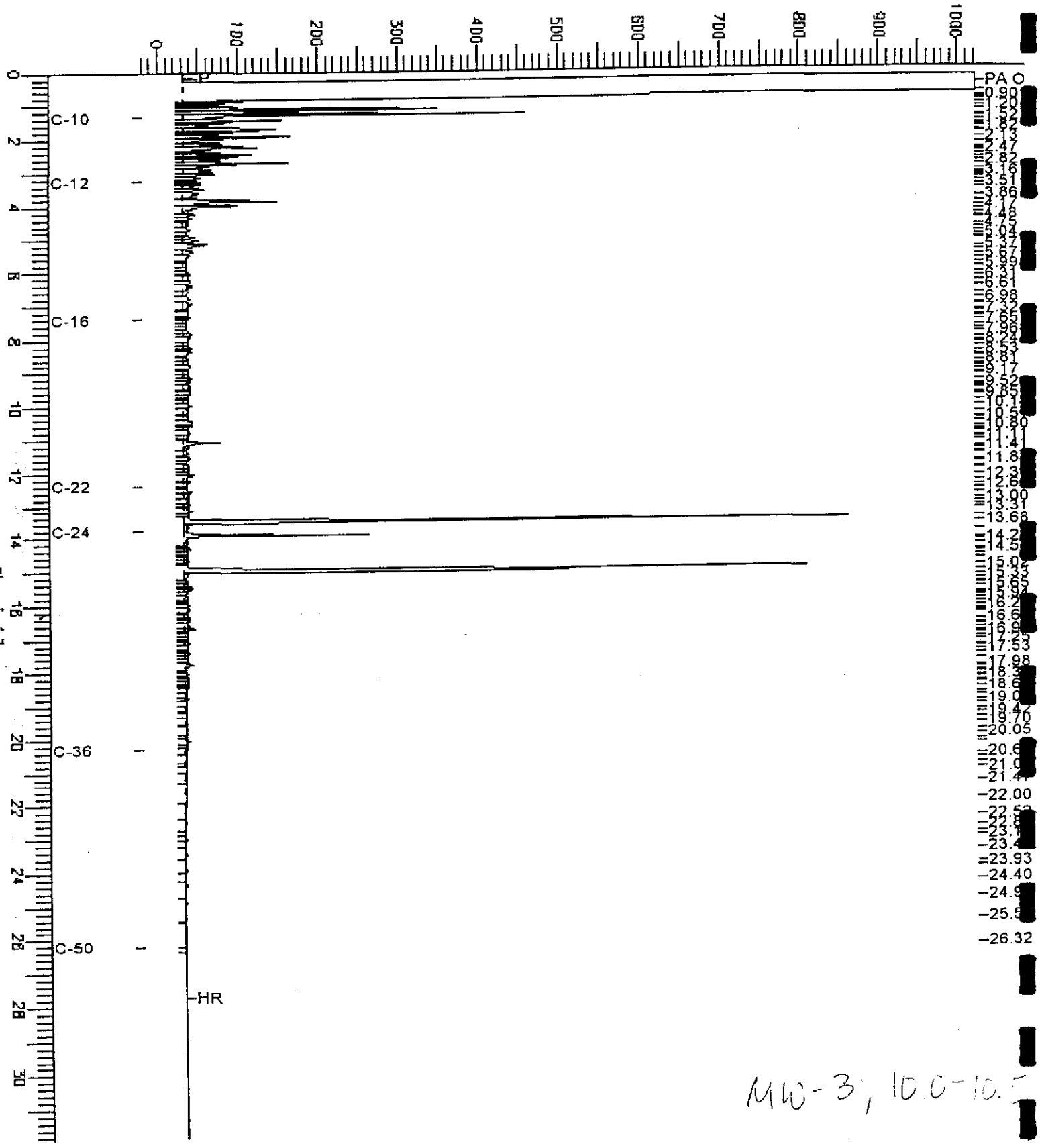


MW-3; 5.0-5.5

Chromatogram

Sample Name : 137549-002,45923,SG
FileName : G:\GC13\CHB\026B006.RAW
Method : BTEH015.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -20 mV

Sample #: 45923
Date : 1/26/99 02:01 PM
Time of Injection: 1/26/99 01:08 PM
Low Point : -20.14 mV High Point : 1024.00 mV
Plot Scale: 1044.1 mV

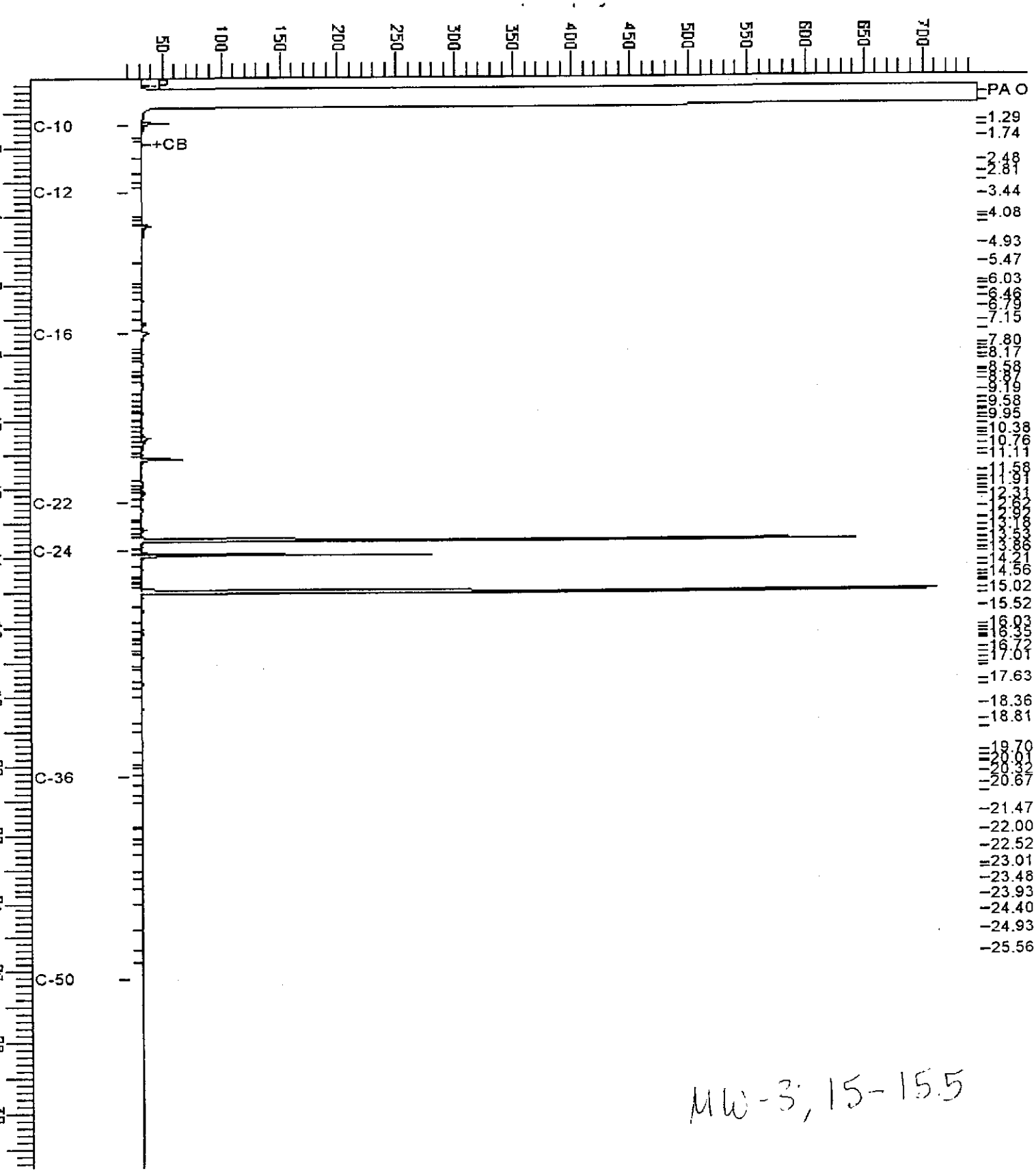


MW-3; 10.0-10.5

Chromatogram

Sample Name : 137549-003,45923,SG
FileName : G:\GC13\CHB\026B007.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 20 mV

Sample #: 45923 Page 1 of 1
Date : 1/26/99 02:21 PM
Time of Injection: 1/26/99 01:50 PM
Low Point : 19.82 mV High Point : 748.10 mV
Plot Scale: 728.3 mV

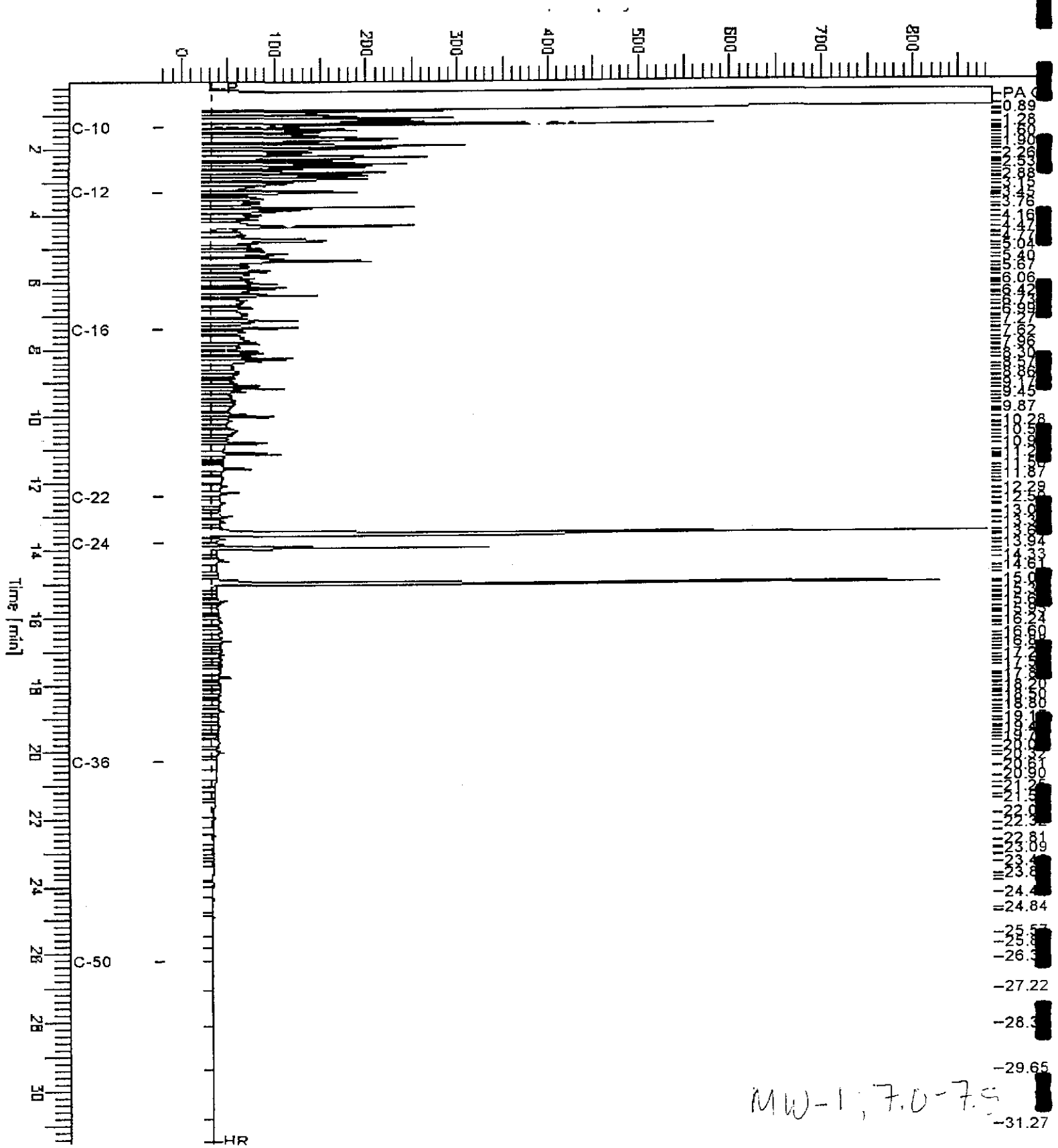


MW-3; 15-15.5

Chromatogram

Sample Name : 137549-008,45923,SG
FileName : G:\GC13\CHB\026B008.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -21 mV

Sample #: 45923 Page 1 of 1
Date : 1/26/99 04:38 PM
Time of Injection: 1/26/99 02:31 PM
Low Point : -21.14 mV High Point : 887.85 mV
Plot Scale: 909.0 mV



MW-1 ; 7.0-7.5

TEH-Tot Ext Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-009	MW-1;10.0-10.5	45923	01/14/99	01/25/99	01/26/99	
137549-010	MW-1;15.0-15.5	45923	01/14/99	01/25/99	01/26/99	
137549-014	MW-2;5.5-6.0	45923	01/14/99	01/25/99	01/26/99	
137549-015	MW-2;10.0-10.5	45923	01/14/99	01/25/99	01/26/99	

Matrix: Soil

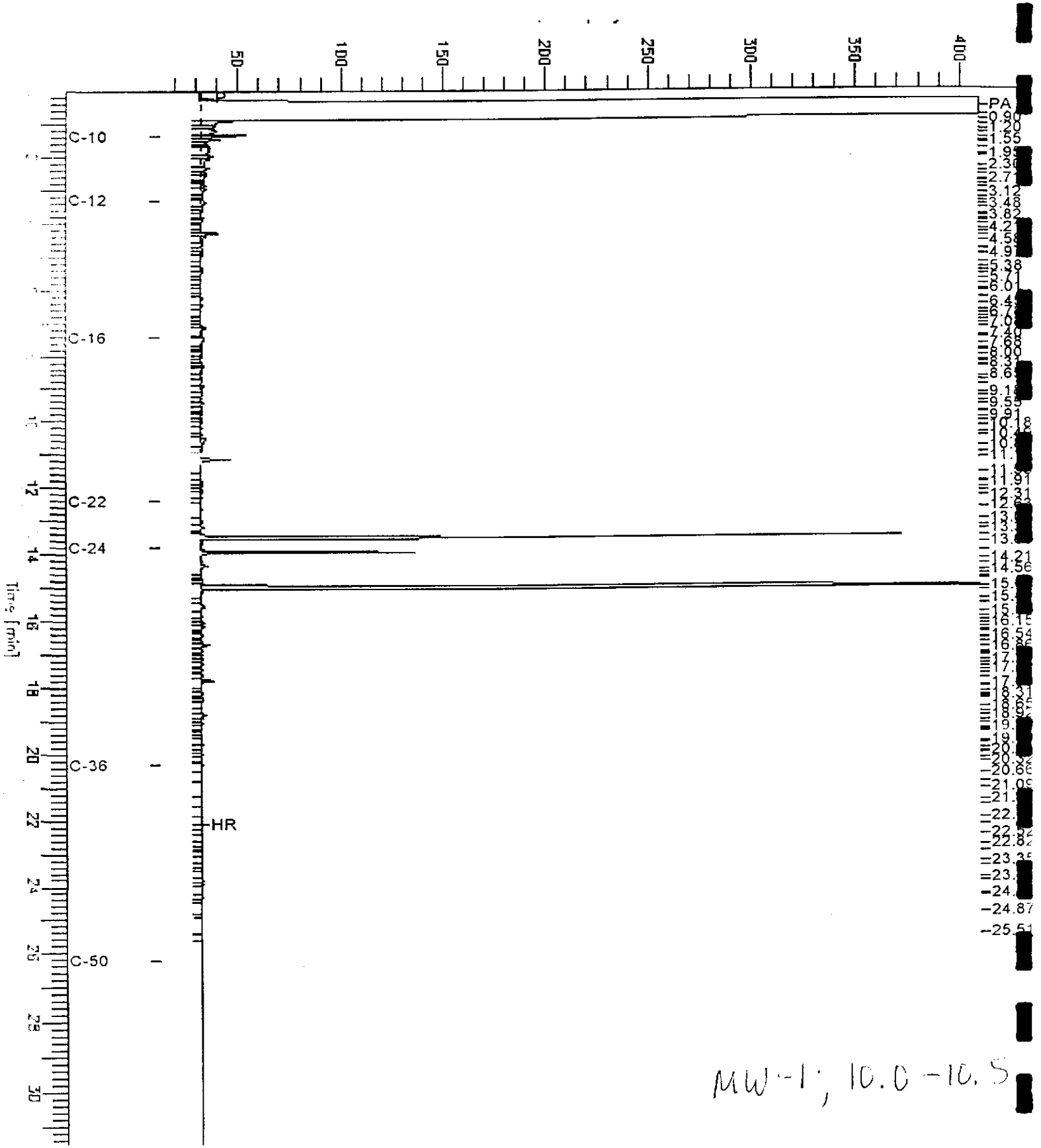
Analyte	Units	137549-009	137549-010	137549-014	137549-015
Diln Fac:		1	1	1	1
Diesel C10-C24	mg/Kg	3.1YZ	13 YZ	9 YZ	12 YL
Surrogate					
Hexacosane	%REC	101	85	96	100

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks
L: Lighter hydrocarbons than indicated standard

Chromatogram

: 137549-009,45923,SG
ame : G:\GC13\CHB\026B009.RAW
d : BTEH015.MTH
Time : 0.01 min End Time : 31.91 min
Factor: 0.0 Plot Offset: 12 mV

Sample #: 45923 Page 1 of 1
Date : 1/27/99 08:12 AM
Time of Injection: 1/26/99 05:07 PM
Low Point : 12.30 mV High Point : 409.67 mV
Plot Scale: 397.4 mV

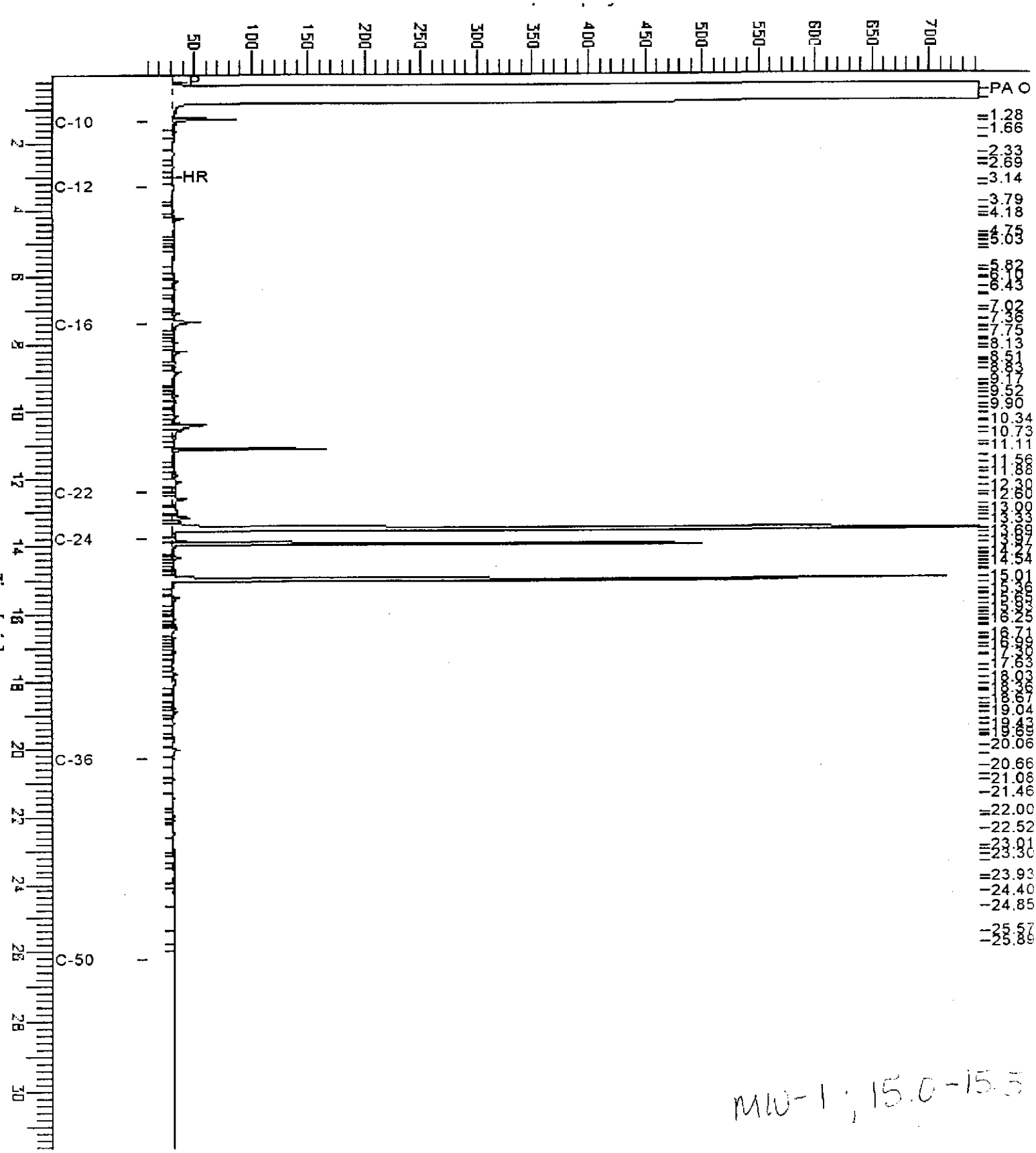


MW-1; 10.0 - 10.5

Chromatogram

Sample Name : 137549-010,45923,SG
FileName : G:\GC13\CHB\026B010.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 8 mV

Sample #: 45923 Page 1 of 1
Date : 1/27/99 08:10 AM
Time of Injection: 1/26/99 05:48 PM
Low Point : 8.27 mV High Point : 744.36 mV
Plot Scale: 736.1 mV

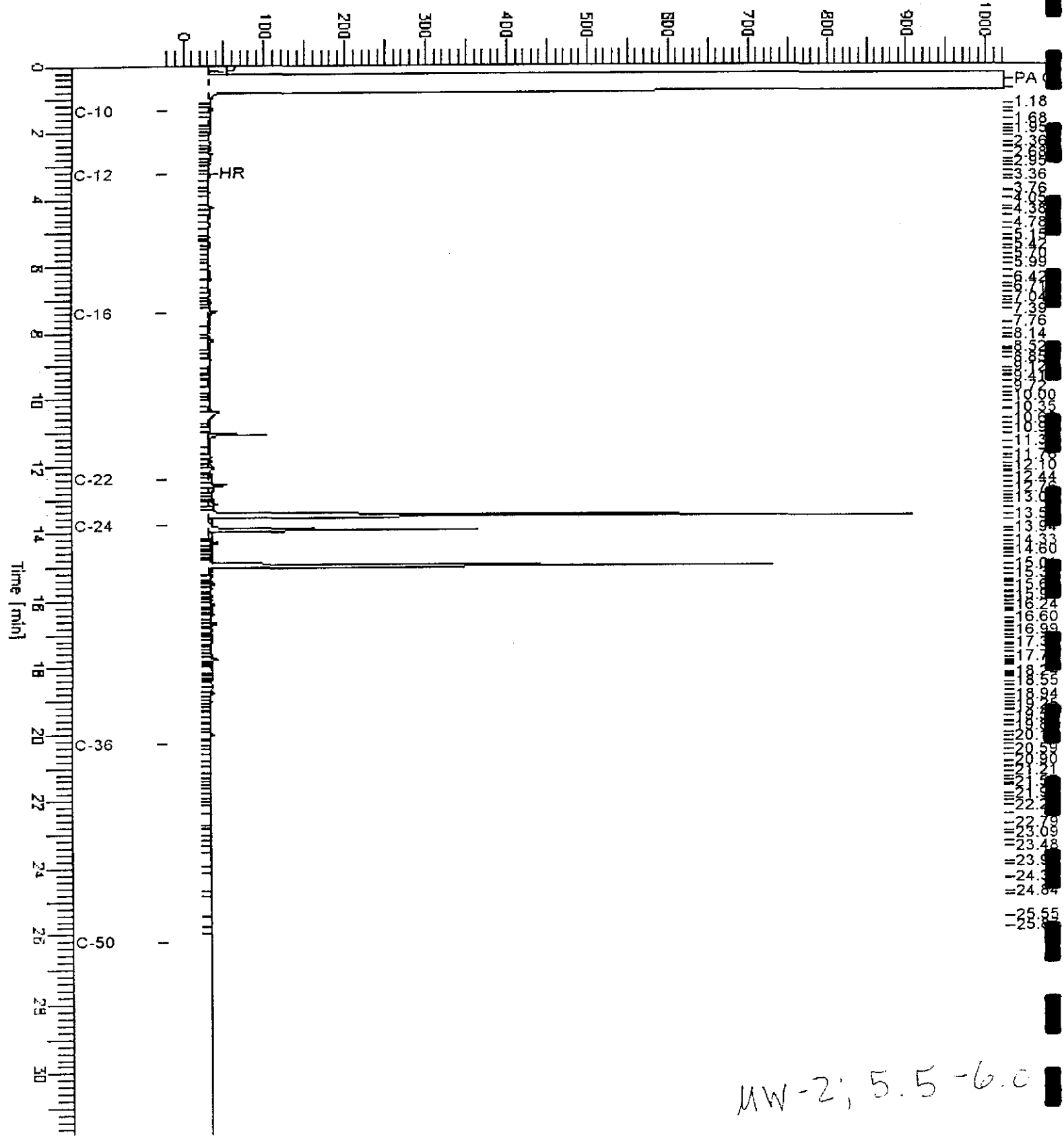


MW-1 ; 15.0-15.5

Chromatogram

ple Name : 137549-014,45923,SG
eName : G:\GC13\CHB\026B011.RAW
hod : BTEH015.MTH
art Time : 0.00 min End Time : 31.90 min
ale Factor: 0.0 Plot Offset: -21 mV

Sample #: 45923 Page 1 of 1
Date : 1/27/99 08:14 AM
Time of Injection: 1/26/99 06:30 PM
Low Point : -21.13 mV High Point : 1024.00 mV
Plot Scale: 1045.1 mV



MW-2; 5.5-6.0

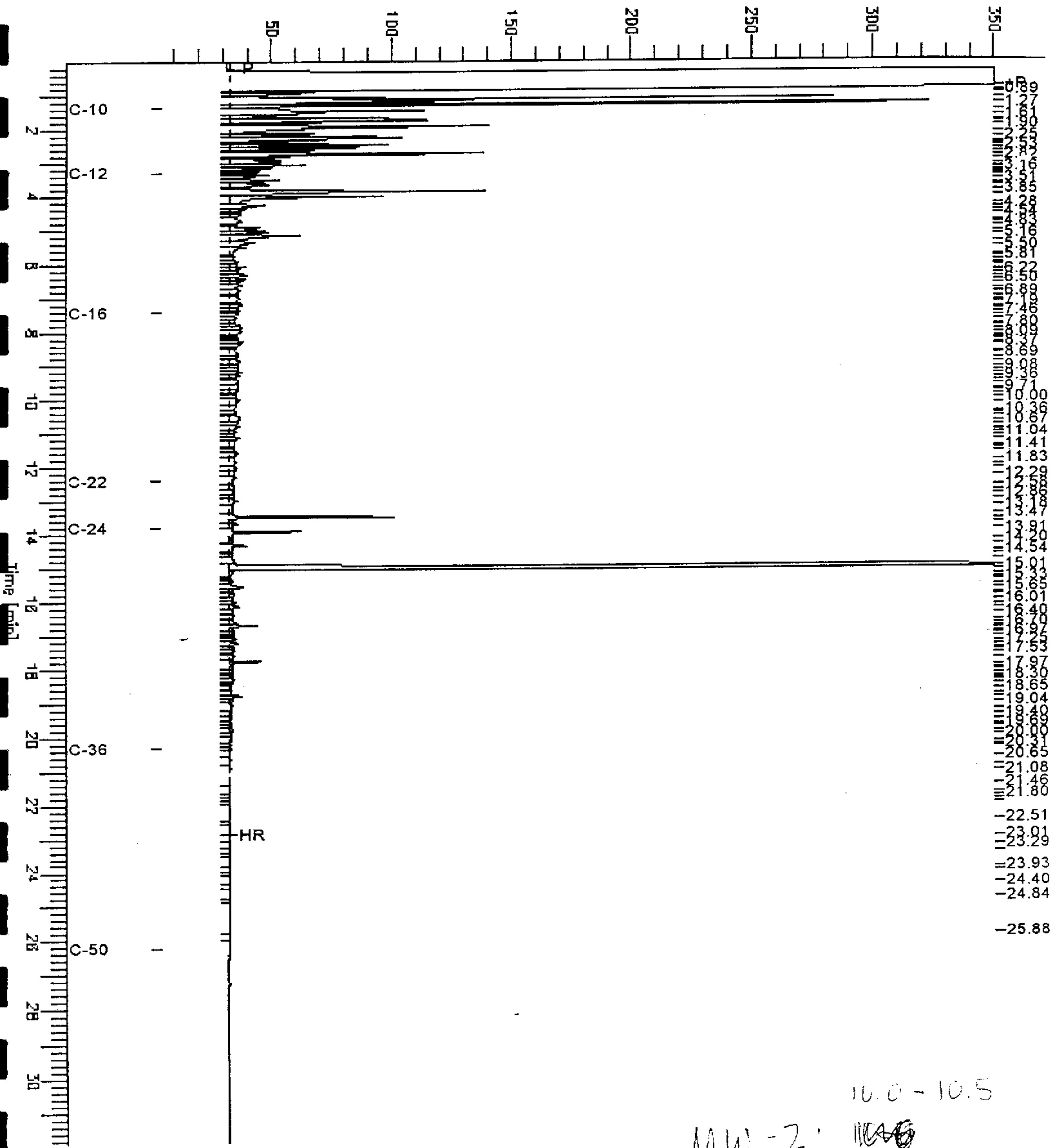
Chromatogram

Sample Name : 137549-015,45923,SG
FileName : G:\GC13\CHB\026B012.RAW
Method : BTEH015.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 5 mV

Sample #: 45923
Date : 1/27/99 08:51 AM
Time of Injection: 1/26/99 07:11 PM
Low Point : 4.85 mV
Plot Scale: 345.8 mV

High Point : 350.61 mV



10.0 - 10.5

MW-2;

TEH-Tot Ext Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137549-016	MW-2;16.0-16.5	45923	01/14/99	01/25/99	01/26/99	

Matrix: Soil

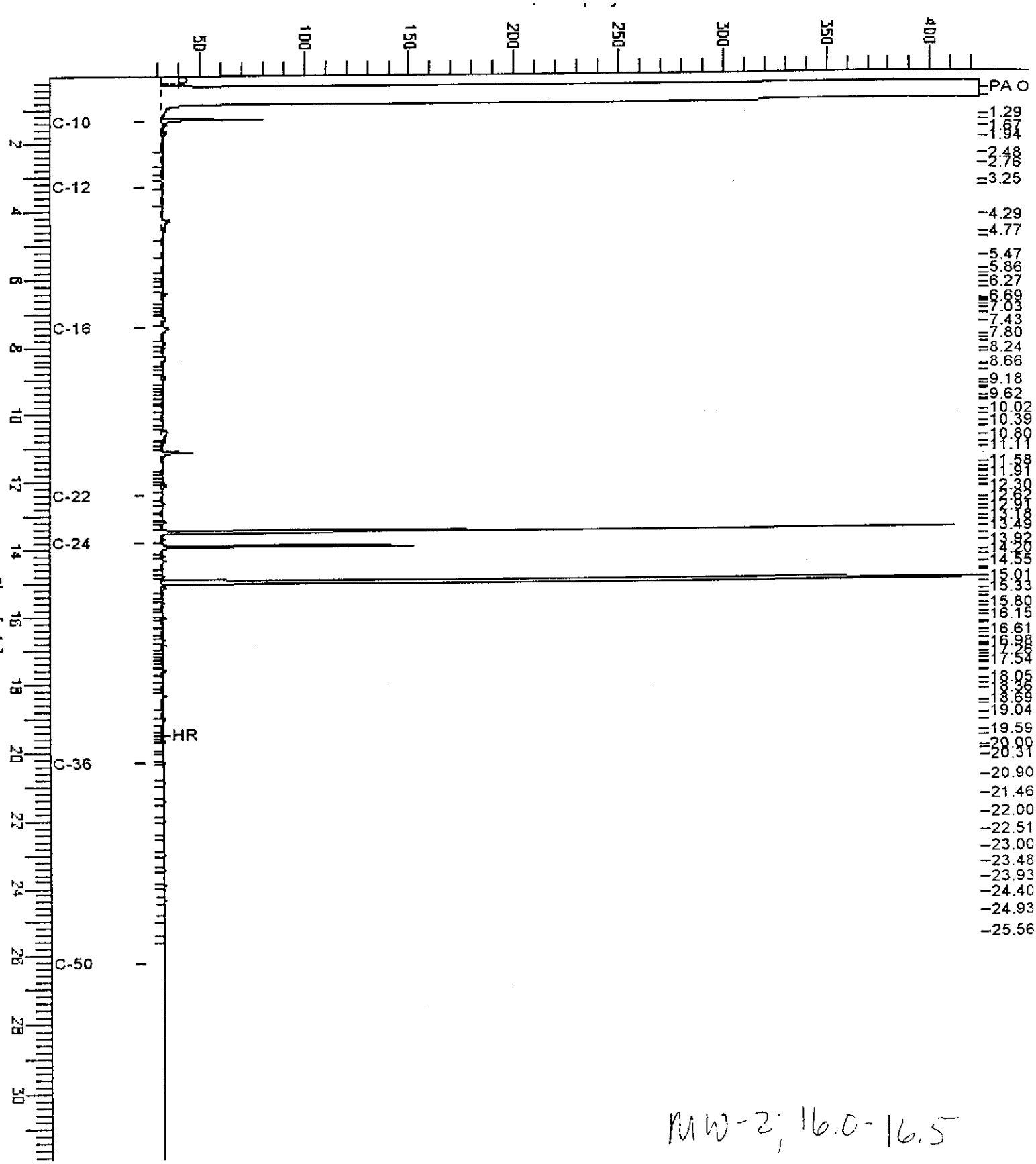
Analyte	Units	137549-016
Diln Fac:		1
Diesel C10-C24	mg/Kg	2.5YZ
Surrogate		
Hexacosane	%REC	93

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks

Chromatogram

Sample Name : 137549-016,45923,SG
FileName : G:\GC13\CHB\026B013.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 23 mV

Sample #: 45923 Page 1 of 1
Date : 1/27/99 08:53 AM
Time of Injection: 1/26/99 07:53 PM
Low Point : 23.16 mV High Point : 424.25 mV
Plot Scale: 401.1 mV

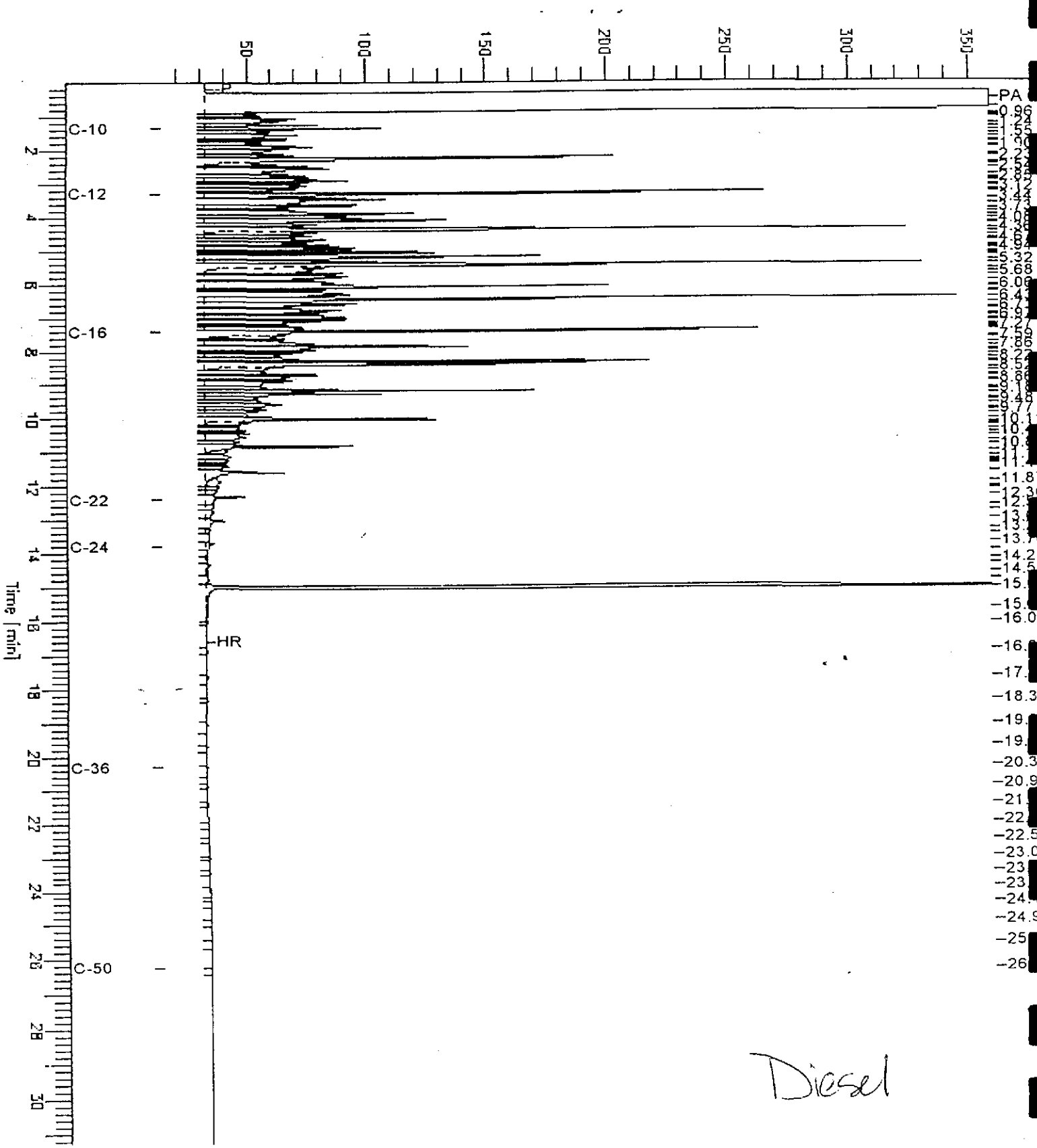


MW-2, 16.0-16.5

Chromatogram

Sample Name : CCV,98WS6771,DS
FileName : G:\GC13\CHB\026B004.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 13 mV

Sample #: 500MG/L Page 1 of 1
Date : 1/26/99 01:58 PM
Time of Injection: 1/26/99 11:40 AM
Low Point : 13.41 mV High Point : 358.87 mV
Plot Scale: 345.5 mV



TEH-Tot Ext Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	CA LUFT
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45923	Analysis Date:	01/27/99
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC89586

Analyte	Result
Diesel C10-C24	<1.0

Surrogate	%Rec	Recovery Limits
Hexacosane	97	48-142

TEH-Tot Ext Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	CA LUFT
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45923	Analysis Date:	01/27/99
Units:	mg/Kg		
Diln Fac:	1		

LCS Lab ID: QC89587

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C10-C24	41	49.5	83	49-108
Surrogate	**%Rec**	**Limits**		
Hexacosane	92	48-142		

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:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	CA LUFT
Location:	McDonalds,6623 San Pablo		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	01/22/99
Lab ID:	137642-006	Received Date:	01/22/99
Matrix:	Soil	Prep Date:	01/25/99
Batch#:	45923	Analysis Date:	01/27/99
Units:	mg/Kg		
Diln Fac:	1		

MS Lab ID: QC89588

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C10-C24	49.5	<1	75.51	108	34-121
Surrogate	**%Rec**	**Limits**			
Hexacosane	106	48-142			

MSD Lab ID: QC89589

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C10-C24	49.5	62.61	82	34-121	36	36
Surrogate	**%Rec**	**Limits**				
Hexacosane	94	48-142				

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

Quality Control Checklist
for Review of Laboratory Report

Job No.: 98381-00 Site: McDonalds, 6623 San Pablo Ave.

Laboratory: Curtis and Tompkins Laboratory Report No: 137870

Report Date: 2-17-99 BASELINE Review By: BAA

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

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

Comments: _____

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:

Baseline Environmental
5900 Hollis Street
Suite D
Emeryville, CA 94608

Date: 17-FEB-99
Lab Job Number: 137870
Project ID: 98381
Location: McDonalds,6623 San Pablo

Reviewed by:

Reviewed by:

TVH-Total Volatile Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137870-001	MW-1B	46183	02/08/99	02/10/99	02/10/99	
137870-002	MW-2A	46183	02/08/99	02/10/99	02/10/99	
137870-003	MW-3A	46206	02/08/99	02/10/99	02/10/99	
137870-004	MW-3B	46206	02/08/99	02/10/99	02/10/99	

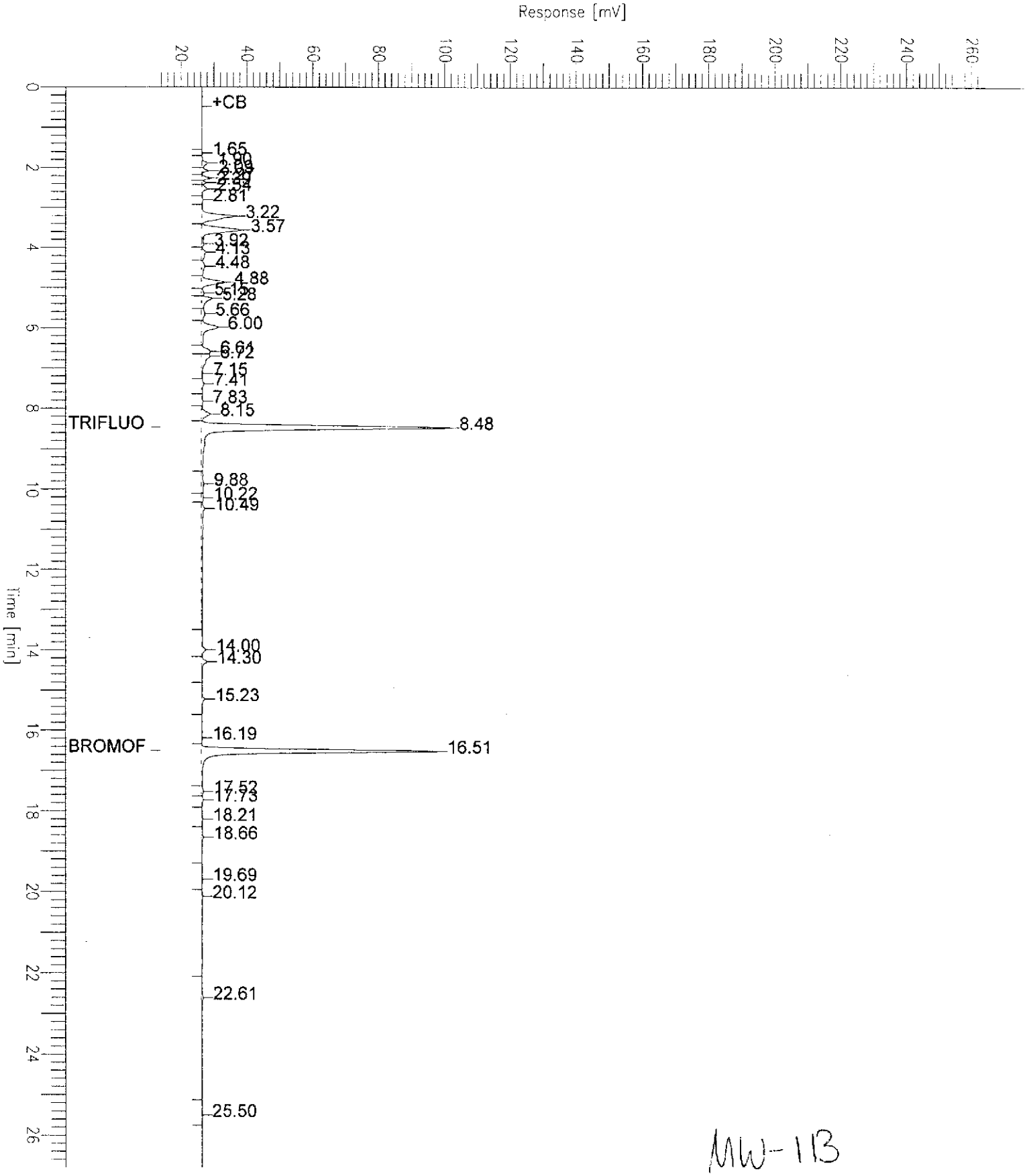
Matrix: Water

Analyte	Units	137870-001	137870-002	137870-003	137870-004
Diln Fac:		1	25	25	1
Gasoline C7-C12	ug/L	59	3600	24000	80
Surrogate					
Trifluorotoluene	%REC	84	85	96	96
Bromofluorobenzene	%REC	102	101	100	102

Chromatogram

Sample Name : 137870-001,46183,
FileName : G:\GC05\DATA\040G026.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 14 mV

Sample #: Page 1 of 1
Date : 2/10/99 05:10 AM
Time of Injection: 2/10/99 04:43 AM
Low Point : 13.78 mV High Point : 263.78 mV
Plot Scale: 250.0 mV

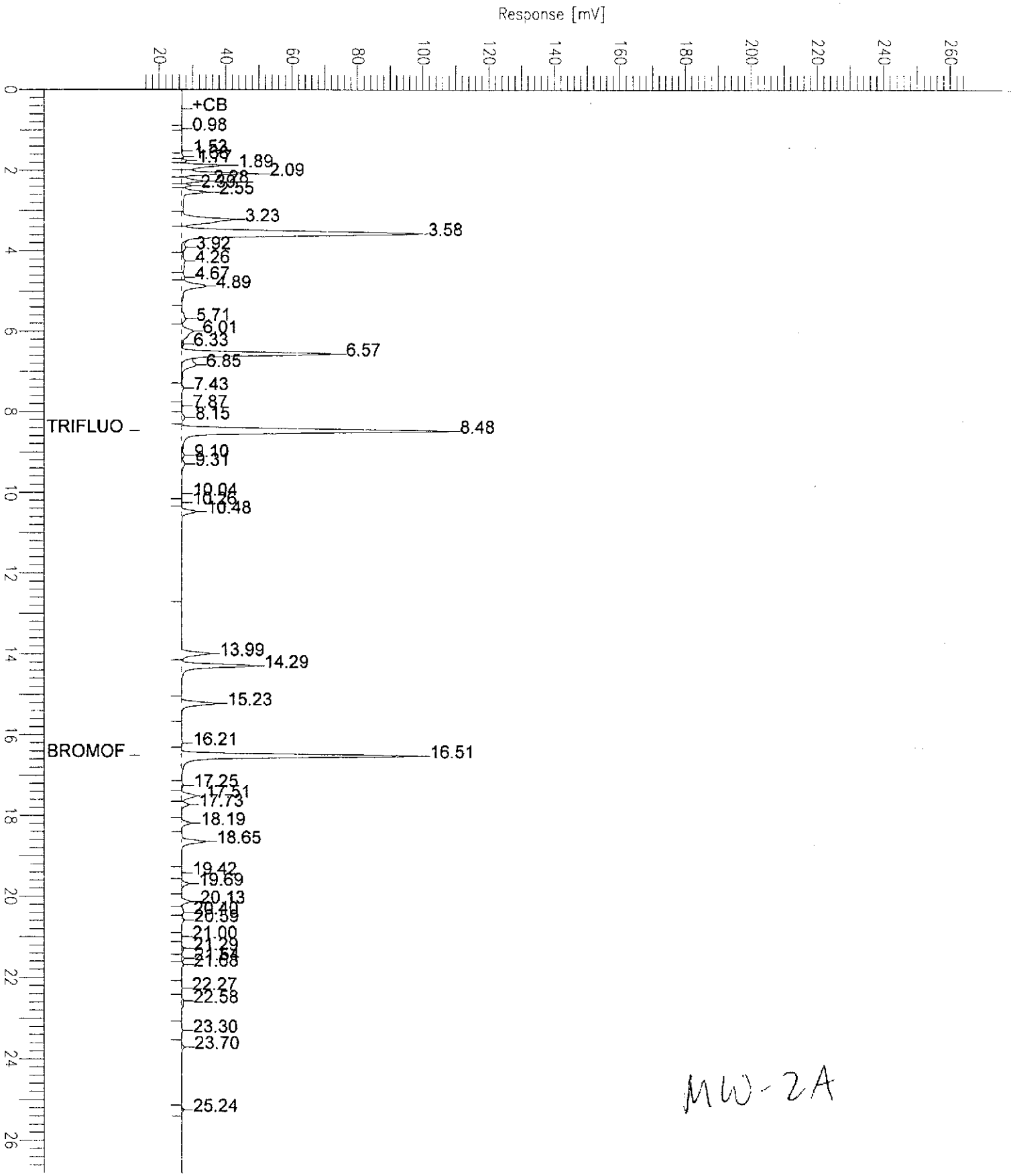


MW-113

Chromatogram

Sample Name : D,137870-002,46183,
FileName : G:\GC05\DATA\040G027.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 14 mV

Sample #: Page 1 of 1
Date : 2/10/99 05:49 AM
Time of Injection: 2/10/99 05:21 AM
Low Point : 14.16 mV High Point : 264.16 mV
Plot Scale: 250.0 mV

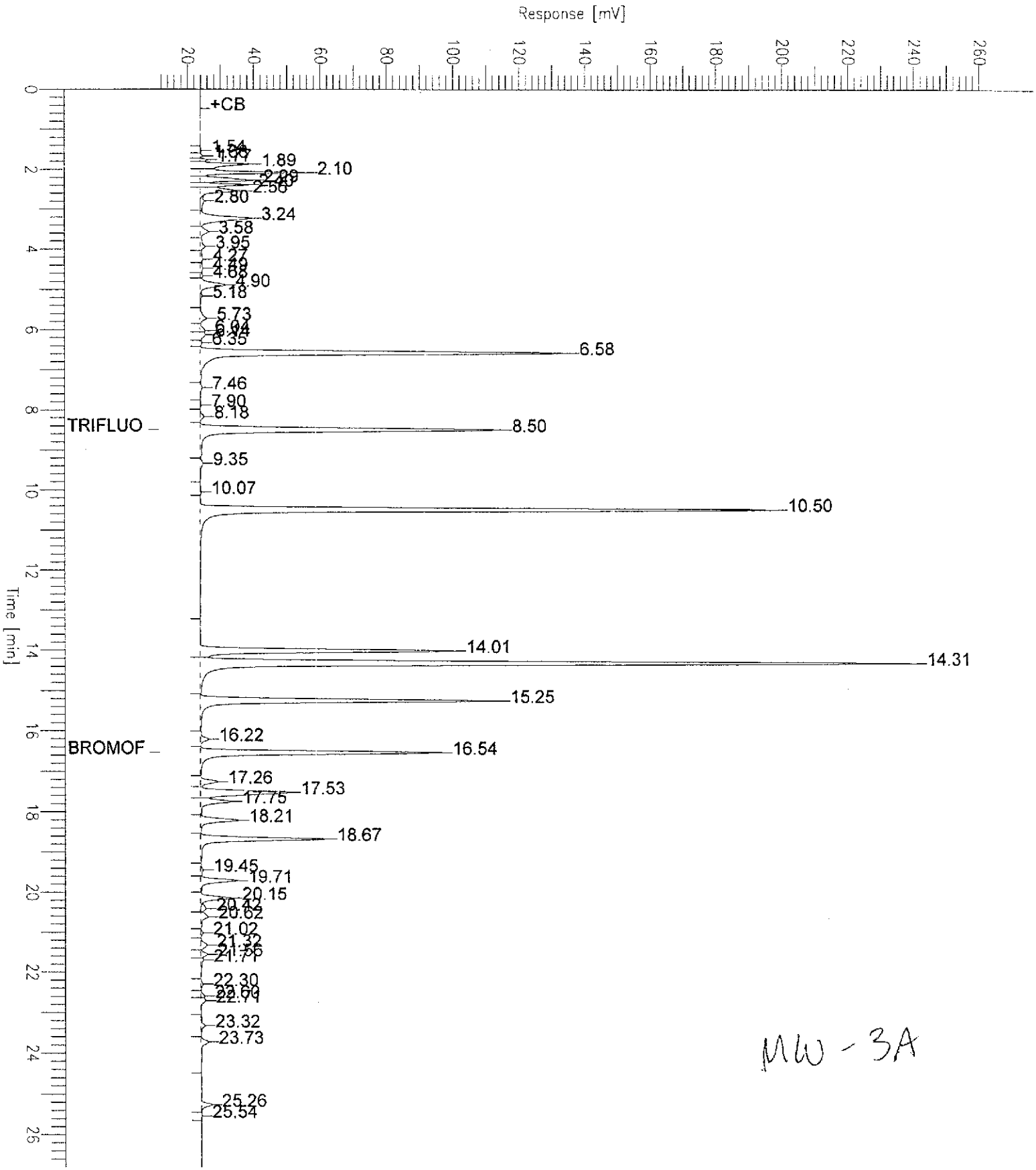


MW-2A

Chromatogram

Sample Name : RR,D,137870-003,46206,
FileName : G:\GC05\DATA\041G010.RAW
Method :
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 11 mV

Sample #: Page 1 of 1
Date : 2/11/99 02:36 PM
Time of Injection: 2/10/99 10:01 PM
Low Point : 11.21 mV High Point : 261.21 mV
Plot Scale: 250.0 mV

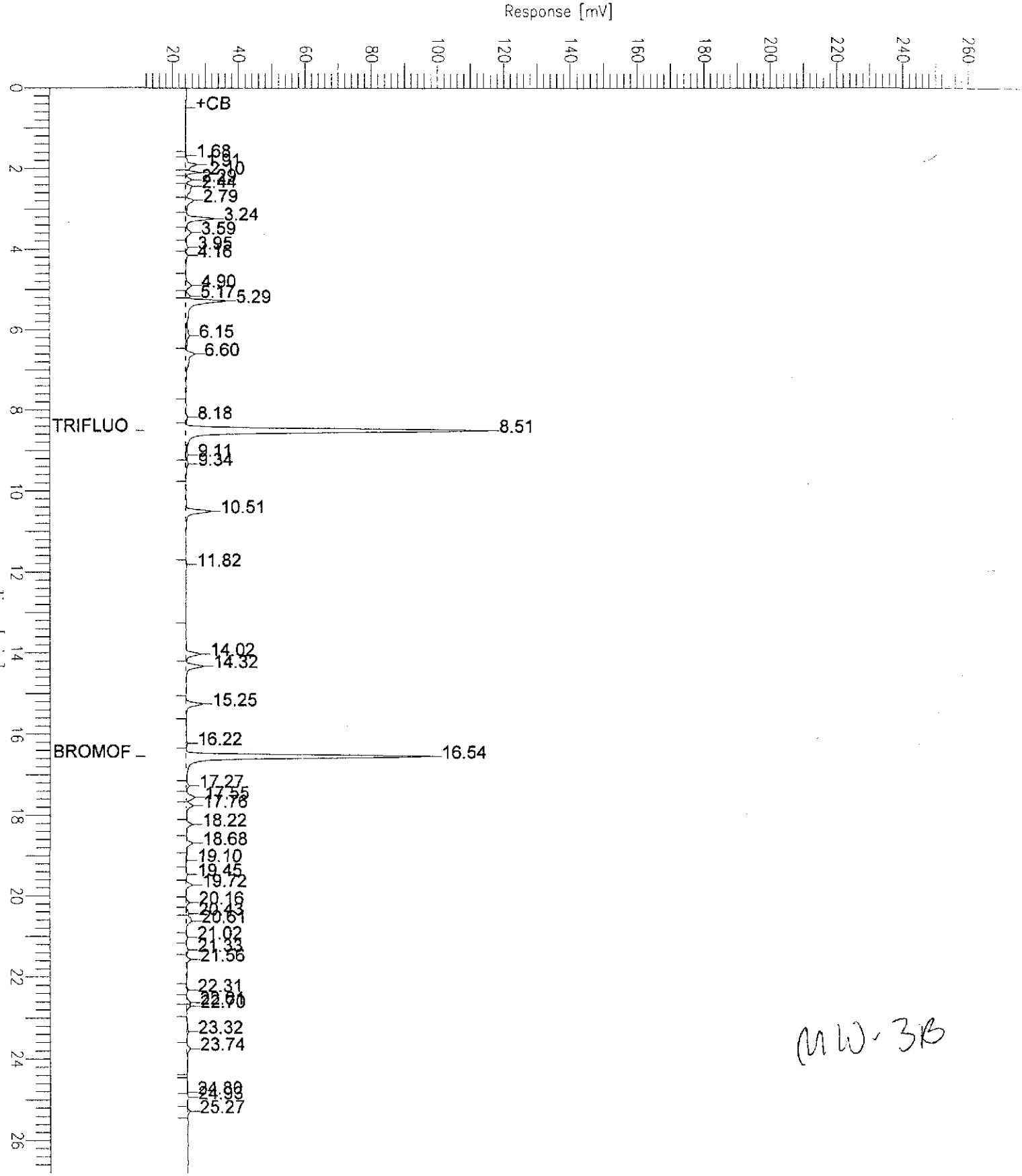


MW-3A

Chromatogram

Sample Name : RR,137870-004,46206,
FileName : G:\GC05\DATA\041G011.RAW
Method :
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 12 mV

Sample #: Page 1 of 1
Date : 2/11/99 02:38 PM
Time of Injection: 2/10/99 10:39 PM
Low Point : 11.56 mV High Point : 261.56 mV
Plot Scale: 250.0 mV

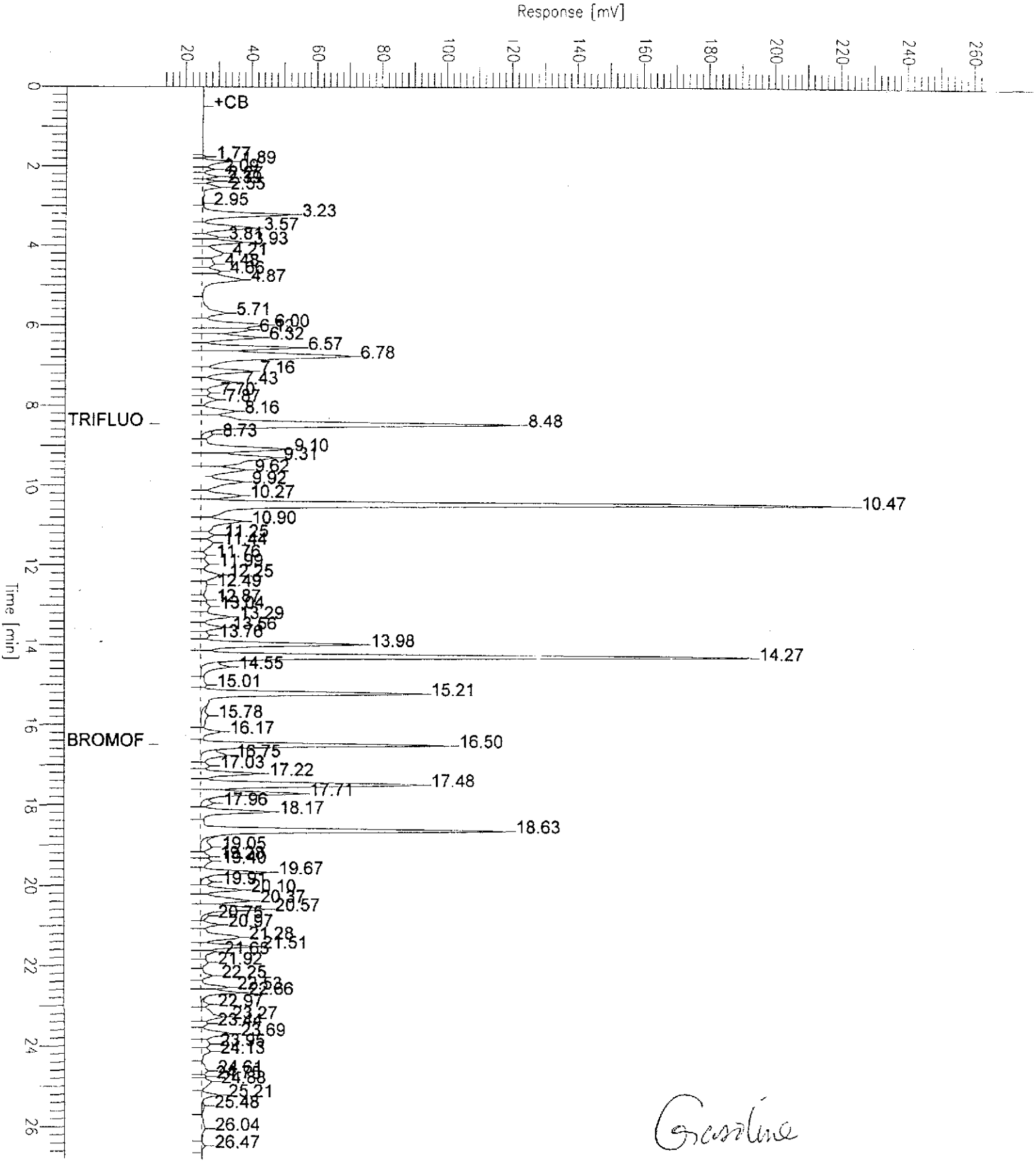


MW-3B

Chromatogram

Sample Name : CCV/LCS,QC90569,98WS6813,46183,
FileName : G:\GC05\DATA\040G022.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 13 mV

Sample #: GAS
Date : 2/10/99 09:27 AM
Time of Injection: 2/10/99 02:08 AM
Low Point : 12.60 mV High Point : 262.60 mV
Plot Scale: 250.0 mV



BTXE

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137870-001	MW-1B	46183	02/08/99	02/10/99	02/10/99	
137870-002	MW-2A	46183	02/08/99	02/10/99	02/10/99	
137870-003	MW-3A	46206	02/08/99	02/10/99	02/10/99	
137870-004	MW-3B	46206	02/08/99	02/10/99	02/10/99	

Matrix: Water

Analyte	Units	137870-001	137870-002	137870-003	137870-004
Diln Fac:		1	25	25	1
MTBE	ug/L	33	5100	<50	4.5C
Benzene	ug/L	1.3	870	2100	1.5
Toluene	ug/L	<0.5	79	3400	4.8
Ethylbenzene	ug/L	0.55	140	1500	2.5
m,p-Xylenes	ug/L	0.87	390	4300	3.1
o-Xylene	ug/L	0.53	190	1800	3
Surrogate					
Trifluorotoluene	%REC	96	102	114	112
Bromofluorobenzene	%REC	110	111	108	111

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

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46206	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC90654

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	95	59-162
Bromofluorobenzene	101	59-162

BTXE	
Client: Baseline Environmental	Analysis Method: EPA 8021B
Project#: 98381	Prep Method: EPA 5030
Location: McDonalds,6623 San Pablo	

METHOD BLANK	
Matrix: Water	Prep Date: 02/10/99
Batch#: 46206	Analysis Date: 02/10/99
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC90654

Analyte	Result
MTBE	<2.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	107	53-124
Bromofluorobenzene	105	41-142

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46206	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC90652

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	2090	2000	105	80-119

Surrogate	%Rec	Limits
Trifluorotoluene	127	59-162
Bromofluorobenzene	102	59-162

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: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8021B
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 46206
Units: ug/L
Diln Fac: 1

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

LCS Lab ID: QC90653

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	16.01	20	80	65-135
Benzene	16.58	20	83	69-109
Toluene	18.39	20	92	72-116
Ethylbenzene	18.63	20	93	67-120
m,p-Xylenes	39.13	40	98	69-117
o-Xylene	18.98	20	95	75-122

Surrogate	%Rec	Limits
Trifluorotoluene	105	53-124
Bromofluorobenzene	104	41-142

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

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	02/02/99
Lab ID:	137873-003	Received Date:	02/05/99
Matrix:	Water	Prep Date:	02/11/99
Batch#:	46206	Analysis Date:	02/11/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC90655

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	2017	101	71-131

Surrogate	%Rec	Limits
Trifluorotoluene	128	59-162
Bromofluorobenzene	106	59-162

MSD Lab ID: QC90656

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	2057	103	71-131	2	26

Surrogate	%Rec	Limits
Trifluorotoluene	122	59-162
Bromofluorobenzene	99	59-162

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

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46183	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC90571

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	97	59-162
Bromofluorobenzene	102	59-162

BTXE

Client:	Baseline Environmental	Analysis Method:	EPA 8021B
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46183	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC90571

Analyte	Result
MTBE	<2.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	111	53-124
Bromofluorobenzene	108	41-142

TVH-Total Volatile Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46183	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC90569

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1871	2000	94	80-119

Surrogate	%Rec	Limits
Trifluorotoluene	118	59-162
Bromofluorobenzene	104	59-162

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:	Baseline Environmental	Analysis Method:	EPA 8021B
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	02/10/99
Batch#:	46183	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC90570

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	17.1	20	86	65-135
Benzene	19.05	20	95	69-109
Toluene	19.12	20	96	72-116
Ethylbenzene	19.2	20	96	67-120
m,p-Xylenes	39.73	40	99	69-117
o-Xylene	19.31	20	97	75-122

Surrogate	%Rec	Limits
Trifluorotoluene	108	53-124
Bromofluorobenzene	110	41-142

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

BTXE

Client:	Baseline Environmental	Analysis Method:	EPA 8021B
Project#:	98381	Prep Method:	EPA 5030
Location:	McDonalds,6623 San Pablo		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	02/02/99
Lab ID:	137833-003	Received Date:	02/03/99
Matrix:	Water	Prep Date:	02/10/99
Batch#:	46183	Analysis Date:	02/10/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC90572

Analyte	Spike Added	Sample	MS	%Rec #	Limits
MTBE	20	<2	26.18	97	65-135
Benzene	20	<0.5	17.45	87	55-125
Toluene	20	<0.5	18.74	94	65-126
Ethylbenzene	20	<0.5	18.84	94	60-129
m,p-Xylenes	40	<0.5	38.21	96	68-116
o-Xylene	20	<0.5	18.6	93	69-129

Surrogate	%Rec	Limits
Trifluorotoluene	117	53-124
Bromofluorobenzene	113	41-142

MSD Lab ID: QC90573

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
MTBE	20	25.73	95	65-135	2	20
Benzene	20	18.1	91	55-125	4	11
Toluene	20	19.29	96	65-126	3	11
Ethylbenzene	20	19.2	96	60-129	2	12
m,p-Xylenes	40	38.82	97	68-116	2	11
o-Xylene	20	19.46	97	69-129	5	12

Surrogate	%Rec	Limits
Trifluorotoluene	116	53-124
Bromofluorobenzene	111	41-142

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

TEH-Tot Ext Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
137870-001	MW-1B	46193	02/08/99	02/09/99	02/11/99	
137870-002	MW-2A	46193	02/08/99	02/09/99	02/11/99	
137870-003	MW-3A	46193	02/08/99	02/09/99	02/12/99	
137870-004	MW-3B	46193	02/08/99	02/09/99	02/12/99	

Matrix: Water

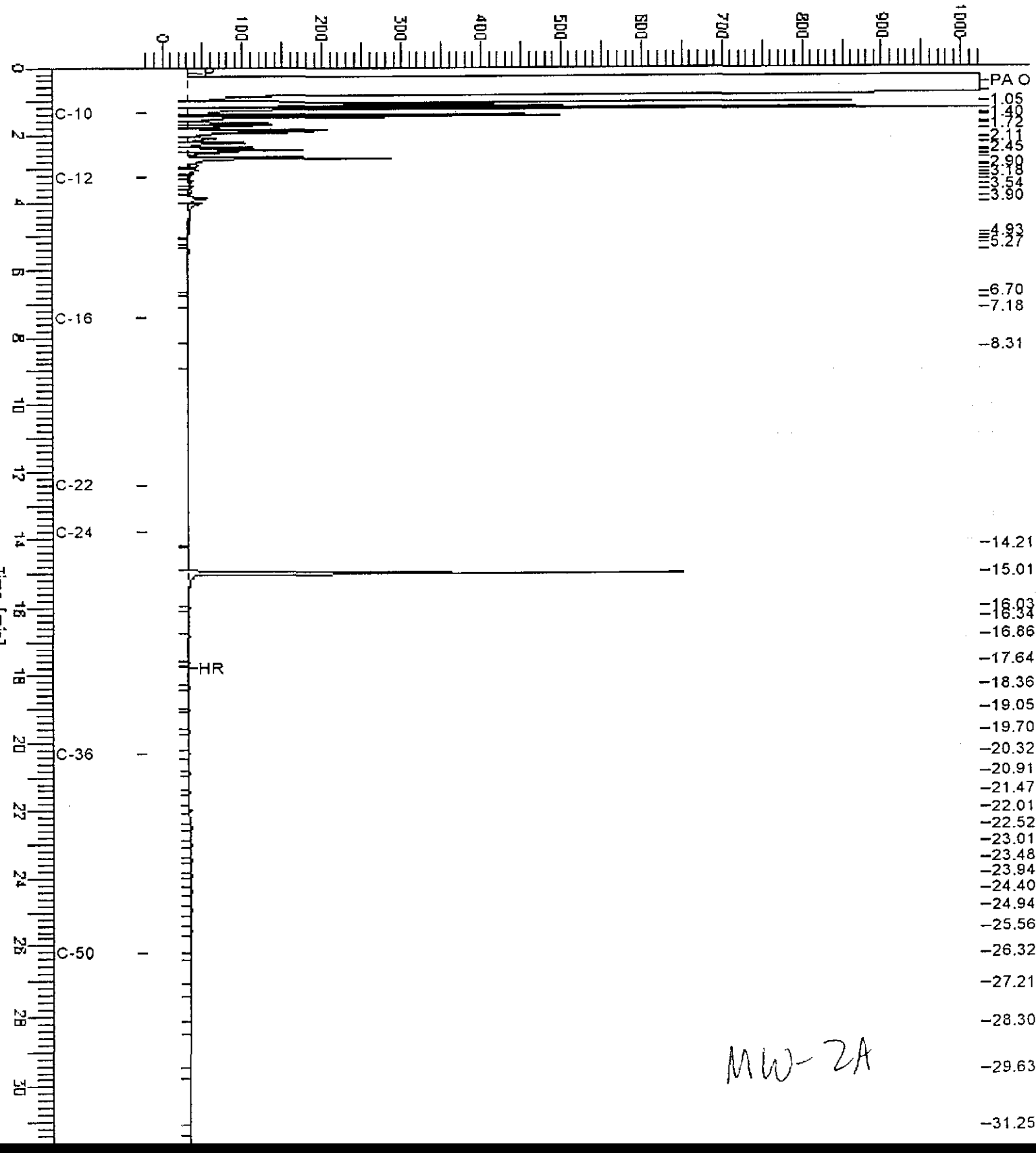
Analyte Diln Fac:	Units	137870-001 1	137870-002 1	137870-003 1	137870-004 1
Diesel C10-C24	ug/L	<49	530 YL	210 YL	<47
Surrogate					
Hexacosane	%REC	65	70	81	81

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

Chromatogram

Sample Name : 137870-002SG,46193
FileName : G:\GC13\CHB\041B037.RAW
Method : BTEH015.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -21 mV

Sample #: 46193
Date : 2/11/99 04:05 PM
Time of Injection: 2/11/99 03:16 PM
Low Point : -21.06 mV High Point : 1024.00 mV
Plot Scale: 1045.1 mV

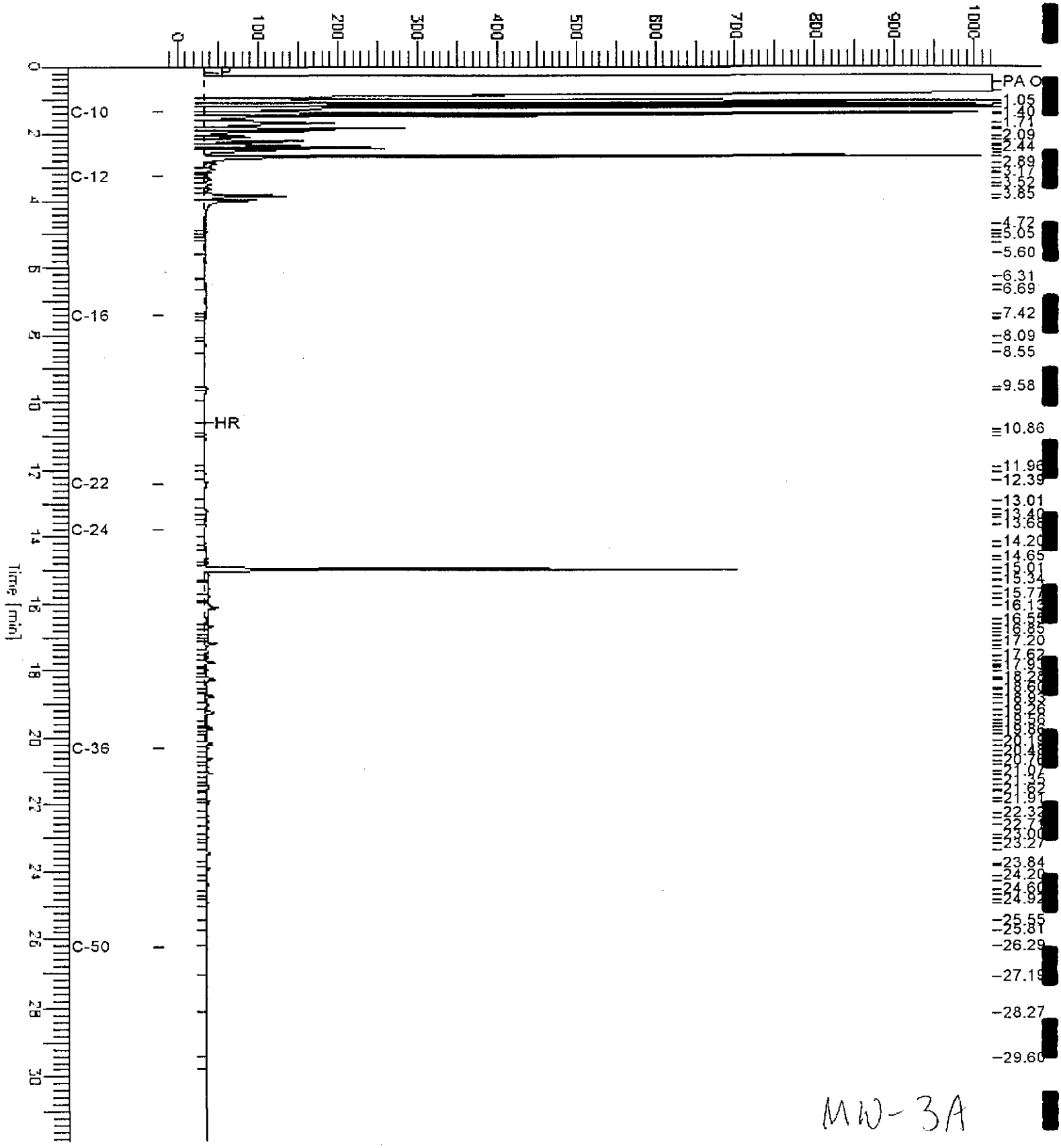


MW-2A

Chromatogram

Sample Name : 137870-003sg,46193
FileName : G:\GC13\CHB\042B019.RAW
Method : BTEH015.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -20 mV

Sample #: 46193 Page 1 of 1
Date : 2/12/99 12:25 PM
Time of Injection: 2/12/99 11:49 AM
Low Point : -19.54 mV High Point : 1024.00 mV
Plot Scale: 1043.5 mV



MW-3A

TEH-Tot Ext Hydrocarbons

Client:	Baseline Environmental	Analysis Method:	EPA 8015M
Project#:	98381	Prep Method:	EPA 3520
Location:	McDonalds,6623 San Pablo		

METHOD BLANK

Matrix:	Water	Prep Date:	02/09/99
Batch#:	46193	Analysis Date:	02/11/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC90607

Analyte	Result
Diesel C10-C24	<50

Surrogate	%Rec	Recovery Limits
Hexacosane	90	53-136

TEH-Tot Ext Hydrocarbons

Client: Baseline Environmental
Project#: 98381
Location: McDonalds,6623 San Pablo

Analysis Method: EPA 8015M
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 46193
Units: ug/L
Diln Fac: 1

Prep Date: 02/09/99
Analysis Date: 02/11/99

BS Lab ID: QC90608

Analyte	Spike Added	BS	%Rec	#	Limits
Diesel C10-C24	2475	1614	65		58-110

Surrogate	%Rec	Limits
Hexacosane	87	53-136

BSD Lab ID: QC90609

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Diesel C10-C24	2475	1505	61		58-110	7		21

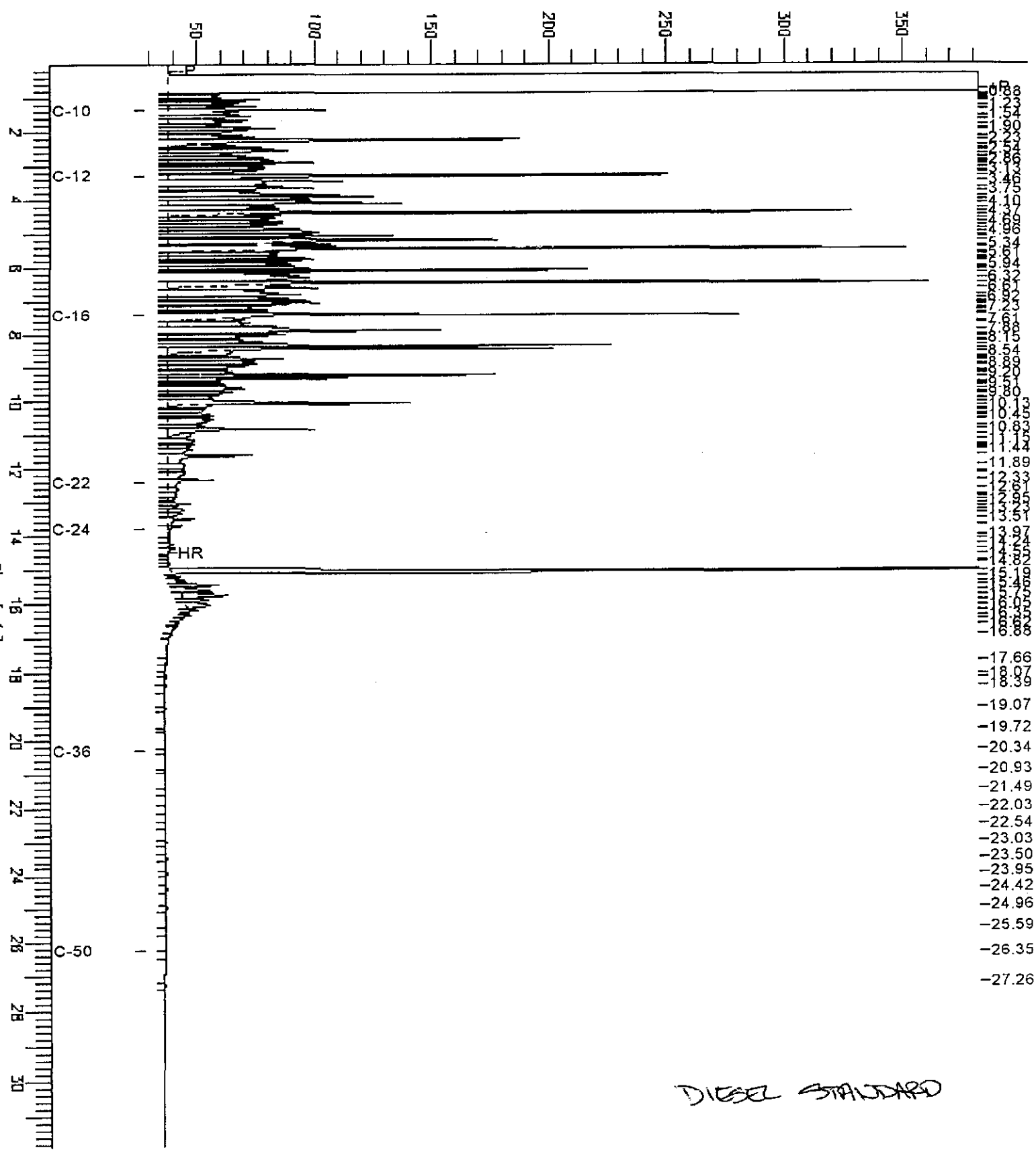
Surrogate	%Rec	Limits
Hexacosane	79	53-136

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

Chromatogram

Sample Name : ccv,99ws7003,dsl
FileName : G:\GC13\CHB\041B001.RAW
Method : BTEH015.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 27 mV

Sample #: 500mg/l Page 1 of 1
Date : 2/10/99 11:49 AM
Time of Injection: 2/10/99 10:31 AM
Low Point : 27.37 mV High Point : 382.76 mV
Plot Scale: 355.4 mV



DIESEL STANDARD

BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608
(510) 420-8686

123516

CHAIN OF CUSTODY RECORD

Turn-around Time: Normal
Lab: Curtis & Tompkins
BASELINE Contact Person: Bruce Abello Aron

Project No.	Project Name and Location
98381	McDonalds, 6623 San Pablo Ave, Oakland

Samplers: (Signature) William K Scott

Sample ID No. Station	Date	Time	Media	Depth	No. of Containers	TEH as diesel (silica gel cleanup)	TPH with BTX&E (as gasoline)	Oil & Grease	Motor Oil	PNAs	Title 22 Metals	Total Lead	MTBE	Remarks/ Composite	Detection Limits
MW-1B	2-8-99	7:45	Water	–	3-VOAs 1-liter	X	X						X		
MW-2A	↓	8:10	↓	–	↓	X	X						X		
MW-3A	↓	7:20	↓	–	↓	X	X						X		
MW-3B	↓	7:00	↓	–	↓	X	X						X		
M															

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Conditions of Samples Upon Arrival at Laboratory:
William K Scott	2-8-99 / 12:10	[signature]	2/2/99 12:10	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Remarks:
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	